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# U.S. Coast Guard SARSAT Final Evaluation Report

## Vol. II: Appendices

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Final Report



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15. Supplementary Notes

16. Abstract

Volume I of this report, Technical Evaluation, presents the findings of the U.S. Coast Guard's two year demonstration and evaluation (D&E) of the COSPAS/SARSAT satellite-aided search and rescue system for locating distressed vessels and aircraft, a cooperative project of the US, USSR, France, and Canada. The report summarizes results of controlled tests and exercises; analyzes SARSAT's role in actual distress cases; discusses operations of the system's radio beacons, satellites, Coast Guard Rescue Coordination Centers, U.S. Mission Control Center, Local User Terminals, and ground communications; appraises the system's long-term economic costs and benefits; and assesses achievement of project objectives. Results indicate that the COSPAS/SARSAT system increased the role of radio beacons in search and rescue cases and provided key information in locating more than one-third of Coast Guard ELT/EPIRB distress cases during the D&E, resulting in the rescue of 74 persons.

Volume II consists of appendices that give detailed information and data in support of each section of the Technical Evaluation; Volume III contains programs and data listings.

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SARSAT FINAL EVALUATION REPORT
VOLUME II
APPENDICES

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# APPENDIX A
# CONTROLLED TESTS

## CONTENTS



## LIST OF ILLUSTRATIONS

# APPENDIX A

# CONTROLLED TESTS

This appendix describes the set-up and conduct of the controlled tests performed during the Coast Guard SARSAT D&E period. It encompasses three types of tests as shown in Table A-1.

## A.1 FIRST STATIC TESTS

The First Static Tests were performed during February 1983, at three sites: Marshfield, MA; Pt. Reyes, CA; and Kodiak, AK. The tests involved the activation of one 121.5-MHz beacon and one 406-MHz beacon. The purpose was to verify the proper operation of beacons, test equipment, and test coordination procedures, as well as to calibrate the three local user terminals and to provide control cases for the at-sea tests.

Table A-2 shows the static tests planned, scheduled, and carried out. Each test involved the activation of one 121.5-MHz beacon and one 406-MHz beacon. The performance specifications of these beacons are given in Reference. Not every test activation carried out, however, resulted in useable LUT data. On the other hand, data were obtained in some cases from more than one LUT so that on the whole the number of positions calculated exceeded the number of activations.

The results of the static tests are summarized in Table A-3 for 121.5-MHz and in Table A-4 for 406-MHz. Detailed outputs of the error analysis program are given in Appendix B.

## A.2 FIRST NANTUCKET TESTS

The first at-sea tests were performed by Coast Guard personnel aboard the NANTUCKET Lightship and its relief vessel, anchored at the Nantucket Shoals about 35 miles southeast of Cape Cod. The tests were performed with 121.5- and 406-MHz beacons floating on a tether connected to the vessel. The major questions to be answered by the tests were:

TABLE A-2. SCHEDULE FOR FIRST STATIC TESTS

| | PLANNED[1] | SCHEDULED[2] | EXECUTED[3] |
|---|---|---|---|
| Marshfield | | | |
| 121.5/243 | 10 | 15 | 10 |
| 406 | 10 | 15 | 11 |
| Pt. Reyes | | | |
| 121.5/243 | 10 | 12 | 9 |
| 406 | 10 | 12 | 10 |
| Kodiak | | | |
| 121.5/243 | 10 | 19 | 13 |
| 406 | 10 | 19 | 13 |

(1) As given in the USCG/SARSAT Test Plan, Reference 2.

(2) As contained in NASA's consolidated test schedule, January 1983, "SARSAT Quarterly Regional Tests".

(3) Successfully executed tests, based on Field Test Data Sheets.

TABLE A-3. FIRST STATIC TESTS -- 121.5-MHz (Cont.d)

| Definitions of Terms | |
|---|---|
| Location Error: | Location of the beacon is indicated on the LUT output messages, minus its location as indicated on the field data sheets (ship's position or ground station location |
| Mean Location Error: | Mean value of the magnitude of the location error. |
| Cross-Track Error: | Component of the location error parallel to the satellite ground track at TCA, positive to the right of the satellite direction of travel. |
| Along-Track Error: | Component of the location error parallel to the satellite ground track at TCA, positive in the direction of the satellite travel. |
| A-Position Probability: | The percent of calculated LUT locations for which the A-position of the alert message coincides with the true test location. |
| Number of Activations: | Number of valid test beacon activations. An activation is considered valid if the beacon was properly operating, activated, deployed, and retrieved in the judgement of the TSC Test Director, and for which output files are available from one or more LUTs that tracked the satellites involved in the test. |
| Positions Not Located: | Positions not found on LUT output files corresponding to valid test beacon activations. |
| Location Probability: | The number of positions located, divided by the number of positions both located and not located, in percent. |
| Percent in Error Ellipse: | The percent of located positions for which the location error falls within the ellipse indicated on the alert message. |

1. What is the probability of a floating EPIRB being located, given adequate mutual visibility conditions, compared to the same EPIRB on land?

2. How does the location probability vary with wave height? With peak satellite elevation angle?

3. What accuracy can be expected from floating EPIRBs, compared to land-based EPIRBs?

4. How does the 121.5-MHz EPIRB compare with the 406-MHz EPIRB in regard to questions 1 through 3?

One hundred Nantucket at-sea tests were planned, 116 scheduled, and about 80 carried out. Each test involved the activation of one 121.5-MHz and one 406-MHz beacon. The beacons were power tested and then activated about 10-20 minutes before the scheduled start of the satellite pass (COSPAS I visibility period). They were then deployed over the fantail of the lightship on a tether. The physical arrangement is shown in Figure A-1. At the conclusion of the pass, the beacons were retrieved and the power levels measured once again.

Several test activations were unsuccessful because of low power readings, water penetration into the beacon case, or damage to the antenna housing. These cases were excluded from the data reduction, so that the detectability and location probabilities are based on properly functioning beacons.

## A.3 FISHERIES PATROL TESTS

These tests took place from 7 March to 27 April 1983 on board the USCG cutters ALERT and VIGILANT from May 5 to May 16 on board the cutter EVERGREEN. In contrast to the first quarter tests conducted off the lightship NANTUCKET, the beacons were set to float free in the ocean, rather than being tethered to the ship. This eliminated any effects that the tether line may have had on beacon performance.

For each test, both a 121.5-MHz and a 406-MHz beacon was activated. Power measurements, ship's position, and time were recorded at beacon turn-on and turn-off. These and other test data were recorded by the Coast Guard crew on the forms shown in Reference 10, Figure 2-3.

A total of 50 tests were performed from 7 March through 16 May, as shown in Table A-5. On 1 May the test procedure was modified to allow a longer warm-up period for the beacons (30 minutes versus 15 minutes) after they had been placed in the water but before the satellite pass. Another change occurred on 15 March, when the 121.5-MHz beacons were replaced by new and repaired units from the manufacturer. The latter 44 tests were performed with the replacement units. No changes were made in the 406-MHz beacons.

The error analysis of the Fisheries Patrol Tests are given in Appendix B. Only activations in which the beacons were judged to be functioning correctly are counted; those in which there exists some doubt as to the proper functioning or activation of the beacons at the time of the test are excluded from the counts. A total of 71 activations are considered valid. Of 17 excluded activations, other than deck tests, 3 were at 121.5/243.0-MHz and 14 at 406-MHz.

## A.4 NORTHWIND TESTS

At-sea tests were performed by the USCG icebreaker NORTHWIND during its transit from Wilmington, NC to Thule, Greenland. The tests were performed using a 406-MHz beacon with a LORAN-C interface installed aboard the vessel. The major objectives of the tests were (Reference 5):

1. To test operation of the SARSAT Global Mode, in which NOAA-8 will store the beacon transmission and dump it on command to the NOAA Command and Data Acquisition Station, from which the USMCC will receive the data, calculate position, and issue the alert messages to the RCCs.
2. To test the automatic interface of the 406-MHz beacon with a LORAN-C receiver.
3. To test the accuracy and A-Position probability of a vessel-borne 406-MHz beacon in both Global and Regional modes.

During the NORTHWIND's transit a 406-MHz beacon was activated continuously for periods of two days with a one day pause between periods. SARSAT locations of the 406-MHz beacon were compared with the ship's position at the time of the satellite's closest approach. The ship's position was interpolated from the ship's navigational log, which used a combination of LORAN-C, dead reckoning, celestial, and satellite navigation to fix positions.

SARSAT 1 and COSPAS 1 and 2 locations were obtained from printouts of the Scott LUT, and NASA SEDL, and the French LUT at Toulouse, France.

The NORTHWIND left Wilmington, NC on 14 June and proceeded around Cape Race, Newfoundland, to Gronnedal, Greenland, where it arrived 22 June, as shown in Figure A-2. The NORTHWIND left Gronnedal 25 June, entered Sondre Strofjord in 26 June for icebreaking, and arrived Thule, Greenland on 5 July. The 406-MHz beacon transmissions took place from 14 June through 1 July. Further transmissions could not be carried out because of crew illness. Moreover, the trans-Atlantic portion of the voyage was cancelled because the unusual ice conditions encountered on the west coast of Greenland left inadequate time to complete the original itinerary. The NORTHWIND returned to Wilmington, NC from Thule, Greenland, without further tests.

The NORTHWIND tests are summarized in Tables A-6, A-7 and A-8. The major results are summarized as follows:

1. Global Mode: The SARSAT Global Mode operation could not be tested because the NORTHWIND's itinerary was terminated before the SARSAT Global Mode could be implemented.

   COSPAS 1 and 2 Global dumps to the Toulouse station, however, are available and were supplied by Centre National D'Etudes Spatial (CNES) for the NORTHWIND tests in the June 4 - July 1 period. Thirty of the 44 locations calculated for the NORTHWIND by CNES were from Global Mode Signals. They all originated on COSPAS 1. Of the 14 Regional Mode locations, 7 were from COSPAS 1, 3 from COSPAS 2, and 4 from SARSAT 1.

   The COSPAS 1 Global Mode results are shown in Table A-9. Since only one satellite is represented in the data, it is not surprising that the mean time from TCA to TPC (Time of Closest Approach to Time Processing is Complete) is about six hours. This is expected because a station at the latitude of Toulouse receives a Global dump about every 12 hours. Therefore, the data have been in storage on board the satellite, on the average, about six hours. The distribution of (TSC-TCA) is shown in Figure A-3. There are few cases in the 0-2 hour interval because TCAs within that interval are usually transmitted in the Regional Mode.

TABLE A-6. RESULTS OF 406-MHz TESTS ON USCGC NORTHWIND -- GENERAL

| | |
|---|---|
| TEST DATES | 6/14 - 7/1 |
| TEST FREQUENCY | 406-MHz |
| BEACON ID's | CGEPRB04 (BABC2DAB334A)<br>CGEPRB02 (BABC2DAB3359) |
| LONG MESSAGES TRANSMITTED | 19 |
| LONG MESSAGES RECEIVED | 19 |
| LONG MESSAGE MEAN POSITION ERROR, NMI | 3.8 |
| LONG MESSAGE S DEV POSITION ERROR, NMI | 2.3 |

| | COSPAS 1 | COSPAS 2 | SARSAT 1 |
|---|---|---|---|
| NUMBER OF PASSES IN TEST: | 39 | 26 | 25 |
| NUMBER OF LOCATIONS CALCULATED: | | | |
| SCOTT LUT: | 17 | 18 | 23 |
| SEDL: | 7 | 20 | 0 |
| TOULOUSE LUT: | 37 | 3 | 4 |
| | 61 | 41 | 27 |

TABLE A-8. RESULTS OF 406-MHz TESTS ON USCGC NORTHWIND -- LOCATION ACCURACY, BY LUT

| | SCOTT | SEDL | TOULOUSE |
|---|---|---|---|
| MEAN LOCATION ERROR, NMI | 4.1 | 4.2 | 5.6 |
| S DEV LOCATION ERROR, NMI | 3.1 | 2.3 | 8.8 |
| MEAN N-S ERROR, NMI | 0.7 | 0.2 | -0.2 |
| S DEV N-S ERROR, NMI | 2.3 | 2.6 | 4.3 |
| MEAN E-W ERROR, NMI | 1.7 | -0.1 | -2.0 |
| S DEV E-W ERROR, NMI | 4.2 | 4.0 | 9.2 |
| MEAN X-TRACK ERROR, NMI | 1.1 | 0.0 | -1.0 |
| S DEV X-TRACK ERROR, NMI | 4.3 | 3.7 | 9.8 |
| MEAN Y-TRACK ERROR, NMI | 0.9 | 1.4 | 0.3 |
| S DEV Y-TRACK ERROR, NMI | 2.4 | 2.6 | 3.3 |
| A-POSITION PROBABILITY | 94 | 94 | 91 |
| PERCENT IN ERROR ELLIPSE | 0 | 0 | 44 |

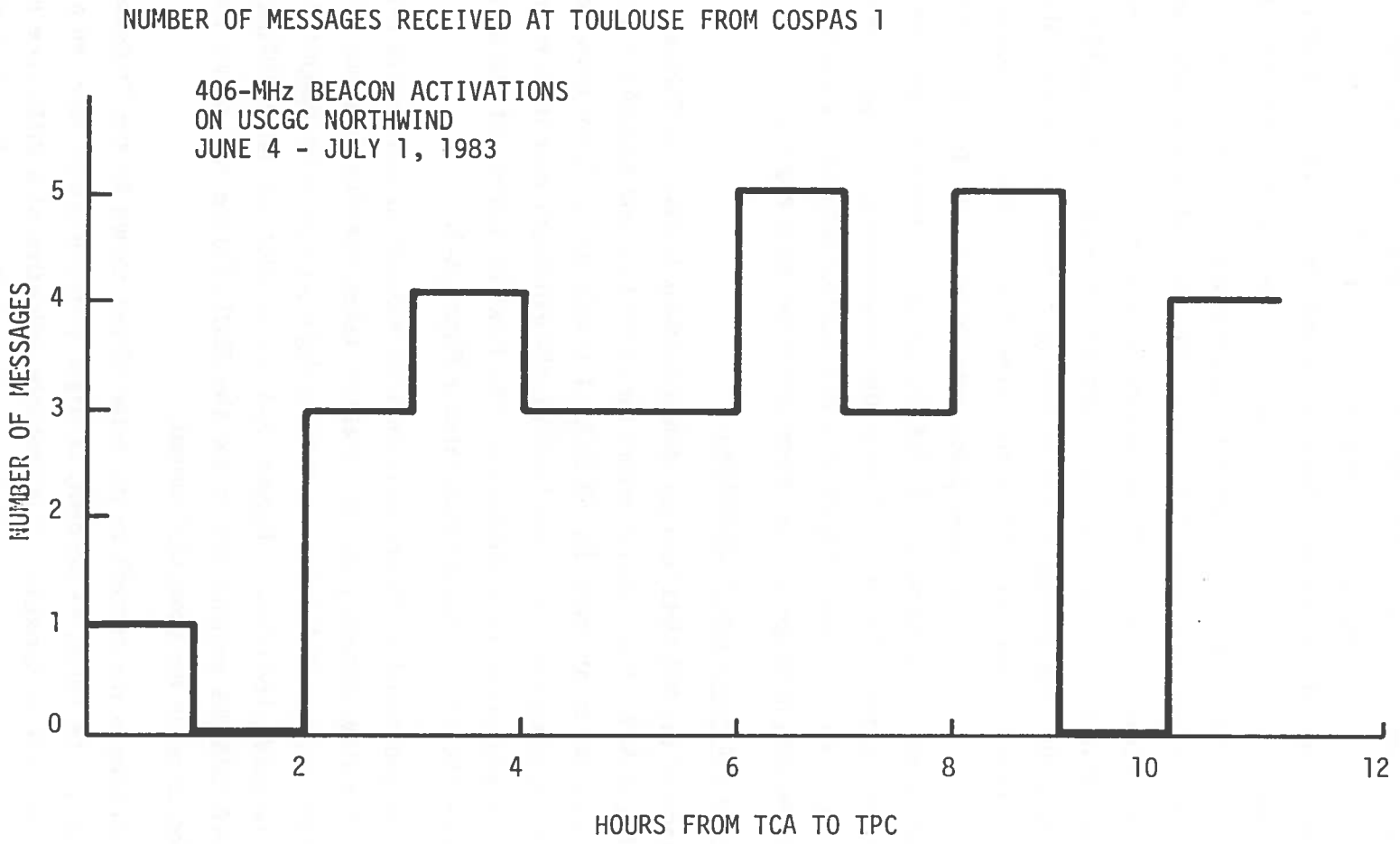


FIGURE A-3. SAMPLE TIMES FROM TCA TO TPC — GLOBAL MODE, COSPAS 1 NORTHWIND DATA

TABLE A-10. 406-MHz LONG MESSAGE RECEPTION AT SCOTT AFB LUT VIA SARSAT -- NORTHWIND TESTS 6/4 - 7/1/83

| | NORTHWIND | | LONG MESSAGE | | LOCATION ERROR | | |
|---|---|---|---|---|---|---|---|
| NUMBER | LAT | LON | LAT | LON | MAG | N-S | E-W |
| 1113 | 33°33.5' | 77°22.5' | 33.5° | 77.3° | 5.1 | -3.5 | -3.7 |
| 1114 | 33°45.0' | 77°.03.1' | 33.7° | 77.0° | 3.9 | -3.0 | -2.4 |
| 1115 | 33°55.9' | 76°42.9' | 33.9° | 76.7° | 2.0 | -1.9 | -0.8 |
| 1121 | 35°13.5' | 74°07.1' | 35.3° | 74.1° | 4.6 | 4.5 | -0.9 |
| 1122 | 35°18.7' | 73°42.7' | 35.3° | 73.7° | 0.9 | -0.7 | -0.6 |
| 1127 | 36°12.5' | 71°52.8' | 36.2° | 71.8° | 3.9 | -0.5 | -3.9 |
| 1128 | 36°26.2' | 71°23.6' | 36.4° | 71.3° | 5.0 | -2.2 | -4.5 |
| 1129 | 36°42.0' | 70°54.3' | 36.7° | 70.9° | 0.2 | 0.0 | -0.2 |
| 1136 | 38°33.9' | 67°44.6' | 38.5° | 67.7° | 4.4 | -3.9 | -2.0 |
| 1142 | 39°38.6' | 65°47.1' | 39.6° | 65.7° | 4.7 | -2.6 | -3.9 |
| 1143 | 39°50.8' | 65°25.7' | 39.8° | 65.4° | 3.1 | -2.8 | -1.3 |
| 1164 | 43°46.7' | 57°16.1' | 43.7° | 57.2° | 5.5 | -4.7 | -3.0 |
| 1165 | 43°55.8' | 56°58.1' | 43.8° | 57.1° | 9.6 | -7.8 | 5.7 |
| 1170 | 44°49.2' | 55°01.1' | 44.6° | 55.8° | 35.8 | -13.2 | 33.3 |
| 1171 | 44°59.6' | 54°37.8' | 45.0° | 54.6° | 1.3 | 0.4 | -1.3 |
| 1177 | 46°06.9' | 52°14.1' | 45.7° | 77.8°E | * | * | * |
| 1178 | 46°25.0' | 52°10.6' | 45.7° | 55.1° | * | * | * |
| 1179 | 46°43.8' | 52°06.9' | 45.6° | 55.1° | * | * | * |
| 1184 | 48°20.3' | 51°50.2' | 45.6° | 55.1° | * | * | * |
| 1213 | 56°39.4' | 50°30.9' | NOT AVAILABLE | | * | * | * |
| 1214 | 57°05.8' | 50°26.0' | " | " | * | * | * |
| 1221 | 59°17.3' | 50°02.0' | " | " | * | * | * |
| 1222 | 59°38.1' | 49°56.3' | " | " | * | * | * |

*Edge of reception for the particular LORAN receiver employed.

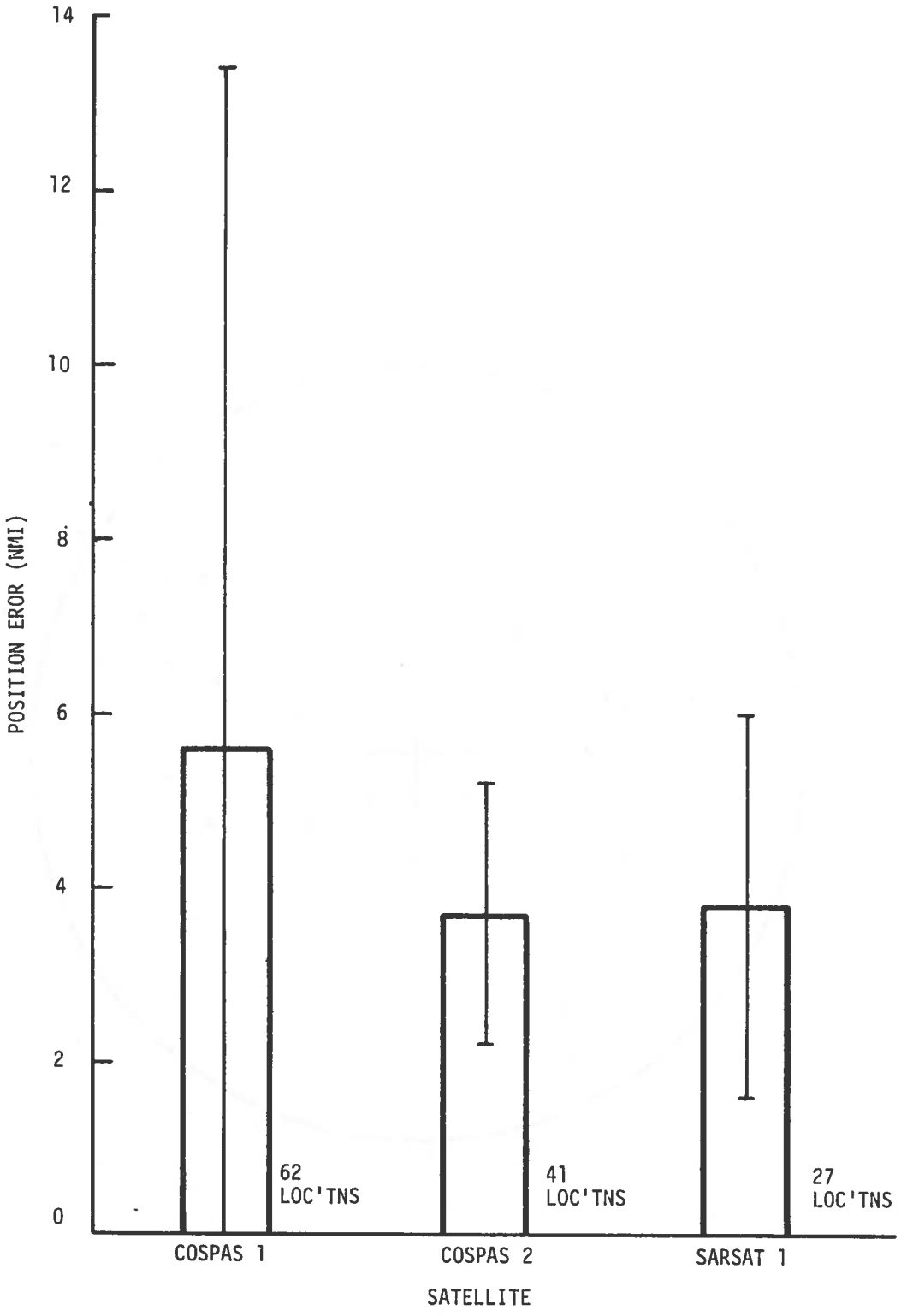


FIGURE A-5. MEAN AND STANDARD ERRORS OF POSITION ERROR VERSUS SATELLITE

percent of the cases should have errors falling within the error ellipse. The value obtained from the Toulouse LUT messages, 44 percent, is an excellent agreement with this expectation. More over, the French LUT output clearly states the ellipse parameters as semi-major and semi-minor axes, so that no uncertainty exists about their meaning.

The Global Mode accuracy is shown in Table A-9 for COSPAS 1. These data were received at the Toulouse LUT. The 6.6 nm mean error and 10.4 nm standard deviation are not at all inconsistent with the mean and standard deviation shown in Table A-7 for COSPAS 1. It appears therefore that, as expected, the Global Mode has about the same accuracy as the Regional Mode for COSPAS 1.

## A.5 SECOND STATIC TESTS

These tests were conducted from 9 August to 25 August 1930. Each test involved the activation of one 121.5/243.0-MHz beacon and one 406-MHz beacon. Fifty-five tests were carried out of which forty are considered valid tests. A number of tests were considered invalid because the LUT tracked a different satellite than the one desired or because the LUT was down during testing. The Scott LUT was down for 6 of the Marshfield tests, 10, 11, and 12 August 1983.

The results of the static tests are summarized in Table A-11 for 121.5-MHz and in Table A-12 for 406-MHz. Detailed outputs of the error analysis program are given in Appendix B.

## A.6 GULF OF ALASKA (FIREBUSH) TESTS

These tests were performed during the period 25-31 August 1983, by the USCG cutter FIREBUSH off the southeast coast of Kodiak Island, Alaska. As with the static tests, only COSPAS II and SARSAT I passes were planned, but a few COSPAS I passes were also detected.

For each test, one 121.5-MHz and two 406-MHz EPIRBs were activated (see Figure A-7). In addition to the standard 406-MHz EPIRB (designated "P") used in all previous tests, which utilizes a whip antenna, an alternative design (designated "H") incorporating a circularly polarized antenna and an articulated design to improve floating characteristics, was tested simultaneoulsy. Power measurements, ship's position, and time were recorded at beacon turn-on and turn-off. Beacons

TABLE A-12. SUMMARY OF SECOND STATIC TESTS - 406-MHz

| TEST DATES | MARSHFIELD 9-12 AUG | PT. REYES 16-18 AUG | KODIAK 22-25 AUG | ALL LUTS 9-25 AUG |
|---|---|---|---|---|
| NO. OF VALID ACTIVATIONS | 5 | 15 | 20 | 40 |
| POSITONS LOCATED | 5 | 12 | 15 | 32 |
| POSITIONS NOT LOCATED | 0 | 3 | 5 | 8 |
| LOCATION PROBABILITY | 100% | 80% | 75% | 80% |
| MEAN LOCATION ERROR | 2.3 NMI | 2.1 NMI | 4.5 NMI | 3.3 NMI |
| S DEV LOCATION ERROR | 2.2 NMI | 2.0 NMI | 6.6 NMI | 4.4 NMI |
| A-POSITION PROBABILITY | 100% | 100% | 87% | 94% |
| LOCATIONS IN ERROR ELLIPSE | 0 | 1 | 0 | 1 |
| C2 SAT. ONLY | | | | |
| POSITIONS LOCATED | 3 | 7 | 7 | 17 |
| POSITONS NOT LOCATED | 0 | 0 | 5 | 5 |
| LOCATION PROBABILITY | 100% | 100% | 58% | 77% |
| MEAN LOCATION ERROR | 3.6 NMI | 2.5 NMI | 7.7 NMI | 4.9 NMI |
| S DEV LOCATION ERROR | 2.0 NMI | 2.5 NMI | 8.2 NMI | 5.3 NMI |
| A-POSITION PROBABILITY | 100% | 100% | 71% | 88% |
| LOCATIONS IN ERROR ELLIPSE | 0 | 1 | 0 | 1 |
| S1 SAT. ONLY | | | | |
| POSITIONS LOCATED | 2 | 5 | 8 | 15 |
| POSITIONS NOT LOCATED | 0 | 3 | 0 | 3 |
| LOCATION PROBABILITY | 100% | 62% | 100% | 83% |
| MEAN LOCATION ERROR | .4 NMI | 1.6 NMI | 1.7 NMI | 1.5 NMI |
| S DEV LOCATION ERROR | .2 NMI | .9 NMI | 2.3 NMI | 1.8 NMI |
| A-POSITION PROBABILITY | 100% | 100% | 100% | 100% |
| LOCATIONS IN ERROR ELLIPSE | 0 | 0 | 0 | 0 |

were deployed in the water thirty minutes prior to the beginning of satellite visibility to allow sufficient temperature stabilization time.

The results of the FIREBUSH tests are given in Appendix B, and summarized in Table A-13. Approximately one half of the test activations were detected by the Kodiak LUT and one half by the Pt. Reyes LUT.

## A.7 WESTWIND TESTS

### A.7.1 Objectives

The purpose of the tests on board the WESTWIND was to demonstrate the ability of the COSPAS/SARSAT system to detect, transmit and locate 406-MHz beacons outside of the direct LUT coverage areas. This is provided for under the COSPAS/SARSAT Global Mode. The system is designed to receive 406-MHz coded transmissions anywhere on the globe; to derive the Doppler shift and to store it with the beacon digital message; and to dump these data to a ground station when one comes in view. The COSPAS satellites dump their Global Mode data to any LUT; the SARSAT satellite dumps to the NOAA Command and Data Acquisition (CDA) stations at Wallops Island, VA, and Gilmore Creek, AK, from which it is forwarded to the USMCC. The beacon position is calculated by the LUT for COSPAS dumps, and by the USMCC for SARSAT dumps. The WESTWIND tests, therefore, were intended to demonstrate the entire Global Mode system from beacon transmission to satellite, LUT and USMCC.

### A.7.2 Test Methodology

The general approach was to place a set of 406-MHz beacons on board the Coast Guard icebreaker WESTWIND, which carried them on its scheduled tour from Mobile AL through the Panama Canal and the Straits of Magellan to the Weddell Sea in Antarctica (latitude 60°-70° S) and subsequent return to Mobile along the east coast of South America.

Two 406-MHz beacons were located in the WESTWIND radio bridge, with cable to a short whip antenna clamped to the external railing. The beacons were alternately charged for 24 hours and activated for 24 hours, so that one beacon was transmitting at any one time during the voyage. Gaps in transmission were expected briefly at switch-over times and for more extended periods when the vessel was in port. See Table A-14.

TABLE A-14. WESTWIND GENERAL INFORMATION

| | |
|---|---|
| Voyage Dates | 10/5/83 - 2/25/84 |
| Test Dates | 10/5/83 - 1/8/84<br>1/19/84 - 2/15/84 |
| Test Frequency | 406 MHz |
| Beacon ID's | CGEPRB07 (BABC2DAB335C)<br>CGEPRB08 (BABC2DAB334C) |
| Beacon Type | Proteon |
| LUT Receiving<br>Transmission | SCOTT<br>SCOTT AFB, IL |

### A.7.4 Error Analysis

Given the SARSAT positions obtained from the Scott LUT log, and the beacon positions interpolated from the WESTWIND log, it was possible to estimate the errors in the COSPAS/SARSAT positions. These are shown in Appendix B and summarized in Table A-16. This table shows the position error statistics for 237 locations calculated during the WESTWIND voyage.

Table A-16 shows an average error magnitude of 6.6 nm for the Global Mode and 8.1 nm for the Regional Mode. This is slightly greater than what was obtained on previous tests. This difference may be due to the error introduced by straight-line interpolation of the ship's position between points of the WESTWIND log. The position accuracies obtained in the WESTWIND tests are not considered good indicators of 406-MHz location accuracy in either the Regional or Global Mode.

The A-Position probability shown in Table A-16 is consistent with previous results. The location probability was not calculated for these tests because the individual beacon activations were not verified and the LUT logs were not scanned to verify tracking.

### A.7.5 Conclusions from WESTWIND Tests

The WESTWIND tests successfully demonstrated the ability of the COSPAS/SARSAT system to detect and locate 406-MHz beacons as far south as latitude 60° South. This is considered a considerable extension of search and rescue capability to regions of the globe that hitherto had very poor aircraft or radio distress monitoring capability. Although the Global Mode demonstration was limited to COSPAS satellites, SARSAT Regional Mode coverage was found to extend as far south as latitude 9° N. A-Position probabilities were found to be consistently above 90 percent. The results for accuracy are not considered good indicators because of errors in interpolation of ship's position.

## A.8 SECOND NANTUCKET (LIGHTSHIP) TESTS

The NANTUCKET lightships served a second time as platforms for testing during February 1984 off the coast of Massachusetts. Tests were performed using 121.5-MHz beacons and three different 406-MHz beacon designs; the Proteon and Hazeltine units used in previous tests, and the unit manufactured by A. S. Jotron

Elektronikk of Norway. the purpose of the tests was to compare satellite performance and determine differences in 406-MHz beacon performance. The tests were conducted off the lightships NANTUCKET I and II from 6 to 24 February 1984. The test procedure was similar to that for the First NANTUCKET Tests one year prior.

A detailed listing of the error analysis of the tests is given in Appendix B. A summary is given in Table A-17.

### A.8.1 Performance at 121.5-MHz

The 121.5-MHz mean location error of 4.9 nm is a substantial improvement over the 12.7 nm obtained one year earlier in the First Nantucket Tests. A-Position probability and location probability are also improved over the year earlier values. In general, the Second Nantucket Tests show excellent performance at 121.5-MHz, the error magnitudes and standard deviation being about twice those of the 406-MHz units. A remaining question is whether comparable results can be obtained with EPIRBs of brands other than the test EPIRB, the Martech Mako. The Martech unit was chosen because of its above-average spectrum characteristics. The effect on accuracy and location probability of spectrum irregularities known to exist in other units presently in operational service must be determined.

### A.8.2 Performance at 406-MHz

Table A-17 presents a comparison of the performance of three types of 406-MHz EPIRBs and a 121.5-MHz Martech Mako EPIRB based on data from the Second Nantucket Tests.

The Hazeltine EPIRBs showed the best accuracy in the relatively low number of tests for which they were operational. While 15 valid tests are not considered to be a large enough sample on which to base firm conclusions, the circularly polarized antenna design seems promising if it could be utilized without the failure-prone articulated packaging design.

The Jotron EPIRB performed well, and was very dependable, being available for all tests. The performance of this EPIRB may have been slightly compromised by the fact that one bit of its message was in error and may have resulted in some lost data points in the LUT error checking software.

The performance of the Proteon EPIRB was also quite acceptable. It should be pointed out that the Proteon and Hazeltine test EPIRBs were designed solely for the purposes of the D&E and in no way represent designs that could be produced in quantity or deployed efficiently as operational EPIRBs. The Jotron unit, while expensive in the small quantities now being sold, was designed as an operational EPIRB and built to a high standard of quality. The units purchased for the D&E testing cost approximately $3500 each.

Some insight into the functioning of the 406-MHz system can be obtained from the following comparison among the three beacons:

| Beacon Type | Average Number of Points received per Pass | Mean Location Error | A-Position Probability | Location Probability |
|---|---|---|---|---|
| Hazeltine | 12.0 | 1.2 | 100 | 100 |
| Proteon | 8.3 | 4.3 | 76 | 85 |
| Jotron | 7.1 | 2.0 | 91 | 85 |

The average number of points received from the Hazeltine beacon, per satellite pass, exceeds that for the Proteon and Jotron models. This may in part explain the higher location and A-Position probabilities as well as the lower position error for the Hazeltine beacon.

## A.9 LOCATION PROBABILITY TESTS

Tests of the 406-MHz beacons by the U.S. Coast Guard and TSC during the first year of the SARSAT D&E yielded location probabilities in the range 65-85 percent. The 121.5/243.0-MHz beacons, activated in these tests simultaneously with the 406-MHz beacons, showed location probabilities in the 80-95 percent range. These results were obtained in both land and at-sea tests in the Regional Mode.

Analysis of 406-MHz accuracy versus number of points employed in the location calculation indicated that accuracy degrades rapidly as the number of processed points is reduced below six (Reference 12, page 7-29). Moreover, the algorithm does not usually calculate a solution with fewer than four points; obviously no solution is possible with fewer than one point. Since loss in accuracy is produced by the same mechanism as is loss of location probability (i.e., reduction in the number of points available for a solution), it was clear that tests were

TABLE A-18. SCHEDULED LOCATION PROBABILITY TESTS

| TEST NUMBERS | DATE 1984 | SATELLITE | ORBIT NUMBER | TCA EDT | PEAK ELEVATION |
|---|---|---|---|---|---|
| 1 | 5/21 | S1 | D 5969 | 0926 | 58.7 degrees |
| 2 | | C2 | D 5814 | 0931 | 22.4 |
| 3 | | C2 | D 5815 | 1117 | 49.1 |
| 4 | | C1 | A 9459 | 1713 | 49.8 |
| 5 | | C1 | A 9460 | 1900 | 23.4 |
| 6 | | S1 | A 5975 | 1906 | 22.3 |
| 7 | | S1 | A 5976 | 2046 | 43.4 |
| 8 | | C2 | A 5822 | 2300 | 57.7 |
| 9 | 5/22 | C2 | A 5823 | 0046 | 20.4 |
| 10 | | C1 | D 9465 | 0416 | 40.2 |
| 11 | | C1 | D 9466 | 0601 | 27.3 |
| 12 | | S1 | D 5983 | 0905 | 87.0 |
| 13 | | C2 | D 5828 | 1000 | 43.5 |
| 14 | | S1 | D 5984 | 1044 | 11.2 |
| 15 | | C2 | D 5829 | 1145 | 24.6 |
| 16 | | C1 | A 9472 | 1603 | 14.3 |
| 17 | | C1 | A 9473 | 1748 | 76.3 |
| 18 | | S1 | A 5989 | 1845 | 14.3 |
| 19 | | S1 | A 5990 | 2024 | 70.7 |
| 20 | | C2 | A 5835 | 2144 | 14.8 |
| 21 | | C2 | A 5836 | 2329 | 74.7 |
| 22 | 5/23 | C1 | D 9478 | 0304 | 11.6 |
| 23 | | C1 | D 9479 | 0451 | 88.5 |
| 24 | | C1 | D 9480 | 0636 | 11.2 |
| 25 | | C2 | D 5841 | 0842 | 10.9 |
| 26 | | S1 | D 5997 | 0843 | 54.0 |
| 27 | | S1 | D 5998 | 1023 | 18.0 |
| 28 | | C2 | D 5842 | 1028 | 85.7 |
| 29 | | C2 | D 5843 | 1213 | 11.5 |
| 30 | | C1 | A 9486 | 1638 | 32.8 |
| 31 | | C1 | A 9487 | 1824 | 34.8 |

A.9.2 Results - 406-MHz

The results of the Location Probability Tests are given in Appendix B and summarized in Table A-19.

The 406-MHz tests yielded a mean location accuracy of 2.1 nm with standard deviation of 2.9 nm. The accuracy did not vary appreciably from satellite to satellite. The X-track and Y-track positions showed mean offsets of -0.7 and -0.4 nm with standard deviations of 3.1 and 1.5 nm. These results are slightly better than were obtained in previous tests.

The 406-MHz location probability (the main objective of the tests) was obtained as 91 percent for all satellites together. COSPAS I was slightly lower, and COSPAS II slightly higher, than SARSAT I in regard to location probability. But all three showed location probability definitely above previous USCG/TSC results, and similar to other NASA and CNES tests.

The result of the 406-MHz location probability data in Table A-19 is to narrow down the list of possible sources of burst message loss for at-sea tests.

1. Beacon operation was checked carefully in these tests. It remains as a possible source of message loss in previous tests, particularly those that were conducted at sea.

2. Environmental conditions at the test site were carefully controlled in these tests. They may have been a source of message loss in previous at-sea tests.

3. Satellite reception and retransmision was essentially the same as for previous at sea tests.

4. LUT reception and filtering may have been different in previous tests, which were conducted at other LUTs. The variation from LUT to LUT is negligible, given the same software, so that the possibility remaining is that the software used for previous tests performed differently than that used for the location probability tests.

5. LUT calculation remains as a source of message loss in the same sense as (4), LUT reception and filtering, and for the same reasons.

6. Geometric conditions at previous tests, particularly those at Marshfield, Nantucket and Georges Bank (Fisheries) were different in that the test locations were more remote from the LUT than in these location probability tests. Therefore, the remote geometry remains as a possible explanation for previously lower location probabilities.

A.9.2 Results - 121.5/243.0-MHz

The 121.5-MHz results of Table A-19 indicate a location accuracy of 7.3 nm and location probability of about 75 percent.

The location accuracy is substantially better than had been obtained in early tests (15-30 nm). It is about the same as had been obtained in the later 121.5-MHz tests off the lightship NANTUCKET and at Pt. Reyes and Kodiak. The location probability tests, however, were performed with an artificial ground plane and may not be typical of the previous tests. Nevertheless, these location probability tests, coupled with the 121.5 tests done in the later part of the D&E, provide evidence that the 121.5-MHz system accuracy is approximately 6.0-8.0 nm.

The 243.0-MHz data of Table A-19 shows position errors of about 10.0 nm and location probability of about 55 percent. Although this is substantially less than for 121.5-MHz, it is still surprisingly good, since the 243.0-MHz signal is approximately 20 mW and is intended for homing only. Moreover, the 243.0-MHz signals add to the location probability of the 121.-MHz beacon. If the location probabilities for the two signals are assumed to be independent (an assumption that is not completely valid for real situations) then the probability of location "PL" for a beacon radiating both signals is:

$$PL = P1 + P2 - (P1)(P2)$$

where P1 is the 121.5 location probability and P2 is the 243 location probability. Using the data of Table A-19 gives

$$PL = 88\%$$

This can be considered an upper limit for the combined 121.5/243.0-MHz location probability in the tests, since any positive dependence of the signals would reduce the location probability.

10. Trudell, B., et al., "Search and Rescue Satellite-Aided Tracking System," 1980 Annual Meeting American Astronautical Society, Paper 80-204, October 20-23, Boston, MA.

# APPENDIX B

# CONTROLLED TEST ERROR ANALYSIS

TABLE B-1. LIST OF CONTROLLED TEST ERROR ANALYSIS PRINT-OUTS

| TEST NAME | BEACON FREQ | BEACON TYPE | LUT NUMBER* | SATELLITES* C1 | C2 | S1 | S2 | TEST TYPE* | FILE NAME |
|---|---|---|---|---|---|---|---|---|---|
| MARSHFIELD 1 | 121 | M | 1,2,4 | o | - | - | - | L | PERROR.MAR.121.00.00 |
| NANTUCKET | 121 | M | 1,2,4 | o | - | - | - | F | PERROR.NAN.121.00.00 |
| PT. REYES 1 | 121 | M | 1,2,3 | o | - | - | - | L | PERROR.PTR.121.00.00 |
| KODIAK 1 | 121 | M | 2,3 | o | - | - | - | L | PERROR.KOD.121.00.00 |
| FISHERIES | 121 | M | 1,4 | o | - | - | - | F | PERROR.FSH.121.00.00 |
| PT. REYES 2 | 121 | M | 2 | - | o | o | - | L | PERROR.PT2.121.00.00 |
| KODIAK 2 | 121 | M | 3 | - | o | o | - | L | PERROR.KO2.121.00.00 |
| MARSHFIELD 2 | 121 | M | 1 | - | o | o | - | L | PERROR.MA2.121.00.00 |
| FIREBUSH | 121 | M | 2,3 | o | o | o | - | F | PERROR.FRB.121.00.00 |
| LIGHTSHIP | 121 | M | 1,4 | o | o | o | - | F | PERROR.LSH.121.00.00 |
| " | 121 | M | 1,4 | o | - | - | - | F | PERROR.LSH.121.C1.00 |

*NOTE: LUTs: 1=Scott AFB; 2=Pt. Reyes; 3=Kodiak; 4=SEDL; 20 = Toulouse
Satellites: C1, C2 = COSPAS 1 and 2; S1, S2 = SARSAT 1 and 2
(o) = Satellite ID
(-) = No Satellite ID
Test Type: F=Floating test; L=Land test, D=Deck test
All tests in Regional Mode, unless otherwise noted as G
Beacon Type: M = Marteck, P = Proteon, H = Hazeltine, T = Jotron

TABLE B-1. LIST OF CONTROLLED TEST ERROR ANALYSIS PRINT-OUTS (Cont'd)

| TEST NAME | BEACON FREQ | BEACON TYPE | LUT NUMBER | SATELLITES C1 | C2 | S1 | S2 | TEST TYPE | FILE NAME |
|---|---|---|---|---|---|---|---|---|---|
| PT. REYES 2 | 406 | P | 2 | - | - | o | - | L | PERROR.PT2.406.S1.00 |
| KODIAK 2 | 406 | P | 3 | - | o | o | - | L | PERROR.KOD.406.00.00 |
| " | 406 | P | 3 | - | o | - | - | L | PERROR.KOD.406.C2.00 |
| " | 406 | P | 3 | - | - | o | - | L | PERROR.KOD.406.S1.00 |
| MARSHFIELD 2 | 406 | P | 1 | - | o | o | - | L | PERROR.MA2.406.00.00 |
| FIREBUSH | 406 | H,P | 2,3 | o | o | o | - | F | PERROR.FRB.406.00.00 |
| " | 406 | H,P | 2,3 | o | - | - | - | F | PERROR.FRB.406.C1.00 |
| " | 406 | H,P | 2,3 | - | o | - | - | F | PERROR.FRB.406.C2.00 |
| " | 406 | H,P | 2,3 | - | - | o | - | F | PERROR.FRB.406.S1.00 |
| FIREBUSH | 406 | H | 2,3 | - | o | o | - | F | PERROR.FRB.4H6.00.00 |
| FIREBUSH | 406 | P | 2,3 | - | o | o | - | F | PERROR.FRB.4P6.00.00 |
| WESTWIND | 406 | H | 1 | o | o | o | - | D | PERROR.WWD.406.00.00 |
| " | 406 | P | 1 | o | - | - | - | D | PERROR.WWD.406.C1.00 |
| " | 406 | P | 1 | - | o | - | - | D | PERROR.WWD.406.C2.00 |
| " | 406 | P | 1 G* | o | o | - | - | D | PERROR.WWD.4G6.00.00 |

*Note: (G)=Global Mode.

## TABLE B-2. DEFINITION OF COLUMN HEADINGS - PERROR OUTPUT

| | |
|---|---|
| BCN | Beacon Frequency and Type (See Notes to Table B-1.) |
| TEST NUM | Test number assigned by TSC |
| SEA HT | Mean wave height, feet, as recorded by Coast Guard |
| SAT ID | See Notes to Table B-1 |
| LUT NUM | See Notes to Table B-1 |
| EVT NUM | Event number assigned by LUT sequentially to solutions |
| NUM PTS | Number of points employed in 406 solution, as indicated on LUT alert message |
| TCA YRDAY | Year and Julian day number of Time of Closest Approach (TCA) of satellite to beacon |
| GMT HHMM | GMT of TCA |
| POSITION ERROR | Magnitude (NM) and direction (DEG) from true north of SARSAT location relative to true location of beacon |
| X-TRK | Component perpendicular to satellite ground track of SARSAT location relative to time location of beacon, positive to right of direction of satellite travel |
| Y-TRK | Component parallel to satellite ground track of SARSAT location |
| A B C | Real (A) or Image (B) indicated message; or (C) no location calculated |
| PKEL | Peak elevation angle of satellite at the beacon during test pass |
| CTA | Earth central angle between beacon location and satellite orbital plane |
| THETA | Direction of satellite ground track relative to true north at TCA |
| BUIS | Minutes of satellite visibility at beacon during pass, based on minimum visibility angle of 10 degrees at beacon |

SLIST PERROR.MAR.121.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
MARSHFIELD TEST 1
1 FEBRUARY 1983 - 3 FEBRUARY 1983

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CIA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | 1002 | 0 | C01 | 2962 | 4 | 5 | 0 | 0 | 0 | 54.1 | -133 | 45.5 | 29.2 | C | 19 | -16.4 | 149 | 9 | 14 | 9 | 0.11 |
| 121 | 1004 | 0 | C01 | 2963 | 4 | 1 | 0 | 0 | 0 | 7.3 | 152 | -2.2 | 7.0 | A | 69 | 2.7 | 170 | 13 | 18 | 13 | 0.22 |
| 121 | 1004 | 0 | C01 | 2963 | 1 | 1 | 0 | 83032 | 1515 | 7.9 | 123 | -5.8 | 5.3 | B | 69 | 2.7 | 170 | 13 | 17 | 13 | 0.23 |
| 121 | 1006 | 0 | C01 | 2964 | 1 | | | | | | | | | C | 9 | 22.1 | 169 | 13 | 17 | 13 | 1.11 |
| 121 | 1012 | 0 | C01 | 2976 | 1 | 1 | 0 | 83033 | 1404 | 24.2 | -124 | 22.1 | 9.8 | A | 39 | -9.0 | 169 | 12 | 12 | 11 | 0.27 |
| 121 | 1012 | 0 | C01 | 2976 | 4 | 3 | 0 | 83033 | 1404 | 4.5 | -151 | 2.8 | 3.5 | A | 39 | -9.0 | 169 | 12 | 16 | 12 | 0.33 |
| 121 | 1014 | 0 | C01 | 2977 | 1 | 4 | 0 | 83033 | 1550 | 11.9 | -88 | 11.7 | -2.1 | B | 33 | 10.5 | 170 | 12 | 18 | 12 | 0.17 |
| 121 | 1014 | 0 | C01 | 2977 | 4 | 4 | 0 | 83933 | 1550 | 6.2 | -104 | 6.2 | 0.5 | B | 33 | 10.5 | 170 | 12 | 18 | 12 | 0.17 |
| 121 | 1018 | 0 | C01 | 2984 | 1 | 3 | 0 | 83034 | 340 | 72.4 | -83 | -72.1 | -3.0 | C | 81 | 0.4 | 9 | 13 | 16 | 13 | 0.23 |
| 121 | 1020 | 0 | C01 | 2985 | 4 | 15 | 0 | 83034 | 527 | 29.6 | 124 | 26.9 | -12.5 | A | 15 | -18.4 | 9 | 7 | 16 | 7 | 0.43 |
| 121 | 1020 | 0 | C01 | 2985 | 1 | 20 | 0 | 83034 | 527 | 30.1 | 132 | 25.3 | -16.2 | A | 15 | -18.4 | 9 | 7 | 19 | 7 | 0.43 |
| 121 | 1024 | 0 | C01 | 2990 | 1 | 8 | 0 | 83034 | 1440 | 4.3 | 145 | -1.8 | 3.9 | A | 79 | -1.4 | 170 | 13 | 16 | 13 | 0.23 |
| 121 | 1026 | 0 | C01 | 2991 | 1 | 7 | 0 | 83034 | 1625 | 12.5 | -179 | 2.2 | 12.3 | B | 15 | 18.2 | 170 | 7 | 18 | 7 | 0.14 |
| 121 | 1026 | 0 | C01 | 2991 | 2 | 3 | 0 | 83034 | 1625 | 3.2 | 130 | -2.1 | 2.5 | A | 15 | 18.2 | 170 | 7 | 13 | 7 | 0.14 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 12.9 | 1.9 | -7.7 | 7.8 | 1.2 | 0.0 | 63.6 | 78.6 |
| STD DEVTN | 9.7 | 12.4 | 6.6 | 11.4 | 8.3 | | | |

11 BEACON TESTS  11 POSITIONS LOCATED  3 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS - 0.00

OK,

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | COA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | 4098 | 3 | C01 | 3290 | 4 | 5 | 0 | 83056 | 1328 | 3.2 | -167 | 1.2 | 2.9 | A | 25 | 13.6 | 170 | 10 | 18 | 10 | 0.40 |
| 121 | 4098 | 3 | C01 | 3290 | 1 | 2 | 0 | 83056 | 1328 | 1.3 | 151 | -0.4 | 1.2 | A | 25 | 13.6 | 170 | 10 | 18 | 10 | 0.40 |
| 121 | 4100 | 30 | C01 | 3303 | 4 | 3 | 0 | 83057 | 1217 | 7.1 | 128 | -4.8 | 5.3 | B | 78 | 1.6 | 170 | 13 | 18 | 13 | 0.23 |
| 121 | 4100 | 30 | C01 | 3303 | 1 | 1 | 0 | 83057 | 1217 | 6.4 | 104 | -5.9 | 2.6 | A | 78 | 1.6 | 170 | 13 | 16 | 13 | 0.23 |
| 121 | 4104 | 6 | C01 | 3317 | 4 | 4 | 0 | 83058 | 1252 | 5.7 | -162 | 2.5 | 5.1 | A | 37 | 9.5 | 170 | 12 | 18 | 12 | 0.33 |
| 121 | 4106 | 2 | C01 | 3331 | 4 | 5 | 0 | 83059 | 1327 | 15.8 | -75 | 14.4 | -6.5 | A | 17 | 17.5 | 170 | 7 | 16 | 7 | 0.43 |
| 121 | 4106 | 2 | C01 | 3331 | 1 | 1 | 0 | 83059 | 1327 | 15.6 | -66 | 13.0 | -8.6 | A | 17 | 17.5 | 170 | 7 | 18 | 7 | 0.43 |
| 121 | 4108 | 2 | C01 | 3344 | 4 | 2 | 0 | 83060 | 1217 | 0.9 | -159 | 0.4 | 0.7 | A | 55 | 5.4 | 170 | 13 | 18 | 13 | 0.23 |
| 121 | 4110 | 12 | C01 | 3358 | 1 | 1 | 0 | 83061 | 1252 | 3.2 | 119 | -2.5 | 2.0 | A | 25 | 13.4 | 170 | 11 | 18 | 11 | 0.27 |
| 121 | 4114 | 6 | C01 | 3385 | 1 | 8 | 0 | 83063 | 1217 | 3.7 | 94 | -3.6 | 0.9 | A | 38 | 9.2 | 170 | 12 | 18 | 12 | 0.33 |
| 121 | 4116 | 2 | C01 | 3399 | 1 | 13 | 0 | 83064 | 1251 | 4.2 | -126 | 3.8 | 1.9 | A | 17 | 17.2 | 170 | 9 | 18 | 9 | 0.33 |
| 121 | 4118 | 3 | C01 | 3426 | 1 | 3 | 0 | 83066 | 1216 | 1.6 | -104 | 1.6 | 0.1 | A | 26 | 13.1 | 170 | 11 | 18 | 11 | 0.27 |
| 121 | 4124 | 13 | C01 | 3500 | 4 | 1 | 0 | 83071 | 2144 | 11.4 | 22 | 2.7 | 11.1 | B | 16 | 18.0 | 9 | 7 | 11 | 7 | 0.14 |
| 121 | 4126 | 14 | C01 | 3508 | 1 | | | | | | | | | C | 11 | 20.8 | 170 | 4 | 18 | 4 | 0.50 |
| 121 | 4128 | 7 | C01 | 3527 | 4 | | | | | | | | | C | 9 | 22.1 | 9 | 4 | 8 | 4 | 1.00 |
| 121 | 4134 | 7 | C01 | 3582 | 1 | | | | | | | | | C | 34 | 10.3 | 9 | 11 | 9 | 9 | 0.33 |
| 121 | 4136 | 15 | C01 | 3595 | 4 | | | | | | | | | C | 9 | 22.3 | 9 | 11 | 9 | 9 | 1.00 |
| 121 | 4172 | 10 | C01 | 3786 | 1 | 3 | 0 | 83092 | 1955 | 4.9 | -160 | -0.9 | -4.8 | B | 31 | 11.1 | 8 | 11 | 9 | 9 | 0.33 |
| 121 | 4174 | 8 | C01 | 3787 | 1 | 1 | 0 | 83092 | 2141 | 9.7 | -9 | -3.2 | 9.2 | A | 38 | 9.0 | 9 | 12 | 18 | 12 | 0.17 |
| 121 | 4176 | 6 | C01 | 3800 | 1 | 1 | 0 | 83093 | 2030 | 3.3 | -42 | -2.5 | 2.0 | A | 68 | 3.1 | 8 | 13 | 14 | 13 | 0.23 |
| 121 | 4180 | 4 | C01 | 3814 | 1 | 2 | 0 | 83094 | 2106 | 2.9 | 25 | 0.8 | 2.8 | A | 57 | 4.9 | 9 | 13 | 17 | 13 | 0.08 |
| 121 | 4182 | 3 | C01 | 3827 | 1 | 3 | 0 | 83095 | 1955 | 5.0 | 42 | 2.7 | 4.2 | A | 46 | 7.2 | 9 | 13 | 12 | 12 | 0.17 |
| 121 | 4184 | 3 | C01 | 3828 | 1 | 2 | 0 | 83095 | 2141 | 12.3 | -86 | -12.3 | -1.3 | B | 27 | 12.7 | 9 | 11 | 18 | 11 | 0.27 |
| 121 | 4186 | 1 | C01 | 3841 | 4 | 2 | 0 | 83096 | 2030 | 17.3 | -52 | -15.2 | 8.2 | A | 13 | 19.3 | 9 | 6 | 10 | 6 | 0.33 |
| 121 | 4188 | 1 | C01 | 3841 | 1 | 1 | 0 | 83096 | 2030 | 15.5 | -63 | -14.8 | 4.7 | B | 84 | 0.8 | 9 | 13 | 16 | 13 | 0.23 |
| 121 | 4190 | 0 | C01 | 3854 | 1 | 3 | 0 | 83097 | 1920 | 37.4 | -93 | -36.5 | -8.2 | B | 31 | 11.4 | 9 | 11 | 8 | 8 | 0.50 |
| 121 | 4192 | 0 | C01 | 3855 | 1 | 4 | 0 | 83097 | 2105 | 39.5 | 103 | 39.4 | -2.6 | A | 39 | 8.7 | 9 | 12 | 18 | 12 | 0.17 |
| 121 | 4194 | 2 | C01 | 3868 | 1 | 1 | 0 | 83098 | 1955 | 8.4 | 69 | 7.3 | 4.1 | B | 66 | 3.4 | 9 | 13 | 14 | 13 | 0.23 |
| 121 | 4196 | 5 | C01 | 3869 | 1 | | | | | | | | | C | 19 | 16.3 | 9 | 9 | 18 | 9 | 0.11 |
| 121 | 4198 | 5 | C01 | 3881 | 4 | | | | | | | | | C | 20 | 15.5 | 9 | 9 | 13 | 9 | 0.33 |
| 121 | 4200 | 8 | C01 | 3882 | 1 | | | | | | | | | C | 59 | 4.6 | 9 | 13 | 17 | 13 | 0.08 |
| 121 | 4202 | 10 | C01 | 3895 | 1 | 4 | 0 | 83100 | 1919 | 5.5 | 1 | -0.7 | 5.5 | A | 44 | 7.5 | 9 | 13 | 11 | 11 | 0.27 |
| 121 | 4204 | 10 | C01 | 3896 | 1 | 11 | 0 | 83100 | 2105 | 13.8 | 87 | 13.5 | 2.9 | A | 28 | 12.4 | 9 | 11 | 18 | 11 | 0.27 |
| 121 | 4208 | 8 | C01 | 3909 | 1 | | | | | | | | | C | 85 | 0.6 | 9 | 13 | 16 | 13 | 0.23 |
| 121 | 4212 | 4 | C01 | 3922 | 1 | 3 | 0 | 83102 | 1844 | 12.3 | -82 | -12.4 | -0.2 | A | 30 | 11.6 | 9 | 11 | 8 | 8 | 0.50 |
| 121 | 4214 | 6 | C01 | 3923 | 1 | 10 | 0 | 83102 | 2030 | 8.3 | -11 | -3.0 | 7.7 | A | 40 | 8.5 | 9 | 12 | 18 | 12 | 0.17 |
| 121 | 4216 | 3 | C01 | 3936 | 1 | 4 | 0 | 83103 | 1919 | 6.1 | 37 | 2.9 | 5.3 | A | 65 | 3.6 | 8 | 13 | 14 | 13 | 0.23 |
| 121 | 4218 | 3 | C01 | 3937 | 1 | 15 | 0 | 83103 | 2105 | 20.5 | 84 | 19.7 | 5.4 | A | 19 | 16.1 | 9 | 9 | 18 | 9 | 0.11 |
| 121 | 4220 | 4 | C01 | 3949 | 4 | 2 | 0 | 83104 | 1809 | 27.5 | -68 | -26.8 | 6.1 | B | 20 | 15.8 | 9 | 9 | 13 | 9 | 0.33 |
| 121 | 4222 | 3 | C01 | 3950 | 1 | 9 | 0 | 83104 | 1954 | 56.5 | 86 | 55.1 | 12.6 | C | 60 | 4.4 | 9 | 13 | 17 | 13 | 0.08 |
| 121 | 4224 | 4 | C01 | 3963 | 1 | 2 | 0 | 83105 | 1843 | 13.5 | -82 | -13.5 | -0.4 | B | 43 | 7.8 | 9 | 13 | 11 | 11 | 0.27 |
| 121 | 4228 | 5 | C01 | 3976 | 4 | | | | | | | | | C | 13 | 19.8 | 9 | 6 | 10 | 6 | 0.33 |
| 121 | 4230 | 5 | C01 | 3977 | 1 | | | | | | | | | C | 87 | 0.4 | 9 | 13 | 16 | 13 | 0.23 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | Z IN ELLPSE | Z APROB | Z LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 12.2 | -0.2 | -3.4 | -0.3 | 5.1 | 1.3 | 70.9 | 79.8 |
| STD DEVTN | 10.8 | 13.9 | 7.8 | 13.8 | 7.1 | | | |

81 BEACON TESTS  79 POSITIONS LOCATED  20 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.00

OK,

SLIST PERROR.KOD.121.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
KODIAK TEST 1
15 FEBRUARY 1983 - 17 FEBRUARY 1983

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | 3002 | 0 | C01 | 3156 | 3 | 1 | 0 | 83046 | 1804 | 30.1 | -118 | 29.3 | 7.0 | B | 62 | 4.0 | 165 | 13 | 18 | 13 | 0.23 |
| 121 | 3002 | 0 | C01 | 3156 | 2 | 1 | 0 | 83046 | 1804 | 8.7 | -92 | 8.5 | -1.8 | A | 62 | 4.0 | 165 | 13 | 16 | 9 | 0.78 |
| 121 | 3004 | 0 | C01 | 3157 | 3 | 0 | 0 | 0 | 0 | 25.4 | 0 | -24.7 | 5.7 | B | 35 | 10.0 | 166 | 11 | 17 | 11 | 0.27 |
| 121 | 3006 | 0 | C01 | 3163 | 3 | 1 | 0 | 83047 | 604 | 46.9 | -97 | -43.8 | -16.8 | B | 20 | 15.7 | 13 | 9 | 16 | 9 | 0.11 |
| 121 | 3006 | 0 | C01 | 3163 | 2 | 2 | 0 | 83047 | 604 | 43.7 | -49 | -38.9 | 19.8 | B | 20 | 15.7 | 13 | 9 | 18 | 8 | 0.00 |
| 121 | 3008 | 0 | C01 | 3164 | 3 | 1 | 0 | 83047 | 749 | 18.0 | 86 | 17.3 | 4.9 | A | 78 | 1.6 | 12 | 13 | 18 | 13 | 0.23 |
| 121 | 3008 | 0 | C01 | 3164 | 2 | 1 | 0 | 83047 | 749 | 11.1 | -20 | -6.0 | 9.3 | B | 78 | 1.6 | 12 | 13 | 12 | 9 | 0.11 |
| 121 | 3012 | 0 | C01 | 3166 | 3 | | | | | | | | | C | 10 | 21.5 | 23 | 3 | 13 | 3 | 1.00 |
| 121 | 3014 | 0 | C01 | 3168 | 3 | | | | | | | | | C | 10 | 21.5 | 150 | 3 | 14 | 3 | 1.00 |
| 121 | 3018 | 0 | C01 | 3170 | 3 | 1 | 0 | 83047 | 1840 | 63.8 | 87 | -62.5 | 13.0 | C | 77 | 1.7 | 166 | 13 | 19 | 13 | 0.23 |
| 121 | 3018 | 0 | C01 | 3170 | 2 | 1 | 0 | 83047 | 1840 | 5.1 | -96 | 5.0 | -0.6 | B | 77 | 1.7 | 166 | 13 | 12 | 7 | 1.29 |
| 121 | 3020 | 0 | C01 | 3171 | 3 | 1 | 0 | 83047 | 2025 | 51.2 | 139 | -23.6 | 45.4 | C | 20 | 15.5 | 166 | 9 | 15 | 9 | 0.33 |
| 121 | 3024 | 0 | C01 | 3178 | 3 | 5 | 0 | 83048 | 824 | 6.1 | -36 | -4.6 | 4.0 | B | 63 | 3.9 | 12 | 13 | 18 | 13 | 0.23 |
| 121 | 3026 | 0 | C01 | 3179 | 3 | 3 | 0 | 83048 | 1012 | 8.9 | -43 | -7.6 | 4.6 | B | 19 | 16.1 | 15 | 9 | 16 | 9 | 0.33 |
| 121 | 3028 | 0 | C01 | 3182 | 2 | 14 | 0 | 83048 | 1541 | 30.2 | -136 | 26.9 | 13.8 | A | 15 | 18.2 | 160 | 8 | 17 | 4 | 1.50 |
| 121 | 3028 | 0 | C01 | 3182 | 3 | 1 | 0 | 83048 | 1541 | 43.6 | 6 | -18.6 | -39.4 | A | 15 | 18.2 | 160 | 8 | 15 | 8 | 0.25 |
| 121 | 3034 | 0 | C01 | 3185 | 3 | 1 | 0 | 83048 | 2059 | 43.5 | 3 | -12.9 | -41.5 | A | 11 | 20.9 | 165 | 4 | 13 | 4 | 1.00 |
| 121 | 3036 | 0 | C01 | 3190 | 3 | 1 | 0 | 83049 | 529 | 47.3 | -0 | -11.1 | 46.0 | A | 15 | 18.4 | 12 | 7 | 14 | 7 | 0.43 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 26.3 | -7.5 | 10.1 | -5.8 | 1.1 | 0.0 | 42.9 | 77.8 |
| STD DEVTN | 16.0 | 18.5 | 21.1 | 21.2 | 21.5 | | | |

13 BEACON TESTS  14 POSITIONS LOCATED  4 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.00

OK,

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SLIST PERROR.PT2.121.00.00
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SARSAT/COSPAS POSITION ERROR ANALYSIS
PT REYES TEST 2
16 AUGUST 1983 - 18 AUGUST 1983

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | 2101 | 0 | C02 | 1984 | 2 | 1 | 0 | 83228 | 1407 | 1.8 | -103 | -1.7 | -0.7 | B | 46 | 7.1 | 9 | 12 | 18 | 12 | 0.17 |
| 121 | 2102 | 0 | S01 | 2004 | 2 | 1 | 0 | 83228 | 1524 | 5.4 | 70 | -4.7 | -2.7 | B | 26 | 9.5 | -169 | 9 | 15 | 9 | 0.11 |
| 121 | 2103 | 0 | S01 | 2005 | 2 | 1 | 0 | 83228 | 1704 | 4.4 | 85 | -4.3 | -1.3 | A | 25 | 9.8 | -168 | 10 | 14 | 10 | 0.20 |
| 121 | 2104 | 0 | C02 | 1990 | 2 | 1 | 0 | 83229 | 106 | 47.1 | -87 | 46.1 | -9.7 | A | 36 | 9.5 | 170 | 12 | 18 | 12 | 0.33 |
| 121 | 2105 | 0 | S01 | 2011 | 2 | 3 | 0 | 83229 | 244 | 26.6 | -113 | -26.0 | -5.4 | B | 38 | 6.4 | -11 | 10 | 15 | 10 | 0.20 |
| 121 | 2106 | 0 | S01 | 2012 | 2 | 1 | 0 | 83229 | 424 | 9.4 | 93 | 9.1 | -2.3 | A | 16 | 13.2 | -10 | 8 | 14 | 8 | 0.25 |
| 121 | 2107 | 0 | C02 | 1997 | 2 | 7 | 0 | 83229 | 1251 | 9.1 | -110 | -8.0 | -4.4 | B | 11 | 20.8 | 8 | 4 | 14 | 4 | 0.50 |
| 121 | 2108 | 0 | C02 | 1998 | 2 | 1 | 0 | 83229 | 1435 | 10.0 | 103 | 9.9 | -0.8 | B | 86 | 0.5 | 8 | 13 | 18 | 13 | 0.08 |
| 121 | 2109 | 0 | S01 | 2019 | 2 | 1 | 0 | 83229 | 1642 | 5.2 | -67 | 5.1 | -1.0 | A | 41 | 5.9 | -168 | 11 | 15 | 11 | 0.09 |
| 121 | 2111 | 0 | S01 | 2025 | 2 | 4 | 0 | 83230 | 222 | 27.0 | -122 | -25.3 | -9.6 | B | 23 | 10.4 | -11 | 9 | 14 | 9 | 0.33 |
| 121 | 2112 | 0 | C02 | 2005 | 2 | 1 | 0 | 83230 | 320 | 15.9 | 101 | -14.9 | 5.6 | B | 15 | 18.1 | 170 | 8 | 14 | 8 | 0.25 |
| 121 | 2113 | 0 | S01 | 2026 | 2 | 1 | 0 | 83230 | 402 | 4.4 | 104 | 4.0 | -1.9 | A | 28 | 8.9 | -10 | 10 | 15 | 10 | 0.20 |
| 121 | 2114 | 0 | C02 | 2011 | 2 | 1 | 0 | 83230 | 1319 | 3.2 | -159 | -0.7 | -3.2 | A | 23 | 13.9 | 8 | 10 | 16 | 10 | 0.20 |
| 121 | 2115 | 0 | C02 | 2012 | 2 | 2 | 0 | 83230 | 1504 | 1.2 | 163 | 0.5 | -1.1 | A | 46 | 6.9 | 8 | 12 | 18 | 12 | 0.17 |
| 121 | 2116 | 0 | S01 | 2033 | 2 | 1 | 0 | 83230 | 1621 | 17.1 | -68 | 16.9 | -2.9 | A | 70 | 1.9 | -168 | 11 | 15 | 11 | 0.09 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLIPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 12.5 | -5.2 | -1.8 | 0.4 | -2.8 | 0.0 | 53.3 | 100.0 |
| STD DEVTN | 12.2 | 15.9 | 4.9 | 16.9 | 3.6 | | | |

15 BEACON TESTS  15 POSITIONS LOCATED  0 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.00

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OK,
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SLIST PERROR.MA2.121.00.00
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SARSAT/COSPAS POSITION ERROR ANALYSIS
MARSHFIELD TEST 2
25 AUGUST 1983 - 31 AUGUST 1983

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | 1101 | 0 | C02 | 1887 | 1 | 3 | 0 | 83221 | 1235 | 21.3 | -68 | -20.8 | 4.5 | B | 54 | 5.3 | 9 | 13 | 18 | 13 | 0.23 |
| 121 | 1103 | 0 | C02 | 1893 | 1 | 1 | 0 | 83221 | 2332 | 2.5 | 116 | -2.0 | 1.5 | B | 63 | 3.8 | 170 | 13 | 17 | 13 | 0.23 |
| 121 | 1104 | 0 | S01 | 1910 | 1 | 1 | 0 | 83222 | 13 | 8.5 | 98 | 8.0 | -2.8 | A | 43 | 5.4 | -11 | 10 | 14 | 10 | 0.20 |
| 121 | 1105 | 0 | C02 | 1901 | 1 | 1 | 0 | 83222 | 1304 | 11.5 | -49 | -9.9 | 5.9 | B | 29 | 11.6 | 9 | 11 | 18 | 11 | 0.09 |
| 121 | 1106 | 0 | S01 | 1918 | 1 | 1 | 0 | 83222 | 1409 | 11.8 | -44 | 9.9 | -6.3 | A | 14 | 14.3 | -166 | 8 | 15 | 8 | 0.90 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | % 1R ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 11.1 | -5.2 | 4.3 | -3.0 | 0.6 | 0.0 | 40.0 | 100.0 |
| STD DEVTN | 6.1 | 9.7 | 4.5 | 11.4 | 4.6 | | | |

13 BEACON TESTS  5 POSITIONS LOCATED  0 POSITIONS NOT LOCATED  MPTS/NUMBER TRANS = 0.00

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OK,
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SLIST PERROR.LSH.121.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
LIGHTSHIP TEST
6 FEBRUARY 1984 - 24 FEBRUARY 1984

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | 6101 | 5 | S01 | 4477 | 1 | 1 | 0 | 84402 | 1430 | 2.4 | -98 | 2.2 | 0.8 | A | 73 | 1.6 | -167 | 11 | 14 | 11 | 0.09 |
| 121 | 6102 | 5 | C02 | 4373 | 4 | 1 | 0 | 84402 | 1410 | 1.9 | -20 | -0.9 | 1.6 | B | 29 | 11.6 | 9 | 11 | 15 | 11 | 0.27 |
| 121 | 6103 | 6 | C02 | 4374 | 4 | 7 | 0 | 84402 | 1555 | 1.7 | -101 | -1.6 | -0.6 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 121 | 6103 | 6 | C02 | 4374 | 1 | 7 | 0 | 84402 | 1555 | 1.3 | -34 | -0.9 | 0.9 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 121 | 6104 | 2 | C01 | 8023 | 4 | 0 | 0 | 84402 | 2014 | 120.1 | -179 | 23.2 | 117.8 | C | 57 | 4.9 | 169 | 13 | 17 | 13 | 0.23 |
| 121 | 6104 | 2 | C01 | 8023 | 1 | 1 | 0 | 84402 | 2014 | 1.6 | -48 | 1.0 | -1.3 | A | 57 | 4.9 | 169 | 13 | 15 | 13 | 0.23 |
| 121 | 6105 | 1 | C01 | 8024 | 1 | 6 | 0 | 84402 | 2159 | 2.6 | -55 | 1.9 | -1.8 | A | 22 | 14.6 | 170 | 10 | 18 | 10 | 0.20 |
| 121 | 6107 | 3 | S01 | 4490 | 4 | 1 | 0 | 84403 | 1229 | 0.4 | 95 | -0.4 | -0.1 | A | 58 | 3.2 | -168 | 11 | 14 | 11 | 0.09 |
| 121 | 6107 | 3 | S01 | 4490 | 1 | 1 | 0 | 84403 | 1418 | 0.9 | 4 | 0.1 | -0.9 | A | 58 | 3.2 | -168 | 11 | 13 | 10 | 0.20 |
| 121 | 6108 | 3 | S01 | 4491 | 1 | 1 | 0 | 84403 | 1408 | 1.5 | -37 | 1.1 | -0.9 | A | 14 | 14.4 | -166 | 8 | 15 | 8 | 0.00 |
| 121 | 6109 | 4 | C02 | 4387 | 4 | 1 | 0 | 84403 | 1438 | 1.0 | -92 | -0.9 | -0.2 | A | 56 | 5.0 | 9 | 12 | 18 | 12 | 0.17 |
| 121 | 6109 | 4 | C02 | 4387 | 1 | 1 | 0 | 84403 | 1438 | 0.6 | -21 | -0.3 | 0.5 | A | 56 | 5.0 | 9 | 12 | 14 | 12 | 0.17 |
| 121 | 6110 | 4 | C02 | 4388 | 1 | 1 | 0 | 84403 | 1624 | 1.1 | -19 | -0.5 | 1.0 | A | 23 | 14.1 | 9 | 10 | 18 | 10 | 0.20 |
| 121 | 6111 | 3 | C01 | 8036 | 4 | 1 | 0 | 84403 | 1902 | 1.5 | 115 | -1.2 | 0.9 | A | 19 | 16.2 | 169 | 9 | 14 | 9 | 0.33 |
| 121 | 6112 | 3 | C01 | 8037 | 4 | 1 | 0 | 84403 | 2049 | 1.4 | -112 | 1.4 | 0.3 | A | 69 | 2.9 | 169 | 13 | 18 | 13 | 0.23 |
| 121 | 6112 | 3 | C01 | 8037 | 1 | 2 | 0 | 84403 | 2049 | 1.7 | -74 | 1.5 | -0.7 | A | 69 | 2.9 | 169 | 13 | 17 | 13 | 0.23 |
| 121 | 6115 | 8 | S01 | 4505 | 4 | 1 | 0 | 84404 | 1347 | 0.3 | -97 | 0.3 | 0.1 | A | 22 | 10.9 | -167 | 9 | 14 | 9 | 0.11 |
| 121 | 6115 | 8 | S01 | 4505 | 1 | 1 | 0 | 84404 | 1347 | 1.7 | -17 | 0.9 | -1.5 | A | 22 | 10.9 | -167 | 9 | 16 | 9 | 0.11 |
| 121 | 6116 | 10 | C02 | 4401 | 4 | 1 | 0 | 84404 | 1506 | 12.2 | -85 | -12.2 | -0.9 | B | 75 | 2.0 | 9 | 13 | 18 | 13 | 0.23 |
| 121 | 6116 | 10 | C02 | 4401 | 1 | 1 | 0 | 84404 | 1506 | 7.1 | -78 | -7.1 | 0.2 | B | 75 | 2.0 | 9 | 13 | 16 | 13 | 0.23 |
| 121 | 6117 | 10 | C02 | 4402 | 1 | 5 | 0 | 84404 | 1653 | 3.7 | 143 | 2.7 | -2.5 | A | 12 | 20.1 | 10 | 6 | 18 | 6 | 0.33 |
| 121 | 6118 | 10 | C01 | 8050 | 4 | 2 | 0 | 84404 | 1938 | 1.5 | -107 | 1.5 | 0.2 | A | 39 | 8.9 | 169 | 13 | 16 | 13 | 0.23 |
| 121 | 6118 | 10 | C01 | 8050 | 1 | 2 | 0 | 84404 | 1938 | 1.5 | 2 | -0.3 | -1.4 | A | 39 | 8.9 | 169 | 13 | 12 | 12 | 0.17 |
| 121 | 6119 | 10 | C01 | 8051 | 1 | 1 | 0 | 84404 | 2124 | 1.0 | -8 | -0.0 | -1.0 | A | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 121 | 6120 | 6 | S01 | 4518 | 4 | 2 | 0 | 84405 | 1145 | 8.1 | -67 | 8.0 | -1.5 | A | 21 | 11.2 | -167 | 9 | 13 | 9 | 0.11 |
| 121 | 6122 | 6 | S01 | 4519 | 4 | 5 | 0 | 84405 | 1326 | 0.5 | 94 | -0.5 | -0.1 | A | 35 | 7.1 | -167 | 10 | 15 | 10 | 0.20 |
| 121 | 6122 | 6 | S01 | 4519 | 1 | 5 | 0 | 84405 | 1326 | 2.2 | 66 | -1.8 | -1.3 | A | 35 | 7.1 | -167 | 10 | 15 | 10 | 0.20 |
| 121 | 6123 | 4 | C02 | 4415 | 1 | 2 | 0 | 84405 | 1535 | 4.5 | 85 | 4.4 | 1.1 | A | 42 | 7.9 | 9 | 13 | 18 | 13 | 0.23 |
| 121 | 6125 | 3 | C01 | 8064 | 1 | 1 | 0 | 84405 | 2013 | 7.3 | -97 | 7.3 | -0.3 | A | 80 | 1.3 | 170 | 14 | 16 | 14 | 0.14 |
| 121 | 6131 | 4 | S01 | 4675 | 1 | 3 | 0 | 84416 | 1248 | 26.5 | -76 | 26.5 | -0.2 | B | 76 | 1.3 | -167 | 11 | 14 | 11 | 0.09 |
| 121 | 6133 | 4 | S02 | 4676 | 4 | 7 | 0 | 84416 | 1428 | 7.9 | -77 | -7.2 | 3.3 | A | | | | | | | |
| 121 | 6137 | 2 | S01 | 4689 | 1 | 6 | 0 | 84417 | 1227 | 14.5 | 20 | -2.2 | -14.4 | A | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 121 | 6139 | 2 | S01 | 4690 | 1 | 2 | 0 | 84417 | 1406 | 0.8 | 164 | -0.4 | 0.7 | A | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 121 | 6141 | 2 | C01 | 8227 | 1 | 1 | 0 | 84417 | 1826 | 11.8 | 4 | -2.9 | -11.4 | A | 52 | 5.9 | 170 | 13 | 13 | 13 | 0.23 |
| 121 | 6143 | 4 | S01 | 4703 | 1 | 1 | 0 | 84418 | 1205 | 12.6 | -45 | 10.5 | -6.9 | A | 33 | 7.4 | -168 | 10 | 10 | 9 | 0.11 |
| 121 | 6143 | 4 | S01 | 4703 | 4 | 1 | 0 | 84418 | 1205 | 17.4 | -74 | 17.3 | -1.2 | B | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 121 | 6144 | 4 | C02 | 4592 | 1 | 1 | 0 | 84418 | 1258 | 3.0 | 53 | 2.1 | 2.1 | B | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 121 | 6144 | 4 | C02 | 4592 | 4 | 1 | 0 | 84418 | 1258 | 2.3 | 42 | 1.2 | 1.9 | B | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 121 | 6145 | 4 | S01 | 4704 | 1 | 2 | 0 | 84418 | 1345 | 2.7 | 77 | -2.5 | -1.1 | A | 33 | 7.4 | -168 | 10 | 10 | 9 | 0.11 |
| 121 | 6145 | 4 | S01 | 4704 | 4 | 2 | 0 | 84418 | 1345 | 2.3 | 93 | -2.3 | -0.4 | A | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 121 | 6146 | 4 | C02 | 4593 | 1 | 6 | 0 | 84418 | 1444 | 4.1 | 121 | 3.7 | -1.6 | A | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 121 | 6146 | 4 | C02 | 4593 | 4 | 6 | 0 | 84418 | 1444 | 4.4 | 128 | 3.8 | -2.1 | A | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 121 | 6147 | 4 | C01 | 8240 | 4 | 1 | 0 | 84418 | 1714 | 9.4 | -95 | 9.3 | -1.0 | A | 17 | 17.1 | 169 | 9 | 12 | 9 | 0.33 |
| 121 | 6148 | 2 | C01 | 8241 | 1 | 3 | 0 | 84418 | 1901 | 3.9 | -93 | 3.8 | -0.4 | B | 76 | 2.0 | 170 | 13 | 17 | 13 | 0.23 |
| 121 | 6149 | 2 | C01 | 8242 | 1 | 8 | 0 | 84418 | 2046 | 28.5 | -68 | 24.2 | -15.0 | A | 10 | 21.4 | 169 | 3 | 18 | 3 | 1.00 |
| 121 | 6150 | 2 | C02 | 4605 | 4 | 1 | 0 | 84419 | 1142 | 6.6 | -80 | -6.6 | -0.0 | A | 17 | 17.2 | 9 | 8 | 13 | 8 | 0.25 |
| 121 | 6152 | 1 | S01 | 4718 | 1 | 1 | 0 | 84419 | 1324 | 1.0 | -19 | 0.5 | -0.8 | A | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 121 | 6152 | 1 | S01 | 4718 | 4 | 1 | 0 | 84419 | 1324 | 0.8 | -87 | 0.8 | 0.1 | A | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 121 | 6155 | 1 | C01 | 8254 | 1 | 1 | 0 | 84419 | 1750 | 3.9 | -104 | 3.9 | 0.2 | A | 36 | 9.8 | 169 | 12 | 11 | 11 | 0.09 |
| 121 | 6155 | 1 | C01 | 8254 | 4 | 3 | 0 | 84419 | 1750 | 0.8 | -135 | 0.6 | 0.4 | A | 36 | 9.8 | 169 | 12 | 16 | 12 | 0.17 |
| 121 | 6156 | 1 | C01 | 8255 | 1 | 2 | 0 | 84419 | 1936 | 4.1 | 89 | -4.0 | 0.6 | A | 36 | 9.6 | 170 | 12 | 18 | 12 | 0.17 |
| 121 | 6158 | 4 | C02 | 4619 | 1 | 1 | 0 | 84420 | 1210 | 2.6 | -25 | -1.5 | 2.1 | A | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 121 | 6159 | 6 | S01 | 4732 | 1 | 1 | 0 | 84420 | 1302 | 1.3 | 5 | 0.1 | -1.3 | A | 12 | 15.5 | -168 | 7 | 9 | 7 | 1.20 |
| 121 | 6159 | 6 | S01 | 4732 | 4 | 1 | 0 | 84420 | 1302 | 13.0 | 114 | -12.7 | 2.7 | B | 12 | 15.5 | -168 | 7 | 11 | 7 | 0.14 |
| 121 | 6160 | 6 | C02 | 4620 | 1 | 2 | 0 | 84420 | 1356 | 3.8 | 101 | 3.8 | -0.2 | A | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | Z IN ELLPSE | Z APROB | Z LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 4.9 | -2.0 | 1.2 | 1.4 | -1.0 | 14.8 | 83.3 | 98.2 |
| STD DEVTN | 6.0 | 6.6 | 3.3 | 6.7 | 3.4 | | | |

54 BEACON TESTS  54 POSITIONS LOCATED  1 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.00

SLIST PERROR.LSH.121.C2.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
LIGHTSHIP TEST
6 FEBRUARY 1984 - 24 FEBRUARY 1984

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LIT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | 6102 | 5 | C02 | 4373 | 4 | 1 | 0 | 84402 | 1410 | 1.9 | -20 | -0.9 | 1.6 | B | 29 | 11.6 | 9 | 11 | 15 | 11 | 0.27 |
| 121 | 6103 | 6 | C02 | 4374 | 4 | 7 | 0 | 84402 | 1555 | 1.7 | -101 | -1.6 | -0.6 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 121 | 6103 | 6 | C02 | 4374 | 1 | 7 | 0 | 84402 | 1555 | 1.3 | -34 | -0.9 | 0.9 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 121 | 6109 | 4 | C02 | 4387 | 4 | 1 | 0 | 84403 | 1438 | 1.0 | -92 | -0.9 | -0.2 | A | 56 | 5.0 | 9 | 12 | 18 | 12 | 0.17 |
| 121 | 6109 | 4 | C02 | 4387 | 1 | 1 | 0 | 84403 | 1438 | 0.6 | -31 | -0.3 | 0.5 | A | 56 | 5.0 | 9 | 12 | 14 | 12 | 0.17 |
| 121 | 6110 | 4 | C02 | 4388 | 1 | 1 | 0 | 84403 | 1624 | 1.1 | -19 | -0.5 | 1.0 | A | 23 | 14.1 | 9 | 10 | 18 | 10 | 0.20 |
| 121 | 6116 | 10 | C02 | 4401 | 4 | 1 | 0 | 84404 | 1506 | 12.2 | -85 | -12.2 | -0.9 | B | 75 | 2.0 | 9 | 13 | 18 | 13 | 0.23 |
| 121 | 6116 | 10 | C02 | 4401 | 1 | 1 | 0 | 84404 | 1506 | 7.1 | -78 | -7.1 | 0.2 | B | 75 | 2.0 | 9 | 13 | 16 | 13 | 0.23 |
| 121 | 6117 | 10 | C02 | 4402 | 1 | 5 | 0 | 84404 | 1653 | 3.7 | 143 | 2.7 | -2.5 | A | 12 | 20.1 | 10 | 6 | 17 | 6 | 0.33 |
| 121 | 6123 | 4 | C02 | 4415 | 1 | 2 | 0 | 84405 | 1535 | 4.5 | 85 | 4.4 | 1.1 | A | 42 | 7.9 | 9 | 13 | 18 | 13 | 0.23 |
| 121 | 6144 | 4 | C02 | 4592 | 1 | 1 | 0 | 84418 | 1258 | 3.0 | 53 | 2.1 | 2.1 | B | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 121 | 6144 | 4 | C02 | 4592 | 4 | 1 | 0 | 84418 | 1258 | 2.3 | 42 | 1.2 | 1.9 | B | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 121 | 6146 | 4 | C02 | 4593 | 1 | 6 | 0 | 84418 | 1444 | 4.1 | 121 | 3.7 | -1.6 | A | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 121 | 6146 | 4 | C02 | 4593 | 4 | 6 | 0 | 84418 | 1444 | 4.4 | 128 | 3.8 | -2.1 | A | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 121 | 6150 | 3 | C02 | 4605 | 4 | 1 | 0 | 84419 | 1142 | 6.6 | -80 | -6.6 | -0.0 | A | 17 | 17.2 | 9 | 8 | 13 | 8 | 0.25 |
| 121 | 6158 | 4 | C02 | 4619 | 1 | 1 | 0 | 84420 | 1210 | 2.6 | -25 | -1.5 | 2.1 | A | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 121 | 6160 | 6 | C02 | 4620 | 1 | 2 | 0 | 84420 | 1356 | 3.8 | 101 | 3.8 | -0.2 | A | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROX | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 3.6 | -0.6 | 0.3 | -0.6 | 0.2 | 0.0 | 70.6 | 100.0 |
| STD DEVTN | 2.8 | 4.3 | 1.6 | 4.3 | 1.4 | | | |

54 BEACON TESTS  17 POSITIONS LOCATED  0 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.00

OK,

SLIST PERROR.LPR.121.00.4

SARSAT/COSPAS POSITION ERROR ANALYSIS
NASA LOCATION PROBABILITY TEST
21 MAY 1984 - 25 MAY 1984

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | 10001 | 0 | S01 | 5969 | 4 | | | | | | | | | C | 60 | 3.0 | -168 | 11 | 15 | 11 | 0.09 |
| 121 | 10003 | 0 | S01 | 5969 | 4 | 0 | 149 | 84142 | 926 | 3.1 | 91 | -3.1 | -0.5 | A | 60 | 3.0 | -168 | 11 | 15 | 11 | 0.09 |
| 121 | 10006 | 0 | C02 | 5815 | 4 | | | | | | | | | C | 50 | 6.1 | 170 | 13 | 18 | 13 | 0.23 |
| 121 | 10008 | 0 | C02 | 5815 | 4 | 0 | 484 | 84142 | 1117 | 6.4 | -82 | 6.2 | -1.8 | A | 50 | 6.1 | 170 | 13 | 18 | 13 | 0.08 |
| 121 | 10011 | 0 | C01 | 9459 | 4 | | | | | | | | | C | 50 | 6.3 | 9 | 13 | 19 | 13 | 0.23 |
| 121 | 10013 | 0 | C01 | 9459 | 4 | 0 | 867 | 84142 | 1713 | 11.7 | -68 | -11.4 | 2.7 | A | 50 | 6.3 | 8 | 12 | 18 | 12 | 0.50 |
| 121 | 10016 | 0 | S01 | 5975 | 4 | | | | | | | | | C | 22 | 10.8 | -11 | 9 | 14 | 8 | 0.25 |
| 121 | 10018 | 0 | S01 | 5975 | 4 | 0 | 129 | 84142 | 1906 | 15.8 | -152 | -10.0 | -12.3 | B | 22 | 10.8 | -11 | 9 | 14 | 9 | 0.56 |
| 121 | 10021 | 0 | S01 | 5976 | 4 | | | | | | | | | C | 45 | 5.2 | -10 | 10 | 15 | 10 | 0.20 |
| 121 | 10023 | 0 | S01 | 5976 | 4 | 0 | 341 | 84142 | 2046 | 9.2 | 78 | 9.2 | 0.1 | A | 45 | 5.2 | -10 | 10 | 15 | 10 | 0.40 |
| 121 | 10028 | 0 | C02 | 5822 | 4 | 0 | 864 | 84142 | 2300 | 3.1 | -85 | -3.1 | -0.2 | A | 55 | 5.1 | 9 | 13 | 18 | 13 | 0.38 |
| 121 | 10031 | 0 | C02 | 5823 | 4 | | | | | | | | | C | 20 | 15.5 | 8 | 9 | 16 | 9 | 0.33 |
| 121 | 10033 | 0 | C02 | 5823 | 4 | 0 | 754 | 84143 | 46 | 1.5 | 58 | 1.1 | 1.0 | A | 20 | 15.5 | 9 | 10 | 16 | 10 | 0.60 |
| 121 | 10036 | 0 | C01 | 9465 | 4 | 0 | 505 | 84143 | 416 | 1.4 | -99 | 1.4 | 0.0 | A | 41 | 8.4 | 170 | 12 | 17 | 12 | 0.17 |
| 121 | 10038 | 0 | C01 | 9465 | 4 | 0 | 662 | 84143 | 416 | 0.9 | -175 | 0.2 | 0.8 | B | 41 | 8.4 | 170 | 12 | 17 | 12 | 0.00 |
| 121 | 10041 | 0 | C01 | 9466 | 4 | | | | | | | | | C | 27 | 12.7 | 171 | 11 | 16 | 11 | 0.27 |
| 121 | 10043 | 0 | C01 | 9466 | 4 | | | | | | | | | C | 27 | 12.7 | 171 | 11 | 16 | 11 | 0.09 |
| 121 | 10046 | 0 | S01 | 5983 | 4 | 0 | 383 | 84143 | 905 | 7.0 | -95 | 6.7 | 2.0 | A | 84 | 0.5 | -168 | 10 | 15 | 10 | 0.00 |
| 121 | 10048 | 0 | S01 | 5983 | 4 | 0 | 293 | 84143 | 905 | 0.9 | 178 | -0.2 | 0.9 | A | 84 | 0.5 | -168 | 10 | 15 | 10 | 0.20 |
| 121 | 10051 | 0 | C02 | 5828 | 4 | 0 | 654 | 84143 | 1000 | 1.2 | -149 | 0.7 | 0.9 | B | 43 | 7.8 | 170 | 12 | 17 | 12 | 0.17 |
| 121 | 10053 | 0 | C02 | 5828 | 4 | 0 | 798 | 84143 | 1000 | 6.5 | 20 | -3.2 | -5.6 | B | 43 | 7.8 | 170 | 12 | 17 | 12 | 0.00 |
| 121 | 10056 | 0 | S01 | 5984 | 4 | 0 | 175 | 84143 | 1044 | 7.7 | -88 | 7.6 | 1.5 | A | 12 | 15.5 | -167 | 4 | 12 | 4 | 0.50 |
| 121 | 10058 | 0 | S01 | 5984 | 4 | 0 | 336 | 84143 | 1044 | 4.0 | -49 | 3.5 | -1.9 | A | 12 | 15.5 | -167 | 7 | 12 | 7 | 0.14 |
| 121 | 10061 | 0 | C02 | 5829 | 4 | 0 | 423 | 84143 | 1145 | 9.6 | 48 | -8.1 | -5.1 | A | 25 | 13.1 | 171 | 11 | 16 | 11 | 0.27 |
| 121 | 10063 | 0 | C02 | 5829 | 4 | 0 | 462 | 84143 | 1145 | 7.5 | -160 | 3.5 | 6.6 | B | 25 | 13.1 | 171 | 11 | 16 | 11 | 0.09 |
| 121 | 10066 | 0 | C01 | 5472 | 4 | | | | | | | | | C | 14 | 19.0 | 8 | 7 | 14 | 7 | 0.14 |
| 121 | 10068 | 0 | C01 | 5472 | 4 | | | | | | | | | C | 14 | 19.0 | 8 | 6 | 14 | 6 | 0.67 |
| 121 | 10073 | 0 | C01 | 9473 | 4 | 0 | 660 | 84143 | 1818 | 36.7 | -98 | -35.1 | -10.7 | A | 75 | 2.0 | 8 | 13 | 18 | 13 | 0.23 |
| 121 | 10078 | 0 | S01 | 5989 | 4 | 0 | 242 | 84143 | 1845 | 9.5 | 51 | 8.5 | 4.2 | A | 14 | 14.4 | -11 | 6 | 13 | 6 | 0.67 |
| 121 | 10083 | 0 | S01 | 5990 | 4 | 0 | 360 | 84143 | 2024 | 7.9 | 74 | 7.8 | 0.7 | B | 69 | 2.0 | -10 | 10 | 15 | 10 | 0.40 |
| 121 | 10088 | 0 | C02 | 5835 | 4 | 0 | 585 | 84143 | 2144 | 4.8 | -67 | -4.7 | 1.2 | A | 13 | 19.1 | 9 | 6 | 14 | 6 | 0.67 |
| 121 | 10093 | 0 | C02 | 5836 | 4 | 0 | 840 | 84143 | 2329 | 15.8 | 98 | 15.8 | 0.0 | A | 76 | 1.9 | 8 | 13 | 18 | 13 | 0.23 |
| 121 | 10098 | 0 | C01 | 9478 | 4 | | | | | | | | | C | 12 | 20.5 | 170 | 7 | 14 | 7 | 0.14 |
| 121 | 10103 | 0 | C01 | 9479 | 4 | 0 | 812 | 84144 | 451 | 6.9 | 80 | -6.9 | -0.1 | A | 82 | 1.0 | 171 | 13 | 18 | 13 | 0.08 |
| 121 | 10108 | 0 | C01 | 9480 | 4 | 0 | 507 | 84144 | 636 | 9.5 | -37 | 4.5 | -8.4 | A | 11 | 20.9 | 170 | 6 | 14 | 6 | 0.00 |
| 121 | 10113 | 0 | C02 | 5841 | 4 | | | | | | | | | C | 10 | 21.1 | 169 | 6 | 14 | 6 | 0.33 |
| 121 | 10118 | 0 | S01 | 5997 | 4 | 0 | 299 | 84144 | 843 | 0.7 | -47 | 0.6 | -0.4 | A | 53 | 4.0 | -168 | 10 | 16 | 10 | 0.20 |
| 121 | 10123 | 0 | S01 | 5998 | 4 | 0 | 285 | 84144 | 1023 | 3.8 | 62 | -3.0 | -2.4 | A | 19 | 12.0 | -168 | 9 | 13 | 9 | 0.11 |
| 121 | 10128 | 0 | C02 | 5842 | 4 | 0 | 743 | 84144 | 1028 | 9.4 | -100 | 9.4 | 0.1 | B | 78 | 1.5 | 170 | 13 | 18 | 13 | 0.08 |
| 121 | 10133 | 0 | C02 | 5843 | 4 | 0 | 442 | 84144 | 1213 | 9.7 | 133 | -5.8 | 7.7 | A | 12 | 20.1 | 170 | 7 | 14 | 7 | 0.14 |
| 121 | 10138 | 0 | C01 | 9486 | 4 | | | | | | | | | C | 33 | 10.6 | 9 | 11 | 16 | 11 | 0.45 |
| 121 | 10143 | 0 | C01 | 9487 | 4 | 0 | 521 | 84144 | 1824 | 14.4 | 132 | 12.0 | -7.9 | B | 34 | 10.3 | 8 | 12 | 17 | 12 | 0.33 |
| 121 | 10148 | 0 | S01 | 6004 | 4 | 0 | 378 | 84144 | 2003 | 1.4 | 4 | 0.4 | 1.4 | A | 71 | 1.8 | -10 | 11 | 15 | 11 | 0.45 |
| 121 | 10153 | 0 | S01 | 6005 | 4 | 0 | 204 | 84144 | 2143 | 7.9 | 47 | 6.7 | 4.2 | A | 12 | 15.2 | -10 | 5 | 12 | 5 | 1.00 |
| 121 | 10158 | 0 | C02 | 5850 | 4 | 0 | 814 | 84144 | 2357 | 7.3 | 94 | 7.3 | 0.5 | A | 38 | 8.9 | 8 | 12 | 17 | 12 | 0.33 |
| 121 | 10163 | 0 | C01 | 9492 | 4 | 0 | 677 | 84145 | 340 | 4.9 | -118 | 4.7 | 1.6 | A | 27 | 12.6 | 170 | 11 | 17 | 11 | 0.09 |
| 121 | 10168 | 0 | C01 | 9493 | 4 | | | | | | | | | C | 41 | 8.3 | 171 | 13 | 18 | 13 | 0.08 |
| 121 | 10173 | 0 | S01 | 6011 | 4 | 0 | 358 | 84145 | 911 | 4.7 | 99 | -4.7 | -0.1 | B | 33 | 7.5 | -168 | 9 | 14 | 9 | 0.11 |
| 121 | 10178 | 0 | C02 | 5855 | 4 | | | | | | | | | C | 22 | 14.5 | 170 | 11 | 16 | 11 | 0.09 |
| 121 | 10183 | 0 | S01 | 6012 | 4 | 0 | 319 | 84145 | 1001 | 4.3 | 176 | -1.1 | 4.1 | A | 29 | 8.5 | -168 | 10 | 14 | 10 | 0.20 |
| 121 | 10188 | 0 | C02 | 5856 | 4 | 0 | 754 | 84145 | 1057 | 6.7 | 58 | -6.2 | -2.6 | A | 49 | 6.3 | 171 | 13 | 18 | 13 | 0.08 |
| 121 | 10193 | 0 | C01 | 9500 | 4 | 0 | 253 | 84145 | 1713 | 13.2 | -124 | -9.7 | -9.0 | B | 73 | 2.3 | 8 | 13 | 18 | 13 | 0.38 |
| 121 | 10198 | 0 | C01 | 9501 | 4 | 0 | 532 | 84145 | 1859 | 24.0 | 120 | 22.3 | -8.7 | A | 15 | 18.3 | 9 | 9 | 15 | 9 | 0.56 |
| 121 | 10203 | 0 | S01 | 6018 | 4 | 0 | 370 | 84145 | 1941 | 7.1 | 84 | 7.0 | -0.7 | B | 45 | 5.2 | -10 | 11 | 15 | 11 | 0.27 |
| 121 | 10208 | 0 | S01 | 6019 | 4 | 0 | 258 | 84145 | 2121 | 3.3 | 79 | 3.3 | -0.0 | A | 21 | 11.2 | -10 | 9 | 14 | 9 | 0.33 |

SLIST PERROR.LPR.121.C2.4

SARSAT/COSPAS POSITION ERROR ANALYSIS
NASA LOCATION PROBABILITY TEST
21 MAY 1984 - 25 MAY 1984

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 121 | 10006 | 0 | C02 | 5815 | 4 | | | | | | | | | C | 50 | 6.1 | 170 | 13 | 18 | 13 | 0.23 |
| 121 | 10008 | 0 | C02 | 5815 | 4 | 0 | 484 | 84142 | 1117 | 6.4 | -82 | 6.2 | -1.8 | A | 50 | 6.1 | 170 | 13 | 18 | 13 | 0.08 |
| 121 | 10028 | 0 | C02 | 5822 | 4 | 0 | 864 | 84142 | 2300 | 3.1 | -85 | -3.1 | -0.2 | A | 55 | 5.1 | 8 | 13 | 18 | 13 | 0.38 |
| 121 | 10031 | 0 | C02 | 5823 | 4 | | | | | | | | | C | 20 | 15.5 | 8 | 9 | 16 | 9 | 0.33 |
| 121 | 10033 | 0 | C02 | 5823 | 4 | 0 | 754 | 84143 | 46 | 1.5 | 58 | 1.1 | 1.0 | A | 20 | 15.5 | 8 | 10 | 16 | 10 | 0.60 |
| 121 | 10051 | 0 | C02 | 5828 | 4 | 0 | 654 | 84143 | 1000 | 1.2 | -149 | 0.7 | 0.9 | B | 43 | 7.8 | 170 | 12 | 17 | 12 | 0.17 |
| 121 | 10053 | 0 | C02 | 5828 | 4 | 0 | 798 | 84143 | 1000 | 6.5 | 20 | -3.2 | -5.6 | B | 43 | 7.8 | 170 | 12 | 17 | 12 | 0.00 |
| 121 | 10061 | 0 | C02 | 5829 | 4 | 0 | 423 | 84143 | 1145 | 9.6 | 48 | -8.1 | -5.1 | A | 25 | 13.1 | 171 | 11 | 16 | 11 | 0.27 |
| 121 | 10063 | 0 | C02 | 5829 | 4 | 0 | 462 | 84143 | 1145 | 7.5 | -160 | 3.5 | 6.6 | B | 25 | 13.1 | 171 | 11 | 16 | 11 | 0.09 |
| 121 | 10088 | 0 | C02 | 5835 | 4 | 0 | 585 | 84143 | 2144 | 4.8 | -67 | -4.7 | 1.2 | A | 13 | 19.1 | 8 | 6 | 14 | 6 | 0.67 |
| 121 | 10093 | 0 | C02 | 5836 | 4 | 0 | 840 | 84143 | 2329 | 15.8 | 99 | 15.8 | 0.0 | A | 76 | 1.9 | 8 | 13 | 18 | 13 | 0.23 |
| 121 | 10113 | 0 | C02 | 5841 | 4 | | | | | | | | | C | 10 | 21.1 | 169 | 6 | 14 | 6 | 0.33 |
| 121 | 10128 | 0 | C02 | 5842 | 4 | 0 | 743 | 84144 | 1028 | 9.4 | -100 | 9.4 | 0.1 | B | 78 | 1.5 | 170 | 13 | 18 | 13 | 0.08 |
| 121 | 10133 | 0 | C02 | 5843 | 4 | 0 | 442 | 84144 | 1213 | 9.7 | 133 | -5.8 | 7.7 | A | 12 | 20.1 | 170 | 7 | 14 | 7 | 0.14 |
| 121 | 10158 | 0 | C02 | 5850 | 4 | 0 | 814 | 84144 | 2357 | 7.3 | 94 | 7.3 | 0.5 | A | 38 | 8.9 | 8 | 12 | 17 | 12 | 0.33 |
| 121 | 10178 | 0 | C02 | 5855 | 4 | | | | | | | | | C | 22 | 14.5 | 170 | 11 | 16 | 11 | 0.09 |
| 121 | 10188 | 0 | C02 | 5856 | 4 | 0 | 754 | 84145 | 1057 | 6.7 | 58 | -6.2 | -2.6 | A | 49 | 6.3 | 171 | 13 | 18 | 13 | 0.08 |
| 121 | 10213 | 0 | C02 | 5863 | 4 | 0 | 835 | 84145 | 2240 | 4.3 | -93 | -4.2 | -0.9 | A | 56 | 5.0 | 8 | 13 | 18 | 13 | 0.38 |
| 121 | 10218 | 0 | C02 | 5864 | 4 | 0 | 717 | 84146 | 26 | 3.2 | 92 | -3.1 | -0.6 | A | | | | | | | |
| 121 | 10265 | 0 | C02 | 5869 | 4 | 0 | 619 | 84146 | 940 | 1.1 | 17 | -0.5 | -1.0 | A | 43 | 7.6 | 170 | 12 | 17 | 12 | 0.09 |
| 121 | 10273 | 0 | C02 | 5870 | 4 | 0 | 710 | 84146 | 1125 | 6.0 | 51 | -5.2 | -2.9 | A | 25 | 13.3 | 171 | 11 | 16 | 11 | 0.09 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 6.1 | 1.4 | 0.3 | -0.0 | -0.2 | 0.0 | 76.5 | 81.0 |
| STD DEVTN | 3.7 | 6.0 | 3.5 | 6.3 | 3.3 | | | |

63 BEACON TESTS  17 POSITIONS LOCATED  4 POSITIONS NOT LOCATED  MPTS/NUMBER TRANS = 0.00

OK,

SLIST PERROR.LPR.243.00.4

SARSAT/COSPAS POSITION ERROR ANALYSIS
NASA LOCATION PROBABILITY TEST
21 MAY 1984 - 25 MAY 1984

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GHT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 243 | 10002 | 0 | S01 | 5969 | 4 | | | | | | | | | C | 60 | 3.0 | -168 | 11 | 15 | 11 | 0.09 |
| 243 | 10004 | 0 | S01 | 5969 | 4 | 0 | 223 | 84142 | 926 | 7.7 | -89 | 7.6 | 1.4 | A | 60 | 3.0 | -168 | 11 | 15 | 11 | 0.09 |
| 243 | 10007 | 0 | C02 | 5815 | 4 | | | | | | | | | C | 50 | 6.1 | 170 | 13 | 18 | 13 | 0.23 |
| 243 | 10009 | 0 | C02 | 5815 | 4 | | | | | | | | | C | 50 | 6.1 | 170 | 13 | 18 | 13 | 0.08 |
| 243 | 10012 | 0 | C01 | 9459 | 4 | | | | | | | | | C | 50 | 6.3 | 8 | 13 | 18 | 13 | 0.23 |
| 243 | 10014 | 0 | C01 | 9459 | 4 | | | | | | | | | C | 50 | 6.3 | 8 | 12 | 18 | 12 | 0.50 |
| 243 | 10017 | 0 | S01 | 5975 | 4 | | | | | | | | | C | 22 | 10.8 | -11 | 9 | 14 | 8 | 0.25 |
| 243 | 10019 | 0 | S01 | 5975 | 4 | 0 | 129 | 84142 | 1906 | 15.8 | -152 | -10.0 | -12.3 | B | 22 | 10.8 | -11 | 9 | 14 | 9 | 0.56 |
| 243 | 10022 | 0 | S01 | 5976 | 4 | | | | | | | | | C | 45 | 5.2 | -10 | 10 | 15 | 10 | 0.20 |
| 243 | 10024 | 0 | S01 | 5976 | 4 | | | | | | | | | C | 45 | 5.2 | -10 | 10 | 15 | 10 | 0.40 |
| 243 | 10027 | 0 | C02 | 5822 | 4 | | | | | | | | | C | 55 | 5.1 | 8 | 13 | 18 | 13 | 0.23 |
| 243 | 10029 | 0 | C02 | 5822 | 4 | | | | | | | | | C | 55 | 5.1 | 8 | 13 | 18 | 13 | 0.38 |
| 243 | 10032 | 0 | C02 | 5823 | 4 | | | | | | | | | C | 20 | 15.5 | 8 | 9 | 16 | 9 | 0.33 |
| 243 | 10034 | 0 | C02 | 5823 | 4 | | | | | | | | | C | 20 | 15.5 | 8 | 10 | 16 | 10 | 0.60 |
| 243 | 10037 | 0 | C01 | 9465 | 4 | | | | | | | | | C | 41 | 8.4 | 170 | 12 | 17 | 12 | 0.17 |
| 243 | 10039 | 0 | C01 | 9465 | 4 | | | | | | | | | C | 41 | 8.4 | 170 | 12 | 17 | 12 | 0.00 |
| 243 | 10042 | 0 | C01 | 9466 | 4 | | | | | | | | | C | 27 | 12.7 | 171 | 11 | 16 | 11 | 0.27 |
| 243 | 10044 | 0 | C01 | 9466 | 4 | | | | | | | | | C | 27 | 12.7 | 171 | 11 | 16 | 11 | 0.09 |
| 243 | 10047 | 0 | S01 | 5983 | 4 | | | | | | | | | C | 84 | 0.5 | -168 | 10 | 15 | 10 | 0.00 |
| 243 | 10049 | 0 | S01 | 5983 | 4 | 0 | 244 | 84143 | 905 | 3.1 | 129 | -2.7 | 1.5 | B | 84 | 0.5 | -168 | 10 | 15 | 10 | 0.20 |
| 243 | 10052 | 0 | C02 | 5828 | 4 | | | | | | | | | C | 43 | 7.8 | 170 | 12 | 17 | 12 | 0.17 |
| 243 | 10054 | 0 | C02 | 5828 | 4 | | | | | | | | | C | 43 | 7.8 | 170 | 12 | 17 | 12 | 0.00 |
| 243 | 10057 | 0 | S01 | 5984 | 4 | | | | | | | | | C | 12 | 15.5 | -167 | 4 | 12 | 4 | 0.50 |
| 243 | 10059 | 0 | S01 | 5984 | 4 | | | | | | | | | C | 12 | 15.5 | -167 | 7 | 12 | 7 | 0.14 |
| 243 | 10062 | 0 | C02 | 5829 | 4 | | | | | | | | | C | 25 | 13.1 | 171 | 11 | 16 | 11 | 0.27 |
| 243 | 10064 | 0 | C02 | 5829 | 4 | | | | | | | | | C | 25 | 13.1 | 171 | 11 | 16 | 11 | 0.09 |
| 243 | 10067 | 0 | C01 | 5472 | 4 | | | | | | | | | C | 14 | 19.0 | 8 | 7 | 14 | 7 | 0.14 |
| 243 | 10069 | 0 | C01 | 5472 | 4 | | | | | | | | | C | 14 | 19.0 | 8 | 6 | 14 | 6 | 0.67 |
| 243 | 10074 | 0 | C01 | 9473 | 4 | | | | | | | | | C | 75 | 2.0 | 8 | 13 | 18 | 13 | 0.23 |
| 243 | 10079 | 0 | S01 | 5989 | 4 | 0 | 167 | 84143 | 1845 | 12.6 | 43 | 10.4 | 7.2 | A | 14 | 14.4 | -11 | 6 | 13 | 6 | 0.67 |
| 243 | 10084 | 0 | S01 | 5990 | 4 | 0 | 292 | 84143 | 2024 | 6.0 | 79 | 6.0 | -0.0 | A | 49 | 2.0 | -10 | 10 | 15 | 10 | 0.40 |
| 243 | 10089 | 0 | C02 | 5835 | 4 | | | | | | | | | C | 13 | 19.1 | 8 | 6 | 14 | 6 | 0.67 |
| 243 | 10094 | 0 | C02 | 5836 | 4 | | | | | | | | | C | 75 | 1.9 | 8 | 13 | 18 | 13 | 0.23 |
| 243 | 10099 | 0 | C01 | 9478 | 4 | | | | | | | | | C | 12 | 20.5 | 170 | 7 | 14 | 7 | 0.14 |
| 243 | 10104 | 0 | C01 | 9479 | 4 | | | | | | | | | C | 82 | 1.0 | 171 | 13 | 18 | 13 | 0.08 |
| 243 | 10109 | 0 | C01 | 9480 | 4 | | | | | | | | | C | 11 | 20.9 | 170 | 6 | 14 | 6 | 0.00 |
| 243 | 10114 | 0 | C02 | 5841 | 4 | | | | | | | | | C | 10 | 21.1 | 169 | 6 | 14 | 6 | 0.33 |
| 243 | 10119 | 0 | S01 | 5997 | 4 | | | | | | | | | C | 53 | 4.0 | -168 | 10 | 16 | 10 | 0.20 |
| 243 | 10124 | 0 | S01 | 5998 | 4 | | | | | | | | | C | 19 | 12.0 | -168 | 9 | 13 | 9 | 0.11 |
| 243 | 10129 | 0 | C02 | 5842 | 4 | | | | | | | | | C | 78 | 1.5 | 170 | 13 | 18 | 13 | 0.08 |
| 243 | 10134 | 0 | C02 | 5843 | 4 | | | | | | | | | C | 12 | 20.1 | 170 | 7 | 14 | 7 | 0.14 |
| 243 | 10139 | 0 | C01 | 9486 | 4 | | | | | | | | | C | 33 | 10.6 | 8 | 11 | 16 | 11 | 0.45 |
| 243 | 10144 | 0 | C01 | 9487 | 4 | | | | | | | | | C | 34 | 10.3 | 8 | 12 | 17 | 12 | 0.33 |
| 243 | 10149 | 0 | S01 | 6004 | 4 | | | | | | | | | C | 71 | 1.8 | -10 | 11 | 15 | 11 | 0.45 |
| 243 | 10154 | 0 | S01 | 6005 | 4 | 0 | 89 | 84144 | 2143 | 25.5 | -4 | 2.8 | 25.4 | A | 12 | 15.2 | -10 | 5 | 12 | 5 | 1.00 |
| 243 | 10159 | 0 | C02 | 5850 | 4 | | | | | | | | | C | 38 | 8.9 | 8 | 12 | 17 | 12 | 0.33 |
| 243 | 10164 | 0 | C01 | 9492 | 4 | | | | | | | | | C | 27 | 12.6 | 170 | 11 | 17 | 11 | 0.09 |
| 243 | 10169 | 0 | C01 | 9493 | 4 | | | | | | | | | C | 41 | 8.3 | 171 | 13 | 18 | 13 | 0.08 |
| 243 | 10174 | 0 | S01 | 6011 | 4 | 0 | 216 | 84145 | 811 | 10.7 | 100 | -10.7 | -0.1 | B | 33 | 7.5 | -168 | 9 | 14 | 9 | 0.11 |
| 243 | 10179 | 0 | C02 | 5855 | 4 | | | | | | | | | C | 22 | 14.5 | 170 | 11 | 16 | 11 | 0.09 |
| 243 | 10184 | 0 | S01 | 6012 | 4 | 0 | 247 | 84145 | 1001 | 7.2 | 174 | -2.2 | 6.9 | A | 29 | 8.5 | -168 | 10 | 14 | 10 | 0.20 |
| 243 | 10189 | 0 | C02 | 5856 | 4 | | | | | | | | | C | 49 | 6.3 | 171 | 13 | 18 | 13 | 0.08 |
| 243 | 10194 | 0 | C01 | 9500 | 4 | | | | | | | | | C | 73 | 2.3 | 8 | 13 | 18 | 13 | 0.38 |
| 243 | 10199 | 0 | C01 | 9501 | 4 | | | | | | | | | C | 15 | 18.3 | 9 | 9 | 15 | 9 | 0.56 |
| 243 | 10204 | 0 | S01 | 6018 | 4 | 0 | 283 | 84145 | 1941 | 13.0 | -109 | -12.8 | -2.1 | B | 45 | 5.2 | -10 | 11 | 15 | 11 | 0.27 |
| 243 | 10209 | 0 | S01 | 6019 | 4 | 0 | 183 | 84145 | 2121 | 3.1 | 119 | 2.4 | -1.9 | A | 21 | 11.2 | -10 | 9 | 14 | 9 | 0.33 |

SLIST PERROR.MAR.406.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
MARSHFIELD TEST 1
1 FEBRUARY 1983 - 3 FEBRUARY 1983

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PHEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 1002 | 0 | C01 | 2962 | 4 | 1 | 9 | 83032 | 1329 | 4.4 | -148 | 3.0 | 3.3 | A | 19 | -16.4 | 169 | 9 | 14 | 9 | 0.11 |
| 406 | 1004 | 0 | C01 | 2963 | 4 | 13 | 0 | 0 | 0 | 3.7 | 130 | -2.4 | 2.8 | A | 69 | 2.7 | 170 | 13 | 18 | 13 | 0.23 |
| 406 | 1004 | 0 | C01 | 2963 | 1 | 12 | 6 | 83032 | 1515 | 5.3 | 95 | -5.1 | 1.4 | A | 69 | 2.7 | 170 | 13 | 17 | 13 | 0.23 |
| 406 | 1006 | 0 | C01 | 2964 | 1 | | | | | | | | | C | 9 | 22.1 | 169 | 13 | 17 | 13 | 1.11 |
| 406 | 1012 | 0 | C01 | 2976 | 1 | 8 | 10 | 83033 | 1404 | 0.4 | 143 | -0.2 | 0.3 | A | 39 | -9.0 | 169 | 12 | 12 | 11 | 0.27 |
| 406 | 1012 | 0 | C01 | 2976 | 4 | 11 | 13 | 83033 | 1410 | 0.5 | 156 | -0.1 | 0.5 | A | 39 | -9.0 | 169 | 12 | 16 | 12 | 0.33 |
| 406 | 1014 | 0 | C01 | 2977 | 1 | 17 | 8 | 83033 | 1550 | 0.8 | 105 | -0.7 | 0.3 | A | 33 | 10.5 | 170 | 12 | 18 | 12 | 0.17 |
| 406 | 1014 | 0 | C01 | 2977 | 4 | 18 | 8 | 83033 | 1550 | 0.7 | -138 | 0.5 | 0.4 | A | 33 | 10.5 | 170 | 12 | 18 | 12 | 0.17 |
| 406 | 1018 | 0 | C01 | 2984 | 1 | | | | | | | | | C | 81 | 0.4 | 9 | 13 | 16 | 13 | 0.23 |
| 406 | 1020 | 0 | C01 | 2985 | 1 | | | | | | | | | C | 15 | -18.4 | 9 | 7 | 18 | 7 | 0.43 |
| 406 | 1024 | 0 | C01 | 2990 | 1 | 12 | 10 | 83034 | 1440 | 5.0 | -163 | 2.2 | 4.5 | A | 79 | -1.4 | 170 | 13 | 16 | 13 | 0.23 |
| 406 | 1024 | 0 | C01 | 2990 | 1 | 13 | 13 | 83034 | 1440 | 7.1 | -143 | 5.1 | 4.9 | A | 79 | -1.4 | 170 | 13 | 16 | 13 | 0.23 |
| 406 | 1026 | 0 | C01 | 2991 | 1 | 18 | 7 | 83034 | 1625 | 0.5 | 114 | -0.4 | 0.3 | A | 15 | 18.2 | 170 | 7 | 18 | 7 | 0.14 |
| 406 | 1026 | 0 | C01 | 2991 | 2 | 18 | 7 | 83034 | 1625 | 1.4 | -155 | 0.8 | 1.2 | A | 15 | 18.2 | 170 | 7 | 13 | 7 | 0.14 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | Z IN ELLPSE | Z APROB | Z LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 2.7 | 0.1 | -1.8 | 0.2 | 1.8 | 0.0 | 100.0 | 78.6 |
| STD DEVTN | 2.3 | 2.4 | 1.9 | 2.6 | 1.7 | | | |

11 BEACON TESTS  11 POSITIONS LOCATED  3 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.60

OK,

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CIA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 4100 | 30 | C01 | 3304 | 4 | 17 | 4 | 83057 | 1217 | 546.2 | -89 | 537.6 | -96.6 | C | 78 | 1.6 | 170 | 13 | 18 | 13 | 0.23 |
| 406 | 4104 | 6 | C01 | 3317 | 4 | 2 | 5 | 83058 | 1252 | 8.5 | -96 | 8.5 | -0.5 | B | 37 | 9.5 | 170 | 12 | 18 | 12 | 0.33 |
| 406 | 4106 | 2 | C01 | 3331 | 4 | 3 | 7 | 83059 | 1327 | 10.2 | -157 | 5.5 | 8.6 | A | 17 | 17.5 | 170 | 7 | 16 | 7 | 0.43 |
| 406 | 4106 | 2 | C01 | 3331 | 1 | 5 | 7 | 83059 | 1327 | 7.7 | -157 | 4.1 | 6.5 | A | 17 | 17.5 | 170 | 7 | 18 | 7 | 0.43 |
| 406 | 4108 | 2 | C01 | 3344 | 4 | | | | | | | | | C | 55 | 5.4 | 170 | 13 | 18 | 13 | 0.23 |
| 406 | 4110 | 12 | C01 | 3358 | 1 | 19 | 6 | 83061 | 1252 | 4.0 | 95 | -3.9 | 1.1 | A | 25 | 13.4 | 170 | 11 | 18 | 11 | 0.27 |
| 406 | 4116 | 2 | C01 | 3399 | 1 | 17 | 4 | 83064 | 1251 | 5.3 | 86 | -5.2 | 0.6 | A | 17 | 17.2 | 170 | 9 | 18 | 9 | 0.33 |
| 406 | 4124 | 13 | C01 | 3500 | 4 | | | | | | | | | C | 16 | 18.0 | 9 | 7 | 11 | 7 | 0.14 |
| 406 | 4126 | 14 | C01 | 3508 | 1 | | | | | | | | | C | 11 | 20.8 | 170 | 4 | 18 | 4 | 0.50 |
| 406 | 4128 | 7 | C01 | 3527 | 4 | | | | | | | | | C | 9 | 22.1 | 9 | 4 | 8 | 4 | 1.00 |
| 406 | 4132 | 7 | C01 | 3568 | 4 | 2 | 5 | 83076 | 2108 | 16.4 | -12 | -6.1 | 15.2 | B | 15 | 18.3 | 9 | 7 | 11 | 7 | 0.14 |
| 406 | 4134 | 7 | C01 | 3582 | 1 | 6 | 7 | 83077 | 2143 | 7.5 | -88 | -7.4 | -1.0 | A | 34 | 10.3 | 9 | 11 | 9 | 9 | 0.33 |
| 406 | 4136 | 15 | C01 | 3595 | 4 | | | | | | | | | C | 9 | 22.3 | 9 | 11 | 8 | 8 | 1.00 |
| 406 | 4140 | 6 | C01 | 3623 | 1 | | | | | | | | | C | 49 | 6.4 | 9 | 13 | 13 | 13 | 0.23 |
| 406 | 4144 | 12 | C01 | 3650 | 1 | | | | | | | | | C | 33 | 10.6 | 9 | 11 | 9 | 9 | 0.33 |
| 406 | 4146 | 7 | C01 | 3663 | 4 | | | | | | | | | C | 9 | 22.6 | 9 | 11 | 6 | 6 | 1.00 |
| 406 | 4148 | 20 | C01 | 3677 | 4 | | | | | | | | | C | 22 | 14.7 | 9 | 9 | 13 | 9 | 0.33 |
| 406 | 4150 | 6 | C01 | 3691 | 1 | 8 | 4 | 83085 | 2106 | 18.0 | -100 | -17.0 | -6.1 | A | 48 | 6.7 | 8 | 13 | 13 | 13 | 0.23 |
| 406 | 4152 | 4 | C01 | 3704 | 4 | | | | | | | | | C | 14 | 18.8 | 9 | 7 | 11 | 7 | 0.14 |
| 406 | 4154 | 14 | C01 | 3718 | 4 | 5 | 5 | 83087 | 2031 | 26.7 | 73 | 24.1 | 11.5 | A | 32 | 10.8 | 9 | 11 | 15 | 11 | 0.27 |
| 406 | 4158 | 8 | C01 | 3732 | 1 | 7 | 4 | 83088 | 2106 | 80.8 | 106 | 80.3 | -9.8 | C | 70 | 2.8 | 9 | 13 | 14 | 13 | 0.23 |
| 406 | 4160 | 6 | C01 | 3745 | 4 | 2 | 4 | 83089 | 1956 | 10.1 | 153 | 5.9 | -8.3 | A | 22 | 15.0 | 9 | 9 | 13 | 9 | 0.33 |
| 406 | 4162 | 5 | C01 | 3746 | 1 | 13 | 7 | 83089 | 2141 | 0.8 | -142 | -0.4 | -0.7 | A | 56 | 5.2 | 9 | 13 | 17 | 13 | 0.08 |
| 406 | 4164 | 1 | C01 | 3759 | 1 | 5 | 9 | 83090 | 2031 | 6.7 | 23 | 1.6 | 6.5 | A | 47 | 7.0 | 9 | 13 | 12 | 12 | 0.17 |
| 406 | 4172 | 10 | C01 | 3786 | 1 | | | | | | | | | C | 31 | 11.1 | 8 | 11 | 9 | 9 | 0.33 |
| 406 | 4180 | 4 | C01 | 3814 | 1 | | | | | | | | | C | 57 | 4.9 | 9 | 13 | 17 | 13 | 0.08 |
| 406 | 4182 | 3 | C01 | 3827 | 1 | 8 | 10 | 83095 | 1955 | 5.1 | -78 | -5.1 | 0.2 | A | 46 | 7.2 | 9 | 13 | 12 | 12 | 0.17 |
| 406 | 4184 | 3 | C01 | 3828 | 1 | | | | | | | | | C | 27 | 12.7 | 9 | 11 | 18 | 11 | 0.27 |
| 406 | 4186 | 1 | C01 | 3841 | 4 | 9 | 10 | 83096 | 2030 | 14.9 | -73 | -14.8 | 1.9 | B | 13 | 19.3 | 9 | 6 | 10 | 6 | 0.33 |
| 406 | 4186 | 1 | C01 | 3841 | 4 | 10 | 5 | 83096 | 2030 | 2.5 | 42 | 1.4 | 2.0 | A | 13 | 19.3 | 9 | 6 | 10 | 6 | 0.33 |
| 406 | 4188 | 1 | C01 | 3841 | 1 | 10 | 5 | 83096 | 2030 | 10.1 | 94 | 10.0 | 0.9 | A | 84 | 0.8 | 9 | 13 | 16 | 13 | 0.23 |
| 406 | 4190 | 0 | C01 | 3854 | 1 | 5 | 4 | 83097 | 1920 | 2.1 | 18 | 0.4 | 2.1 | B | 31 | 11.4 | 9 | 11 | 8 | 8 | 0.50 |
| 406 | 4192 | 0 | C01 | 3855 | 4 | 20 | 8 | 83097 | 1920 | 7.5 | -57 | -6.9 | 2.9 | A | 39 | 8.7 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 4194 | 2 | C01 | 3868 | 1 | 13 | 6 | 83098 | 1955 | 11.1 | 108 | 11.0 | -1.8 | A | 66 | 3.4 | 9 | 13 | 14 | 13 | 0.23 |
| 406 | 4196 | 5 | C01 | 3869 | 1 | 26 | 4 | 83098 | 2141 | 4.3 | 37 | 2.0 | 3.8 | A | 19 | 16.3 | 9 | 9 | 18 | 9 | 0.11 |
| 406 | 4198 | 5 | C01 | 3881 | 4 | | | | | | | | | C | 20 | 15.5 | 9 | 9 | 13 | 9 | 0.33 |
| 406 | 4200 | 8 | C01 | 3882 | 1 | | | | | | | | | C | 59 | 4.6 | 9 | 13 | 17 | 13 | 0.08 |
| 406 | 4202 | 10 | C01 | 3895 | 1 | 8 | 5 | 83100 | 1919 | 9.1 | 24 | 2.3 | 8.8 | B | 44 | 7.5 | 9 | 13 | 11 | 11 | 0.27 |
| 406 | 4204 | 10 | C01 | 3896 | 1 | | | | | | | | | C | 28 | 12.4 | 9 | 11 | 18 | 11 | 0.27 |
| 406 | 4208 | 8 | C01 | 3909 | 1 | | | | | | | | | C | 85 | 0.6 | 9 | 13 | 16 | 13 | 0.23 |
| 406 | 4212 | 4 | C01 | 3922 | 1 | | | | | | | | | C | 30 | 11.6 | 9 | 11 | 8 | 8 | 0.50 |
| 406 | 4214 | 6 | C01 | 3923 | 1 | | | | | | | | | C | 40 | 8.5 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 4216 | 3 | C01 | 3936 | 1 | 9 | 5 | 83103 | 1919 | 24.0 | -72 | -23.7 | 3.6 | A | 65 | 3.6 | 8 | 13 | 14 | 13 | 0.23 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | Z IN ELLPSE | Z APROB | Z LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 7.2 | 0.1 | -0.3 | -0.5 | 1.7 | 47.6 | 65.1 | 64.3 |
| STD DEVTN | 6.0 | 8.0 | 4.7 | 8.0 | 4.5 | | | |

82 BEACON TESTS  63 POSITIONS LOCATED  35 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.52

OK,

SLIST PERROR.PTR.406.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
PT REYES TEST 1
8 FEBRUARY 1983 - 10 FEBRUARY 1983

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CIA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 2002 | 0 | C01 | 3059 | 1 | | | | | | | | | C | 10 | 21.6 | 170 | 3 | 18 | 3 | 1.00 |
| 406 | 2004 | 0 | C01 | 3060 | 1 | 9 | 5 | 83039 | 1736 | 1.4 | -111 | 1.4 | 0.3 | A | 76 | 1.9 | 170 | 13 | 11 | 11 | 0.09 |
| 406 | 2004 | 0 | C01 | 3060 | 2 | 10 | 8 | 83039 | 1736 | 1.4 | 173 | 0.1 | 1.4 | A | 76 | 1.9 | 170 | 13 | 18 | 13 | 0.23 |
| 406 | 2006 | 0 | C01 | 3061 | 2 | 7 | 11 | 83039 | 1921 | 0.6 | -167 | 0.2 | 0.6 | A | 14 | 19.2 | 170 | 6 | 14 | 6 | 0.33 |
| 406 | 2008 | 0 | C01 | 3067 | 1 | 4 | 11 | 83040 | 523 | 3.0 | 14 | 0.3 | 3.0 | A | 28 | 12.2 | 9 | 11 | 16 | 11 | 0.09 |
| 406 | 2012 | 0 | C01 | 3073 | 1 | 8 | 8 | 83040 | 1625 | 1.1 | 171 | 0.0 | 1.1 | A | 24 | 13.9 | 170 | 11 | 17 | 11 | 0.27 |
| 406 | 2014 | 0 | C01 | 3074 | 2 | 5 | 5 | 83040 | 1811 | 2.1 | -145 | 1.4 | 1.5 | A | 48 | 6.7 | 170 | 13 | 17 | 13 | 0.23 |
| 406 | 2016 | 0 | C01 | 3081 | 1 | 2 | 7 | 83041 | 558 | 8.7 | 161 | 4.0 | -7.7 | B | 63 | 3.9 | 8 | 13 | 14 | 11 | 0.27 |
| 406 | 2016 | 0 | C01 | 3081 | 2 | 3 | 10 | 83041 | 558 | 21.0 | 119 | 19.6 | -7.5 | B | 63 | 3.9 | 8 | 13 | 18 | 13 | 0.09 |
| 406 | 2020 | 0 | C01 | 3087 | 1 | 6 | 10 | 83041 | 1701 | 0.9 | -131 | 0.8 | 0.5 | A | 52 | 5.9 | 170 | 12 | 14 | 12 | 0.17 |
| 406 | 2020 | 0 | C01 | 3087 | 2 | 8 | 10 | 83041 | 1701 | 1.9 | -173 | 0.5 | 1.9 | A | 52 | 5.9 | 170 | 12 | 18 | 12 | 0.17 |
| 406 | 2022 | 0 | C01 | 3088 | 2 | 5 | 11 | 83041 | 1846 | 2.2 | -152 | 1.3 | 1.7 | A | 21 | 15.0 | 170 | 9 | 16 | 9 | 0.33 |
| 406 | 2024 | 0 | C01 | 3094 | 1 | 10 | 6 | 83042 | 448 | 3.5 | -34 | -2.4 | 2.5 | A | 18 | 16.5 | 8 | 8 | 17 | 8 | 0.25 |
| 406 | 2024 | 0 | C01 | 3094 | 2 | 10 | 7 | 83042 | 448 | 3.0 | -27 | -1.8 | 2.4 | A | 18 | 16.5 | 8 | 8 | 16 | 8 | 0.25 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | Z IN ELLPSE | Z APROB | Z LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 3.9 | 1.1 | -1.5 | 2.0 | 0.1 | 15.4 | 84.6 | 92.9 |
| STD DEVTN | 5.3 | 5.1 | 3.8 | 3.3 | 3.4 | | | |

10 BEACON TESTS  13 POSITIONS LOCATED  1 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.65

OK,

SLIST PERROR.NWB.406.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
NORTHWIND TEST
14 JUNE 1983 - 1 JULY 1983

| BCN | TEST NUM | SEA MT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 7000 | 0 | C02 | 1122 | 1 | 15 | 9 | 83165 | 1918 | 1.9 | -41 | -1.4 | 1.2 | A | 52 | 5.7 | 8 | 13 | 18 | 13 | 0.08 |
| 406 | 7001 | 0 | S01 | 1113 | 4 | 2 | 11 | 83165 | 2236 | 4.6 | -20 | -0.7 | 4.5 | A | 6 | 19.7 | -11 | 13 | 13 | 13 | 1.04 |
| 406 | 7002 | 0 | S01 | 1114 | 4 | 17 | 10 | 83166 | 16 | 10.5 | -90 | -10.3 | 1.8 | B | 75 | 1.3 | -10 | 10 | 15 | 10 | 0.20 |
| 406 | 7003 | 0 | C01 | 4786 | 1 | 12 | 9 | 83166 | 22 | 17.2 | 88 | -17.1 | 2.0 | A | 83 | 0.9 | 171 | 13 | 18 | 13 | 0.23 |
| 406 | 7004 | 0 | S01 | 1115 | 4 | 6 | 8 | 83166 | 156 | 2.2 | 43 | 1.7 | 1.3 | A | 4 | 21.0 | -10 | 13 | 10 | 10 | 1.05 |
| 406 | 7005 | 0 | C01 | 4787 | 1 | 11 | 6 | 83166 | 208 | 4.6 | -12 | 0.3 | -4.6 | A | 9 | 22.5 | 171 | 13 | 17 | 13 | 1.18 |
| 406 | 7006 | 0 | C02 | 1127 | 1 | 4 | 7 | 83166 | 433 | 1.7 | 122 | -1.2 | 1.1 | A | 13 | 19.4 | 170 | 7 | 9 | 5 | 0.20 |
| 406 | 7006 | 0 | C02 | 1127 | 4 | 6 | 11 | 83166 | 433 | 3.0 | 152 | -1.0 | 2.9 | A | 13 | 19.4 | 170 | 7 | 15 | 7 | 0.43 |
| 406 | 7007 | 0 | C02 | 1128 | 1 | 12 | 12 | 83166 | 620 | 1.7 | -103 | 1.7 | 0.2 | A | 72 | 2.4 | 171 | 13 | 18 | 13 | 0.23 |
| 406 | 7008 | 0 | C02 | 1129 | 1 | 9 | 8 | 83166 | 804 | 4.3 | -79 | 4.1 | -1.5 | A | 4 | 26.0 | 170 | 13 | 16 | 13 | 1.16 |
| 406 | 7008 | 0 | C02 | 1129 | 4 | 10 | 8 | 83166 | 804 | 4.9 | -101 | 4.9 | 0.2 | A | 4 | 26.0 | 170 | 13 | 12 | 12 | 1.11 |
| 406 | 7009 | 0 | C01 | 4793 | 1 | 7 | 9 | 83166 | 1207 | 7.4 | -13 | -2.7 | 6.9 | A | 44 | 7.5 | 8 | 12 | 14 | 12 | 0.17 |
| 406 | 7009 | 0 | C01 | 4793 | 20 | 0 | 14 | 83166 | 1216 | 6.1 | -18 | -2.7 | 5.4 | A | 44 | 7.5 | 8 | 12 | 14 | 12 | 0.17 |
| 406 | 7010 | 0 | S01 | 1121 | 4 | 14 | 12 | 83166 | 1236 | 1.3 | -47 | 1.1 | -0.7 | A | 57 | 3.4 | -169 | 10 | 16 | 10 | 0.20 |
| 406 | 7011 | 0 | C01 | 4794 | 1 | 10 | 13 | 83166 | 1353 | 1.3 | 70 | 1.2 | 0.6 | A | 24 | 14.0 | 8 | 10 | 18 | 10 | 0.20 |
| 406 | 7011 | 0 | C01 | 4794 | 20 | 0 | 15 | 83166 | 1359 | 1.0 | 130 | 0.9 | -0.6 | A | 24 | 14.0 | 8 | 10 | 18 | 10 | 0.20 |
| 406 | 7012 | 0 | S01 | 1122 | 4 | 14 | 13 | 83166 | 1415 | 1.9 | -115 | 1.5 | 1.1 | A | 11 | 16.3 | -167 | 6 | 14 | 6 | 0.33 |
| 406 | 7013 | 0 | C02 | 1135 | 1 | 7 | 11 | 83166 | 1802 | 5.1 | 18 | 0.9 | 5.0 | A | 48 | 6.5 | 8 | 12 | 14 | 12 | 0.17 |
| 406 | 7013 | 0 | C02 | 1135 | 4 | 13 | 12 | 83166 | 1802 | 5.2 | 13 | 0.5 | 5.2 | A | 48 | 6.5 | 8 | 12 | 18 | 12 | 0.17 |
| 406 | 7014 | 0 | C02 | 1136 | 4 | 8 | 10 | 83166 | 1948 | 2.7 | 70 | 2.3 | 1.3 | A | 18 | 16.7 | 9 | 9 | 17 | 9 | 0.33 |
| 406 | 7014 | 0 | C02 | 1136 | 1 | 8 | 11 | 83166 | 1954 | 2.8 | 71 | 2.5 | 1.3 | A | 18 | 16.7 | 9 | 9 | 18 | 9 | 0.33 |
| 406 | 7015 | 0 | S01 | 1127 | 4 | 7 | 10 | 83166 | 2215 | 5.6 | -22 | -1.1 | 5.5 | A | 8 | 18.2 | -11 | 3 | 10 | 3 | 0.33 |
| 406 | 7016 | 0 | C01 | 4799 | 1 | 3 | 11 | 83166 | 2311 | 1.5 | -153 | 0.8 | 1.2 | A | 45 | 7.4 | 170 | 13 | 14 | 11 | 0.09 |
| 406 | 7016 | 0 | C01 | 4799 | 20 | 0 | 13 | 83166 | 2319 | 1.6 | -171 | 0.5 | 1.6 | A | 45 | 7.4 | 170 | 13 | 14 | 11 | 0.09 |
| 406 | 7017 | 0 | S01 | 1128 | 4 | 9 | 18 | 83166 | 2355 | 5.3 | -60 | -4.0 | 3.4 | A | 77 | 1.2 | -10 | 11 | 15 | 11 | 0.09 |
| 406 | 7018 | 0 | C01 | 4800 | 1 | 20 | 8 | 83167 | 56 | 3.2 | -81 | 3.0 | -0.9 | A | 24 | 13.9 | 171 | 10 | 18 | 10 | 0.40 |
| 406 | 7018 | 0 | C01 | 4800 | 20 | 0 | 12 | 83167 | 104 | 3.4 | -85 | 3.3 | -0.8 | A | 24 | 13.9 | 171 | 10 | 18 | 10 | 0.40 |
| 406 | 7019 | 0 | S01 | 1129 | 4 | 19 | 11 | 83167 | 135 | 2.2 | 10 | 0.8 | 2.1 | A | 4 | 21.1 | -10 | 10 | 12 | 10 | 1.30 |
| 406 | 7020 | 0 | C02 | 1141 | 1 | 8 | 8 | 83167 | 502 | 1.8 | 99 | -1.7 | 0.6 | A | 45 | 7.2 | 170 | 13 | 15 | 12 | 0.17 |
| 406 | 7020 | 0 | C02 | 1141 | 4 | 12 | 7 | 83167 | 502 | 2.8 | 147 | -1.1 | 2.6 | A | 45 | 7.2 | 170 | 13 | 17 | 13 | 0.23 |
| 406 | 7021 | 0 | C02 | 1142 | 1 | 18 | 9 | 83167 | 647 | 2.7 | -72 | 2.4 | -1.2 | A | 18 | 16.5 | 170 | 9 | 18 | 9 | 0.33 |
| 406 | 7021 | 0 | C02 | 1142 | 4 | 19 | 9 | 83167 | 647 | 3.1 | -107 | 3.0 | 0.4 | A | 18 | 16.5 | 170 | 9 | 17 | 9 | 0.33 |
| 406 | 7022 | 0 | C01 | 4806 | 4 | 3 | 6 | 83167 | 1058 | 4.6 | -38 | -3.4 | 3.1 | A | 21 | 15.2 | 8 | 10 | 13 | 10 | 0.20 |
| 406 | 7023 | 0 | C01 | 4807 | 1 | 20 | 10 | 83167 | 1243 | 5.7 | 72 | 5.1 | 2.5 | A | 53 | 5.7 | 8 | 13 | 16 | 13 | 0.23 |
| 406 | 7023 | 0 | C01 | 4807 | 4 | 22 | 9 | 83167 | 1243 | 5.4 | 72 | 4.9 | 2.4 | A | 53 | 5.7 | 8 | 13 | 18 | 13 | 0.23 |
| 406 | 7024 | 0 | S01 | 1136 | 4 | 2 | 15 | 83167 | 1353 | 2.4 | -150 | 0.7 | 2.3 | A | 12 | 15.4 | -167 | 6 | 14 | 6 | 0.00 |
| 406 | 7025 | 0 | C01 | 4808 | 1 | 19 | 4 | 83167 | 1431 | 3.2 | 97 | 3.2 | 0.1 | A | 5 | 25.2 | 9 | 6 | 17 | 6 | 1.72 |
| 406 | 7025 | 0 | C01 | 4808 | 4 | 19 | 4 | 83167 | 1431 | 3.2 | 97 | 3.2 | 0.1 | A | 5 | 25.2 | 9 | 6 | 15 | 6 | 1.52 |
| 406 | 7026 | 0 | C02 | 1148 | 4 | 1 | 6 | 83167 | 1646 | 3.7 | -23 | -2.0 | 3.1 | A | 20 | 15.4 | 8 | 10 | 13 | 10 | 0.20 |
| 406 | 7027 | 0 | C02 | 1149 | 4 | 12 | 13 | 83167 | 1832 | 2.7 | 43 | 1.5 | 2.3 | A | 47 | 6.8 | 9 | 13 | 18 | 13 | 0.23 |
| 406 | 7028 | 0 | C02 | 1150 | 1 | 15 | 9 | 83167 | 2019 | 2.8 | 108 | 2.8 | -0.4 | A | 4 | 25.6 | 10 | 13 | 17 | 13 | 1.22 |
| 406 | 7028 | 0 | C02 | 1150 | 4 | 12 | 7 | 83167 | 2019 | 2.5 | 119 | 2.3 | -0.8 | A | 4 | 25.6 | 10 | 13 | 15 | 13 | 1.17 |
| 406 | 7029 | 0 | C01 | 4812 | 4 | 6 | 7 | 83167 | 2159 | 3.9 | 163 | -0.5 | 3.8 | A | 23 | 14.5 | 170 | 10 | 12 | 10 | 0.20 |
| 406 | 7029 | 0 | C01 | 4812 | 20 | 0 | 15 | 83167 | 2201 | 0.5 | 154 | -0.2 | 0.5 | A | 23 | 14.5 | 170 | 10 | 12 | 10 | 0.20 |
| 406 | 7030 | 0 | S01 | 1142 | 4 | 15 | 11 | 83167 | 2334 | 3.1 | -36 | -1.3 | 2.8 | A | 71 | 1.8 | -10 | 11 | 15 | 11 | 0.09 |
| 406 | 7031 | 0 | C01 | 4813 | 1 | 20 | 7 | 83167 | 2345 | 1.1 | -120 | 1.0 | 0.4 | A | 53 | 5.6 | 170 | 12 | 17 | 12 | 0.17 |
| 406 | 7031 | 0 | C01 | 4813 | 20 | 0 | 12 | 83167 | 2350 | 1.8 | -63 | 1.5 | -1.1 | A | 53 | 5.6 | 170 | 12 | 17 | 12 | 0.17 |
| 406 | 7032 | 0 | S01 | 1143 | 4 | 22 | 12 | 83168 | 115 | 1.7 | 16 | 0.8 | 1.5 | A | 4 | 21.2 | -11 | 12 | 14 | 12 | 1.16 |
| 406 | 7033 | 0 | C01 | 4814 | 20 | 0 | 3 | 83168 | 132 | 3.2 | -117 | 3.1 | 1.0 | A | 5 | 25.8 | 170 | 12 | 14 | 12 | 1.58 |
| 406 | 7034 | 0 | C01 | 4834 | 1 | 6 | 12 | 83169 | 1210 | 4.6 | 57 | 3.4 | 3.1 | A | 41 | 8.2 | 10 | 12 | 16 | 12 | 0.17 |
| 406 | 7034 | 0 | C01 | 4834 | 20 | 0 | 17 | 83169 | 1218 | 2.9 | 94 | 2.9 | 0.3 | A | 41 | 8.2 | 10 | 12 | 16 | 12 | 0.17 |
| 406 | 7035 | 0 | S01 | 1164 | 4 | 24 | 10 | 83169 | 1308 | 2.2 | -125 | 1.4 | 1.7 | A | 17 | 12.6 | -166 | 8 | 15 | 8 | 0.25 |
| 406 | 7036 | 0 | C01 | 4835 | 1 | 21 | 6 | 83169 | 1358 | 3.3 | 69 | 2.8 | 1.8 | A | 5 | 25.4 | 11 | 8 | 18 | 8 | 1.73 |
| 406 | 7036 | 0 | C01 | 4835 | 4 | 22 | 5 | 83169 | 1358 | 3.7 | 63 | 3.0 | 2.3 | A | 5 | 25.4 | 11 | 8 | 16 | 8 | 1.57 |
| 406 | 7036 | 0 | C01 | 4835 | 20 | 0 | 10 | 83169 | 1403 | 1.7 | 97 | 1.7 | 0.1 | A | 5 | 25.4 | 11 | 8 | 16 | 8 | 1.57 |

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 7080 | 0 | C01 | 4889 | 20 | 0 | 15 | 83173 | 1258 | 2.4 | 116 | -0.9 | -2.2 | A | | | | | | | |
| 406 | 7081 | 0 | S01 | 1221 | 4 | 18 | 7 | 83173 | 1317 | 3.5 | -131 | -2.4 | 2.5 | A | | | | | | | |
| 406 | 7082 | 0 | C02 | 1231 | 20 | 0 | 6 | 83173 | 1432 | 3.2 | -119 | -1.7 | 2.7 | A | | | | | | | |
| 406 | 7083 | 0 | C01 | 4890 | 20 | 0 | 12 | 83173 | 1446 | 3.0 | 166 | -2.9 | -0.9 | A | | | | | | | |
| 406 | 7084 | 0 | S01 | 1222 | 4 | 8 | 4 | 83173 | 1456 | 3.1 | -110 | -1.3 | 2.8 | B | | | | | | | |
| 406 | 7085 | 0 | C01 | 5000 | 20 | 0 | 15 | 83181 | 1558 | 4.0 | 115 | 2.5 | 3.1 | A | 34 | 10.1 | 76 | 12 | 17 | 2 | 6.00 |
| 406 | 7085 | 0 | C01 | 5000 | 20 | 0 | 13 | 83181 | 1558 | 11.9 | -13 | -11.9 | -0.0 | A | 34 | 10.1 | 76 | 12 | 17 | 2 | 6.00 |
| 406 | 7086 | 0 | S01 | 1338 | 20 | 0 | 4 | 83181 | 1838 | 3.8 | -140 | -3.8 | 0.1 | B | 40 | 6.0 | -51 | 10 | 15 | 2 | 3.00 |
| 406 | 7086 | 0 | S01 | 1338 | 20 | 0 | 4 | 83181 | 1837 | 6.5 | -48 | 0.3 | 6.5 | B | 40 | 6.0 | -51 | 10 | 15 | 2 | 3.00 |
| 406 | 7087 | 0 | C01 | 5002 | 20 | 0 | 18 | 83181 | 1925 | 8.3 | 55 | -8.3 | -0.1 | A | 79 | 1.5 | 146 | 13 | 10 | 4 | 3.00 |
| 406 | 7088 | 0 | C01 | 5003 | 20 | 0 | 14 | 83181 | 2111 | 2.5 | -68 | 1.6 | -2.0 | A | 55 | 5.2 | 149 | 13 | 10 | 10 | 1.12 |
| 406 | 7089 | 0 | C01 | 5004 | 20 | 0 | 18 | 83181 | 2305 | 1.6 | 8 | -0.9 | -1.3 | A | 28 | 12.2 | 152 | 11 | 10 | 10 | 1.04 |
| 406 | 7090 | 0 | C01 | 5005 | 20 | 0 | 5 | 83182 | 45 | 3.0 | -108 | 2.7 | -1.1 | A | 15 | 18.2 | 139 | 7 | 10 | 7 | 1.01 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | Z IN ELLPSE | Z APROB | Z LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 4.3 | 0.1 | 0.2 | 0.7 | 1.2 | 15.5 | 93.0 | 99.2 |
| STD DEVTN | 3.9 | 4.8 | 3.2 | 4.9 | 2.8 | | | |

90 REACQN TESTS 129 POSITIONS LOCATED 1 POSITIONS NOT LOCATED NPTS/NUMBER TRANS = 0.70

OK,

SLIST PERROR.PT2.406.C2.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
PT REYES TEST 2
16 AUGUST 1983 - 18 AUGUST 1983

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | POSITION ERROR DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 2101 | 0 | C02 | 1984 | 2 | 5 | 9 | 83228 | 1407 | 0.7 | 166 | 0.3 | -0.7 | A | 46 | 7.1 | 8 | 12 | 18 | 12 | 0.17 |
| 406 | 2104 | 0 | C02 | 1990 | 2 | 2 | 13 | 83229 | 106 | 3.3 | -69 | 2.9 | -1.7 | A | 36 | 9.5 | 170 | 12 | 18 | 12 | 0.33 |
| 406 | 2107 | 0 | C02 | 1997 | 2 | 11 | 5 | 83229 | 1251 | 0.7 | -148 | -0.3 | -0.7 | A | 11 | 20.8 | 8 | 4 | 14 | 4 | 0.50 |
| 406 | 2108 | 0 | C02 | 1998 | 2 | 5 | 9 | 83229 | 1435 | 8.2 | -96 | -7.9 | -2.2 | A | 86 | 0.5 | 8 | 13 | 18 | 13 | 0.08 |
| 406 | 2112 | 0 | C02 | 2005 | 2 | 3 | 11 | 83230 | 320 | 1.0 | 46 | -0.8 | -0.6 | A | 15 | 18.1 | 170 | 8 | 14 | 8 | 0.25 |
| 406 | 2114 | 0 | C02 | 2011 | 2 | 10 | 6 | 83230 | 1319 | 1.8 | -165 | -0.2 | -1.8 | A | 23 | 13.9 | 8 | 10 | 16 | 10 | 0.20 |
| 406 | 2115 | 0 | C02 | 2012 | 2 | 4 | 8 | 83230 | 1504 | 1.5 | 179 | 0.2 | -1.5 | A | 46 | 6.9 | 8 | 12 | 18 | 12 | 0.17 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 2.5 | -1.6 | -0.5 | -0.8 | -1.3 | 14.3 | 100.0 | 100.0 |
| STD DEVTN | 2.5 | 2.9 | 1.0 | 3.1 | 0.6 | | | |

15 BEACON TESTS  7 POSITIONS LOCATED  0 POSITIONS NOT LOCATED  MPTS/NUMBER TRANS = 0.69

OK,

SLIST PERROR.K02.406.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
KODIAK TEST 2
22 AUGUST 1983 - 25 AUGUST 1993

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 3101 | 0 | C02 | 2067 | 3 | | | | | | | | | C | 40 | 8.5 | 12 | 12 | 17 | 12 | 0.33 |
| 406 | 3102 | 0 | C02 | 2068 | 3 | | | | | | | | | C | 54 | 5.4 | 13 | 13 | 18 | 13 | 0.23 |
| 406 | 3103 | 0 | S01 | 2091 | 3 | 5 | 9 | 83234 | 1811 | 1.0 | -54 | 1.0 | -0.3 | A | 54 | 3.8 | -163 | 11 | 15 | 11 | 0.09 |
| 406 | 3105 | 0 | S01 | 2092 | 3 | 4 | 13 | 83234 | 1951 | 0.4 | 133 | -0.4 | 0.2 | A | 28 | 8.7 | -160 | 10 | 14 | 10 | 0.20 |
| 406 | 3106 | 0 | C02 | 2072 | 3 | | | | | | | | | C | 16 | 17.3 | 160 | 9 | 15 | 9 | 0.33 |
| 406 | 3107 | 0 | C02 | 2073 | 3 | | | | | | | | | C | 53 | 5.5 | 165 | 12 | 18 | 12 | 0.17 |
| 406 | 3108 | 0 | C02 | 2074 | 3 | | | | | | | | | C | 41 | 8.3 | 166 | 12 | 17 | 12 | 0.33 |
| 406 | 3109 | 0 | S01 | 2098 | 3 | 4 | 16 | 83235 | 542 | 0.5 | -128 | -0.4 | -0.2 | A | 34 | 7.1 | -15 | 11 | 15 | 11 | 0.09 |
| 406 | 3110 | 0 | C02 | 2080 | 3 | 3 | 15 | 83235 | 1402 | 1.8 | -132 | -1.0 | -1.5 | A | 16 | 17.7 | 12 | 8 | 14 | 8 | 0.25 |
| 406 | 3111 | 0 | C02 | 2081 | 3 | 2 | 4 | 83235 | 1546 | 24.5 | 109 | 24.3 | -3.1 | A | 63 | 3.8 | 12 | 13 | 18 | 13 | 0.23 |
| 406 | 3115 | 0 | C02 | 2086 | 3 | 5 | 16 | 83236 | 48 | 2.6 | -154 | 1.9 | 1.8 | A | 24 | 13.7 | 161 | 11 | 17 | 11 | 0.27 |
| 406 | 3116 | 0 | C02 | 2087 | 3 | 4 | 8 | 83236 | 234 | 15.1 | 79 | -15.0 | 1.1 | B | 78 | 1.5 | 165 | 13 | 18 | 13 | 0.23 |
| 406 | 3118 | 0 | S01 | 2112 | 3 | 3 | 13 | 83236 | 520 | 0.7 | -124 | -0.7 | -0.2 | A | 50 | 4.3 | -15 | 11 | 15 | 11 | 0.09 |
| 406 | 3119 | 0 | C02 | 2094 | 3 | 4 | 14 | 83236 | 1430 | 0.5 | -173 | 0.1 | -0.5 | A | 25 | 13.1 | 13 | 11 | 16 | 11 | 0.27 |
| 406 | 3120 | 0 | C02 | 2095 | 3 | 3 | 17 | 83236 | 1615 | 6.0 | 102 | 6.0 | -0.0 | B | 83 | 0.9 | 12 | 13 | 18 | 13 | 0.08 |
| 406 | 3121 | 0 | S01 | 2119 | 3 | 4 | 11 | 83236 | 1728 | 7.7 | -89 | 7.5 | 2.1 | A | 26 | 9.4 | -163 | 10 | 15 | 10 | 0.20 |
| 406 | 3122 | 0 | S01 | 2120 | 3 | 4 | 11 | 83236 | 1908 | 1.4 | 51 | -0.8 | -1.2 | A | 55 | 3.7 | -161 | 10 | 15 | 10 | 0.20 |
| 406 | 3123 | 0 | S01 | 2121 | 3 | 2 | 8 | 83236 | 2047 | 0.6 | 98 | -0.6 | -0.1 | A | 13 | 14.6 | -157 | 7 | 13 | 7 | 0.14 |
| 406 | 3124 | 0 | C02 | 2099 | 3 | 2 | 9 | 83236 | 2329 | 3.9 | 11 | -2.2 | -3.2 | A | 12 | 20.3 | 156 | 5 | 15 | 5 | 0.60 |
| 406 | 3126 | 0 | S01 | 2125 | 3 | 6 | 6 | 83237 | 319 | 0.7 | 133 | 0.3 | -0.6 | A | 23 | 10.5 | -18 | 9 | 14 | 9 | 0.11 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 4.5 | -2.3 | -0.5 | 1.3 | -0.4 | 0.0 | 86.7 | 75.0 |
| STD DEVTN | 6.6 | 7.2 | 2.6 | 7.7 | 1.4 | | | |

20 BEACON TESTS  15 POSITIONS LOCATED  5 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS - 0.92

OK,

SLIST PERROR.K02.406.S1.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
KODIAK TEST 2
22 AUGUST 1983 - 25 AUGUST 1983

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 3103 | 0 | S01 | 2091 | 3 | 5 | 9 | 83234 | 1811 | 1.0 | -55 | 1.0 | -0.3 | A | 54 | 3.8 | -163 | 11 | 15 | 11 | 0.09 |
| 406 | 3105 | 0 | S01 | 2092 | 3 | 4 | 13 | 83234 | 1951 | 0.4 | 133 | -0.4 | 0.2 | A | 28 | 8.7 | -160 | 10 | 14 | 10 | 0.20 |
| 406 | 3109 | 0 | S01 | 2098 | 3 | 4 | 16 | 83235 | 542 | 0.5 | -128 | -0.4 | -0.2 | A | 34 | 7.1 | -15 | 10 | 15 | 10 | 0.30 |
| 406 | 3118 | 0 | S01 | 2112 | 3 | 3 | 13 | 83236 | 520 | 0.7 | -124 | -0.7 | -0.2 | A | 50 | 4.3 | -15 | 11 | 15 | 11 | 0.09 |
| 406 | 3121 | 0 | S01 | 2119 | 3 | 4 | 11 | 83236 | 1729 | 7.7 | -89 | 7.5 | 2.1 | A | 26 | 9.4 | -163 | 10 | 15 | 10 | 0.20 |
| 406 | 3122 | 0 | S01 | 2120 | 3 | 4 | 11 | 83236 | 1908 | 1.4 | 51 | -0.8 | -1.2 | A | 55 | 3.7 | -161 | 10 | 15 | 10 | 0.20 |
| 406 | 3123 | 0 | S01 | 2121 | 3 | 2 | 8 | 83236 | 2047 | 0.6 | 99 | -0.6 | -0.1 | A | 13 | 14.6 | -157 | 7 | 13 | 7 | 0.14 |
| 406 | 3126 | 0 | S01 | 2125 | 3 | 6 | 6 | 83237 | 319 | 0.7 | 133 | 0.3 | -0.6 | A | 23 | 10.5 | -18 | 9 | 14 | 9 | 0.11 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 1.7 | -0.9 | -0.0 | 0.7 | -0.1 | 0.0 | 100.0 | 100.0 |
| STD DEVTN | 2.3 | 2.7 | 0.5 | 2.6 | 0.9 | | | |

20 BEACON TESTS  8 POSITIONS LOCATED  0 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.93

OK,

SLIST PERROR.FRB.406.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
FIREBUSH TEST
25 AUGUST 1993 - 31 AUGUST 1993

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-ERR NMI | Y-ERR NMI | | PREL DEG | CFA DEG | THETA DEG | BWIS MIN | LWIS MIN | MWIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 6002 | 2 | C01 | 5768 | 2 | 2 | 5 | 83237 | 2034 | 42.0 | 75 | -42.0 | -1.0 | B | 79 | 1.4 | 166 | 13 | 14 | 8 | 1.00 |
| 406 | 6002 | 2 | C01 | 5768 | 3 | 10 | 6 | 83237 | 2034 | 11.2 | -86 | 10.8 | -3.3 | B | 79 | 1.4 | 166 | 13 | 18 | 13 | 0.23 |
| 406 | 6002 | 2 | C01 | 5768 | 2 | 4 | 7 | 83237 | 2034 | 0.6 | 28 | -0.4 | -0.4 | B | 79 | 1.4 | 166 | 13 | 14 | 8 | 1.00 |
| 406 | 6002 | 2 | C01 | 5768 | 3 | 9 | 12 | 83237 | 2034 | 2.9 | 6 | -1.0 | -2.8 | A | 79 | 1.4 | 166 | 13 | 18 | 13 | 0.23 |
| 406 | 6003 | 2 | C02 | 2113 | 2 | | | | | | | | | C | 17 | 17.2 | 160 | 9 | 18 | 5 | 1.40 |
| 406 | 6003 | 2 | C02 | 2113 | 2 | | | | | | | | | C | 17 | 17.2 | 160 | 9 | 18 | 5 | 1.40 |
| 406 | 6016 | 3 | C02 | 2135 | 2 | 10 | 8 | 83239 | 1410 | 4.3 | -93 | -4.1 | -1.2 | A | 26 | 12.8 | 12 | 10 | 18 | 9 | 0.11 |
| 406 | 6016 | 3 | C02 | 2135 | 2 | 11 | 10 | 83239 | 1410 | 0.2 | -112 | -0.2 | -0.1 | A | 26 | 12.8 | 12 | 10 | 18 | 9 | 0.11 |
| 406 | 6022 | 4 | C02 | 2142 | 2 | | | | | | | | | C | 62 | 4.1 | 166 | 12 | 10 | 6 | 1.67 |
| 406 | 6022 | 4 | C02 | 2142 | 2 | | | | | | | | | C | 62 | 4.1 | 166 | 12 | 10 | 6 | 1.67 |
| 406 | 6025 | 3 | C02 | 2149 | 2 | | | | | | | | | C | 42 | 8.0 | 12 | 12 | 16 | 10 | 0.00 |
| 406 | 6025 | 3 | C02 | 2149 | 2 | | | | | | | | | C | 42 | 8.0 | 12 | 12 | 16 | 10 | 0.00 |
| 406 | 6027 | 5 | S01 | 2176 | 2 | 3 | 4 | 83240 | 1742 | 54.6 | -59 | 52.9 | -13.3 | C | 34 | 7.3 | -163 | 10 | 12 | 8 | 0.50 |
| 406 | 6027 | 5 | S01 | 2176 | 2 | | | | | | | | | C | 34 | 7.3 | -163 | 10 | 12 | 8 | 0.50 |
| 406 | 6030 | 2 | C02 | 2154 | 2 | | | | | | | | | C | 17 | 17.1 | 159 | 9 | 18 | 5 | 1.40 |
| 406 | 6030 | 2 | C02 | 2154 | 2 | 12 | 5 | 83240 | 2339 | 16.5 | 5 | -7.3 | -14.8 | B | 17 | 17.1 | 159 | 9 | 18 | 5 | 1.40 |
| 406 | 6031 | 1 | C02 | 2155 | 2 | | | | | | | | | C | 55 | 5.2 | 164 | 13 | 17 | 9 | 0.78 |
| 406 | 6031 | 1 | C02 | 2155 | 2 | 5 | 11 | 83241 | 126 | 1.3 | -58 | 0.9 | -1.0 | A | 55 | 5.2 | 164 | 13 | 17 | 9 | 0.78 |
| 406 | 6032 | 0 | S01 | 2182 | 2 | | | | | | | | | C | 27 | 9.0 | -18 | 9 | 16 | 6 | 0.33 |
| 406 | 6032 | 0 | S01 | 2182 | 2 | | | | | | | | | C | 27 | 9.0 | -18 | 9 | 16 | 6 | 0.33 |
| 406 | 6033 | 2 | S01 | 2183 | 2 | | | | | | | | | C | 56 | 3.5 | -15 | 11 | 11 | 5 | 1.00 |
| 406 | 6033 | 2 | S01 | 2183 | 2 | | | | | | | | | C | 56 | 3.5 | -15 | 11 | 11 | 5 | 1.00 |
| 406 | 6039 | 2 | C02 | 2168 | 3 | | | | | | | | | C | 24 | 13.5 | 163 | 10 | 17 | 10 | 0.40 |
| 406 | 6039 | 2 | C02 | 2168 | 2 | | | | | | | | | C | 24 | 13.5 | 163 | 10 | 18 | 7 | 1.00 |
| 406 | 6039 | 2 | C02 | 2168 | 3 | | | | | | | | | C | 24 | 13.5 | 163 | 10 | 17 | 10 | 0.40 |
| 406 | 6039 | 2 | C02 | 2168 | 2 | | | | | | | | | C | 24 | 13.5 | 163 | 10 | 18 | 7 | 1.00 |
| 406 | 6040 | 2 | C02 | 2169 | 2 | 3 | 9 | 83242 | 155 | 0.3 | 0 | 0.3 | -0.1 | B | 79 | 1.5 | 166 | 13 | 14 | 8 | 1.00 |
| 406 | 6040 | 2 | C02 | 2169 | 3 | | | | | | | | | C | 79 | 1.5 | 166 | 13 | 18 | 13 | 0.23 |
| 406 | 6040 | 2 | C02 | 2169 | 2 | 4 | 4 | 83242 | 155 | 1.2 | -141 | 0.9 | 0.7 | B | 79 | 1.5 | 166 | 13 | 14 | 8 | 1.00 |
| 406 | 6040 | 2 | C02 | 2169 | 3 | | | | | | | | | C | 79 | 1.5 | 166 | 13 | 18 | 13 | 0.23 |
| 406 | 6041 | 1 | S01 | 2197 | 3 | 9 | 13 | 83242 | 450 | 6.0 | 31 | 4.4 | 4.1 | A | 75 | 1.4 | -15 | 11 | 16 | 11 | 0.69 |
| 406 | 6041 | 1 | S01 | 2197 | 2 | | | | | | | | | C | 75 | 1.4 | -15 | 11 | 13 | 6 | 0.67 |
| 406 | 6041 | 1 | S01 | 2197 | 3 | 7 | 15 | 83242 | 450 | 3.9 | -46 | -2.1 | 3.4 | A | 75 | 1.4 | -15 | 11 | 16 | 11 | 0.69 |
| 406 | 6041 | 1 | S01 | 2197 | 2 | | | | | | | | | C | 75 | 1.4 | -15 | 11 | 13 | 6 | 0.67 |
| 406 | 6042 | 2 | S01 | 2198 | 3 | 3 | 8 | 83242 | 631 | 4.9 | -63 | -3.7 | 3.3 | A | 14 | 14.1 | -15 | 8 | 14 | 8 | 0.25 |
| 406 | 6042 | 2 | S01 | 2198 | 3 | 2 | 7 | 83242 | 631 | 2.8 | -17 | -0.1 | 2.8 | A | 14 | 14.1 | -15 | 8 | 14 | 8 | 0.25 |
| 406 | 6043 | 2 | C02 | 2177 | 3 | | | | | | | | | C | 79 | 1.4 | 12 | 13 | 18 | 13 | 0.23 |
| 406 | 6043 | 2 | C02 | 2177 | 3 | | | | | | | | | C | 79 | 1.4 | 12 | 13 | 18 | 13 | 0.23 |
| 406 | 6044 | 2 | C02 | 2178 | 3 | | | | | | | | | C | 23 | 14.1 | 15 | 10 | 17 | 10 | 0.20 |
| 406 | 6044 | 2 | C02 | 2178 | 3 | | | | | | | | | C | 23 | 14.1 | 15 | 10 | 17 | 10 | 0.20 |
| 406 | 6045 | 2 | S01 | 2205 | 3 | 4 | 14 | 83242 | 1839 | 14.9 | -57 | 14.3 | -3.9 | B | 82 | 0.7 | -163 | 11 | 15 | 11 | 0.09 |
| 406 | 6045 | 2 | S01 | 2205 | 3 | 5 | 11 | 83242 | 1839 | 8.2 | -43 | 7.2 | -4.0 | A | 82 | 0.7 | -163 | 11 | 15 | 11 | 0.09 |
| 406 | 6046 | 2 | S01 | 2206 | 3 | 4 | 16 | 83242 | 2019 | 4.7 | 11 | 0.8 | -4.6 | A | 19 | 12.1 | -158 | 8 | 13 | 9 | 0.25 |
| 406 | 6046 | 2 | S01 | 2206 | 3 | 5 | 11 | 83242 | 2019 | 2.0 | 9 | 0.4 | -2.0 | A | 19 | 12.1 | -158 | 8 | 13 | 8 | 0.25 |
| 406 | 6046 | 2 | S01 | 2206 | 2 | | | | | | | | | C | 19 | 12.1 | -158 | 8 | 13 | 9 | 0.25 |
| 406 | 6047 | 2 | C02 | 2181 | 3 | 2 | 7 | 83242 | 2250 | 5.0 | -49 | 2.1 | -4.6 | A | 12 | 20.2 | 155 | 3 | 15 | 3 | 1.00 |
| 406 | 6047 | 2 | C02 | 2181 | 3 | | | | | | | | | C | 12 | 20.2 | 155 | 3 | 15 | 3 | 1.00 |
| 406 | 6048 | 2 | C02 | 2182 | 2 | 6 | 7 | 83243 | 37 | 0.4 | 134 | -0.2 | 0.4 | A | 36 | 9.4 | 164 | 12 | 18 | 9 | 0.78 |
| 406 | 6048 | 2 | C02 | 2182 | 2 | | | | | | | | | C | 36 | 9.4 | 164 | 12 | 18 | 9 | 0.78 |
| 406 | 6049 | 3 | C02 | 2183 | 3 | 5 | 7 | 83243 | 224 | 4.2 | -17 | 0.2 | -4.2 | A | 61 | 4.1 | 166 | 13 | 18 | 13 | 0.23 |
| 406 | 6049 | 3 | C02 | 2183 | 3 | | | | | | | | | C | 61 | 4.1 | 166 | 13 | 18 | 13 | 0.23 |
| 406 | 6050 | 5 | S01 | 2211 | 3 | 5 | 18 | 83243 | 429 | 4.6 | 7 | 1.9 | 4.2 | A | 66 | 2.4 | -16 | 10 | 16 | 10 | 0.20 |
| 406 | 6050 | 5 | S01 | 2211 | 2 | 6 | 6 | 83243 | 429 | 3.2 | 73 | 3.2 | -0.0 | A | 66 | 2.4 | -16 | 10 | 14 | 6 | 0.33 |
| 406 | 6050 | 5 | S01 | 2211 | 2 | 7 | 5 | 83243 | 429 | 1.5 | 74 | 1.5 | -0.0 | B | 66 | 2.4 | -16 | 10 | 14 | 6 | 0.33 |
| 406 | 6050 | 5 | S01 | 2211 | 3 | 7 | 11 | 83243 | 429 | 5.0 | 14 | 2.6 | 4.2 | A | 66 | 2.4 | -16 | 10 | 16 | 10 | 0.20 |
| 406 | 6051 | 3 | S01 | 2212 | 3 | 5 | 13 | 83243 | 609 | 4.1 | -27 | -0.9 | 4.0 | A | 21 | 11.1 | -15 | 10 | 15 | 10 | 0.20 |
| 406 | 6051 | 3 | S01 | 2212 | 3 | 6 | 6 | 83243 | 609 | 2.8 | -4 | 0.5 | 2.8 | A | 21 | 11.1 | -15 | 10 | 15 | 10 | 0.20 |

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SLIST PERROR.FRB,406.C1.00
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SARSAT/COSPAS POSITION ERROR ANALYSIS
FIREBUSH TEST
25 AUGUST 1983 - 31 AUGUST 1983

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 6002 | 2 | C01 | 5768 | 2 | 2 | 5 | 83237 | 2034 | 42.0 | 75 | -42.0 | -1.0 | B | 79 | 1.4 | 166 | 13 | 14 | 8 | 1.00 |
| 406 | 6002 | 2 | C01 | 5768 | 3 | 10 | 6 | 83237 | 2034 | 11.2 | -86 | 10.8 | -3.3 | B | 79 | 1.4 | 166 | 13 | 18 | 13 | 0.23 |
| 406 | 6002 | 2 | C01 | 5768 | 2 | 4 | 7 | 83237 | 2034 | 0.6 | 28 | -0.4 | -0.4 | B | 79 | 1.4 | 166 | 13 | 14 | 8 | 1.00 |
| 406 | 6002 | 2 | C01 | 5768 | 3 | 9 | 12 | 83237 | 2034 | 2.9 | 6 | -1.0 | -2.8 | A | 79 | 1.4 | 166 | 13 | 18 | 13 | 0.23 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 14.2 | 7.5 | 3.7 | -8.2 | -1.9 | 0.0 | 25.0 | 100.0 |
| STD DEVTN | 16.5 | 19.7 | 4.1 | 20.1 | 1.2 | | | |

52 BEACON TESTS  4 POSITIONS LOCATED  0 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.58

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OK,
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SLIST PERROR.FRB.4H6.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
FIREBUSH TEST
25 AUGUST 1983 - 31 AUGUST 1983

| BCN | TEST NUM | SEA MT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4H6 | 6002 | 2 | C01 | 5768 | 2 | 4 | 7 | 83237 | 2034 | 0.6 | 28 | -0.4 | -0.4 | B | 79 | 1.4 | 166 | 13 | 14 | 8 | 1.00 |
| 4H6 | 6002 | 2 | C01 | 5768 | 3 | 9 | 12 | 83237 | 2034 | 2.9 | 6 | -1.0 | -2.8 | A | 79 | 1.4 | 166 | 13 | 18 | 13 | 0.23 |
| 4H6 | 6003 | 2 | C02 | 2113 | 2 | | | | | | | | | C | 17 | 17.2 | 160 | 9 | 18 | 5 | 1.40 |
| 4H6 | 6016 | 3 | C02 | 2135 | 2 | 11 | 10 | 83239 | 1410 | 0.2 | -112 | -0.2 | -0.1 | A | 26 | 12.8 | 12 | 10 | 18 | 9 | 0.11 |
| 4H6 | 6022 | 4 | C02 | 2142 | 2 | | | | | | | | | C | 62 | 4.1 | 166 | 13 | 10 | 6 | 1.67 |
| 4H6 | 6025 | 3 | C02 | 2149 | 2 | | | | | | | | | C | 42 | 8.0 | 12 | 12 | 16 | 10 | 0.00 |
| 4H6 | 6027 | 5 | S01 | 2176 | 2 | | | | | | | | | C | 34 | 7.3 | -163 | 11 | 12 | 9 | 0.56 |
| 4H6 | 6030 | 2 | C02 | 2154 | 2 | 12 | 5 | 83240 | 2339 | 16.5 | 5 | -7.3 | -14.8 | B | 17 | 17.1 | 159 | 8 | 18 | 5 | 1.40 |
| 4H6 | 6031 | 1 | C02 | 2155 | 2 | 5 | 11 | 83241 | 126 | 1.3 | -58 | 0.9 | -1.0 | A | 55 | 5.2 | 164 | 13 | 17 | 9 | 0.78 |
| 4H6 | 6032 | 0 | S01 | 2182 | 2 | | | | | | | | | C | 27 | 9.0 | -18 | 9 | 16 | 6 | 0.33 |
| 4H6 | 6033 | 2 | S01 | 2183 | 2 | | | | | | | | | C | 56 | 3.5 | -15 | 11 | 11 | 5 | 1.00 |
| 4H6 | 6039 | 2 | C02 | 2168 | 3 | | | | | | | | | C | 24 | 13.5 | 163 | 10 | 17 | 10 | 0.40 |
| 4H6 | 6039 | 2 | C02 | 2168 | 2 | | | | | | | | | C | 24 | 13.5 | 163 | 10 | 18 | 7 | 1.00 |
| 4H6 | 6040 | 2 | C02 | 2169 | 2 | 4 | 4 | 83242 | 155 | 1.2 | -141 | 0.9 | 0.7 | B | 79 | 1.5 | 166 | 13 | 14 | 8 | 1.00 |
| 4H6 | 6040 | 2 | C02 | 2169 | 3 | | | | | | | | | C | 79 | 1.5 | 166 | 13 | 18 | 13 | 0.23 |
| 4H6 | 6041 | 1 | S01 | 2197 | 3 | 7 | 15 | 83242 | 450 | 3.9 | -46 | -2.1 | 3.4 | A | 75 | 1.4 | -15 | 11 | 16 | 11 | 0.09 |
| 4H6 | 6041 | 1 | S01 | 2197 | 2 | | | | | | | | | C | 75 | 1.4 | -15 | 11 | 13 | 6 | 0.67 |
| 4H6 | 6042 | 2 | S01 | 2198 | 3 | 2 | 7 | 83242 | 631 | 2.8 | -17 | -0.1 | 2.8 | A | 14 | 14.1 | -15 | 8 | 14 | 8 | 0.25 |
| 4H6 | 6043 | 2 | C02 | 2177 | 3 | | | | | | | | | C | 79 | 1.4 | 12 | 13 | 18 | 13 | 0.23 |
| 4H6 | 6044 | 2 | C02 | 2178 | 3 | | | | | | | | | C | 23 | 14.1 | 15 | 10 | 17 | 10 | 0.20 |
| 4H6 | 6045 | 2 | S01 | 2205 | 3 | 5 | 11 | 83242 | 1839 | 8.2 | -43 | 7.2 | -4.0 | A | 82 | 0.7 | -163 | 11 | 15 | 11 | 0.09 |
| 4H6 | 6046 | 2 | S01 | 2206 | 3 | 5 | 11 | 83242 | 2019 | 2.0 | 9 | 0.4 | -2.0 | A | 19 | 12.1 | -158 | 8 | 13 | 8 | 0.25 |
| 4H6 | 6046 | 2 | S01 | 2206 | 2 | | | | | | | | | C | 19 | 12.1 | -158 | 8 | 13 | 8 | 0.25 |
| 4H6 | 6047 | 2 | C02 | 2181 | 3 | | | | | | | | | C | 12 | 20.2 | 155 | 3 | 15 | 3 | 1.00 |
| 4H6 | 6048 | 2 | C02 | 2182 | 2 | | | | | | | | | C | | | | | | | |
| 4H6 | 6049 | 3 | C02 | 2183 | 3 | | | | | | | | | C | 61 | 4.1 | 166 | 13 | 18 | 13 | 0.23 |
| 4H6 | 6050 | 5 | S01 | 2211 | 2 | 7 | 5 | 83243 | 429 | 1.5 | 74 | 1.5 | -0.0 | B | 66 | 2.4 | -16 | 11 | 14 | 7 | 0.43 |
| 4H6 | 6050 | 5 | S01 | 2211 | 3 | 7 | 11 | 83243 | 429 | 5.0 | 14 | 2.6 | 4.2 | A | 66 | 2.4 | -16 | 11 | 16 | 11 | 0.09 |
| 4H6 | 6051 | 3 | S01 | 2212 | 3 | 6 | 6 | 83243 | 609 | 2.8 | -4 | 0.5 | 2.8 | A | 21 | 11.1 | -15 | 10 | 15 | 10 | 0.20 |
| 4H6 | 6053 | 2 | C02 | 2192 | 3 | | | | | | | | | C | 16 | 17.7 | 17 | 8 | 15 | 8 | 0.25 |
| 4H6 | 6054 | 2 | S01 | 2220 | 3 | 5 | 4 | 83243 | 1957 | 4.2 | -4 | 1.8 | -3.8 | B | 25 | 9.8 | -159 | 10 | 14 | 10 | 0.20 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 3.8 | -0.5 | 3.2 | 0.3 | -1.1 | 7.1 | 64.3 | 45.2 |
| STD DEVTN | 4.1 | 1.8 | 4.1 | 3.0 | 4.6 | | | |

25 BEACON TESTS  14 POSITIONS LOCATED  17 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.42

OK,

SLIST PERROR.FRB.406.S1.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
FIREBUSH TEST
25 AUGUST 1993 - 31 AUGUST 1993

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | POSITION ERROR DEG | X-TRK NMI | Y-TRK NMI | | PHEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 6027 | 5 | S01 | 2176 | 2 | 3 | 4 | 83240 | 1742 | 54.6 | -59 | 52.9 | -13.3 | C | 34 | 7.3 | -163 | 10 | 12 | 8 | 0.50 |
| 406 | 6027 | 5 | S01 | 2176 | 2 | | | | | | | | | C | 34 | 7.3 | -163 | 10 | 12 | 8 | 0.50 |
| 406 | 6032 | 0 | S01 | 2182 | 2 | | | | | | | | | C | 27 | 9.0 | -18 | 9 | 16 | 6 | 0.33 |
| 406 | 6032 | 0 | S01 | 2182 | 2 | | | | | | | | | C | 27 | 9.0 | -18 | 9 | 16 | 6 | 0.33 |
| 406 | 6033 | 2 | S01 | 2183 | 2 | | | | | | | | | C | 56 | 3.5 | -15 | 11 | 11 | 5 | 1.00 |
| 406 | 6033 | 2 | S01 | 2183 | 2 | | | | | | | | | C | 56 | 3.5 | -15 | 11 | 11 | 5 | 1.00 |
| 406 | 6041 | 1 | S01 | 2197 | 3 | 9 | 13 | 83242 | 450 | 6.0 | 31 | 4.4 | 4.1 | A | 75 | 1.4 | -15 | 11 | 16 | 11 | 0.09 |
| 406 | 6041 | 1 | S01 | 2197 | 2 | | | | | | | | | C | 75 | 1.4 | -15 | 11 | 13 | 6 | 0.67 |
| 406 | 6041 | 1 | S01 | 2197 | 3 | 7 | 15 | 83242 | 450 | 3.9 | -46 | -2.1 | 3.4 | A | 75 | 1.4 | -15 | 11 | 16 | 11 | 0.09 |
| 406 | 6041 | 1 | S01 | 2197 | 2 | | | | | | | | | C | 75 | 1.4 | -15 | 11 | 13 | 6 | 0.67 |
| 406 | 6042 | 2 | S01 | 2198 | 3 | 3 | 8 | 83242 | 631 | 4.9 | -63 | -3.7 | 3.3 | A | 14 | 14.1 | -15 | 8 | 14 | 8 | 0.25 |
| 406 | 6042 | 2 | S01 | 2198 | 3 | 2 | 7 | 83242 | 631 | 2.8 | -17 | -0.1 | 2.8 | A | 14 | 14.1 | -15 | 8 | 14 | 8 | 0.25 |
| 406 | 6045 | 2 | S01 | 2205 | 3 | 4 | 14 | 83242 | 1839 | 14.9 | -57 | 14.3 | -3.9 | B | 82 | 0.7 | -163 | 11 | 15 | 11 | 0.09 |
| 406 | 6045 | 2 | S01 | 2205 | 3 | 5 | 11 | 83242 | 1839 | 8.2 | -43 | 7.2 | -4.0 | A | 82 | 0.7 | -163 | 11 | 15 | 11 | 0.09 |
| 406 | 6046 | 2 | S01 | 2206 | 3 | 4 | 16 | 83242 | 2019 | 4.7 | 11 | 0.8 | -4.6 | A | 19 | 12.1 | -158 | 8 | 13 | 8 | 0.25 |
| 406 | 6046 | 2 | S01 | 2206 | 3 | 5 | 11 | 83242 | 2019 | 2.0 | 9 | 0.4 | -2.0 | A | 19 | 12.1 | -158 | 8 | 13 | 8 | 0.25 |
| 406 | 6046 | 2 | S01 | 2206 | 2 | | | | | | | | | C | 19 | 12.1 | -158 | 8 | 13 | 8 | 0.25 |
| 406 | 6050 | 5 | S01 | 2211 | 3 | 5 | 18 | 83243 | 429 | 4.6 | 7 | 1.9 | 4.2 | A | 66 | 2.4 | -16 | 10 | 16 | 10 | 0.20 |
| 406 | 6050 | 5 | S01 | 2211 | 2 | 6 | 6 | 83243 | 429 | 3.2 | 73 | 3.2 | -0.0 | A | 66 | 2.4 | -16 | 10 | 14 | 6 | 0.33 |
| 406 | 6050 | 5 | S01 | 2211 | 2 | 7 | 5 | 83243 | 429 | 1.5 | 74 | 1.5 | -0.0 | B | 66 | 2.4 | -16 | 10 | 14 | 6 | 0.33 |
| 406 | 6050 | 5 | S01 | 2211 | 3 | 7 | 11 | 83243 | 429 | 5.0 | 14 | 2.6 | 4.2 | A | 66 | 2.4 | -16 | 10 | 16 | 10 | 0.20 |
| 406 | 6051 | 3 | S01 | 2212 | 3 | 5 | 13 | 83243 | 609 | 4.1 | -27 | -0.9 | 4.0 | A | 21 | 11.1 | -15 | 10 | 15 | 10 | 0.20 |
| 406 | 6051 | 3 | S01 | 2212 | 3 | 6 | 6 | 83243 | 609 | 2.8 | -4 | 0.5 | 2.8 | A | 21 | 11.1 | -15 | 10 | 15 | 10 | 0.20 |
| 406 | 6054 | 2 | S01 | 2220 | 3 | 4 | 6 | 83243 | 1957 | 4.0 | -2 | 1.6 | -3.7 | A | 25 | 9.8 | -159 | 10 | 14 | 10 | 0.20 |
| 406 | 6054 | 2 | S01 | 2220 | 3 | 5 | 4 | 83243 | 1957 | 4.2 | -4 | 1.8 | -3.8 | B | 25 | 9.8 | -159 | 10 | 14 | 10 | 0.20 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 4.8 | -1.1 | 3.7 | 2.1 | 0.4 | 0.0 | 81.3 | 64.0 |
| STD DEVTN | 3.0 | 3.8 | 1.9 | 4.0 | 3.4 | | | |

52 BEACON TESTS  16 POSITIONS LOCATED  9 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.89

OK,

| BCN | TST# | SEA | SAT | ORB# | LUT | EN | MPT | TCAYD | GMT | ERROR | DIR | X-TRK | Y-TRK | | PKEL | CTA | THETA | RVIS | G | S | O | P | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4R6 | 7222 | 0 | C01 | 6404 | 1 | | | | | | | | | C | 10 | 31 | 172 | 14 | 8 | 4 | 5 | 0 | 0 |
| 4R6 | 7224 | 0 | C01 | 6405 | 1 | 3 | 6 | 83284 | 1118 | 2.6 | 61 | -2.4 | -0.9 | A | 62 | 4 | 172 | 18 | 12 | 12 | 10 | 3 | 0 |
| 4R6 | 7226 | 0 | S01 | 2798 | 1 | | | | | | | | | C | 17 | 12 | -170 | 13 | 5 | 0 | 4 | 0 | 0 |
| 4R6 | 7228 | 0 | C01 | 6406 | 1 | | | | | | | | | C | 0 | 29 | 172 | 5 | 0 | 2 | 0 | 3 | 0 |
| 4R6 | 7230 | 0 | S01 | 2799 | 1 | 13 | 12 | 83284 | 1342 | 2.9 | 104 | -2.9 | 0.2 | A | 20 | 11 | -170 | 12 | 6 | 7 | 6 | 0 | 0 |
| 4R6 | 7232 | 0 | C02 | 2753 | 1 | 0 | 11 | 83284 | 1457 | 5.2 | -42 | 3.0 | -4.3 | A | 4 | 26 | 172 | 9 | 6 | 0 | 3 | 0 | 0 |
| 4R6 | 7234 | 0 | C02 | 2754 | 1 | | | | | | | | | C | 82 | 1 | 172 | 19 | 10 | 11 | 10 | 0 | 0 |
| 4R6 | 7236 | 0 | C02 | 2755 | 1 | 7 | 8 | 83284 | 1828 | 12.3 | 24 | -6.4 | -10.5 | A | 5 | 25 | 172 | 11 | 4 | 7 | 1 | 5 | 0 |
| 4R6 | 7238 | 0 | C01 | 6412 | 1 | 24 | 4 | 83284 | 2251 | 4.0 | -6 | -0.1 | -4.0 | A | 54 | 5 | 172 | 19 | 11 | 10 | 9 | 0 | 0 |
| 4R6 | 7240 | 0 | S01 | 2805 | 1 | | | | | | | | | C | 4 | 20 | -9 | 8 | 4 | 0 | 3 | 0 | 0 |
| 4R6 | 7242 | 0 | C01 | 6413 | 1 | | | | | | | | | C | 14 | 19 | 7 | 12 | 6 | 8 | 4 | 6 | 0 |
| 4R6 | 7244 | 0 | S01 | 2806 | 1 | | | | | | | | | C | 80 | 0 | -8 | 11 | 5 | 5 | 4 | 0 | 0 |
| 4R6 | 7246 | 0 | C02 | 2761 | 1 | 6 | 4 | 83285 | 412 | 10.7 | -16 | 1.8 | -10.5 | A | 27 | 12 | 172 | 17 | 8 | 6 | 6 | 0 | 0 |
| 4R6 | 7248 | 0 | C02 | 2762 | 1 | 6 | 8 | 83285 | 558 | 11.8 | -0 | -1.3 | -11.7 | A | 24 | 13 | 172 | 16 | 7 | 8 | 5 | 4 | 0 |
| 4R6 | 7250 | 0 | C01 | 6418 | 1 | | | | | | | | | C | 24 | 14 | 172 | 17 | 8 | 6 | 6 | 0 | 0 |
| 4R6 | 7252 | 0 | S01 | 2812 | 1 | | | | | | | | | C | 6 | 19 | -171 | 10 | 0 | 0 | 0 | 0 | 0 |
| 4R6 | 7254 | 0 | C01 | 6419 | 1 | 4 | 6 | 83285 | 1155 | 16.7 | 36 | -11.5 | -12.0 | A | 28 | 12 | 172 | 18 | 9 | 9 | 6 | 6 | 0 |
| 4R6 | 9165 | 0 | S01 | 4675 | 1 | 22 | 8 | 84416 | 1257 | 7.7 | -83 | 7.7 | 0.4 | B | 77 | 1 | -170 | 15 | 7 | 7 | 4 | 0 | 0 |
| 4R6 | 9166 | 0 | C02 | 4565 | 1 | 0 | 10 | 84416 | 1338 | 7.4 | -95 | 7.4 | -0.3 | A | 63 | 3 | 172 | 17 | 9 | 8 | 7 | 0 | 0 |
| 4R6 | 9167 | 0 | S01 | 4676 | 1 | 20 | 6 | 84416 | 1436 | 5.6 | -42 | 4.4 | -3.5 | B | 1 | 23 | -170 | 5 | 0 | 2 | 0 | 1 | 0 |
| 4R6 | 9168 | 0 | C02 | 4566 | 1 | 14 | 8 | 84416 | 1523 | 0.9 | -108 | 0.9 | 0.2 | A | 9 | 22 | 172 | 14 | 5 | 8 | 4 | 7 | 0 |
| 4R6 | 9169 | 0 | C01 | 8214 | 1 | 17 | 6 | 84416 | 1945 | 6.6 | 43 | -5.1 | -4.2 | A | 61 | 4 | 172 | 19 | 11 | 10 | 9 | 0 | 0 |
| 4R6 | 9170 | 0 | C01 | 8215 | 1 | 15 | 8 | 84416 | 2131 | 5.7 | -10 | 0.3 | -5.7 | A | 10 | 21 | 172 | 13 | 5 | 7 | 3 | 6 | 0 |
| 4R6 | 9171 | 0 | S01 | 4682 | 1 | | | | | | | | | C | | | | | | | | | |
| 4R6 | 9172 | 0 | S01 | 4682 | 1 | | | | | | | | | C | | | | | | | | | |
| 4R6 | 9173 | 0 | C02 | 4571 | 1 | 0 | 14 | 84417 | 52 | 2.4 | 40 | -1.8 | -1.6 | A | 33 | 10 | 172 | 18 | 11 | 10 | 9 | 0 | 0 |
| 4R6 | 9174 | 0 | C02 | 4571 | 1 | | | | | | | | | C | 33 | 10 | 172 | 18 | 11 | 10 | 9 | 0 | 0 |
| 4R6 | 9175 | 0 | S01 | 4683 | 1 | 19 | 8 | 84417 | 143 | 10.4 | 80 | -9.8 | -3.3 | A | 12 | 15 | -171 | 12 | 3 | 5 | 1 | 2 | 0 |
| 4R6 | 9176 | 0 | C02 | 4572 | 1 | 0 | 11 | 84417 | 237 | 8.6 | 79 | -8.6 | -0.5 | A | 21 | 15 | 172 | 15 | 9 | 9 | 7 | 7 | 0 |
| 4R6 | 9177 | 0 | C01 | 8221 | 1 | 7 | 7 | 84417 | 718 | 15.1 | 90 | -14.9 | 2.0 | A | 27 | 12 | 172 | 16 | 9 | 7 | 7 | 0 | 0 |
| 4R6 | 9178 | 0 | C01 | 8222 | 1 | 8 | 5 | 84417 | 904 | 11.0 | 82 | -11.0 | -0.1 | A | 26 | 12 | 172 | 16 | 9 | 10 | 7 | 6 | 0 |
| 4R6 | 9179 | 0 | C02 | 4578 | 1 | 0 | 14 | 84417 | 1223 | 5.3 | -87 | 5.2 | -0.9 | A | 11 | 20 | 172 | 13 | 7 | 3 | 5 | 0 | 0 |
| 4R6 | 9180 | 0 | S01 | 4689 | 1 | 16 | 7 | 84417 | 1235 | 2.4 | -52 | 2.1 | -1.1 | A | 40 | 6 | -171 | 14 | 7 | 6 | 5 | 0 | 0 |
| 4R6 | 9181 | 0 | C02 | 4579 | 1 | 0 | 11 | 84417 | 1408 | 6.4 | -98 | 6.4 | 0.1 | A | 55 | 5 | 172 | 19 | 11 | 11 | 9 | 0 | 0 |
| 4R6 | 9182 | 0 | S01 | 4690 | 1 | | | | | | | | | C | 8 | 17 | -170 | 10 | 5 | 7 | 4 | 3 | 0 |
| 4R6 | 9183 | 0 | C01 | 8227 | 1 | 24 | 6 | 84417 | 1833 | 2.2 | 52 | -1.9 | -1.1 | A | 14 | 18 | 172 | 14 | 8 | 7 | 8 | 0 | 0 |
| 4R6 | 9184 | 0 | C01 | 8228 | 1 | 22 | 5 | 84417 | 2019 | 2.1 | 11 | -0.7 | -2.0 | A | 47 | 6 | 172 | 17 | 10 | 12 | 8 | 5 | 0 |
| 4R6 | 9185 | 0 | C02 | 4584 | 1 | 0 | 8 | 84417 | 2333 | 5.8 | 71 | -5.1 | -2.7 | A | | | | | | | | | |
| 4R6 | 9189 | 0 | S01 | 4697 | 1 | | | | | | | | | C | 32 | 7 | -9 | 13 | 7 | 8 | 5 | 3 | 0 |
| 4R6 | 9190 | 0 | C02 | 4586 | 1 | | | | | | | | | C | 11 | 20 | 172 | 14 | 7 | 10 | 4 | 9 | 0 |
| 4R6 | 9191 | 0 | C01 | 8235 | 1 | | | | | | | | | C | 52 | 5 | 172 | 18 | 12 | 11 | 10 | 0 | 0 |
| 4R6 | 9192 | 0 | C01 | 8236 | 1 | | | | | | | | | C | 14 | 19 | 172 | 15 | 8 | 11 | 7 | 10 | 0 |
| 4R6 | 9193 | 0 | S01 | 4703 | 1 | | | | | | | | | C | 13 | 14 | -170 | 12 | 7 | 4 | 5 | 0 | 0 |
| 4R6 | 9194 | 0 | C02 | 4592 | 1 | | | | | | | | | C | 21 | 15 | 172 | 17 | 11 | 9 | 9 | 0 | 0 |
| 4R6 | 9195 | 0 | S01 | 4704 | 1 | | | | | | | | | C | 28 | 8 | -170 | 14 | 8 | 9 | 6 | 0 | 0 |
| 4R6 | 9195 | 0 | S01 | 4704 | 1 | | | | | | | | | C | 28 | 8 | -170 | 14 | 8 | 9 | 6 | 0 | 0 |
| 4R6 | 9196 | 0 | C02 | 4593 | 1 | | | | | | | | | C | 34 | 10 | 172 | 18 | 11 | 12 | 9 | 8 | 0 |
| 4R6 | 9197 | 0 | C01 | 8241 | 1 | 11 | 10 | 84418 | 1908 | 4.2 | 19 | -1.9 | -3.8 | A | 30 | 11 | 172 | 18 | 13 | 11 | 11 | 0 | 0 |
| 4R6 | 9198 | 0 | C01 | 8242 | 1 | 18 | 8 | 84418 | 2053 | 3.1 | 2 | -0.5 | -3.1 | A | 24 | 13 | 172 | 17 | 10 | 12 | 8 | 9 | 0 |
| 4R6 | 9199 | 0 | S01 | 4710 | 1 | 17 | 5 | 84418 | 2323 | 3.4 | 123 | 2.5 | -2.4 | A | 5 | 20 | -9 | 9 | 6 | 4 | 5 | 0 | 0 |
| 4R6 | 9200 | 0 | C02 | 4598 | 1 | 2 | 5 | 84418 | 1 | 4.0 | -10 | 1.4 | -3.7 | B | | | | | | | | | |
| 4R6 | 9201 | 0 | S01 | 4711 | 1 | | | | | | | | | C | 77 | 1 | -9 | 15 | 9 | 10 | 7 | 2 | 0 |
| 4R6 | 9202 | 0 | C02 | 4599 | 1 | 16 | 10 | 84419 | 146 | 12.3 | -98 | 12.3 | 0.2 | A | 81 | 1 | 172 | 18 | 13 | 13 | 11 | 7 | 0 |
| 4R6 | 9203 | 0 | S01 | 4712 | 1 | | | | | | | | | C | 1 | 24 | -9 | 5 | 0 | 1 | 0 | 3 | 0 |

| BCN | TST# | SEA | SAT | ORB# | LUT | EN | MPT | TCAYD | GMT | ERROR | DIR | X-TRK | Y-TRK | | PKEL | CTA | THETA | RVIS | G | S | O | P | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4R6 | 9197 | 0 | C01 | 8241 | 1 | 11 | 10 | 84418 | 1908 | 4.2 | 19 | -1.9 | -3.8 | A | 30 | 11 | 172 | 18 | 13 | 11 | 11 | 0 | 0 |
| 4R6 | 9198 | 0 | C01 | 8242 | 1 | 18 | 8 | 84418 | 2053 | 3.1 | 2 | -0.5 | -3.1 | A | 24 | 13 | 172 | 17 | 10 | 12 | 8 | 9 | 0 |
| 4R6 | 9199 | 0 | S01 | 4710 | 1 | 17 | 5 | 84418 | 2323 | 3.4 | 123 | 2.5 | -2.4 | A | 5 | 20 | -9 | 9 | 6 | 4 | 5 | 0 | 0 |
| 4R6 | 9200 | 0 | C02 | 4598 | 1 | 2 | 5 | 84418 | 1 | 4.0 | -10 | 1.4 | -3.7 | B | | | | | | | | | |
| 4R6 | 9201 | 0 | S01 | 4711 | 1 | | | | | | | | | C | 77 | 1 | -9 | 15 | 9 | 10 | 7 | 2 | 0 |
| 4R6 | 9202 | 0 | C02 | 4599 | 1 | 16 | 10 | 84419 | 146 | 12.3 | -98 | 12.3 | 0.2 | A | 81 | 1 | 172 | 18 | 13 | 13 | 11 | 7 | 0 |
| 4R6 | 9203 | 0 | S01 | 4712 | 1 | | | | | | | | | C | 1 | 24 | -9 | 5 | 0 | 1 | 0 | 3 | 0 |
| 4R6 | 9204 | 0 | C02 | 4600 | 1 | 12 | 8 | 84419 | 331 | 11.1 | -135 | 8.8 | 6.7 | A | 5 | 25 | 172 | 10 | 2 | 7 | 1 | 9 | 0 |
| 4R6 | 9205 | 0 | C01 | 8248 | 1 | 2 | 8 | 84419 | 645 | 16.3 | -128 | -11.3 | -11.7 | A | 8 | 23 | 7 | 12 | 9 | 6 | 7 | 0 | 0 |
| 4R6 | 9206 | 0 | C01 | 8249 | 1 | 11 | 13 | 84419 | 830 | 13.9 | -139 | 10.3 | 9.4 | A | 81 | 1 | 172 | 18 | 12 | 13 | 10 | 5 | 0 |
| 4R6 | 9207 | 0 | C01 | 8250 | 1 | 4 | 6 | 84419 | 1017 | 13.7 | -146 | -6.0 | -12.3 | A | 5 | 25 | 7 | 12 | 5 | 9 | 4 | 11 | 1 |
| 4R6 | 9208 | 0 | S01 | 4717 | 1 | | | | | | | | | C | 2 | 23 | -170 | 7 | 3 | 0 | 1 | 0 | 0 |
| 4R6 | 9209 | 0 | C02 | 4606 | 1 | 0 | 11 | 84419 | 1321 | 5.0 | -108 | 4.9 | 0.9 | A | 36 | 9 | 172 | 17 | 12 | 11 | 10 | 0 | 0 |
| 4R6 | 9210 | 0 | S01 | 4718 | 1 | 16 | 11 | 84419 | 1330 | 6.3 | 105 | -6.2 | 0.6 | B | 79 | 1 | -170 | 15 | 10 | 9 | 8 | 0 | 0 |
| 4R6 | 9211 | 0 | C02 | 4607 | 1 | 5 | 11 | 84419 | 1507 | 1.9 | 155 | 1.0 | -1.6 | A | 21 | 15 | 7 | 15 | 9 | 11 | 8 | 10 | 0 |
| 4R6 | 9212 | 0 | S01 | 4719 | 1 | | | | | | | | | C | 2 | 22 | -169 | 7 | 1 | 5 | 1 | 6 | 0 |
| 4R6 | 9213 | 0 | C01 | 8254 | 1 | 7 | 4 | 84419 | 1755 | 15.6 | -34 | 6.9 | -13.9 | B | 2 | 28 | 171 | 9 | 9 | 4 | 6 | 0 | 0 |
| 4R6 | 9214 | 0 | C01 | 8255 | 1 | 11 | 11 | 84419 | 1942 | 18.0 | 21 | -8.6 | -15.8 | A | 63 | 3 | 172 | 18 | 14 | 13 | 12 | 4 | 0 |
| 4R6 | 9215 | 0 | C01 | 8256 | 1 | 16 | 8 | 84419 | 2127 | 16.5 | -0 | -2.0 | -16.4 | A | 11 | 20 | 172 | 13 | 7 | 11 | 6 | 11 | 1 |
| 4R6 | 9216 | 0 | C02 | 4612 | 1 | 0 | 12 | 84420 | 29 | 5.4 | 35 | -3.7 | -3.9 | A | 21 | 15 | 172 | 17 | 12 | 12 | 10 | 0 | 0 |
| 4R6 | 9217 | 0 | S01 | 4725 | 1 | 11 | 14 | 84420 | 42 | 2.9 | 36 | 2.1 | 2.0 | A | 47 | 4 | -9 | 14 | 11 | 10 | 9 | 0 | 0 |
| 4R6 | 9218 | 0 | C02 | 4613 | 1 | 26 | 14 | 84420 | 214 | 15.6 | -173 | 4.0 | 15.0 | A | 42 | 8 | 172 | 18 | 13 | 13 | 11 | 11 | 1 |
| 4R6 | 9219 | 0 | S01 | 4726 | 1 | | | | | | | | | C | 8 | 17 | -9 | 10 | 0 | 7 | 0 | 6 | 0 |
| 4R6 | 9220 | 0 | C01 | 8262 | 1 | 14 | 9 | 84420 | 721 | 25.9 | -169 | -1.2 | -25.9 | A | 21 | 15 | 7 | 16 | 13 | 12 | 11 | 0 | 0 |
| 4R6 | 9221 | 0 | C01 | 8263 | 1 | 16 | 11 | 84420 | 907 | 21.9 | 176 | 1.7 | 21.8 | A | 39 | 8 | 172 | 17 | 12 | 14 | 10 | 11 | 0 |
| 4R6 | 9222 | 0 | C02 | 4619 | 1 | 0 | 5 | 84420 | 1206 | 18.8 | -172 | 0.1 | -18.8 | A | 4 | 26 | 7 | 10 | 9 | 5 | 7 | 0 | 0 |
| 4R6 | 9223 | 0 | S01 | 4732 | 1 | 10 | 12 | 84420 | 1307 | 13.2 | 160 | -6.5 | 11.5 | A | 36 | 6 | -170 | 14 | 10 | 10 | 8 | 0 | 0 |
| 4R6 | 9224 | 0 | C02 | 4620 | 1 | 8 | 8 | 84420 | 1350 | 12.3 | -173 | 3.0 | 12.0 | A | 68 | 3 | 172 | 19 | 14 | 14 | 12 | 0 | 0 |
| 4R6 | 9225 | 0 | S01 | 4733 | 1 | 19 | 12 | 84420 | 1447 | 9.4 | 165 | -4.0 | 8.5 | A | 12 | 15 | -169 | 12 | 7 | 10 | 6 | 10 | 0 |
| 4R6 | 9226 | 0 | C02 | 4621 | 1 | 7 | 10 | 84420 | 1536 | 13.0 | 143 | 9.1 | -9.3 | A | 11 | 20 | 8 | 14 | 8 | 11 | 6 | 13 | 3 |
| 4R6 | 9227 | 0 | C01 | 8268 | 1 | 18 | 10 | 84420 | 1829 | 8.4 | 156 | -2.2 | 8.1 | A | 14 | 19 | 171 | 15 | 13 | 11 | 11 | 0 | 0 |
| 4R6 | 9228 | 0 | C01 | 8269 | 1 | 9 | 8 | 84420 | 2016 | 11.2 | -170 | 3.3 | 10.7 | A | 60 | 4 | 172 | 17 | 14 | 15 | 12 | 10 | 0 |
| 4R6 | 9229 | 0 | C01 | 8270 | 1 | | | | | | | | | C | 2 | 28 | 171 | 6 | 0 | 5 | 0 | 6 | 0 |
| 4R6 | 9230 | 0 | S01 | 4739 | 1 | | | | | | | | | C | | | | | | | | | |
| 4R6 | 9231 | 0 | C02 | 4626 | 1 | | | | | | | | | C | 42 | 8 | 171 | 18 | 14 | 15 | 14 | 0 | 0 |
| 4R6 | 9232 | 0 | S01 | 4740 | 1 | | | | | | | | | C | 17 | 12 | -9 | 13 | 7 | 9 | 4 | 7 | 0 |
| 4R6 | 9233 | 0 | C02 | 4627 | 1 | | | | | | | | | C | 20 | 15 | 171 | 15 | 11 | 14 | 8 | 12 | 4 |
| 4R6 | 9235 | 0 | C01 | 8276 | 1 | | | | | | | | | C | 51 | 6 | 172 | 18 | 15 | 15 | 13 | 0 | 0 |
| 4R6 | 9236 | 0 | C01 | 8277 | 1 | | | | | | | | | C | 17 | 17 | 8 | 15 | 10 | 13 | 8 | 13 | 3 |
| 4R6 | 9237 | 0 | C02 | 4633 | 1 | | | | | | | | | C | 14 | 18 | 7 | 15 | 13 | 11 | 11 | 0 | 0 |
| 4R6 | 9238 | 0 | S01 | 4746 | 1 | | | | | | | | | C | 18 | 12 | -170 | 13 | 10 | 10 | 7 | 0 | 0 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | Z IN ELLPSE | Z APROB |
|---|---|---|---|---|---|---|---|
| (NMI) | 9.2 | -0.3 | 0.6 | -0.5 | -2.0 | 0.0 | 93.1 |
| STD DEVTN | 11.7 | 9.4 | 11.5 | 10.3 | 10.6 | | |

SARSAT/COSPAS POSITION ERROR ANALYSIS
WESTWIND TEST

5 OCT 1983 - 8 JAN 1984
19 JAN 1984 - 25 FEB 1984

| BCN | TST# | SEA | SAT | ORB# | LUT | EN | MPT | TCAYD | GMT | ERROR | DIR | X-TRK | Y-TRK | | PKEL | CTA | THETA | BVIS | 6 | S | 0 | P | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4R6 | 7106 | 0 | C02 | 2666 | 1 | | | | | | | | | C | 66 | 3 | 7 | 18 | 14 | 14 | 12 | 0 | 0 |
| 4R6 | 7108 | 0 | C02 | 2667 | 1 | 6 | 13 | 83278 | 800 | 2.8 | -56 | -2.5 | 1.2 | A | 12 | 19 | 8 | 14 | 8 | 11 | 7 | 13 | 2 |
| 4R6 | 7118 | 0 | C02 | 2672 | 1 | 14 | 9 | 83278 | 1719 | 0.7 | 131 | -0.5 | 0.6 | A | 41 | 8 | 171 | 17 | 14 | 15 | 14 | 0 | 0 |
| 4R6 | 7120 | 0 | C02 | 2673 | 1 | 12 | 9 | 83278 | 1904 | 15.2 | 104 | -14.0 | 5.8 | A | 20 | 15 | 172 | 17 | 10 | 13 | 8 | 12 | 2 |
| 4R6 | 7132 | 0 | C02 | 2679 | 1 | 6 | 7 | 83279 | 502 | 9.3 | -30 | -5.8 | 7.3 | A | 14 | 18 | 7 | 14 | 11 | 9 | 9 | 0 | 0 |
| 4R6 | 7134 | 0 | C02 | 2680 | 1 | 12 | 16 | 83279 | 641 | 9.8 | -52 | 6.9 | -7.0 | A | 53 | 5 | 172 | 18 | 12 | 13 | 10 | 9 | 0 |
| 4R6 | 7136 | 0 | C02 | 2681 | 1 | 4 | 8 | 83279 | 828 | 7.3 | -57 | -6.6 | 3.0 | A | 1 | 29 | 8 | 6 | 9 | 5 | 0 | 5 | 0 |
| 4R6 | 7148 | 0 | C02 | 2685 | 1 | 5 | 7 | 83279 | 1602 | 2.0 | -27 | 0.7 | -1.9 | A | 7 | 23 | 171 | 11 | 10 | 7 | 10 | 0 | 0 |
| 4R6 | 7150 | 0 | C02 | 2686 | 1 | 16 | 8 | 83279 | 1748 | 32.2 | -92 | 32.0 | -3.1 | A | 79 | 1 | 172 | 19 | 13 | 13 | 11 | 8 | 0 |
| 4R6 | 7152 | 0 | C02 | 2687 | 1 | 6 | 5 | 83279 | 1933 | 3.4 | 24 | -1.8 | -2.9 | A | 6 | 24 | 172 | 11 | 3 | 8 | 2 | 10 | 1 |
| 4R6 | 7162 | 0 | C02 | 2693 | 1 | 6 | 10 | 83280 | 523 | 19.0 | -122 | 17.2 | 7.9 | A | 43 | 7 | 172 | 18 | 12 | 11 | 10 | 0 | 0 |
| 4R6 | 7164 | 0 | C02 | 2694 | 1 | 3 | 12 | 83280 | 716 | 18.3 | -135 | 14.4 | 11.3 | A | 17 | 17 | 172 | 15 | 9 | 11 | 7 | 10 | 0 |
| 4R6 | 7176 | 0 | C02 | 2699 | 1 | 10 | 8 | 83280 | 1632 | 0.8 | -62 | 0.7 | -0.5 | A | 24 | 13 | 172 | 16 | 12 | 12 | 10 | 0 | 0 |
| 4R6 | 7178 | 0 | C02 | 2700 | 1 | 12 | 13 | 83280 | 1818 | 4.2 | 77 | -4.2 | -0.4 | A | 31 | 11 | 172 | 17 | 11 | 11 | 9 | 9 | 0 |
| 4R6 | 7190 | 0 | C02 | 2706 | 1 | | | | | | | | | C | 12 | 19 | 172 | 15 | 9 | 5 | 7 | 0 | 0 |
| 4R6 | 7192 | 0 | C02 | 2707 | 1 | 9 | 10 | 83281 | 551 | 2.0 | 88 | -2.0 | 0.2 | A | 54 | 5 | 172 | 19 | 12 | 12 | 10 | 0 | 0 |
| 4R6 | 7204 | 0 | C02 | 2712 | 1 | | | | | | | | | C | 4 | 25 | 172 | 10 | 6 | 2 | 5 | 0 | 0 |
| 4R6 | 7218 | 0 | C02 | 2747 | 1 | | | | | | | | | C | 13 | 19 | 172 | 14 | 7 | 3 | 5 | 0 | 0 |
| 4R6 | 7220 | 0 | C02 | 2748 | 1 | 3 | 9 | 83284 | 531 | 101.3 | 37 | -71.2 | -72.1 | A | 48 | 6 | 172 | 17 | 10 | 10 | 8 | 0 | 0 |
| 4R6 | 7232 | 0 | C02 | 2753 | 1 | 0 | 11 | 83284 | 1457 | 5.2 | -42 | 3.0 | -4.3 | A | 4 | 26 | 172 | 9 | 6 | 0 | 3 | 0 | 0 |
| 4R6 | 7234 | 0 | C02 | 2754 | 1 | | | | | | | | | C | 82 | 1 | 172 | 19 | 10 | 11 | 10 | 0 | 0 |
| 4R6 | 7236 | 0 | C02 | 2755 | 1 | 7 | 8 | 83284 | 1828 | 12.3 | 24 | -6.4 | -10.5 | A | 5 | 25 | 172 | 11 | 4 | 7 | 1 | 5 | 0 |
| 4R6 | 7246 | 0 | C02 | 2761 | 1 | 6 | 4 | 83285 | 412 | 10.7 | -16 | 1.8 | -10.5 | A | 27 | 12 | 172 | 17 | 8 | 6 | 6 | 0 | 0 |
| 4R6 | 7248 | 0 | C02 | 2762 | 1 | 6 | 8 | 83285 | 558 | 11.8 | -0 | -1.3 | -11.7 | A | 24 | 13 | 172 | 16 | 7 | 8 | 5 | 4 | 0 |
| 4R6 | 9166 | 0 | C02 | 4565 | 1 | 0 | 10 | 84416 | 1338 | 7.4 | -95 | 7.4 | -0.3 | A | 63 | 3 | 172 | 17 | 9 | 8 | 7 | 0 | 0 |
| 4R6 | 9168 | 0 | C02 | 4566 | 1 | 14 | 8 | 84416 | 1523 | 0.9 | -108 | 0.9 | 0.2 | A | 9 | 22 | 172 | 14 | 5 | 8 | 4 | 7 | 0 |
| 4R6 | 9173 | 0 | C02 | 4571 | 1 | 0 | 14 | 84417 | 52 | 2.4 | 40 | -1.8 | -1.6 | A | 33 | 10 | 172 | 18 | 11 | 10 | 9 | 0 | 0 |
| 4R6 | 9174 | 0 | C02 | 4571 | 1 | | | | | | | | | C | 33 | 10 | 172 | 18 | 11 | 10 | 9 | 0 | 0 |
| 4R6 | 9176 | 0 | C02 | 4572 | 1 | 0 | 11 | 84417 | 237 | 8.6 | 79 | -8.6 | -0.5 | A | 21 | 15 | 172 | 15 | 9 | 9 | 7 | 7 | 0 |
| 4R6 | 9179 | 0 | C02 | 4578 | 1 | 0 | 14 | 84417 | 1223 | 5.3 | -87 | 5.2 | -0.9 | A | 11 | 20 | 172 | 13 | 7 | 3 | 5 | 0 | 0 |
| 4R6 | 9181 | 0 | C02 | 4579 | 1 | 0 | 11 | 84417 | 1408 | 6.4 | -98 | 6.4 | 0.1 | A | 55 | 5 | 172 | 19 | 11 | 11 | 9 | 0 | 0 |
| 4R6 | 9185 | 0 | C02 | 4584 | 1 | 0 | 8 | 84417 | 2333 | 5.8 | 71 | -5.1 | -2.7 | A | | | | | | | | | |
| 4R6 | 9190 | 0 | C02 | 4586 | 1 | | | | | | | | | C | 11 | 20 | 172 | 14 | 7 | 10 | 4 | 9 | 0 |
| 4R6 | 9194 | 0 | C02 | 4592 | 1 | | | | | | | | | C | 21 | 15 | 172 | 17 | 11 | 9 | 9 | 0 | 0 |
| 4R6 | 9196 | 0 | C02 | 4593 | 1 | | | | | | | | | C | 34 | 10 | 172 | 18 | 11 | 12 | 9 | 8 | 0 |
| 4R6 | 9200 | 0 | C02 | 4598 | 1 | 2 | 5 | 84418 | 1 | 4.0 | -10 | 1.4 | -3.7 | B | | | | | | | | | |
| 4R6 | 9202 | 0 | C02 | 4599 | 1 | 16 | 10 | 84419 | 146 | 12.3 | -98 | 12.3 | 0.2 | A | 81 | 1 | 172 | 18 | 13 | 13 | 11 | 7 | 0 |
| 4R6 | 9204 | 0 | C02 | 4600 | 1 | 12 | 8 | 84419 | 331 | 11.1 | -135 | 8.8 | 6.7 | A | 5 | 25 | 172 | 10 | 2 | 7 | 1 | 9 | 0 |
| 4R6 | 9209 | 0 | C02 | 4606 | 1 | 0 | 11 | 84419 | 1321 | 5.0 | -108 | 4.9 | 0.9 | A | 36 | 9 | 172 | 17 | 12 | 11 | 10 | 0 | 0 |
| 4R6 | 9211 | 0 | C02 | 4607 | 1 | 5 | 11 | 84419 | 1507 | 1.9 | 155 | 1.0 | -1.6 | A | 21 | 15 | 7 | 15 | 9 | 11 | 8 | 10 | 0 |
| 4R6 | 9216 | 0 | C02 | 4612 | 1 | 0 | 12 | 84420 | 29 | 5.4 | 35 | -3.7 | -3.9 | A | 21 | 15 | 172 | 17 | 12 | 12 | 10 | 0 | 0 |
| 4R6 | 9218 | 0 | C02 | 4613 | 1 | 26 | 14 | 84420 | 214 | 15.6 | -173 | 4.0 | 15.0 | A | 42 | 8 | 172 | 18 | 13 | 13 | 11 | 11 | 1 |
| 4R6 | 9222 | 0 | C02 | 4619 | 1 | 0 | 5 | 84420 | 1206 | 18.8 | -172 | 0.1 | -18.8 | A | 4 | 26 | 7 | 10 | 9 | 5 | 7 | 0 | 0 |
| 4R6 | 9224 | 0 | C02 | 4620 | 1 | 8 | 8 | 84420 | 1350 | 12.3 | -173 | 3.0 | 12.0 | A | 68 | 3 | 172 | 19 | 14 | 14 | 12 | 0 | 0 |
| 4R6 | 9226 | 0 | C02 | 4621 | 1 | 7 | 10 | 84420 | 1536 | 13.0 | 143 | 9.1 | -9.3 | A | 11 | 20 | 8 | 14 | 8 | 11 | 6 | 13 | 3 |
| 4R6 | 9231 | 0 | C02 | 4626 | 1 | | | | | | | | | C | 42 | 8 | 171 | 18 | 14 | 15 | 14 | 0 | 0 |
| 4R6 | 9233 | 0 | C02 | 4627 | 1 | | | | | | | | | C | 20 | 15 | 171 | 15 | 11 | 14 | 8 | 12 | 4 |
| 4R6 | 9237 | 0 | C02 | 4633 | 1 | | | | | | | | | C | 14 | 18 | 7 | 15 | 13 | 11 | 11 | 0 | 0 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB |
|---|---|---|---|---|---|---|---|
| (NMI) | 11.2 | -0.7 | 1.6 | 0.2 | -2.7 | 0.0 | 97.2 |
| STD DEVTN | 16.6 | 13.1 | 15.1 | 14.5 | 13.5 | | |

| BCN | TST# | SEA | SAT | ORB# | LUT | EN | MPT | TCAYD | GMT | ERROR | DIR | X-TRK | Y-TRK | | PKEL | CTA | THETA | RVIS | G | S | O | P | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 466 | 7424 | 0 | C02 | 2991 | 1 | 0 | 7 | 83301 | 2344 | 1.8 | 117 | -1.7 | 0.5 | B | | | | | | | | | |
| 466 | 7426 | 0 | C02 | 2992 | 1 | 0 | 12 | 83302 | 132 | 4.6 | -3 | -0.4 | -4.6 | A | 40 | 8 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7428 | 0 | C02 | 2993 | 1 | 0 | 15 | 83302 | 317 | 6.6 | -41 | 3.5 | -5.6 | A | 29 | 11 | 170 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7430 | 0 | C01 | 6649 | 1 | | | | | | | | | C | 22 | 15 | 171 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7432 | 0 | C01 | 6650 | 1 | 0 | 15 | 83302 | 936 | 5.1 | -10 | 0.1 | -5.1 | A | 50 | 6 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7434 | 0 | C01 | 6651 | 1 | 0 | 11 | 83302 | 1133 | 4.9 | -28 | 1.6 | -4.6 | A | 4 | 26 | 170 | 10 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7436 | 0 | C02 | 2999 | 1 | 0 | 11 | 83302 | 1315 | 14.4 | -35 | 6.4 | -13.0 | A | 11 | 20 | 171 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7438 | 0 | C02 | 3000 | 1 | | | | | | | | | C | 84 | 0 | 171 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7440 | 0 | C02 | 3001 | 1 | 0 | 18 | 83302 | 1646 | 12.7 | -30 | 4.6 | -11.8 | A | 10 | 21 | 170 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7442 | 0 | C01 | 6655 | 1 | 0 | 12 | 83302 | 1902 | 8.1 | -33 | 3.3 | -7.4 | A | 18 | 16 | 170 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7444 | 0 | C01 | 6656 | 1 | 0 | 15 | 83302 | 2048 | 7.2 | -54 | 5.1 | -5.0 | A | 62 | 4 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7446 | 0 | C01 | 6657 | 1 | 0 | 13 | 83302 | 2233 | 3.1 | -94 | 3.1 | -0.3 | A | 5 | 25 | 170 | 11 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7448 | 0 | C02 | 3005 | 1 | 0 | 16 | 83303 | 12 | 2.1 | 80 | -2.0 | -0.7 | A | | | | | | | | | |
| 466 | 7450 | 0 | C02 | 3006 | 1 | 0 | 15 | 83303 | 159 | 0.3 | 34 | -0.2 | -0.2 | A | 68 | 3 | 170 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7452 | 0 | C02 | 3007 | 1 | 0 | 15 | 83303 | 343 | 5.2 | -68 | 4.5 | -2.7 | A | 17 | 16 | 170 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7454 | 0 | C01 | 6662 | 1 | 0 | 11 | 83303 | 652 | 4.9 | -70 | 4.3 | -2.4 | A | 3 | 27 | 170 | 8 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7456 | 0 | C01 | 6663 | 1 | | | | | | | | | C | 43 | 7 | 170 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7458 | 0 | C01 | 6664 | 1 | 0 | 20 | 83303 | 1023 | 2.6 | 69 | -2.5 | -0.5 | A | 29 | 11 | 170 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7460 | 0 | C01 | 6665 | 1 | 0 | 9 | 83303 | 1211 | 2.9 | 86 | -2.9 | 0.4 | A | 1 | 29 | 168 | 6 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7462 | 0 | C02 | 3013 | 1 | 0 | 19 | 83303 | 1344 | 3.6 | -51 | 2.4 | -2.7 | A | 23 | 14 | 170 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7464 | 0 | C02 | 3014 | 1 | | | | | | | | | C | 53 | 5 | 170 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7466 | 0 | C02 | 3015 | 1 | 0 | 16 | 83303 | 1717 | 3.4 | 79 | -3.4 | -0.0 | A | 7 | 23 | 169 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7468 | 0 | C01 | 6668 | 1 | 0 | 8 | 83303 | 1748 | 4.2 | 67 | -4.1 | -0.8 | A | 3 | 26 | 167 | 10 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7470 | 0 | C01 | 6669 | 1 | 0 | 16 | 83303 | 1936 | 4.3 | 119 | -3.3 | 2.7 | A | 39 | 8 | 170 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7472 | 0 | C01 | 6670 | 1 | 0 | 20 | 83303 | 2122 | 7.0 | -100 | 7.0 | 0.1 | A | 32 | 11 | 170 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7544 | 0 | C01 | 6770 | 1 | 0 | 16 | 83311 | 435 | 12.1 | -103 | 12.1 | 0.1 | A | 13 | 19 | 166 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7546 | 0 | C01 | 6771 | 1 | 0 | 22 | 83311 | 619 | 13.6 | -91 | 13.4 | -2.5 | A | 56 | 5 | 167 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7548 | 0 | C01 | 6772 | 1 | | | | | | | | | C | 38 | 9 | 167 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7550 | 0 | C01 | 6773 | 1 | | | | | | | | | C | 12 | 20 | 161 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7552 | 0 | C02 | 3121 | 1 | | | | | | | | | C | 17 | 16 | 167 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7554 | 0 | C01 | 6774 | 1 | | | | | | | | | C | 4 | 26 | 130 | 10 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7556 | 0 | C02 | 3122 | 1 | | | | | | | | | C | 72 | 2 | 168 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7558 | 0 | C01 | 6775 | 1 | | | | | | | | | C | 6 | 24 | 143 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7560 | 0 | C02 | 3123 | 1 | | | | | | | | | C | 30 | 11 | 166 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7562 | 0 | C01 | 6776 | 1 | | | | | | | | | C | 20 | 15 | 163 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7564 | 0 | C02 | 3124 | 1 | | | | | | | | | C | 9 | 22 | 159 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7566 | 0 | C01 | 6777 | 1 | | | | | | | | | C | 72 | 2 | 166 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7568 | 0 | C02 | 3125 | 1 | 0 | 11 | 83311 | 1745 | 11.2 | 28 | -11.1 | 1.7 | A | 3 | 26 | 109 | 9 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7570 | 0 | C01 | 6778 | 1 | | | | | | | | | C | 28 | 12 | 166 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7572 | 0 | C02 | 3126 | 1 | | | | | | | | | C | 7 | 23 | 153 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7574 | 0 | C01 | 6779 | 1 | | | | | | | | | C | 4 | 26 | 164 | 11 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7576 | 0 | C02 | 3127 | 1 | 0 | 22 | 83311 | 2122 | 23.3 | 3 | -7.3 | -22.1 | A | 24 | 13 | 164 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7578 | 0 | C02 | 3128 | 1 | 0 | 16 | 83311 | 2308 | 29.7 | -1 | -6.5 | -28.9 | A | 82 | 1 | 165 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7580 | 0 | C02 | 3129 | 1 | 0 | 12 | 83312 | 53 | 28.4 | 7 | -10.4 | -26.4 | A | 22 | 14 | 166 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7582 | 0 | C01 | 6782 | 1 | | | | | | | | | C | 2 | 27 | 163 | 9 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7584 | 0 | C01 | 6783 | 1 | 0 | 14 | 83312 | 325 | 23.1 | 26 | -14.9 | -17.7 | A | 20 | 15 | 166 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7586 | 0 | C01 | 6784 | 1 | 0 | 21 | 83312 | 509 | 23.5 | 33 | -17.3 | -15.9 | A | 71 | 2 | 166 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7588 | 0 | C01 | 6785 | 1 | | | | | | | | | C | 35 | 10 | 164 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7590 | 0 | C02 | 3133 | 1 | | | | | | | | | C | 4 | 26 | 163 | 8 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7592 | 0 | C01 | 6786 | 1 | | | | | | | | | C | 13 | 19 | 158 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7594 | 0 | C02 | 3134 | 1 | 0 | 16 | 83312 | 921 | 21.7 | 59 | -20.7 | -6.3 | A | 23 | 14 | 166 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 7596 | 0 | C01 | 6787 | 1 | 0 | 5 | 83312 | 1033 | 15.3 | 77 | -4.8 | 14.5 | A | 7 | 23 | 95 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8486 | 0 | C01 | 7123 | 1 | 0 | 11 | 83337 | 26 | 4.3 | -17 | 2.0 | -3.9 | A | | | | | | | | | |
| 466 | 8487 | 0 | C01 | 7124 | 1 | 0 | 20 | 83337 | 210 | 2.1 | -29 | 0.6 | -2.0 | A | 21 | 15 | 167 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8488 | 0 | C01 | 7125 | 1 | 0 | 20 | 83337 | 355 | 5.0 | -114 | 4.9 | 1.1 | A | 80 | 1 | 168 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8489 | 0 | C01 | 7126 | 1 | 0 | 19 | 83337 | 543 | 5.8 | -125 | 5.5 | 2.0 | A | 27 | 12 | 165 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8490 | 0 | C02 | 3476 | 1 | 0 | 18 | 83337 | 709 | 0.9 | -70 | 0.8 | -0.5 | A | 11 | 20 | 166 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8491 | 0 | C01 | 7127 | 1 | 0 | 14 | 83337 | 731 | 6.6 | -125 | 6.4 | 1.6 | A | 8 | 22 | 158 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8492 | 0 | C02 | 3477 | 1 | 0 | 20 | 83337 | 854 | 1.4 | -77 | 1.2 | -0.6 | A | 48 | 6 | 167 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8493 | 0 | C01 | 7128 | 1 | 0 | 10 | 83337 | 921 | 6.5 | -133 | 5.7 | -3.0 | A | 4 | 26 | 108 | 9 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8494 | 0 | C02 | 3478 | 1 | 0 | 20 | 83337 | 1039 | 6.3 | -84 | 5.9 | -2.1 | A | 44 | 7 | 166 | 18 | 0 | 0 | 0 | 0 | 0 |

| BCN | TST# | SEA | SAT | ORB# | LUT | EM | MPT | TCAYD | GMT | ERROR | DIR | X-TRK | Y-TRK | | PKEL | CTA | THETA | RVIS | G | S | O | P | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 466 | 9058 | 0 | C01 | 7970 | 1 | 43 | 17 | 84398 | 2334 | 2.2 | -78 | 2.2 | -0.1 | A | | | | | | | | | |
| 466 | 9059 | 0 | C02 | 4324 | 1 | 15 | 5 | 84399 | 121 | 5.6 | 45 | -4.5 | -3.3 | A | 1 | 28 | 171 | 6 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9060 | 0 | C02 | 4325 | 1 | | | | | | | | | C | 49 | 6 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9061 | 0 | C02 | 4326 | 1 | | | | | | | | | C | 20 | 15 | 171 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9062 | 0 | C01 | 7974 | 1 | 16 | 10 | 83399 | 705 | 4.6 | -37 | 2.2 | -4.0 | A | 3 | 27 | 170 | 8 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9063 | 0 | C01 | 7975 | 1 | 9 | 15 | 84399 | 852 | 4.3 | -48 | 2.7 | -3.3 | A | 53 | 5 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9064 | 0 | C01 | 7976 | 1 | 9 | 14 | 84399 | 1038 | 4.2 | 68 | -4.1 | -0.9 | A | 18 | 16 | 171 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9065 | 0 | C02 | 4331 | 1 | 9 | 19 | 84399 | 1407 | 18.0 | 17 | -7.9 | -16.1 | A | 34 | 10 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9069 | 0 | C02 | 4379 | 1 | | | | | | | | | C | 8 | 22 | 172 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9070 | 0 | C02 | 4380 | 1 | | | | | | | | | C | 79 | 1 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9071 | 0 | C02 | 4381 | 1 | | | | | | | | | C | 7 | 23 | 171 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9072 | 0 | C01 | 8029 | 1 | | | | | | | | | C | 18 | 16 | 171 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9073 | 0 | C01 | 8031 | 1 | | | | | | | | | C | 48 | 6 | 171 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9074 | 0 | C02 | 4385 | 1 | | | | | | | | | C | 3 | 26 | 171 | 10 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9075 | 0 | C02 | 4387 | 1 | | | | | | | | | C | 62 | 4 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9084 | 0 | C02 | 4407 | 1 | 0 | 16 | 84405 | 222 | 2.4 | 34 | -1.6 | -1.8 | A | 34 | 10 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9085 | 0 | C02 | 4408 | 1 | 0 | 19 | 84405 | 407 | 3.8 | -68 | 3.4 | -1.9 | A | 19 | 15 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9086 | 0 | C01 | 8056 | 1 | 18 | 4 | 84405 | 709 | 1.2 | -173 | 0.3 | 1.2 | B | 2 | 28 | 172 | 7 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9088 | 0 | C01 | 8059 | 1 | 11 | 12 | 84405 | 1041 | 4.3 | 49 | -3.6 | -2.4 | A | 8 | 23 | 172 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9089 | 0 | C02 | 4414 | 1 | 0 | 15 | 84405 | 1331 | 2.1 | -120 | 2.0 | 0.8 | A | 17 | 17 | 172 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9090 | 0 | C02 | 4415 | 1 | 0 | 16 | 84405 | 1517 | 3.0 | 113 | -2.6 | 1.5 | A | 39 | 8 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9091 | 0 | C01 | 8064 | 1 | 9 | 7 | 84405 | 2032 | 297.0 | -109 | 290.1 | 63.6 | A | 30 | 11 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9092 | 0 | C01 | 8065 | 1 | 9 | 16 | 84405 | 2217 | 3.6 | -70 | 3.3 | -1.6 | A | 23 | 14 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9093 | 0 | C02 | 4420 | 1 | 0 | 4 | 84406 | 105 | 5.3 | 123 | -4.0 | 3.5 | B | 1 | 28 | 172 | 6 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9094 | 0 | C02 | 4421 | 1 | 0 | 12 | 84406 | 249 | 4.4 | 64 | -4.1 | -1.4 | A | 67 | 3 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9095 | 0 | C02 | 4422 | 1 | 0 | 17 | 84406 | 434 | 2.7 | -74 | 2.4 | -1.0 | A | 9 | 22 | 172 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9096 | 0 | C01 | 8071 | 1 | 6 | 7 | 84406 | 746 | 3.3 | -45 | 2.0 | -2.6 | B | 13 | 19 | 172 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9097 | 0 | C01 | 8072 | 1 | 20 | 13 | 84406 | 932 | 3.9 | 76 | -3.9 | -0.4 | A | 50 | 6 | 172 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9098 | 0 | C02 | 4428 | 1 | 0 | 11 | 84406 | 1402 | 2.0 | -112 | 1.9 | 0.5 | A | 34 | 10 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9099 | 0 | C02 | 4429 | 1 | 0 | 14 | 84406 | 1545 | 3.0 | 91 | -3.0 | 0.5 | A | 20 | 15 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9100 | 0 | C01 | 8077 | 1 | 14 | 9 | 84406 | 1920 | 5.2 | 82 | -5.2 | 0.0 | A | 1 | 28 | 172 | 7 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9101 | 0 | C01 | 8078 | 1 | | | | | | | | | C | 68 | 3 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9102 | 0 | C01 | 8079 | 1 | | | | | | | | | C | 9 | 22 | 172 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9103 | 0 | C02 | 4434 | 1 | 0 | 13 | 84407 | 131 | 1.5 | 101 | -1.4 | 0.5 | A | 9 | 21 | 172 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9104 | 0 | C02 | 4435 | 1 | 0 | 14 | 84407 | 316 | 5.6 | -120 | 5.1 | 2.2 | A | 60 | 4 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9105 | 0 | C01 | 8085 | 1 | 12 | 13 | 84407 | 822 | 7.7 | 176 | 0.5 | 7.7 | A | 30 | 11 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9106 | 0 | C01 | 8086 | 1 | 13 | 14 | 84407 | 1008 | 10.7 | 144 | -5.1 | 9.5 | A | 22 | 14 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9107 | 0 | C02 | 4440 | 1 | 0 | 5 | 84407 | 1249 | 10.8 | 152 | -3.7 | 10.1 | A | 0 | 29 | 172 | 5 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9108 | 0 | C02 | 4442 | 1 | | | | | | | | | C | 65 | 3 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9109 | 0 | C02 | 4443 | 1 | | | | | | | | | C | 8 | 22 | 172 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9110 | 0 | C01 | 8091 | 1 | | | | | | | | | C | 12 | 20 | 172 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9111 | 0 | C01 | 8092 | 1 | | | | | | | | | C | 51 | 6 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9112 | 0 | C02 | 4448 | 1 | | | | | | | | | C | 22 | 14 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9113 | 0 | C02 | 4449 | 1 | | | | | | | | | C | 29 | 11 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9114 | 0 | C01 | 8099 | 1 | | | | | | | | | C | 69 | 2 | 172 | 117 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9115 | 0 | C01 | 8100 | 1 | | | | | | | | | C | 7 | 23 | 172 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9116 | 0 | C02 | 4455 | 1 | | | | | | | | | C | 8 | 22 | 172 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9117 | 0 | C02 | 4456 | 1 | | | | | | | | | C | 65 | 3 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9118 | 0 | C01 | 8105 | 1 | | | | | | | | | C | 30 | 11 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9119 | 0 | C01 | 8106 | 1 | | | | | | | | | C | 21 | 15 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9120 | 0 | C02 | 4462 | 1 | | | | | | | | | C | 53 | 5 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9121 | 0 | C02 | 4463 | 1 | | | | | | | | | C | 10 | 21 | 172 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9122 | 0 | C01 | 8112 | 1 | | | | | | | | | C | 14 | 19 | 172 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9123 | 0 | C01 | 8113 | 1 | | | | | | | | | C | 44 | 7 | 172 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9124 | 0 | C02 | 4469 | 1 | | | | | | | | | C | 23 | 14 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9125 | 0 | C02 | 4470 | 1 | | | | | | | | | C | 27 | 12 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9126 | 0 | C02 | 8118 | 1 | | | | | | | | | C | | | | | | | | | |
| 466 | 9127 | 0 | C01 | 8119 | 1 | | | | | | | | | C | 85 | 0 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9128 | 0 | C01 | 8120 | 1 | | | | | | | | | C | 4 | 26 | 172 | 11 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9129 | 0 | C02 | 4475 | 1 | 0 | 15 | 84410 | 108 | 26.4 | 23 | -13.5 | -22.6 | A | 9 | 22 | 172 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9130 | 0 | C02 | 4476 | 1 | 0 | 12 | 84410 | 253 | 20.1 | 4 | -4.1 | -19.7 | B | 60 | 4 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |

SARSAT/COSPAS POSITION ERROR ANALYSIS
WESTWIND TEST

5 OCT 1983 - 8 JAN 1984
19 JAN 1984 - 25 FEB 1984

| BCN | TST# | SEA | SAT | ORB# | LUT | EN | MPT | TCAYD | GMT | ERROR | DIR | X-TRK | Y-TRK | | PKEL | CTA | THETA | RVIS | G | S | O | P | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4G6 | 7256 | 0 | C01 | 6439 | 1 | 9 | 5 | 83286 | 2214 | 14.5 | -129 | 12.2 | 7.8 | B | 28 | 12 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7258 | 0 | C01 | 6440 | 1 | | | | | | | | | C | | | | | | | | | |
| 4G6 | 7296 | 0 | C01 | 6466 | 1 | 0 | 16 | 83288 | 2137 | 9.5 | 63 | -8.9 | -3.2 | A | 9 | 22 | 172 | 13 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7298 | 0 | C01 | 6467 | 1 | 0 | 10 | 83288 | 2323 | 2.4 | 30 | -1.5 | -1.9 | A | 59 | 4 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7304 | 0 | C01 | 6472 | 1 | | | | | | | | | C | 1 | 28 | 172 | 6 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7306 | 0 | C01 | 6473 | 1 | | | | | | | | | C | 72 | 2 | 172 | 19 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7308 | 0 | C01 | 6474 | 1 | | | | | | | | | C | 6 | 24 | 172 | 12 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7322 | 0 | C01 | 6486 | 1 | 0 | 8 | 83290 | 936 | 7.0 | -110 | 6.8 | 1.7 | A | 17 | 17 | 172 | 15 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7324 | 0 | C01 | 6487 | 1 | 0 | 13 | 83290 | 1123 | 2.1 | -149 | 1.3 | 1.7 | A | 37 | 9 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7330 | 0 | C01 | 6493 | 1 | 0 | 9 | 83290 | 2059 | 3.5 | 54 | -3.1 | -1.7 | A | 5 | 25 | 172 | 11 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7332 | 0 | C01 | 6494 | 1 | | | | | | | | | C | 79 | 1 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7334 | 0 | C01 | 6495 | 1 | 0 | 7 | 83291 | 31 | 6.3 | -47 | 4.1 | -4.8 | B | 2 | 28 | 172 | 8 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7340 | 0 | C01 | 6500 | 1 | | | | | | | | | C | 55 | 5 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7342 | 0 | C01 | 6501 | 1 | | | | | | | | | C | 11 | 21 | 172 | 15 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7348 | 0 | C01 | 6507 | 1 | | | | | | | | | C | 27 | 12 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7350 | 0 | C01 | 6508 | 1 | | | | | | | | | C | 24 | 13 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7364 | 0 | C01 | 6554 | 1 | 0 | 17 | 83295 | 905 | 3.1 | -41 | 1.7 | -2.5 | A | 28 | 12 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7366 | 0 | C01 | 6555 | 1 | | | | | | | | | C | 25 | 13 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7372 | 0 | C01 | 6561 | 1 | 0 | 15 | 83295 | 2019 | 4.9 | 54 | -4.3 | -2.3 | A | 15 | 18 | 172 | 15 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7374 | 0 | C01 | 6562 | 1 | | | | | | | | | C | 46 | 7 | 172 | 19 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7380 | 0 | C01 | 6567 | 1 | 0 | 10 | 83296 | 757 | 0.9 | -147 | 0.5 | 0.7 | A | 3 | 26 | 172 | 9 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7382 | 0 | C01 | 6568 | 1 | 0 | 12 | 83296 | 942 | 10.1 | -83 | 9.8 | -2.4 | B | 78 | 1 | 172 | 19 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7384 | 0 | C01 | 6569 | 1 | 0 | 13 | 83296 | 1128 | 10.0 | 75 | -10.0 | -1.2 | A | 8 | 23 | 172 | 13 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7392 | 0 | C01 | 6575 | 1 | 0 | 10 | 83296 | 2053 | 1.7 | 91 | -1.7 | 0.3 | A | 45 | 7 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7394 | 0 | C01 | 6576 | 1 | 0 | 17 | 83296 | 2239 | 3.8 | -73 | 3.5 | -1.5 | A | 16 | 17 | 172 | 15 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7400 | 0 | C01 | 6581 | 1 | | | | | | | | | C | 22 | 14 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7402 | 0 | C01 | 6582 | 1 | | | | | | | | | C | 38 | 9 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7408 | 0 | C01 | 6587 | 1 | 0 | 14 | 83297 | 1941 | 3.2 | 87 | -3.2 | 0.3 | A | 15 | 18 | 171 | 14 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7410 | 0 | C01 | 6588 | 1 | 0 | 15 | 83297 | 2127 | 2.4 | -116 | 2.3 | 0.8 | A | 57 | 4 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7412 | 0 | C01 | 6589 | 1 | 0 | 4 | 83297 | 2311 | 4.9 | -77 | 4.5 | -1.7 | B | 1 | 28 | 171 | 7 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7430 | 0 | C01 | 6649 | 1 | | | | | | | | | C | 22 | 15 | 171 | 17 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7432 | 0 | C01 | 6650 | 1 | 0 | 15 | 83302 | 936 | 5.1 | -10 | 0.1 | -5.1 | A | 50 | 6 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7434 | 0 | C01 | 6651 | 1 | 0 | 11 | 83302 | 1133 | 4.9 | -28 | 1.6 | -4.6 | A | 4 | 26 | 170 | 10 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7442 | 0 | C01 | 6655 | 1 | 0 | 12 | 83302 | 1902 | 8.1 | -33 | 3.3 | -7.4 | A | 18 | 16 | 170 | 17 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7444 | 0 | C01 | 6656 | 1 | 0 | 15 | 83302 | 2048 | 7.2 | -54 | 5.1 | -5.0 | A | 62 | 4 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7446 | 0 | C01 | 6657 | 1 | 0 | 13 | 83302 | 2233 | 3.1 | -94 | 3.1 | -0.3 | A | 5 | 25 | 170 | 11 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7454 | 0 | C01 | 6662 | 1 | 0 | 11 | 83303 | 452 | 4.9 | -70 | 4.3 | -2.4 | A | 3 | 27 | 170 | 8 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7456 | 0 | C01 | 6663 | 1 | | | | | | | | | C | 43 | 7 | 170 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7458 | 0 | C01 | 6664 | 1 | 0 | 20 | 83303 | 1023 | 2.6 | 69 | -2.5 | -0.5 | A | 29 | 11 | 170 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7460 | 0 | C01 | 6665 | 1 | 0 | 9 | 83303 | 1211 | 2.9 | 86 | -2.9 | 0.4 | A | 1 | 29 | 168 | 6 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7468 | 0 | C01 | 6668 | 1 | 0 | 8 | 83303 | 1748 | 4.2 | 67 | -4.1 | -0.8 | A | 3 | 26 | 167 | 10 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7470 | 0 | C01 | 6669 | 1 | 0 | 16 | 83303 | 1936 | 4.3 | 119 | -3.3 | 2.7 | A | 39 | 8 | 170 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7472 | 0 | C01 | 6670 | 1 | 0 | 20 | 83303 | 2122 | 7.0 | -100 | 7.0 | 0.1 | A | 32 | 11 | 170 | 17 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7544 | 0 | C01 | 6770 | 1 | 0 | 16 | 83311 | 435 | 12.1 | -103 | 12.1 | 0.1 | A | 13 | 19 | 166 | 14 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7546 | 0 | C01 | 6771 | 1 | 0 | 22 | 83311 | 619 | 13.6 | -91 | 13.4 | -2.5 | A | 56 | 5 | 167 | 17 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7548 | 0 | C01 | 6772 | 1 | | | | | | | | | C | 38 | 9 | 167 | 17 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7550 | 0 | C01 | 6773 | 1 | | | | | | | | | C | 12 | 20 | 161 | 15 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7554 | 0 | C01 | 6774 | 1 | | | | | | | | | C | 4 | 26 | 130 | 10 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7558 | 0 | C01 | 6775 | 1 | | | | | | | | | C | 6 | 24 | 143 | 12 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7562 | 0 | C01 | 6776 | 1 | | | | | | | | | C | 20 | 15 | 163 | 16 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7566 | 0 | C01 | 6777 | 1 | | | | | | | | | C | 72 | 2 | 166 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7570 | 0 | C01 | 6778 | 1 | | | | | | | | | C | 28 | 12 | 166 | 18 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7574 | 0 | C01 | 6779 | 1 | | | | | | | | | C | 4 | 26 | 164 | 11 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7582 | 0 | C01 | 6782 | 1 | | | | | | | | | C | 2 | 27 | 163 | 9 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7584 | 0 | C01 | 6783 | 1 | 0 | 14 | 83312 | 325 | 23.1 | 26 | -14.9 | -17.7 | A | 20 | 15 | 166 | 17 | 0 | 0 | 0 | 0 | 0 |
| 4G6 | 7586 | 0 | C01 | 6784 | 1 | 0 | 21 | 83312 | 509 | 23.5 | 33 | -17.3 | -15.9 | A | 71 | 2 | 166 | 19 | 0 | 0 | 0 | 0 | 0 |

| BCN | TST# | SEA | SAT | ORB# | LUT | EN | MPT | TCAYD | GMT | ERROR | DIR | X-TRK | Y-TRK | | PKEL | CTA | THETA | RVIS | G | S | O | P | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 466 | 8515 | 0 | C01 | 7156 | 1 | | | | | | | | | C | 0 | 29 | 100 | 5 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8517 | 0 | C01 | 7157 | 1 | 0 | 11 | 83339 | 1223 | 2.4 | -106 | 2.4 | -0.1 | A | 7 | 23 | 161 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8519 | 0 | C01 | 7158 | 1 | 0 | 20 | 83339 | 1411 | 0.9 | -85 | 0.8 | -0.3 | A | 31 | 11 | 166 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8521 | 0 | C01 | 7159 | 1 | 0 | 14 | 83339 | 1557 | 0.4 | 21 | -0.2 | -0.3 | A | 60 | 4 | 167 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8523 | 0 | C01 | 7160 | 1 | 0 | 16 | 83339 | 1742 | 3.6 | -51 | 2.3 | -2.8 | A | 12 | 20 | 167 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8567 | 0 | C01 | 7255 | 1 | | | | | | | | | C | 16 | 17 | 165 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8572 | 0 | C01 | 7260 | 1 | 0 | 15 | 83347 | 59 | 7.9 | 139 | -3.7 | 7.0 | A | 8 | 23 | 167 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8574 | 0 | C01 | 7275 | 1 | 0 | 19 | 83348 | 134 | 23.8 | -105 | 23.7 | 1.3 | A | 79 | 1 | 167 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8575 | 0 | C01 | 7276 | 1 | | | | | | | | | C | 28 | 12 | 163 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8577 | 0 | C01 | 7277 | 1 | | | | | | | | | C | 12 | 20 | 154 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8579 | 0 | C01 | 7278 | 1 | | | | | | | | | C | 8 | 22 | 111 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8581 | 0 | C01 | 7279 | 1 | | | | | | | | | C | 15 | 18 | 155 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9027 | 0 | C01 | 7936 | 1 | | | | | | | | | C | 3 | 27 | 169 | 9 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9032 | 0 | C01 | 7941 | 1 | 13 | 15 | 84396 | 2041 | 1.0 | 173 | 0.1 | 1.0 | A | 12 | 20 | 170 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9033 | 0 | C01 | 7942 | 1 | 13 | 18 | 84397 | 2226 | 12.7 | 82 | -12.7 | 0.5 | A | 76 | 1 | 170 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9034 | 0 | C01 | 7943 | 1 | | | | | | | | | C | | | | | | | | | |
| 466 | 9038 | 0 | C01 | 7947 | 1 | 13 | 17 | 84397 | 738 | 4.8 | -94 | 4.7 | -0.5 | A | 11 | 21 | 169 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9046 | 0 | C01 | 7957 | 1 | | | | | | | | | C | 4 | 26 | 169 | 11 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9050 | 0 | C01 | 7961 | 1 | | | | | | | | | C | 22 | 14 | 170 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9051 | 0 | C01 | 7962 | 1 | | | | | | | | | C | 50 | 6 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9052 | 0 | C01 | 7963 | 1 | 12 | 10 | 84398 | 1146 | 2.9 | 10 | -1.0 | -2.8 | A | 3 | 27 | 170 | 8 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9056 | 0 | C01 | 7968 | 1 | 10 | 13 | 84398 | 2003 | 3.8 | 117 | -3.1 | 2.2 | A | 5 | 25 | 171 | 11 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9057 | 0 | C01 | 7969 | 1 | | | | | | | | | C | 60 | 4 | 171 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9058 | 0 | C01 | 7970 | 1 | 43 | 17 | 84398 | 2334 | 2.2 | -78 | 2.2 | -0.1 | A | | | | | | | | | |
| 466 | 9062 | 0 | C01 | 7974 | 1 | 16 | 10 | 83399 | 705 | 4.6 | -37 | 2.2 | -4.0 | A | 3 | 27 | 170 | 8 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9063 | 0 | C01 | 7975 | 1 | 9 | 15 | 84399 | 852 | 4.3 | -48 | 2.7 | -3.3 | A | 53 | 5 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9064 | 0 | C01 | 7976 | 1 | 9 | 14 | 84399 | 1038 | 4.2 | 68 | -4.1 | -0.9 | A | 18 | 16 | 171 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9072 | 0 | C01 | 8029 | 1 | | | | | | | | | C | 18 | 16 | 171 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9073 | 0 | C01 | 8031 | 1 | | | | | | | | | C | 48 | 6 | 171 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9086 | 0 | C01 | 8056 | 1 | 18 | 4 | 84405 | 709 | 1.2 | -173 | 0.3 | 1.2 | B | 2 | 28 | 172 | 7 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9088 | 0 | C01 | 8059 | 1 | 11 | 12 | 84405 | 1041 | 4.3 | 49 | -3.6 | -2.4 | A | 8 | 23 | 172 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9091 | 0 | C01 | 8064 | 1 | 9 | 7 | 84405 | 2032 | 297.0 | -109 | 290.1 | 63.6 | A | 30 | 11 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9092 | 0 | C01 | 8065 | 1 | 9 | 16 | 84405 | 2217 | 3.6 | -70 | 3.3 | -1.6 | A | 23 | 14 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9096 | 0 | C01 | 8071 | 1 | 6 | 7 | 84406 | 746 | 3.3 | -45 | 2.0 | -2.6 | B | 13 | 19 | 172 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9097 | 0 | C01 | 8072 | 1 | 20 | 13 | 84406 | 932 | 3.9 | 76 | -3.9 | -0.4 | A | 50 | 6 | 172 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9100 | 0 | C01 | 8077 | 1 | 14 | 9 | 84406 | 1920 | 5.2 | 82 | -5.2 | 0.0 | A | 1 | 28 | 172 | 7 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9101 | 0 | C01 | 8078 | 1 | | | | | | | | | C | 68 | 3 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9102 | 0 | C01 | 8079 | 1 | | | | | | | | | C | 9 | 22 | 172 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9105 | 0 | C01 | 8085 | 1 | 12 | 13 | 84407 | 822 | 7.7 | 176 | 0.5 | 7.7 | A | 30 | 11 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9106 | 0 | C01 | 8086 | 1 | 13 | 14 | 84407 | 1008 | 10.7 | 144 | -5.1 | 9.5 | A | 22 | 14 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9110 | 0 | C01 | 8091 | 1 | | | | | | | | | C | 12 | 20 | 172 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9111 | 0 | C01 | 8092 | 1 | | | | | | | | | C | 51 | 6 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9114 | 0 | C01 | 8099 | 1 | | | | | | | | | C | 69 | 2 | 172 | 117 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9115 | 0 | C01 | 8100 | 1 | | | | | | | | | C | 7 | 23 | 172 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9118 | 0 | C01 | 8105 | 1 | | | | | | | | | C | 30 | 11 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9119 | 0 | C01 | 8106 | 1 | | | | | | | | | C | 21 | 15 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9122 | 0 | C01 | 8112 | 1 | | | | | | | | | C | 14 | 19 | 172 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9123 | 0 | C01 | 8113 | 1 | | | | | | | | | C | 44 | 7 | 172 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9127 | 0 | C01 | 8119 | 1 | | | | | | | | | C | 85 | 0 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9128 | 0 | C01 | 8120 | 1 | | | | | | | | | C | 4 | 26 | 172 | 11 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9131 | 0 | C01 | 8126 | 1 | 23 | 6 | 84410 | 826 | 11.3 | 7 | -2.9 | -10.9 | A | 42 | 8 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9132 | 0 | C01 | 8127 | 1 | 10 | 4 | 84410 | 1011 | 11.5 | 61 | -10.7 | -4.2 | B | 15 | 18 | 172 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9135 | 0 | C01 | 8132 | 1 | 0 | 12 | 84410 | 1949 | 3.3 | 57 | -3.0 | -1.4 | A | 20 | 15 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9136 | 0 | C01 | 8133 | 1 | | | | | | | | | C | 32 | 10 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9139 | 0 | C01 | 8139 | 1 | | | | | | | | | C | 10 | 21 | 172 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9140 | 0 | C01 | 8140 | 1 | | | | | | | | | C | 57 | 4 | 172 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9143 | 0 | C01 | 8145 | 1 | | | | | | | | | C | 1 | 29 | 172 | 7 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9144 | 0 | C01 | 8146 | 1 | | | | | | | | | C | 71 | 2 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9145 | 0 | C01 | 8147 | 1 | | | | | | | | | C | 7 | 23 | 172 | 11 | 0 | 0 | 0 | 0 | 0 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB |
|---|---|---|---|---|---|---|---|
| | 10.5 | -4.2 | -0.7 | 4.4 | 0.2 | 0.0 | 90.0 |
| STD DEVTN | 34.8 | 33.8 | 12.9 | 35.0 | 9.1 | | |

| BCN | TST# | SEA | SAT | ORB# | LUT | EM | MPT | TCAYD | GMT | ERROR | DIR | X-TRK | Y-TRK | | PKEL | CTA | THETA | BVIS | G | S | O | P | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 466 | 8518 | 0 | C02 | 3507 | 1 | 0 | 16 | 83339 | 1319 | 4.0 | -160 | 2.3 | 3.3 | A | 8 | 22 | 164 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8520 | 0 | C02 | 3508 | 1 | 0 | 6 | 83339 | 1512 | 3.8 | -179 | 2.5 | 2.8 | A | 0 | 29 | 138 | 4 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8522 | 0 | C02 | 3509 | 1 | 0 | 7 | 83339 | 1702 | 3.2 | -149 | 2.9 | 1.5 | A | 2 | 28 | 148 | 8 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8524 | 0 | C02 | 3510 | 1 | 0 | 16 | 83339 | 1852 | 4.5 | -99 | 4.4 | -0.4 | A | 14 | 18 | 164 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8525 | 0 | C02 | 3511 | 1 | 0 | 21 | 83339 | 2039 | 9.9 | -68 | 8.2 | -5.5 | A | 60 | 4 | 167 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8526 | 0 | C02 | 3512 | 1 | 0 | 19 | 83339 | 2224 | 12.7 | -72 | 11.1 | -6.2 | A | 30 | 11 | 168 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8566 | 0 | C02 | 3604 | 1 | 0 | 10 | 83346 | 1503 | 1.9 | 19 | -1.9 | 0.1 | A | 3 | 27 | 105 | 9 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8568 | 0 | C02 | 3605 | 1 | 0 | 14 | 83346 | 1653 | 2.0 | -17 | -0.2 | -2.0 | A | 9 | 22 | 158 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8569 | 0 | C02 | 3606 | 1 | 0 | 21 | 83346 | 1841 | 1.0 | -44 | 0.5 | -0.9 | A | 31 | 10 | 165 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8570 | 0 | C02 | 3607 | 1 | 0 | 21 | 83346 | 2026 | 6.4 | -83 | 6.0 | -2.2 | A | 67 | 3 | 166 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8571 | 0 | C02 | 3608 | 1 | 0 | 16 | 83346 | 2211 | 4.9 | -98 | 4.9 | -0.4 | A | 16 | 17 | 166 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8576 | 0 | C02 | 3626 | 1 | 0 | 11 | 83348 | 524 | 14.8 | -104 | 14.8 | -0.3 | A | 5 | 25 | 164 | 10 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8578 | 0 | C02 | 3627 | 1 | 0 | 19 | 83348 | 707 | 11.5 | -91 | 11.3 | -2.3 | A | 24 | 13 | 166 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8580 | 0 | C02 | 3628 | 1 | 0 | 20 | 83348 | 852 | 11.8 | -93 | 11.6 | -2.0 | A | 85 | 0 | 166 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 8582 | 0 | C02 | 3629 | 1 | 0 | 19 | 83348 | 1038 | 3.9 | 2 | -1.2 | -3.7 | A | 30 | 11 | 163 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9028 | 0 | C02 | 4289 | 1 | | | | | | | | | C | 4 | 26 | 167 | 9 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9029 | 0 | C02 | 4290 | 1 | | | | | | | | | C | 35 | 9 | 168 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9030 | 0 | C02 | 4291 | 1 | | | | | | | | | C | 39 | 8 | 169 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9031 | 0 | C02 | 4292 | 1 | 22 | 12 | 84396 | 1753 | 4.4 | -179 | 0.9 | 4.3 | A | 3 | 27 | 168 | 8 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9035 | 0 | C02 | 4297 | 1 | 19 | 12 | 84397 | 212 | 3.5 | 111 | -3.0 | 1.8 | A | 10 | 21 | 170 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9036 | 0 | C02 | 4298 | 1 | | | | | | | | | C | 78 | 1 | 170 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9037 | 0 | C02 | 4299 | 1 | | | | | | | | | C | 15 | 18 | 170 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9047 | 0 | C02 | 4311 | 1 | | | | | | | | | C | 21 | 15 | 171 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9048 | 0 | C02 | 4312 | 1 | | | | | | | | | C | 50 | 6 | 171 | 19 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9049 | 0 | C02 | 4313 | 1 | | | | | | | | | C | 4 | 25 | 170 | 10 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9053 | 0 | C02 | 4317 | 1 | 29 | 17 | 84398 | 1337 | 5.9 | -82 | 5.7 | -1.7 | A | 16 | 17 | 170 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9054 | 0 | C02 | 4318 | 1 | 22 | 14 | 84398 | 1523 | 4.9 | 109 | -4.3 | 2.3 | A | 67 | 3 | 170 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9055 | 0 | C02 | 4319 | 1 | 15 | 13 | 84398 | 1707 | 4.5 | 137 | -2.4 | 3.8 | A | 6 | 24 | 170 | 10 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9059 | 0 | C02 | 4324 | 1 | 15 | 5 | 84399 | 121 | 5.6 | 45 | -4.5 | -3.3 | A | 1 | 28 | 171 | 6 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9060 | 0 | C02 | 4325 | 1 | | | | | | | | | C | 49 | 6 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9061 | 0 | C02 | 4326 | 1 | | | | | | | | | C | 20 | 15 | 171 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9065 | 0 | C02 | 4331 | 1 | 9 | 19 | 84399 | 1407 | 18.0 | 17 | -7.9 | -16.1 | A | 34 | 10 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9069 | 0 | C02 | 4379 | 1 | | | | | | | | | C | 8 | 22 | 172 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9070 | 0 | C02 | 4380 | 1 | | | | | | | | | C | 79 | 1 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9071 | 0 | C02 | 4381 | 1 | | | | | | | | | C | 7 | 23 | 171 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9074 | 0 | C02 | 4385 | 1 | | | | | | | | | C | 3 | 26 | 171 | 10 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9075 | 0 | C02 | 4387 | 1 | | | | | | | | | C | 62 | 4 | 171 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9084 | 0 | C02 | 4407 | 1 | 0 | 16 | 84405 | 222 | 2.4 | 34 | -1.6 | -1.8 | A | 34 | 10 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9085 | 0 | C02 | 4408 | 1 | 0 | 19 | 84405 | 407 | 3.8 | -68 | 3.4 | -1.9 | A | 19 | 15 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9089 | 0 | C02 | 4414 | 1 | 0 | 15 | 84405 | 1331 | 2.1 | -120 | 2.0 | 0.8 | A | 17 | 17 | 172 | 15 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9090 | 0 | C02 | 4415 | 1 | 0 | 16 | 84405 | 1517 | 3.0 | 113 | -2.6 | 1.5 | A | 39 | 8 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9093 | 0 | C02 | 4420 | 1 | 0 | 4 | 84406 | 105 | 5.3 | 123 | -4.0 | 3.5 | B | 1 | 28 | 172 | 6 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9094 | 0 | C02 | 4421 | 1 | 0 | 12 | 84406 | 249 | 4.4 | 64 | -4.1 | -1.4 | A | 67 | 3 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9095 | 0 | C02 | 4422 | 1 | 0 | 17 | 84406 | 434 | 2.7 | -74 | 2.4 | -1.0 | A | 9 | 22 | 172 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9098 | 0 | C02 | 4428 | 1 | 0 | 11 | 84406 | 1402 | 2.0 | -112 | 1.9 | 0.5 | A | 34 | 10 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9099 | 0 | C02 | 4429 | 1 | 0 | 14 | 84406 | 1545 | 3.0 | 91 | -3.0 | 0.5 | A | 20 | 15 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9103 | 0 | C02 | 4434 | 1 | 0 | 13 | 84407 | 131 | 1.5 | 101 | -1.4 | 0.5 | A | 9 | 21 | 172 | 14 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9104 | 0 | C02 | 4435 | 1 | 0 | 14 | 84407 | 316 | 5.6 | -120 | 5.1 | 2.2 | A | 60 | 4 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9107 | 0 | C02 | 4440 | 1 | 0 | 5 | 84407 | 1249 | 10.8 | 152 | -3.7 | 10.1 | A | 0 | 29 | 172 | 5 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9108 | 0 | C02 | 4442 | 1 | | | | | | | | | C | 65 | 3 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9109 | 0 | C02 | 4443 | 1 | | | | | | | | | C | 8 | 22 | 172 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9112 | 0 | C02 | 4448 | 1 | | | | | | | | | C | 22 | 14 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9113 | 0 | C02 | 4449 | 1 | | | | | | | | | C | 29 | 11 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9116 | 0 | C02 | 4455 | 1 | | | | | | | | | C | 8 | 22 | 172 | 12 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9117 | 0 | C02 | 4456 | 1 | | | | | | | | | C | 65 | 3 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9120 | 0 | C02 | 4462 | 1 | | | | | | | | | C | 53 | 5 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9121 | 0 | C02 | 4463 | 1 | | | | | | | | | C | 10 | 21 | 172 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9124 | 0 | C02 | 4469 | 1 | | | | | | | | | C | 23 | 14 | 172 | 17 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9125 | 0 | C02 | 4470 | 1 | | | | | | | | | C | 27 | 12 | 172 | 16 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9126 | 0 | C02 | 8118 | 1 | | | | | | | | | C | | | | | | | | | |
| 466 | 9129 | 0 | C02 | 4475 | 1 | 0 | 15 | 84410 | 108 | 26.4 | 23 | -13.5 | -22.6 | A | 9 | 22 | 172 | 13 | 0 | 0 | 0 | 0 | 0 |
| 466 | 9130 | 0 | C02 | 4476 | 1 | 0 | 12 | 84410 | 253 | 20.1 | 4 | -4.1 | -19.7 | B | 60 | 4 | 172 | 18 | 0 | 0 | 0 | 0 | 0 |

SLIST PERROR.LSH.406.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
LIGHTSHIP TEST
6 FEBRUARY 1984 - 24 FEBRUARY 1984

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 6101 | 5 | S01 | 4477 | 1 | 5 | 12 | 84402 | 1430 | 1.5 | -49 | 1.3 | -0.7 | A | 73 | 1.6 | -167 | 11 | 14 | 11 | 0.09 |
| 406 | 6101 | 5 | S01 | 4477 | 1 | 7 | 4 | 84402 | 1430 | 2.4 | -148 | 0.8 | 2.3 | B | 73 | 1.6 | -167 | 11 | 14 | 11 | 0.09 |
| 406 | 6102 | 5 | C02 | 4373 | 4 | 17 | 8 | 84402 | 1410 | 11.8 | 102 | 11.8 | -0.6 | B | 29 | 11.6 | 9 | 11 | 15 | 11 | 0.27 |
| 406 | 6102 | 5 | C02 | 4373 | 1 | 27 | 10 | 84402 | 1410 | 3.3 | 116 | 3.1 | -0.9 | A | 29 | 11.6 | 9 | 11 | 9 | 9 | 0.11 |
| 406 | 6102 | 5 | C02 | 4373 | 1 | 30 | 9 | 84402 | 1410 | 0.2 | -105 | -0.1 | -0.1 | A | 29 | 11.6 | 9 | 11 | 9 | 9 | 0.11 |
| 406 | 6102 | 5 | C02 | 4373 | 4 | 18 | 9 | 84402 | 1410 | 0.6 | -123 | -0.5 | -0.4 | A | 29 | 11.6 | 9 | 11 | 15 | 11 | 0.27 |
| 406 | 6103 | 6 | C02 | 4374 | 4 | 22 | 10 | 84402 | 1555 | 0.8 | 55 | 0.6 | 0.6 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 406 | 6103 | 6 | C02 | 4374 | 1 | 22 | 10 | 84402 | 1555 | 1.7 | 37 | 0.8 | 1.5 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 406 | 6103 | 6 | C02 | 4374 | 4 | 23 | 7 | 84404 | 1555 | 0.6 | -164 | -0.1 | -0.6 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 406 | 6103 | 6 | C02 | 4374 | 1 | 23 | 7 | 84402 | 1555 | 0.6 | -164 | -0.1 | -0.6 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 406 | 6104 | 2 | C01 | 8023 | 4 | 9 | 10 | 84402 | 2014 | 1.7 | -116 | 1.6 | 0.5 | A | 57 | 4.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6104 | 2 | C01 | 8023 | 1 | 5 | 9 | 84402 | 2014 | 0.9 | -34 | 0.4 | -0.8 | B | 57 | 4.9 | 169 | 13 | 15 | 13 | 0.23 |
| 406 | 6104 | 2 | C01 | 8023 | 4 | 10 | 6 | 84402 | 2014 | 0.5 | -39 | 0.2 | -0.4 | A | 57 | 4.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6104 | 2 | C01 | 8023 | 1 | 6 | 5 | 84402 | 2014 | 1.5 | 11 | -0.6 | -1.4 | A | 57 | 4.9 | 169 | 13 | 15 | 13 | 0.23 |
| 406 | 6104 | 2 | C01 | 8023 | 4 | 11 | 17 | 84402 | 2014 | 1.0 | 67 | -0.9 | -0.2 | A | 57 | 4.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6104 | 2 | C01 | 8023 | 1 | 7 | 16 | 84402 | 2014 | 2.0 | 38 | -1.5 | -1.3 | A | 57 | 4.9 | 169 | 13 | 15 | 13 | 0.23 |
| 406 | 6105 | 1 | C01 | 8024 | 1 | 11 | 9 | 84402 | 2159 | 5.0 | 32 | -3.3 | -3.7 | A | 22 | 14.6 | 170 | 10 | 18 | 10 | 0.20 |
| 406 | 6105 | 1 | C01 | 8024 | 1 | 15 | 6 | 84402 | 2159 | 1.3 | 27 | -0.8 | -1.0 | A | 22 | 14.6 | 170 | 10 | 18 | 10 | 0.20 |
| 406 | 6105 | 1 | C01 | 8024 | 1 | 14 | 9 | 84402 | 2159 | 1.0 | 27 | -0.6 | -0.8 | A | 22 | 14.6 | 170 | 10 | 18 | 10 | 0.20 |
| 406 | 6107 | 3 | S01 | 4490 | 4 | 11 | 11 | 84403 | 1229 | 1.8 | -9 | 0.7 | -1.7 | A | 58 | 3.2 | -168 | 11 | 14 | 11 | 0.09 |
| 406 | 6107 | 3 | S01 | 4490 | 1 | 9 | 9 | 84403 | 1229 | 3.0 | 0 | 0.6 | -2.9 | A | 58 | 3.2 | -168 | 11 | 13 | 10 | 0.20 |
| 406 | 6107 | 3 | S01 | 4490 | 4 | 12 | 9 | 84403 | 1229 | 1.9 | -18 | 0.9 | -1.6 | A | 58 | 3.2 | -168 | 11 | 14 | 11 | 0.09 |
| 406 | 6107 | 3 | S01 | 4490 | 1 | 10 | 7 | 84403 | 1229 | 2.9 | -3 | 0.7 | -2.8 | B | 58 | 3.2 | -168 | 11 | 13 | 10 | 0.20 |
| 406 | 6107 | 3 | S01 | 4490 | 4 | 10 | 13 | 84403 | 1229 | 1.7 | 10 | 0.1 | -1.7 | A | 58 | 3.2 | -168 | 11 | 14 | 11 | 0.09 |
| 406 | 6107 | 3 | S01 | 4490 | 1 | 8 | 11 | 84403 | 1229 | 2.9 | 11 | 0.0 | -2.9 | A | 58 | 3.2 | -168 | 11 | 13 | 10 | 0.20 |
| 406 | 6108 | 3 | S01 | 4491 | 1 | 7 | 11 | 84403 | 1408 | 2.2 | 11 | 0.1 | -2.2 | A | 14 | 14.4 | -166 | 8 | 15 | 8 | 0.00 |
| 406 | 6108 | 3 | S01 | 4491 | 1 | 10 | 10 | 84403 | 1408 | 2.7 | 24 | -0.5 | -2.7 | A | 14 | 14.4 | -166 | 8 | 15 | 8 | 0.00 |
| 406 | 6108 | 3 | S01 | 4491 | 1 | 9 | 14 | 84403 | 1408 | 2.5 | 26 | -0.5 | -2.5 | A | 14 | 14.4 | -166 | 8 | 15 | 8 | 0.00 |
| 406 | 6109 | 4 | C02 | 4387 | 4 | 11 | 9 | 84403 | 1438 | 1.0 | -175 | 0.1 | -1.0 | A | 56 | 5.0 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 6109 | 4 | C02 | 4387 | 1 | 6 | 6 | 84403 | 1438 | 0.9 | 160 | 0.4 | -0.8 | A | 56 | 5.0 | 9 | 12 | 14 | 12 | 0.17 |
| 406 | 6109 | 4 | C02 | 4387 | 4 | 10 | 8 | 84403 | 1438 | 0.6 | -114 | -0.5 | -0.3 | A | 56 | 5.0 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 6109 | 4 | C02 | 4387 | 1 | 7 | 7 | 84403 | 1438 | 0.3 | -15 | -0.1 | 0.2 | A | 56 | 5.0 | 9 | 12 | 14 | 12 | 0.17 |
| 406 | 6109 | 4 | C02 | 4387 | 4 | 9 | 16 | 84403 | 1438 | 0.8 | -114 | -0.7 | -0.5 | A | 56 | 5.0 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 6109 | 4 | C02 | 4387 | 1 | 4 | 10 | 84403 | 1438 | 0.3 | -15 | -0.1 | 0.2 | A | 56 | 5.0 | 9 | 12 | 14 | 12 | 0.17 |
| 406 | 6110 | 4 | C02 | 4388 | 1 | 9 | 10 | 84403 | 1624 | 0.7 | -38 | -0.5 | 0.5 | A | 23 | 14.1 | 9 | 10 | 18 | 10 | 0.20 |
| 406 | 6110 | 4 | C02 | 4388 | 1 | 11 | 7 | 84403 | 1624 | 0.8 | 38 | 0.4 | 0.7 | A | 23 | 14.1 | 9 | 10 | 18 | 10 | 0.20 |
| 406 | 6110 | 4 | C02 | 4388 | 1 | 10 | 14 | 84403 | 1624 | 0.5 | 39 | 0.2 | 0.4 | A | 23 | 14.1 | 9 | 10 | 18 | 10 | 0.20 |
| 406 | 6111 | 3 | C01 | 8036 | 4 | 3 | 10 | 84403 | 1902 | 0.2 | 105 | -0.1 | 0.1 | A | 19 | 16.2 | 169 | 9 | 14 | 9 | 0.33 |
| 406 | 6111 | 3 | C01 | 8036 | 4 | 4 | 4 | 84403 | 1902 | 0.4 | -80 | 0.4 | -0.1 | A | 19 | 16.2 | 169 | 9 | 14 | 9 | 0.33 |
| 406 | 6111 | 3 | C01 | 8036 | 4 | 5 | 8 | 84403 | 1902 | 1.0 | -41 | 0.5 | -0.9 | A | 19 | 16.2 | 169 | 9 | 14 | 9 | 0.33 |
| 406 | 6112 | 3 | C01 | 8037 | 4 | 19 | 7 | 84403 | 2049 | 1.3 | -40 | 0.6 | -1.1 | B | 69 | 2.9 | 169 | 13 | 18 | 13 | 0.23 |
| 406 | 6112 | 3 | C01 | 8037 | 1 | 17 | 7 | 84403 | 2049 | 2.2 | -30 | 0.8 | -2.0 | B | 69 | 2.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6112 | 3 | C01 | 8037 | 4 | | | | | | | | | C | 69 | 2.9 | 169 | 13 | 18 | 13 | 0.23 |
| 406 | 6112 | 3 | C01 | 8037 | 1 | | | | | | | | | C | 69 | 2.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6112 | 3 | C01 | 8037 | 4 | 20 | 11 | 84403 | 2049 | 0.5 | 39 | -0.4 | -0.3 | A | 69 | 2.9 | 169 | 13 | 18 | 13 | 0.23 |
| 406 | 6112 | 3 | C01 | 8037 | 1 | 18 | 11 | 84403 | 2049 | 1.2 | 0 | -0.2 | -1.1 | A | 69 | 2.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6113 | 6 | S01 | 4504 | 4 | 3 | 7 | 84404 | 1207 | 3.0 | 51 | -1.9 | -2.3 | B | 34 | 7.1 | -167 | 10 | 14 | 10 | 0.00 |
| 406 | 6113 | 6 | S01 | 4504 | 4 | 1 | 12 | 84404 | 1207 | 10.7 | 154 | -6.6 | 8.5 | B | 34 | 7.1 | -167 | 10 | 14 | 10 | 0.00 |
| 406 | 6115 | 10 | S01 | 4505 | 1 | 12 | 9 | 84404 | 1347 | 0.9 | 14 | -0.0 | -0.9 | A | 22 | 10.9 | -167 | 9 | 16 | 9 | 0.11 |
| 406 | 6115 | 10 | S01 | 4505 | 4 | 11 | 10 | 84404 | 1347 | 2.2 | 96 | -2.1 | -0.2 | A | 22 | 10.9 | -167 | 9 | 14 | 9 | 0.11 |
| 406 | 6116 | 10 | C02 | 4401 | 4 | 11 | 11 | 84404 | 1506 | 8.3 | 94 | 8.3 | 0.7 | A | 75 | 2.0 | 9 | 13 | 18 | 13 | 0.23 |
| 406 | 6116 | 10 | C02 | 4401 | 1 | 12 | 10 | 84404 | 1506 | 7.8 | 88 | 7.6 | 1.5 | A | 75 | 2.0 | 9 | 13 | 16 | 13 | 0.23 |
| 406 | 6117 | 10 | C02 | 4402 | 1 | 12 | 4 | 84404 | 1653 | 20.1 | -38 | -15.0 | 13.3 | A | 12 | 20.1 | 10 | 6 | 18 | 6 | 0.33 |
| 406 | 6118 | 10 | C01 | 8050 | 4 | | | | | | | | | C | 39 | 8.9 | 169 | 13 | 16 | 13 | 0.23 |
| 406 | 6118 | 10 | C01 | 8050 | 1 | | | | | | | | | C | 39 | 8.9 | 169 | 13 | 12 | 12 | 0.17 |
| 406 | 6118 | 10 | C01 | 8050 | 4 | 7 | 12 | 84404 | 1938 | 0.6 | -63 | 0.5 | -0.3 | A | 39 | 8.9 | 169 | 13 | 16 | 13 | 0.23 |
| 406 | 6118 | 10 | C01 | 8050 | 1 | 7 | 11 | 84404 | 1938 | 1.5 | 0 | -0.3 | -1.4 | A | 39 | 8.9 | 169 | 13 | 12 | 12 | 0.17 |
| 406 | 6118 | 10 | C01 | 8050 | 4 | 5 | 15 | 84404 | 1938 | 2.0 | 47 | -1.7 | -1.1 | A | 39 | 8.9 | 169 | 13 | 16 | 13 | 0.23 |
| 406 | 6118 | 10 | C01 | 8050 | 1 | 6 | 11 | 84404 | 1938 | 2.3 | 18 | -1.1 | -2.0 | A | 39 | 8.9 | 169 | 13 | 12 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 4 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 1 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 4 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 1 | 11 | 7 | 84404 | 2124 | 0.6 | -7 | -0.0 | -0.6 | A | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 1 | 10 | 12 | 84404 | 2124 | 1.8 | -35 | 0.8 | -1.6 | A | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 4 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 6145 | 4 | S01 | 4704 | 4 | 28 | 15 | 84418 | 1345 | 0.4 | -24 | 0.2 | -0.3 | A | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 406 | 6146 | 4 | C02 | 4593 | 1 | 21 | 10 | 84418 | 1444 | 1.1 | 18 | 0.2 | 1.1 | A | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 406 | 6146 | 4 | C02 | 4593 | 1 | 20 | 7 | 84418 | 1444 | 0.4 | 45 | 0.2 | 0.3 | A | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 406 | 6146 | 4 | C02 | 4593 | 4 | 36 | 7 | 84418 | 1444 | 0.6 | -162 | -0.1 | -0.5 | A | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 6146 | 4 | C02 | 4593 | 4 | 37 | 10 | 84418 | 1444 | 0.3 | -18 | -0.1 | 0.3 | A | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 6146 | 4 | C02 | 4593 | 1 | 19 | 14 | 84418 | 1444 | 0.5 | 36 | 0.2 | 0.4 | A | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 406 | 6146 | 4 | C02 | 4593 | 4 | 35 | 14 | 84418 | 1444 | 0.5 | -170 | -0.0 | -0.5 | A | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 6147 | 3 | C01 | 8240 | 4 | | | | | | | | | C | 17 | 17.1 | 169 | 9 | 12 | 9 | 0.33 |
| 406 | 6147 | 3 | C01 | 8240 | 4 | 4 | 6 | 84418 | 1715 | 1.5 | 165 | -0.1 | 1.5 | A | 17 | 17.1 | 169 | 9 | 12 | 9 | 0.33 |
| 406 | 6147 | 3 | C01 | 8240 | 4 | | | | | | | | | C | 17 | 17.1 | 169 | 9 | 12 | 9 | 0.33 |
| 406 | 6147 | 3 | C01 | 8240 | 4 | | | | | | | | | C | 17 | 17.1 | 169 | 9 | 12 | 9 | 0.33 |
| 406 | 6148 | 2 | C01 | 8241 | 1 | 13 | 8 | 84418 | 1901 | 1.3 | -13 | 0.1 | -1.3 | A | 76 | 2.0 | 170 | 13 | 17 | 13 | 0.23 |
| 406 | 6148 | 2 | C01 | 8241 | 1 | 14 | 4 | 84418 | 1901 | 7.4 | -74 | 6.7 | -3.2 | A | 76 | 2.0 | 170 | 13 | 17 | 13 | 0.23 |
| 406 | 6148 | 2 | C01 | 8241 | 1 | 12 | 5 | 84418 | 1901 | 1.7 | -37 | 0.8 | -1.5 | A | 76 | 2.0 | 170 | 13 | 17 | 13 | 0.23 |
| 406 | 6150 | 1 | C02 | 4605 | 4 | | | | | | | | | C | 17 | 17.2 | 9 | 8 | 13 | 8 | 0.25 |
| 406 | 6150 | 1 | C02 | 4605 | 4 | 4 | 6 | 84419 | 1142 | 6.3 | 162 | 2.9 | -5.6 | A | 17 | 17.2 | 9 | 8 | 13 | 8 | 0.25 |
| 406 | 6150 | 1 | C02 | 4605 | 4 | | | | | | | | | C | 17 | 17.2 | 9 | 8 | 13 | 8 | 0.25 |
| 406 | 6150 | 1 | C02 | 4605 | 4 | 5 | 5 | 84419 | 1142 | 0.7 | 58 | 0.5 | 0.5 | A | 17 | 17.2 | 9 | 8 | 13 | 8 | 0.25 |
| 406 | 6152 | 1 | S01 | 4718 | 1 | 14 | 12 | 84419 | 1324 | 1.4 | 7 | 0.1 | -1.3 | A | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6152 | 1 | S01 | 4718 | 1 | 15 | 10 | 84419 | 1324 | 1.8 | 23 | -0.3 | -1.8 | A | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6152 | 1 | S01 | 4718 | 4 | 11 | 11 | 84419 | 1324 | 6.2 | -77 | 6.2 | 0.0 | B | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6152 | 1 | S01 | 4718 | 4 | 13 | 13 | 84419 | 1324 | 0.5 | -22 | 0.3 | -0.4 | A | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6152 | 1 | S01 | 4718 | 4 | 14 | 11 | 84419 | 1324 | 1.1 | 46 | -0.6 | -0.9 | A | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6152 | 1 | S01 | 4718 | 1 | 12 | 10 | 84419 | 1324 | 7.3 | -72 | 7.2 | -0.6 | B | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6154 | 1 | C02 | 4607 | 1 | 8 | 5 | 84419 | 1514 | 1.0 | 8 | -0.0 | 1.0 | A | 11 | 20.7 | 10 | 4 | 17 | 4 | 0.50 |
| 406 | 6154 | 1 | C02 | 4607 | 1 | 10 | 7 | 84419 | 1514 | 0.5 | 73 | 0.5 | 0.2 | A | 11 | 20.7 | 10 | 4 | 17 | 4 | 0.50 |
| 406 | 6154 | 1 | C02 | 4607 | 1 | 9 | 8 | 84419 | 1514 | 2.0 | 136 | 1.6 | -1.2 | A | 11 | 20.7 | 10 | 4 | 17 | 4 | 0.50 |
| 406 | 6155 | 1 | C01 | 8254 | 1 | 3 | 9 | 84419 | 1750 | 1.8 | -33 | 0.7 | -1.6 | A | 36 | 9.8 | 169 | 12 | 11 | 11 | 0.09 |
| 406 | 6155 | 1 | C01 | 8254 | 1 | 4 | 8 | 84419 | 1750 | 1.7 | -0 | -0.3 | -1.6 | A | 36 | 9.8 | 169 | 12 | 11 | 11 | 0.09 |
| 406 | 6155 | 1 | C01 | 8254 | 4 | 9 | 15 | 84419 | 1750 | 5.5 | 76 | -5.5 | -0.3 | A | 36 | 9.8 | 169 | 12 | 16 | 12 | 0.17 |
| 406 | 6155 | 1 | C01 | 8254 | 4 | 10 | 12 | 84419 | 1750 | 1.2 | -73 | 1.1 | -0.6 | A | 36 | 9.8 | 169 | 12 | 16 | 12 | 0.17 |
| 406 | 6155 | 1 | C01 | 8254 | 4 | 12 | 11 | 84419 | 1750 | 0.4 | -13 | 0.0 | -0.4 | A | 36 | 9.8 | 169 | 12 | 16 | 12 | 0.17 |
| 406 | 6155 | 1 | C01 | 8254 | 1 | 5 | 9 | 84419 | 1750 | 6.5 | 41 | -5.1 | -4.0 | A | 36 | 9.8 | 169 | 12 | 11 | 11 | 0.09 |
| 406 | 6156 | 1 | C01 | 8255 | 1 | 9 | 6 | 84419 | 1936 | 1.4 | 0 | -0.2 | -1.3 | A | 36 | 9.6 | 170 | 12 | 18 | 12 | 0.17 |
| 406 | 6156 | 1 | C01 | 8255 | 1 | 10 | 4 | 84419 | 1936 | 2.5 | -5 | -0.2 | -2.5 | A | 36 | 9.6 | 170 | 12 | 18 | 12 | 0.17 |
| 406 | 6156 | 1 | C01 | 8255 | 1 | 7 | 11 | 84419 | 1936 | 5.5 | -74 | 5.0 | -2.3 | B | 36 | 9.6 | 170 | 12 | 18 | 12 | 0.17 |
| 406 | 6158 | 4 | C02 | 4619 | 1 | | | | | | | | | C | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6158 | 4 | C02 | 4619 | 1 | | | | | | | | | C | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6158 | 4 | C02 | 4619 | 1 | | | | | | | | | C | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6158 | 4 | C02 | 4619 | 1 | 3 | 3 | 84420 | 1210 | 2.0 | 148 | 1.3 | -1.5 | B | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6159 | 6 | S01 | 4732 | 1 | 9 | 6 | 84420 | 1302 | 7.2 | -57 | 6.7 | -2.5 | B | 12 | 15.5 | -168 | 7 | 9 | 7 | 1.20 |
| 406 | 6159 | 6 | S01 | 4732 | 1 | 8 | 9 | 84420 | 1302 | 12.5 | -85 | 12.4 | 1.7 | A | 12 | 15.5 | -168 | 7 | 9 | 7 | 1.20 |
| 406 | 6159 | 6 | S01 | 4732 | 1 | | | | | | | | | C | 12 | 15.5 | -168 | 7 | 9 | 7 | 1.20 |
| 406 | 6159 | 6 | S01 | 4732 | 1 | 6 | 8 | 84420 | 1302 | 4.0 | 88 | -3.9 | -1.0 | A | 12 | 15.5 | -168 | 7 | 9 | 7 | 1.20 |
| 406 | 6159 | 6 | S01 | 4732 | 4 | 10 | 6 | 84420 | 1302 | 6.9 | -65 | 6.7 | -1.5 | B | 12 | 15.5 | -168 | 7 | 11 | 7 | 0.14 |
| 406 | 6159 | 6 | S01 | 4732 | 4 | 9 | 10 | 84420 | 1302 | 6.1 | -88 | 6.1 | 1.1 | B | 12 | 15.5 | -168 | 7 | 11 | 7 | 0.14 |
| 406 | 6159 | 6 | S01 | 4732 | 4 | 8 | 4 | 84420 | 1302 | 3.6 | 133 | -3.1 | 1.9 | B | 12 | 15.5 | -168 | 7 | 11 | 7 | 0.14 |
| 406 | 6159 | 6 | S01 | 4732 | 4 | 7 | 9 | 84420 | 1302 | 1.1 | 99 | -1.1 | -0.1 | A | 12 | 15.5 | -168 | 7 | 11 | 7 | 0.14 |
| 406 | 6160 | 6 | C02 | 4620 | 1 | | | | | | | | | C | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6160 | 6 | C02 | 4620 | 1 | 10 | 11 | 84420 | 1356 | 5.1 | -62 | -4.8 | 1.6 | A | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6160 | 6 | C02 | 4620 | 1 | 9 | 9 | 84420 | 1356 | 0.8 | 15 | 0.1 | 0.8 | A | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6160 | 6 | C02 | 4620 | 1 | 11 | 6 | 84420 | 1356 | 3.2 | -14 | -1.3 | 2.9 | A | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6160 | 6 | C02 | 4620 | 4 | | | | | | | | | C | 32 | 10.7 | 9 | 12 | 16 | 12 | 0.17 |
| 406 | 6160 | 6 | C02 | 4620 | 4 | 10 | 12 | 84420 | 1356 | 4.9 | -78 | -4.9 | 0.2 | A | 32 | 10.7 | 9 | 12 | 16 | 12 | 0.17 |
| 406 | 6160 | 6 | C02 | 4620 | 4 | 9 | 9 | 84420 | 1356 | 0.2 | -121 | -0.1 | -0.1 | A | 32 | 10.7 | 9 | 12 | 16 | 12 | 0.17 |
| 406 | 6160 | 6 | C02 | 4620 | 4 | 11 | 6 | 84420 | 1356 | 2.6 | -27 | -1.5 | 2.1 | A | 32 | 10.7 | 9 | 12 | 16 | 12 | 0.17 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 2.8 | 0.3 | 0.9 | 0.3 | -0.4 | 28.3 | 86.2 | 85.9 |
| STD DEVTN | 3.7 | 3.8 | 2.4 | 3.9 | 2.4 | | | |

190 BEACON TESTS  159 POSITIONS LOCATED  26 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.72

SLIST PERROR.LSH.406.C1.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
LIGHTSHIP TEST
6 FEBRUARY 1984 - 24 FEBRUARY 1984

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | MAJS MIN | MNJS MIN | MNIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 6104 | 2 | C01 | 8023 | 4 | 9 | 10 | 84402 | 2014 | 1.7 | -116 | 1.6 | 0.5 | A | 57 | 4.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6104 | 2 | C01 | 8023 | 1 | 5 | 9 | 84402 | 2014 | 0.9 | -34 | 0.4 | -0.8 | B | 57 | 4.9 | 169 | 13 | 15 | 13 | 0.23 |
| 406 | 6104 | 2 | C01 | 8023 | 4 | 11 | 17 | 84402 | 2014 | 1.0 | 67 | -0.9 | -0.2 | A | 57 | 4.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6104 | 2 | C01 | 8023 | 1 | 7 | 16 | 84402 | 2014 | 2.0 | 38 | -1.5 | -1.3 | A | 57 | 4.9 | 169 | 13 | 15 | 13 | 0.23 |
| 406 | 6104 | 2 | C01 | 8023 | 4 | 10 | 6 | 84402 | 2014 | 0.5 | -39 | 0.2 | -0.4 | A | 57 | 4.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6104 | 2 | C01 | 8023 | 1 | 6 | 5 | 84402 | 2014 | 1.5 | 11 | -0.6 | -1.4 | A | 57 | 4.9 | 169 | 13 | 15 | 13 | 0.23 |
| 406 | 6105 | 1 | C01 | 8024 | 1 | 11 | 9 | 84402 | 2159 | 5.0 | 32 | -3.3 | -3.7 | A | 22 | 14.6 | 170 | 10 | 18 | 10 | 0.20 |
| 406 | 6105 | 1 | C01 | 8024 | 1 | 14 | 9 | 84402 | 2159 | 1.0 | 27 | -0.6 | -0.8 | A | 22 | 14.6 | 170 | 10 | 18 | 10 | 0.20 |
| 406 | 6105 | 1 | C01 | 8024 | 1 | 15 | 6 | 84402 | 2159 | 1.3 | 27 | -0.8 | -1.0 | A | 22 | 14.6 | 170 | 10 | 18 | 10 | 0.20 |
| 406 | 6111 | 3 | C01 | 8036 | 4 | 3 | 10 | 84403 | 1902 | 0.2 | 104 | -0.1 | 0.1 | A | 19 | 16.2 | 169 | 9 | 14 | 9 | 0.33 |
| 406 | 6111 | 3 | C01 | 8036 | 4 | 5 | 8 | 84403 | 1902 | 1.0 | -41 | 0.5 | -0.9 | A | 19 | 16.2 | 169 | 9 | 14 | 9 | 0.33 |
| 406 | 6111 | 3 | C01 | 8036 | 4 | 4 | 4 | 84403 | 1902 | 0.4 | -80 | 0.4 | -0.1 | A | 19 | 16.2 | 169 | 9 | 14 | 9 | 0.33 |
| 406 | 6112 | 3 | C01 | 8037 | 4 | 19 | 7 | 84403 | 2049 | 1.3 | -40 | 0.6 | -1.1 | B | 69 | 2.9 | 169 | 13 | 18 | 13 | 0.23 |
| 406 | 6112 | 3 | C01 | 8037 | 1 | 17 | 7 | 84403 | 2049 | 2.2 | -30 | 0.8 | -2.0 | B | 69 | 2.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6112 | 3 | C01 | 8037 | 4 | 20 | 11 | 84403 | 2049 | 0.5 | 39 | -0.4 | -0.3 | A | 69 | 2.9 | 169 | 13 | 18 | 13 | 0.23 |
| 406 | 6112 | 3 | C01 | 8037 | 1 | 18 | 11 | 84403 | 2049 | 1.2 | 0 | -0.2 | -1.1 | A | 69 | 2.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6112 | 3 | C01 | 8037 | 4 | | | | | | | | | C | 69 | 2.9 | 169 | 13 | 18 | 13 | 0.23 |
| 406 | 6112 | 3 | C01 | 8037 | 1 | | | | | | | | | C | 69 | 2.9 | 169 | 13 | 17 | 13 | 0.23 |
| 406 | 6118 | 10 | C01 | 8050 | 4 | 5 | 15 | 84404 | 1938 | 2.0 | 47 | -1.7 | -1.1 | A | 39 | 8.9 | 169 | 13 | 16 | 13 | 0.23 |
| 406 | 6118 | 10 | C01 | 8050 | 1 | 6 | 11 | 84404 | 1938 | 2.3 | 18 | -1.1 | -2.0 | A | 39 | 8.9 | 169 | 13 | 12 | 12 | 0.17 |
| 406 | 6118 | 10 | C01 | 8050 | 4 | 7 | 12 | 84404 | 1938 | 0.6 | -63 | 0.5 | -0.3 | A | 39 | 8.9 | 169 | 13 | 16 | 13 | 0.23 |
| 406 | 6118 | 10 | C01 | 8050 | 1 | 7 | 11 | 84404 | 1938 | 1.5 | 0 | -0.3 | -1.4 | A | 39 | 8.9 | 169 | 13 | 12 | 12 | 0.17 |
| 406 | 6118 | 10 | C01 | 8050 | 4 | | | | | | | | | C | 39 | 8.9 | 169 | 13 | 16 | 13 | 0.23 |
| 406 | 6118 | 10 | C01 | 8050 | 1 | | | | | | | | | C | 39 | 8.9 | 169 | 13 | 12 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 1 | 10 | 12 | 84404 | 2124 | 1.8 | -35 | 0.8 | -1.6 | A | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 4 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 1 | 11 | 7 | 84404 | 2124 | 0.6 | -7 | -0.0 | -0.6 | A | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 4 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 1 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 406 | 6119 | 10 | C01 | 8051 | 4 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 406 | 6124 | 3 | C01 | 8063 | 4 | 4 | 5 | 84405 | 1655 | 3.9 | -42 | 2.0 | -3.3 | A | 12 | 19.9 | 169 | 6 | 11 | 6 | 0.33 |
| 406 | 6124 | 3 | C01 | 8063 | 4 | | | | | | | | | C | 12 | 19.9 | 169 | 6 | 11 | 6 | 0.33 |
| 406 | 6124 | 3 | C01 | 8063 | 1 | | | | | | | | | C | 12 | 19.9 | 169 | 6 | 11 | 6 | 0.33 |
| 406 | 6124 | 3 | C01 | 8063 | 4 | | | | | | | | | C | 12 | 19.9 | 169 | 6 | 11 | 6 | 0.33 |
| 406 | 6125 | 3 | C01 | 8064 | 1 | 4 | 7 | 84405 | 2013 | 0.7 | -68 | 0.6 | -0.4 | A | 80 | 1.3 | 170 | 14 | 16 | 14 | 0.14 |
| 406 | 6125 | 3 | C01 | 8064 | 1 | 6 | 4 | 84405 | 2013 | 57.0 | 82 | -56.9 | 2.1 | C | 80 | 1.3 | 170 | 14 | 16 | 14 | 0.14 |
| 406 | 6141 | 2 | C01 | 8227 | 1 | 6 | 8 | 84417 | 1826 | 1.1 | 43 | -0.9 | -0.7 | A | 52 | 5.8 | 170 | 13 | 13 | 13 | 0.23 |
| 406 | 6141 | 2 | C01 | 8227 | 1 | 7 | 11 | 84417 | 1826 | 0.3 | 6 | -0.1 | -0.3 | A | 52 | 5.8 | 170 | 13 | 13 | 13 | 0.23 |
| 406 | 6141 | 2 | C01 | 8227 | 1 | 8 | 8 | 84417 | 1826 | 1.8 | 15 | -0.9 | -1.6 | A | 52 | 5.8 | 170 | 13 | 13 | 13 | 0.23 |
| 406 | 6142 | 1 | C01 | 8228 | 1 | | | | | | | | | C | 24 | 13.7 | 170 | 10 | 18 | 10 | 0.20 |
| 406 | 6142 | 1 | C01 | 8228 | 1 | 21 | 6 | 84417 | 2021 | 0.8 | 50 | -0.7 | -0.4 | A | 24 | 13.7 | 170 | 10 | 18 | 10 | 0.20 |
| 406 | 6142 | 1 | C01 | 8228 | 1 | 20 | 7 | 84417 | 2012 | 1.5 | 53 | -1.3 | -0.7 | A | 24 | 13.7 | 170 | 10 | 18 | 10 | 0.20 |
| 406 | 6142 | 1 | C01 | 8228 | 4 | 14 | 6 | 84417 | 2012 | 0.5 | 127 | -0.3 | 0.4 | A | 24 | 13.7 | 170 | 10 | 17 | 10 | 0.20 |
| 406 | 6142 | 1 | C01 | 8228 | 4 | 13 | 7 | 84417 | 2012 | 1.0 | 83 | -1.0 | 0.1 | A | 24 | 13.7 | 170 | 10 | 17 | 10 | 0.20 |
| 406 | 6147 | 3 | C01 | 8240 | 4 | | | | | | | | | C | 17 | 17.1 | 169 | 9 | 12 | 9 | 0.33 |
| 406 | 6147 | 3 | C01 | 8240 | 4 | | | | | | | | | C | 17 | 17.1 | 169 | 9 | 12 | 9 | 0.33 |
| 406 | 6147 | 3 | C01 | 8240 | 4 | | | | | | | | | C | 17 | 17.1 | 169 | 9 | 12 | 9 | 0.33 |

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SLIST PERROR.LSH.406.C2.00
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| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 6144 | 4 | C02 | 4592 | 4 | 8 | 10 | 84418 | 1258 | 0.8 | -92 | -0.8 | -0.2 | A | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 6146 | 4 | C02 | 4593 | 1 | 21 | 10 | 84418 | 1444 | 1.1 | 18 | 0.2 | 1.1 | A | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 406 | 6146 | 4 | C02 | 4593 | 1 | 20 | 7 | 84418 | 1444 | 0.4 | 45 | 0.2 | 0.3 | A | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 406 | 6146 | 4 | C02 | 4593 | 4 | 36 | 7 | 84418 | 1444 | 0.6 | -162 | -0.1 | -0.5 | A | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 6146 | 4 | C02 | 4593 | 4 | 37 | 10 | 84418 | 1444 | 0.3 | -18 | -0.1 | 0.3 | A | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 6146 | 4 | C02 | 4593 | 1 | 19 | 14 | 84418 | 1444 | 0.5 | 36 | 0.2 | 0.4 | A | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 406 | 6146 | 4 | C02 | 4593 | 4 | 35 | 14 | 84418 | 1444 | 0.5 | -170 | -0.0 | -0.5 | A | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 406 | 6150 | 1 | C02 | 4605 | 4 | | | | | | | | | C | 17 | 17.2 | 9 | 8 | 13 | 8 | 0.25 |
| 406 | 6150 | 1 | C02 | 4605 | 4 | 4 | 6 | 84419 | 1142 | 6.3 | 162 | 2.9 | -5.6 | A | 17 | 17.2 | 9 | 8 | 13 | 8 | 0.25 |
| 406 | 6150 | 1 | C02 | 4605 | 4 | | | | | | | | | C | 17 | 17.2 | 9 | 8 | 13 | 8 | 0.25 |
| 406 | 6150 | 1 | C02 | 4605 | 4 | 5 | 5 | 84419 | 1142 | 0.7 | 58 | 0.5 | 0.5 | A | 17 | 17.2 | 9 | 8 | 13 | 8 | 0.25 |
| 406 | 6154 | 1 | C02 | 4607 | 1 | 8 | 5 | 84419 | 1514 | 1.0 | 8 | -0.0 | 1.0 | A | 11 | 20.7 | 10 | 4 | 17 | 4 | 0.50 |
| 406 | 6154 | 1 | C02 | 4607 | 1 | 10 | 7 | 84419 | 1514 | 0.5 | 73 | 0.5 | 0.2 | A | 11 | 20.7 | 10 | 4 | 17 | 4 | 0.50 |
| 406 | 6154 | 1 | C02 | 4607 | 1 | 9 | 8 | 84419 | 1514 | 2.0 | 136 | 1.6 | -1.2 | A | 11 | 20.7 | 10 | 4 | 17 | 4 | 0.50 |
| 406 | 6158 | 4 | C02 | 4619 | 1 | | | | | | | | | C | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6158 | 4 | C02 | 4619 | 1 | | | | | | | | | C | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6158 | 4 | C02 | 4619 | 1 | | | | | | | | | C | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6158 | 4 | C02 | 4619 | 1 | 3 | 3 | 84420 | 1210 | 2.0 | 148 | 1.3 | -1.5 | B | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6160 | 6 | C02 | 4620 | 1 | | | | | | | | | C | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6160 | 6 | C02 | 4620 | 1 | 10 | 11 | 84420 | 1356 | 5.1 | -62 | -4.8 | 1.6 | A | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6160 | 6 | C02 | 4620 | 1 | 9 | 9 | 84420 | 1356 | 0.8 | 15 | 0.1 | 0.8 | A | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6160 | 6 | C02 | 4620 | 1 | 11 | 6 | 84420 | 1356 | 3.2 | -14 | -1.3 | 2.9 | A | 32 | 10.7 | 9 | 12 | 9 | 9 | 0.11 |
| 406 | 6160 | 6 | C02 | 4620 | 4 | | | | | | | | | C | 32 | 10.7 | 9 | 12 | 16 | 12 | 0.17 |
| 406 | 6160 | 6 | C02 | 4620 | 4 | 10 | 12 | 84420 | 1356 | 4.9 | -78 | -4.9 | 0.2 | A | 32 | 10.7 | 9 | 12 | 16 | 12 | 0.17 |
| 406 | 6160 | 6 | C02 | 4620 | 4 | 9 | 9 | 84420 | 1356 | 0.2 | -121 | -0.1 | -0.1 | A | 32 | 10.7 | 9 | 12 | 16 | 12 | 0.17 |
| 406 | 6160 | 6 | C02 | 4620 | 4 | 11 | 6 | 84420 | 1356 | 2.6 | -27 | -1.5 | 2.1 | A | 32 | 10.7 | 9 | 12 | 16 | 12 | 0.17 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 2.8 | 0.9 | 0.3 | 0.9 | 0.4 | 33.3 | 94.4 | 88.5 |
| STD DEVTN | 5.1 | 4.7 | 3.2 | 5.0 | 2.7 | | | |

190 BEACON TESTS  54 POSITIONS LOCATED  7 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.67

OK,

SLIST PERROR.LSH.406.S1.00

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 6139 | 2 | S01 | 4690 | 1 | 18 | 11 | 84417 | 1406 | 1.4 | -2 | 0.4 | -1.4 | A | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 406 | 6139 | 2 | S01 | 4690 | 1 | 15 | 11 | 84417 | 1406 | 2.4 | -149 | 0.8 | 2.3 | A | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 406 | 6139 | 2 | S01 | 4690 | 1 | 17 | 12 | 84417 | 1406 | 2.8 | -1 | 0.6 | -2.7 | A | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 406 | 6143 | 4 | S01 | 4703 | 1 | 9 | 8 | 84418 | 1205 | 1.4 | -26 | 0.9 | -1.1 | A | 33 | 7.4 | -168 | 10 | 10 | 9 | 0.11 |
| 406 | 6143 | 4 | S01 | 4703 | 1 | 8 | 7 | 84418 | 1205 | 2.6 | 5 | 0.3 | -2.6 | A | 33 | 7.4 | -168 | 10 | 10 | 9 | 0.11 |
| 406 | 6143 | 4 | S01 | 4703 | 4 | 13 | 11 | 84418 | 1205 | 0.7 | -66 | 0.7 | -0.1 | A | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 406 | 6143 | 4 | S01 | 4703 | 4 | 14 | 8 | 84418 | 1205 | 1.7 | 13 | -0.1 | -1.7 | A | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 406 | 6143 | 4 | S01 | 4703 | 1 | 10 | 7 | 84418 | 1205 | 1.7 | -8 | 0.6 | -1.6 | A | 33 | 7.4 | -168 | 10 | 10 | 9 | 0.11 |
| 406 | 6143 | 4 | S01 | 4703 | 4 | | | | | | | | | C | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 406 | 6143 | 4 | S01 | 4703 | 4 | 11 | 11 | 84418 | 1205 | 0.7 | -49 | 0.6 | -0.3 | A | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 406 | 6145 | 4 | S01 | 4704 | 1 | 32 | 13 | 84418 | 1345 | 1.5 | -0 | 0.3 | -1.4 | A | 33 | 7.4 | -168 | 10 | 10 | 9 | 0.11 |
| 406 | 6145 | 4 | S01 | 4704 | 1 | 33 | 12 | 84418 | 1345 | 1.2 | 81 | -1.1 | -0.4 | A | 33 | 7.4 | -168 | 10 | 10 | 9 | 0.11 |
| 406 | 6145 | 4 | S01 | 4704 | 4 | 29 | 14 | 84418 | 1345 | 0.6 | -39 | 0.5 | -0.4 | A | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 406 | 6145 | 4 | S01 | 4704 | 4 | 31 | 12 | 84418 | 1345 | 1.1 | 130 | -1.0 | 0.5 | A | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 406 | 6145 | 4 | S01 | 4704 | 1 | 30 | 14 | 84418 | 1345 | 1.3 | 2 | 0.2 | -1.3 | A | 33 | 7.4 | -168 | 10 | 10 | 9 | 0.11 |
| 406 | 6145 | 4 | S01 | 4704 | 4 | 28 | 15 | 84418 | 1345 | 0.4 | -24 | 0.2 | -0.3 | A | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 406 | 6152 | 1 | S01 | 4718 | 1 | 14 | 12 | 84419 | 1324 | 1.4 | 7 | 0.1 | -1.3 | A | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6152 | 1 | S01 | 4718 | 1 | 15 | 10 | 84419 | 1324 | 1.8 | 23 | -0.3 | -1.8 | A | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6152 | 1 | S01 | 4718 | 4 | 11 | 11 | 84419 | 1324 | 6.2 | -77 | 6.2 | 0.0 | B | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6152 | 1 | S01 | 4718 | 4 | 13 | 13 | 84419 | 1324 | 0.5 | -22 | 0.3 | -0.4 | A | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6152 | 1 | S01 | 4718 | 4 | 14 | 11 | 84419 | 1324 | 1.1 | 46 | -0.6 | -0.9 | A | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6152 | 1 | S01 | 4718 | 1 | 12 | 10 | 84419 | 1324 | 7.3 | -72 | 7.2 | -0.6 | B | 36 | 6.8 | -167 | 10 | 15 | 10 | 0.20 |
| 406 | 6159 | 6 | S01 | 4732 | 1 | 9 | 6 | 84420 | 1302 | 7.2 | -57 | 6.7 | -2.5 | B | 12 | 15.5 | -168 | 7 | 15 | 7 | 1.00 |
| 406 | 6159 | 6 | S01 | 4732 | 1 | 8 | 9 | 84420 | 1302 | 12.5 | -85 | 12.4 | 1.7 | A | 12 | 15.5 | -168 | 7 | 15 | 7 | 1.00 |
| 406 | 6159 | 6 | S01 | 4732 | 1 | | | | | | | | | C | 12 | 15.5 | -168 | 7 | 15 | 7 | 1.00 |
| 406 | 6159 | 6 | S01 | 4732 | 1 | 6 | 8 | 84420 | 1302 | 4.0 | 88 | -3.9 | -1.0 | A | 12 | 15.5 | -168 | 7 | 15 | 7 | 1.00 |
| 406 | 6159 | 6 | S01 | 4732 | 4 | 10 | 6 | 84420 | 1302 | 6.9 | -65 | 6.7 | -1.5 | B | 12 | 15.5 | -168 | 7 | 11 | 7 | 0.14 |
| 406 | 6159 | 6 | S01 | 4732 | 4 | 9 | 10 | 84420 | 1302 | 6.1 | -88 | 6.1 | 1.1 | B | 12 | 15.5 | -168 | 7 | 11 | 7 | 0.14 |
| 406 | 6159 | 6 | S01 | 4732 | 4 | 8 | 4 | 84420 | 1302 | 3.6 | 133 | -3.1 | 1.9 | B | 12 | 15.5 | -168 | 7 | 11 | 7 | 0.14 |
| 406 | 6159 | 6 | S01 | 4732 | 4 | 7 | 9 | 84420 | 1302 | 1.1 | 99 | -1.1 | -0.1 | A | 12 | 15.5 | -168 | 7 | 11 | 7 | 0.14 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 3.5 | -0.1 | 1.4 | 0.1 | -0.7 | 26.2 | 75.4 | 95.3 |
| STD DEVTN | 3.1 | 3.9 | 2.1 | 3.9 | 2.5 | | | |

190 BEACON TESTS  61 POSITIONS LOCATED  3 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.89

OK,

SLIST PERROR.LSH.4P6.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
LIGHTSHIP TEST
6 FEBRUARY 1994 - 24 FEBRUARY 1994

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PREL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4P6 | 6101 | 5 | S01 | 4477 | 1 | 5 | 12 | 94402 | 1430 | 1.5 | -49 | 1.4 | -0.7 | A | 73 | 1.6 | -167 | 11 | 13 | 11 | 0.09 |
| 4P6 | 6102 | 5 | C02 | 4373 | 4 | 17 | 8 | 94402 | 1410 | 11.8 | 102 | 11.8 | -0.6 | B | 29 | 11.6 | 9 | 11 | 15 | 11 | 0.27 |
| 4P6 | 6102 | 5 | C02 | 4373 | 1 | 27 | 10 | 94402 | 1410 | 3.3 | 116 | 3.1 | -0.9 | A | 29 | 11.6 | 9 | 11 | 9 | 9 | 0.11 |
| 4P6 | 6103 | 6 | C02 | 4374 | 4 | 22 | 10 | 94402 | 1555 | 0.8 | 55 | 0.6 | 0.6 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 4P6 | 6103 | 6 | C02 | 4374 | 1 | 22 | 10 | 94402 | 1555 | 1.7 | 37 | 0.8 | 1.5 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 4P6 | 6104 | 2 | C01 | 8023 | 4 | 9 | 10 | 94402 | 2014 | 1.7 | -116 | 1.6 | 0.5 | A | 57 | 4.9 | 169 | 13 | 17 | 13 | 0.23 |
| 4P6 | 6104 | 2 | C01 | 8023 | 1 | 5 | 9 | 94402 | 2014 | 0.9 | -34 | 0.4 | -0.8 | B | 57 | 4.9 | 169 | 13 | 15 | 13 | 0.23 |
| 4P6 | 6105 | 1 | C01 | 8024 | 1 | 11 | 9 | 94402 | 2159 | 5.0 | 32 | -3.3 | -3.7 | A | 22 | 14.6 | 170 | 10 | 18 | 10 | 0.20 |
| 4P6 | 6107 | 3 | S01 | 4490 | 4 | 11 | 11 | 94403 | 1229 | 1.8 | -9 | 0.7 | -1.7 | A | 58 | 3.2 | -168 | 10 | 14 | 10 | 0.20 |
| 4P6 | 6107 | 3 | S01 | 4490 | 1 | 9 | 9 | 94403 | 1229 | 3.0 | 0 | 0.6 | -2.9 | A | 58 | 3.2 | -168 | 10 | 14 | 10 | 0.20 |
| 4P6 | 6108 | 3 | S01 | 4491 | 1 | 7 | 11 | 94403 | 1408 | 2.2 | 11 | 0.1 | -2.2 | A | 14 | 14.4 | -164 | 8 | 15 | 8 | 0.00 |
| 4P6 | 6109 | 4 | C02 | 4387 | 4 | 11 | 9 | 94403 | 1438 | 1.0 | -175 | 0.1 | -1.0 | A | 56 | 5.0 | 9 | 12 | 18 | 12 | 0.17 |
| 4P6 | 6109 | 4 | C02 | 4387 | 1 | 6 | 6 | 94403 | 1438 | 0.9 | 160 | 0.4 | -0.8 | A | 56 | 5.0 | 9 | 12 | 14 | 12 | 0.17 |
| 4P6 | 6110 | 4 | C02 | 4388 | 1 | 9 | 10 | 94403 | 1624 | 0.7 | -38 | -0.5 | 0.5 | A | 23 | 14.1 | 9 | 10 | 18 | 10 | 0.20 |
| 4P6 | 6111 | 3 | C01 | 8036 | 4 | 3 | 10 | 94403 | 1902 | 0.2 | 105 | -0.1 | 0.1 | A | 19 | 16.2 | 169 | 9 | 14 | 9 | 0.33 |
| 4P6 | 6112 | 3 | C01 | 8037 | 4 | 19 | 7 | 94403 | 2049 | 1.3 | -40 | 0.6 | -1.1 | B | 69 | 2.9 | 169 | 13 | 18 | 13 | 0.23 |
| 4P6 | 6112 | 3 | C01 | 8037 | 1 | 17 | 7 | 94403 | 2049 | 2.2 | -30 | 0.8 | -2.0 | B | 69 | 2.9 | 169 | 13 | 17 | 13 | 0.23 |
| 4P6 | 6113 | 6 | S01 | 4504 | 4 | 1 | 12 | 94404 | 1207 | 10.7 | 154 | -6.6 | 8.5 | B | 54 | 7.1 | -167 | 10 | 14 | 10 | 0.00 |
| 4P6 | 6118 | 10 | C01 | 8050 | 4 | 5 | 15 | 94404 | 1938 | 2.0 | 47 | -1.7 | -1.1 | A | 39 | 8.9 | 169 | 13 | 16 | 13 | 0.23 |
| 4P6 | 6118 | 10 | C01 | 8050 | 1 | 6 | 11 | 94404 | 1938 | 2.3 | 18 | -1.1 | -2.0 | A | 39 | 8.9 | 169 | 13 | 12 | 12 | 0.17 |
| 4P6 | 6119 | 10 | C01 | 8051 | 1 | 10 | 12 | 94404 | 2124 | 1.9 | -35 | 0.9 | -1.6 | A | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 4P6 | 6119 | 10 | C01 | 8051 | 4 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 4P6 | 6120 | 6 | S01 | 4518 | 4 | 11 | 12 | 94405 | 1145 | 7.3 | -76 | 7.3 | -0.2 | A | 21 | 11.2 | -167 | 9 | 13 | 9 | 0.11 |
| 4P6 | 6122 | 6 | S01 | 4519 | 4 | 16 | 17 | 94405 | 1326 | 2.0 | 17 | -0.2 | -1.9 | A | 35 | 7.1 | -167 | 10 | 15 | 10 | 0.20 |
| 4P6 | 6122 | 6 | S01 | 4519 | 1 | 15 | 16 | 94405 | 1326 | 2.9 | 19 | -0.3 | -2.9 | A | 35 | 7.1 | -167 | 10 | 15 | 10 | 0.20 |
| 4P6 | 6123 | 4 | C02 | 4415 | 1 | 9 | 13 | 94405 | 1535 | 0.6 | 0 | -0.1 | 0.6 | A | 42 | 7.9 | 9 | 13 | 18 | 13 | 0.23 |
| 4P6 | 6124 | 3 | C01 | 8063 | 4 | 4 | 5 | 94405 | 1655 | 3.9 | -42 | 3.0 | -3.3 | A | 12 | 19.9 | 169 | 6 | 11 | 6 | 0.33 |
| 4P6 | 6125 | 3 | C01 | 8064 | 1 | 4 | 7 | 94405 | 2013 | 0.7 | -69 | 0.6 | -0.4 | A | 80 | 1.3 | 170 | 14 | 16 | 14 | 0.14 |
| 4P6 | 6131 | 1 | S01 | 4675 | 1 | 21 | 6 | 94416 | 1248 | 16.0 | 87 | -15.5 | -4.1 | B | 76 | 1.3 | -167 | 11 | 14 | 11 | 0.09 |
| 4P6 | 6133 | 4 | S01 | 4676 | 1 | 15 | 5 | 94416 | 1428 | 8.4 | -35 | -3.3 | 7.7 | B | | | | | | | |
| 4P6 | 6133 | 4 | S01 | 4676 | 4 | 16 | 5 | 94416 | 1428 | 7.9 | -40 | -3.8 | 6.9 | B | | | | | | | |
| 4P6 | 6134 | 4 | C02 | 4566 | 1 | 18 | 9 | 94416 | 1534 | 9.7 | 54 | 6.9 | 6.8 | A | 16 | 17.3 | 9 | 9 | 13 | 8 | 1.00 |
| 4P6 | 6134 | 4 | C02 | 4566 | 4 | 12 | 9 | 94416 | 1534 | 8.9 | 57 | 6.7 | 5.9 | A | 16 | 17.3 | 9 | 9 | 13 | 9 | 0.25 |
| 4P6 | 6137 | 2 | S01 | 4689 | 1 | 14 | 4 | 94417 | 1227 | 8.5 | 72 | -7.4 | -4.2 | A | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 4P6 | 6137 | 2 | S01 | 4689 | 1 | 13 | 12 | 94417 | 1227 | 2.2 | -31 | 1.5 | -1.6 | A | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 4P6 | 6139 | 2 | S01 | 4690 | 1 | 17 | 12 | 94417 | 1406 | 2.8 | -1 | 0.6 | -2.7 | A | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 4P6 | 6141 | 2 | C01 | 8227 | 1 | 6 | 8 | 94417 | 1926 | 1.1 | 43 | -0.9 | -0.7 | A | 52 | 5.9 | 170 | 13 | 13 | 13 | 0.23 |
| 4P6 | 6142 | 1 | C01 | 8228 | 1 | | | | | | | | | C | 24 | 13.7 | 170 | 10 | 18 | 10 | 0.20 |
| 4P6 | 6143 | 4 | S01 | 4703 | 1 | 10 | 7 | 94418 | 1205 | 1.7 | -8 | 0.6 | -1.6 | A | 33 | 7.4 | -168 | 10 | 10 | 9 | 0.11 |
| 4P6 | 6143 | 4 | S01 | 4703 | 4 | | | | | | | | | C | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 4P6 | 6143 | 4 | S01 | 4703 | 4 | 11 | 11 | 94418 | 1205 | 0.7 | -49 | 0.6 | -0.3 | A | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 4P6 | 6144 | 4 | C02 | 4592 | 1 | 7 | 9 | 94418 | 1258 | 0.9 | -38 | -0.6 | 0.6 | A | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 4P6 | 6144 | 4 | C02 | 4592 | 4 | 4 | 4 | 94418 | 1258 | 28.5 | 117 | 27.1 | -8.9 | B | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 4P6 | 6144 | 4 | C02 | 4592 | 4 | 8 | 10 | 94418 | 1258 | 0.8 | -92 | -0.8 | -0.2 | A | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 4P6 | 6145 | 4 | S01 | 4704 | 1 | 30 | 14 | 94418 | 1345 | 1.3 | 2 | 0.2 | -1.3 | A | 33 | 7.4 | -168 | 10 | 10 | 9 | 0.11 |
| 4P6 | 6145 | 4 | S01 | 4704 | 4 | 28 | 15 | 94418 | 1345 | 0.4 | -24 | 0.2 | -0.3 | A | 33 | 7.4 | -168 | 10 | 14 | 10 | 0.00 |
| 4P6 | 6146 | 4 | C02 | 4593 | 1 | 19 | 14 | 94418 | 1444 | 0.5 | 36 | 0.2 | 0.4 | A | 60 | 4.4 | 9 | 12 | 14 | 12 | 0.17 |
| 4P6 | 6146 | 4 | C02 | 4593 | 4 | 35 | 14 | 94418 | 1444 | 0.5 | -170 | -0.0 | -0.5 | A | 60 | 4.4 | 9 | 12 | 18 | 12 | 0.17 |
| 4P6 | 6147 | 3 | C01 | 8240 | 4 | | | | | | | | | C | 17 | 17.1 | 169 | 9 | 12 | 9 | 0.33 |
| 4P6 | 6147 | 3 | C01 | 8240 | 4 | | | | | | | | | C | 17 | 17.1 | 169 | 9 | 12 | 9 | 0.33 |

SLIST PERROR.LSH.4T6.00.00

SARSAT/COSPAS POSITION ERROR ANALYSIS
LIGHTSHIP TEST
6 FEBRUARY 1984 - 24 FEBRUARY 1984

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL. DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4T6 | 6101 | 5 | S01 | 4477 | 1 | 7 | 4 | 84402 | 1430 | 2.4 | -148 | 0.8 | 2.3 | B | 73 | 1.6 | -167 | 11 | 14 | 11 | 0.09 |
| 4T6 | 6102 | 5 | C02 | 4373 | 1 | 30 | 9 | 84402 | 1410 | 0.2 | -105 | -0.1 | -0.1 | A | 29 | 11.6 | 9 | 11 | 9 | 9 | 0.11 |
| 4T6 | 6102 | 5 | C02 | 4373 | 4 | 18 | 9 | 84402 | 1410 | 0.6 | -123 | -0.5 | -0.4 | A | 29 | 11.6 | 9 | 11 | 15 | 11 | 0.27 |
| 4T6 | 6103 | 6 | C02 | 4374 | 4 | 23 | 7 | 84404 | 1555 | 0.6 | -164 | -0.1 | -0.6 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 4T6 | 6103 | 6 | C02 | 4374 | 1 | 23 | 7 | 84402 | 1555 | 0.6 | -164 | -0.1 | -0.6 | A | 42 | 7.8 | 9 | 13 | 18 | 13 | 0.23 |
| 4T6 | 6104 | 2 | C01 | 8023 | 4 | 10 | 6 | 84402 | 2014 | 0.5 | -39 | 0.2 | -0.4 | A | 57 | 4.9 | 169 | 13 | 17 | 13 | 0.23 |
| 4T6 | 6104 | 2 | C01 | 8023 | 1 | 6 | 5 | 84402 | 2014 | 1.5 | 11 | -0.6 | -1.4 | A | 57 | 4.9 | 169 | 13 | 15 | 13 | 0.23 |
| 4T6 | 6105 | 1 | C01 | 8024 | 1 | 15 | 6 | 84402 | 2159 | 1.3 | 27 | -0.8 | -1.0 | A | 22 | 14.6 | 170 | 10 | 18 | 10 | 0.20 |
| 4T6 | 6107 | 3 | S01 | 4490 | 4 | 12 | 9 | 84403 | 1229 | 1.9 | -18 | 0.9 | -1.6 | A | 58 | 3.2 | -168 | 10 | 14 | 10 | 0.20 |
| 4T6 | 6107 | 3 | S01 | 4490 | 1 | 10 | 7 | 84403 | 1229 | 2.9 | -3 | 0.7 | -2.8 | B | 58 | 3.2 | -168 | 10 | 13 | 10 | 0.20 |
| 4T6 | 6108 | 3 | S01 | 4491 | 1 | 10 | 10 | 84403 | 1408 | 2.7 | 24 | -0.5 | -2.7 | A | 14 | 14.4 | -166 | 8 | 15 | 8 | 0.00 |
| 4T6 | 6109 | 4 | C02 | 4387 | 4 | 10 | 8 | 84403 | 1438 | 0.6 | -114 | -0.5 | -0.3 | A | 56 | 5.0 | 9 | 12 | 18 | 12 | 0.17 |
| 4T6 | 6109 | 4 | C02 | 4387 | 1 | 7 | 7 | 84403 | 1438 | 0.3 | -15 | -0.1 | 0.2 | A | 56 | 5.0 | 9 | 12 | 14 | 12 | 0.17 |
| 4T6 | 6110 | 4 | C02 | 4388 | 1 | 11 | 7 | 84403 | 1624 | 0.8 | 38 | 0.4 | 0.7 | A | 23 | 14.1 | 9 | 10 | 18 | 10 | 0.20 |
| 4T6 | 6111 | 3 | C01 | 8036 | 4 | 4 | 4 | 84403 | 1902 | 0.4 | -80 | 0.4 | -0.1 | A | 19 | 16.2 | 169 | 9 | 14 | 9 | 0.33 |
| 4T6 | 6112 | 3 | C01 | 8037 | 4 | | | | | | | | | C | 69 | 2.9 | 169 | 13 | 18 | 13 | 0.23 |
| 4T6 | 6112 | 3 | C01 | 8037 | 1 | | | | | | | | | C | 69 | 2.9 | 169 | 13 | 17 | 13 | 0.23 |
| 4T6 | 6113 | 6 | S01 | 4504 | 4 | 3 | 7 | 84404 | 1207 | 3.0 | 51 | -1.9 | -2.3 | B | 34 | 7.1 | -167 | 10 | 14 | 10 | 0.00 |
| 4T6 | 6115 | 10 | S01 | 4505 | 1 | 12 | 9 | 84404 | 1347 | 0.9 | 14 | -0.0 | -0.9 | A | 22 | 10.9 | -167 | 9 | 16 | 9 | 0.11 |
| 4T6 | 6115 | 10 | S01 | 4505 | 4 | 11 | 10 | 84404 | 1347 | 2.2 | 96 | -2.1 | -0.2 | A | 22 | 10.9 | -167 | 9 | 14 | 9 | 0.11 |
| 4T6 | 6116 | 10 | C02 | 4401 | 4 | 11 | 11 | 84404 | 1506 | 8.3 | 94 | 8.3 | 0.7 | A | 75 | 2.0 | 9 | 13 | 18 | 13 | 0.23 |
| 4T6 | 6116 | 10 | C02 | 4401 | 1 | 12 | 10 | 84404 | 1506 | 7.8 | 88 | 7.6 | 1.5 | A | 75 | 2.0 | 9 | 13 | 16 | 13 | 0.23 |
| 4T6 | 6117 | 10 | C02 | 4402 | 1 | 12 | 4 | 84404 | 1653 | 20.1 | -38 | -15.0 | 13.3 | A | 12 | 20.1 | 10 | 6 | 18 | 6 | 0.33 |
| 4T6 | 6118 | 10 | C01 | 8050 | 4 | | | | | | | | | C | 39 | 8.9 | 169 | 13 | 16 | 13 | 0.23 |
| 4T6 | 6118 | 10 | C01 | 8050 | 1 | | | | | | | | | C | 39 | 8.9 | 169 | 13 | 12 | 12 | 0.17 |
| 4T6 | 6119 | 10 | C01 | 8051 | 4 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 4T6 | 6119 | 10 | C01 | 8051 | 1 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 4T6 | 6119 | 10 | C01 | 8051 | 4 | | | | | | | | | C | 33 | 10.6 | 169 | 12 | 18 | 12 | 0.17 |
| 4T6 | 6120 | 6 | S01 | 4518 | 4 | 13 | 6 | 84405 | 1145 | 4.5 | -6 | 1.4 | -4.3 | A | 21 | 11.2 | -167 | 9 | 13 | 9 | 0.11 |
| 4T6 | 6122 | 6 | S01 | 4519 | 4 | 15 | 9 | 84405 | 1326 | 5.7 | 75 | -5.0 | -2.6 | A | 35 | 7.1 | -167 | 10 | 15 | 10 | 0.20 |
| 4T6 | 6122 | 6 | S01 | 4519 | 1 | 14 | 8 | 84405 | 1326 | 7.1 | 75 | -6.3 | -3.2 | A | 35 | 7.1 | -167 | 10 | 15 | 10 | 0.20 |
| 4T6 | 6123 | 4 | C02 | 4415 | 1 | 10 | 10 | 84405 | 1535 | 1.5 | -14 | -0.6 | 1.4 | A | 42 | 7.9 | 9 | 13 | 18 | 13 | 0.23 |
| 4T6 | 6123 | 4 | C02 | 4415 | 4 | 9 | 10 | 84405 | 1535 | 1.0 | -55 | -0.9 | 0.4 | A | 42 | 7.9 | 9 | 13 | 18 | 13 | 0.23 |
| 4T6 | 6124 | 3 | C01 | 8063 | 4 | | | | | | | | | C | 12 | 19.9 | 169 | 6 | 11 | 6 | 0.33 |
| 4T6 | 6124 | 3 | C01 | 8063 | 1 | | | | | | | | | C | 12 | 19.9 | 169 | 6 | 11 | 6 | 0.33 |
| 4T6 | 6124 | 3 | C01 | 8063 | 4 | | | | | | | | | C | 12 | 19.9 | 169 | 6 | 11 | 6 | 0.33 |
| 4T6 | 6125 | 3 | C01 | 8064 | 1 | 6 | 4 | 84405 | 2013 | 57.5 | 81 | -57.5 | 1.3 | C | 80 | 1.3 | 170 | 14 | 16 | 14 | 0.14 |
| 4T6 | 6131 | 4 | S01 | 4675 | 1 | 19 | 9 | 84416 | 1248 | 3.4 | 72 | -3.0 | -1.7 | B | 76 | 1.3 | -167 | 11 | 14 | 11 | 0.09 |
| 4T6 | 6131 | 4 | S01 | 4675 | 1 | 20 | 11 | 84416 | 1248 | 3.2 | -21 | 1.8 | -2.7 | B | 76 | 1.3 | -167 | 11 | 14 | 11 | 0.09 |
| 4T6 | 6133 | 4 | S01 | 4676 | 1 | 16 | 12 | 84416 | 1428 | 2.3 | 9 | 0.1 | -2.3 | A | 76 | 1.3 | -167 | 11 | 14 | 11 | 0.09 |
| 4T6 | 6133 | 4 | S01 | 4676 | 1 | 18 | 12 | 84416 | 1428 | 1.9 | 23 | -0.4 | -1.8 | A | 76 | 1.3 | -167 | 11 | 14 | 11 | 0.09 |
| 4T6 | 6133 | 4 | S01 | 4676 | 4 | 17 | 12 | 84416 | 1428 | 1.4 | 3 | 0.2 | -1.4 | A | 76 | 1.3 | -167 | 11 | 15 | 11 | 0.09 |
| 4T6 | 6133 | 4 | S01 | 4676 | 4 | 18 | 12 | 84416 | 1428 | 1.0 | 26 | -0.2 | -1.0 | A | 76 | 1.3 | -167 | 11 | 15 | 11 | 0.09 |
| 4T6 | 6134 | 4 | C02 | 4566 | 1 | 19 | 5 | 84416 | 1534 | 1.1 | 6 | -0.1 | 1.1 | A | 16 | 17.3 | 9 | 8 | 15 | 8 | 1.29 |
| 4T6 | 6134 | 4 | C02 | 4566 | 1 | 17 | 7 | 84416 | 1533 | 0.7 | 134 | 0.6 | -0.4 | A | 16 | 17.3 | 9 | 8 | 15 | 8 | 1.29 |
| 4T6 | 6134 | 4 | C02 | 4566 | 4 | 13 | 5 | 84416 | 1534 | 0.3 | -48 | -0.3 | 0.2 | A | 16 | 17.3 | 9 | 8 | 13 | 8 | 0.25 |
| 4T6 | 6134 | 4 | C02 | 4566 | 4 | 11 | 7 | 84416 | 1533 | 1.3 | 174 | 0.3 | -1.2 | A | 16 | 17.3 | 9 | 8 | 13 | 8 | 0.25 |
| 4T6 | 6137 | 2 | S01 | 4689 | 1 | 15 | 7 | 84417 | 1227 | 2.2 | -33 | 1.5 | -1.5 | A | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 4T6 | 6137 | 2 | S01 | 4689 | 1 | | | | | | | | | C | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 4T6 | 6139 | 2 | S01 | 4690 | 1 | 18 | 11 | 84417 | 1406 | 1.4 | -2 | 0.4 | -1.4 | A | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 4T6 | 6139 | 2 | S01 | 4690 | 1 | 15 | 11 | 84417 | 1406 | 2.4 | -149 | 0.8 | 2.3 | A | 56 | 3.5 | -168 | 10 | 12 | 10 | 0.20 |
| 4T6 | 6141 | 2 | C01 | 8227 | 1 | 7 | 11 | 84417 | 1826 | 0.3 | 6 | -0.1 | -0.3 | A | 52 | 5.9 | 170 | 13 | 13 | 13 | 0.23 |
| 4T6 | 6141 | 2 | C01 | 8227 | 1 | 8 | 8 | 84417 | 1826 | 1.8 | 15 | -0.8 | -1.6 | A | 52 | 5.9 | 170 | 13 | 13 | 13 | 0.23 |

SLIST PERROR.LPR.406.C1.4

SARSAT/COSPAS POSITION ERROR ANALYSIS
NASA LOCATION PROBABILITY TEST
21 MAY 1984 - 25 MAY 1984

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 10015 | 0 | C01 | 9459 | 4 | 0 | 12 | 84142 | 1713 | 3.4 | 99 | 3.4 | -0.1 | B | 50 | 6.3 | 8 | 12 | 18 | 12 | 0.50 |
| 406 | 10040 | 0 | C01 | 9465 | 4 | 0 | 10 | 84143 | 416 | 0.6 | 11 | -0.2 | -0.6 | A | 41 | 8.4 | 170 | 12 | 17 | 12 | 0.00 |
| 406 | 10045 | 0 | C01 | 9466 | 4 | 0 | 5 | 84143 | 601 | 1.8 | 0 | -0.3 | -1.8 | B | 27 | 12.7 | 171 | 11 | 16 | 11 | 0.09 |
| 406 | 10070 | 0 | C01 | 5472 | 4 | 0 | 9 | 84143 | 1603 | 16.1 | -123 | -11.8 | -10.9 | A | 14 | 19.0 | 8 | 6 | 14 | 6 | 0.67 |
| 406 | 10075 | 0 | C01 | 9473 | 4 | | | | | | | | | C | 75 | 2.0 | 8 | 13 | 18 | 13 | 0.23 |
| 406 | 10100 | 0 | C01 | 9478 | 4 | 0 | 6 | 84144 | 304 | 0.8 | -58 | 0.6 | -0.5 | A | 12 | 20.5 | 170 | 7 | 14 | 7 | 0.14 |
| 406 | 10105 | 0 | C01 | 9479 | 4 | 0 | 12 | 84144 | 451 | 2.4 | 72 | -2.3 | -0.4 | A | 82 | 1.0 | 171 | 13 | 18 | 13 | 0.08 |
| 406 | 10110 | 0 | C01 | 9480 | 4 | | | | | | | | | C | 11 | 20.9 | 170 | 6 | 14 | 6 | 0.00 |
| 406 | 10140 | 0 | C01 | 9486 | 4 | 0 | 8 | 84144 | 1638 | 0.5 | -152 | -0.2 | -0.4 | A | 33 | 10.6 | 8 | 11 | 16 | 11 | 0.45 |
| 406 | 10145 | 0 | C01 | 9487 | 4 | 0 | 10 | 84144 | 1824 | 0.7 | -100 | -0.7 | -0.2 | A | 34 | 10.3 | 8 | 12 | 17 | 12 | 0.33 |
| 406 | 10165 | 0 | C01 | 9492 | 4 | 0 | 11 | 84145 | 340 | 0.3 | -33 | 0.1 | -0.3 | A | 27 | 12.6 | 170 | 11 | 17 | 11 | 0.09 |
| 406 | 10170 | 0 | C01 | 9493 | 4 | 0 | 8 | 84145 | 526 | 0.6 | -61 | 0.5 | -0.3 | A | 41 | 8.3 | 171 | 13 | 18 | 13 | 0.08 |
| 406 | 10195 | 0 | C01 | 9500 | 4 | 0 | 12 | 84145 | 1713 | 0.4 | -149 | -0.1 | -0.4 | A | 73 | 2.3 | 8 | 13 | 18 | 13 | 0.38 |
| 406 | 10200 | 0 | C01 | 9501 | 4 | 0 | 5 | 84145 | 1859 | 8.8 | 149 | 5.6 | -6.8 | A | 15 | 18.3 | 9 | 9 | 15 | 9 | 0.56 |
| 406 | 10226 | 0 | C01 | 9459 | 4 | 0 | 13 | 84142 | 1713 | 0.8 | -84 | -0.8 | -0.0 | A | 50 | 6.3 | 8 | 12 | 18 | 12 | 0.50 |
| 406 | 10229 | 0 | C01 | 9506 | 4 | 0 | 10 | 84146 | 415 | 0.7 | 46 | -0.6 | -0.4 | A | 59 | 4.5 | 170 | 13 | 18 | 13 | 0.08 |
| 406 | 10236 | 0 | C01 | 9465 | 4 | 0 | 8 | 84143 | 416 | 0.4 | -61 | 0.3 | -0.2 | A | 41 | 8.4 | 170 | 12 | 17 | 12 | 0.00 |
| 406 | 10238 | 0 | C01 | 9466 | 4 | 0 | 8 | 84143 | 601 | 1.8 | 0 | -0.3 | -1.8 | A | 27 | 12.7 | 171 | 11 | 16 | 11 | 0.09 |
| 406 | 10239 | 0 | C01 | 9507 | 4 | 0 | 6 | 84146 | 601 | 0.3 | -127 | 0.3 | 0.1 | A | 18 | 16.6 | 170 | 9 | 16 | 9 | 0.11 |
| 406 | 10248 | 0 | C01 | 5472 | 4 | | | | | | | | | C | 14 | 19.0 | 8 | 6 | 14 | 6 | 0.67 |
| 406 | 10250 | 0 | C01 | 9473 | 4 | 0 | 11 | 84143 | 1748 | 12.0 | -84 | -12.0 | -0.6 | B | 75 | 2.0 | 8 | 13 | 18 | 13 | 0.23 |
| 406 | 10262 | 0 | C01 | 9479 | 4 | 0 | 9 | 84144 | 451 | 3.4 | 73 | -3.4 | -0.4 | B | 82 | 1.0 | 171 | 13 | 18 | 13 | 0.08 |
| 406 | 10264 | 0 | C01 | 9480 | 4 | | | | | | | | | C | 11 | 20.9 | 170 | 6 | 14 | 6 | 0.00 |
| 406 | 10276 | 0 | C01 | 9486 | 4 | 0 | 4 | 84144 | 1638 | 0.7 | 156 | 0.4 | -0.6 | A | 33 | 10.6 | 8 | 11 | 16 | 11 | 0.45 |
| 406 | 10278 | 0 | C01 | 9487 | 4 | 0 | 10 | 84144 | 1824 | 0.1 | -155 | -0.0 | -0.1 | A | 34 | 10.3 | 8 | 12 | 17 | 12 | 0.33 |
| 406 | 10283 | 0 | C01 | 9492 | 4 | 0 | 8 | 84145 | 340 | 0.6 | 11 | -0.2 | -0.6 | A | 27 | 12.6 | 170 | 11 | 17 | 11 | 0.09 |
| 406 | 10284 | 0 | C01 | 9493 | 4 | 0 | 10 | 84145 | 526 | 0.7 | -57 | 0.5 | -0.4 | A | 41 | 8.3 | 171 | 13 | 18 | 13 | 0.08 |
| 406 | 10289 | 0 | C01 | 9500 | 4 | 0 | 12 | 84145 | 1713 | 1.2 | 94 | 1.2 | 0.1 | A | 73 | 2.3 | 8 | 13 | 18 | 13 | 0.38 |
| 406 | 10290 | 0 | C01 | 9501 | 4 | 0 | 4 | 84145 | 1859 | 3.3 | -98 | -3.1 | -1.0 | B | 15 | 18.3 | 9 | 9 | 15 | 9 | 0.56 |
| 406 | 10295 | 0 | C01 | 9506 | 4 | 0 | 6 | 84146 | 415 | 2.6 | 69 | -2.5 | -0.5 | A | 59 | 4.5 | 170 | 13 | 18 | 13 | 0.08 |
| 406 | 10296 | 0 | C01 | 9507 | 4 | 0 | 7 | 84146 | 601 | 0.6 | 20 | -0.3 | -0.5 | A | 18 | 16.6 | 170 | 9 | 16 | 9 | 0.11 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROB | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 2.4 | -0.5 | -0.3 | -1.9 | -1.1 | 0.0 | 81.5 | 87.1 |
| STD DEVTN | 3.8 | 3.8 | 2.3 | 3.5 | 2.3 | | | |

100 BEACON TESTS  27 POSITIONS LOCATED  4 POSITIONS NOT LOCATED  MPTS/NUMBER TRANS = 0.63

OK,

SLIST PERROR.LPR.406.S1.4

SARSAT/COSPAS POSITION ERROR ANALYSIS
NASA LOCATION PROBABILITY TEST
21 MAY 1984 - 25 MAY 1984

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | TCA HHMM | POSITION ERROR NMI | POSITION ERROR DEG | X-TRK NMI | Y-TRK NMI | | PREL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 10005 | 0 | S01 | 5969 | 4 | 0 | 14 | 84142 | 926 | 0.6 | 84 | -0.5 | -0.2 | A | 60 | 3.0 | -169 | 11 | 15 | 11 | 0.09 |
| 406 | 10020 | 0 | S01 | 5975 | 4 | 0 | 13 | 84142 | 1906 | 15.0 | -109 | -14.9 | -2.1 | B | 22 | 10.8 | -11 | 9 | 14 | 9 | 0.16 |
| 406 | 10025 | 0 | S01 | 5976 | 4 | 0 | 11 | 84142 | 2046 | 1.8 | 0 | 0.4 | 1.8 | A | 45 | 5.2 | -10 | 10 | 15 | 10 | 0.40 |
| 406 | 10050 | 0 | S01 | 5983 | 4 | 0 | 13 | 84143 | 905 | 0.7 | -76 | 0.7 | -0.0 | A | 84 | 0.5 | -168 | 10 | 15 | 10 | 0.20 |
| 406 | 10060 | 0 | S01 | 5984 | 4 | 0 | 9 | 84143 | 1044 | 0.7 | 117 | -0.7 | 0.2 | A | 12 | 15.5 | -167 | 7 | 12 | 7 | 0.14 |
| 406 | 10080 | 0 | S01 | 5989 | 4 | | | | | | | | | C | 14 | 14.4 | -11 | 6 | 13 | 6 | 0.67 |
| 406 | 10085 | 0 | S01 | 5990 | 4 | | | | | | | | | C | 69 | 2.0 | -10 | 10 | 15 | 10 | 0.40 |
| 406 | 10120 | 0 | S01 | 5997 | 4 | 0 | 13 | 84144 | 843 | 1.0 | -51 | 0.9 | -0.5 | A | 53 | 4.0 | -168 | 10 | 16 | 10 | 0.20 |
| 406 | 10125 | 0 | S01 | 5998 | 4 | 0 | 12 | 84144 | 1023 | 2.1 | 74 | -1.9 | -1.0 | A | 19 | 12.0 | -168 | 9 | 13 | 9 | 0.11 |
| 406 | 10150 | 0 | S01 | 6004 | 4 | 0 | 13 | 84144 | 2003 | 4.3 | 73 | 4.3 | 0.4 | A | 71 | 1.8 | -10 | 11 | 15 | 11 | 0.45 |
| 406 | 10155 | 0 | S01 | 6005 | 4 | 0 | 11 | 84144 | 2143 | 1.5 | -79 | -1.4 | 0.5 | A | 12 | 15.2 | -10 | 5 | 12 | 5 | 1.00 |
| 406 | 10175 | 0 | S01 | 6011 | 4 | 0 | 14 | 84145 | 811 | 1.7 | -58 | 1.6 | -0.6 | A | 33 | 7.5 | -168 | 9 | 14 | 9 | 0.11 |
| 406 | 10185 | 0 | S01 | 6012 | 4 | 0 | 12 | 84145 | 1001 | 0.1 | 112 | -0.1 | 0.0 | A | 29 | 9.5 | -169 | 10 | 14 | 10 | 0.20 |
| 406 | 10205 | 0 | S01 | 6018 | 4 | 0 | 11 | 84145 | 1941 | 5.3 | -121 | -4.9 | -1.9 | B | 45 | 5.2 | -10 | 11 | 15 | 11 | 0.27 |
| 406 | 10210 | 0 | S01 | 6019 | 4 | 0 | 12 | 84145 | 2121 | 1.9 | -132 | -1.6 | -1.0 | A | 21 | 11.2 | -10 | 9 | 14 | 9 | 0.33 |
| 406 | 10222 | 0 | S01 | 5969 | 4 | 0 | 13 | 84142 | 926 | 0.1 | 118 | -0.1 | 0.0 | A | 60 | 3.0 | -168 | 11 | 15 | 11 | 0.09 |
| 406 | 10228 | 0 | S01 | 5975 | 4 | 0 | 13 | 84142 | 1906 | 2.3 | 71 | 2.3 | 0.3 | A | 22 | 10.8 | -11 | 9 | 14 | 9 | 0.56 |
| 406 | 10230 | 0 | S01 | 5976 | 4 | 0 | 14 | 84142 | 2046 | 4.8 | -68 | -4.1 | 2.6 | A | 45 | 5.2 | -10 | 10 | 15 | 10 | 0.40 |
| 406 | 10240 | 0 | S01 | 5983 | 4 | 0 | 11 | 84143 | 905 | 1.5 | -76 | 1.5 | -0.1 | A | 84 | 0.5 | -168 | 10 | 15 | 10 | 0.20 |
| 406 | 10244 | 0 | S01 | 5984 | 4 | 0 | 8 | 84143 | 1044 | 2.3 | 109 | -2.3 | 0.2 | A | 12 | 15.5 | -167 | 7 | 12 | 7 | 0.14 |
| 406 | 10249 | 0 | S01 | 6025 | 4 | 0 | 10 | 84146 | 800 | 2.0 | -161 | 0.3 | 2.0 | A | 21 | 11.3 | -169 | 7 | 14 | 7 | 0.14 |
| 406 | 10252 | 0 | S01 | 5989 | 4 | 0 | 11 | 84143 | 1845 | 0.9 | 74 | 0.9 | 0.1 | A | 14 | 14.4 | -11 | 6 | 13 | 6 | 0.67 |
| 406 | 10254 | 0 | S01 | 5990 | 4 | 0 | 10 | 84143 | 2024 | 4.2 | -107 | -4.1 | -0.5 | A | 69 | 2.0 | -10 | 10 | 15 | 10 | 0.40 |
| 406 | 10259 | 0 | S01 | 6026 | 4 | 0 | 12 | 84146 | 940 | 0.2 | 101 | -0.2 | -0.0 | A | 45 | 5.2 | -168 | 11 | 15 | 11 | 0.09 |
| 406 | 10260 | 0 | S01 | 9478 | 4 | | | | | | | | | C | | | | | | | |
| 406 | 10268 | 0 | S01 | 5997 | 4 | 0 | 12 | 84144 | 843 | 0.8 | -47 | 0.7 | -0.4 | A | 53 | 4.0 | -168 | 10 | 16 | 10 | 0.20 |
| 406 | 10270 | 0 | S01 | 5998 | 4 | 0 | 13 | 84144 | 1023 | 2.1 | 69 | -1.7 | -1.1 | A | 19 | 12.0 | -168 | 9 | 13 | 9 | 0.11 |
| 406 | 10280 | 0 | S01 | 6004 | 4 | 0 | 15 | 84144 | 2003 | 6.0 | 76 | 6.0 | 0.3 | A | 71 | 1.8 | -10 | 11 | 15 | 11 | 0.45 |
| 406 | 10281 | 0 | S01 | 6005 | 4 | 0 | 10 | 84144 | 2143 | 1.7 | -111 | -1.7 | -0.3 | A | 12 | 15.2 | -10 | 5 | 12 | 5 | 1.00 |
| 406 | 10285 | 0 | S01 | 6011 | 4 | 0 | 12 | 84145 | 811 | 1.9 | -63 | 1.9 | -0.5 | A | 33 | 7.5 | -168 | 9 | 14 | 9 | 0.11 |
| 406 | 10287 | 0 | S01 | 6012 | 4 | 0 | 11 | 84145 | 1001 | 1.3 | 102 | -1.3 | 0.0 | A | 29 | 9.5 | -169 | 10 | 14 | 10 | 0.20 |
| 406 | 10291 | 0 | S01 | 6018 | 4 | 0 | 15 | 84145 | 1941 | 0.9 | 81 | 0.9 | -0.0 | A | 45 | 5.2 | -10 | 11 | 15 | 11 | 0.27 |
| 406 | 10292 | 0 | S01 | 6019 | 4 | 0 | 12 | 84145 | 2121 | 1.7 | -108 | -1.7 | -0.2 | A | 21 | 11.2 | -10 | 9 | 14 | 9 | 0.33 |
| 406 | 10297 | 0 | S01 | 6025 | 4 | 0 | 12 | 84146 | 800 | 2.4 | -141 | 1.1 | 2.1 | A | 21 | 11.3 | -169 | 7 | 14 | 7 | 0.14 |
| 406 | 10298 | 0 | S01 | 6026 | 4 | 0 | 13 | 84146 | 940 | 2.1 | 107 | -2.1 | 0.2 | A | 45 | 5.2 | -168 | 11 | 15 | 11 | 0.09 |

| AV ERRORS | MAGN | EAST | NRTH | XTRK | YTRK | % IN ELLPSE | % APROR | % LOCATN |
|---|---|---|---|---|---|---|---|---|
| (NMI) | 2.4 | -0.5 | -0.2 | -0.7 | 0.0 | 0.0 | 93.8 | 91.4 |
| STD DEVTN | 2.7 | 3.3 | 1.4 | 3.4 | 1.0 | | | |

100 BEACON TESTS  32 POSITIONS LOCATED  3 POSITIONS NOT LOCATED  MPTS/NUMBER TRANS = 1.08

OK,

| BCN | TEST NUM | SEA HT | SAT ID | ORBIT NUM | LUT NUM | EVT NUM | NUM PTS | TCA YRDAY | GMT HHMM | POSITION ERROR NMI | DEG | X-TRK NMI | Y-TRK NMI | | PKEL DEG | CTA DEG | THETA DEG | BVIS MIN | LVIS MIN | MVIS MIN | TCA RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 406 | 10239 | 0 | C01 | 9507 | 4 | 0 | 6 | 84146 | 601 | 0.3 | -127 | 0.3 | 0.1 | A | 18 | 16.7 | 170 | 9 | 16 | 9 | 0.11 |
| 406 | 10240 | 0 | S01 | 5983 | 4 | 0 | 11 | 84143 | 905 | 1.5 | -76 | 1.5 | -0.1 | A | 84 | 0.5 | -168 | 10 | 15 | 10 | 0.20 |
| 406 | 10242 | 0 | C02 | 5828 | 4 | 0 | 10 | 84143 | 1000 | 0.7 | -65 | 0.6 | -0.4 | A | 43 | 7.8 | 170 | 12 | 17 | 12 | 0.00 |
| 406 | 10244 | 0 | S01 | 5984 | 4 | 0 | 8 | 84143 | 1044 | 2.3 | 109 | -2.3 | 0.2 | A | 12 | 15.5 | -167 | 7 | 12 | 7 | 0.14 |
| 406 | 10246 | 0 | C02 | 5829 | 4 | 0 | 8 | 84143 | 1145 | 2.0 | 154 | -0.6 | 1.9 | A | 25 | 13.1 | 171 | 11 | 16 | 11 | 0.09 |
| 406 | 10248 | 0 | C01 | 5472 | 4 | | | | | | | | | C | 14 | 19.0 | 8 | 6 | 14 | 6 | 0.67 |
| 406 | 10249 | 0 | S01 | 6025 | 4 | 0 | 10 | 84146 | 800 | 2.0 | -161 | 0.3 | 2.0 | A | 21 | 11.3 | -169 | 7 | 14 | 7 | 0.14 |
| 406 | 10250 | 0 | C01 | 9473 | 4 | 0 | 11 | 84143 | 1748 | 12.0 | -84 | -12.0 | -0.6 | B | 75 | 2.1 | 8 | 13 | 18 | 13 | 0.23 |
| 406 | 10252 | 0 | S01 | 5989 | 4 | 0 | 11 | 84143 | 1845 | 0.9 | 74 | 0.9 | 0.1 | A | 14 | 14.4 | -11 | 6 | 13 | 6 | 0.67 |
| 406 | 10254 | 0 | S01 | 5990 | 4 | 0 | 10 | 84143 | 2024 | 4.2 | -107 | -4.1 | -0.5 | A | 69 | 2.0 | -10 | 10 | 15 | 10 | 0.40 |
| 406 | 10256 | 0 | C02 | 5835 | 4 | 0 | 5 | 84143 | 2144 | 1.2 | 178 | 0.2 | -1.2 | A | 13 | 19.1 | 8 | 6 | 14 | 6 | 0.67 |
| 406 | 10258 | 0 | C02 | 5836 | 4 | 0 | 12 | 84143 | 2329 | 8.0 | -84 | -8.0 | -0.4 | A | 76 | 1.9 | 8 | 13 | 18 | 13 | 0.23 |
| 406 | 10259 | 0 | S01 | 6026 | 4 | 0 | 12 | 84146 | 940 | 0.2 | 101 | -0.2 | -0.0 | A | 45 | 5.2 | -168 | 11 | 15 | 11 | 0.09 |
| 406 | 10260 | 0 | S01 | 9478 | 4 | | | | | | | | | C | | | | | | | |
| 406 | 10262 | 0 | C01 | 9479 | 4 | 0 | 9 | 84144 | 451 | 3.4 | 73 | -3.4 | -0.4 | B | 82 | 1.0 | 171 | 13 | 18 | 13 | 0.08 |
| 406 | 10264 | 0 | C01 | 9480 | 4 | | | | | | | | | C | 11 | 20.9 | 170 | 6 | 14 | 6 | 0.00 |
| 406 | 10266 | 0 | C02 | 5841 | 4 | 0 | 4 | 84144 | 842 | 0.5 | 92 | -0.5 | 0.1 | A | 10 | 21.1 | 169 | 6 | 14 | 6 | 0.33 |
| 406 | 10268 | 0 | S01 | 5997 | 4 | 0 | 12 | 84144 | 843 | 0.8 | -47 | 0.7 | -0.4 | A | 53 | 4.0 | -168 | 10 | 16 | 10 | 0.20 |
| 406 | 10270 | 0 | S01 | 5998 | 4 | 0 | 13 | 84144 | 1023 | 2.1 | 69 | -1.7 | -1.1 | A | 19 | 12.0 | -168 | 9 | 13 | 9 | 0.11 |
| 406 | 10272 | 0 | C02 | 5842 | 4 | 0 | 11 | 84144 | 1028 | 1.7 | 71 | -1.7 | -0.3 | B | 78 | 1.5 | 170 | 13 | 18 | 13 | 0.08 |
| 406 | 10274 | 0 | C02 | 5843 | 4 | 0 | 9 | 84144 | 1213 | 0.7 | -120 | 0.7 | 0.3 | A | 12 | 20.1 | 170 | 7 | 14 | 7 | 0.14 |
| 406 | 10276 | 0 | C01 | 9486 | 4 | 0 | 4 | 84144 | 1638 | 0.7 | 156 | 0.4 | -0.6 | A | 33 | 10.6 | 8 | 11 | 16 | 11 | 0.45 |
| 406 | 10277 | 0 | C02 | 5870 | 4 | 0 | 12 | 84146 | 1125 | 0.4 | -8 | -0.0 | -0.4 | A | 25 | 13.3 | 171 | 11 | 16 | 11 | 0.09 |
| 406 | 10278 | 0 | C01 | 9487 | 4 | 0 | 10 | 84144 | 1824 | 0.1 | -155 | -0.0 | -0.1 | A | 34 | 10.3 | 8 | 12 | 17 | 12 | 0.33 |
| 406 | 10279 | 0 | C02 | 5829 | 4 | 0 | 10 | 84146 | 940 | 0.7 | 28 | -0.4 | -0.6 | A | 43 | 7.6 | 170 | 12 | 17 | 12 | 0.00 |
| 406 | 10280 | 0 | S01 | 6004 | 4 | 0 | 15 | 84144 | 2003 | 6.0 | 76 | 6.0 | 0.3 | A | 71 | 1.8 | -10 | 11 | 15 | 11 | 0.45 |
| 406 | 10281 | 0 | S01 | 6005 | 4 | 0 | 10 | 84144 | 2143 | 1.7 | -111 | -1.7 | -0.3 | A | 12 | 15.2 | -10 | 5 | 12 | 5 | 1.00 |
| 406 | 10282 | 0 | C02 | 5850 | 4 | 0 | 15 | 84144 | 2357 | 0.6 | -85 | -0.6 | -0.0 | A | 38 | 8.9 | 8 | 12 | 17 | 12 | 0.33 |
| 406 | 10283 | 0 | C01 | 9492 | 4 | 0 | 8 | 84145 | 340 | 0.6 | 11 | -0.2 | -0.6 | A | 27 | 12.6 | 170 | 11 | 17 | 11 | 0.09 |
| 406 | 10284 | 0 | C01 | 9493 | 4 | 0 | 10 | 84145 | 526 | 0.7 | -57 | 0.5 | -0.4 | A | 41 | 8.3 | 171 | 13 | 18 | 13 | 0.08 |
| 406 | 10285 | 0 | S01 | 6011 | 4 | 0 | 12 | 84145 | 811 | 1.9 | -63 | 1.9 | -0.5 | A | 33 | 7.6 | -168 | 9 | 14 | 9 | 0.11 |
| 406 | 10286 | 0 | C02 | 5855 | 4 | 0 | 9 | 84145 | 941 | 0.4 | -25 | 0.1 | -0.4 | A | 22 | 14.5 | 170 | 11 | 16 | 11 | 0.09 |
| 406 | 10287 | 0 | S01 | 6012 | 4 | 0 | 11 | 84145 | 1001 | 1.3 | 102 | -1.3 | 0.0 | A | 29 | 8.5 | -168 | 10 | 14 | 10 | 0.20 |
| 406 | 10288 | 0 | C02 | 5856 | 4 | 0 | 12 | 84145 | 1057 | 1.0 | 46 | -0.8 | -0.5 | A | 49 | 6.3 | 171 | 13 | 18 | 13 | 0.08 |
| 406 | 10289 | 0 | C01 | 9500 | 4 | 0 | 12 | 84145 | 1713 | 1.2 | 94 | 1.2 | 0.1 | A | 73 | 2.3 | 8 | 13 | 18 | 13 | 0.38 |
| 406 | 10290 | 0 | C01 | 9501 | 4 | 0 | 4 | 84145 | 1859 | 3.3 | -98 | -3.1 | -1.0 | B | 15 | 18.3 | 9 | 9 | 15 | 9 | 0.56 |
| 406 | 10291 | 0 | S01 | 6018 | 4 | 0 | 15 | 84145 | 1941 | 0.9 | 81 | 0.9 | -0.0 | A | 45 | 5.2 | -10 | 11 | 15 | 11 | 0.27 |
| 406 | 10292 | 0 | S01 | 6019 | 4 | 0 | 12 | 84145 | 2121 | 1.7 | -108 | -1.7 | -0.2 | A | 21 | 11.2 | -10 | 9 | 14 | 9 | 0.33 |
| 406 | 10293 | 0 | C02 | 5863 | 4 | 0 | 14 | 84145 | 2240 | 1.0 | 98 | 1.0 | 0.0 | A | 56 | 5.0 | 8 | 13 | 18 | 13 | 0.38 |
| 406 | 10294 | 0 | C02 | 5864 | 4 | 0 | 13 | 84145 | 26 | 1.1 | -103 | 1.0 | 0.5 | A | | | | | | | |
| 406 | 10295 | 0 | C01 | 9506 | 4 | 0 | 6 | 84146 | 415 | 2.6 | 69 | -2.5 | -0.5 | A | 59 | 4.5 | 170 | 13 | 18 | 13 | 0.08 |
| 406 | 10296 | 0 | C01 | 9507 | 4 | 0 | 7 | 84146 | 601 | 0.6 | 20 | -0.3 | -0.5 | A | 18 | 16.7 | 170 | 9 | 16 | 9 | 0.11 |
| 406 | 10297 | 0 | S01 | 6025 | 4 | 0 | 12 | 84146 | 800 | 2.4 | -141 | 1.1 | 2.1 | A | 21 | 11.3 | -169 | 7 | 14 | 7 | 0.14 |
| 406 | 10298 | 0 | S01 | 6026 | 4 | 0 | 13 | 84146 | 940 | 2.1 | 107 | -2.1 | 0.2 | A | 45 | 5.2 | -168 | 11 | 15 | 11 | 0.09 |
| 406 | 10299 | 0 | C02 | 5869 | 4 | 0 | 9 | 84146 | 940 | 1.2 | -89 | 1.2 | -0.2 | A | 43 | 7.6 | 170 | 12 | 17 | 12 | 0.00 |
| 406 | 10300 | 0 | C02 | 5870 | 4 | 0 | 10 | 84146 | 1125 | 9.3 | 73 | -9.2 | -1.2 | A | 25 | 13.3 | 171 | 11 | 16 | 11 | 0.09 |

| AV ERRORS (NMI) | MAGN | EAST | NRTH | XTRK | YTRK | Z IN ELLPSE | Z APROB | Z LOCATN |
|---|---|---|---|---|---|---|---|---|
| | 2.1 | -0.2 | -0.0 | -0.7 | -0.4 | 0.0 | 91.2 | 91.0 |
| STD DEVTN | 2.9 | 3.2 | 1.6 | 3.1 | 1.5 | | | |

100 BEACON TESTS  91 POSITIONS LOCATED  9 POSITIONS NOT LOCATED  NPTS/NUMBER TRANS = 0.76

OK,

# APPENDIX C

## PROCESSING OF WESTWIND DATA

The USCG cutter WESTWIND departed from Mobile, AL on 5 October 1983 en route to the Antarctic. It arrived back in Mobile, AL 25 February 1984. On board the WESTWIND were two test EPIRBs (Emergency Position Indicating Radio Beacons) which transmitted on the test frequency of 406-MHz. The 121.5-MHz homing signal was disabled. One beacon at a time was activated continuously, in a 24 hour alternating schedule.

The original purpose for this demonstration was to test the accuracy of the SARSAT/COSPAS satellite Global Mode, in which a satellite will store a beacon transmission and dump it out to a LUT or to the NOAA CDA station when it becomes visible . The SARSAT Global Mode was not operable until the end of January 1984 causing the testing to be conducted primarily on the two COSPAS satellites, which dumped their data to the Scott AFB LUT.

The processing of the data for this test was an extensive computational task. The method of data collecting and reduction is shown in Figure C-1. From the WESTWIND logsheets, which were filled out each day at 800, 1200, and 2400 hours, the times and locations were extracted and put in a file to be used for two purposes: (1) to create a file of the ship's locations (Appendix C-1) at the endpoints of each leg (a leg is defined as the time between each documented location); (2) to use the ship's time and location in the ELANGLE-WWD.F77 program to create a time history of satellite elevation angles at the ship's locations. This file was used by the PASSUM-WWD.F77 program to produce a summary of the satellite orbit passes at a EPIRB over a 10 degree or greater elevation angle from satellite to the beacon. The peak elevation angles and the TCAs (times of closest approach) of the satellite over the beacon are inserted into the PASSUM-WWD file. The FLD-DATA program then interpolates the ship's position between the leg points at the TCAs to create the WWDFLD.DAT file (Appendix C-2). The entries in this file are the ship's position at each TCA, which are taken to be test times.

The next step was to create the LUTPASS file. The LUT printouts were collected from Scott AFB throughout the testing and sent to the TSC for data extraction. The printouts were scanned for the WESTWIND's beacon locations detected and calculated by the Scott LUT from the downlink data. Locations found in the LUT logbooks were assigned test numbers and were entered into the LUTPASS FILE.

The PERROR-WWD program calculates the errors between the locations listed in FLDTEST and the locations listed in the LUTPASS file.

The initial number of test positions calculated was 1417. These tests had to be scanned to exclude invalid test positions. SPEEDCHECK and LOGCHECK (Appendix C-3) were created to aid in elimination of faulty data. The test positions on a leg were deemed faulty if there was reason to believe that the WESTWIND did not travel on a steady course from one end of the leg to the other. If the mean speed on a leg was below 10 knots, that leg and the next sequential leg were eliminated. Some of the reasons for the slow speeds were ice breaking and traveling through land passages (canals). The tests from January 8 to 19 were excluded because the WESTWIND was undergoing hull repairs after a collision with an iceberg. After eliminating invalid locations, the number of test locations was 434. These tests met all the requirements for acceptable testing of the SARSAT/COSPAS global and regional modes.

After elimination of faulty leg data, it was found that several exceptionally large position errors remained in the global and regional mode. Two of these were over 100 nm. in magnitude: an error of 297 nm in CI Global and one of 101 nm in CII Regional Mode. Although it could not be verified from the LUT output, it is likely that these errors, and possibly others, are due to erroneous time tags attached to the COSPAS dump data by the LUT software. Elimination of this type of error substantially reduces the standard deviation of the error magnitude. For example, removal of the 297 nm error in COSPAS I data reduces the error magnitude from 10.5 to 6.3 nm and the standard deviation from 34.8 to 4.1 nm. Both of the two points in excess of 100 nm were eliminated from the data before calculation of the statistics shown in Table A-16, Appendix A. The remaining location errors are all less than 50 nm.

The remainder of this appendix consists of: Appendix C-1, containing the log location data file LOG.DAT; Appendix C-2, giving the field test file WWDFLD.DAT of times and locations of beacon tests, each corresponding to a TCA; and Appendix C-3, the LOGCHECK.DAT file used to eliminate faulty legs on the basis of speed.

APPENDIX C-1

LOG LOCATION DATA FILE (before leg elimination)

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83 | 335 | 2300 | 0 | -59 | 19.2 | 40 | 14.9 | 84 | 21 | 1100 | 0 | -57 | 27.2 | 63 | 42.4 |
| 83 | 336 | 1100 | 0 | -59 | 41.2 | 40 | 9.3 | 84 | 21 | 1500 | 0 | -56 | 53.1 | 64 | 40.7 |
| 83 | 336 | 1500 | 0 | -59 | 32.0 | 40 | 38.0 | 84 | 21 | 2300 | 0 | -55 | 48.6 | 65 | 58.1 |
| 83 | 336 | 2300 | 0 | -58 | 51.7 | 44 | 8.9 | 84 | 22 | 1100 | 0 | -54 | 53.1 | 67 | 51.0 |
| 83 | 337 | 1100 | 0 | -57 | 49.5 | 48 | 51.2 | 84 | 22 | 1500 | 0 | -54 | 55.3 | 67 | 51.3 |
| 83 | 337 | 1500 | 0 | -57 | 28.3 | 50 | 26.2 | 84 | 22 | 2300 | 0 | -54 | 48.8 | 68 | 15.9 |
| 83 | 337 | 2300 | 0 | -56 | 45.6 | 53 | 6.3 | 84 | 23 | 1100 | 0 | -54 | 11.6 | 65 | 43.5 |
| 83 | 339 | 1100 | 0 | -53 | 30.0 | 65 | 8.4 | 84 | 23 | 1500 | 0 | -53 | 35.2 | 66 | 44.6 |
| 83 | 339 | 1500 | 0 | -53 | 1.9 | 66 | 40.9 | 84 | 23 | 2300 | 0 | -52 | 36.7 | 68 | 22.3 |
| 83 | 339 | 2300 | 0 | -52 | 22.0 | 68 | 53.7 | 84 | 25 | 2300 | 0 | -53 | 10.6 | 70 | 56.0 |
| 83 | 340 | 1100 | 0 | -53 | 10.2 | 70 | 54.2 | 84 | 26 | 1100 | 0 | -53 | 10.6 | 70 | 53.0 |
| 83 | 344 | 2300 | 0 | -52 | 55.8 | 70 | 48.3 | 84 | 26 | 1500 | 0 | -53 | 45.3 | 70 | 54.1 |
| 83 | 345 | 1100 | 0 | -52 | 55.4 | 70 | 42.8 | 84 | 26 | 2300 | 0 | -53 | 25.3 | 72 | 52.7 |
| 83 | 345 | 1500 | 0 | -52 | 39.0 | 69 | 59.0 | 84 | 27 | 1100 | 0 | -52 | 8.7 | 73 | 41.0 |
| 83 | 345 | 2300 | 0 | -53 | 4.6 | 67 | 18.3 | 84 | 27 | 1500 | 0 | -51 | 31.7 | 74 | 2.5 |
| 83 | 346 | 1100 | 0 | 54 | 1.2 | 60 | 40.4 | 84 | 27 | 2300 | 0 | -50 | 1.0 | 74 | 14.0 |
| 83 | 346 | 1500 | 0 | -56 | 7.0 | 63 | 46.7 | 84 | 28 | 1100 | 0 | -49 | 22.0 | 74 | 24.5 |
| 83 | 346 | 2300 | 0 | -57 | 43.5 | 62 | 4.9 | 84 | 28 | 1500 | 0 | -53 | 40.0 | 72 | 12.0 |
| 83 | 348 | 1100 | 0 | -63 | 15.3 | 56 | 58.9 | 84 | 28 | 2300 | 0 | -47 | 34.5 | 74 | 51.5 |
| 83 | 348 | 1500 | 0 | -61 | 51.9 | 56 | 19.3 | 84 | 29 | 1100 | 0 | -46 | 56.7 | 75 | 7.4 |
| 83 | 348 | 2300 | 0 | -64 | 14.1 | 56 | 32.7 | 84 | 29 | 1500 | 0 | -46 | 53.2 | 75 | 13.6 |
| 83 | 349 | 1100 | 0 | -64 | 14.1 | 56 | 32.5 | 84 | 30 | 1500 | 0 | -46 | 53.0 | 75 | 13.6 |
| 83 | 349 | 1500 | 0 | -64 | 14.2 | 56 | 32.8 | 84 | 30 | 2300 | 0 | -46 | 53.0 | 75 | 18.6 |
| 83 | 353 | 2300 | 0 | -63 | 57.3 | 56 | 8.8 | 84 | 31 | 1100 | 0 | -45 | 46.0 | 75 | 43.3 |
| 83 | 354 | 1100 | 0 | -62 | 11.5 | 58 | 51.8 | 84 | 31 | 1500 | 0 | -45 | 5.1 | 75 | 32.9 |
| 83 | 354 | 1500 | 0 | -62 | 35.7 | 59 | 17.0 | 84 | 31 | 2300 | 0 | -43 | 55.5 | 74 | 40.3 |
| 83 | 354 | 2300 | 0 | -62 | 53.7 | 60 | 5.0 | 84 | 32 | 1100 | 0 | -41 | 47.1 | 74 | 12.0 |
| 83 | 357 | 1100 | 0 | -63 | 9.5 | 57 | 9.0 | 84 | 32 | 1500 | 0 | -41 | 38.0 | 74 | 8.9 |
| 83 | 357 | 1500 | 0 | -63 | 48.3 | 56 | 18.4 | 84 | 32 | 2300 | 0 | -40 | 13.0 | 74 | 8.0 |
| 83 | 357 | 2300 | 0 | -64 | 14.6 | 56 | 32.0 | 84 | 33 | 1100 | 0 | -37 | 50.4 | 74 | 6.8 |
| 83 | 356 | 1100 | 0 | -62 | 33.5 | 60 | 4.0 | 84 | 33 | 1500 | 0 | -37 | 2.9 | 73 | 58.0 |
| 83 | 356 | 1500 | 0 | -62 | 32.5 | 60 | 1.1 | 84 | 33 | 2300 | 0 | -35 | 40.7 | 73 | 9.5 |
| 83 | 355 | 1100 | 0 | -62 | 33.2 | 60 | 4.0 | 84 | 34 | 1100 | 0 | -33 | 37.0 | 72 | 4.5 |
| 83 | 360 | 1500 | 0 | -64 | 10.0 | 56 | 46.0 | 84 | 34 | 1500 | 0 | -33 | 15.8 | 71 | 52.2 |
| 83 | 362 | 1100 | 0 | -64 | 34.2 | 56 | 56.9 | 84 | 37 | 1500 | 0 | -32 | 34.5 | 71 | 45.5 |
| 83 | 362 | 1500 | 0 | -64 | 33.9 | 56 | 57.2 | 84 | 37 | 2300 | 0 | -31 | 11.6 | 71 | 58.3 |
| 83 | 362 | 2300 | 0 | -64 | 34.5 | 56 | 56.3 | 84 | 38 | 1100 | 0 | -28 | 57.7 | 72 | 46.0 |
| 83 | 363 | 1100 | 0 | -64 | 46.6 | 57 | 55.6 | 84 | 38 | 1500 | 0 | -28 | 12.8 | 73 | 2.9 |
| 83 | 363 | 1500 | 0 | -65 | 4.6 | 58 | 41.8 | 84 | 38 | 2300 | 0 | -27 | 52.6 | 73 | 10.9 |
| 83 | 363 | 2300 | 0 | -65 | 9.3 | 59 | 8.5 | 84 | 39 | 1100 | 0 | -24 | 39.3 | 74 | 27.3 |
| 83 | 364 | 1100 | 0 | -66 | 33.9 | 60 | 22.3 | 84 | 40 | 1100 | 0 | -20 | 20.7 | 76 | 12.9 |
| 83 | 364 | 1500 | 0 | -66 | 24.7 | 60 | 33.3 | 84 | 40 | 1500 | 0 | -19 | 37.3 | 76 | 32.4 |
| 83 | 364 | 2300 | 0 | -66 | 20.3 | 60 | 31.9 | 84 | 40 | 2300 | 0 | -18 | 10.6 | 77 | 5.3 |
| 83 | 365 | 1100 | 0 | -66 | 20.2 | 60 | 31.7 | 84 | 41 | 1100 | 0 | -15 | 57.5 | 77 | 55.0 |
| 83 | 365 | 1500 | 0 | -66 | 20.4 | 60 | 28.5 | 84 | 41 | 1500 | 0 | -15 | 12.0 | 78 | 12.9 |
| 83 | 365 | 2300 | 0 | -66 | 11.8 | 60 | 20.6 | 84 | 41 | 2300 | 0 | -13 | 41.1 | 78 | 48.0 |
| 84 | 2 | 1100 | 0 | -65 | 29.0 | 59 | 24.1 | 84 | 42 | 1100 | 0 | -11 | 23.2 | 79 | 35.1 |
| 84 | 2 | 1500 | 0 | -65 | 19.8 | 59 | 10.6 | 84 | 42 | 1500 | 0 | -10 | 40.7 | 79 | 52.7 |
| 84 | 2 | 2300 | 0 | -65 | 11.9 | 59 | 4.3 | 84 | 42 | 2300 | 0 | -9 | 12.0 | 80 | 26.0 |
| 84 | 3 | 1100 | 0 | -64 | 32.3 | 56 | 59.5 | 84 | 43 | 1200 | 0 | -6 | 47.8 | 81 | 16.5 |
| 84 | 3 | 1500 | 0 | -64 | 34.9 | 57 | 61.5 | 84 | 43 | 1600 | 0 | -6 | 3.7 | 81 | 31.6 |
| 84 | 3 | 2300 | 0 | -64 | 32.7 | 57 | 6.5 | 84 | 43 | 2400 | 0 | -5 | 18.2 | 81 | 39.1 |
| 84 | 4 | 1100 | 0 | -64 | 32.4 | 57 | 3.9 | 84 | 44 | 1300 | 0 | -2 | 43.5 | 81 | 26.0 |
| 84 | 4 | 1500 | 0 | -64 | 31.8 | 57 | 4.6 | 84 | 44 | 1700 | 0 | -1 | 59.5 | 81 | 24.1 |
| 84 | 4 | 2300 | 0 | -64 | 12.0 | 56 | 42.9 | 84 | 45 | 100 | 0 | 0 | -47.2 | 81 | 21.3 |
| 84 | 5 | 1100 | 0 | -64 | 12.0 | 56 | 42.5 | 84 | 45 | 1300 | 0 | 2 | 7.0 | 80 | 44.1 |
| 84 | 5 | 1500 | 0 | -64 | 12.0 | 56 | 42.5 | 84 | 45 | 1700 | 0 | 2 | 52.4 | 80 | 34.6 |
| 84 | 7 | 1100 | 0 | -63 | 42.2 | 56 | 19.5 | 84 | 46 | 100 | 0 | 4 | 25.0 | 80 | 14.8 |
| 84 | 5 | 1500 | 0 | -63 | 1.8 | 57 | 11.3 | 84 | 46 | 1300 | 0 | 5 | 47.6 | 78 | 21.1 |
| 84 | 7 | 2300 | 0 | -62 | 12.1 | 58 | 55.9 | 84 | 46 | 1700 | 0 | 6 | 19.7 | 78 | 3.4 |
| 84 | 20 | 1100 | 0 | -60 | 51.9 | 58 | 32.8 | 84 | 47 | 100 | 0 | 7 | 36.0 | 79 | 6.0 |
| 84 | 20 | 1500 | 0 | -60 | 12.6 | 59 | 13.3 | 84 | 47 | 1300 | 0 | 8 | 47.9 | 79 | 27.7 |
| 84 | 20 | 2300 | 0 | -59 | 5.2 | 61 | 10.6 | 84 | 47 | 1700 | 0 | 8 | 54.0 | 79 | 32.2 |

APPENDIX C-2

FIELD TEST FILE (after leg elimination)

| Column | |
|---|---|
| 1 | Test Name |
| 2 | Test Number |
| 3 | Year, month, day of test |
| 4 | GMT, beacon turn-on |
| 5 | North Latitude (DDMM.MM) of turn-on |
| 6 | West Longitude (DDDMM.MM) of turn-on |
| 7 | GMT, beacon turn-off |
| 8 | North Latitude (DDMM.MM) of turn-off |
| 9 | West Longitude (DDDMM.MM) of turn-off |
| 10 | Beacon frequency |
| 11 | Beacon unit number |
| 12 | Power - before |
| 13 | Power - after |
| 14 | Notes |
| 15 | Platform size |
| 16 | Wave height |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WESTWIND | 7236 | 831011 | 1759 | 1345.27 | 7802.59 | 1859 | 1345.27 | 7802.59 | 406 | 8 | 0 | 0 | NDWR | 269 | 0 |
| WESTWIND | 7238 | 831011 | 2220 | 1252.30 | 7821.84 | 2320 | 1252.30 | 7821.84 | 406 | 8 | 0 | 0 | NDWR | 269 | 0 |
| WESTWIND | 7240 | 831011 | 2239 | 1248.45 | 7823.24 | 2339 | 1248.45 | 7823.24 | 406 | 8 | 0 | 0 | NDWR | 269 | 0 |
| WESTWIND | 7242 | 831012 | 5 | 1229.48 | 7831.15 | 105 | 1229.48 | 7831.15 | 406 | 8 | 0 | 0 | NDWR | 269 | 0 |
| WESTWIND | 7244 | 831012 | 18 | 1226.28 | 7832.69 | 118 | 1226.28 | 7832.69 | 406 | 8 | 0 | 0 | NDWR | 269 | 0 |
| WESTWIND | 7246 | 831012 | 343 | 1135.80 | 7856.97 | 443 | 1135.80 | 7856.97 | 406 | 8 | 0 | 0 | NDWR | 269 | 0 |
| WESTWIND | 7248 | 831012 | 528 | 1109.94 | 7909.41 | 628 | 1109.94 | 7909.41 | 406 | 8 | 0 | 0 | NDWR | 269 | 0 |
| WESTWIND | 7250 | 831012 | 938 | 1008.38 | 7939.03 | 1038 | 1008.38 | 7939.03 | 406 | 8 | 0 | 0 | NDWR | 269 | 0 |
| WESTWIND | 7252 | 831012 | 1112 | 945.23 | 7950.17 | 1212 | 945.23 | 7950.17 | 406 | 8 | 0 | 0 | NDWR | 269 | 0 |
| WESTWIND | 7254 | 831012 | 1123 | 942.52 | 7951.47 | 1223 | 942.52 | 7951.47 | 406 | 8 | 0 | 0 | NDWR | 269 | 0 |
| WESTWIND | 7256 | 831013 | 2143 | 652.17 | 8038.21 | 2243 | 652.17 | 8038.21 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7258 | 831014 | 2329 | 655.11 | 8102.32 | 29 | 655.11 | 8102.32 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7290 | 831015 | 1440 | 603.01 | 8347.45 | 1540 | 603.01 | 8347.45 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7292 | 831015 | 1625 | 540.57 | 8341.10 | 1725 | 540.57 | 8341.10 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7294 | 831015 | 1810 | 517.56 | 8336.57 | 1910 | 517.56 | 8336.57 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7296 | 831015 | 2107 | 438.73 | 8329.08 | 2207 | 438.73 | 8329.08 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7298 | 831015 | 2252 | 415.70 | 8324.64 | 2352 | 415.70 | 8324.64 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7300 | 831016 | 349 | 311.44 | 8316.57 | 449 | 311.44 | 8316.57 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7302 | 831016 | 534 | 248.88 | 8314.50 | 634 | 248.88 | 8314.50 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7304 | 831016 | 829 | 211.28 | 8311.05 | 929 | 211.28 | 8311.05 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7306 | 831016 | 1015 | 148.51 | 8308.96 | 1115 | 148.51 | 8308.96 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7308 | 831016 | 1201 | 125.73 | 8306.87 | 1301 | 125.73 | 8306.87 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7318 | 831017 | 231 | -137.36 | 8230.28 | 331 | -137.36 | 8230.28 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7320 | 831017 | 417 | -159.13 | 8224.39 | 517 | -159.13 | 8224.39 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7322 | 831017 | 906 | -258.50 | 8208.33 | 1006 | -258.50 | 8208.33 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7324 | 831017 | 1051 | -320.06 | 8202.50 | 1151 | -320.06 | 8202.50 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7326 | 831017 | 1540 | -416.66 | 8147.34 | 1640 | -416.66 | 8147.34 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7328 | 831017 | 1725 | -438.01 | 8142.59 | 1825 | -438.01 | 8142.59 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7330 | 831017 | 2029 | -517.54 | 8135.19 | 2129 | -517.54 | 8135.19 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7332 | 831017 | 2214 | -540.09 | 8130.97 | 2314 | -540.09 | 8130.97 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7334 | 831018 | 0 | -602.86 | 8126.70 | 100 | -602.86 | 8126.70 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7336 | 831018 | 258 | -636.56 | 8110.10 | 358 | -636.56 | 8110.10 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7338 | 831018 | 443 | -655.89 | 8059.18 | 543 | -655.89 | 8059.18 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7340 | 831018 | 942 | -750.96 | 8028.07 | 1042 | -750.96 | 8028.07 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7342 | 831018 | 1128 | -810.48 | 8017.05 | 1228 | -810.48 | 8017.05 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7344 | 831018 | 1424 | -842.42 | 7956.78 | 1524 | -842.42 | 7956.78 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7346 | 831018 | 1609 | -901.32 | 7944.04 | 1709 | -901.32 | 7944.04 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7348 | 831018 | 2102 | -952.59 | 7908.01 | 2202 | -952.59 | 7908.01 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7350 | 831018 | 2248 | -1011.09 | 7854.96 | 2348 | -1011.09 | 7854.96 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7358 | 831022 | 119 | -1413.13 | 7650.78 | 219 | -1413.13 | 7650.78 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7360 | 831022 | 305 | -1437.22 | 7644.91 | 405 | -1437.22 | 7644.91 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7362 | 831022 | 450 | -1501.08 | 7639.09 | 550 | -1501.08 | 7639.09 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7364 | 831022 | 834 | -1551.98 | 7626.68 | 934 | -1551.98 | 7626.68 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7366 | 831022 | 1019 | -1615.83 | 7620.86 | 1119 | -1615.83 | 7620.86 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7368 | 831022 | 1435 | -1713.47 | 7604.48 | 1535 | -1713.47 | 7604.48 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7370 | 831022 | 1621 | -1737.09 | 7556.75 | 1721 | -1737.09 | 7556.75 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7372 | 831022 | 1949 | -1822.18 | 7544.70 | 2049 | -1822.18 | 7544.70 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7374 | 831022 | 2135 | -1845.12 | 7538.62 | 2235 | -1845.12 | 7538.62 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7376 | 831023 | 147 | -1940.14 | 7523.55 | 247 | -1940.14 | 7523.55 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7378 | 831023 | 332 | -2003.51 | 7516.67 | 432 | -2003.51 | 7516.67 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7380 | 831023 | 725 | -2055.38 | 7501.41 | 825 | -2055.38 | 7501.41 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7382 | 831023 | 910 | -2118.75 | 7454.53 | 1010 | -2118.75 | 7454.53 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7384 | 831023 | 1056 | -2142.35 | 7447.58 | 1156 | -2142.35 | 7447.58 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7386 | 831023 | 1320 | -2214.41 | 7438.15 | 1420 | -2214.41 | 7438.15 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7388 | 831023 | 1504 | -2237.56 | 7431.33 | 1604 | -2237.56 | 7431.33 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7390 | 831023 | 1651 | -2301.46 | 7424.84 | 1751 | -2301.46 | 7424.84 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7392 | 831023 | 2023 | -2349.47 | 7416.14 | 2123 | -2349.47 | 7416.14 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7394 | 831023 | 2209 | -2413.47 | 7411.79 | 2309 | -2413.47 | 7411.79 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7396 | 831024 | 213 | -2507.90 | 7400.33 | 313 | -2507.90 | 7400.33 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7398 | 831024 | 357 | -2530.62 | 7354.61 | 457 | -2530.62 | 7354.61 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7400 | 831024 | 802 | -2624.15 | 7341.14 | 902 | -2624.15 | 7341.14 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7402 | 831024 | 947 | -2647.09 | 7335.36 | 1047 | -2647.09 | 7335.36 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7404 | 831024 | 1351 | -2739.27 | 7321.67 | 1451 | -2739.27 | 7321.67 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |
| WESTWIND | 7406 | 831024 | 1535 | -2800.55 | 7315.61 | 1635 | -2800.55 | 7315.61 | 406 | 8 | 0 | 0 | NDWG | 269 | 0 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WESTWIND | 8494 | 831203 | 1011-5751.14 | 4843.75 | 1111-5751.14 | 4843.75 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8506 | 831203 | 2243-5644.42 | 5310.64 | 2343-5644.42 | 5310.64 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8507 | 831204 | 29-5634.83 | 5346.08 | 129-5634.83 | 5346.08 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8508 | 831205 | 103-5421.35 | 6158.85 | 203-5421.35 | 6158.85 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8509 | 831205 | 247-5411.93 | 6233.62 | 347-5411.93 | 6233.62 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8510 | 831205 | 432-5402.42 | 6308.72 | 532-5402.42 | 6308.72 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8511 | 831205 | 620-5352.64 | 6344.82 | 720-5352.64 | 6344.82 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8512 | 831205 | 736-5345.76 | 6410.23 | 836-5345.76 | 6410.23 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8513 | 831205 | 809-5342.77 | 6421.26 | 909-5342.77 | 6421.26 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8514 | 831205 | 920-5336.34 | 6445.00 | 1020-5336.34 | 6445.00 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8515 | 831205 | 1000-5332.72 | 6458.37 | 1100-5332.72 | 6458.37 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8516 | 831205 | 1106-5325.79 | 6522.27 | 1206-5325.79 | 6522.27 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8517 | 831205 | 1151-5320.52 | 6539.62 | 1251-5320.52 | 6539.62 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8518 | 831205 | 1254-5313.14 | 6603.90 | 1354-5313.14 | 6603.90 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8519 | 831205 | 1339-5307.87 | 6621.24 | 1439-5307.87 | 6621.24 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8520 | 831205 | 1444-5300.74 | 6644.77 | 1544-5300.74 | 6644.77 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8521 | 831205 | 1525-5257.33 | 6656.12 | 1625-5257.33 | 6656.12 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8522 | 831205 | 1635-5251.51 | 6715.48 | 1735-5251.51 | 6715.48 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8523 | 831205 | 1711-5248.52 | 6725.44 | 1811-5248.52 | 6725.44 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8524 | 831205 | 1824-5242.45 | 6745.64 | 1924-5242.45 | 6745.64 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8525 | 831205 | 2012-5233.47 | 6815.52 | 2112-5233.47 | 6815.52 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8526 | 831205 | 2157-5224.74 | 6844.57 | 2257-5224.74 | 6844.57 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8566 | 831212 | 1436-5608.21 | 6345.43 | 1536-5608.21 | 6345.43 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8567 | 831212 | 1558-5624.69 | 6328.04 | 1658-5624.69 | 6328.04 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8568 | 831212 | 1626-5630.32 | 6322.10 | 1726-5630.32 | 6322.10 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8569 | 831212 | 1814-5652.03 | 6259.19 | 1914-5652.03 | 6259.19 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8570 | 831212 | 1959-5713.14 | 6236.92 | 2059-5713.14 | 6236.92 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8571 | 831212 | 2144-5734.25 | 6214.65 | 2244-5734.25 | 6214.65 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8572 | 831213 | 27-5801.47 | 6148.32 | 127-5801.47 | 6148.32 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8573 | 831214 | 102-6148.05 | 5819.37 | 202-6148.05 | 5819.37 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8574 | 831214 | 247-6204.18 | 5804.49 | 347-6204.18 | 5804.49 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8575 | 831214 | 435-6220.77 | 5749.19 | 535-6220.77 | 5749.19 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8576 | 831214 | 435-6223.84 | 5746.36 | 535-6223.84 | 5746.36 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8577 | 831214 | 623-6237.36 | 5733.89 | 723-6237.36 | 5733.89 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8578 | 831214 | 639-6239.82 | 5731.62 | 739-6239.82 | 5731.62 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8579 | 831214 | 813-6254.26 | 5718.31 | 913-6254.26 | 5718.31 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8580 | 831214 | 824-6255.95 | 5716.75 | 924-6255.95 | 5716.75 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8581 | 831214 | 1003-6311.15 | 5702.72 | 1103-6311.15 | 5702.72 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8582 | 831214 | 1010-6312.23 | 5701.73 | 1110-6312.23 | 5701.73 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8888 | 840120 | 1541-6002.63 | 5930.65 | 1641-6002.63 | 5930.65 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8889 | 840120 | 1725-5948.03 | 5956.06 | 1825-5948.03 | 5956.06 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8890 | 840120 | 1906-5933.85 | 6020.75 | 2006-5933.85 | 6020.75 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8891 | 840120 | 2050-5919.24 | 6046.16 | 2150-5919.24 | 6046.16 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8892 | 840120 | 2236-5904.38 | 6111.86 | 2336-5904.38 | 6111.86 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8893 | 840121 | 10-5851.59 | 6131.68 | 110-5851.59 | 6131.68 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8894 | 840121 | 22-5849.96 | 6134.21 | 122-5849.96 | 6134.21 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8895 | 840121 | 152-5837.71 | 6153.19 | 252-5837.71 | 6153.19 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8896 | 840121 | 209-5835.39 | 6156.77 | 309-5835.39 | 6156.77 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8897 | 840121 | 336-5823.55 | 6215.11 | 436-5823.55 | 6215.11 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8898 | 840121 | 400-5820.29 | 6220.17 | 500-5820.29 | 6220.17 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8899 | 840121 | 522-5809.12 | 6237.46 | 622-5809.12 | 6237.46 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8900 | 840121 | 550-5805.31 | 6243.37 | 650-5805.31 | 6243.37 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8901 | 840121 | 709-5754.56 | 6300.02 | 809-5754.56 | 6300.02 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8902 | 840121 | 739-5750.48 | 6306.35 | 839-5750.48 | 6306.35 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8903 | 840121 | 859-5739.59 | 6323.21 | 959-5739.59 | 6323.21 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8904 | 840121 | 927-5735.78 | 6329.12 | 1027-5735.78 | 6329.12 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8905 | 840121 | 1049-5724.50 | 6347.01 | 1149-5724.50 | 6347.01 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8906 | 840121 | 1111-5721.38 | 6352.36 | 1211-5721.38 | 6352.36 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8907 | 840121 | 1238-5709.01 | 6413.49 | 1338-5709.01 | 6413.49 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8908 | 840121 | 1255-5706.60 | 6417.62 | 1355-5706.60 | 6417.62 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8909 | 840121 | 1425-5653.81 | 6439.48 | 1525-5653.81 | 6439.48 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8910 | 840121 | 1610-5639.66 | 6456.82 | 1710-5639.66 | 6456.82 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8911 | 840121 | 1754-5625.69 | 6513.59 | 1854-5625.69 | 6513.59 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 8912 | 840121 | 1940-5611.44 | 6530.69 | 2040-5611.44 | 6530.69 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WESTWIND | 9107 | 840211 | 1220 | -1103.72 | 7943.17 | 1320 | -1103.72 | 7943.17 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9108 | 840211 | 1405 | -1045.13 | 7950.87 | 1505 | -1045.13 | 7950.87 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9109 | 840211 | 1551 | -1025.73 | 7958.32 | 1651 | -1025.73 | 7958.32 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9110 | 840211 | 1922 | -946.74 | 8012.96 | 2022 | -946.74 | 8012.96 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9111 | 840211 | 2107 | -927.34 | 8020.24 | 2207 | -927.34 | 8020.24 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9112 | 840212 | 131 | -838.54 | 8037.72 | 231 | -838.54 | 8037.72 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9113 | 840212 | 317 | -818.94 | 8044.58 | 417 | -818.94 | 8044.58 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9114 | 840212 | 827 | -721.63 | 8104.65 | 927 | -721.63 | 8104.65 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9115 | 840212 | 1013 | -702.04 | 8111.51 | 1113 | -702.04 | 8111.51 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9116 | 840212 | 1249 | -633.28 | 8121.47 | 1349 | -633.28 | 8121.47 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9117 | 840212 | 1434 | -613.99 | 8128.08 | 1534 | -613.99 | 8128.08 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9118 | 840212 | 1956 | -538.49 | 8135.75 | 2056 | -538.49 | 8135.75 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9119 | 840212 | 2141 | -528.53 | 8137.40 | 2241 | -528.53 | 8137.40 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9120 | 840213 | 158 | -448.85 | 8136.61 | 258 | -448.85 | 8136.61 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9121 | 840213 | 344 | -427.82 | 8134.83 | 444 | -427.82 | 8134.83 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9122 | 840213 | 718 | -345.38 | 8131.24 | 818 | -345.38 | 8131.24 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9123 | 840213 | 904 | -324.36 | 8129.46 | 1004 | -324.36 | 8129.46 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9124 | 840213 | 1320 | -234.33 | 8125.60 | 1420 | -234.33 | 8125.60 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9125 | 840213 | 1505 | -215.08 | 8124.77 | 1605 | -215.08 | 8124.77 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9126 | 840213 | 1843 | -139.47 | 8123.32 | 1943 | -139.47 | 8123.32 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9127 | 840213 | 2030 | -123.35 | 8122.70 | 2130 | -123.35 | 8122.70 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9128 | 840213 | 2215 | -107.53 | 8122.09 | 2315 | -107.53 | 8122.09 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9129 | 840214 | 41 | -44.54 | 8120.73 | 141 | -44.54 | 8120.73 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9130 | 840214 | 226 | -19.13 | 8115.30 | 326 | -19.13 | 8115.30 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9131 | 840214 | 754 | 100.22 | 8058.36 | 854 | 100.22 | 8058.36 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9132 | 840214 | 940 | 125.87 | 8052.88 | 1040 | 125.87 | 8052.88 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9133 | 840214 | 1349 | 221.94 | 8040.97 | 1449 | 221.94 | 8040.97 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9134 | 840214 | 1534 | 241.81 | 8036.81 | 1634 | 241.81 | 8036.81 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9135 | 840214 | 1917 | 324.62 | 8027.71 | 2017 | 324.62 | 8027.71 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9136 | 840214 | 2103 | 345.07 | 8023.34 | 2203 | 345.07 | 8023.34 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9137 | 840215 | 108 | 429.36 | 8008.80 | 208 | 429.36 | 8008.80 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9138 | 840215 | 253 | 441.41 | 7952.22 | 353 | 441.41 | 7952.22 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9139 | 840215 | 644 | 507.91 | 7915.74 | 744 | 507.91 | 7915.74 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9140 | 840215 | 830 | 520.07 | 7859.00 | 930 | 520.07 | 7859.00 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9141 | 840215 | 1233 | 548.00 | 7820.88 | 1333 | 548.00 | 7820.88 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9142 | 840215 | 1418 | 602.04 | 7813.13 | 1518 | 602.04 | 7813.13 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9143 | 840215 | 1806 | 634.96 | 7815.92 | 1906 | 634.96 | 7815.92 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9144 | 840215 | 1951 | 651.65 | 7829.61 | 2051 | 651.65 | 7829.61 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9145 | 840215 | 2137 | 708.50 | 7843.44 | 2237 | 708.50 | 7843.44 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9146 | 840215 | 2351 | 729.80 | 7900.91 | 51 | 729.80 | 7900.91 | 406 | 8 | 0 | 0 | NDNG | 269 | 0 |
| WESTWIND | 9165 | 840220 | 1231 | 1142.77 | 7947.26 | 1331 | 1142.77 | 7947.26 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9166 | 840220 | 1312 | 1149.74 | 7945.85 | 1412 | 1149.74 | 7945.85 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9167 | 840220 | 1411 | 1159.77 | 7943.80 | 1511 | 1159.77 | 7943.80 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9168 | 840220 | 1457 | 1207.59 | 7942.21 | 1557 | 1207.59 | 7942.21 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9169 | 840220 | 1914 | 1245.74 | 7921.95 | 2014 | 1245.74 | 7921.95 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9170 | 840220 | 2100 | 1300.19 | 7910.93 | 2200 | 1300.19 | 7910.93 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9171 | 840220 | 2337 | 1321.58 | 7854.61 | 37 | 1321.58 | 7854.61 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9172 | 840220 | 2338 | 1321.71 | 7854.50 | 38 | 1321.71 | 7854.50 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9173 | 840221 | 26 | 1328.25 | 7849.51 | 126 | 1328.25 | 7849.51 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9174 | 840221 | 27 | 1328.39 | 7849.41 | 127 | 1328.39 | 7849.41 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9175 | 840221 | 118 | 1336.01 | 7851.11 | 218 | 1336.01 | 7851.11 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9176 | 840221 | 211 | 1343.98 | 7853.33 | 311 | 1343.98 | 7853.33 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9177 | 840221 | 646 | 1425.30 | 7904.87 | 746 | 1425.30 | 7904.87 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9178 | 840221 | 832 | 1441.23 | 7909.32 | 932 | 1441.23 | 7909.32 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9179 | 840221 | 1157 | 1512.04 | 7917.91 | 1257 | 1512.04 | 7917.91 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9180 | 840221 | 1209 | 1513.84 | 7918.42 | 1309 | 1513.84 | 7918.42 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9181 | 840221 | 1342 | 1530.32 | 7922.03 | 1442 | 1530.32 | 7922.03 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9182 | 840221 | 1349 | 1531.61 | 7922.29 | 1449 | 1531.61 | 7922.29 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9183 | 840221 | 1802 | 1616.33 | 7942.54 | 1902 | 1616.33 | 7942.54 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9184 | 840221 | 1948 | 1633.53 | 7958.84 | 2048 | 1633.53 | 7958.84 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9185 | 840222 | 2308 | 1705.99 | 8029.59 | 8 | 1705.99 | 8029.59 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9186 | 840222 | 2316 | 1707.29 | 8030.82 | 16 | 1707.29 | 8030.82 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |
| WESTWIND | 9187 | 840222 | 53 | 1722.74 | 8045.77 | 153 | 1722.74 | 8045.77 | 406 | 8 | 0 | 0 | NDNR | 269 | 0 |

## APPENDIX C-3

## LOGCHECK FILE WITH SPEEDS (used for leg elimination)

| Column | |
|---|---|
| 1 | Test number |
| 2 | Orbit number |
| 3 | Satellite |
| 4 | Julian Day |
| 5 | GMT Hour |
| 6 | GMT Minute |
| 7 | Mean leg speed (knots) |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7352 | 2855 | C2 | 292 | 2 | 10 | 2.17 | 7478 | 3021 | C2 | 304 | 4 | 10 | 13.46 |
| 7354 | 6548 | C1 | 294 | 21 | 31 | 12.94 | 7480 | 6676 | C1 | 304 | 7 | 26 | 13.46 |
| 7356 | 6549 | C1 | 294 | 23 | 17 | 12.94 | 7482 | 6677 | C1 | 304 | 9 | 12 | 13.46 |
| 7358 | 2897 | C2 | 295 | 1 | 49 | 14.01 | 7484 | 6678 | C1 | 304 | 10 | 58 | 13.46 |
| 7360 | 2898 | C2 | 295 | 3 | 35 | 14.01 | 7486 | 3026 | C2 | 304 | 12 | 30 | 13.48 |
| 7362 | 2899 | C2 | 295 | 5 | 20 | 14.01 | 7488 | 3027 | C2 | 304 | 14 | 14 | 13.48 |
| 7364 | 6554 | C1 | 295 | 9 | 4 | 14.01 | 7490 | 3028 | C2 | 304 | 16 | 0 | 12.87 |
| 7366 | 6555 | C1 | 295 | 10 | 49 | 14.01 | 7492 | 3029 | C2 | 304 | 17 | 48 | 12.87 |
| 7368 | 2904 | C2 | 295 | 15 | 5 | 14.01 | 7494 | 6682 | C1 | 304 | 18 | 22 | 12.86 |
| 7370 | 2905 | C2 | 295 | 16 | 51 | 14.01 | 7496 | 6683 | C1 | 304 | 20 | 9 | 12.87 |
| 7372 | 6561 | C1 | 295 | 20 | 19 | 13.39 | 7498 | 6684 | C1 | 304 | 21 | 54 | 12.86 |
| 7374 | 6562 | C1 | 295 | 22 | 5 | 13.39 | 7500 | 3032 | C2 | 304 | 23 | 22 | 3.51 |
| 7376 | 2911 | C2 | 296 | 2 | 17 | 13.85 | 7502 | 3033 | C2 | 305 | 1 | 9 | 3.51 |
| 7378 | 2912 | C2 | 296 | 4 | 2 | 13.85 | 7504 | 3089 | C2 | 309 | 3 | 0 | 3.51 |
| 7380 | 6567 | C1 | 296 | 7 | 55 | 13.85 | 7506 | 6743 | C1 | 309 | 5 | 8 | 3.51 |
| 7382 | 6568 | C1 | 296 | 9 | 40 | 13.85 | 7508 | 6744 | C1 | 309 | 6 | 52 | 3.51 |
| 7384 | 6569 | C1 | 296 | 11 | 26 | 13.85 | 7510 | 6745 | C1 | 309 | 8 | 38 | 3.51 |
| 7386 | 2917 | C2 | 296 | 13 | 50 | 13.85 | 7512 | 6746 | C1 | 309 | 10 | 26 | 3.51 |
| 7388 | 2918 | C2 | 296 | 15 | 34 | 13.85 | 7514 | 3094 | C2 | 309 | 11 | 24 | 38.33 |
| 7390 | 2919 | C2 | 296 | 17 | 21 | 13.77 | 7516 | 6747 | C1 | 309 | 12 | 16 | 38.33 |
| 7392 | 6575 | C1 | 296 | 20 | 53 | 13.77 | 7518 | 3095 | C2 | 309 | 13 | 9 | 38.33 |
| 7394 | 6576 | C1 | 296 | 22 | 39 | 13.77 | 7520 | 6748 | C1 | 309 | 14 | 7 | 38.33 |
| 7396 | 2925 | C2 | 297 | 2 | 43 | 13.44 | 7522 | 3096 | C2 | 309 | 14 | 55 | 38.33 |
| 7398 | 2926 | C2 | 297 | 4 | 27 | 13.44 | 7524 | 6749 | C1 | 309 | 15 | 57 | 0.97 |
| 7400 | 6581 | C1 | 297 | 8 | 32 | 13.44 | 7526 | 3097 | C2 | 309 | 16 | 43 | 0.97 |
| 7402 | 6582 | C1 | 297 | 10 | 17 | 13.44 | 7528 | 6750 | C1 | 309 | 17 | 45 | 0.97 |
| 7404 | 2931 | C2 | 297 | 14 | 21 | 12.66 | 7530 | 3098 | C2 | 309 | 18 | 33 | 0.97 |
| 7406 | 2932 | C2 | 297 | 16 | 5 | 12.66 | 7532 | 6751 | C1 | 309 | 19 | 31 | 0.97 |
| 7408 | 6587 | C1 | 297 | 19 | 40 | 14.31 | 7534 | 3099 | C2 | 309 | 20 | 23 | 0.97 |
| 7410 | 6588 | C1 | 297 | 21 | 26 | 14.31 | 7536 | 6752 | C1 | 309 | 21 | 15 | 0.97 |
| 7412 | 6589 | C1 | 297 | 23 | 11 | 14.31 | 7538 | 3100 | C2 | 309 | 22 | 12 | 0.97 |
| 7414 | 2937 | C2 | 298 | 1 | 26 | 2.60 | 7540 | 3101 | C2 | 309 | 23 | 59 | 11.37 |
| 7416 | 2987 | C2 | 301 | 16 | 17 | 2.60 | 7542 | 3116 | C2 | 311 | 2 | 11 | 11.37 |
| 7418 | 6641 | C1 | 301 | 18 | 26 | 2.60 | 7544 | 6770 | C1 | 311 | 4 | 33 | 11.37 |
| 7420 | 6642 | C1 | 301 | 20 | 13 | 2.60 | 7546 | 6771 | C1 | 311 | 6 | 18 | 11.37 |
| 7422 | 6643 | C1 | 301 | 21 | 59 | 2.60 | 7548 | 6772 | C1 | 311 | 8 | 4 | 11.37 |
| 7424 | 2991 | C2 | 301 | 23 | 46 | 12.90 | 7550 | 6773 | C1 | 311 | 9 | 52 | 11.37 |
| 7426 | 2992 | C2 | 302 | 1 | 32 | 12.90 | 7552 | 3121 | C2 | 311 | 10 | 37 | 11.37 |
| 7428 | 2993 | C2 | 302 | 3 | 17 | 12.90 | 7554 | 6774 | C1 | 311 | 11 | 42 | 12.66 |
| 7430 | 6649 | C1 | 302 | 7 | 59 | 12.90 | 7556 | 3122 | C2 | 311 | 12 | 21 | 12.65 |
| 7432 | 6650 | C1 | 302 | 9 | 44 | 12.90 | 7558 | 6775 | C1 | 311 | 13 | 32 | 12.65 |
| 7434 | 6651 | C1 | 302 | 11 | 31 | 15.65 | 7560 | 3123 | C2 | 311 | 14 | 8 | 12.65 |
| 7436 | 2999 | C2 | 302 | 13 | 16 | 15.65 | 7562 | 6776 | C1 | 311 | 15 | 22 | 15.22 |
| 7438 | 3000 | C2 | 302 | 15 | 0 | 15.65 | 7564 | 3124 | C2 | 311 | 15 | 56 | 15.22 |
| 7440 | 3001 | C2 | 302 | 16 | 46 | 12.52 | 7566 | 6777 | C1 | 311 | 17 | 9 | 15.22 |
| 7442 | 6655 | C1 | 302 | 19 | 1 | 12.52 | 7568 | 3125 | C2 | 311 | 17 | 46 | 15.22 |
| 7444 | 6656 | C1 | 302 | 20 | 47 | 12.52 | 7570 | 6778 | C1 | 311 | 18 | 54 | 15.22 |
| 7446 | 6657 | C1 | 302 | 22 | 32 | 12.52 | 7572 | 3126 | C2 | 311 | 19 | 36 | 15.22 |
| 7448 | 3005 | C2 | 303 | 0 | 14 | 14.01 | 7574 | 6779 | C1 | 311 | 20 | 39 | 15.22 |
| 7450 | 3006 | C2 | 303 | 1 | 59 | 14.01 | 7576 | 3127 | C2 | 311 | 21 | 24 | 15.22 |
| 7452 | 3007 | C2 | 303 | 3 | 44 | 14.01 | 7578 | 3128 | C2 | 311 | 23 | 10 | 10.78 |
| 7454 | 6662 | C1 | 303 | 6 | 50 | 14.01 | 7580 | 3129 | C2 | 312 | 0 | 55 | 10.78 |
| 7456 | 6663 | C1 | 303 | 8 | 35 | 14.01 | 7582 | 6782 | C1 | 312 | 1 | 40 | 10.78 |
| 7458 | 6664 | C1 | 303 | 10 | 21 | 14.01 | 7584 | 6783 | C1 | 312 | 3 | 23 | 10.78 |
| 7460 | 6665 | C1 | 303 | 12 | 9 | 13.87 | 7586 | 6784 | C1 | 312 | 5 | 9 | 10.78 |
| 7462 | 3013 | C2 | 303 | 13 | 45 | 13.87 | 7588 | 6785 | C1 | 312 | 6 | 55 | 10.78 |
| 7464 | 3014 | C2 | 303 | 15 | 30 | 13.76 | 7590 | 3133 | C2 | 312 | 7 | 38 | 10.78 |
| 7466 | 3015 | C2 | 303 | 17 | 18 | 13.76 | 7592 | 6786 | C1 | 312 | 8 | 43 | 10.78 |
| 7468 | 6668 | C1 | 303 | 17 | 47 | 13.76 | 7594 | 3134 | C2 | 312 | 9 | 21 | 10.78 |
| 7470 | 6669 | C1 | 303 | 19 | 35 | 13.76 | 7596 | 6787 | C1 | 312 | 10 | 33 | 10.78 |
| 7472 | 6670 | C1 | 303 | 21 | 21 | 13.76 | 7598 | 3135 | C2 | 312 | 11 | 7 | 10.69 |
| 7474 | 3019 | C2 | 304 | 0 | 41 | 13.46 | 7600 | 6788 | C1 | 312 | 12 | 23 | 10.68 |
| 7476 | 3020 | C2 | 304 | 2 | 26 | 13.46 | 7602 | 3136 | C2 | 312 | 12 | 53 | 10.68 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7860 | 6884 | C1 | 319 | 12 | 58 | 0.52 | 7988 | 3273 | C2 | 322 | 12 | 22 | 0.22 |
| 7862 | 3233 | C2 | 319 | 14 | 30 | 0.52 | 7990 | 6925 | C1 | 322 | 12 | 58 | 0.22 |
| 7864 | 6885 | C1 | 319 | 14 | 45 | 0.52 | 7992 | 3274 | C2 | 322 | 14 | 9 | 0.22 |
| 7866 | 3234 | C2 | 319 | 16 | 19 | 0.14 | 7994 | 6926 | C1 | 322 | 14 | 46 | 0.22 |
| 7868 | 6886 | C1 | 319 | 16 | 32 | 0.14 | 7996 | 3275 | C2 | 322 | 15 | 59 | 0.33 |
| 7870 | 3235 | C2 | 319 | 18 | 7 | 0.14 | 7998 | 6927 | C1 | 322 | 16 | 31 | 0.33 |
| 7872 | 6887 | C1 | 319 | 18 | 16 | 0.14 | 8000 | 3276 | C2 | 322 | 17 | 48 | 0.34 |
| 7874 | 3236 | C2 | 319 | 19 | 55 | 0.14 | 8002 | 6928 | C1 | 322 | 18 | 16 | 0.33 |
| 7876 | 6888 | C1 | 319 | 19 | 59 | 0.14 | 8004 | 3277 | C2 | 322 | 19 | 36 | 0.34 |
| 7878 | 3237 | C2 | 319 | 21 | 41 | 0.14 | 8006 | 3278 | C2 | 322 | 21 | 22 | 0.34 |
| 7880 | 3238 | C2 | 319 | 23 | 26 | 0.84 | 8008 | 3279 | C2 | 322 | 23 | 6 | 0.43 |
| 7882 | 6891 | C1 | 320 | 1 | 4 | 0.84 | 8010 | 3280 | C2 | 323 | 0 | 50 | 0.43 |
| 7884 | 3239 | C2 | 320 | 1 | 8 | 0.84 | 8012 | 6932 | C1 | 323 | 1 | 3 | 0.43 |
| 7886 | 6892 | C1 | 320 | 2 | 48 | 0.84 | 8014 | 6946 | C1 | 324 | 1 | 37 | 0.43 |
| 7888 | 6893 | C1 | 320 | 4 | 32 | 0.84 | 8016 | 6947 | C1 | 324 | 3 | 21 | 0.43 |
| 7890 | 6894 | C1 | 320 | 6 | 18 | 0.84 | 8018 | 6948 | C1 | 324 | 5 | 7 | 0.43 |
| 7892 | 3243 | C2 | 320 | 7 | 55 | 0.84 | 8020 | 3297 | C2 | 324 | 6 | 20 | 0.43 |
| 7894 | 6895 | C1 | 320 | 8 | 7 | 0.84 | 8022 | 6949 | C1 | 324 | 6 | 54 | 0.43 |
| 7896 | 3244 | C2 | 320 | 9 | 39 | 0.84 | 8024 | 3298 | C2 | 324 | 8 | 3 | 0.43 |
| 7898 | 6896 | C1 | 320 | 9 | 56 | 0.84 | 8026 | 6950 | C1 | 324 | 8 | 43 | 0.43 |
| 7900 | 3245 | C2 | 320 | 11 | 24 | 0.73 | 8028 | 3299 | C2 | 324 | 9 | 47 | 0.43 |
| 7902 | 6897 | C1 | 320 | 11 | 46 | 0.73 | 8030 | 6951 | C1 | 324 | 10 | 33 | 0.43 |
| 7904 | 3246 | C2 | 320 | 13 | 12 | 0.73 | 8032 | 3300 | C2 | 324 | 11 | 33 | 1.33 |
| 7906 | 6898 | C1 | 320 | 13 | 34 | 0.73 | 8034 | 6952 | C1 | 324 | 12 | 22 | 1.33 |
| 7908 | 3247 | C2 | 320 | 15 | 0 | 0.73 | 8036 | 3301 | C2 | 324 | 13 | 20 | 1.33 |
| 7910 | 6899 | C1 | 320 | 15 | 20 | 1.25 | 8038 | 6953 | C1 | 324 | 14 | 9 | 1.33 |
| 7912 | 3248 | C2 | 320 | 16 | 48 | 1.25 | 8040 | 3302 | C2 | 324 | 15 | 9 | 1.95 |
| 7914 | 6900 | C1 | 320 | 17 | 7 | 1.25 | 8042 | 6954 | C1 | 324 | 15 | 56 | 1.95 |
| 7916 | 3249 | C2 | 320 | 18 | 36 | 1.25 | 8044 | 3303 | C2 | 324 | 16 | 58 | 1.95 |
| 7918 | 6901 | C1 | 320 | 18 | 50 | 1.25 | 8046 | 6955 | C1 | 324 | 17 | 40 | 1.95 |
| 7920 | 3250 | C2 | 320 | 20 | 24 | 1.25 | 8048 | 3304 | C2 | 324 | 18 | 47 | 1.95 |
| 7922 | 3251 | C2 | 320 | 22 | 9 | 1.25 | 8050 | 3305 | C2 | 324 | 20 | 33 | 1.95 |
| 7924 | 3252 | C2 | 320 | 23 | 54 | 0.42 | 8052 | 3306 | C2 | 324 | 22 | 19 | 1.95 |
| 7926 | 6905 | C1 | 321 | 1 | 37 | 0.42 | 8054 | 3307 | C2 | 325 | 0 | 2 | 1.43 |
| 7928 | 6906 | C1 | 321 | 3 | 22 | 0.42 | 8056 | 6959 | C1 | 325 | 0 | 28 | 1.43 |
| 7930 | 6907 | C1 | 321 | 5 | 7 | 0.42 | 8058 | 6960 | C1 | 325 | 2 | 11 | 1.43 |
| 7932 | 3256 | C2 | 321 | 6 | 39 | 0.42 | 8060 | 6961 | C1 | 325 | 3 | 55 | 1.43 |
| 7934 | 6908 | C1 | 321 | 6 | 54 | 0.42 | 8062 | 6962 | C1 | 325 | 5 | 43 | 1.43 |
| 7936 | 3257 | C2 | 321 | 8 | 22 | 0.42 | 8064 | 3311 | C2 | 325 | 6 | 47 | 1.43 |
| 7938 | 6909 | C1 | 321 | 8 | 43 | 0.42 | 8066 | 6963 | C1 | 325 | 7 | 30 | 1.43 |
| 7940 | 3258 | C2 | 321 | 10 | 6 | 0.42 | 8068 | 3312 | C2 | 325 | 8 | 30 | 1.43 |
| 7942 | 6910 | C1 | 321 | 10 | 33 | 0.42 | 8070 | 6964 | C1 | 325 | 9 | 20 | 1.43 |
| 7944 | 3259 | C2 | 321 | 11 | 53 | 0.81 | 8072 | 3313 | C2 | 325 | 10 | 15 | 1.43 |
| 7946 | 6911 | C1 | 321 | 12 | 23 | 0.81 | 8074 | 6965 | C1 | 325 | 11 | 10 | 0.92 |
| 7948 | 3260 | C2 | 321 | 13 | 40 | 0.81 | 8076 | 3314 | C2 | 325 | 12 | 2 | 0.92 |
| 7950 | 6912 | C1 | 321 | 14 | 10 | 0.81 | 8078 | 6966 | C1 | 325 | 12 | 58 | 0.92 |
| 7952 | 3261 | C2 | 321 | 15 | 29 | 1.94 | 8080 | 3315 | C2 | 325 | 13 | 50 | 0.92 |
| 7954 | 6913 | C1 | 321 | 15 | 56 | 1.94 | 8082 | 6967 | C1 | 325 | 14 | 45 | 0.92 |
| 7956 | 3262 | C2 | 321 | 17 | 19 | 1.94 | 8084 | 3316 | C2 | 325 | 15 | 39 | 6.39 |
| 7958 | 6914 | C1 | 321 | 17 | 42 | 1.94 | 8086 | 6968 | C1 | 325 | 16 | 31 | 6.39 |
| 7960 | 3263 | C2 | 321 | 19 | 7 | 1.94 | 8088 | 3317 | C2 | 325 | 17 | 28 | 6.39 |
| 7962 | 6915 | C1 | 321 | 19 | 25 | 1.94 | 8090 | 6969 | C1 | 325 | 18 | 15 | 6.39 |
| 7964 | 3264 | C2 | 321 | 20 | 54 | 1.94 | 8092 | 3318 | C2 | 325 | 19 | 16 | 6.39 |
| 7966 | 3265 | C2 | 321 | 22 | 38 | 1.94 | 8094 | 3319 | C2 | 325 | 21 | 2 | 6.39 |
| 7968 | 3266 | C2 | 322 | 0 | 21 | 0.74 | 8096 | 3320 | C2 | 325 | 22 | 47 | 6.39 |
| 7970 | 6919 | C1 | 322 | 2 | 12 | 0.74 | 8098 | 3321 | C2 | 326 | 0 | 30 | 2.92 |
| 7972 | 6920 | C1 | 322 | 3 | 57 | 0.74 | 8100 | 6973 | C1 | 326 | 1 | 1 | 2.92 |
| 7974 | 6921 | C1 | 322 | 5 | 43 | 0.74 | 8102 | 6974 | C1 | 326 | 2 | 46 | 2.92 |
| 7976 | 3270 | C2 | 322 | 7 | 7 | 0.74 | 8104 | 6975 | C1 | 326 | 4 | 31 | 2.92 |
| 7978 | 6922 | C1 | 322 | 7 | 30 | 0.74 | 8106 | 6976 | C1 | 326 | 6 | 19 | 2.92 |
| 7980 | 3271 | C2 | 322 | 8 | 51 | 0.74 | 8108 | 3325 | C2 | 326 | 7 | 15 | 2.92 |
| 7982 | 6923 | C1 | 322 | 9 | 20 | 0.74 | 8110 | 6977 | C1 | 326 | 8 | 7 | 2.92 |
| 7984 | 3272 | C2 | 322 | 10 | 36 | 0.74 | 8112 | 3326 | C2 | 326 | 8 | 59 | 2.92 |
| 7986 | 6924 | C1 | 322 | 11 | 9 | 0.21 | 8114 | 6978 | C1 | 326 | 9 | 56 | 2.92 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8372 | 3408 | C2 | 332 | 8 | 20 | 4.58 | 8522 | 3509 | C2 | 339 | 17 | 5 | 11.23 |
| 8374 | 7060 | C1 | 332 | 9 | 56 | 4.58 | 8523 | 7160 | C1 | 339 | 17 | 41 | 11.23 |
| 8376 | 3409 | C2 | 332 | 10 | 5 | 4.58 | 8524 | 3510 | C2 | 339 | 18 | 54 | 11.23 |
| 8378 | 7061 | C1 | 332 | 11 | 46 | 0.34 | 8525 | 3511 | C2 | 339 | 20 | 42 | 11.23 |
| 8380 | 3410 | C2 | 332 | 11 | 51 | 0.34 | 8526 | 3512 | C2 | 339 | 22 | 27 | 11.23 |
| 8382 | 7062 | C1 | 332 | 13 | 33 | 0.34 | 8527 | 3513 | C2 | 340 | 0 | 9 | 7.28 |
| 8384 | 3411 | C2 | 332 | 13 | 39 | 0.34 | 8528 | 7165 | C1 | 340 | 2 | 8 | 7.28 |
| 8386 | 7063 | C1 | 332 | 15 | 19 | 3.49 | 8529 | 7166 | C1 | 340 | 3 | 52 | 7.28 |
| 8388 | 3412 | C2 | 332 | 15 | 29 | 3.49 | 8530 | 7167 | C1 | 340 | 5 | 37 | 7.28 |
| 8390 | 7064 | C1 | 332 | 17 | 4 | 3.49 | 8531 | 7168 | C1 | 340 | 7 | 26 | 7.28 |
| 8392 | 3413 | C2 | 332 | 17 | 18 | 3.49 | 8532 | 3518 | C2 | 340 | 8 | 35 | 7.28 |
| 8394 | 3414 | C2 | 332 | 19 | 5 | 3.49 | 8533 | 7169 | C1 | 340 | 9 | 15 | 7.28 |
| 8396 | 3415 | C2 | 332 | 20 | 51 | 3.49 | 8534 | 3519 | C2 | 340 | 10 | 19 | 7.28 |
| 8398 | 3416 | C2 | 332 | 22 | 35 | 3.49 | 8535 | 7170 | C1 | 340 | 11 | 6 | 0.14 |
| 8400 | 7068 | C1 | 332 | 23 | 51 | 1.52 | 8536 | 3520 | C2 | 340 | 12 | 6 | 0.14 |
| 8402 | 3417 | C2 | 333 | 0 | 18 | 1.52 | 8537 | 7233 | C1 | 345 | 1 | 31 | 0.28 |
| 8474 | 7115 | C1 | 336 | 10 | 34 | 1.85 | 8538 | 7234 | C1 | 345 | 3 | 15 | 0.28 |
| 8475 | 3465 | C2 | 336 | 12 | 0 | 4.30 | 8539 | 7235 | C1 | 345 | 5 | 1 | 0.28 |
| 8476 | 7116 | C1 | 336 | 12 | 22 | 4.30 | 8540 | 7236 | C1 | 345 | 6 | 49 | 0.28 |
| 8477 | 3466 | C2 | 336 | 13 | 49 | 4.30 | 8541 | 3586 | C2 | 345 | 7 | 27 | 0.28 |
| 8478 | 7117 | C1 | 336 | 14 | 9 | 4.30 | 8542 | 3587 | C2 | 345 | 9 | 11 | 0.28 |
| 8479 | 3467 | C2 | 336 | 15 | 39 | 14.41 | 8543 | 3588 | C2 | 345 | 10 | 57 | 0.28 |
| 8480 | 7118 | C1 | 336 | 15 | 54 | 14.41 | 8544 | 7239 | C1 | 345 | 12 | 21 | 7.79 |
| 8481 | 3468 | C2 | 336 | 17 | 28 | 14.41 | 8545 | 3589 | C2 | 345 | 12 | 44 | 7.79 |
| 8482 | 7119 | C1 | 336 | 17 | 38 | 14.41 | 8546 | 7240 | C1 | 345 | 14 | 9 | 7.79 |
| 8483 | 3469 | C2 | 336 | 19 | 15 | 14.41 | 8547 | 7241 | C1 | 345 | 15 | 55 | 12.54 |
| 8484 | 3470 | C2 | 336 | 20 | 59 | 14.41 | 8548 | 7242 | C1 | 345 | 17 | 40 | 12.54 |
| 8485 | 3471 | C2 | 336 | 22 | 43 | 14.41 | 8549 | 3592 | C2 | 345 | 18 | 14 | 12.54 |
| 8486 | 7123 | C1 | 337 | 0 | 24 | 13.39 | 8550 | 3593 | C2 | 345 | 20 | 2 | 12.54 |
| 8487 | 7124 | C1 | 337 | 2 | 8 | 13.39 | 8551 | 3594 | C2 | 345 | 21 | 47 | 12.54 |
| 8488 | 7125 | C1 | 337 | 3 | 53 | 13.39 | 8552 | 3595 | C2 | 345 | 23 | 31 | $536. |
| 8489 | 7126 | C1 | 337 | 5 | 40 | 13.39 | 8553 | 7247 | C1 | 346 | 2 | 7 | $536. |
| 8490 | 3476 | C2 | 337 | 7 | 11 | 13.39 | 8554 | 7248 | C1 | 346 | 3 | 52 | $536. |
| 8491 | 7127 | C1 | 337 | 7 | 29 | 13.39 | 8555 | 7249 | C1 | 346 | 5 | 38 | $536. |
| 8492 | 3477 | C2 | 337 | 8 | 55 | 13.39 | 8556 | 3599 | C2 | 346 | 6 | 12 | $536. |
| 8493 | 7128 | C1 | 337 | 9 | 19 | 13.39 | 8557 | 7250 | C1 | 346 | 7 | 28 | $536. |
| 8494 | 3478 | C2 | 337 | 10 | 41 | 13.39 | 8558 | 3600 | C2 | 346 | 7 | 55 | $536. |
| 8495 | 7129 | C1 | 337 | 11 | 10 | 13.77 | 8559 | 7251 | C1 | 346 | 9 | 18 | $536. |
| 8496 | 3479 | C2 | 337 | 12 | 28 | 13.77 | 8560 | 3601 | C2 | 346 | 9 | 40 | $536. |
| 8497 | 7130 | C1 | 337 | 12 | 58 | 13.77 | 8561 | 7252 | C1 | 346 | 11 | 8 | $1652 |
| 8498 | 3480 | C2 | 337 | 14 | 17 | 13.77 | 8562 | 3602 | C2 | 346 | 11 | 27 | $1652 |
| 8499 | 7131 | C1 | 337 | 14 | 44 | 13.77 | 8563 | 7253 | C1 | 346 | 12 | 57 | $1652 |
| 8500 | 3481 | C2 | 337 | 16 | 7 | 12.11 | 8564 | 3603 | C2 | 346 | 13 | 16 | $1652 |
| 8501 | 7132 | C1 | 337 | 16 | 30 | 12.11 | 8565 | 7254 | C1 | 346 | 14 | 43 | $1652 |
| 8502 | 3482 | C2 | 337 | 17 | 56 | 12.11 | 8566 | 3604 | C2 | 346 | 15 | 6 | 13.92 |
| 8503 | 7133 | C1 | 337 | 18 | 13 | 12.11 | 8567 | 7255 | C1 | 346 | 16 | 28 | 13.92 |
| 8504 | 3483 | C2 | 337 | 19 | 43 | 12.11 | 8568 | 3605 | C2 | 346 | 16 | 56 | 13.92 |
| 8505 | 3484 | C2 | 337 | 21 | 29 | 12.11 | 8569 | 3606 | C2 | 346 | 18 | 44 | 13.92 |
| 8506 | 3485 | C2 | 337 | 23 | 13 | 12.69 | 8570 | 3607 | C2 | 346 | 20 | 29 | 13.92 |
| 8507 | 7137 | C1 | 338 | 0 | 59 | 12.69 | 8571 | 3608 | C2 | 346 | 22 | 14 | 13.92 |
| 8508 | 7151 | C1 | 339 | 1 | 33 | 12.69 | 8572 | 7260 | C1 | 347 | 0 | 57 | 10.12 |
| 8509 | 7152 | C1 | 339 | 3 | 17 | 12.69 | 8573 | 7274 | C1 | 348 | 1 | 32 | 10.12 |
| 8510 | 7153 | C1 | 339 | 5 | 2 | 12.69 | 8574 | 7275 | C1 | 348 | 3 | 17 | 10.12 |
| 8511 | 7154 | C1 | 339 | 6 | 50 | 12.69 | 8575 | 7276 | C1 | 348 | 5 | 5 | 10.12 |
| 8512 | 3504 | C2 | 339 | 8 | 6 | 12.69 | 8576 | 3626 | C2 | 348 | 5 | 25 | 10.12 |
| 8513 | 7155 | C1 | 339 | 8 | 39 | 12.69 | 8577 | 7277 | C1 | 348 | 6 | 53 | 10.12 |
| 8514 | 3505 | C2 | 339 | 9 | 50 | 12.69 | 8578 | 3627 | C2 | 348 | 7 | 9 | 10.12 |
| 8515 | 7156 | C1 | 339 | 10 | 30 | 12.69 | 8579 | 7278 | C1 | 348 | 8 | 43 | 10.12 |
| 8516 | 3506 | C2 | 339 | 11 | 36 | 15.51 | 8580 | 3628 | C2 | 348 | 8 | 54 | 10.12 |
| 8517 | 7157 | C1 | 339 | 12 | 21 | 15.51 | 8581 | 7279 | C1 | 348 | 10 | 33 | 10.12 |
| 8518 | 3507 | C2 | 339 | 13 | 24 | 15.51 | 8582 | 3629 | C2 | 348 | 10 | 40 | 10.12 |
| 8519 | 7158 | C1 | 339 | 14 | 9 | 15.51 | 8583 | 7280 | C1 | 348 | 12 | 20 | 21.34 |
| 8520 | 3508 | C2 | 339 | 15 | 14 | 11.23 | 8584 | 3630 | C2 | 348 | 12 | 28 | 21.34 |
| 8521 | 7159 | C1 | 339 | 15 | 55 | 11.23 | 8585 | 7281 | C1 | 348 | 14 | 7 | 21.34 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8714 | 7490 | C1 | 363 | 20 | 53 | 1.52 | 8778 | 3891 | C2 | 367 | 12 | 48 | 2.69 |
| 8715 | 3841 | C2 | 363 | 21 | 28 | 1.52 | 8779 | 7540 | C1 | 367 | 12 | 52 | 2.69 |
| 8716 | 7491 | C1 | 363 | 22 | 36 | 1.52 | 8780 | 3892 | C2 | 367 | 14 | 36 | 2.69 |
| 8717 | 7492 | C1 | 364 | 0 | 20 | 7.49 | 8781 | 7541 | C1 | 367 | 14 | 37 | 2.69 |
| 8718 | 7493 | C1 | 364 | 2 | 7 | 7.49 | 8782 | 7542 | C1 | 367 | 16 | 20 | 1.04 |
| 8719 | 3844 | C2 | 364 | 2 | 34 | 7.49 | 8783 | 3893 | C2 | 367 | 16 | 23 | 1.04 |
| 8720 | 7494 | C1 | 364 | 3 | 53 | 7.49 | 8784 | 3894 | C2 | 367 | 18 | 9 | 1.04 |
| 8721 | 3845 | C2 | 364 | 4 | 16 | 7.49 | 8785 | 3895 | C2 | 367 | 19 | 53 | 1.04 |
| 8722 | 7495 | C1 | 364 | 5 | 41 | 7.49 | 8786 | 7545 | C1 | 367 | 21 | 26 | 1.04 |
| 8723 | 3846 | C2 | 364 | 5 | 59 | 7.49 | 8787 | 3896 | C2 | 367 | 21 | 36 | 1.04 |
| 8724 | 7496 | C1 | 364 | 7 | 31 | 7.49 | 8788 | 7546 | C1 | 367 | 23 | 9 | 5.51 |
| 8725 | 3847 | C2 | 364 | 7 | 44 | 7.49 | 8789 | 7547 | C1 | 368 | 0 | 55 | 5.51 |
| 8726 | 7497 | C1 | 364 | 9 | 19 | 7.49 | 8790 | 3899 | C2 | 368 | 2 | 40 | 5.51 |
| 8727 | 3848 | C2 | 364 | 9 | 31 | 7.49 | 8791 | 7548 | C1 | 368 | 2 | 41 | 5.51 |
| 8728 | 7498 | C1 | 364 | 11 | 6 | 2.54 | 8792 | 3900 | C2 | 368 | 4 | 23 | 5.51 |
| 8729 | 3849 | C2 | 364 | 11 | 19 | 2.55 | 8793 | 7549 | C1 | 368 | 4 | 30 | 5.51 |
| 8730 | 7499 | C1 | 364 | 12 | 53 | 2.55 | 8794 | 3901 | C2 | 368 | 6 | 7 | 5.51 |
| 8731 | 3850 | C2 | 364 | 13 | 7 | 2.55 | 8795 | 7550 | C1 | 368 | 6 | 19 | 5.51 |
| 8732 | 7500 | C1 | 364 | 14 | 37 | 2.55 | 8796 | 3902 | C2 | 368 | 7 | 53 | 5.51 |
| 8733 | 3851 | C2 | 364 | 14 | 55 | 2.55 | 8797 | 7551 | C1 | 368 | 8 | 7 | 5.51 |
| 8734 | 7501 | C1 | 364 | 16 | 21 | 0.55 | 8798 | 3903 | C2 | 368 | 9 | 41 | 5.51 |
| 8735 | 3852 | C2 | 364 | 16 | 42 | 0.55 | 8799 | 7552 | C1 | 368 | 9 | 56 | 5.51 |
| 8736 | 3853 | C2 | 364 | 18 | 28 | 0.55 | 8800 | 3904 | C2 | 368 | 11 | 29 | 6.69 |
| 8737 | 3854 | C2 | 364 | 20 | 12 | 0.55 | 8801 | 7553 | C1 | 368 | 11 | 42 | 6.69 |
| 8738 | 7504 | C1 | 364 | 21 | 28 | 0.55 | 8802 | 3905 | C2 | 368 | 13 | 18 | 6.69 |
| 8739 | 3855 | C2 | 364 | 21 | 55 | 0.55 | 8803 | 7554 | C1 | 368 | 13 | 27 | 6.69 |
| 8740 | 7505 | C1 | 364 | 23 | 11 | 0.01 | 8804 | 3906 | C2 | 368 | 15 | 5 | 2.96 |
| 8741 | 7506 | C1 | 365 | 0 | 55 | 0.01 | 8805 | 7555 | C1 | 368 | 15 | 11 | 2.97 |
| 8742 | 7507 | C1 | 365 | 2 | 42 | 0.01 | 8806 | 3907 | C2 | 368 | 16 | 52 | 2.97 |
| 8743 | 3858 | C2 | 365 | 3 | 0 | 0.01 | 8807 | 3908 | C2 | 368 | 18 | 37 | 2.97 |
| 8744 | 7508 | C1 | 365 | 4 | 29 | 0.01 | 8808 | 7558 | C1 | 368 | 20 | 17 | 2.97 |
| 8745 | 3859 | C2 | 365 | 4 | 44 | 0.01 | 8809 | 3909 | C2 | 368 | 20 | 21 | 2.97 |
| 8746 | 7509 | C1 | 365 | 6 | 18 | 0.01 | 8810 | 7559 | C1 | 368 | 22 | 0 | 2.97 |
| 8747 | 3860 | C2 | 365 | 6 | 28 | 0.01 | 8811 | 7560 | C1 | 368 | 23 | 44 | 0.10 |
| 8748 | 7510 | C1 | 365 | 8 | 7 | 0.01 | 8812 | 7561 | C1 | 369 | 1 | 30 | 0.10 |
| 8749 | 3861 | C2 | 365 | 8 | 14 | 0.01 | 8813 | 3913 | C2 | 369 | 3 | 8 | 0.10 |
| 8750 | 7511 | C1 | 365 | 9 | 55 | 0.01 | 8814 | 7562 | C1 | 369 | 3 | 17 | 0.10 |
| 8751 | 3862 | C2 | 365 | 10 | 1 | 0.01 | 8815 | 3914 | C2 | 369 | 4 | 51 | 0.10 |
| 8752 | 7512 | C1 | 365 | 11 | 42 | 0.33 | 8816 | 7563 | C1 | 369 | 5 | 7 | 0.10 |
| 8753 | 3863 | C2 | 365 | 11 | 48 | 0.33 | 8817 | 3915 | C2 | 369 | 6 | 36 | 0.10 |
| 8754 | 7513 | C1 | 365 | 13 | 28 | 0.33 | 8818 | 7564 | C1 | 369 | 6 | 55 | 0.10 |
| 8755 | 3864 | C2 | 365 | 13 | 36 | 0.32 | 8819 | 3916 | C2 | 369 | 8 | 22 | 0.10 |
| 8756 | 7514 | C1 | 365 | 15 | 11 | 1.14 | 8820 | 7565 | C1 | 369 | 8 | 44 | 0.10 |
| 8757 | 3865 | C2 | 365 | 15 | 24 | 1.14 | 8821 | 3917 | C2 | 369 | 10 | 10 | 0.10 |
| 8758 | 7515 | C1 | 365 | 16 | 55 | 1.15 | 8822 | 7566 | C1 | 369 | 10 | 32 | 0.10 |
| 8759 | 3866 | C2 | 365 | 17 | 11 | 1.15 | 8823 | 3918 | C2 | 369 | 11 | 59 | 0.17 |
| 8760 | 3867 | C2 | 365 | 18 | 56 | 1.15 | 8824 | 7567 | C1 | 369 | 12 | 17 | 0.17 |
| 8761 | 7517 | C1 | 365 | 20 | 18 | 1.15 | 8825 | 3919 | C2 | 369 | 13 | 47 | 0.17 |
| 8762 | 3868 | C2 | 365 | 20 | 40 | 1.15 | 8826 | 7568 | C1 | 369 | 14 | 1 | 0.17 |
| 8763 | 7518 | C1 | 365 | 22 | 2 | 1.15 | 8827 | 3920 | C2 | 369 | 15 | 35 | 2.74 |
| 8764 | 3869 | C2 | 365 | 22 | 23 | 1.15 | 8828 | 7569 | C1 | 369 | 15 | 45 | 2.74 |
| 8765 | 7519 | C1 | 365 | 23 | 46 | 1.35 | 8829 | 3921 | C2 | 369 | 17 | 21 | 2.74 |
| 8766 | 7534 | C1 | 367 | 2 | 6 | 1.35 | 8830 | 3922 | C2 | 369 | 19 | 5 | 2.74 |
| 8767 | 3885 | C2 | 367 | 2 | 13 | 1.35 | 8831 | 3923 | C2 | 369 | 20 | 48 | 2.74 |
| 8768 | 7535 | C1 | 367 | 3 | 54 | 1.35 | 8832 | 7572 | C1 | 369 | 20 | 51 | 2.74 |
| 8769 | 3886 | C2 | 367 | 3 | 56 | 1.35 | 8833 | 7573 | C1 | 369 | 22 | 34 | 2.74 |
| 8770 | 3887 | C2 | 367 | 5 | 40 | 1.35 | 8834 | 7574 | C1 | 370 | 0 | 19 | 0.01 |
| 8771 | 7536 | C1 | 367 | 5 | 42 | 1.35 | 8835 | 3926 | C2 | 370 | 1 | 53 | 0.01 |
| 8772 | 3888 | C2 | 367 | 7 | 25 | 1.35 | 8836 | 7575 | C1 | 370 | 2 | 6 | 0.01 |
| 8773 | 7537 | C1 | 367 | 7 | 31 | 1.35 | 8837 | 3927 | C2 | 370 | 3 | 35 | 0.01 |
| 8774 | 3889 | C2 | 367 | 9 | 11 | 1.35 | 8838 | 7576 | C1 | 370 | 3 | 53 | 0.01 |
| 8775 | 7538 | C1 | 367 | 9 | 20 | 1.35 | 8839 | 3928 | C2 | 370 | 5 | 20 | 0.01 |
| 8776 | 3890 | C2 | 367 | 10 | 59 | 1.35 | 8840 | 7577 | C1 | 370 | 5 | 42 | 0.01 |
| 8777 | 7539 | C1 | 367 | 11 | 7 | 2.69 | 8841 | 3929 | C2 | 370 | 7 | 5 | 0.01 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8970 | 4228 | C2 | 392 | 1 | 42 | 6.83 | 9034 | 7943 | C1 | 397 | 0 | 11 | 10.84 |
| 8971 | 7876 | C1 | 392 | 2 | 37 | 6.83 | 9035 | 4297 | C2 | 397 | 2 | 15 | 10.84 |
| 8972 | 4229 | C2 | 392 | 3 | 26 | 6.83 | 9036 | 4298 | C2 | 397 | 4 | 0 | 10.84 |
| 8973 | 4230 | C2 | 392 | 5 | 10 | 6.83 | 9037 | 4299 | C2 | 397 | 5 | 45 | 10.84 |
| 8974 | 7878 | C1 | 392 | 6 | 20 | 6.83 | 9038 | 7947 | C1 | 397 | 7 | 37 | 10.84 |
| 8975 | 4231 | C2 | 392 | 6 | 57 | 6.83 | 9039 | 7948 | C1 | 397 | 9 | 24 | 10.84 |
| 8976 | 7879 | C1 | 392 | 8 | 9 | 6.83 | 9040 | 7949 | C1 | 397 | 11 | 9 | 2.35 |
| 8977 | 4232 | C2 | 392 | 8 | 46 | 6.83 | 9041 | 4303 | C2 | 397 | 13 | 11 | 2.35 |
| 8978 | 7880 | C1 | 392 | 9 | 57 | 6.83 | 9042 | 4304 | C2 | 397 | 14 | 57 | 2.35 |
| 8979 | 7881 | C1 | 392 | 11 | 42 | 9.83 | 9043 | 4305 | C2 | 397 | 16 | 42 | 10.63 |
| 8980 | 4234 | C2 | 392 | 12 | 28 | 9.83 | 9044 | 7955 | C1 | 397 | 21 | 12 | 10.63 |
| 8981 | 4235 | C2 | 392 | 14 | 17 | 9.83 | 9045 | 7956 | C1 | 397 | 22 | 58 | 10.63 |
| 8982 | 4236 | C2 | 392 | 16 | 3 | 11.37 | 9046 | 7957 | C1 | 398 | 0 | 46 | 11.88 |
| 8983 | 4237 | C2 | 392 | 17 | 47 | 11.37 | 9047 | 4311 | C2 | 398 | 2 | 42 | 11.88 |
| 8984 | 7886 | C1 | 392 | 20 | 7 | 11.37 | 9048 | 4312 | C2 | 398 | 4 | 27 | 11.88 |
| 8985 | 7887 | C1 | 392 | 21 | 51 | 11.37 | 9049 | 4313 | C2 | 398 | 6 | 14 | 11.88 |
| 8986 | 7888 | C1 | 392 | 23 | 37 | 3.30 | 9050 | 7961 | C1 | 398 | 8 | 14 | 11.88 |
| 8987 | 7889 | C1 | 393 | 1 | 25 | 3.30 | 9051 | 7962 | C1 | 398 | 10 | 0 | 11.88 |
| 8988 | 4242 | C2 | 393 | 2 | 10 | 3.30 | 9052 | 7963 | C1 | 398 | 11 | 44 | 12.00 |
| 8989 | 7890 | C1 | 393 | 3 | 15 | 3.30 | 9053 | 4317 | C2 | 398 | 13 | 40 | 12.00 |
| 8990 | 4243 | C2 | 393 | 3 | 54 | 3.30 | 9054 | 4318 | C2 | 398 | 15 | 27 | 11.38 |
| 8991 | 7891 | C1 | 393 | 5 | 7 | 3.30 | 9055 | 4319 | C2 | 398 | 17 | 11 | 11.38 |
| 8992 | 4244 | C2 | 393 | 5 | 40 | 3.30 | 9056 | 7968 | C1 | 398 | 20 | 2 | 11.38 |
| 8993 | 7892 | C1 | 393 | 6 | 57 | 3.30 | 9057 | 7969 | C1 | 398 | 21 | 46 | 11.38 |
| 8994 | 4245 | C2 | 393 | 7 | 28 | 3.30 | 9058 | 7970 | C1 | 398 | 23 | 33 | 11.23 |
| 8995 | 7893 | C1 | 393 | 8 | 15 | 3.30 | 9059 | 4324 | C2 | 399 | 1 | 24 | 11.23 |
| 8996 | 7894 | C1 | 393 | 10 | 32 | 3.30 | 9060 | 4325 | C2 | 399 | 3 | 8 | 11.23 |
| 8997 | 4247 | C2 | 393 | 11 | 8 | 67.72 | 9061 | 4326 | C2 | 399 | 4 | 54 | 11.23 |
| 8998 | 7895 | C1 | 393 | 12 | 16 | 67.71 | 9062 | 7974 | C1 | 399 | 7 | 3 | 11.23 |
| 8999 | 4248 | C2 | 393 | 12 | 57 | 67.71 | 9063 | 7975 | C1 | 399 | 8 | 50 | 11.23 |
| 9000 | 4249 | C2 | 393 | 14 | 45 | 67.71 | 9064 | 7976 | C1 | 399 | 10 | 36 | 11.23 |
| 9001 | 4250 | C2 | 393 | 16 | 30 | 47.41 | 9065 | 4331 | C2 | 399 | 14 | 11 | 5.89 |
| 9002 | 4251 | C2 | 393 | 18 | 14 | 47.41 | 9066 | 4332 | C2 | 399 | 15 | 57 | 0.58 |
| 9003 | 7900 | C1 | 393 | 20 | 42 | 47.41 | 9067 | 8023 | C1 | 402 | 20 | 33 | 10.45 |
| 9004 | 7901 | C1 | 393 | 22 | 26 | 47.41 | 9068 | 8024 | C1 | 402 | 22 | 20 | 10.45 |
| 9005 | 7902 | C1 | 394 | 0 | 14 | 3.28 | 9069 | 4379 | C2 | 403 | 1 | 31 | 11.68 |
| 9006 | 7903 | C1 | 394 | 2 | 0 | 3.28 | 9070 | 4380 | C2 | 403 | 3 | 16 | 11.68 |
| 9007 | 4256 | C2 | 394 | 2 | 36 | 3.28 | 9071 | 4381 | C2 | 403 | 5 | 2 | 11.68 |
| 9008 | 4257 | C2 | 394 | 4 | 20 | 3.28 | 9072 | 8029 | C1 | 403 | 7 | 41 | 11.68 |
| 9009 | 4258 | C2 | 394 | 6 | 6 | 3.28 | 9073 | 8031 | C1 | 403 | 9 | 27 | 11.68 |
| 9010 | 7906 | C1 | 394 | 7 | 35 | 3.28 | 9074 | 4385 | C2 | 403 | 12 | 34 | 11.82 |
| 9011 | 7907 | C1 | 394 | 9 | 22 | 3.28 | 9075 | 4387 | C2 | 403 | 14 | 21 | 11.82 |
| 9012 | 7908 | C1 | 394 | 11 | 9 | 1.37 | 9076 | 4387 | C2 | 403 | 16 | 6 | 2.67 |
| 9013 | 4262 | C2 | 394 | 13 | 29 | 1.37 | 9077 | 8036 | C1 | 403 | 19 | 23 | 2.67 |
| 9014 | 4263 | C2 | 394 | 15 | 16 | 0.01 | 9078 | 8037 | C1 | 403 | 21 | 7 | 2.67 |
| 9015 | 4278 | C2 | 395 | 17 | 29 | 0.43 | 9079 | 8038 | C1 | 403 | 22 | 54 | 2.67 |
| 9016 | 7927 | C1 | 395 | 20 | 4 | 0.43 | 9080 | 4393 | C2 | 404 | 1 | 58 | 17.09 |
| 9017 | 7928 | C1 | 395 | 21 | 49 | 0.43 | 9081 | 4394 | C2 | 404 | 3 | 43 | 17.09 |
| 9018 | 7929 | C1 | 395 | 23 | 35 | 5.76 | 9082 | 8044 | C1 | 404 | 8 | 18 | 17.09 |
| 9019 | 7930 | C1 | 396 | 1 | 24 | 5.76 | 9083 | 8045 | C1 | 404 | 10 | 3 | 17.09 |
| 9020 | 4283 | C2 | 396 | 1 | 48 | 5.76 | 9084 | 4407 | C2 | 405 | 2 | 24 | 11.52 |
| 9021 | 4284 | C2 | 396 | 3 | 32 | 5.76 | 9085 | 4408 | C2 | 405 | 4 | 9 | 11.52 |
| 9022 | 4285 | C2 | 396 | 5 | 18 | 5.76 | 9086 | 8056 | C1 | 405 | 7 | 9 | 11.52 |
| 9023 | 7933 | C1 | 396 | 6 | 59 | 5.76 | 9087 | 8058 | C1 | 405 | 8 | 56 | 11.52 |
| 9024 | 4286 | C2 | 396 | 7 | 5 | 5.76 | 9088 | 8059 | C1 | 405 | 10 | 41 | 11.52 |
| 9025 | 7934 | C1 | 396 | 8 | 47 | 5.76 | 9089 | 4414 | C2 | 405 | 13 | 37 | 11.78 |
| 9026 | 7935 | C1 | 396 | 10 | 33 | 5.76 | 9090 | 4415 | C2 | 405 | 15 | 22 | 11.51 |
| 9027 | 7936 | C1 | 396 | 12 | 18 | 10.39 | 9091 | 8064 | C1 | 405 | 20 | 28 | 11.51 |
| 9028 | 4289 | C2 | 396 | 12 | 40 | 10.39 | 9092 | 8065 | C1 | 405 | 22 | 13 | 11.51 |
| 9029 | 4290 | C2 | 396 | 14 | 27 | 10.39 | 9093 | 4420 | C2 | 406 | 1 | 7 | 11.78 |
| 9030 | 4291 | C2 | 396 | 16 | 12 | 9.88 | 9094 | 4421 | C2 | 406 | 2 | 52 | 11.78 |
| 9031 | 4292 | C2 | 396 | 17 | 56 | 9.88 | 9095 | 4422 | C2 | 406 | 4 | 38 | 11.78 |
| 9032 | 7941 | C1 | 396 | 20 | 39 | 9.88 | 9096 | 8071 | C1 | 406 | 7 | 44 | 11.78 |
| 9033 | 7942 | C1 | 396 | 22 | 24 | 9.88 | 9097 | 8072 | C1 | 406 | 9 | 30 | 11.78 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 9226 | 4621 | C2 | 420 | 15 | 41 | 11.93 |
| 9227 | 8268 | C1 | 420 | 18 | 28 | 11.18 |
| 9228 | 8269 | C1 | 420 | 20 | 15 | 11.18 |
| 9229 | 8270 | C1 | 420 | 21 | 59 | 11.18 |
| 9230 | 4739 | S1 | 421 | 0 | 26 | 11.18 |
| 9231 | 4626 | C2 | 421 | 1 | 0 | 11.18 |
| 9232 | 4740 | S1 | 421 | 2 | 6 | 14.58 |
| 9233 | 4627 | C2 | 421 | 2 | 46 | 14.58 |
| 9234 | 8275 | C1 | 421 | 6 | 10 | 14.58 |
| 9235 | 8276 | C1 | 421 | 7 | 55 | 14.58 |
| 9236 | 8277 | C1 | 421 | 9 | 41 | 14.58 |
| 9237 | 4633 | C2 | 421 | 12 | 39 | 14.58 |
| 9238 | 4746 | S1 | 421 | 12 | 50 | 14.58 |

# APPENDIX D

# EXERCISES AND HOMING TESTS

Two exercises and one set of homing tests were conducted during the USCG/SARSAT D&E.

## D.1 MASSACHUSETTS BAY EXERCISE

An exercise was conducted on 20 January 1984 in Massachusetts Bay, in which Coast Guard patrol boats simulated a distress by activating a 406-MHz EPIRB with a low power 121.5-MHz component. The distress was located and identified to the RCC by the SARSAT system, and a helicopter was dispatched to locate the vessel. The purpose of the exercise was to demonstrate the use of the SARSAT system in the Coast Guard DAR network.

The Massachusetts Bay Exercise was a success in that the search aircraft located the simulated distress vessel within two and one-half hours of the time the beacon was activated (Table D-1). However, the search craft (a Coast Guard HH-52 helicopter) that located the vessel visually was not able to localize the beacon immediately with its DF equipment. Before further attempts to localize the beacon could be made, the aircraft was diverted from the exercise to an actual SAR case (see Figure D-1).

## D.2 GULF COAST EXERCISE

### D.2.1 Objectives

The objective of this exercise was to demonstrate the feasibility and effectiveness of maritime search and rescue using the 406-MHz SARSAT system currently in place. The feasibility was demonstrated by a Coast Guard rescue craft locating a "distressed" vessel indicated by a 406-MHz beacon. The effectiveness was determined by evaluating the response of the various segments of the SARSAT system to this simulated distress. The segments of the system are the beacon, the spacecraft, the LUT, the MCC, the RCC, and the search craft.

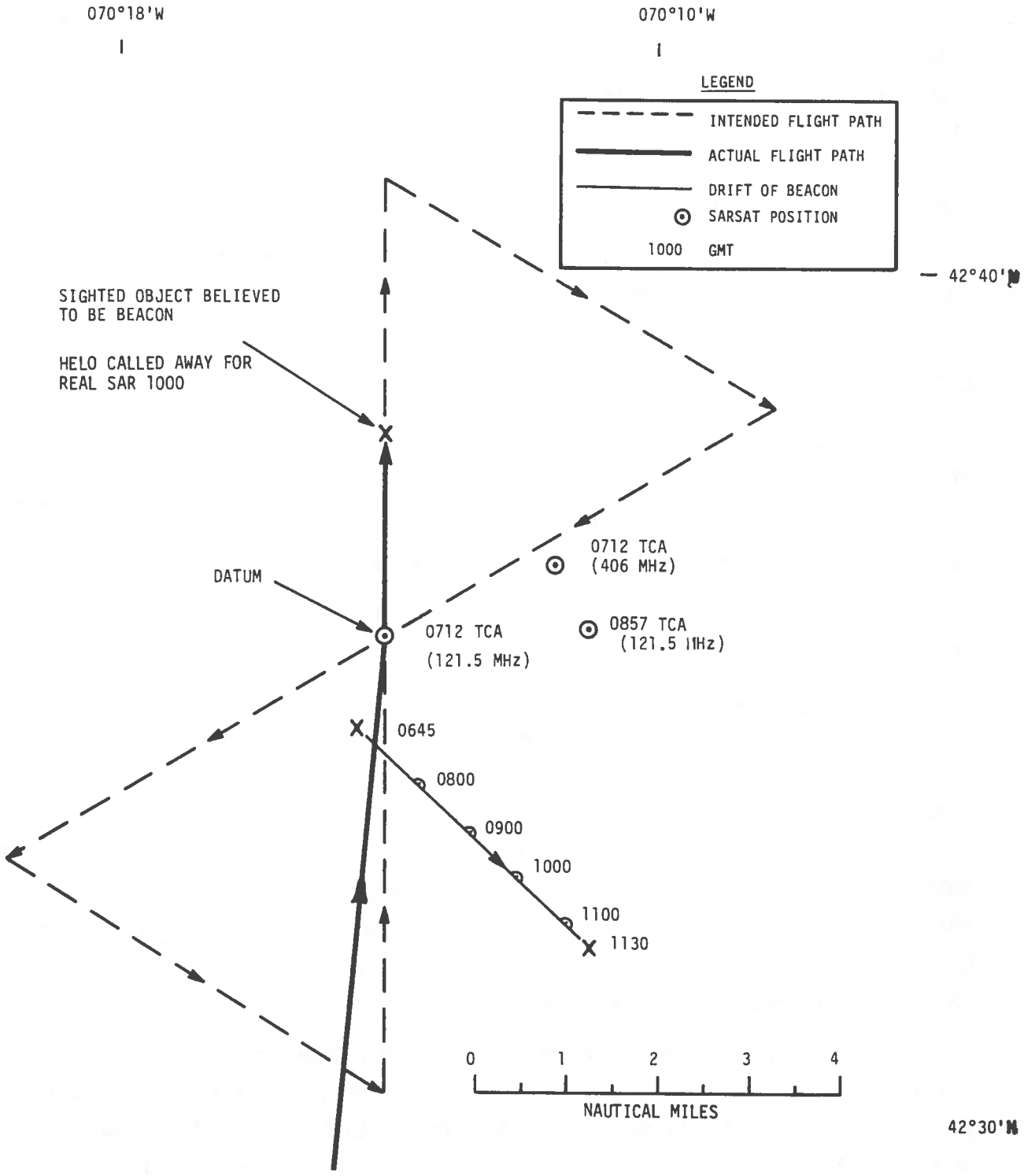


FIGURE D-1. CHART OF MASSACHUSETTS BAY DEMONSTRATION EXERCISE

problem with the routing of 406-MHz messages to RCC New Orleans. A check with the MCC revealed that the 406-MHz messages were not correctly flagged at the MCC. The problem was corrected and two previous 406-MHz positions from SI orbit #5386 (Scott and SEDL LUTs) were relayed over the phone.

The RCC controller now had 4 SARSAT positions dispersed over a distance of over 100 nm (Figure D-2). The two 406-MHz positions, which the controller was told would be the more accurate positions, were on land. Two of the 121.5-MHz positions were in the general area of the test but separated by approximately 25 nm. At this point, the controller was unsure whether either or both of these positions corresponded to the exercise or if an actual ELT/EPIRB case was developing. Normally, the controller would have waited for subsequent SARSAT passes to substantiate the case, but he decided to launch aircraft to resolve the mystery and to complete the exercise.

Two HH-52 helicopters were launched from Coast Guard Air Station Houston to check out both 121.5-MHz positions. Flying together at an altitude of 1500 feet, they were able to hear the 121.5-MHz signal at 1021, approximately 7-8 nm from the first position. Shortly afterward, one of the aircraft was able to DF on the beacon. The vessel and beacon were visually sighted at 1028.

Seven additional SARSAT messages were received by the RCC after the aircraft had launched (Figure D-3). This figure shows the drift of the beacon in the water as observed by the POINT MONROE, and the series of SARSAT locations, over the 3 1/2 hour period 0730-1100. If the mean SARSAT locations are plotted along with the beacon locations at each time that new SARSAT information was generated (TCAs of 0741, 0854 and 0927), the results are as shown in Figure D-4. It can be seen that the mean indicated SARSAT location moves in the same general direction, and at about the same speed, as the actual drifting beacon.

Table D-2 gives the Chronology of the Gulf of Mexico Exercise.

### D.2.4 Observations

The exercise demonstrated the feasibility of SAR using the 406-MHz SARSAT system presently in place. The time from beacon activation to time of distress sighting was just under 3 1/2 hours. Although all the participants knew that this was only an exercise, they reacted as they would in a real distress situation.

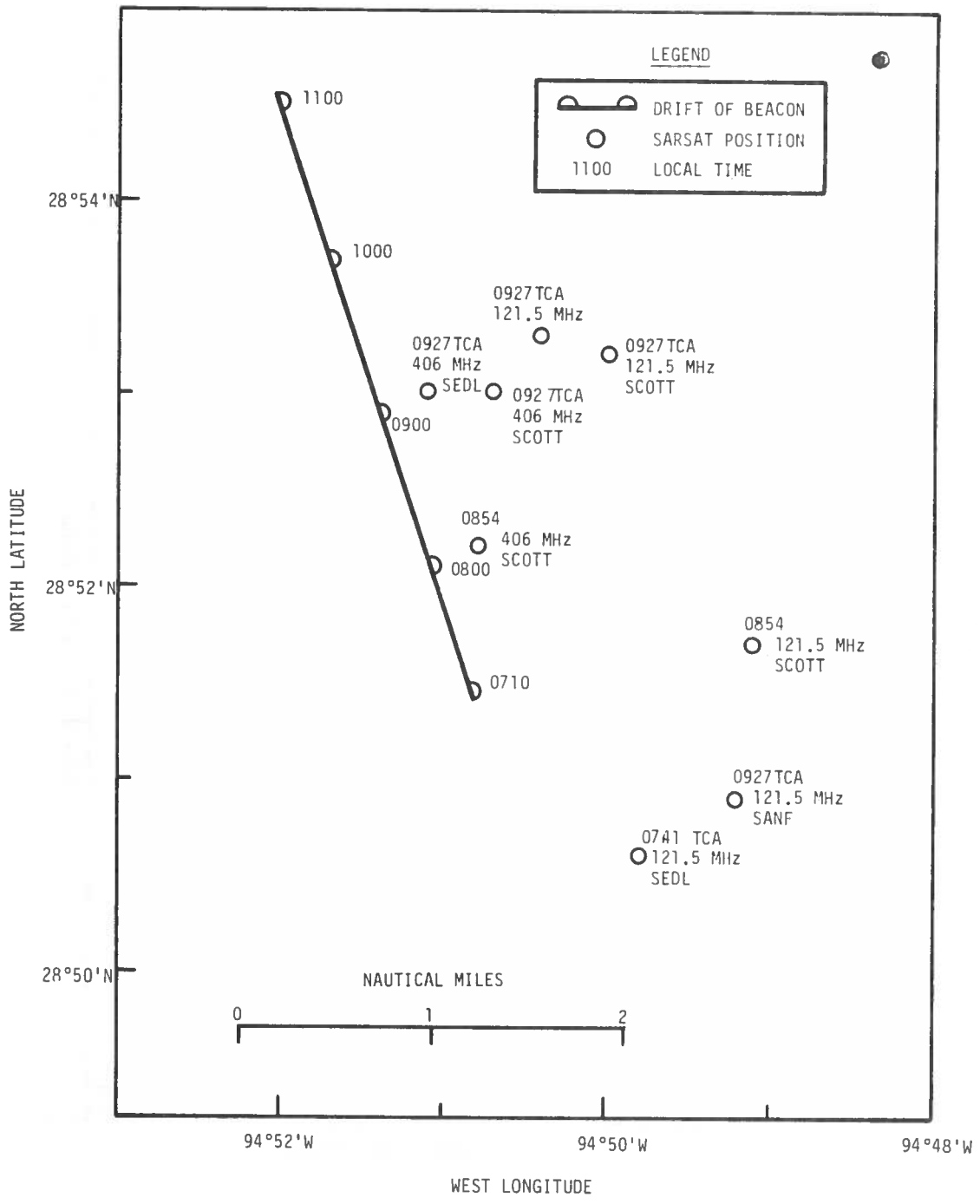


FIGURE D-3. DETAIL OF SARSAT LOCATIONS IN GULF COAST EXERCISE

TABLE D-2. CHRONOLOGY OF GULF OF MEXICO DEMONSTRATION

| LOCAL TIME | |
|---|---|
| 0710 | EPIRB activated and deployed from USCGC POINT MONROE |
| 0800 | New Orleans RCC receives SARSAT 121.5 alert SI #5386 |
| 0830 | RCC receives SARSAT 121.5 alert CI #8894 |
| 0835 | MCC contacted regarding routing of 406 alert messages to RCC new Orleans |
| 0840 | MCC confirms/corrects routing problem, provides two SARSAT 406 alert messages, SI #5386 and CI #8894 |
| 0850 | RCC briefed CG Air Station Houston; instructed to launch |
| 0921 | Two Air Station Houston HH-52s airborne en route SARSAT positions |
| 0955 | Aircraft arrives search scene |
| 1021 | Aircraft receiving 121.5 MHz signal |
| 1028 | Aircraft visually locate beacon and POINT MONROE |
| 0945-1110 | RCC receives seven additional SARSAT alerts |

The inability to home on the low power 121.5-MHz signals was also encountered in our previous demonstration using the HH-52 helicopter. This seems to be a serious weakness in the SAR effectiveness of the current 406-MHz SARSAT system but should be resolved somewhat as the HH-52 is replaced by the HH-65A.

### D.2.5 Conclusions

The Gulf Coast Exercise produced some unexpected and significant results.

The most striking result was that the relatively weak (20 mW) 121.5-MHz beacon component, which was designed only for short range homing, actually performed as well as the main 5-Watt 406-MHz beacon signal. This is evident in that six out of eleven SARSAT positions were from the 121.5-MHz signal. Moreover, these positions were, on the average, no less accurate than the 406-MHz positions.

Another result is that the averaged SARSAT position for this exercise reflected both speed and direction of the drifting beacon. A moving average of SARSAT positions can be expected to do so with even more accuracy.

The exercise also revealed the status of several parts of the over-all COSPAS/SARSAT SAR system. 1) The USMCC was not, at the time of the exercise in April 1984, prepared to sort geographically and to forward 406-MHz messages as it does for the 121.5-MHz messages. 2) The U.S. Coast Guard 121.5-MHz homing equipment on the HH52 helicopter is a weakness in the ELT/EPIRB SAR loop. 3) The RCC controllers need indicators of quality of position on the SARSAT alerts. Such indicators should be able to exclude locations that are far off the true beacon position, such as were experienced in the first two 406-MHz alert messages.

Because its results have substantial significance for the Coast Guard SARSAT D&E, the Gulf Coast Exercise is considered successful.

## D.3 MASSACHUSETTS BAY HOMING TEST

Homing tests were conducted in Massachusetts Bay during November 1983. Using a low power 121.5-MHz beacon and an HH-52 Coast Guard helicopter, the aircraft homing ranges were determined for several EPIRB conditions. The data from this test served to determine whether the SARSAT 406-MHz beacon accuracy is sufficient to place a Coast Guard aircraft within homing range of the beacon.

# APPENDIX E
# FURTHER ANALYSIS OF CONTROLLED TESTS

## E.1 EVALUATION ANGLE AND WAVE HEIGHT EFFECTS ON FLOATING BEACONS

The location probability for floating beacons as obtained from the two NANTUCKET tests, plus the FIREBUSH and the Fisheries Patrol tests, was analyzed as a function of wave height and peak satellite elevation angle at the beacon. Figure E-1 shows that the probability of the 121.5-MHz beacon being detected goes from 0 to 80 percent as the peak elevation angle goes from 10 degrees to 20 degrees. The 121.5-MHz location probability averaged over all elevation angles is 84 percent for the floating EPIRBs tested.

Figure E-2 shows location probability of 121.5-MHz beacons as a function of observed wave height. The data beyond 15 feet wave height are scarce and for that reason the probabilities are shown there by a dotted line. Nevertheless the plot suggests that the deterioration of 121.5-MHz location probability with wave height is not pronounced.

Figure E-3 shows 406-MHz location probability as a function of peak elevation angle at the beacon. Unlike the 121.5-MHz floating EPIRB the 406-MHz units have a practically constant location probability of about 75 percent for all elevation angles between 10 degrees to 90 degrees. More accurately, the figure shows that the location probability rises from 60 percent to about 80 percent as the elevation angle goes from 10 degrees to 70 degrees, and drops slightly as the elevation angle goes from 70 degrees to 90 degrees. The reason for this behavior is the LUT 406-MHz position calculation algorithm. The 406-MHz algorithm calculates a position for as few as four points regardless of accuracy, unlike the 121.5-MHz algorithm, which stops calculation when the error is above a certain level.

Figure E-4 shows 406-MHz location probability as a function of wave height. Just as for the 121.5-MHz units, the location probability for 406-MHz units tested does not drop off appreciably as wave height increases, although the data beyond wave heights of 15 feet are inadequate.

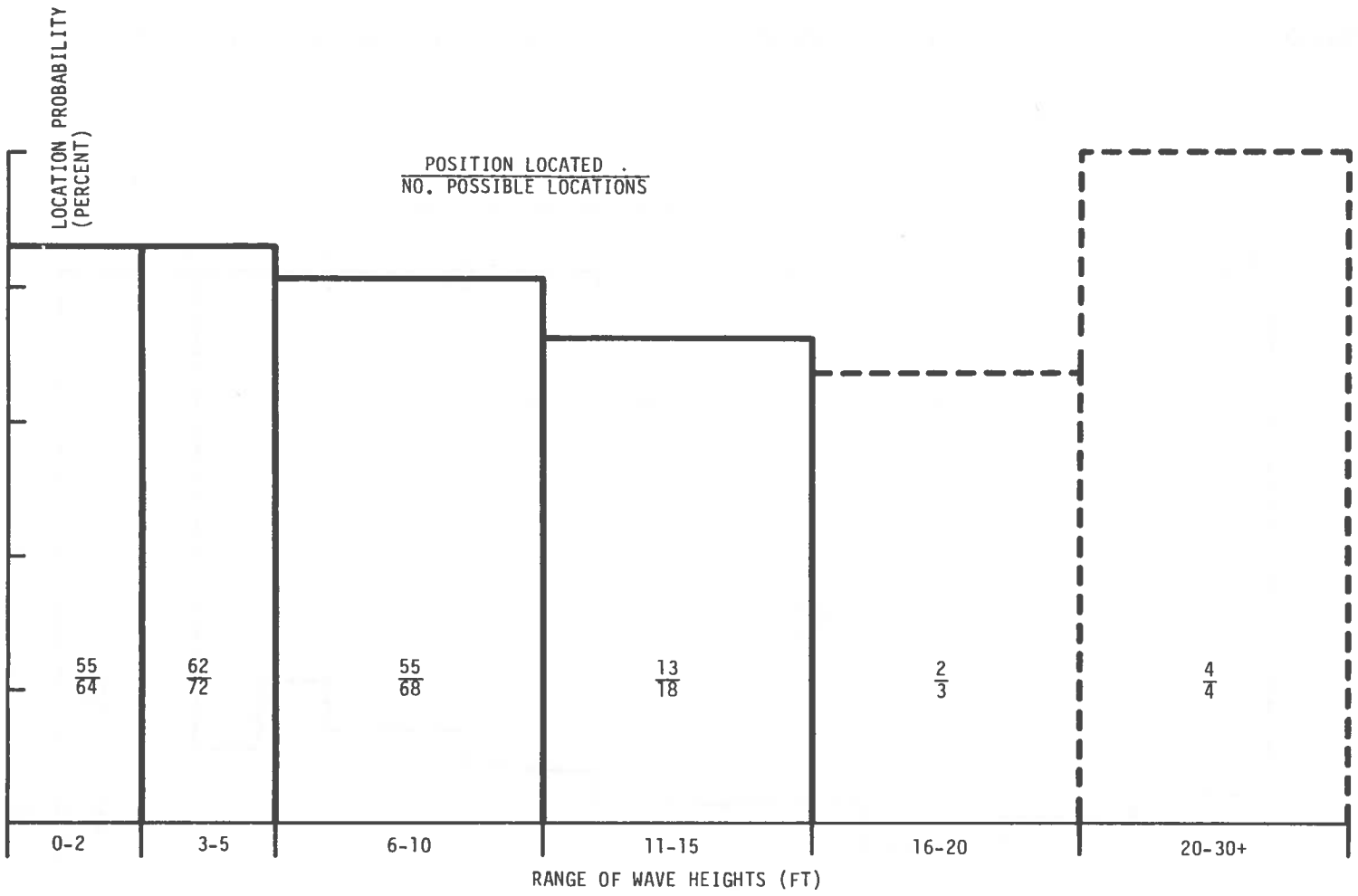


FIGURE E-2. LOCATION PROBABILITY VS. WAVE HEIGHT FOR 121.5-MHz FLOATING BEACONS

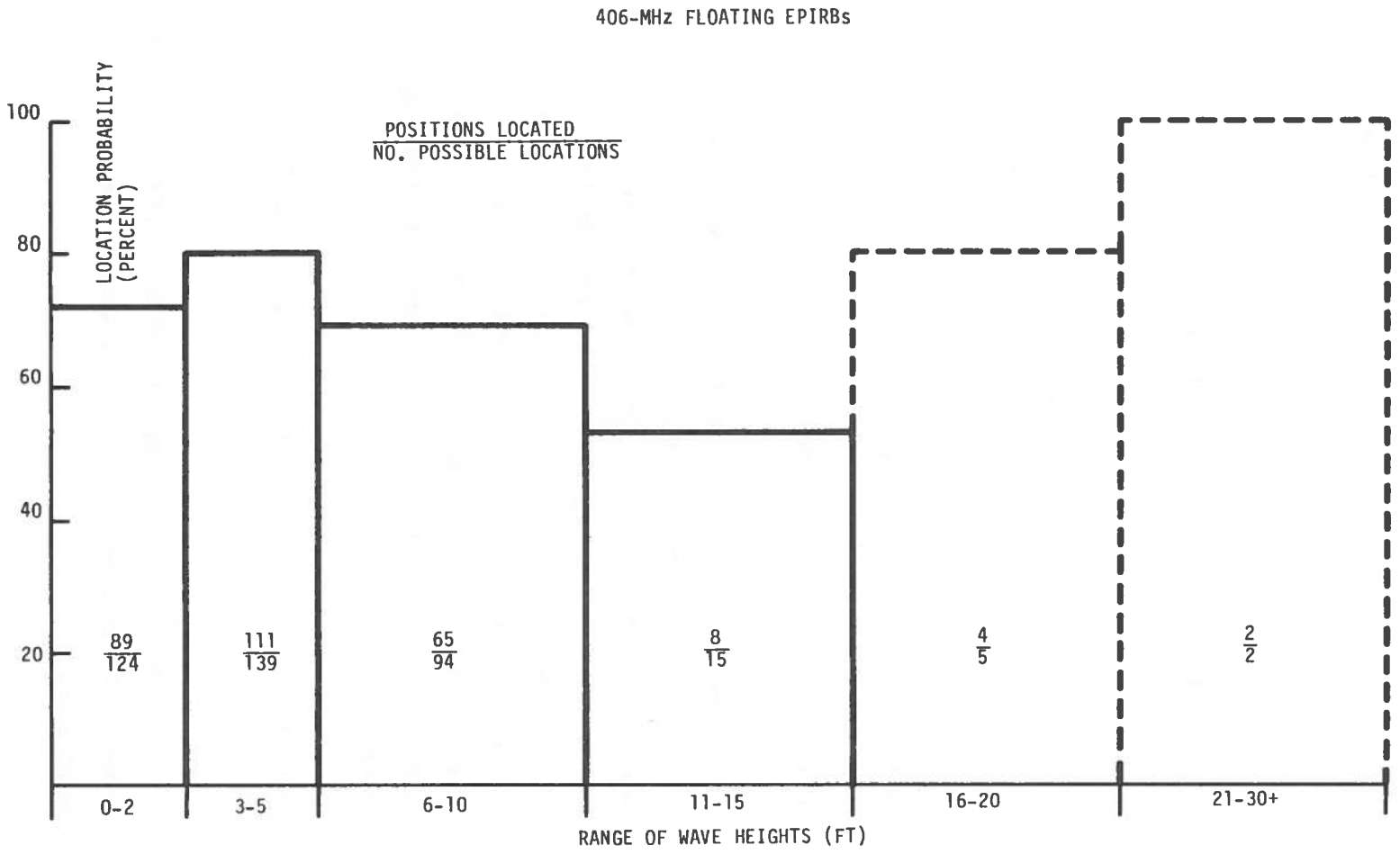


FIGURE E-4. LOCATION PROBABILITY VS. WAVE HEIGHT FOR406-MHz FLOATING BEACONS

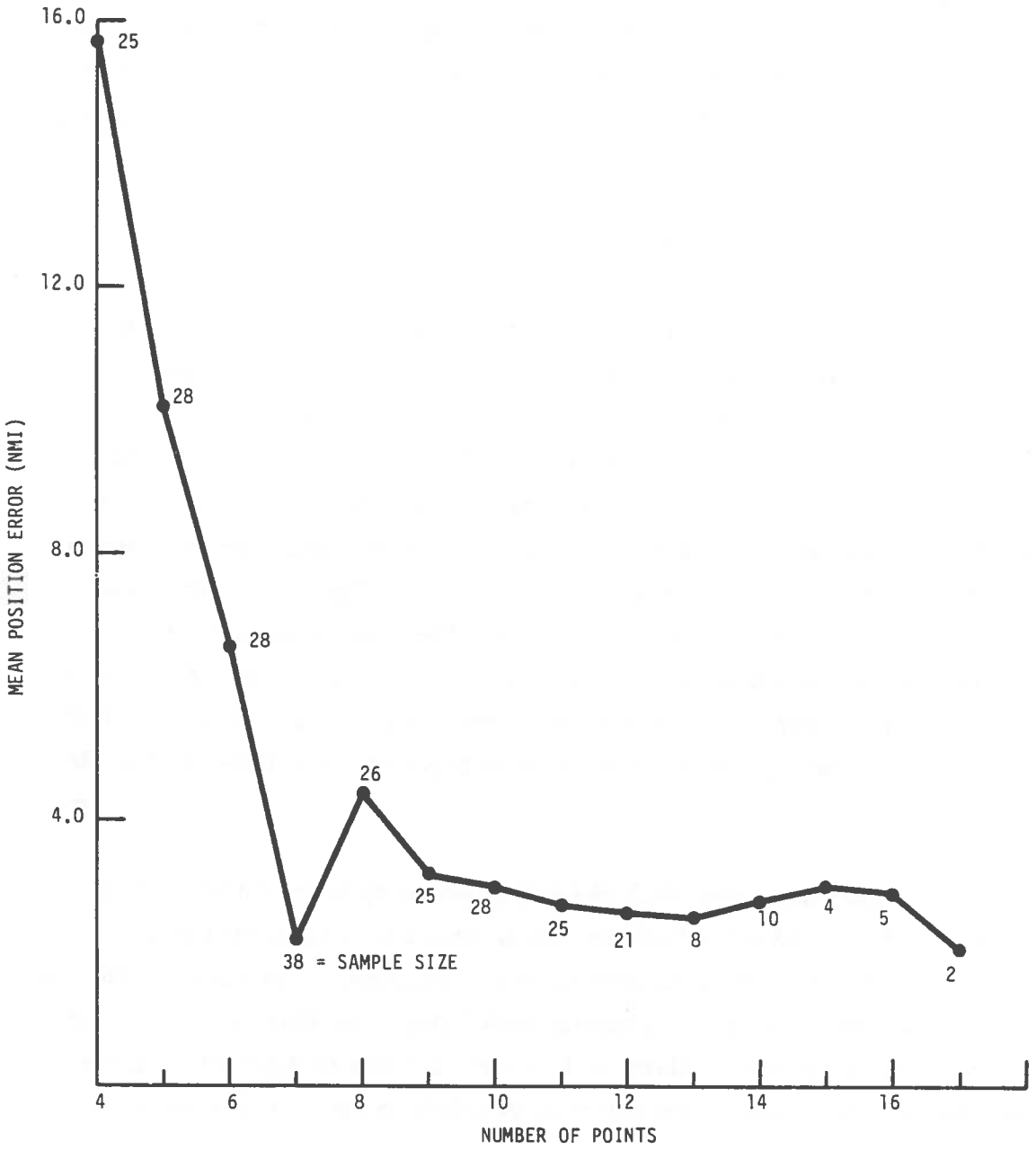


FIGURE E-5. 406-MHz BEACON ERROR VS. NUMBER OF POINTS IN LUT SOLUTION - ALL FLOATING BEACON TESTS

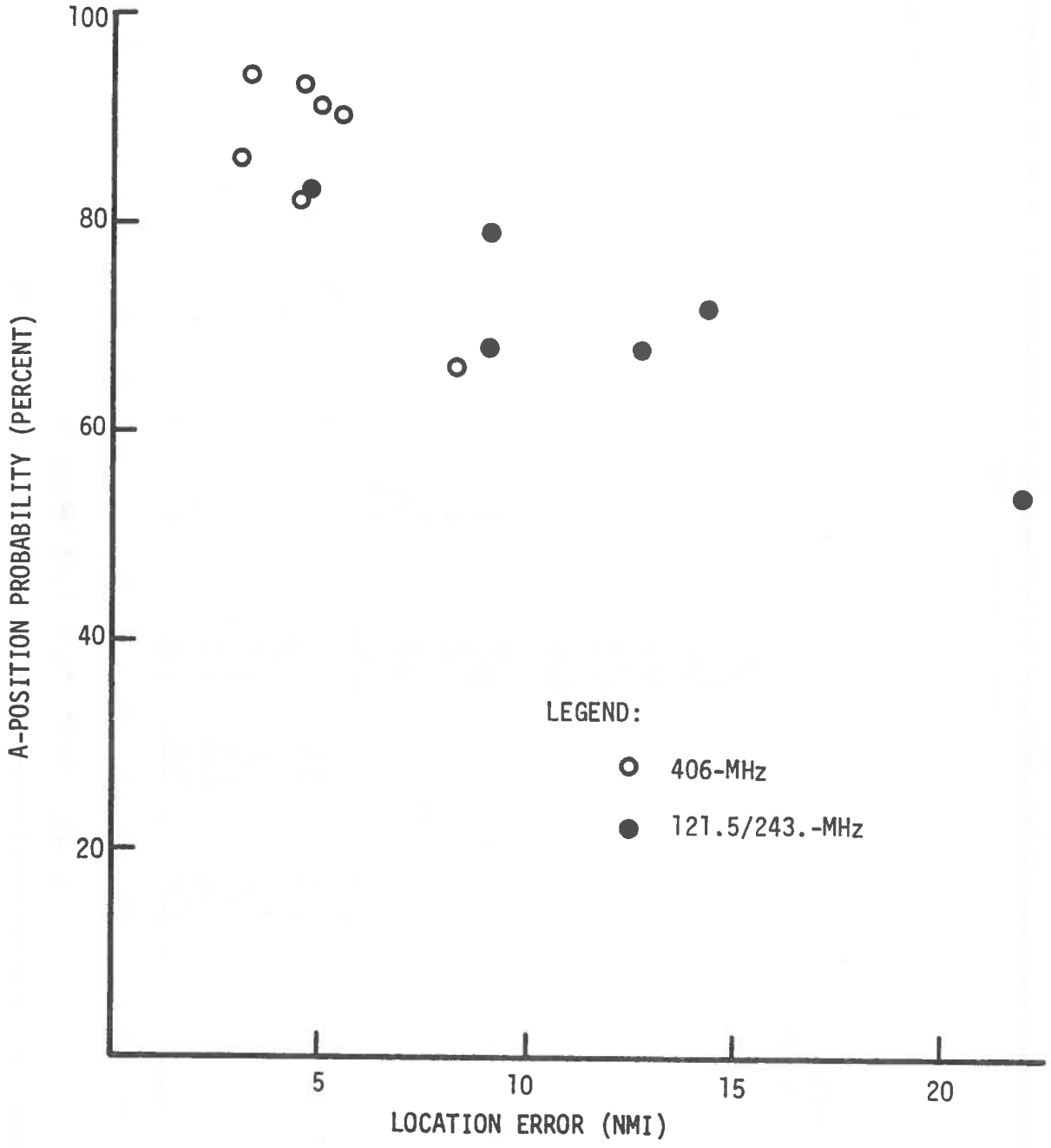


FIGURE E-6. A-POSITION PROBABILITY VS. LOCATION ERROR

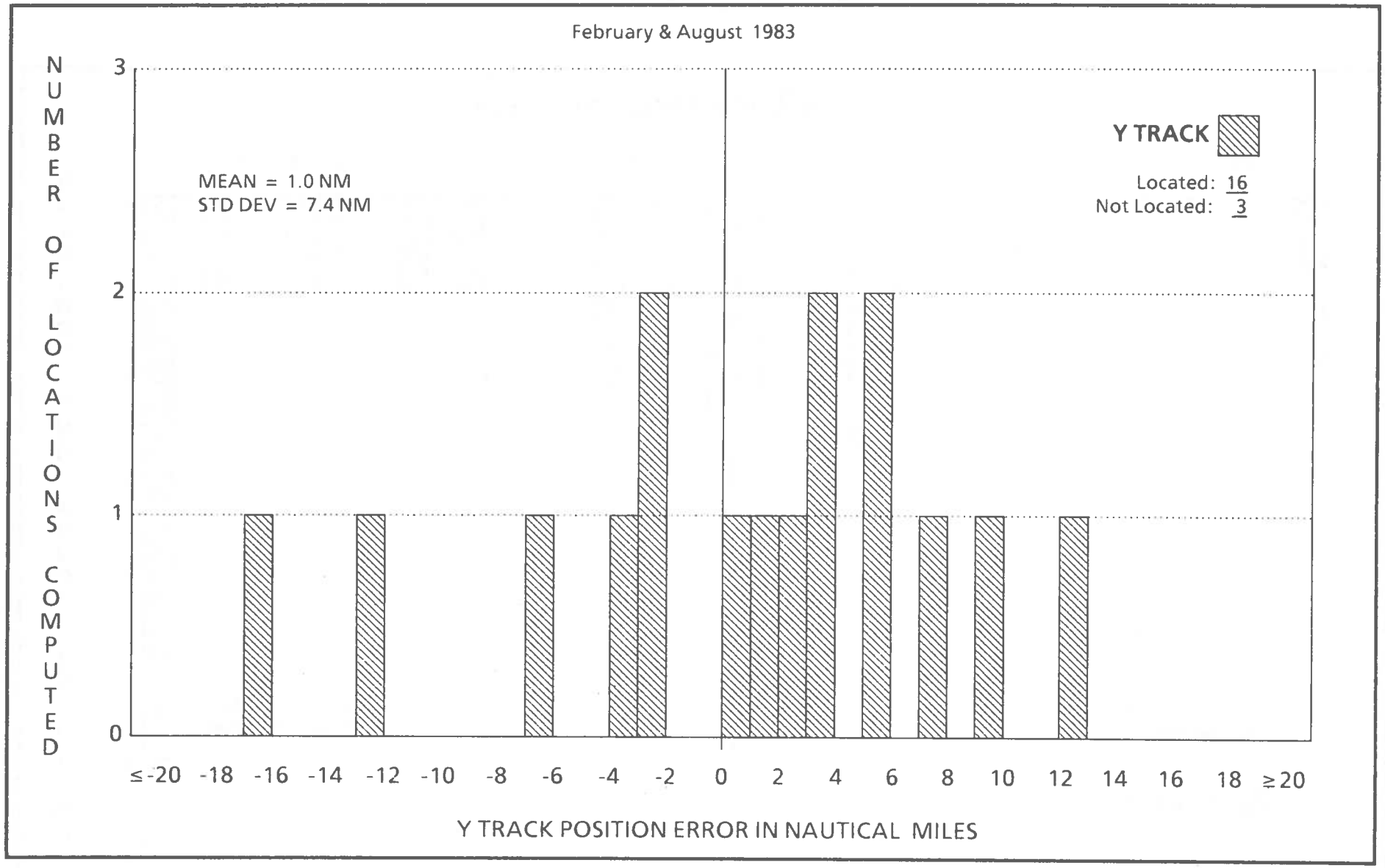


FIGURE E-8. Y-TRACK ERROR DISTRIBUTION: MARSHFIELD 1 & 2 -- 121.5-MHz

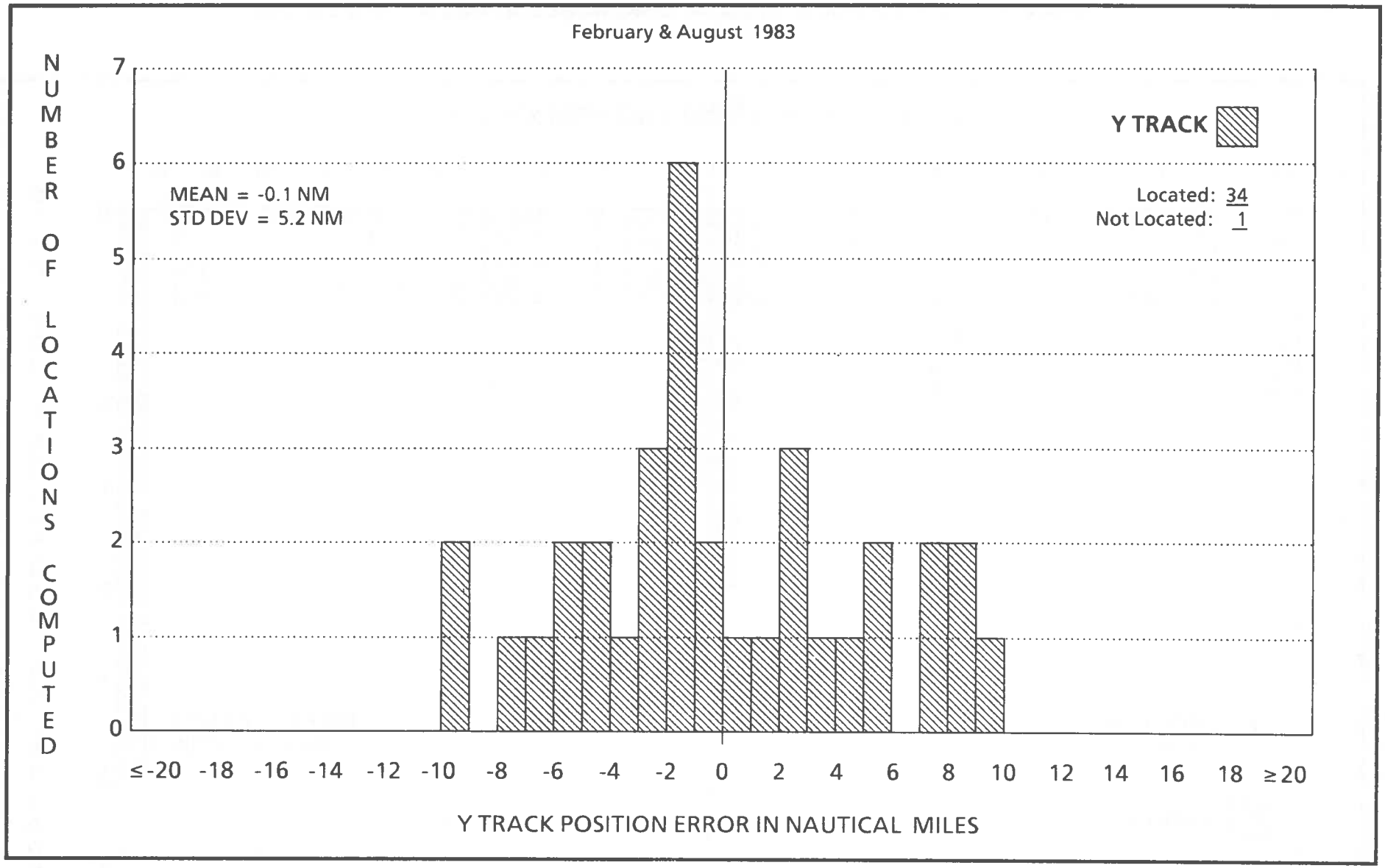


FIGURE E-10. Y-TRACK ERROR DISTRIBUTION: PT. REYES 1 & 2 -- 121.5-MHz

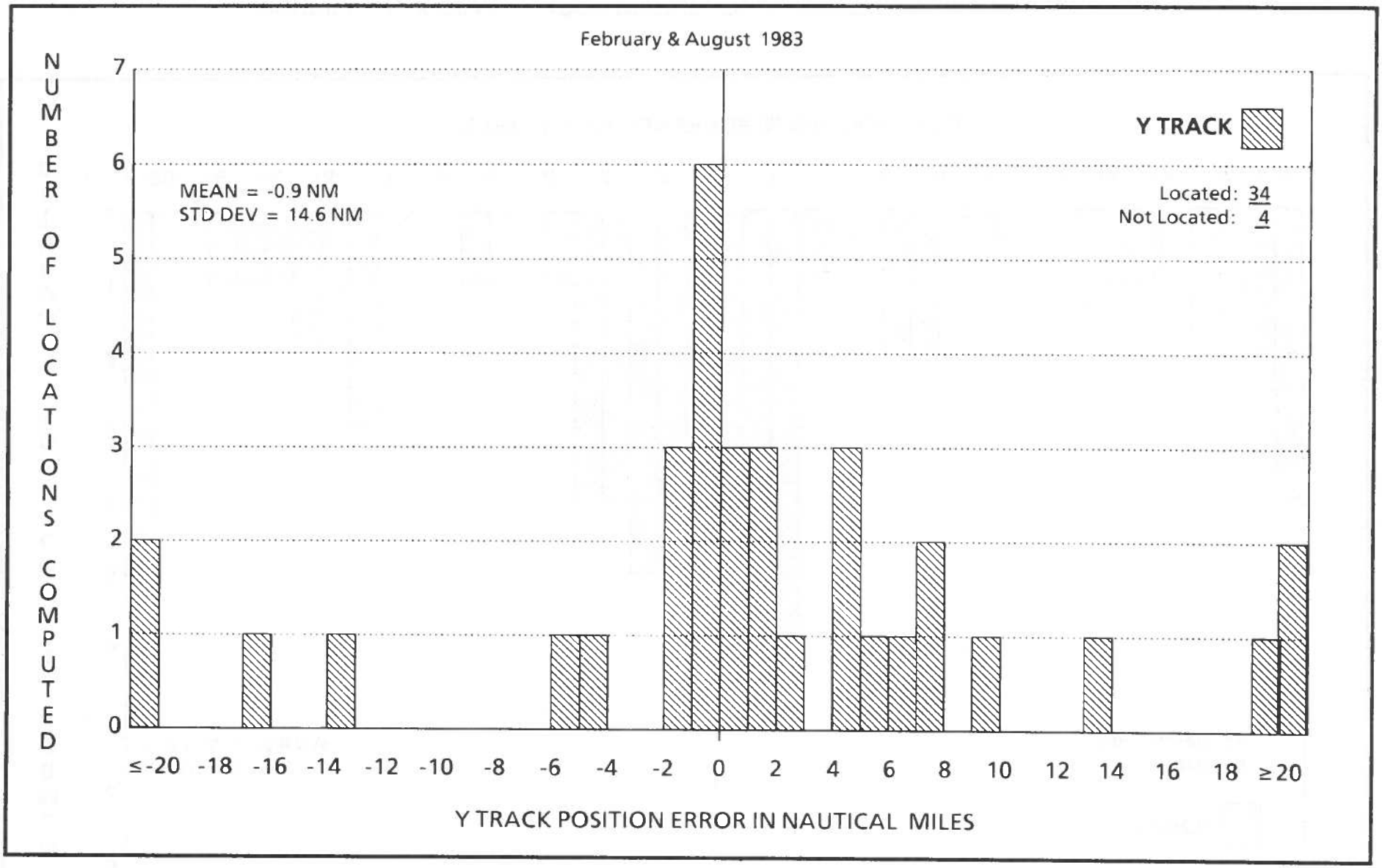


FIGURE E-12. Y-TRACK ERROR DISTRIBUTION: KODIAK 1 & 2 -- 121.5-MHz

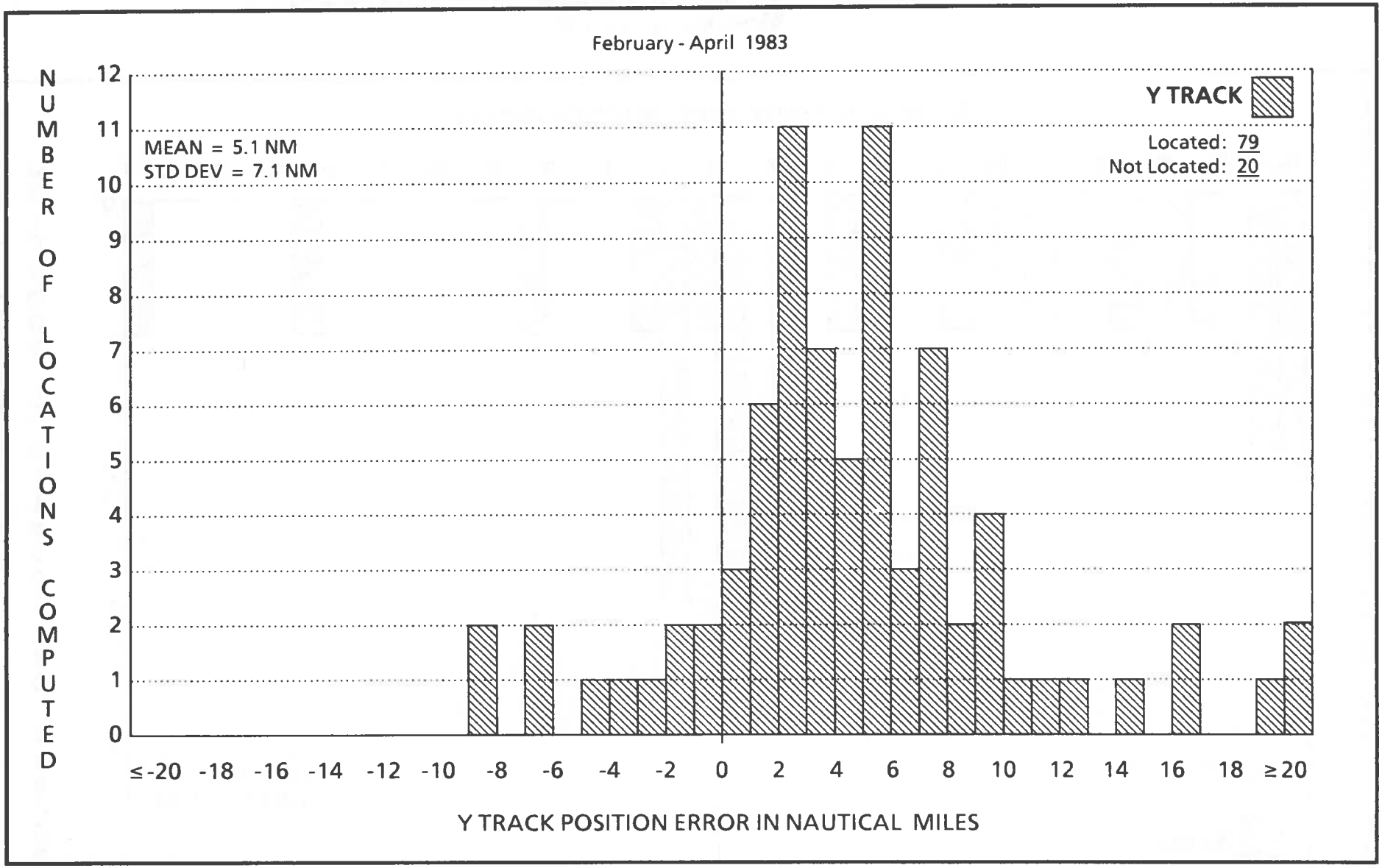


FIGURE E-14. Y-TRACK ERROR DISTRIBUTION: NANTUCKET LIGHT -- 121.5-MHz

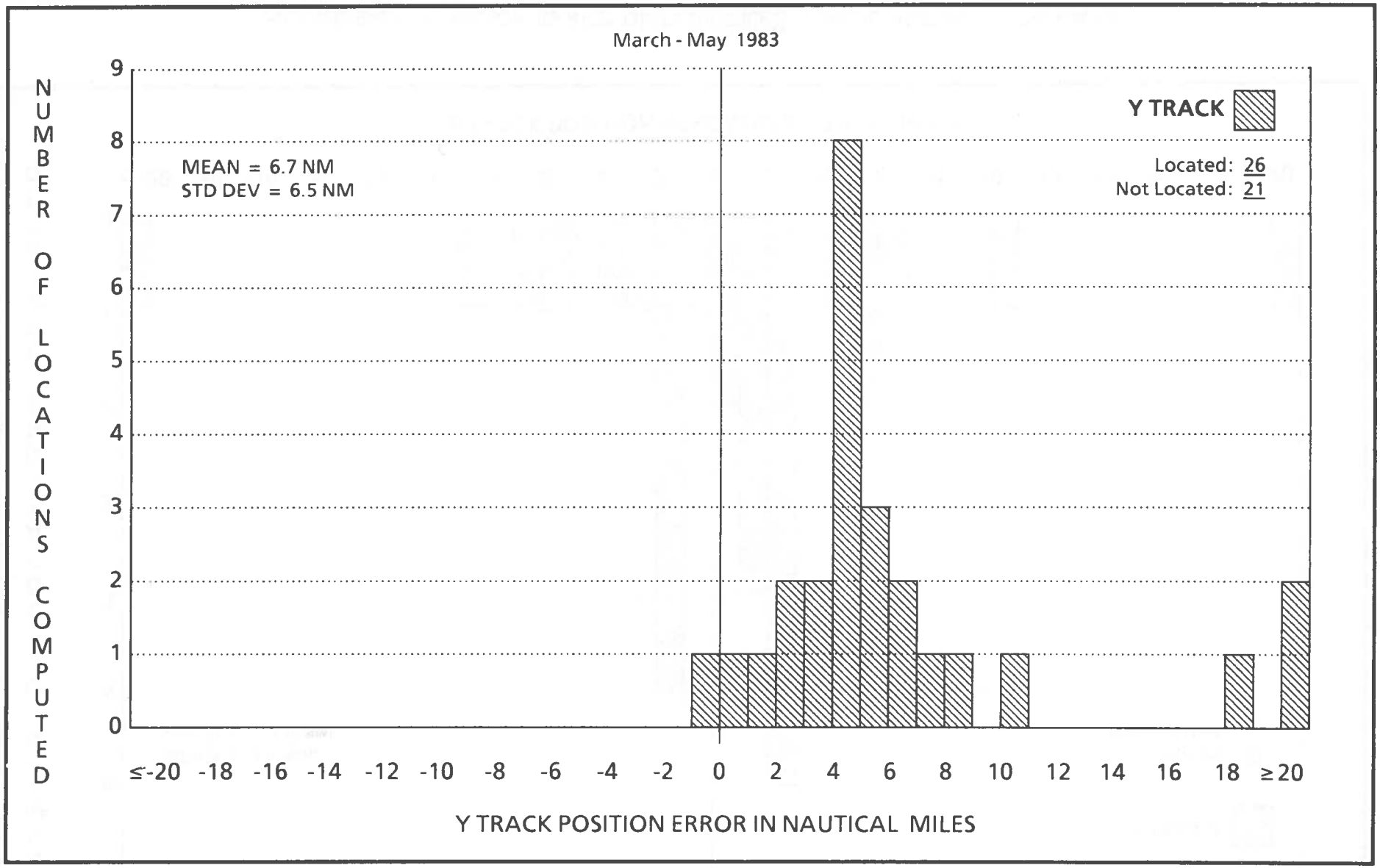


FIGURE -16. Y-TRACK ERROR DISTRIBUTION: FISHERIES -- 121.5-MHz

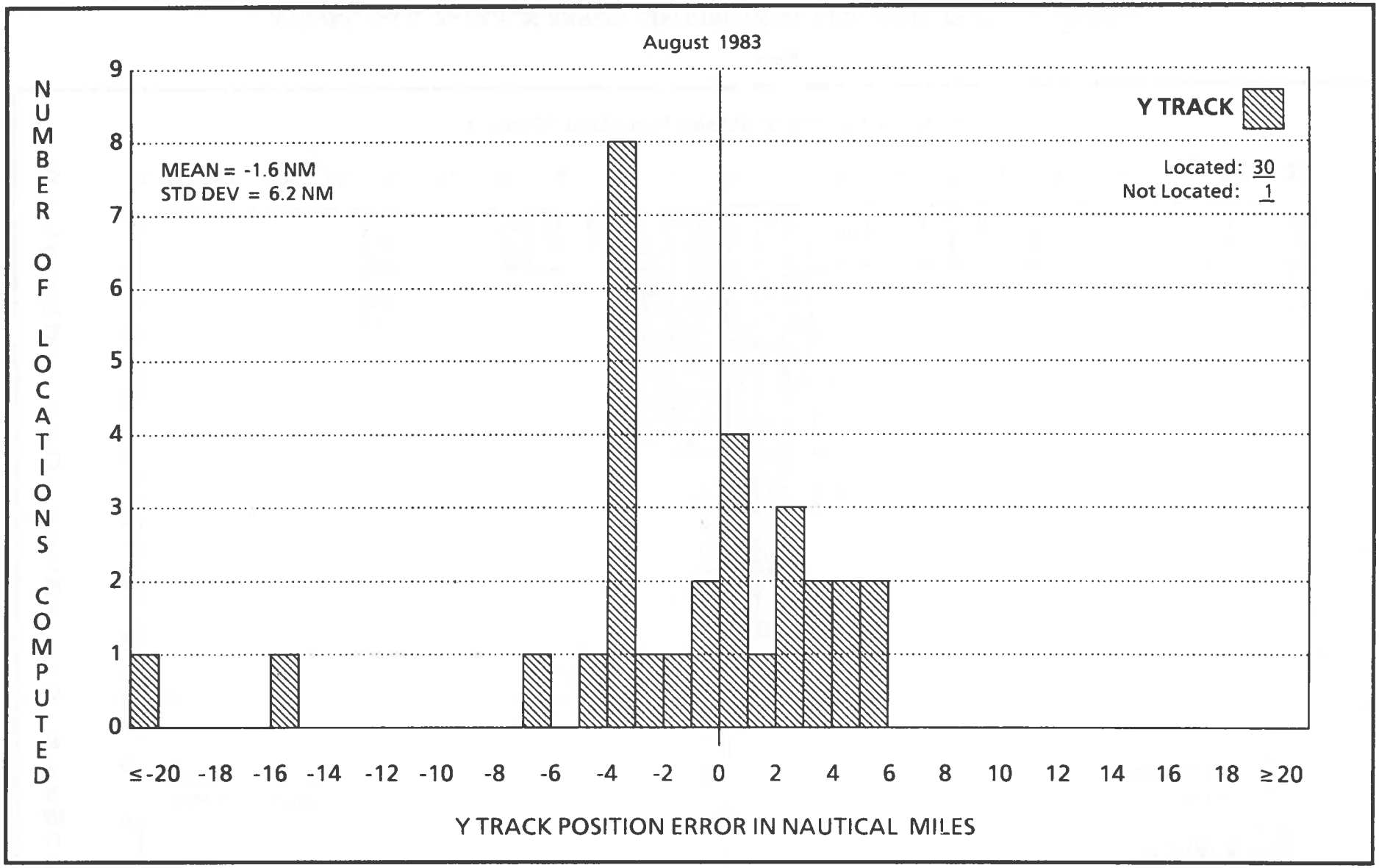


FIGURE E-18. Y-TRACK ERROR DISTRIBUTION: FIREBUSH TEST -- 121.5-MHz

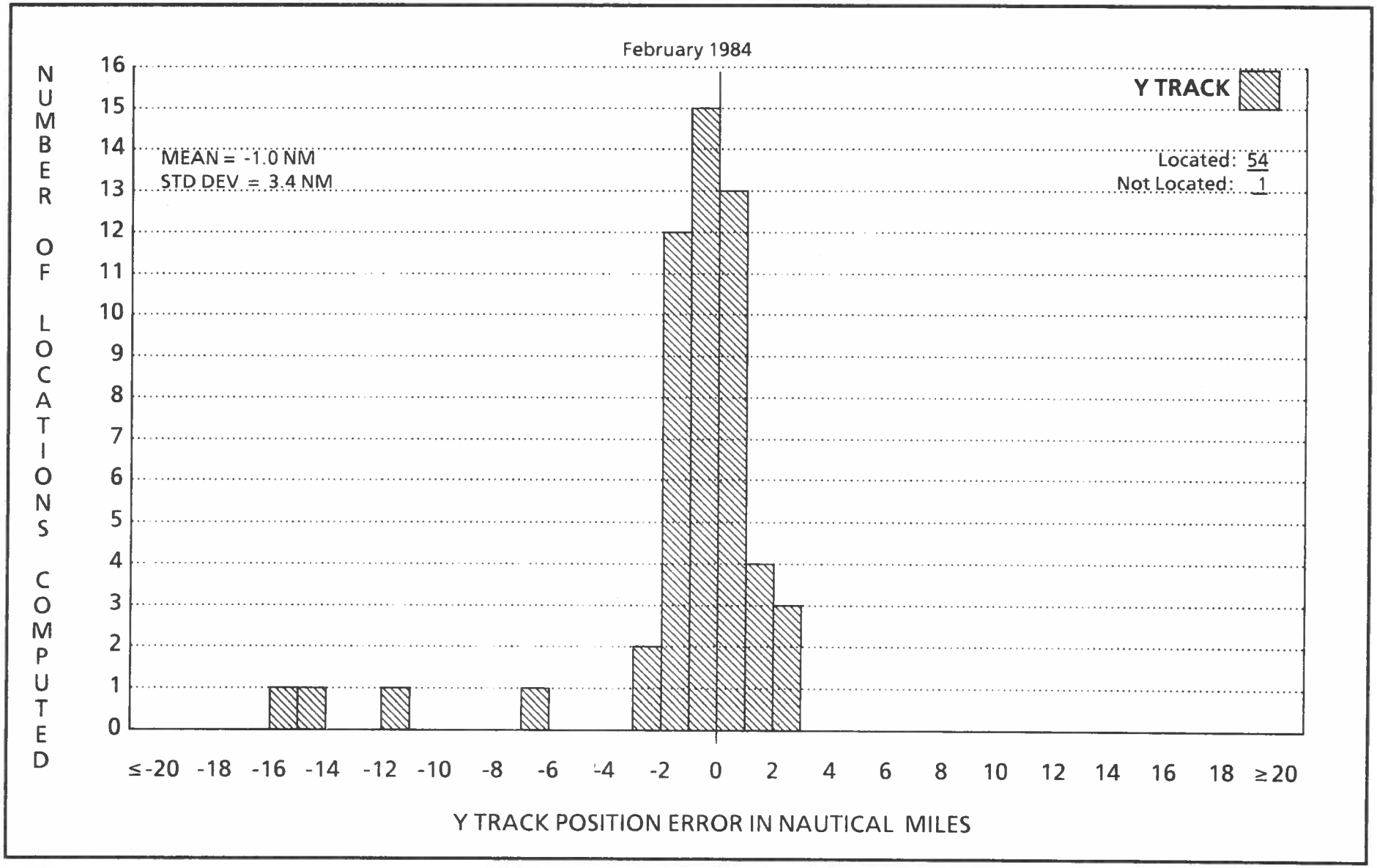


FIGURE E-20. Y-TRACK ERROR DISTRIBUTION: LIGHTSHIP TEST -- 121.5-MHz

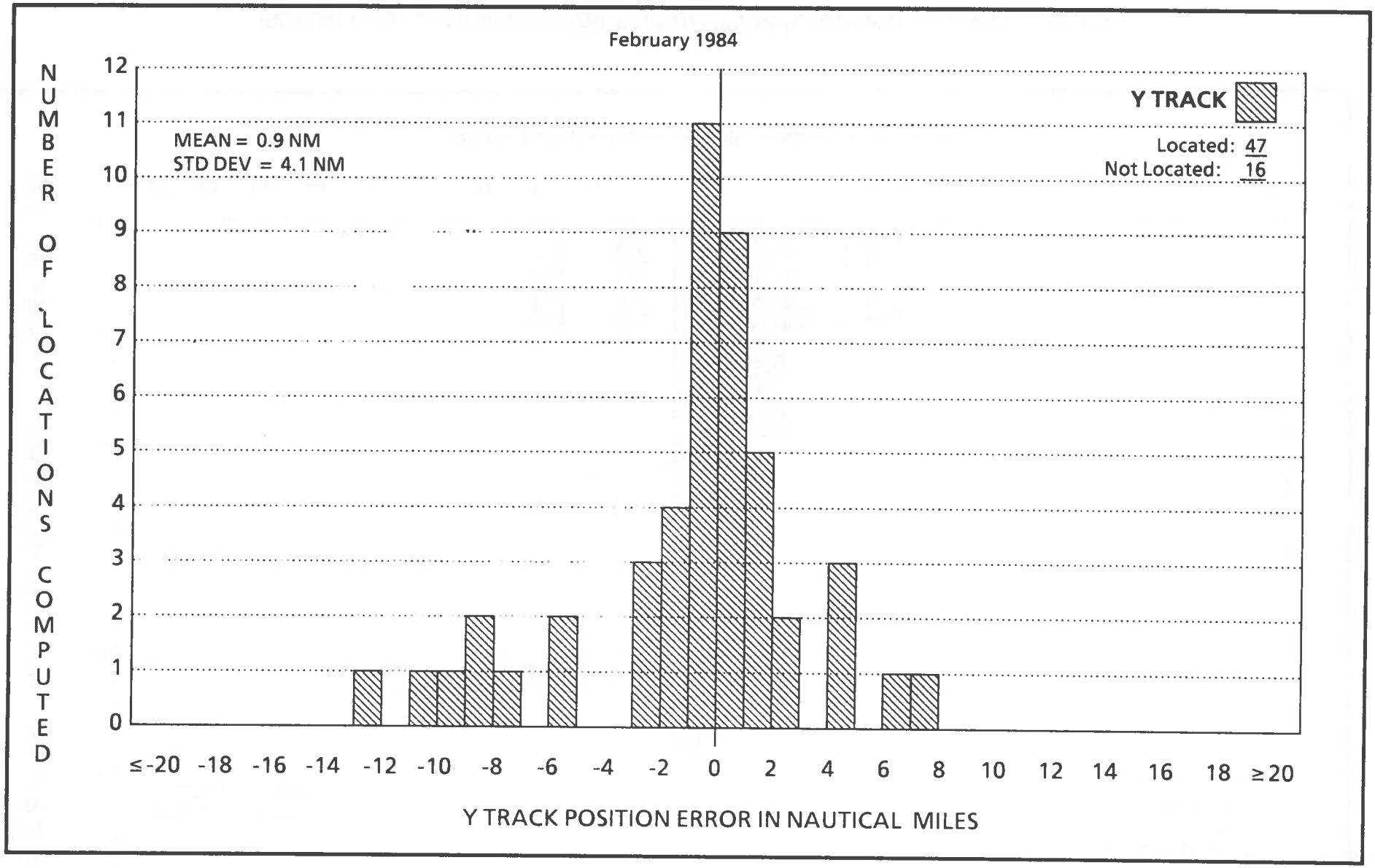


FIGURE E-22. Y-TRACK ERROR DISTRIBUTION: NASA LOCATION PROBABILITY TEST -- 121.5-MHz

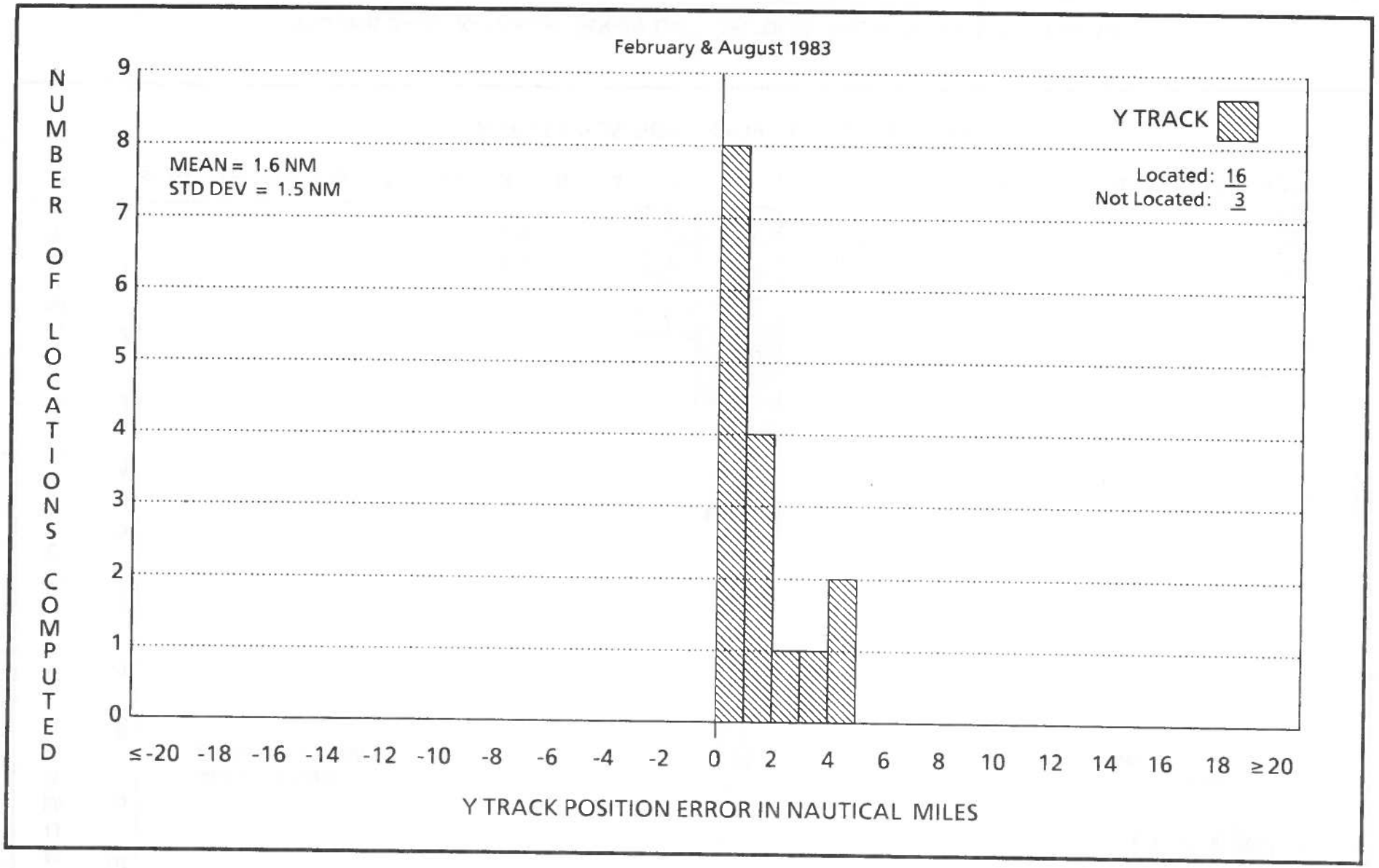


FIGURE E-24. Y-TRACK ERROR DISTRIBUTION: MARSHFIELD 1 & 2 -- 406-MHz

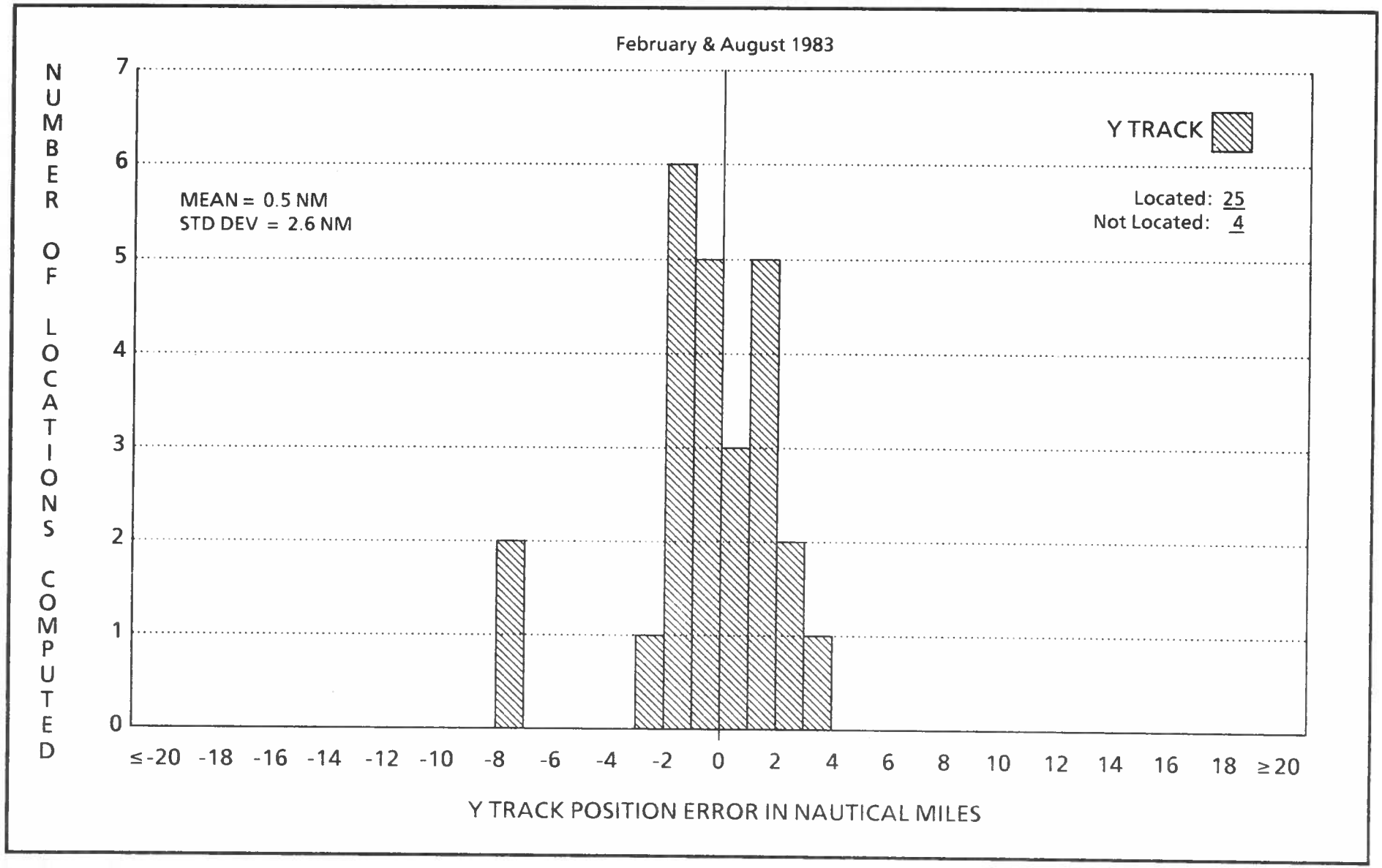


FIGURE E-26. Y-TRACK ERROR DISTRIBUTION: PT. REYES 1 & 2 -- 406-MHz

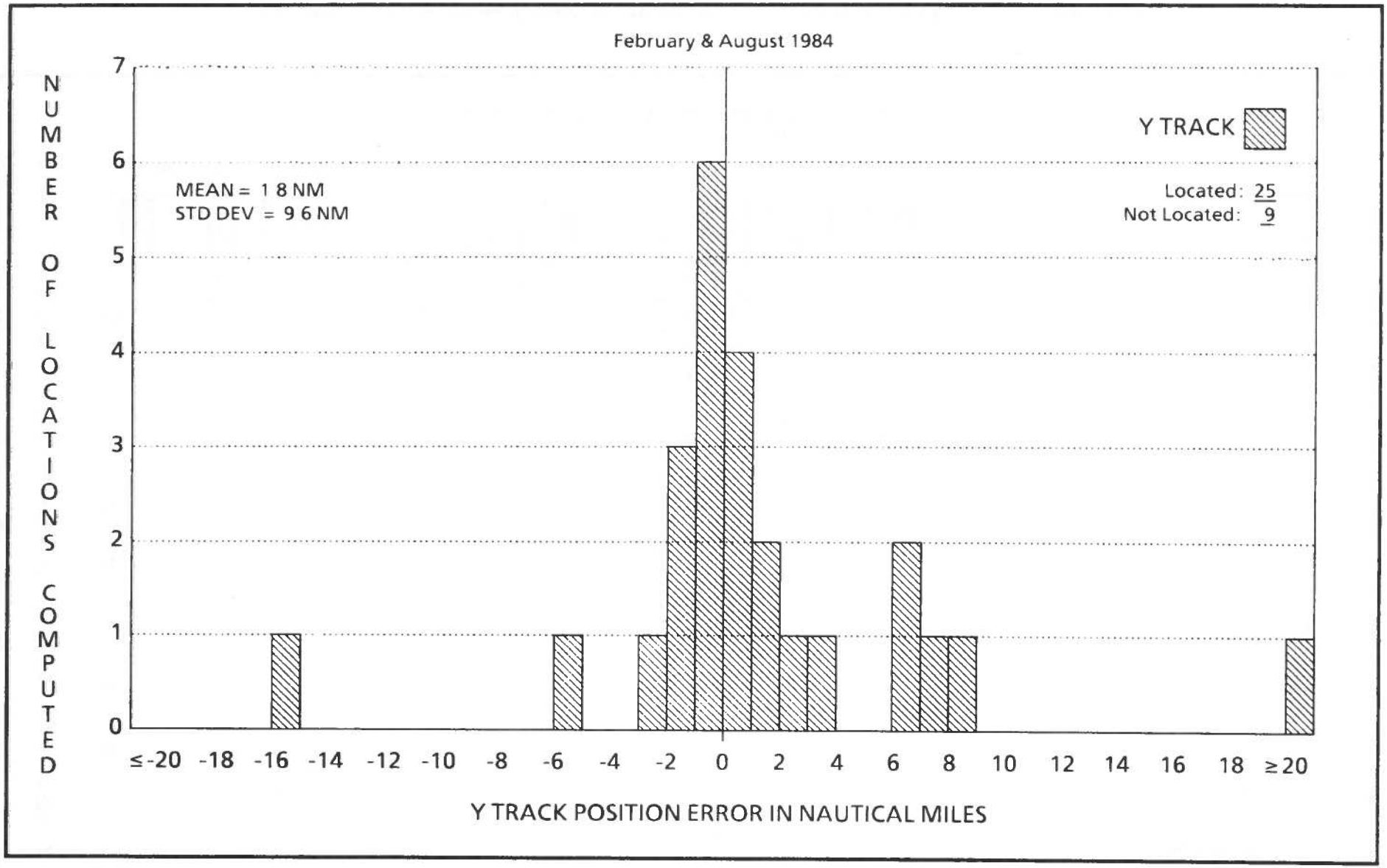


FIGURE E-28. Y-TRACK ERROR DISTRIBUTION: KODIAK 1 & 2 -- 406-MHz

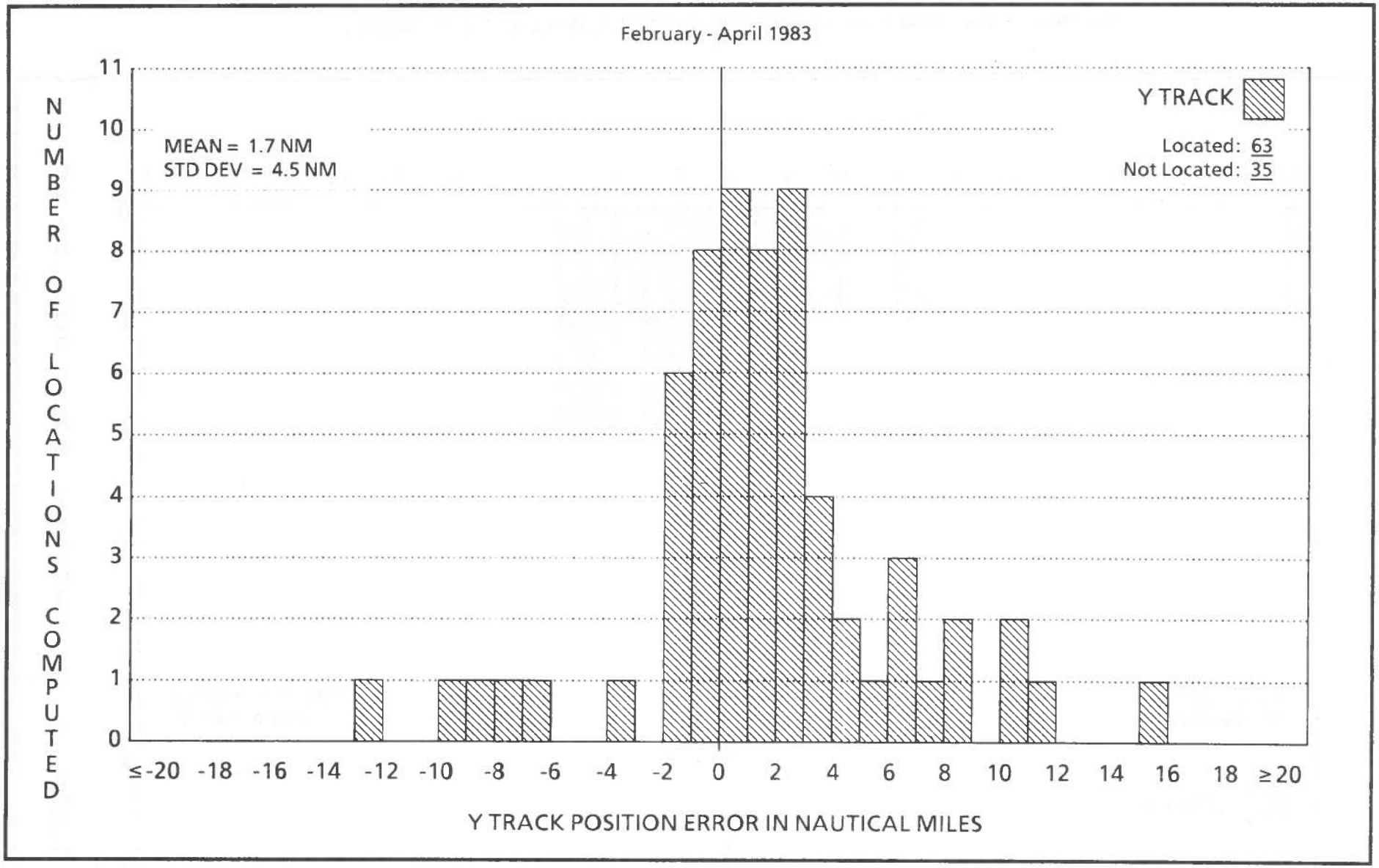


FIGURE E-30. Y-TRACK ERROR DISTRIBUTION: NANTUCKET LIGHT -- 406-MHz

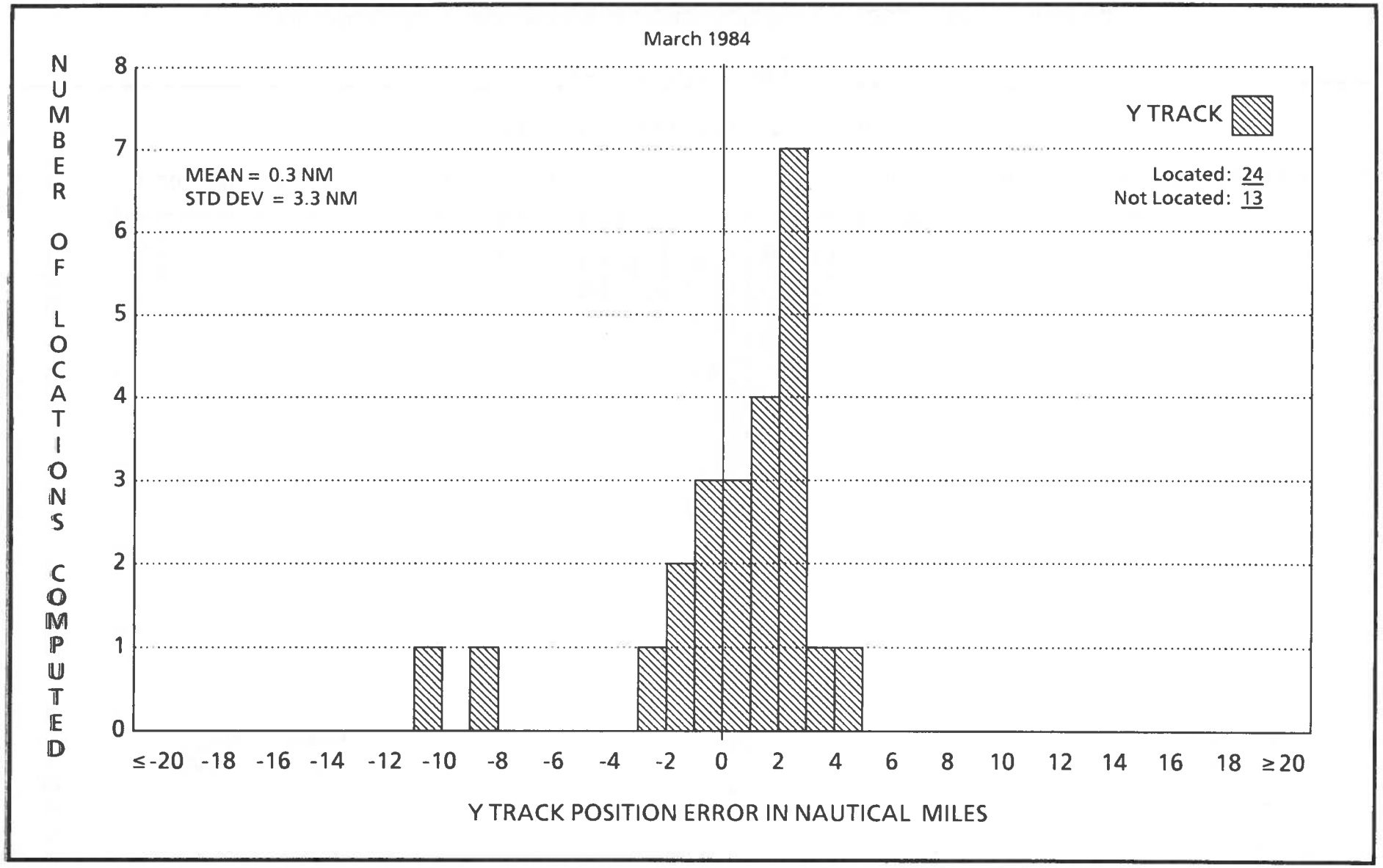


FIGURE E-32. Y-TRACK ERROR DISTRIBUTION: FISHERIES -- 406-MHz

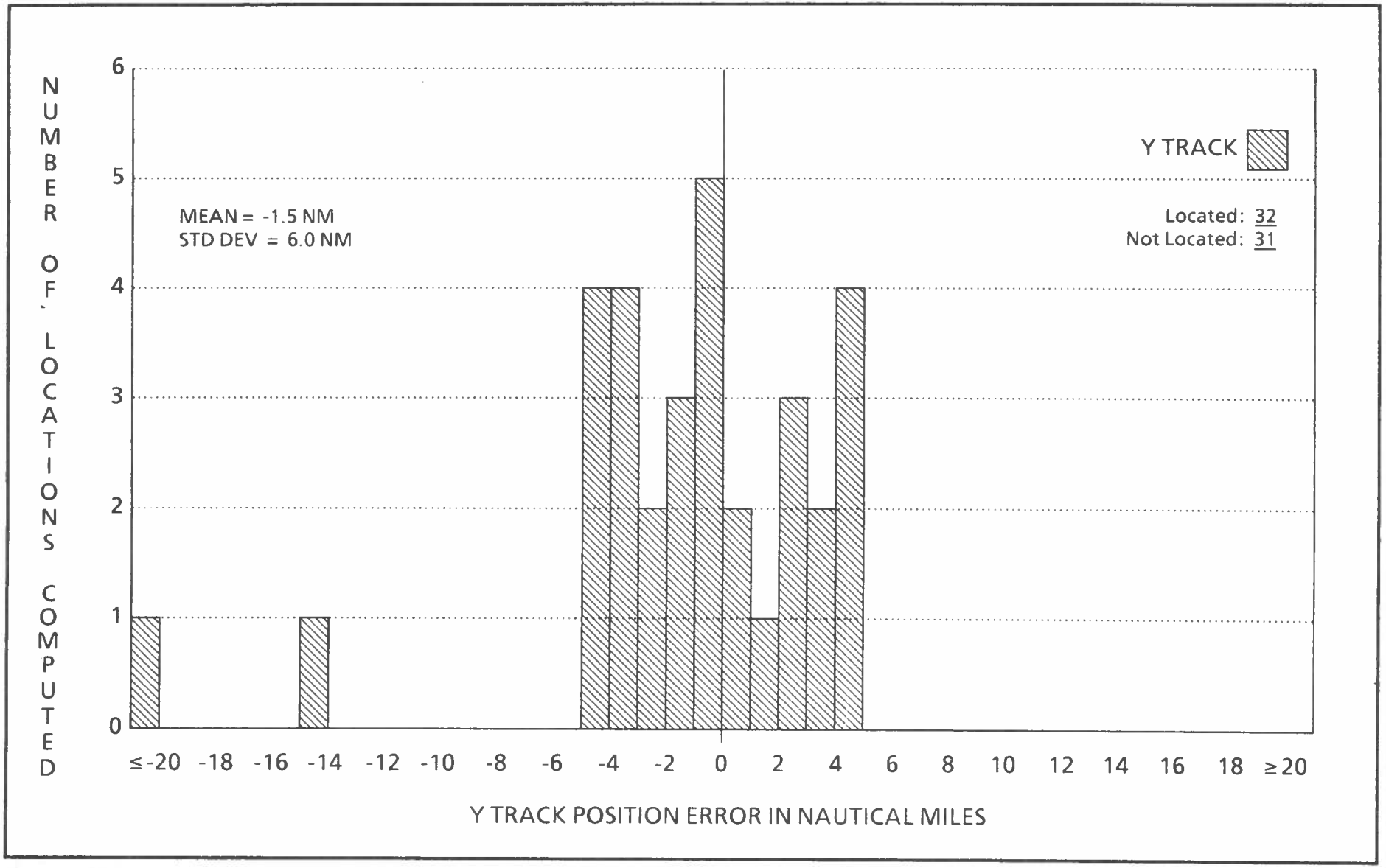


FIGURE E-34. Y-TRACK ERROR DISTRIBUTION: FIREBUSH TEST -- 406-MHz

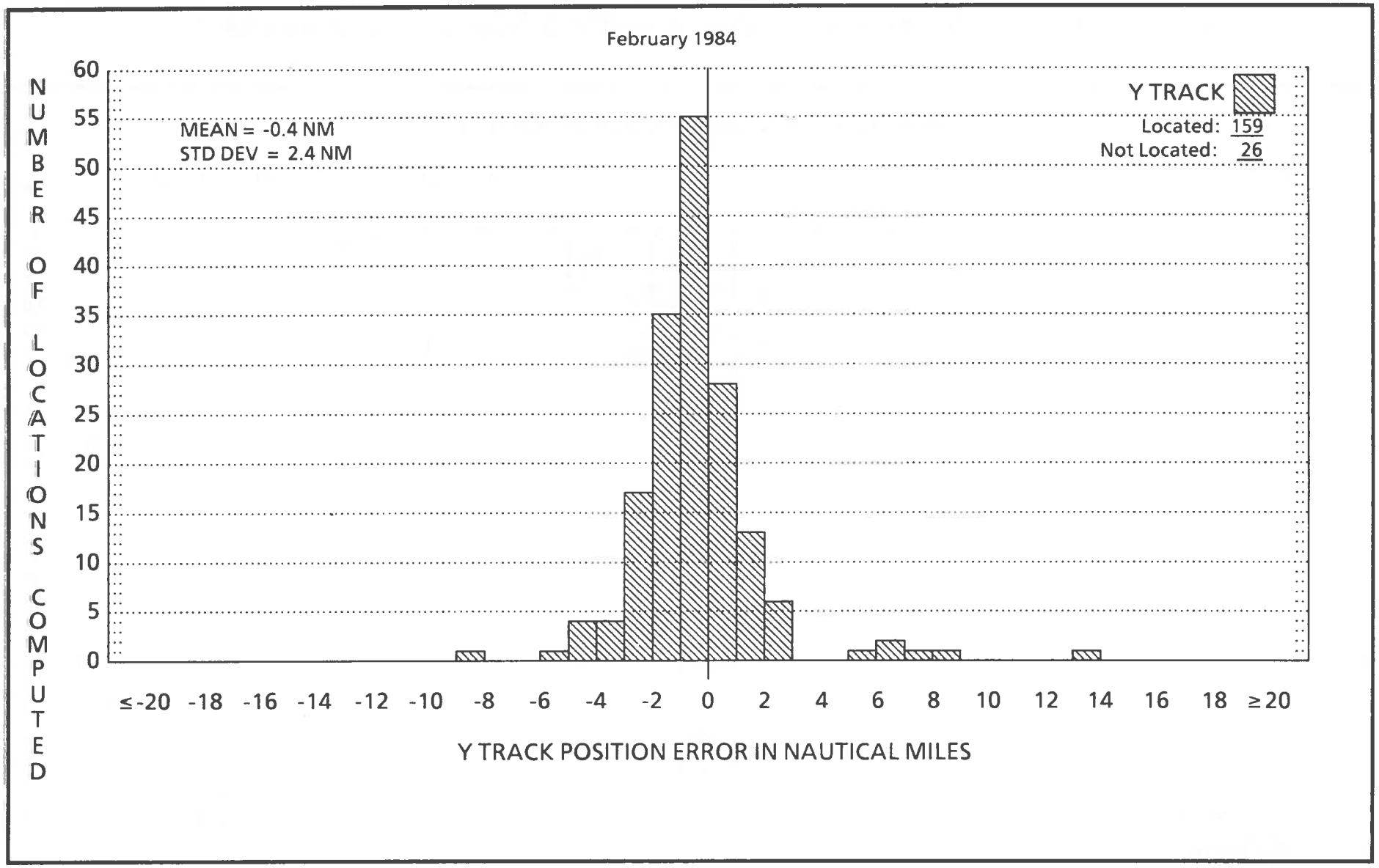


FIGURE E-36. Y-TRACK ERROR DISTRIBUTION: LIGHTSHIP -- 406-MHz

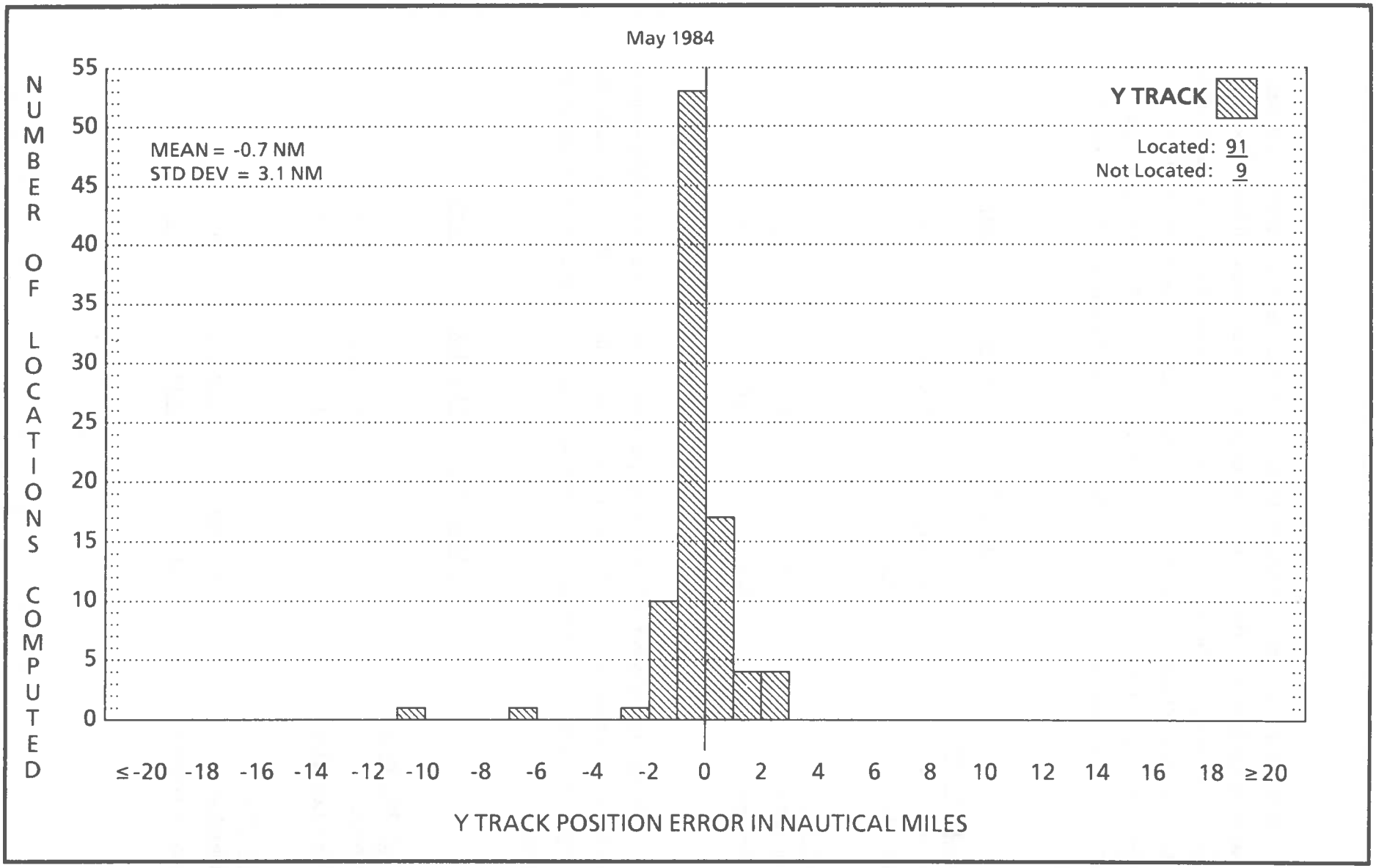


FIGURE E-38. Y-TRACK ERROR DISTRIBUTION: NASA LOCATION PROBABILITY TEST -- 406-MHz

## E.6 ERROR MAGNITUDE HISTOGRAMS

Figures E-39 and E-40 show histograms of the magnitude of position error for all land and floating tests during the D&E. Fifty percent of the 121.5/243-MHz errors (Figure E-39) are under 7 nm, and 85 percent are under 25 nm. For 406-MHz (Figure E-40), 50 percent are under 1.8 nm, and 85 percent are under 7.8 nm. The histograms are similar to the expected Rayleigh distribution, except for the relatively large populations in the tails.

## E.7 ANALYSIS OF VARIANCE OF LOCATION ERROR

An analysis of variance was performed on all test data taken during the D&E, with the exception of the NORTHWIND and WESTWIND (deck) tests. The factors tested for were test site (land vs. sea), satellite (C1, C2, or S1) and LUT (Scott, Pt. Reyes, Kodiak, SEDL). The results for both frequencies as produced by the statistical package SPSS are given in Tables E-1 through E-3. The dependent variable in all cases was magnitude of location error, in nautical miles, excluding errors greater than 50 nm.

### Land/Sea

Table E-1 shows an F-value of 2.162 and no significance to the land/sea variable for 121.5-MHz; but for 406-MHz it shows the mean 406-MHz location error was 2.9 on land and 4.5 nm at sea. This difference is significant at the 99.4 percent level. This lower accuracy for 406-MHz beacons floating at sea is traceable to a lower probability of detecting the 406-MHz burst message at sea, as shall be shown below.

### Satellite

Table E-2 shows that the location error magnitude for COSPAS 1 is significantly greater than for COSPAS 2 or SARSAT 1, both at 121.5-MHz and 406-MHz. The probable explanation is that COSPAS 1 is more sensitive to noise and interference than the later satellites. The higher noise level would interfere with 121.5-MHz reception and relay as well as with detection of the 406-MHz burst messages. Apparently the effect on 121.5-MHz accuracy is somewhat more than the effect on 406-MHz accuracy.

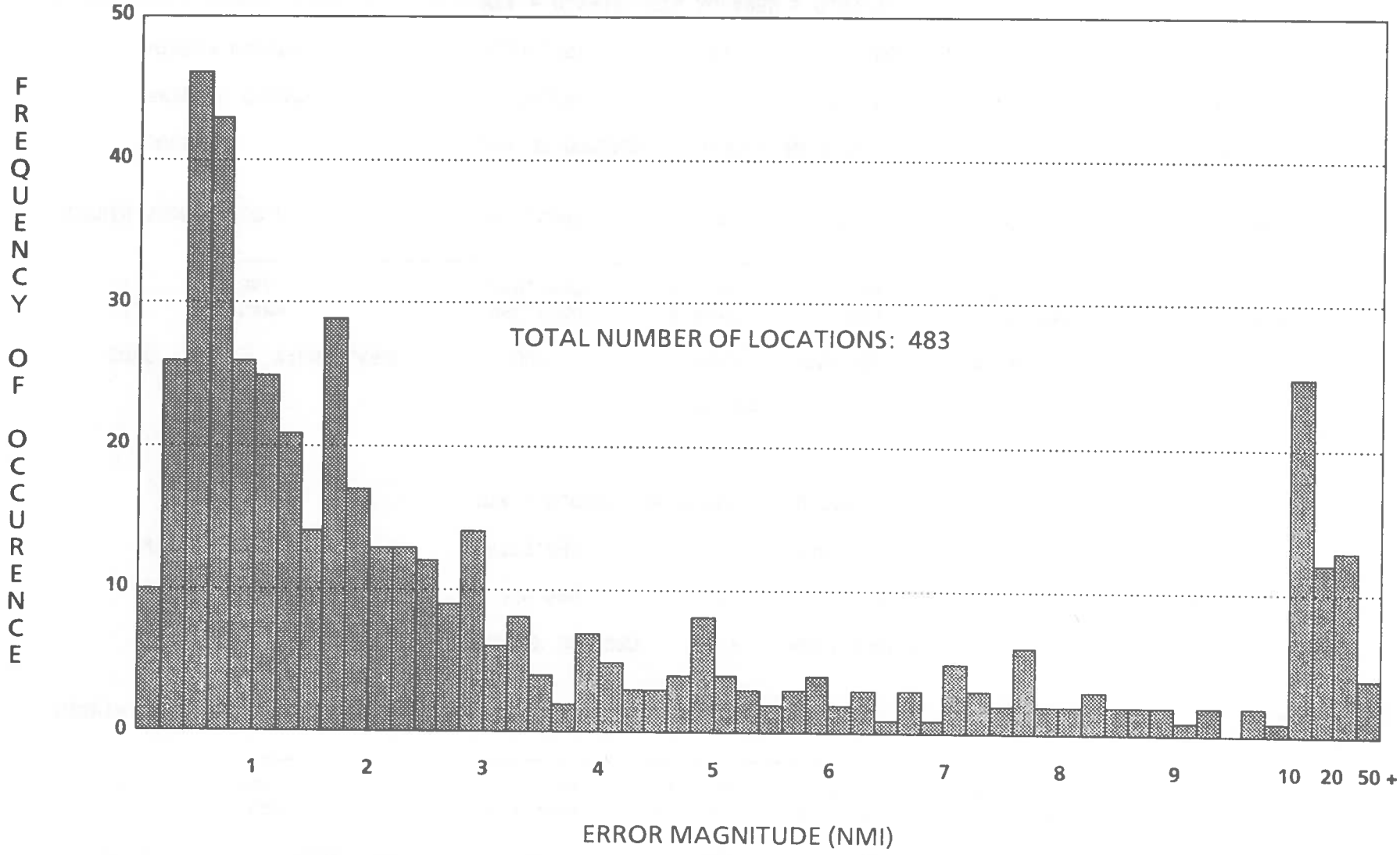


FIGURE E-40. DISTRIBUTION OF POSITION ERROR MAGNITUDES 406-MHz, ALL D&E LAND AND FLOATING TESTS

## TABLE E-2. ANALYSIS OF LOCATION ERROR VARIANCE - BY SATELLITE

### 121.5-MHz

| CODE | VALUE LABEL | SUM | MEAN | STD DEV | SUM OF SQ | N |
|---|---|---|---|---|---|---|
| 1. | COSPAS1 | 2323.9999 | 13.0562 | 11.8288 | 24765.8351 | ( 178) |
| 2. | COSPAS2 | 466.0000 | 6.6571 | 7.3014 | 3678.4111 | ( 70) |
| 3. | SARSAT1 | 475.2000 | 6.8870 | 7.1572 | 3483.3780 | ( 69) |
| WITHIN GROUPS TOTAL | | 3265.1998 | 10.3003 | 10.0837 | 31927.6241 | ( 317) |

| SOURCE | SUM OF SQUARES | D.F. | MEAN SQUARE | F | SIG. |
|---|---|---|---|---|---|
| BETWEEN GROUPS | 3084.882 | 2 | 1542.141 | 15.170 | 0.0000 |
| WITHIN GROUPS | 31927.621 | 314 | 101.680 | | |

ETA = 0.2968 ETA SQUARED = 0.0881

### 406-MHz

| o VARIABLE | CODE | VALUE LABEL | SUM | MEAN | STD DEV | SUM OF SQ | N |
|---|---|---|---|---|---|---|---|
| SAT | 1. | COSPAS1 | 976.6999 | 4.9579 | 6.7865 | 9027.2193 | ( 197) |
| SAT | 2. | COSPAS2 | 344.2000 | 3.0193 | 5.2021 | 3057.9974 | ( 114) |
| SAT | 3. | SARSAT1 | 386.2000 | 3.1145 | 3.0318 | 1130.5938 | ( 124) |
| WITHIN GROUPS TOTAL | | | 1707.0999 | 3.9244 | 5.5310 | 13215.8105 | ( 435) |

| SOURCE | SUM OF SQUARES | D.F. | MEAN SQUARE | F | SIG |
|---|---|---|---|---|---|
| BETWEEN GROUPS | 385.130 | 2 | 192.565 | 6.295 | 0.0020 |
| WITHIN GROUPS | 13215.810 | 132 | 30.592 | | |

ETA = 0.1683 ETA SQUARED = 0.0283

LUTs

Table E-3 shows that the Pt. Reyes and Kodiak LUTs produced slightly less accurate locations than those at Scott and Goddard at 406-MHz. The differences at 121.5-MHz and at 406-MHz were not significant at the 95 percent level. The 406-MHz difference, however, was significant at the 92 percent level.

## E.8 EFFECT OF POINT DETECTION ON 406-MHz ACCURACY

The effect on mean location error magnitude of the number of points in the 406-MHz position calculation may be seen in Figure E-41. This figure shows the average location error magnitude for all land and floating tests during the D&E, except for those with errors greater than 50 nm. The abscissa is the number of points indicated on the LUT alert message. It can be seen that the mean location error increases rapidly as the number of points (burst messages) drops below 7, similar to what is seen in Section E.3 for the floating beacon tests. There are relatively few messages with more than 16 points, or fewer than 4 points. The reason for the loss in accuracy with the loss in points is probably the deterioration in curve-fit accuracy in the LUT algorithm due to the reduction in information received.

Analysis by Satellite

Figure E-42 shows the same error versus points as in Figure E-41, broken out by satellite. It is apparent that solutions from all three satellites show the same general behavior as a function of the number of points. Differences in mean error between satellites are due primarily to the differences among satellites in the number of points in their location solutions. This is shown in Figure E-43, which gives the number of solutions in the D&E data that have a given number of points, broken out by satellite. The poorer accuracy of COSPAS 1 is seen here to be due to the relatively large number of four-, five-, and six-point solutions in the COSPAS 1 alerts, compared to COSPAS 2 and SARSAT 1. This corroborates the hypothesis that the effect of noise and/or interference is

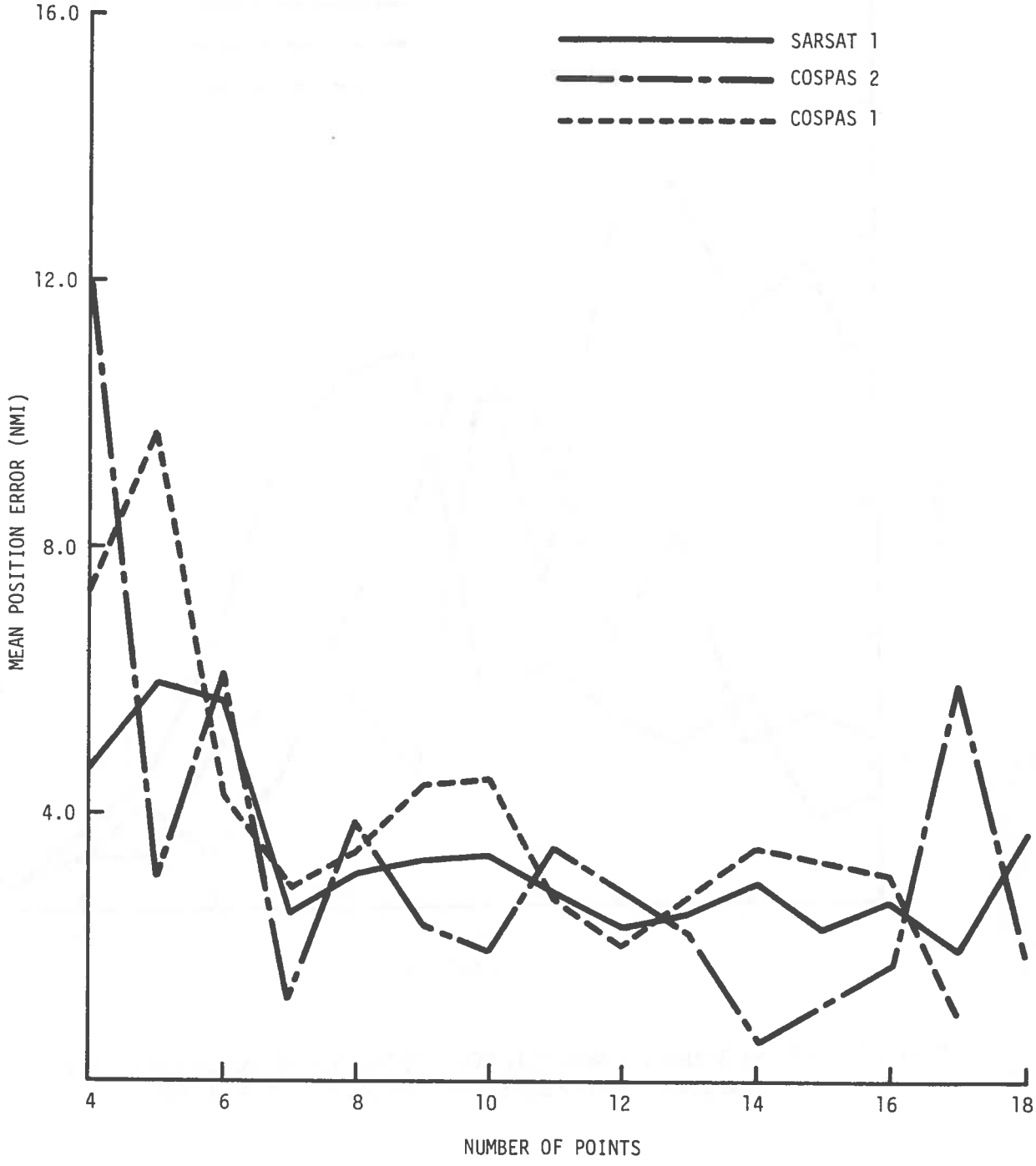


FIGURE E-42. 406-MHz ERROR VS. NUMBER OF POINTS - ALL LAND AND FLOATING TESTS, BY SATELLITE

to reduce the number of burst messages received by the satellite, transmitted to the LUT, and accepted by the LUT error checking algorithm. Since COSPAS.2 and SARSAT 1 do not show the same loss in points, it appears that COSPAS 1 is more susceptible to noise and interference than the other two satellites.

An additional striking illustration of the effect of solution point count on accuracy is given in Figure E-44, which shows the percent of solutions with error exceeding 10 nm as a function of the number of points in the 406 alert.

Analysis by Land/Sea and Satellite

An approximate analysis was carried out on the D&E 406-MHz data to determine whether the lower accuracy for floating beacons (See Table E-1.) is connected to point detection probability. All D&E land and floating location error magnitudes under 50 nm were considered. It was assumed that the beacons transmitted every 50 seconds and could be seen by the satellite when the satellite elevation was 10 degrees or more at the beacon and 0 degrees or more at the LUT. The ratio R of the number of points displayed on the alert message to the number transmitted was calculated. This R differs from the detection probability in several ways.

(1) The beacon repetition rate actually varies $\pm 5$ percent from once per 50 seconds.

(2) The satellite often relayed valid points when its elevation at the beacon was less than 10 degrees.

(3) The number of points on the alert message is often less than the number received at the LUT because of the error detecting/correcting software in the LUT.

(4) Detections of fewer than 4 points are not included in R.

Despite these differences the point detection ratio R is still considered a useful indicator of relative detection probabilities. The mean of the ratio R, the mean of the number of points NPTS in the solution, and the mean of the mutual visibility type MVIS (in minutes), are shown in Table E-4, along with the standard deviations of the distributions of R, NPTS and MVIS. (The standard deviation of the mean is, in each case, the standard deviation of the distribution divided by the square root of the number N of locations in the sample.)

Examination of Table E-4 shows that the point detection ratio R is significantly lower for COSPAS 1 than for COSPAS 2, and that it is significnatly lower for COSPAS than for SARSAT 1. (0.62 versus 0.78 versus 0.98). It may also be seen that the mean mutual visibility time for SARSAT 1 is only about 87 percent of those for the COSPAS satellites, due to the lower altitude of SARSAT. Its point detection ratio R, however, is close to unity as the average and, in some cases shown in Appendix B, exceeds unity because of the approximations (2) and (4) above.

It can be seen from Table E-4 that the point detection ratio is lower at sea (floating beacons) than on land, for each satellite. When all satellites are taken together, the value of R on land is significantly greater than at sea. Tests show that the land-sea difference is significant at well above the 99.5 percent level for COSPAS 1 and SARSAT 1, and at the 95 percent level for COSPAS 2. It can be concluded from the data that the land-sea difference in the point detection ratio is not peculiar to COSPAS 1, or due exclusively to the large proportion of COSPAS 1 tests at sea. This points to a non-satellite, non-LUT explanation of the lower detection ratio at sea. The likelihood of a geometric explanation (i.e., lower mutual visibility time at sea) is also poor because the mean values of MVIS in Table E-4 are not significantly lower at sea.

## E.9 ANALYSIS OF 406-MHz LOCATION PROBABILITY

The location probability dealt with in the D&E tests is the probability that a properly functioning beacon will be located by a LUT in the Regional Mode, given mutual visibility and assuming the LUT is properly functioning and tracking the satellite in question.

For the 406-MHz beacon, the LUT calculates a location if, and only if, it receives and successfully error checks at least four burst messages. Since a properly functioning beacon transmits only one burst message every 50 seconds, the probability of four or more valid messages depends on the satellite, the beacon location (land/sea) and the length of the mutual visibility period.

### Effect of Mutual Visibility Period

Figure E-45 shows the effect of mutual visibility period on the location probability. The solid line is the actually observed ratio of locations calculated to maximum number of locations possible for all 406-MHz beacon passes during the D&E. The numbers above the solid curve are the number of possible locations. The dashed curves are the theoretical location probabilities for single burst message detection probabilities .70 and .30, allowing one burst every 50 seconds of visibility. The observed location probability exceeds the theoretical at small visibility periods because of burst detections at less than the 10 degree beacon visibility angle assumed in calculating the mutual visibility period. The observed location probability for larger mutual visibility periods falls between the two bounding curves for 0.7 and 0.3 detection probability of a single burst.

### Effect of Satellite and Land/Sea

Table E-5 shows how location probability varies with satellite and land/sea site of the beacon, as observed during the D&E. The variable MEAN NDTS is the average value of the number of points on the alert messages, allowing zero points for unlocated beacons. This is only an approximation because unlocated beacons often resulted from one, two, or three points, rather than none.

# TABLE E-5. ANALYSIS OF LOCATION PROBABILITY, NUMBER OF POINTS, AND MUTUAL VISIBILITY TIME FOR 406 BEACONS - BY LAND/SEA AND SATELLITE

Note: See text of Section E.9 for definition of terms.

| | | LAND | SEA |
|---|---|---|---|
| COSPAS1 | N = 272<br>MEAN L = 0.72 STD DEV = 0.45<br>MEAN NPTS = 5.74 STD D = 4.39<br>MEAN MVIS = 10.56 STD D = 2.66 | N = 73<br>MEAN L = 0.84 STD DEV = 0.37<br>MEAN NPTS = 7.05 STD D = 4.19<br>MEAN MVIS = 10.23 STD D = 2.95 | N = 199<br>MEAN L = 0.68 STD DEV = 0.47<br>MEAN NPTS = 5.25 STD D = 4.36<br>MEAN MVIS = 10.67 STD D = 2.53 |
| COSPAS2 | N = 151<br>MEAN L = 0.76 STD DEV = 0.43<br>MEAN NPTS = 7.11 STD D = 4.81<br>MEAN MVIS = 10.07 STD D = 2.93 | N = 56<br>MEAN L = 0.88 STD DEV = 0.33<br>MEAN NPTS = 8.95 STD D = 4.45<br>MEAN MVIS = 10.50 STD D = 3.27 | N = 95<br>MEAN L = 0.69 STD DEV = 0.46<br>MEAN NPTS = 6.02 STD D = 4.69<br>MEAN MVIS = 9.82 STD D = 2.67 |
| SARSAT1 | N = 142<br>MEAN L = 0.87 STD DEV = 0.33<br>MEAN NPTS = 9.51 STD D = 4.57<br>MEAN MVIS = 8.69 STD D = 2.52 | N = 53<br>MEAN L = 0.89 STD DEV = 0.32<br>MEAN NPTS = 10.81 STD D = 4.37<br>MEAN MVIS = 9.11 STD D = 2.05 | N = 89<br>MEAN L = 0.87 STD DEV = 0.34<br>MEAN NPTS = 8.73 STD D = 4.51<br>MEAN MVIS = 8.44 STD D = 2.72 |
| ALL SATS | N = 565<br>MEAN L = 0.77 STD DEV = 0.42<br>MEAN NPTS = 7.05 STD D = 4.80<br>MEAN MVIS = 9.96 STD D = 2.80 | N =- 182<br>MEAN L = 0.86 STD DEV = 0.34<br>MEAN NPTS = 8.73 STD D = 4.59<br>MEAN MVIS = 9.99 STD D = 2.89 | N = 383<br>MEAN L = 0.73 STD DEV = 0.45<br>MEAN NPTS = 6.25 STD D = 4.69<br>MEAN MVIS = 9.94 STD D = 2.76 |

## E.10 REFERENCES

1. Centre Nationale D'Etudes Spatiales, SARSAT-COSPAS Program, "French D and E Six-Month Report," 1 February - 31 July, 1983.

# APPENDIX F

# SAR CASE ANALYSIS TABLES

## F.1 ALL ELT/EPIRB CASES - SUMMARY TABLES

- o SAR CASE ANALYSIS FOR CGDs
- o TABLE FOR TIME ANALYSIS
- o TABLE FOR FALSE ALARMS
- o RESOURCE COST
- o SARSAT MESSAGE ANALYSIS

## F.2 ELT/EPIRB - FIRST CASES - SUMMARY TABLES

- o SAR CASE ANALYSIS FOR CGDs
- o TABLE FOR TIME ANALYSIS
- o TABLE FOR FALSE ALARMS
- o RESOURCE COST
- o SARSAT MESSAGE ANALYSIS

## F.3 ALL ELT/EPIRB CASES - DATA LISTING

- o DISTRESS CASES, IN CHRONOLOGICAL ORDER
- o ALL CASES, BY YEAR, DISTRICT AND CASE NUMBER

## F.4 BASELINE STATISTICS

1 SAR CASE ANALYSIS FOR CG DISTRICT 11
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISTRESS CASES | 0 | 0 | 0 | 2 | 2 |
| LIVES SAVED | 0 | 0 | 0 | 3 | 3 |
| NON-DISTRESS CASES | 7 | 3 | 0 | 0 | 10 |
| TRUE NON-DIST | 0 | 0 | 0 | 0 | 0 |
| FALSE ALARM | 7 | 3 | 0 | 0 | 10 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 0 | 0 |
| NOT LOCATED CASES | 6 | 2 | 0 | 0 | 8 |
| FALSE ALARM | 6 | 2 | 0 | 0 | 8 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 0 | 0 |
| TOTAL CASES | 13 | 5 | 0 | 2 | 20 |

1 SAR CASE ANALYSIS FOR CG DISTRICT 12
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISTRESS CASES | 1 | 2 | 1 | 4 | 8 |
| LIVES SAVED | 2 | 3 | 2 | 8 | 15 |
| NON-DISTRESS CASES | 3 | 7 | 2 | 2 | 14 |
| TRUE NON-DIST | 0 | 0 | 0 | 0 | 0 |
| FALSE ALARM | 3 | 7 | 2 | 2 | 14 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 0 | 0 |
| NOT LOCATED CASES | 4 | 1 | 3 | 1 | 9 |
| FALSE ALARM | 4 | 1 | 3 | 1 | 9 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 0 | 0 |
| TOTAL CASES | 8 | 10 | 6 | 7 | 31 |

1 SAR CASE ANALYSIS FOR CG DISTRICT 13
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISTRESS CASES | 0 | 1 | 0 | 1 | 2 |
| LIVES SAVED | 0 | 2 | 0 | 3 | 5 |
| NON-DISTRESS CASES | 3 | 5 | 1 | 2 | 11 |
| TRUE NON-DIST | 0 | 0 | 0 | 0 | 0 |
| FALSE ALARM | 3 | 5 | 1 | 2 | 11 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 0 | 0 |
| NOT LOCATED CASES | 0 | 0 | 0 | 1 | 1 |
| FALSE ALARM | 0 | 0 | 0 | 0 | 0 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 1 | 1 |
| TOTAL CASES | 3 | 6 | 1 | 4 | 14 |

1 SAR CASE ANALYSIS FOR CG DISTRICT 14
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISTRESS CASES | 0 | 0 | 2 | 1 | 3 |
| LIVES SAVED | 0 | 0 | 9 | 3 | 12 |
| NON-DISTRESS CASES | 2 | 1 | 19 | 4 | 26 |
| TRUE NON-DIST | 0 | 0 | 0 | 0 | 0 |
| FALSE ALARM | 2 | 1 | 17 | 4 | 24 |
| FALSE ALRT/UNK | 0 | 0 | 2 | 0 | 2 |
| NOT LOCATED CASES | 5 | 1 | 8 | 1 | 15 |
| FALSE ALARM | 3 | 0 | 5 | 1 | 9 |
| FALSE ALRT/UNK | 2 | 1 | 3 | 0 | 6 |
| TOTAL CASES | 7 | 2 | 29 | 6 | 44 |

1 SAR CASE ANALYSIS FOR CG DISTRICT 17
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISTRESS CASES | 3 | 7 | 0 | 2 | 12 |
| LIVES SAVED | 7 | 13 | 0 | 5 | 25 |
| NON-DISTRESS CASES | 18 | 10 | 1 | 3 | 32 |
| TRUE NON-DIST | 5 | 1 | 1 | 0 | 7 |
| FALSE ALARM | 12 | 8 | 0 | 3 | 23 |
| FALSE ALRT/UNK | 1 | 1 | 0 | 0 | 2 |
| NOT LOCATED CASES | 5 | 3 | 0 | 2 | 10 |
| FALSE ALARM | 2 | 1 | 0 | 2 | 5 |
| FALSE ALRT/UNK | 3 | 2 | 0 | 0 | 5 |
| TOTAL CASES | 26 | 20 | 1 | 7 | 54 |

1 SAR CASE ANALYSIS FOR ALL CG DISTRICTS
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISTRESS CASES | 7 | 26 | 13 | 28 | 74 |
| LIVES SAVED | 13 | 70 | 64 | 79 | 226 |
| NON-DISTRESS CASES | 111 | 90 | 100 | 51 | 352 |
| TRUE NON-DIST | 6 | 3 | 4 | 1 | 14 |
| FALSE ALARM | 98 | 84 | 91 | 49 | 322 |
| FALSE ALRT/UNK | 7 | 3 | 5 | 1 | 16 |
| NOT LOCATED CASES | 101 | 58 | 56 | 18 | 233 |
| FALSE ALARM | 74 | 40 | 40 | 15 | 169 |
| FALSE ALRT/UNK | 27 | 18 | 16 | 3 | 64 |
| TOTAL CASES | 219 | 174 | 169 | 97 | 659 |

TIME ANALYSIS FOR ALL CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | AVERAGE |
|---|---|---|---|---|---|
| | [ AVERAGE HOURS PER CASE / NUMBER OF CASES ] | | | | |
| NOTIFICATION TIME | 8.5 / 5 | 7.1 / 9 | 2.3 / 3 | 3.0 / 10 | 5.3 / 27 |
| PLANNING TIME | 12.2 /179 | 8.2 /148 | 2.0 /134 | 5.3 / 78 | 7.6 /539 |
| MODIFIED PLAN TIME | 0.0 / 0 | 2.5 /122 | 2.0 /134 | 5.3 / 78 | 3.0 /334 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SEARCHES ] | | | | |
| SEARCH TIME | 0.7 /177 | 1.4 /151 | 0.7 /139 | 4.5 / 91 | 1.5 /558 |
| HH-52 | 0.6 / 61 | 0.6 / 47 | 0.5 / 53 | 2.8 / 18 | 0.8 /179 |
| HH-3F | 0.7 / 34 | 1.0 / 24 | 1.0 / 27 | 2.0 / 20 | 1.1 /105 |
| HC-130 | 0.9 / 28 | 1.6 / 23 | 0.6 / 16 | 2.9 / 21 | 1.5 / 88 |
| HH-25 | 0.7 / 48 | 0.7 / 43 | 0.6 / 33 | 1.1 / 20 | 0.7 /144 |
| OTHER | 0.8 / 6 | 6.7 / 14 | 0.8 / 10 | 19.9 / 12 | 8.2 / 42 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SORTIES ] | | | | |
| SORTIE TIME | 1.9 /183 | 2.5 /169 | 1.4 /139 | 4.2 / 99 | 2.3 /590 |
| HH-52 | 1.5 / 56 | 1.8 / 38 | 1.1 / 53 | 4.3 / 19 | 1.8 /166 |
| HH-3F | 2.1 / 29 | 2.4 / 26 | 1.8 / 26 | 3.1 / 19 | 2.3 /100 |
| HC-130 | 3.2 / 28 | 3.6 / 26 | 2.6 / 13 | 6.9 / 14 | 3.9 / 81 |
| HH-25 | 2.1 / 48 | 2.2 / 44 | 1.7 / 34 | 2.3 / 22 | 2.1 /148 |
| BOAT | 1.6 / 1 | 3.3 / 4 | 1.4 / 1 | 10.0 / 4 | 5.6 / 10 |
| CUTTER | 5.1 / 1 | 27.9 / 3 | 3.9 / 1 | 42.1 / 2 | 25.3 / 7 |
| OTHER | 1.4 / 20 | 13.5 / 28 | 3.0 / 11 | 12.3 / 19 | 8.7 / 78 |

TIME ANALYSIS FOR DISTRESS CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | AVERAGE |
|---|---|---|---|---|---|
| | [ AVERAGE HOURS PER CASE / NUMBER OF CASES ] | | | | |
| NOTIFICATION TIME | 0.0 / 0 | 6.2 / 8 | 2.3 / 3 | 1.6 / 9 | 3.5 / 20 |
| PLANNING TIME | 9.9 / 6 | 9.4 / 23 | 1.5 / 7 | 4.2 / 24 | 6.4 / 60 |
| MODIFIED PLAN TIME | 0.0 / 0 | 2.1 / 17 | 1.5 / 7 | 4.2 / 24 | 3.1 / 48 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SEARCHES ] | | | | |
| SEARCH TIME | 0.6 / 4 | 3.9 / 23 | 0.6 / 6 | 11.5 / 30 | 7.0 / 63 |
| HH-52 | 0.0 / 0 | 0.0 / 0 | 0.1 / 1 | 12.0 / 3 | 9.0 / 4 |
| HH-3F | 0.0 / 0 | 0.4 / 3 | 1.1 / 1 | 5.1 / 6 | 3.3 / 10 |
| HC-130 | 0.2 / 2 | 1.2 / 9 | 1.0 / 2 | 4.0 / 11 | 2.4 / 24 |
| HH-25 | 1.0 / 2 | 0.7 / 8 | 0.3 / 2 | 1.3 / 6 | 0.9 / 18 |
| OTHER | 0.0 / 0 | 24.2 / 3 | 0.0 / 0 | 56.4 / 4 | 42.6 / 7 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SORTIES ] | | | | |
| SORTIE TIME | 4.0 / 7 | 4.6 / 44 | 3.3 / 10 | 8.7 / 38 | 6.0 / 99 |
| HH-52 | 0.0 / 0 | 4.8 / 2 | 1.4 / 1 | 13.2 / 5 | 9.6 / 8 |
| HH-3F | 2.5 / 1 | 3.4 / 7 | 2.5 / 1 | 8.8 / 5 | 5.2 / 14 |
| HC-130 | 7.8 / 2 | 4.7 / 11 | 9.4 / 2 | 8.9 / 9 | 6.9 / 24 |
| HH-25 | 2.6 / 2 | 3.5 / 9 | 2.2 / 3 | 3.5 / 6 | 3.2 / 20 |
| BOAT | 0.0 / 0 | 5.5 / 1 | 0.0 / 0 | 18.0 / 2 | 13.8 / 3 |
| CUTTER | 5.1 / 1 | 39.5 / 2 | 3.9 / 1 | 42.1 / 2 | 28.7 / 6 |
| OTHER | 1.8 / 1 | 29.0 / 12 | 11.6 / 2 | 23.5 / 9 | 24.3 / 24 |

TIME ANALYSIS FOR NON-DISTRESS + NOT-LOCATED
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | AVERAGE |
|---|---|---|---|---|---|
| | [ AVERAGE HOURS PER CASE / NUMBER OF CASES ] | | | | |
| NOTIFICATION TIME | 8.5 / 5 | 14.6 / 1 | 0.0 / 0 | 15.7 / 1 | 10.4 / 7 |
| PLANNING TIME | 12.2 /173 | 8.0 /125 | 2.0 /127 | 5.8 / 54 | 7.7 /479 |
| MODIFIED PLAN TIME | 0.0 / 0 | 2.6 /105 | 2.0 /127 | 5.8 / 54 | 3.0 /286 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SEARCHES ] | | | | |
| SEARCH TIME | 0.7 /173 | 1.0 /128 | 0.7 /133 | 1.1 / 61 | 0.8 /495 |
| HH-52 | 0.6 / 61 | 0.6 / 47 | 0.5 / 52 | 1.0 / 15 | 0.6 /175 |
| HH-3F | 0.7 / 34 | 1.1 / 21 | 1.0 / 26 | 0.7 / 14 | 0.9 / 95 |
| HC-130 | 1.0 / 26 | 1.9 / 14 | 0.6 / 14 | 1.8 / 10 | 1.2 / 64 |
| HH-25 | 0.7 / 46 | 0.7 / 35 | 0.6 / 31 | 1.0 / 14 | 0.7 /126 |
| OTHER | 0.8 / 6 | 2.0 / 11 | 0.8 / 10 | 1.6 / 8 | 1.3 / 35 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SORTIES ] | | | | |
| SORTIE TIME | 1.8 /176 | 1.7 /125 | 1.3 /129 | 1.4 / 61 | 1.6 /491 |
| HH-52 | 1.5 / 56 | 1.6 / 36 | 1.0 / 52 | 1.1 / 14 | 1.4 /158 |
| HH-3F | 2.1 / 28 | 2.0 / 19 | 1.7 / 25 | 1.1 / 14 | 1.8 / 86 |
| HC-130 | 2.8 / 26 | 2.7 / 15 | 1.4 / 11 | 3.3 / 5 | 2.6 / 57 |
| HH-25 | 2.1 / 46 | 1.8 / 35 | 1.7 / 31 | 1.9 / 16 | 1.9 /128 |
| BOAT | 1.6 / 1 | 2.6 / 3 | 1.4 / 1 | 2.0 / 2 | 2.1 / 7 |
| CUTTER | 0.0 / 0 | 4.6 / 1 | 0.0 / 0 | 0.0 / 0 | 4.6 / 1 |
| OTHER | 1.4 / 19 | 2.0 / 16 | 1.1 / 9 | 2.3 / 10 | 1.7 / 54 |

RESOURCE COST FOR ALL CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| SEARCH COST | 276.47 | 311.95 | 211.74 | 453.87 | 1254.02 |
| SORTIE COST | 582.69 | 1077.94 | 275.16 | 548.02 | 2483.81 |
| TOTAL COST | 859.15 | 1389.89 | 486.90 | 1001.89 | 3737.83 |

RESOURCE COST FOR DISTRESS CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| SEARCH COST | 4.98 | 46.50 | 11.70 | 304.20 | 367.38 |
| SORTIE COST | 49.72 | 761.78 | 76.08 | 394.27 | 1281.85 |
| TOTAL COST | 54.70 | 808.28 | 87.78 | 698.47 | 1649.23 |

RESOURCE COST FOR NON-DISTRESS CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| SEARCH COST | 134.63 | 152.07 | 114.90 | 89.05 | 490.65 |
| SORTIE COST | 303.82 | 195.63 | 122.15 | 107.45 | 729.05 |
| TOTAL COST | 438.45 | 347.70 | 237.05 | 196.50 | 1219.70 |

RESOURCE COST FOR FALSE ALARMS
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| SEARCH COST | 203.18 | 215.69 | 148.70 | 140.45 | 708.02 |
| SORTIE COST | 424.18 | 260.49 | 174.68 | 152.63 | 1011.98 |
| TOTAL COST | 627.36 | 476.18 | 323.38 | 293.08 | 1720.00 |

RESOURCE COST FOR FALSE ALERTS/UNK
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| SEARCH COST | 57.91 | 33.90 | 36.59 | 9.22 | 137.62 |
| SORTIE COST | 84.35 | 42.93 | 11.29 | 1.12 | 139.69 |
| TOTAL COST | 142.26 | 76.83 | 47.88 | 10.34 | 277.31 |

TABLE FOR ALL CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISPOSITION | | | | | |
| SECURED | 118 | 116 | 113 | 79 | 426 |
| CEASED | 101 | 58 | 56 | 18 | 233 |
| ORIGIN | | | | | |
| INLAND | 43 | 34 | 47 | 19 | 143 |
| MARITIME | 67 | 71 | 39 | 52 | 229 |
| OTHER | 109 | 69 | 83 | 26 | 287 |

TABLE FOR FALSE ALARMS
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISPOSITION | | | | | |
| SECURED | 98 | 84 | 91 | 49 | 322 |
| CEASED | 74 | 40 | 40 | 15 | 169 |
| ORIGIN | | | | | |
| INLAND | 28 | 24 | 35 | 14 | 101 |
| MARITIME | 63 | 50 | 30 | 28 | 171 |
| OTHER | 81 | 50 | 66 | 22 | 219 |

TABLE FOR DISTRESS CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISPOSITION | | | | | |
| SECURED | 7 | 26 | 13 | 28 | 74 |
| CEASED | 0 | 0 | 0 | 0 | 0 |
| ORIGIN | | | | | |
| INLAND | 4 | 7 | 6 | 4 | 21 |
| MARITIME | 3 | 19 | 7 | 24 | 53 |
| OTHER | 0 | 0 | 0 | 0 | 0 |

TABLE FOR FALSE ALERTS/UNK
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISPOSITION | | | | | |
| SECURED | 7 | 2 | 5 | 1 | 15 |
| CEASED | 26 | 18 | 16 | 3 | 63 |
| ORIGIN | | | | | |
| INLAND | 4 | 0 | 3 | 1 | 8 |
| MARITIME | 1 | 1 | 1 | 0 | 3 |
| OTHER | 28 | 19 | 17 | 3 | 67 |

TABLE FOR NON-DISTRESS CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISPOSITION | | | | | |
| SECURED | 111 | 90 | 100 | 51 | 352 |
| CEASED | 0 | 0 | 0 | 0 | 0 |
| ORIGIN | | | | | |
| INLAND | 35 | 25 | 40 | 15 | 115 |
| MARITIME | 61 | 49 | 32 | 28 | 170 |
| OTHER | 15 | 16 | 28 | 8 | 67 |

1 SAR CASE ANALYSIS FOR CG DISTRICT 11
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISTRESS CASES | 0 | 0 | 0 | 0 | 0 |
| LIVES SAVED | 0 | 0 | 0 | 0 | 0 |
| NON-DISTRESS CASES | 7 | 3 | 0 | 0 | 10 |
| TRUE NON-DIST | 0 | 0 | 0 | 0 | 0 |
| FALSE ALARM | 7 | 3 | 0 | 0 | 10 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 0 | 0 |
| NOT LOCATED CASES | 5 | 2 | 0 | 0 | 7 |
| FALSE ALARM | 5 | 2 | 0 | 0 | 7 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 0 | 0 |
| TOTAL CASES | 12 | 5 | 0 | 0 | 17 |

1 SAR CASE ANALYSIS FOR CG DISTRICT 12
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISTRESS CASES | 1 | 2 | 0 | 2 | 5 |
| LIVES SAVED | 2 | 3 | 0 | 3 | 8 |
| NON-DISTRESS CASES | 3 | 5 | 2 | 1 | 11 |
| TRUE NON-DIST | 0 | 0 | 0 | 0 | 0 |
| FALSE ALARM | 3 | 5 | 2 | 1 | 11 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 0 | 0 |
| NOT LOCATED CASES | 4 | 1 | 2 | 1 | 8 |
| FALSE ALARM | 4 | 1 | 2 | 1 | 8 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 0 | 0 |
| TOTAL CASES | 8 | 8 | 4 | 4 | 24 |

1 SAR CASE ANALYSIS FOR CG DISTRICT 13
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISTRESS CASES | 0 | 1 | 0 | 0 | 1 |
| LIVES SAVED | 0 | 2 | 0 | 0 | 2 |
| NON-DISTRESS CASES | 3 | 5 | 1 | 2 | 11 |
| TRUE NON-DIST | 0 | 0 | 0 | 0 | 0 |
| FALSE ALARM | 3 | 5 | 1 | 2 | 11 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 0 | 0 |
| NOT LOCATED CASES | 0 | 0 | 0 | 1 | 1 |
| FALSE ALARM | 0 | 0 | 0 | 0 | 0 |
| FALSE ALRT/UNK | 0 | 0 | 0 | 1 | 1 |
| TOTAL CASES | 3 | 6 | 1 | 3 | 13 |

1 SAR CASE ANALYSIS FOR CG DISTRICT 14
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISTRESS CASES | 0 | 0 | 2 | 1 | 3 |
| LIVES SAVED | 0 | 0 | 9 | 3 | 12 |
| NON-DISTRESS CASES | 2 | 0 | 19 | 4 | 25 |
| TRUE NON-DIST | 0 | 0 | 0 | 0 | 0 |
| FALSE ALARM | 2 | 0 | 17 | 4 | 23 |
| FALSE ALRT/UNK | 0 | 0 | 2 | 0 | 2 |
| NOT LOCATED CASES | 5 | 1 | 8 | 1 | 15 |
| FALSE ALARM | 3 | 0 | 5 | 1 | 9 |
| FALSE ALRT/UNK | 2 | 1 | 3 | 0 | 6 |
| TOTAL CASES | 7 | 1 | 29 | 6 | 43 |

1 SAR CASE ANALYSIS FOR CG DISTRICT 17
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISTRESS CASES | 3 | 7 | 0 | 1 | 11 |
| LIVES SAVED | 7 | 13 | 0 | 2 | 22 |
| NON-DISTRESS CASES | 18 | 10 | 0 | 3 | 31 |
| TRUE NON-DIST | 5 | 1 | 0 | 0 | 6 |
| FALSE ALARM | 12 | 8 | 0 | 3 | 23 |
| FALSE ALRT/UNK | 1 | 1 | 0 | 0 | 2 |
| NOT LOCATED CASES | 5 | 3 | 0 | 2 | 10 |
| FALSE ALARM | 2 | 1 | 0 | 2 | 5 |
| FALSE ALRT/UNK | 3 | 2 | 0 | 0 | 5 |
| TOTAL CASES | 26 | 20 | 0 | 6 | 52 |

TIME ANALYSIS FOR ALL CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | AVERAGE |
|---|---|---|---|---|---|
| | [ AVERAGE HOURS PER CASE / NUMBER OF CASES ] | | | | |
| NOTIFICATION TIME | 8.5 / 5 | 7.1 / 9 | 3.4 / 2 | 11.6 / 2 | 7.6 / 18 |
| PLANNING TIME | 12.1 /178 | 8.2 /144 | 2.1 /127 | 5.6 / 63 | 7.7 /512 |
| MODIFIED PLAN TIME | 0.0 / 0 | 2.6 /118 | 2.1 /127 | 5.6 / 63 | 3.0 /308 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SEARCHES ] | | | | |
| SEARCH TIME | 0.7 /176 | 1.5 /147 | 0.6 /132 | 1.2 / 69 | 1.0 /524 |
| HH-52 | 0.6 / 60 | 0.6 / 45 | 0.5 / 52 | 1.1 / 15 | 0.6 /172 |
| HH-3F | 0.7 / 34 | 1.0 / 24 | 0.9 / 23 | 0.6 / 14 | 0.8 / 95 |
| HC-130 | 0.9 / 28 | 1.6 / 23 | 0.6 / 15 | 1.4 / 16 | 1.2 / 82 |
| HH-25 | 0.7 / 48 | 0.7 / 41 | 0.6 / 32 | 0.9 / 14 | 0.7 /135 |
| OTHER | 0.8 / 6 | 6.7 / 14 | 0.8 / 10 | 2.1 / 10 | 3.2 / 40 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SORTIES ] | | | | |
| SORTIE TIME | 1.9 /182 | 2.5 /165 | 1.4 /130 | 2.3 / 74 | 2.0 /551 |
| HH-52 | 1.5 / 55 | 1.8 / 37 | 1.0 / 52 | 1.7 / 16 | 1.4 /160 |
| HH-3F | 2.1 / 29 | 2.4 / 26 | 1.6 / 22 | 1.1 / 14 | 1.9 / 91 |
| HC-130 | 3.2 / 28 | 3.6 / 26 | 2.7 / 11 | 4.0 / 10 | 3.3 / 75 |
| HH-25 | 2.1 / 48 | 2.2 / 42 | 1.8 / 33 | 2.0 / 16 | 2.1 /139 |
| BOAT | 1.6 / 1 | 3.3 / 4 | 1.4 / 1 | 2.0 / 3 | 2.5 / 9 |
| CUTTER | 5.1 / 1 | 27.9 / 3 | 3.9 / 1 | 49.0 / 1 | 23.6 / 6 |
| OTHER | 1.4 / 20 | 14.0 / 27 | 3.2 / 10 | 4.2 / 14 | 7.0 / 71 |

TIME ANALYSIS FOR DISTRESS CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | AVERAGE |
|---|---|---|---|---|---|
| | [ AVERAGE HOURS PER CASE / NUMBER OF CASES ] | | | | |
| NOTIFICATION TIME | 0.0 / 0 | 6.2 / 8 | 3.4 / 2 | 7.6 / 1 | 5.8 / 11 |
| PLANNING TIME | 9.9 / 6 | 9.4 / 23 | 2.4 / 4 | 5.4 / 12 | 7.8 / 45 |
| MODIFIED PLAN TIME | 0.0 / 0 | 2.1 / 17 | 2.4 / 4 | 5.4 / 12 | 3.3 / 33 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SEARCHES ] | | | | |
| SEARCH TIME | 0.8 / 4 | 3.9 / 23 | 0.8 / 3 | 1.3 / 12 | 2.7 / 42 |
| HH-52 | 0.0 / 0 | 0.0 / 0 | 0.0 / 0 | 1.6 / 1 | 1.6 / 1 |
| HH-3F | 0.0 / 0 | 0.4 / 3 | 0.0 / 0 | 0.1 / 1 | 0.3 / 4 |
| HC-130 | 0.2 / 2 | 1.2 / 9 | 1.0 / 2 | 0.7 / 7 | 0.9 / 20 |
| HH-25 | 1.0 / 2 | 0.7 / 8 | 0.4 / 1 | 0.3 / 1 | 0.7 / 12 |
| OTHER | 0.0 / 0 | 24.2 / 3 | 0.0 / 0 | 4.3 / 2 | 16.2 / 5 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SORTIES ] | | | | |
| SORTIE TIME | 4.0 / 7 | 4.6 / 44 | 4.8 / 6 | 5.4 / 18 | 4.7 / 75 |
| HH-52 | 0.0 / 0 | 4.8 / 2 | 0.0 / 0 | 4.2 / 3 | 4.4 / 5 |
| HH-3F | 2.5 / 1 | 3.4 / 7 | 0.0 / 0 | 1.7 / 1 | 3.1 / 9 |
| HC-130 | 7.8 / 2 | 4.7 / 11 | 9.4 / 2 | 4.7 / 5 | 5.5 / 20 |
| HH-25 | 2.6 / 2 | 3.5 / 9 | 3.2 / 2 | 4.0 / 2 | 3.4 / 15 |
| BOAT | 0.0 / 0 | 5.5 / 1 | 0.0 / 0 | 2.1 / 1 | 3.8 / 2 |
| CUTTER | 5.1 / 1 | 39.5 / 2 | 3.9 / 1 | 49.0 / 1 | 27.4 / 5 |
| OTHER | 1.8 / 1 | 29.0 / 12 | 22.4 / 1 | 7.8 / 5 | 21.6 / 19 |

TIME ANALYSIS FOR NON-DISTRESS + NOT-LOCATED
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | AVERAGE |
|---|---|---|---|---|---|
| | [ AVERAGE HOURS PER CASE / NUMBER OF CASES ] | | | | |
| NOTIFICATION TIME | 8.5 / 5 | 14.6 / 1 | 0.0 / 0 | 15.7 / 1 | 10.4 / 7 |
| PLANNING TIME | 12.2 /172 | 8.0 /121 | 2.0 /123 | 5.7 / 51 | 7.7 /467 |
| MODIFIED PLAN TIME | 0.0 / 0 | 2.7 /101 | 2.0 /123 | 5.7 / 51 | 2.9 /275 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SEARCHES ] | | | | |
| SEARCH TIME | 0.7 /172 | 1.0 /124 | 0.6 /129 | 1.2 / 57 | 0.8 /482 |
| HH-52 | 0.6 / 60 | 0.6 / 45 | 0.5 / 52 | 1.0 / 14 | 0.6 /171 |
| HH-3F | 0.7 / 34 | 1.1 / 21 | 0.9 / 23 | 0.6 / 13 | 0.8 / 91 |
| HC-130 | 1.0 / 26 | 1.9 / 14 | 0.6 / 13 | 1.9 / 9 | 1.2 / 62 |
| HH-25 | 0.7 / 46 | 0.7 / 33 | 0.6 / 31 | 1.0 / 13 | 0.7 /123 |
| OTHER | 0.8 / 6 | 2.0 / 11 | 0.8 / 10 | 1.6 / 8 | 1.3 / 35 |
| | [ AVERAGE HOURS PER CASE / NUMBER OF SORTIES ] | | | | |
| SORTIE TIME | 1.8 /175 | 1.7 /121 | 1.2 /124 | 1.3 / 56 | 1.6 /476 |
| HH-52 | 1.5 / 55 | 1.6 / 35 | 1.0 / 52 | 1.1 / 13 | 1.3 /155 |
| HH-3F | 2.1 / 28 | 2.0 / 19 | 1.6 / 22 | 1.0 / 13 | 1.8 / 82 |
| HC-130 | 2.8 / 26 | 2.7 / 15 | 1.2 / 9 | 3.3 / 5 | 2.6 / 55 |
| HH-25 | 2.1 / 46 | 1.8 / 33 | 1.7 / 31 | 1.7 / 14 | 1.9 /124 |
| BOAT | 1.6 / 1 | 2.6 / 3 | 1.4 / 1 | 2.0 / 2 | 2.1 / 7 |
| CUTTER | 0.0 / 0 | 4.6 / 1 | 0.0 / 0 | 0.0 / 0 | 4.6 / 1 |
| OTHER | 1.4 / 19 | 2.0 / 15 | 1.1 / 9 | 2.2 / 9 | 1.7 / 52 |

RESOURCE COST FOR ALL CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| SEARCH COST | 275.52 | 304.44 | 193.91 | 188.53 | 962.39 |
| SORTIE COST | 579.84 | 1064.02 | 248.89 | 410.91 | 2303.67 |
| TOTAL COST | 855.35 | 1368.46 | 442.80 | 599.44 | 3266.06 |

RESOURCE COST FOR DISTRESS CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| SEARCH COST | 4.98 | 46.50 | 8.17 | 47.52 | 107.17 |
| SORTIE COST | 49.72 | 761.78 | 68.53 | 274.68 | 1154.72 |
| TOTAL COST | 54.70 | 808.28 | 76.70 | 322.20 | 1261.89 |

RESOURCE COST FOR NON-DISTRESS CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| SEARCH COST | 134.63 | 144.56 | 101.38 | 82.47 | 463.04 |
| SORTIE COST | 303.82 | 181.71 | 107.85 | 93.13 | 686.51 |
| TOTAL COST | 438.45 | 326.27 | 209.23 | 175.60 | 1149.55 |

RESOURCE COST FOR FALSE ALARMS
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| SEARCH COST | 202.23 | 208.18 | 145.06 | 131.79 | 687.26 |
| SORTIE COST | 421.33 | 246.57 | 167.92 | 135.11 | 970.93 |
| TOTAL COST | 623.56 | 454.75 | 312.98 | 266.90 | 1658.19 |

RESOURCE COST FOR FALSE ALERTS/UNK
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| SEARCH COST | 57.91 | 33.90 | 35.03 | 9.22 | 136.06 |
| SORTIE COST | 84.35 | 42.93 | 11.03 | 1.12 | 139.43 |
| TOTAL COST | 142.26 | 76.83 | 46.06 | 10.34 | 275.49 |

TABLE FOR ALL CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISPOSITION | | | | | |
| SECURED | 118 | 111 | 106 | 61 | 396 |
| CEASED | 100 | 58 | 55 | 17 | 230 |
| ORIGIN | | | | | |
| INLAND | 43 | 34 | 44 | 17 | 138 |
| MARITIME | 67 | 68 | 36 | 37 | 208 |
| OTHER | 108 | 67 | 81 | 24 | 280 |

TABLE FOR FALSE ALARMS
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISPOSITION | | | | | |
| SECURED | 98 | 79 | 90 | 46 | 313 |
| CEASED | 73 | 40 | 39 | 14 | 166 |
| ORIGIN | | | | | |
| INLAND | 28 | 24 | 35 | 12 | 99 |
| MARITIME | 63 | 47 | 29 | 27 | 166 |
| OTHER | 80 | 48 | 65 | 21 | 214 |

TABLE FOR DISTRESS CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISPOSITION | | | | | |
| SECURED | 7 | 26 | 10 | 14 | 57 |
| CEASED | 0 | 0 | 0 | 0 | 0 |
| ORIGIN | | | | | |
| INLAND | 4 | 7 | 4 | 4 | 19 |
| MARITIME | 3 | 19 | 6 | 10 | 38 |
| OTHER | 0 | 0 | 0 | 0 | 0 |

TABLE FOR FALSE ALERTS/UNK
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISPOSITION | | | | | |
| SECURED | 7 | 2 | 3 | 1 | 13 |
| CEASED | 26 | 18 | 16 | 3 | 63 |
| ORIGIN | | | | | |
| INLAND | 4 | 0 | 3 | 1 | 8 |
| MARITIME | 1 | 1 | 0 | 0 | 2 |
| OTHER | 28 | 19 | 16 | 3 | 66 |

TABLE FOR NON-DISTRESS CASES
02/01/83 TO 01/31/85

| | SARSAT ONLY | SARSAT FIRST | OTHER ONLY | OTHER FIRST | TOTAL |
|---|---|---|---|---|---|
| DISPOSITION | | | | | |
| SECURED | 111 | 85 | 96 | 47 | 339 |
| CEASED | 0 | 0 | 0 | 0 | 0 |
| ORIGIN | | | | | |
| INLAND | 35 | 25 | 39 | 13 | 112 |
| MARITIME | 61 | 46 | 30 | 27 | 164 |
| OTHER | 15 | 14 | 27 | 7 | 63 |

| | | |
|---|---|---|
| 20. | LIVES L | Lives Lost |
| 21. | S | Lives Saved |
| 22. | L | Located Code (1 = Located, 0 = Not Located) |
| 23. | D | Distress Code (1 = Distress, 0 = Non-Distress) |
| 24. | T | Non-Distress/Not-Located Code (1 = True Non-Distress, 2 = False Alarm, 3 = False Alert, 4 = Unknown) |
| 25. | C | Cause of False Alarm (1 = Human Error, 2 = Equipment Error, 3 = Hoax, 4 = Other, 5 = Unknown) |
| 26. | 0 | Vehicle Code (1 = Vessel, 2 = Aircraft, 3 = Other) |
| 27. | S | Source Code ( 1 = ELT in Aircraft, 2 = ELT not in Aircraft, 3 = EPIRB on Vessel, 4 = EPIRB not on Vessel, 5 = Transmitter other than ELT or EPIRB, 6 = Other, 7 = ELT or EPIRB) |
| 28. | N | Participation (1 = SARSAT Only, 2 = Other Only, 3 = Both) |
| 29. | SO | Total Sortie Time, Hours. |

# SAR_CASE_DATA.DISTRESS

| DST | CASE | DATE | FREQ | TIME OCCUR | 1ST NOT | 1ST RCC | DISTRESS SITED | D.O.F. | HH-52 | HH-3F | HC-130 | HH-25 | OTH | 1ST SARSAT NOTIFICATION | | 1ST NON-SS NOTIFICATION | | #MSG | LIVES L | S | LDTCOSN | SORT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 335 | 110183 | 100011012250 | | N | 11012305 | 11012330 | 13 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 11012257 | 0 | 0 | 0 | 1100112 | 1.1 |
| 3 | 9 | 102783 | 1000 | 0 | N | 10270554 | 10270836 | 500 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | SS | 10270232 | AC | 10270212 | 5 | 0 | 3 | 1100133 | 12.1 |
| 3 | 11 | 102783 | 1100 | 0 | N | 10270442 | 10271415 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 10262111 | AC | 10261951 | 9 | 0 | 2 | 1100133 | 0.0 |
| 3 | 95 | 52883 | 1000 | 0 | N | 5281630 | 5281952 | 200 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | SS | 5291405 | AC | 5281115 | 6 | 0 | 1 | 1100133 | 5.1 |
| 3 | 123 | 72583 | 1001 | 0 | N | 7260725 | 7260913 | 100 | 0.0 | 0.0 | 1.6 | 0.0 | 0.0 | SS | 7252039 | AC | 7251948 | 9 | 0 | 9 | 1100133 | 5.4 |
| 3 | 7011 | 102193 | 1000 | 0 | S | 10220057 | 10220210 | 300 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | SS | 10212250 | AC | 10220040 | 8 | 0 | 1 | 1100133 | 6.7 |
| 3 | 7020 | 111183 | 110011111427 | | N | 11111455 | 11111818 | NG | 0.0 | 0.0 | 1.8 | 0.0 | 0.0 | SS | 11111739 | OT | 11111427 | 4 | 0 | 4 | 1100133 | 8.4 |
| 7 | 835 | 110383 | 1000 | 0 | N | 11011800 | 11011830 | NG | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 | SS | 11011810 | AC | 11011800 | 2 | 0 | 0 | 1100133 | 1.3 |
| 7 | 3269 | 20883 | 1000 | 0 | N | 2082340 | 2090625 | 50 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 2099354 | AP | 2082135 | 1 | 0 | 4 | 1100133 | 2.3 |
| 7 | 3716 | 22783 | 1000 | 2271030 | N | 2271938 | 2272013 | 50 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | SS | 0 | AC | 2271711 | 0 | 0 | 2 | 1100132 | 5.3 |
| 7 | 4905 | 41183 | 1000 | 4091430 | S | 4100123 | 4100200 | 60 | 0.0 | 0.9 | 0.0 | 0.0 | 0.0 | SS | 4092107 | AC | 4100024 | 7 | 0 | 2 | 1100133 | 14.0 |
| 7 | 5645 | 50483 | 1100 | 0 | N | 5041802 | 5041820 | 20 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 0 | RD | 5041800 | 0 | 0 | 0 | 1100212 | 1.2 |
| 7 | 6759 | 60283 | 1000 | 0 | S | 6021336 | 6021420 | 50 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | SS | 6020157 | SS | 0 | 6 | 0 | 3 | 1100131 | 3.9 |
| 7 | 7542 | 62583 | 1000 | 0 | S | 6250430 | 6250750 | 25 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | SS | 6250159 | OT | 6250205 | 3 | 0 | 5 | 1100133 | 8.4 |
| 8 | 27 | 102583 | 100010242100 | | S | 10252036 | 10252145 | LAN | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | SS | 10251753 | AC | 10252036 | 1 | 0 | 3 | 1100212 | 1.0 |
| 8 | 155 | 112483 | 100011231201 | | N | 11231300 | 11231356 | 30 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | SS | 11231427 | OT | 11231201 | 2 | 0 | 6 | 1100133 | 2.4 |
| 11 | 303 | 72383 | 1001 | 7240305 | N | 7240311 | 7240543 | 15 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 7240859 | OT | 7240305 | 9 | 0 | 3 | 1100133 | 2.5 |
| 12 | 99 | 120183 | 1100 | 0 | S | 12011505 | 12011735 | 600 | 0.0 | 0.0 | 5.7 | 0.0 | 0.0 | SS | 12010213 | AC | 12011213 | 13 | 0 | 1 | 1100133 | 13.3 |
| 12 | 101 | 53083 | 1001 | 0 | N | 5302212 | 5302337 | 170 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | SS | 5301738 | OT | 5301250 | 4 | 0 | 3 | 1100133 | 1.0 |
| 12 | 237 | 62683 | 1001 | 6260445 | N | 6260502 | 6260510 | 3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | OT | 6260445 | 0 | 0 | 2 | 1100132 | 1.4 |
| 12 | 328 | 92583 | 1101 | 9242300 | N | 9250245 | 9250715 | 30 | 0.0 | 0.0 | 1.0 | 0.0 | 3.7 | SS | 9250457 | OT | 9242300 | 2 | 0 | 2 | 1100133 | 13.0 |
| 14 | 409 | 50183 | 1000 | 0 | N | 5011700 | 5011810 | 130 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | SS | 0 | AC | 5011013 | 0 | 0 | 4 | 1100132 | 14.2 |
| 14 | 607 | 72483 | 1000 | 0 | N | 0 | 0 | 23 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | SS | 0 | AC | 7241100 | 0 | 0 | 5 | 1100132 | 4.6 |
| 17 | 89 | 110783 | 1000 | 0 | S | 11071615 | 11071947 | LAN | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 11070519 | SS | 0 | 5 | 0 | 3 | 1100211 | 2.5 |
| 17 | 131 | 112583 | 1000 | 0 | N | 11260020 | 11260200 | LAN | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | SS | 11252314 | AC | 11252300 | 4 | 0 | 2 | 1100213 | 1.7 |
| 17 | 194 | 122783 | 1000 | 0 | S | 12271402 | 12271604 | LAN | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | SS | 12262004 | SS | 0 | 9 | 0 | 2 | 1100211 | 1.9 |
| 17 | 910 | 80883 | 1000 | 0 | S | 8081255 | 8082010 | LAN | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | SS | 8080617 | OT | 0 | 17 | 0 | 1 | 1100213 | 3.3 |
| 1 | 30 | 92284 | 1000 | 0 | N | 9220545 | 9220600 | 100 | 0.0 | 0.7 | 0.0 | 1.4 | 0.0 | SS | 9220941 | RD | 9220420 | 2 | 0 | 7 | 1100133 | 4.9 |
| 1 | 2011 | 62384 | 1000 | 6230900 | S | 6231657 | 6231916 | 58 | 0.0 | 0.1 | 0.0 | 2.0 | 0.0 | SS | 6231201 | OT | 6231245 | 14 | 0 | 4 | 1100133 | 5.6 |
| 3 | 8 | 110684 | 1000 | 0 | S | 11061935 | 11062115 | 170 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | SS | 11061507 | AC | 11061729 | 4 | 0 | 4 | 1100133 | 7.2 |
| 3 | 35 | 50484 | 1000 | 0 | S | 5041300 | 5041539 | 270 | 0.0 | 0.0 | 0.1 | 0.1 | 1.6 | SS | 5040808 | AC | 5041243 | 20 | 0 | 5 | 1100133 | 14.6 |
| 3 | 55 | 70184 | 1000 | 7010200 | S | 7011227 | 7011500 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 7010342 | AC | 7011203 | 5 | 0 | 2 | 1100133 | 20.5 |
| 3 | 68 | 51984 | 1000 | 0 | S | 5190220 | 5190436 | 124 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | SS | 5182113 | AC | 5190032 | 10 | 0 | 4 | 1100133 | 3.1 |
| 3 | 90 | 62584 | 1000 | 0 | S | 6251840 | 6260001 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 6251459 | AC | 6251705 | 15 | 0 | 1 | 1100133 | 0.0 |
| 3 | 297 | 31484 | 1000 | 0 | N | 3140950 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | SS | 3141054 | FA | 3140950 | 1 | 1 | 0 | 1100213 | 12.3 |
| 3 | 7060 | 21684 | 1000 | 0 | N | 2161400 | 2161428 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | FA | 2161350 | 0 | 0 | 1 | 1100132 | 26.3 |
| 3 | 7089 | 32984 | 1000 | 0 | N | 3300216 | 3301330 | 10 | 32.7 | 27.2 | 35.1 | 2.1 | 213.5 | SS | 3292022 | OT | 3291755 | 9 | 4 | 0 | 1100143 | 332.3 |
| 3 | 7126 | 52984 | 1000 | 5281700 | N | 5282000 | 5300315 | NG | 0.0 | 1.2 | 0.0 | 2.2 | 0.0 | SS | 5290153 | OT | 5281700 | 4 | 0 | 5 | 1100133 | 25.9 |
| 3 | 7130 | 60284 | 1000 | 0 | N | 6021600 | 6021637 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 6021422 | AC | 6021147 | 2 | 0 | 3 | 1100133 | 57.9 |
| 3 | 7131 | 53184 | 1000 | 0 | S | 5311654 | 5311822 | NG | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | SS | 5302138 | AC | 5311202 | 3 | 0 | 4 | 1100133 | 162.5 |
| 3 | 7134 | 53184 | 1000 | 5301151 | S | 5310830 | 5310840 | 140 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | SS | 5301214 | AC | 5310159 | 9 | 0 | 3 | 1100133 | 20.4 |
| 3 | 7149 | 61784 | 1000 | 0 | S | 6180050 | 6180258 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 6171948 | AC | 6172031 | 7 | 0 | 4 | 1100133 | 29.7 |
| 5 | 189 | 30884 | 1000 | 3091230 | S | 3092138 | 3100043 | 155 | 0.0 | 0.0 | 0.2 | 2.3 | 0.0 | SS | 3091404 | AC | 3091926 | 2 | 0 | 9 | 1100133 | 13.4 |

| DST | CASE | DATE | FREQ | TIME OCCUR | 1ST NOT | 1ST RCC NOT | DISTRESS SITED | D.O.F. | HH-52 | HH-3F | HC-130 | HH-25 | OTH | 1ST SARSAT NOTIFICATION | 1ST NON-SS NOTIFICATION | #MSG | LIVES L | LIVES S | LDTCOSN | SORT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 93 | 100983 | 1000 | 0 | S | 1009145 | 10090335 | LAN | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS 10082258 | AC 10082313 | 3 | 0 | 0 | 0026213 | 3.3 |
| 1 | 96 | 101083 | 1000 | 0 | S | 10100300 | 10100710 | LAN | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS 10100002 | SS 0 | 2 | 0 | 0 | 1021341 | 1.3 |
| 1 | 276 | 102783 | 0100 | 0 | S | 10271338 | 0 | NG | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS 10271329 | SS 0 | 1 | 0 | 0 | 0025371 | 1.7 |
| 1 | 323 | 92483 | 1000 | 0 | S | 9241244 | 9241315 | | 0.5 | 0.0 | 0.0 | 0.8 | 0.0 | SS 9241206 | AC 9241220 | 4 | 0 | 0 | 0045373 | 1.3 |
| 1 | 335 | 110183 | 100011012250 | N | | 11012305 | 11012330 | 13 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS 0 | AC 11012257 | 0 | 0 | 0 | 1100112 | 1.1 |
| 1 | 460 | 112183 | 1000 | 0 | S | 11210838 | 11211431 | LAN | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS 11210715 | SS 0 | 2 | 0 | 0 | 1021341 | 1.3 |
| 1 | 461 | 112183 | 1000 | 0 | S | 11220004 | 11220020 | LAN | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | SS 11211916 | AC 11211920 | 3 | 0 | 0 | 0025323 | 1.1 |
| 1 | 538 | 123083 | 0100 | 0 | S | 12310016 | 0 | NG | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | SS 12302130 | SS 0 | 2 | 0 | 0 | 0025371 | 1.9 |
| 1 | 582 | 121283 | 1100 | 0 | S | 12121124 | 0 | NG | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | SS 12120959 | AC 12121041 | 2 | 0 | 0 | 0025373 | 2.6 |
| 1 | 782 | 20483 | 1000 | 0 | N | 2040712 | 2040910 | NG | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | SS 2040555 | AC 2040528 | 1 | 0 | 0 | 1021323 | 3.1 |
| 1 | 795 | 20983 | 0100 | 0 | N | 2091408 | 2091430 | LAN | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | SS 0 | AP 2091310 | 0 | 0 | 0 | 1022352 | 0.4 |
| 1 | 837 | 22683 | 1100 | 0 | N | 2252314 | 0 | 15 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | SS 2260137 | AP 2252228 | 1 | 0 | 0 | 1021133 | 2.8 |
| 1 | 857 | 30483 | 1000 | 0 | N | 3041507 | 3041625 | 125 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | SS 3041232 | OT 3031651 | 2 | 0 | 0 | 1021343 | 2.5 |
| 1 | 892 | 31683 | 1000 | 0 | N | 3160057 | 0 | NG | 0.0 | 0.9 | 0.0 | 0.0 | 0.0 | SS 3160055 | AC 3160050 | 1 | 0 | 0 | 0025373 | 1.4 |
| 1 | 898 | 31683 | 1000 | 0 | S | 3161145 | 3161215 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS 3161145 | SS 0 | 1 | 0 | 0 | 0045371 | 1.4 |
| 1 | 932 | 32683 | 1100 | 0 | N | 3262348 | 3270224 | LAN | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | SS 3262121 | AC 3261513 | 2 | 0 | 0 | 1021363 | 1.4 |
| 1 | 934 | 32783 | 1000 | 0 | N | 3270230 | 3270305 | LAN | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | SS 0 | AC 3270215 | 0 | 0 | 0 | 1036322 | 1.8 |
| 1 | 963 | 40183 | 1000 | 0 | S | 4020043 | 0 | NG | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | SS 4012324 | SS 0 | 1 | 0 | 0 | 0035371 | 2.4 |
| 1 | 1059 | 42483 | 1000 | 0 | S | 4250224 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 6.5 | SS 4242126 | AC 4250005 | 1 | 0 | 0 | 0045373 | 6.5 |
| 1 | 1129 | 50283 | 1100 | 0 | S | 5021928 | 0 | LAN | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | SS 5021752 | SS 0 | 2 | 0 | 0 | 1021321 | 1.2 |
| 1 | 1217 | 51083 | 1000 | 0 | N | 5101425 | 5101510 | NG | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS 0 | AC 5101418 | 0 | 0 | 0 | 1021132 | 1.2 |
| 1 | 1287 | 51883 | 1000 | 0 | N | 5181154 | 5181248 | NG | 0.8 | 0.0 | 0.0 | 0.6 | 0.0 | SS 0 | AC 5181137 | 0 | 0 | 0 | 1021132 | 1.5 |
| 1 | 1524 | 60483 | 1000 | 0 | S | 6040427 | 6040513 | LAN | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | SS 6040118 | AC 6040302 | 6 | 0 | 0 | 1025213 | 1.9 |
| 1 | 1547 | 60583 | 1000 | 0 | S | 6051257 | 6051347 | LAN | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | SS 6050718 | SS 0 | 7 | 0 | 0 | 1021131 | 1.8 |
| 1 | 1763 | 61483 | 1000 | 0 | S | 6140919 | 6141045 | NG | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | SS 6140625 | SS 0 | 1 | 0 | 0 | 1021321 | 2.0 |
| 1 | 1813 | 61783 | 1000 | 0 | S | 6170600 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | SS 6170555 | SS 0 | 1 | 0 | 0 | 0045371 | 0.1 |
| 1 | 1816 | 61783 | 1000 | 0 | S | 6171441 | 0 | NG | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | SS 6170547 | SS 0 | 4 | 0 | 0 | 0045371 | 1.2 |
| 1 | 1953 | 62183 | 1000 | 0 | S | 6220050 | 6220135 | NG | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | SS 6211952 | SS 0 | 14 | 0 | 0 | 1021131 | 1.5 |
| 1 | 1976 | 62383 | 1000 | 0 | S | 6231915 | 6240019 | NG | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | SS 6231813 | SS 0 | 3 | 0 | 0 | 1025131 | 2.5 |
| 1 | 2613 | 71183 | 1000 | 0 | S | 7111113 | 7111225 | LAN | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | SS 7110329 | SS 0 | 2 | 0 | 0 | 1021321 | 1.3 |
| 1 | 2721 | 71383 | 0100 | 0 | S | 7130658 | 0 | NG | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | SS 7130306 | AC 7130410 | 1 | 0 | 0 | 0045373 | 0.4 |
| 1 | 3040 | 72183 | 1000 | 0 | S | 7210430 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 | SS 7210340 | SS 0 | 3 | 0 | 0 | 0025371 | 1.5 |
| 1 | 3041 | 72183 | 1100 | 0 | S | 7211800 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS 7211435 | AC 7211758 | 1 | 0 | 0 | 0025373 | 0.3 |
| 1 | 3042 | 72183 | 1100 | 0 | S | 7211430 | 7211455 | LAN | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | SS 7210907 | AC 7211426 | 2 | 0 | 0 | 1014313 | 1.2 |
| 1 | 3044 | 72183 | 0100 | 0 | N | 7211730 | 7211800 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS 0 | OT 7211230 | 0 | 0 | 0 | 1022342 | 0.5 |
| 1 | 3045 | 72383 | 1000 | 0 | S | 7230931 | 0 | NG | 0.2 | 0.0 | 0.0 | 0.3 | 0.0 | SS 7230045 | SS 0 | 4 | 0 | 0 | 0045371 | 1.0 |
| 1 | 3245 | 72583 | 1000 | 0 | N | 7251701 | 7251713 | NG | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | SS 0 | AC 7251701 | 0 | 0 | 0 | 1021322 | 0.5 |
| 1 | 3504 | 80283 | 1000 | 0 | N | 8021733 | 8021828 | NG | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | SS 0 | AC 8021733 | 0 | 0 | 0 | 1010132 | 2.0 |
| 1 | 4048 | 81883 | 1000 | 0 | S | 8190012 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS 8182318 | AC 8190005 | 1 | 0 | 0 | 0045373 | 0.6 |
| 1 | 4086 | 72083 | 1000 | 0 | S | 7200950 | 7201050 | LAN | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | SS 7200737 | AC 7200810 | 2 | 0 | 0 | 1026213 | 2.5 |
| 1 | 4248 | 82383 | 0100 | 0 | S | 8231555 | 8232130 | 15 | 0.0 | 1.6 | 0.0 | 0.0 | 0.0 | SS 8231414 | AC 8231542 | 1 | 0 | 0 | 1022133 | 5.8 |
| 1 | 4738 | 90983 | 1000 | 0 | N | 9090330 | 9090739 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 | SS 9090410 | AC 9090235 | 1 | 0 | 0 | 1021143 | 2.9 |
| 1 | 4922 | 91583 | 1000 | 0 | N | 9151345 | 9151550 | NG | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 | SS 0 | AC 9151300 | 0 | 0 | 0 | 1022132 | 2.1 |
| 1 | 4984 | 91983 | 1000 | 0 | N | 9191003 | 0 | NG | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | SS 0 | AC 9190957 | 0 | 0 | 0 | 0045372 | 4.8 |
| 1 | 5030 | 92383 | 1000 | 0 | N | 9231714 | 0 | NG | 0.0 | 1.4 | 0.0 | 0.5 | 0.0 | SS 0 | AP 9231345 | 0 | 0 | 0 | 0045372 | 2.1 |
| 1 | 5161 | 100183 | 1100 | 0 | S | 10010217 | 0 | NG | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS 10010011 | AC 10010138 | 3 | 0 | 0 | 0025373 | 1.8 |
| 1 | 9052 | 20983 | 1000 | 0 | N | 2092140 | 2092205 | LAN | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | SS 0 | OT 2092136 | 0 | 0 | 0 | 1031152 | 0.4 |
| 1 | 9058 | 22283 | 1000 | 2201230 | S | 2221817 | 2221925 | NG | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | SS 2220240 | SS 0 | 5 | 0 | 0 | 1021341 | 2.4 |
| 1 | 9070 | 31083 | 1100 | 0 | N | 3101545 | 3101608 | NG | 0.0 | 0.0 | 0.0 | 2.7 | 0.0 | SS 3091221 | AC 3090112 | 4 | 0 | 0 | 1026133 | 3.6 |
| 3 | 9 | 102783 | 1000 | 0 | N | 10270554 | 10270836 | 500 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | SS 10270232 | AC 10270212 | 5 | 0 | 3 | 1100133 | 12.1 |
| 3 | 11 | 102783 | 1100 | 0 | N | 10270442 | 10271415 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS 10262111 | AC 10261951 | 9 | 0 | 2 | 1100133 | 0.0 |
| 3 | 12 | 72783 | 1100 | 0 | N | 7272236 | 7272330 | NG | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | SS 0 | AC 7272051 | 0 | 0 | 0 | 1026322 | 2.2 |
| 3 | 60 | 40983 | 1000 | 0 | S | 4091510 | 4091555 | NG | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | SS 4072242 | SS 0 | 7 | 0 | 0 | 1021131 | 1.3 |
| 3 | 75 | 52583 | 1000 | 0 | N | 5250024 | 5251205 | NG | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS 0 | AC 5242258 | 0 | 0 | 0 | 1022212 | 1.0 |
| 3 | 95 | 52883 | 1000 | 0 | N | 5281630 | 5281953 | 200 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | SS 5281405 | AC 5281115 | 6 | 0 | 1 | 1100133 | 5.1 |
| 3 | 123 | 72583 | 1001 | 0 | N | 7260725 | 7260913 | 100 | 0.0 | 0.0 | 1.6 | 0.0 | 0.0 | SS 7252039 | AC 7251948 | 9 | 0 | 9 | 1100133 | 5.4 |
| 3 | 287 | 30983 | 1000 | 0 | N | 3091257 | 3101605 | NG | 2.8 | 0.0 | 5.5 | 0.0 | 0.0 | SS 3091010 | AC 3090127 | 13 | 0 | 0 | 1021133 | 14.4 |
| 3 | 1105 | 92783 | 1000 | 0 | S | 9271118 | 0 | NG | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | SS 9261816 | AC 9262049 | 7 | 0 | 0 | 1025133 | 0.8 |
| 3 | 7011 | 102183 | 1000 | 0 | S | 10220057 | 10220210 | 300 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | SS 10212250 | AC 10220040 | 8 | 0 | 1 | 1100133 | 6.7 |
| 3 | 7020 | 111183 | 110011111427 | N | | 11111455 | 11111818 | NG | 0.0 | 0.0 | 1.8 | 0.0 | 0.0 | SS 11111739 | OT 11111427 | 4 | 0 | 4 | 1100133 | 8.4 |
| 3 | 7112 | 31683 | 1000 | 0 | N | 3161956 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | SS 0 | AC 3161928 | 0 | 0 | 0 | 0025372 | 1.8 |

| DST | CASE | DATE | FREQ | TIME OCCUR | 1ST NOT | 1ST RCC NOT | DISTRESS SITED | D.O.F. | HH-52 | HH-3F | HC-130 | HH-25 | OTH | 1ST SARSAT NOTIFICATION | | 1ST NON-SS NOTIFICATION | | #MSG | LIVES L | LIVES S | LDTCOSN | SORT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 6727 | 60283 | 1000 | 0 | S | 5310922 | 5311128 | NG | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | SS | 5300753 | SS | 0 | 11 | 0 | 0 | 1021141 | 7.6 |
| 7 | 6759 | 60283 | 1000 | 0 | S | 6021336 | 6021420 | 50 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | SS | 6020157 | SS | 0 | 6 | 0 | 3 | 1100131 | 3.9 |
| 7 | 6937 | 60683 | 1100 | 0 | S | 6061818 | 6061824 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 6061345 | SS | 0 | 5 | 0 | 0 | 1025131 | 1.9 |
| 7 | 7007 | 60983 | 1000 | 0 | S | 6100139 | 0 | 180 | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 | SS | 6091638 | SS | 0 | 2 | 0 | 0 | 0025371 | 2.7 |
| 7 | 7062 | 61283 | 1100 | 0 | N | 6112200 | 6112340 | NG | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | SS | 0 | AC | 0 | 0 | 0 | 0 | 1025133 | 2.5 |
| 7 | 7475 | 62183 | 1000 | 0 | N | 6211804 | 0 | 30 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | SS | 6211830 | AC | 6211613 | 1 | 0 | 0 | 0025373 | 1.7 |
| 7 | 7506 | 62483 | 1000 | 0 | N | 6242025 | 6242035 | NG | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | SS | 0 | AC | 0 | 0 | 0 | 0 | 1025133 | 0.2 |
| 7 | 7542 | 62583 | 1000 | 0 | S | 6250430 | 6250750 | 25 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | SS | 6250159 | OT | 6250205 | 3 | 0 | 5 | 1100133 | 8.4 |
| 7 | 7730 | 62983 | 1000 | 0 | S | 6291027 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 6281738 | SS | 0 | 2 | 0 | 0 | 0025371 | 0.5 |
| 7 | 8176 | 70883 | 1000 | 0 | N | 7090035 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | SS | 0 | AC | 7082109 | 0 | 0 | 0 | 0025372 | 3.0 |
| 7 | 8178 | 70883 | 0100 | 0 | S | 7081702 | 0 | 60 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | SS | 7080127 | SS | 0 | 2 | 0 | 0 | 0025371 | 1.1 |
| 7 | 8324 | 71183 | 1000 | 0 | S | 7120000 | 0 | NG | 0.0 | 3.3 | 0.0 | 0.0 | 0.0 | SS | 7112100 | AC | 7112238 | 1 | 0 | 0 | 0025373 | 3.3 |
| 7 | 8373 | 71383 | 1100 | 0 | N | 7131600 | 7132107 | LAN | 0.0 | 1.5 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 7131550 | 0 | 0 | 0 | 1025212 | 3.3 |
| 7 | 8389 | 71383 | 1100 | 0 | S | 7131901 | 0 | NG | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | SS | 7130043 | AC | 7131524 | 3 | 0 | 0 | 1021133 | 5.2 |
| 7 | 8605 | 72083 | 1000 | 0 | N | 7201417 | 7201732 | NG | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 7201125 | 0 | 0 | 0 | 1025132 | 6.1 |
| 7 | 8629 | 71983 | 1000 | 7190700 | N | 7201405 | 7201435 | NG | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | SS | 7200104 | AC | 7192240 | 35 | 0 | 0 | 1024143 | 2.3 |
| 7 | 8917 | 72783 | 1100 | 0 | N | 7271650 | 7271745 | NG | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 | SS | 0 | AC | 7271650 | 0 | 0 | 0 | 1025132 | 1.2 |
| 7 | 9098 | 80283 | 1000 | 0 | N | 8030030 | 8030100 | LAN | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | SS | 8022038 | AC | 8021621 | 3 | 0 | 0 | 1025213 | 1.0 |
| 7 | 9154 | 80483 | 1000 | 0 | S | 8051240 | 0 | NG | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 | SS | 8041516 | SS | 0 | 2 | 0 | 0 | 0025371 | 3.8 |
| 7 | 9439 | 81383 | 1000 | 0 | N | 8131515 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 0 | AC | 8131324 | 0 | 0 | 0 | 0025372 | 0.7 |
| 7 | 9559 | 81483 | 1000 | 0 | N | 8142205 | 8142300 | LAN | 0.0 | 0.9 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 8142110 | 0 | 0 | 0 | 1025372 | 1.8 |
| 7 | 9609 | 81983 | 1100 | 0 | S | 8192108 | 0 | NG | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 | SS | 8191513 | AC | 8191740 | 3 | 0 | 0 | 0025373 | 1.9 |
| 7 | 10069 | 90283 | 1000 | 0 | N | 9021945 | 9022050 | LAN | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | SS | 0 | AC | 9021508 | 0 | 0 | 0 | 1025372 | 1.2 |
| 7 | 10323 | 90783 | 1000 | 0 | S | 9072344 | 9080050 | LAN | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | SS | 9072051 | AC | 9072242 | 1 | 0 | 0 | 1025373 | 1.8 |
| 7 | 10340 | 90883 | 1000 | 0 | N | 9081450 | 9081520 | NG | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | SS | 0 | AP | 9081450 | 0 | 0 | 0 | 1024352 | 0.6 |
| 7 | 10347 | 90983 | 1100 | 0 | S | 9082234 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | SS | 9081413 | SS | 0 | 7 | 0 | 0 | 0025371 | 1.4 |
| 7 | 10393 | 91083 | 1000 | 0 | S | 9101748 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | SS | 9091428 | SS | 0 | 6 | 0 | 0 | 0025371 | 2.7 |
| 7 | 10469 | 91283 | 1100 | 0 | S | 9112217 | 0 | NG | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 9110058 | SS | 0 | 6 | 0 | 0 | 0025371 | 0.5 |
| 7 | 10479 | 91383 | 1000 | 0 | S | 9131132 | 9131150 | LAN | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 9122053 | SS | 0 | 4 | 0 | 0 | 0025211 | 0.3 |
| 7 | 10492 | 90483 | 0100 | 0 | N | 0 | 0 | LAN | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | SS | 0 | AC | 9032230 | 0 | 0 | 0 | 1025372 | 0.6 |
| 7 | 10499 | 91383 | 1000 | 0 | N | 9132328 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 9131432 | AC | 9131430 | 1 | 0 | 0 | 0025373 | 0.5 |
| 7 | 10500 | 91383 | 0100 | 0 | S | 9132358 | 0 | 25 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | SS | 9130145 | AC | 9131533 | 1 | 0 | 0 | 0025373 | 0.3 |
| 7 | 10501 | 90983 | 1000 | 0 | N | 9091339 | 9092100 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 9091230 | 0 | 0 | 0 | 1021132 | 0.0 |
| 7 | 10656 | 92183 | 1000 | 0 | N | 9201935 | 9202335 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 | SS | 0 | AC | 9201930 | 0 | 0 | 0 | 1025132 | 4.0 |
| 7 | 10781 | 92683 | 1100 | 0 | S | 9261647 | 0 | 500 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | SS | 9250058 | SS | 0 | 10 | 0 | 0 | 0025371 | 4.9 |
| 7 | 10802 | 92883 | 1100 | 0 | N | 9281645 | 9281740 | NG | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | SS | 9280733 | AC | 9280245 | 12 | 0 | 0 | 1025143 | 0.3 |
| 8 | 4 | 101883 | 1000 | 0 | S | 10181358 | 10181432 | 7 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | SS | 10181310 | SS | 0 | 2 | 0 | 0 | 1025131 | 1.1 |
| 8 | 6 | 100283 | 0100 | 0 | S | 10021947 | 10022058 | LAN | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | SS | 10020345 | AC | 10021301 | 1 | 0 | 0 | 1025373 | 2.0 |
| 8 | 7 | 100683 | 1100 | 0 | S | 10052153 | 0 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 10051129 | AC | 10051700 | 4 | 0 | 0 | 0025373 | 1.6 |
| 8 | 21 | 112783 | 1100 | 0 | S | 11281430 | 11281615 | 20 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | SS | 11250030 | SS | 0 | 39 | 0 | 0 | 1025141 | 3.2 |
| 8 | 27 | 102583 | 100010242100 | S | | 10252036 | 10252038 | LAN | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | SS | 10251753 | AC | 10252036 | 1 | 0 | 3 | 1100213 | 1.0 |
| 8 | 28 | 20583 | 1000 | 0 | N | 2051636 | 2051655 | NG | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | SS | 0 | OT | 2051444 | 0 | 0 | 0 | 1026142 | 2.0 |
| 8 | 33 | 112183 | 1000 | 0 | N | 11201623 | 11201653 | LAN | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 11201623 | 0 | 0 | 0 | 1010212 | 0.3 |
| 8 | 34 | 112183 | 1000 | 0 | S | 11202237 | 0 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 11201552 | SS | 0 | 1 | 0 | 0 | 0025371 | 0.3 |
| 8 | 42 | 110983 | 1000 | 0 | S | 11101323 | 11101640 | 35 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | SS | 11090123 | SS | 0 | 27 | 0 | 0 | 1025131 | 1.6 |
| 8 | 43 | 121483 | 0100 | 0 | N | 12141554 | 12141605 | LAN | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 12141554 | 0 | 0 | 0 | 1025212 | 0.2 |
| 8 | 49 | 123083 | 1000 | 0 | S | 12281615 | 0 | NG | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 12272313 | SS | 0 | 18 | 0 | 0 | 0025371 | 1.6 |
| 8 | 50 | 30683 | 1000 | 0 | S | 3061350 | 3061410 | LAN | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 3060144 | SS | 0 | 4 | 0 | 0 | 1025211 | 0.5 |
| 8 | 54 | 112983 | 1100 | 0 | N | 11291621 | 11291627 | 10 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | SS | 11292015 | AC | 11291621 | 3 | 0 | 0 | 1025133 | 0.2 |
| 8 | 58 | 30783 | 1000 | 0 | N | 3072045 | 3080230 | LAN | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | OT | 3072030 | 0 | 0 | 0 | 1021222 | 0.5 |
| 8 | 66 | 30183 | 1000 | 0 | S | 3010145 | 3010210 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 3010141 | SS | 0 | 2 | 0 | 0 | 1026141 | 0.0 |
| 8 | 69 | 31283 | 0100 | 0 | N | 3121907 | 3121908 | LAN | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 3121907 | 0 | 0 | 0 | 1025132 | 0.1 |
| 8 | 71 | 31183 | 1000 | 0 | S | 3111855 | 3112000 | 20 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 3101245 | SS | 0 | 6 | 0 | 0 | 1025151 | 1.8 |
| 8 | 73 | 30883 | 1000 | 0 | S | 3081423 | 3081516 | NG | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | SS | 3080026 | SS | 0 | 5 | 0 | 0 | 1022131 | 2.4 |
| 8 | 80 | 31783 | 1100 | 0 | N | 3171554 | 3171606 | NG | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 3171835 | AP | 3170356 | 2 | 0 | 0 | 1025133 | 1.6 |
| 8 | 89 | 32883 | 1000 | 0 | S | 3281427 | 3281516 | 10 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | SS | 3272341 | SS | 0 | 5 | 0 | 0 | 1022131 | 1.0 |
| 8 | 106 | 41383 | 1000 | 0 | S | 4131922 | 4132013 | NG | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | SS | 4122236 | AP | 4131717 | 6 | 0 | 0 | 1025133 | 2.3 |
| 8 | 109 | 51883 | 1000 | 0 | N | 5181550 | 5181608 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 5181550 | 0 | 0 | 0 | 1025132 | 0.4 |
| 8 | 116 | 61683 | 1000 | 6161430 | S | 0 | 0 | LAN | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 6161513 | SS | 0 | 1 | 0 | 0 | 1031321 | 0.0 |
| 8 | 122 | 22483 | 1000 | 0 | S | 2242008 | 2242036 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 1.8 | SS | 2241805 | SS | 0 | 2 | 0 | 0 | 1025131 | 3.4 |
| 8 | 130 | 21883 | 1000 | 0 | N | 2180245 | 2180420 | 70 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 2180125 | 0 | 0 | 0 | 1026142 | 5.0 |
| 8 | 132 | 70583 | 1000 | 0 | N | 7051357 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 0 | AP | 7051122 | 0 | 0 | 0 | 0025372 | 2.5 |

| DST | CASE | DATE | FREQ | TIME OCCUR | 1ST NOT | 1ST RCC NOT | DISTRESS SITED | D.O.F. | MH-52 | MH-3F | MC-130 | MH-25 | OTH | 1ST SARSAT NOTIFICATION | | 1ST NON-SS NOTIFICATION | | #MSG | LIVES L | S | LDTCOSN | SORT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 60 | 21383 | 1100 | 0 | S | 2141855 | 2141952 | NG | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 2140632 | OT | 2141823 | 4 | 0 | 0 | 1025133 | 1.5 |
| 11 | 105 | 30483 | 1100 | 0 | S | 3041747 | 0 | NG | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 3040500 | SS | 0 | 4 | 0 | 0 | 0025371 | 0.7 |
| 11 | 168 | 102583 | 1000 | 0 | S | 10252052 | 10252335 | 285 | 0.0 | 1.7 | 0.0 | 0.0 | 0.0 | SS | 10250450 | SS | 0 | 19 | 0 | 0 | 1025131 | 5.3 |
| 11 | 206 | 62283 | 1000 | 0 | S | 6221345 | 6222018 | NG | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | SS | 6220137 | AC | 6221317 | 5 | 0 | 0 | 1021133 | 3.2 |
| 11 | 248 | 91983 | 1100 | 0 | S | 9191420 | 9191645 | 75 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | SS | 9191009 | SS | 0 | 7 | 0 | 0 | 1021131 | 2.2 |
| 11 | 261 | 21483 | 1000 | 0 | S | 2140852 | 0 | NG | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 2140536 | AC | 2141009 | 3 | 0 | 0 | 0025373 | 2.4 |
| 11 | 303 | 72383 | 1001 | 7240305 | N | 7240311 | 7240543 | 15 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 7240859 | OT | 7240305 | 9 | 0 | 3 | 1100133 | 2.5 |
| 11 | 376 | 72983 | 1000 | 0 | S | 7291507 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 7291144 | SS | 0 | 1 | 0 | 0 | 0025371 | 2.0 |
| 12 | 24 | 32783 | 1000 | 0 | N | 3271740 | 0 | NG | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | SS | 0 | RD | 3271730 | 0 | 0 | 0 | 0025372 | 2.0 |
| 12 | 38 | 22283 | 1000 | 0 | S | 2221657 | 0 | NG | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 2221600 | SS | 0 | 1 | 0 | 0 | 0025371 | 1.0 |
| 12 | 49 | 111583 | 1000 | 0 | S | 11152111 | 0 | 'AN | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 | SS | 11151440 | AC | 11152100 | 6 | 0 | 0 | 1021343 | 2.8 |
| 12 | 65 | 52783 | 1000 | 0 | S | 0 | 5281450 | LAN | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 5280102 | AC | 5280756 | 4 | 0 | 0 | 1025213 | 0.0 |
| 12 | 99 | 120183 | 1100 | 0 | S | 12011505 | 12011735 | 600 | 0.0 | 0.0 | 5.7 | 0.0 | 0.0 | SS | 12010213 | AC | 12011213 | 13 | 0 | 1 | 1100133 | 13.3 |
| 12 | 101 | 53083 | 1001 | 0 | N | 5302212 | 5302337 | 170 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | SS | 5301738 | OT | 5301250 | 4 | 0 | 3 | 1100133 | 1.0 |
| 12 | 115 | 40483 | 1000 | 0 | N | 4042037 | 0 | NG | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 4041749 | 0 | 0 | 0 | 0025372 | 0.6 |
| 12 | 125 | 22283 | 1000 | 0 | S | 2212044 | 0 | 2 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 2200504 | AC | 2210704 | 6 | 0 | 0 | 0025373 | 1.4 |
| 12 | 131 | 22683 | 1000 | 0 | S | 2260600 | 0 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 2260328 | AC | 2260340 | 4 | 0 | 0 | 1025133 | 0.6 |
| 12 | 139 | 30983 | 1000 | 0 | S | 3082111 | 0 | 92 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 | SS | 3081756 | SS | 0 | 2 | 0 | 0 | 0025371 | 4.0 |
| 12 | 140 | 30983 | 0100 | 0 | N | 3091721 | 0 | NG | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | OT | 3091601 | 0 | 0 | 0 | 1025372 | 1.4 |
| 12 | 175 | 70383 | 1000 | 0 | S | 7031200 | 0 | 20 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 7030040 | SS | 0 | 2 | 0 | 0 | 0025371 | 0.8 |
| 12 | 182 | 42683 | 1000 | 0 | N | 4262109 | 0 | 50 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | SS | 0 | OT | 4262053 | 0 | 0 | 0 | 0025372 | 1.3 |
| 12 | 182 | 71083 | 1000 | 0 | N | 7092216 | 7092232 | LAN | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 7092215 | 0 | 0 | 0 | 1025372 | 0.3 |
| 12 | 198 | 51983 | 1000 | 0 | S | 5172345 | 0 | NG | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 5172014 | AC | 5180018 | 3 | 0 | 0 | 1025133 | 0.1 |
| 12 | 208 | 81583 | 1000 | 0 | S | 8151620 | 8151638 | 1 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 8151003 | SS | 0 | 4 | 0 | 0 | 1025371 | 0.3 |
| 12 | 216 | 82383 | 0100 | 0 | N | 8231814 | 0 | 65 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 8231814 | AC | 8231734 | 1 | 0 | 0 | 0025373 | 1.7 |
| 12 | 237 | 62683 | 1001 | 6260445 | N | 6260502 | 6260510 | 3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | OT | 6260445 | 0 | 0 | 2 | 1100132 | 1.4 |
| 12 | 328 | 92583 | 1101 | 9242300 | N | 9250245 | 9250715 | 30 | 0.0 | 0.0 | 1.0 | 0.0 | 3.7 | SS | 9250457 | OT | 9242300 | 2 | 0 | 2 | 1100133 | 13.0 |
| 13 | 3156 | 32383 | 1000 | 0 | S | 3230524 | 0 | NG | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 3230040 | AC | 3231301 | 4 | 0 | 0 | 1025133 | 2.0 |
| 13 | 4003 | 50283 | 1000 | 0 | N | 5020033 | 0 | 80 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AP | 5020006 | 0 | 0 | 0 | 1025372 | 3.0 |
| 13 | 6021 | 60483 | 1000 | 0 | S | 6041955 | 6042110 | LAN | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 6041739 | AC | 6041942 | 3 | 0 | 0 | 1025373 | 1.1 |
| 13 | 7290 | 70883 | 1000 | 0 | S | 7080558 | 7080622 | LAN | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 7072353 | SS | 0 | 6 | 0 | 0 | 1025371 | 0.7 |
| 14 | 42 | 102083 | 1000 | 0 | N | 10202356 | 0 | NG | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 10202345 | 0 | 0 | 0 | 0025372 | 0.5 |
| 14 | 46 | 102283 | 1000 | 0 | S | 10222210 | 10222237 | LAN | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 10221437 | SS | 0 | 2 | 0 | 0 | 1025131 | 0.5 |
| 14 | 66 | 103083 | 1000 | 0 | N | 10302307 | 10302310 | 14 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | SS | 0 | AC | 10302218 | 0 | 0 | 0 | 1025132 | 1.0 |
| 14 | 83 | 110783 | 0100 | 0 | N | 11070015 | 11070132 | LAN | 0.5 | 0.0 | 0.3 | 0.0 | 0.0 | SS | 0 | OT | 11070007 | 0 | 0 | 0 | 1022212 | 2.6 |
| 14 | 94 | 111183 | 1100 | 0 | N | 11112245 | 11120030 | LAN | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AP | 11112200 | 0 | 0 | 0 | 1025212 | 2.1 |
| 14 | 97 | 111283 | 1000 | 0 | N | 11120035 | 0 | NG | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | SS | 0 | AC | 11120009 | 0 | 0 | 0 | 0025372 | 1.4 |
| 14 | 113 | 111683 | 0100 | 0 | N | 11162248 | 11162300 | LAN | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | OT | 11162141 | 0 | 0 | 0 | 1025212 | 0.5 |
| 14 | 131 | 113083 | 0100 | 0 | N | 11300850 | 11301835 | LAN | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 11300549 | 0 | 0 | 0 | 1025212 | 0.8 |
| 14 | 137 | 120383 | 0100 | 0 | N | 12030600 | 12030615 | LAN | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | SS | 0 | AC | 12030600 | 0 | 0 | 0 | 1025212 | 0.3 |
| 14 | 153 | 121383 | 0100 | 0 | N | 12132120 | 12132130 | LAN | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | FA | 12132105 | 0 | 0 | 0 | 1025212 | 0.2 |
| 14 | 172 | 122183 | 0100 | 0 | S | 12212112 | 0 | NG | 0.0 | 0.0 | 2.1 | 0.0 | 0.0 | SS | 12211825 | SS | 0 | 1 | 0 | 0 | 0025371 | 7.9 |
| 14 | 304 | 30483 | 1000 | 0 | S | 0 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 3041740 | SS | 0 | 2 | 0 | 0 | 0025371 | 0.0 |
| 14 | 314 | 31083 | 1000 | 0 | N | 0 | 0 | NG | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | SS | 0 | AC | 3100541 | 0 | 0 | 0 | 0025372 | 0.2 |
| 14 | 324 | 31483 | 1000 | 0 | N | 3142037 | 0 | NG | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 3141920 | 0 | 0 | 0 | 0025372 | 1.6 |
| 14 | 359 | 40283 | 0100 | 0 | N | 4021447 | 4021500 | LAN | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | FA | 4021255 | 0 | 0 | 0 | 1025212 | 0.4 |
| 14 | 367 | 40583 | 0100 | 0 | N | 4051947 | 4052005 | LAN | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AP | 4051918 | 0 | 0 | 0 | 1025372 | 0.5 |
| 14 | 409 | 50183 | 1000 | 0 | N | 5011700 | 5011810 | 130 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | SS | 0 | AC | 5011013 | 0 | 0 | 4 | 1100132 | 14.2 |
| 14 | 452 | 52483 | 0100 | 0 | N | 5250120 | 5250124 | LAN | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AP | 5240145 | 0 | 0 | 0 | 1025372 | 0.1 |
| 14 | 493 | 60783 | 1100 | 0 | S | 6072155 | 6100547 | LAN | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 6072035 | OT | 6100530 | 1 | 0 | 0 | 1025373 | 3.9 |
| 14 | 534 | 62083 | 1000 | 0 | N | 6210443 | 0 | NG | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | SS | 0 | AC | 6210430 | 0 | 0 | 0 | 0025372 | 0.8 |
| 14 | 607 | 72483 | 1000 | 0 | N | 0 | 0 | 23 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | SS | 0 | AC | 7241100 | 0 | 0 | 5 | 1100132 | 4.6 |
| 14 | 615 | 72983 | 1100 | 0 | N | 7292030 | 7292155 | NG | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 7291938 | 0 | 0 | 0 | 1025372 | 0.2 |
| 14 | 672 | 82383 | 1000 | 0 | N | 8231845 | 8231858 | LAN | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 8231845 | 0 | 0 | 0 | 1025372 | 0.3 |
| 14 | 723 | 91583 | 1000 | 0 | N | 9152029 | 9152315 | LAN | 0.0 | 0.0 | 2.2 | 0.0 | 0.0 | SS | 0 | AC | 9151940 | 0 | 0 | 0 | 1025372 | 3.8 |
| 14 | 724 | 92183 | 1000 | 0 | N | 9170857 | 9212042 | NG | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 9170825 | FA | 9170430 | 1 | 0 | 0 | 1025133 | 0.5 |
| 14 | 740 | 92083 | 1000 | 0 | S | 9201930 | 0 | NG | 0.0 | 0.0 | 0.9 | 0.0 | 0.0 | SS | 9201851 | SS | 0 | 1 | 0 | 0 | 0025371 | 0.9 |
| 14 | 756 | 92583 | 1000 | 0 | S | 9262019 | 9262151 | LAN | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | SS | 9251232 | SS | 0 | 4 | 0 | 0 | 1021131 | 2.2 |
| 14 | 764 | 92983 | 1000 | 0 | N | 9291249 | 0 | NG | 0.0 | 0.0 | 3.3 | 0.0 | 0.0 | SS | 9290804 | AC | 9290510 | 1 | 0 | 0 | 0025373 | 7.1 |
| 17 | 2 | 100183 | 1000 | 0 | S | 10012015 | 10012104 | NG | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | SS | 10011627 | SS | 0 | 4 | 0 | 0 | 1025131 | 0.4 |
| 17 | 39 | 101983 | 1000 | 0 | S | 10181730 | 0 | NG | 0.0 | 0.0 | 3.5 | 0.0 | 0.0 | SS | 10180939 | OT | 10180945 | 6 | 0 | 0 | 0025373 | 6.3 |
| 17 | 89 | 110783 | 1000 | 0 | S | 11071615 | 11071947 | LAN | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 11070519 | SS | 0 | 5 | 0 | 3 | 1100211 | 2.5 |

| DST | CASE | DATE | FREQ | TIME OCCUR | 1ST NOT | 1ST RCC NOT | DISTRESS SITED | D.O.F. | MH-52 | MH-3F | HC-130 | MH-25 | OTH | 1ST SARSAT NOTIFICATION | | 1ST NON-SS NOTIFICATION | | #MSG | LIVES L | S | LDTCOSN | SORT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 157 | 72984 | 1000 | 0 | N | 7291725 | 0 | | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 7291643 | 0 | 0 | 0 | 0025372 | 2.4 |
| 3 | 164 | 71784 | 1100 | 0 | N | 7171638 | 7171645 | NG | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 7171639 | 0 | 0 | 0 | 1025132 | 1.0 |
| 3 | 167 | 71984 | 1000 | 0 | S | 7191709 | 7201224 | LAN | 3.2 | 0.0 | 0.6 | 0.0 | 0.0 | SS | 7180802 | AC | 7191658 | 9 | 0 | 0 | 1025033 | 6.3 |
| 3 | 168 | 72084 | 1000 | 0 | S | 7200715 | 7200750 | 0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 7200512 | SS | 0 | 4 | 0 | 0 | 1025131 | 1.1 |
| 3 | 179 | 72684 | 0100 | 0 | N | 7201909 | 0 | 0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 7201909 | 0 | 0 | 0 | 0025372 | 3.6 |
| 3 | 189 | 80184 | 1000 | 0 | S | 8020105 | 0 | | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 8011835 | AC | 8012012 | 2 | 0 | 0 | 0045373 | 0.8 |
| 3 | 190 | 80284 | 1000 | 0 | S | 8022332 | 0 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 8021312 | AC | 8021610 | 1 | 0 | 0 | 1025223 | 1.7 |
| 3 | 194 | 80584 | 1000 | 0 | S | 8052033 | 0 | | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 8051938 | AC | 8051941 | 1 | 0 | 0 | 1025133 | 2.7 |
| 3 | 203 | 81284 | 1000 | 0 | S | 8121850 | 8121945 | | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 8121729 | FA | 8121820 | 1 | 0 | 0 | 1045133 | 1.6 |
| 3 | 203 | 83084 | 0100 | 0 | N | 8302015 | 0 | | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 8301935 | 0 | 0 | 0 | 0045302 | 0.5 5 |
| 3 | 240 | 90984 | 1000 | 0 | N | 9092000 | 0 | | 0.6 | 0.0 | 0.0 | 1.2 | 0.0 | SS | 9091819 | AC | 9091735 | 17 | 0 | 0 | 1025133 | 2.7 |
| 3 | 244 | 91884 | 1000 | 0 | S | 9181820 | 0 | | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 9181209 | | 0 | 1 | 0 | 0 | 0045361 | 1.2 |
| 3 | 246 | 52984 | 1000 | 0 | S | 5291610 | 5291840 | 15 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 5291220 | AC | 5291340 | 2 | 0 | 0 | 1021133 | 9.5 |
| 3 | 252 | 92984 | 1000 | 0 | S | 9291931 | 0 | | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 9291744 | AC | 9291829 | 1 | 0 | 0 | 0045373 | 2.4 |
| 3 | 282 | 90284 | 1000 | 0 | S | 9021910 | 0 | | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 9020345 | | 0 | 9 | 0 | 0 | 1025133 | 1.2 |
| 3 | 297 | 31484 | 1000 | 0 | N | 3140950 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | SS | 3141054 | FA | 3140950 | 1 | 1 | 0 | 1100213 | 12.3 |
| 3 | 358 | 70984 | 1100 | 0 | N | 7090451 | 7090507 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 1.9 | SS | 0 | AC | 7090451 | 0 | 0 | 0 | 1025132 | 4.1 |
| 3 | 393 | 71884 | 1000 | 0 | S | 7182325 | 7190033 | MAR | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 7182125 | SS | 0 | 3 | 0 | 0 | 1025371 | 5.6 |
| 3 | 430 | 72984 | 1100 | 0 | S | 7290305 | 7290345 | 0 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 7281916 | AC | 7290238 | 7 | 0 | 0 | 1021133 | 3.0 |
| 3 | 450 | 80384 | 1000 | 0 | N | 8030052 | 0 | NG | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 8030052 | 0 | 0 | 0 | 1025132 | 1.7 |
| 3 | 457 | 51884 | 1000 | 0 | S | 0 | 5181354 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 5172213 | SS | 0 | 6 | 0 | 0 | 1026341 | 0.0 |
| 3 | 467 | 52284 | 1100 | 0 | S | 5221255 | 0 | 30 | 0.0 | 0.0 | 0.0 | 2.4 | 0.0 | SS | 5220746 | SS | 0 | 3 | 0 | 0 | 0025371 | 6.4 |
| 3 | 468 | 52284 | 1000 | 0 | N | 5221228 | 0 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | OT | 5221219 | 0 | 0 | 0 | 0025372 | 0.3 |
| 3 | 498 | 81984 | 1000 | 0 | S | 8190536 | 0 | | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 8190350 | AC | 8190453 | 13 | 0 | 0 | 1025213 | 1.2 |
| 3 | 506 | 82184 | 1000 | 0 | N | 8211455 | 0 | | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 8211450 | 0 | 0 | 0 | 0045372 | 1.0 |
| 3 | 535 | 82584 | 1000 | 0 | N | 8251821 | 0 | | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 8260705 | AC | 8251810 | 2 | 0 | 0 | 1025023 | 0.2 |
| 3 | 7042 | 112684 | 1000 | 0 | S | 11261326 | 0 | | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | SS | 11260258 | AC | 11261128 | 1 | 0 | 0 | 0045373 | 3.0 |
| 3 | 7060 | 21684 | 1000 | 0 | N | 2161400 | 2161428 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 0 | FA | 2161350 | 0 | 0 | 1 | 1100132 | 26.3 |
| 3 | 7072 | 30984 | 1100 | 0 | S | 3091828 | 0 | 150 | 0.0 | 0.0 | 5.3 | 0.0 | 0.0 | SS | 3091206 | OT | 3091639 | 5 | 0 | 0 | 1010133 | 7.7 |
| 3 | 7089 | 32984 | 1000 | 0 | N | 3300216 | 3301330 | 10 | 32.7 | 27.2 | 35.1 | 2.1 | 213.5 | SS | 3292022 | OT | 3291755 | 9 | 4 | 0 | 1100143 | 332.3 |
| 3 | 7126 | 52984 | 1000 | 5281700 | N | 5282000 | 5300315 | NG | 0.0 | 1.2 | 0.0 | 2.2 | 0.0 | SS | 5290153 | OT | 5281700 | 4 | 0 | 5 | 1100133 | 25.9 |
| 3 | 7130 | 60284 | 1000 | 0 | N | 6021600 | 6021637 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 6021422 | AC | 6021147 | 2 | 0 | 3 | 1100133 | 57.9 |
| 3 | 7131 | 53184 | 1000 | 0 | S | 5311654 | 5311822 | NG | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 | SS | 5302138 | AC | 5311202 | 3 | 0 | 4 | 1100133 | 162.5 |
| 3 | 7134 | 53184 | 1000 | 5301151 | S | 5310830 | 5310840 | 140 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | SS | 5301214 | AC | 5310159 | 9 | 0 | 3 | 1100133 | 20.4 |
| 3 | 7149 | 61784 | 1000 | 0 | S | 6180050 | 6180258 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 6171948 | AC | 6172031 | 7 | 0 | 4 | 1100133 | 29.7 |
| 3 | 7168 | 71484 | 1100 | 0 | N | 7141555 | 7141635 | NG | 0.6 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 0 | AC | 7141430 | 0 | 0 | 0 | 1025212 | 1.2 |
| 3 | 7193 | 81684 | 1000 | 0 | S | 8171935 | 0 | | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | SS | 8152101 | | 0 | 14 | 0 | 0 | 0045371 | 3.5 |
| 3 | 7198 | 82084 | 1000 | 0 | S | 8200523 | 0 | | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | SS | 8200358 | AC | 8200428 | 1 | 0 | 0 | 0045373 | 1.5 |
| 3 | 7215 | 90984 | 1000 | 0 | S | 9090232 | 0 | | 0.0 | 0.0 | 0.0 | 1.3 | 0.0 | SS | 9081914 | AC | 9090058 | 8 | 0 | 0 | 0045373 | 2.3 |
| 3 | 9999 | 82784 | 1000 | 0 | S | 0 | 0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 8271019 | AC | 8271306 | 14 | 0 | 0 | 1025133 | 0.0 |
| 3 | 99990 | 60784 | 1000 | 0 | S | 6071352 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 6071310 | SS | 0 | 2 | 0 | 0 | 0025371 | 0.0 |
| 3 | 99991 | 52984 | 1000 | 0 | S | 0 | 0 | 60 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 5290331 | OT | 5291530 | 1 | 0 | 0 | 1044373 | 0.0 |
| 3 | 99993 | 42484 | 1000 | 0 | N | 4250014 | 0 | 100 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | SS | 0 | AC | 4242000 | 0 | 0 | 0 | 0025372 | 3.4 |
| 3 | 99995 | 10384 | 1000 | 0 | S | 1031510 | 1031543 | LAN | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 1030217 | SS | 0 | 5 | 0 | 0 | 1025371 | 0.8 |
| 5 | 13 | 100984 | 1000 | 0 | S | 10092008 | 0 | | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | SS | 10091523 | | 0 | 4 | 0 | 0 | 0045071 | 2.0 |
| 5 | 16 | 100884 | 1000 | 0 | S | 10090717 | 0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 10080712 | AC | 10090448 | 9 | 0 | 0 | 1021213 | 0.0 |
| 5 | 18 | 101284 | 100010120450 | | S | 10120909 | 0 | | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | SS | 10120450 | | 0 | 5 | 0 | 0 | 1021131 | 2.5 |
| 5 | 37 | 102584 | 1000 | 0 | S | 10251936 | 0 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 10251609 | AC | 10251910 | 2 | 0 | 0 | 0045373 | 0.4 |
| 5 | 68 | 111584 | 0100 | 0 | N | 11152016 | 0 | | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | SS | 0 | AC | 11151720 | 0 | 0 | 0 | 1024132 | 0.7 |
| 5 | 90 | 120784 | 1000 | 0 | S | 12071838 | 12071925 | NG | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | SS | 12070731 | | 0 | 3 | 0 | 0 | 1045131 | 3.4 |
| 5 | 102 | 121884 | 1000 | 0 | S | 12181643 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | SS | 12181420 | | 0 | 2 | 0 | 0 | 0045371 | 0.9 |
| 5 | 117 | 123184 | 1000 | 0 | S | 12312303 | 12312412 | LAN | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | SS | 12311554 | AC | 12312117 | 3 | 0 | 0 | 1021343 | 4.4 |
| 5 | 144 | 12784 | 0100 | 0 | N | 1261514 | 0 | NG | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | SS | 0 | AP | 1261506 | 0 | 0 | 0 | 0025372 | 2.1 |
| 5 | 163 | 21684 | 1000 | 0 | N | 2151905 | 2160543 | NG | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | SS | 2152302 | AP | 2151319 | 2 | 0 | 0 | 1026343 | 3.2 |
| 5 | 189 | 30884 | 1000 | 3091230 | S | 3092138 | 3100043 | 155 | 0.0 | 0.0 | 0.2 | 2.3 | 0.0 | SS | 3091404 | AC | 3091926 | 2 | 0 | 9 | 1100133 | 13.4 |
| 5 | 199 | 32284 | 1000 | 0 | S | 3221514 | 3221630 | LAN | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | SS | 3220243 | AC | 3221440 | 6 | 0 | 0 | 1022323 | 5.0 |
| 5 | 222 | 41484 | 1000 | 0 | S | 4141145 | 4141255 | LAN | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | SS | 4140324 | AC | 4141227 | 2 | 0 | 0 | 1025223 | 2.0 |
| 5 | 230 | 41984 | 1100 | 0 | S | 4191605 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | SS | 4191400 | AC | 4191550 | 3 | 0 | 0 | 0025373 | 1.0 |
| 5 | 285 | 52484 | 1000 | 0 | S | 5231535 | 0 | 111 | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 | SS | 5231300 | AP | 5231525 | 4 | 0 | 0 | 0025373 | 6.1 |
| 5 | 357 | 62984 | 1000 | 0 | S | 6301420 | 6301535 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | SS | 6291657 | AC | 6292156 | 11 | 0 | 0 | 1021133 | 2.8 |
| 5 | 423 | 73184 | 1000 | 0 | N | 8010759 | 8011526 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | SS | 7311537 | AP | 7311526 | 15 | 0 | 0 | 1021133 | 1.1 |
| 5 | 444 | 81384 | 1000 | 0 | S | 8131828 | 8131855 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SS | 8131306 | AC | 8131814 | 3 | 0 | 0 | 1025323 | 3.5 |
| 5 | 446 | 81584 | 1000 | 0 | S | 8151725 | 0 | | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | SS | 8150655 | | 0 | 4 | 0 | 0 | 0025371 | 1.5 |

| DST | CASE | DATE | FREQ | TIME OCCUR | 1ST NOT | 1ST RCC NOT | DISTRESS SITED | D.O.F. | MH-52 | MH-3F | HC-130 | MH-25 | OTH | 1ST SARSAT NOTIFICATION | 1ST NON-SS NOTIFICATION | #MSG | LIVES L | S | LDTCOSN | SORT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 8062 | 80284 | 1000 | 0 | S | 8021123 | 0 | NG | 0.0 | 2.4 | 0.0 | 0.0 | 0.0 SS | 8020127 | AC 8020300 | 2 | 0 | 0 | 0045373 | 4.9 |
| 7 | 8612 | 81884 | 1000 | 0 | S | 8181122 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 SS | 8180138 | AC 8180200 | 3 | 0 | 0 | 0045373 | 3.4 |
| 7 | 8780 | 82384 | 1000 | 0 | S | 8230059 | 0 | | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 SS | 8221659 | 0 | 9 | 0 | 0 | 0045371 | 3.0 |
| 7 | 8792 | 82484 | 1000 | 0 | S | 8241328 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 SS | 8240733 | 0 | 4 | 0 | 0 | 0045371 | 1.0 |
| 7 | 8978 | 82884 | 1000 | 0 | S | 8281053 | 8281128 | NG | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 SS | 8280434 | 0 | 5 | 0 | 1 | 1100131 | 2.0 |
| 7 | 9640 | 91884 | 1000 | 0 | S | 9180704 | 0 | NG | 0.0 | 0.0 | 0.0 | 1.3 | 0.0 SS | 9171923 | 0 | 6 | 0 | 0 | 0045371 | 2.7 |
| 8 | 3 | 100384 | 1000 | 0 | N | 10031925 | 0 | | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 SS | 0 | AC 10031920 | 0 | 0 | 0 | 1025132 | 2.9 |
| 8 | 23 | 111284 | 1000 | 0 | S | 11121705 | 0 | | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 SS | 11120105 | 0 | 5 | 0 | 0 | 1045321 | 1.5 |
| 8 | 29 | 102984 | 1000 | 0 | S | 10292016 | 0 | | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 SS | 10290443 | 0 | 7 | 0 | 0 | 1025131 | 4.7 |
| 8 | 31 | 112284 | 1000 | 0 | S | 11221549 | 0 | NG | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 SS | 11220252 | 0 | 23 | 0 | 0 | 1024141 | 2.5 |
| 8 | 44 | 12984 | 1000 | 0 | S | 1291926 | 0 | NG | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 SS | 1291820 | SS 0 | 1 | 0 | 0 | 0025371 | 3.7 |
| 8 | 47 | 20884 | 1000 | 0 | N | 2080326 | 2080426 | NG | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 SS | 2072107 | AC 2072100 | 4 | 0 | 0 | 1025133 | 1.9 |
| 8 | 52 | 112084 | 1000 | 0 | S | 11201421 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 SS | 11192327 | 0 | 11 | 0 | 0 | 1025131 | 1.2 |
| 8 | 65 | 40584 | 1000 | 0 | N | 4052315 | 4052335 | LAN | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 SS | 0 | OT 4051300 | 0 | 0 | 0 | 1021132 | 0.4 |
| 8 | 69 | 40484 | 1000 | 0 | N | 4042357 | 4051237 | NG | 0.0 | 0.0 | 0.0 | 1.9 | 0.0 SS | 4050337 | OT 4042215 | 3 | 0 | 2 | 1100133 | 7.0 |
| 8 | 76 | 41684 | 1000 | 0 | N | 4161340 | 4161358 | LAN | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 SS | 0 | OT 4161340 | 0 | 0 | 0 | 1025372 | 0.6 |
| 8 | 79 | 32884 | 1100 | 0 | S | 3281428 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 SS | 3262337 | SS 0 | 8 | 0 | 0 | 1025371 | 2.1 |
| 8 | 80 | 41784 | 1000 | 0 | S | 4181906 | 4182120 | 60 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 SS | 4171426 | SS 0 | 30 | 0 | 0 | 1026141 | 3.3 |
| 8 | 81 | 42084 | 1000 | 0 | S | 4202323 | 4210130 | 18 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 SS | 4201429 | AC 4202112 | 1 | 0 | 0 | 0025373 | 2.0 |
| 8 | 86 | 10184 | 1000 | 0 | S | 1011544 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 SS | 1010351 | SS 0 | 3 | 0 | 0 | 0025371 | 1.3 |
| 8 | 86 | 50584 | 1000 | 0 | S | 5042132 | 0 | 90 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 SS | 5040723 | AC 5042215 | 9 | 0 | 0 | 0025373 | 2.3 |
| 8 | 87 | 50684 | 1000 | 0 | S | 5061318 | 5061403 | 35 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 SS | 5050704 | SS 0 | 9 | 0 | 0 | 1021131 | 1.3 |
| 8 | 87 | 122584 | 1000 | 0 | S | 12250534 | 0 | | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 SS | 12242255 | AC 12250400 | 3 | 0 | 0 | 1021133 | 0.8 |
| 8 | 91 | 51284 | 1000 | 0 | S | 5121708 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 SS | 5120023 | AC 5120914 | 2 | 0 | 0 | 0025373 | 2.4 |
| 8 | 92 | 51784 | 1100 | 0 | N | 5180035 | 5180105 | LAN | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 SS | 0 | AC 5180035 | 0 | 0 | 0 | 1025212 | 2.2 |
| 8 | 107 | 22284 | 1000 | 0 | S | 2221510 | 2221647 | NG | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 SS | 2220205 | AC 2221453 | 4 | 0 | 0 | 1022133 | 1.0 |
| 8 | 107 | 60584 | 1100 | 0 | S | 6031930 | 6041630 | NG | 0.0 | 0.3 | 0.0 | 0.8 | 0.0 SS | 6030431 | SS 0 | 4 | 0 | 0 | 1025131 | 3.1 |
| 8 | 108 | 22384 | 1000 | 0 | S | 2220857 | 2221018 | NG | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 SS | 2220158 | SS 0 | 7 | 0 | 0 | 1025371 | 2.3 |
| 8 | 113 | 11284 | 0000 | 0 | N | 1121447 | 0 | NG | 0.5 | 0.6 | 0.0 | 0.0 | 0.0 SS | 0 | AC 1120748 | 0 | 0 | 0 | 0025372 | 1.2 |
| 8 | 113 | 60984 | 1000 | 0 | N | 6102315 | 6110231 | NG | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 SS | 6092041 | AC 6092014 | 4 | 0 | 0 | 1025133 | 4.0 |
| 8 | 116 | 110984 | 1000 | 0 | N | 11090645 | 0 | NG | 0.1 | 0.0 | 0.0 | 0.0 | 0.8 SS | 0 | AC 11090114 | 0 | 0 | 0 | 0045372 | 3.3 |
| 8 | 117 | 22884 | 1000 | 0 | S | 2280650 | 2280708 | 80 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 SS | 2251454 | SS 0 | 22 | 0 | 0 | 1026141 | 3.3 |
| 8 | 124 | 111084 | 1000 | 0 | S | 11101435 | 11101530 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 SS | 11092353 | AC 11101150 | 9 | 0 | 0 | 1021133 | 1.2 |
| 8 | 128 | 12884 | 1100 | 0 | N | 1282400 | 1290015 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 SS | 1291220 | AC 1282400 | 3 | 0 | 0 | 1025133 | 0.5 |
| 8 | 129 | 70384 | 1100 | 0 | S | 6301552 | 7011835 | NG | 0.0 | 0.0 | 0.0 | 1.3 | 0.0 SS | 6300500 | SS 0 | 21 | 0 | 0 | 1100211 | 3.1 |
| 8 | 130 | 70384 | 1000 | 0 | S | 7031858 | 7031935 | LAN | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 SS | 7021801 | SS 0 | 9 | 0 | 0 | 1025211 | 0.7 |
| 8 | 137 | 71184 | 1100 | 0 | N | 7112045 | 7112055 | LAN | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 SS | 0 | AC 7110214 | 0 | 0 | 0 | 1025372 | 2.3 |
| 8 | 142 | 71984 | 1100 | 0 | S | 7191535 | 7191539 | NG | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 SS | 7191500 | AC 7191535 | 2 | 0 | 0 | 1025133 | 0.2 |
| 8 | 146 | 21384 | 1000 | 0 | S | 2131620 | 0 | NG | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 SS | 2122052 | SS 0 | 1 | 0 | 0 | 0025371 | 0.9 |
| 8 | 155 | 32584 | 1000 | 0 | S | 3251631 | 3251843 | NG | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 SS | 3241216 | SS 0 | 7 | 0 | 0 | 1022131 | 2.6 |
| 8 | 178 | 30784 | 1000 | 0 | S | 3071722 | 0 | NG | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 SS | 3070936 | SS 0 | 2 | 0 | 0 | 0025371 | 1.3 |
| 8 | 190 | 31484 | 0000 | 0 | N | 3141802 | 3141815 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 SS | 0 | AC 3141802 | 0 | 0 | 0 | 1025372 | 0.3 |
| 8 | 201 | 50284 | 1000 | 0 | S | 5021245 | 5021327 | 35 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 SS | 5020142 | SS 0 | 8 | 0 | 0 | 1025131 | 3.7 |
| 8 | 214 | 40284 | 1000 | 0 | S | 4021700 | 4021745 | NG | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 SS | 4011551 | AC 4012212 | 7 | 0 | 0 | 1025133 | 1.4 |
| 8 | 232 | 41784 | 1000 | 0 | N | 4161155 | 4161200 | LAN | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 SS | 0 | AC 4161155 | 0 | 0 | 0 | 1010212 | 0.5 |
| 8 | 248 | 42784 | 1100 | 0 | S | 4262008 | 0 | NG | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 SS | 4261552 | AC 4261815 | 1 | 0 | 0 | 0025373 | 2.1 |
| 8 | 250 | 60884 | 1000 | 0 | S | 6081049 | 6081115 | 50 | 0.4 | 0.0 | 0.0 | 0.0 | 0.4 SS | 6080218 | OT 6081000 | 4 | 0 | 0 | 0025373 | 2.0 |
| 8 | 268 | 51384 | 1100 | 0 | N | 5132004 | 5132014 | NG | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 SS | 0 | AC 5132004 | 0 | 0 | 0 | 1025212 | 0.3 |
| 8 | 314 | 60484 | 1100 | 0 | S | 6032214 | 0 | NG | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 SS | 6031747 | SS 0 | 2 | 0 | 0 | 0025371 | 1.7 |
| 8 | 318 | 12484 | 1000 | 0 | N | 1242215 | 1242325 | 30 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 SS | 0 | OT 1242132 | 0 | 0 | 6 | 1100212 | 2.5 |
| 8 | 338 | 61784 | 1000 | 0 | S | 6162114 | 0 | 30 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 SS | 6161713 | AC 6161714 | 4 | 0 | 0 | 0025373 | 2.9 |
| 8 | 345 | 61984 | 1000 | 0 | N | 6181545 | 6181555 | NG | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 SS | 0 | AC 6180910 | 0 | 0 | 0 | 1025372 | 0.3 |
| 8 | 352 | 81784 | 1000 | 0 | S | 8181203 | 8181225 | | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 SS | 8161253 | 0 | 13 | 0 | 0 | 1025171 | 1.4 |
| 8 | 360 | 62684 | 1100 | 0 | N | 6260115 | 6260118 | LAN | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 SS | 0 | AC 6260115 | 0 | 0 | 0 | 1026212 | 0.2 |
| 8 | 398 | 92384 | 1000 | 0 | N | 9240044 | 0 | | 0.0 | 0.0 | 0.0 | 1.6 | 0.0 SS | 9230315 | AC 9230211 | 4 | 0 | 0 | 1045213 | 2.3 |
| 8 | 424 | 30684 | 1000 | 0 | S | 3062334 | 3070020 | 70 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 SS | 3061401 | SS 0 | 3 | 0 | 0 | 1026141 | 3.2 |
| 8 | 428 | 30884 | 1000 | 0 | S | 3071925 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 SS | 3070928 | SS 0 | 2 | 0 | 0 | 0025371 | 0.9 |
| 8 | 429 | 30884 | 0100 | 0 | S | 3072035 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 SS | 3070039 | SS 0 | ? | 0 | 0 | 0025371 | 0.6 |
| 8 | 438 | 81984 | 1000 | 0 | S | 8192155 | 8192215 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 SS | 8190611 | AC 8192215 | 6 | 0 | 0 | 1025323 | 1.0 |
| 8 | 462 | 31784 | 1000 | 0 | S | 3180025 | 0 | 80 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 SS | 3171342 | SS 0 | 5 | 0 | 0 | 0025371 | 0.0 |
| 8 | 580 | 42784 | 1100 | 0 | S | 4240215 | 4241612 | NG | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 SS | 4211541 | SS 0 | 11 | 0 | 0 | 1021131 | 4.0 |
| 8 | 606 | 50284 | 1100 | 0 | N | 5021512 | 0 | NG | 0.4 | 0.0 | 0.0 | 0.1 | 0.0 SS | 0 | OT 5021502 | 0 | 0 | 0 | 0025372 | 1.8 |
| 8 | 615 | 50584 | 1000 | 0 | N | 5041925 | 0 | NG | 0.0 | 0.3 | 0.0 | 0.0 | 3.3 SS | 5051505 | AC 5041925 | 2 | 0 | 0 | 0025373 | 5.2 |

| DST | CASE | DATE | FREQ | TIME OCCUR | 1ST NOT | 1ST RCC NOT | DISTRESS SITED | D.O.F. | HH-52 | HH-3F | HC-130 | HH-25 | 1ST SARSAT NOTIFICATION | | 1ST NON-SS NOTIFICATION | | LIVES @MSG | L | S | LDTCOSN | SORT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 256 | 90984 | 1000 | 0 | S | 9091620 | 9091700 | | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 SS | 9091543 | | 0 | 4 | 0 | 0 | 1010211 | 7.1 |
| 17 | 261 | 91084 | 1000 | 0 | S | 9101557 | 0 | | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 SS | 9100602 | | 0 | 9 | 0 | 0 | 1045211 | 4.0 |
| 17 | 341 | 32184 | 1000 | 0 | S | 3210325 | 3211733 | LAN | 0.0 | 0.0 | 0.0 | 0.0 | 70.0 SS | 3200657 | AC | 3210400 | 19 | 0 | 1 | 1100213 | 192.2 |
| 17 | 373 | 40484 | 1000 | 0 | S | 4041724 | 4041845 | LAN | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 SS | 4040401 | SS | 0 | 10 | 0 | 0 | 1026211 | 1.9 |
| 17 | 376 | 40884 | 1000 | 0 | N | 4080239 | 0 | NG | 0.0 | 0.0 | 2.6 | 0.0 | 0.0 SS | 4080222 | AC | 4080151 | 2 | 0 | 0 | 0025373 | 3.2 |
| 17 | 382 | 40884 | 1000 | 0 | N | 4081235 | 0 | NG | 0.0 | 3.8 | 0.0 | 0.0 | 0.0 SS | 4080222 | AC | 4080151 | 2 | 0 | 0 | 0025373 | 5.4 |
| 17 | 470 | 51784 | 1000 | 0 | S | 5172139 | 5172315 | LAN | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 SS | 5171511 | SS | 0 | 5 | 0 | 0 | 1010211 | 1.5 |
| 17 | 572 | 53084 | 1000 | 0 | S | 5300312 | 5300358 | NG | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 SS | 5291911 | SS | 0 | 3 | 0 | 0 | 1025371 | 0.5 |
| 17 | 643 | 62384 | 1000 | 6212100 | S | 6221315 | 6231750 | NG | 0.0 | 0.0 | 1.6 | 0.0 | 0.0 SS | 6220411 | SS | 0 | 7 | 0 | 1 | 1100133 | 20.2 |
| 17 | 646 | 62384 | 1000 | 0 | S | 6231148 | 6231950 | LAN | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 SS | 6230641 | SS | 0 | 14 | 0 | 0 | 1025211 | 1.2 |
| 17 | 675 | 63084 | 1000 | 0 | S | 6301153 | 6301310 | NG | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 SS | 6300439 | AC | 6300815 | 5 | 0 | 0 | 1025133 | 1.3 |
| 17 | 738 | 71284 | 1000 | 0 | S | 7120335 | 7120504 | LAN | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 SS | 7120256 | AC | 7120335 | 3 | 0 | 0 | 1025373 | 2.5 |
| 17 | 770 | 71984 | 1000 | 0 | N | 7191925 | 7192030 | LAN | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 SS | 7192346 | AC | 7191925 | 13 | 0 | 0 | 1025213 | 1.6 |
| 17 | 803 | 72584 | 1000 | 0 | S | 7252255 | 0 | NG | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 SS | 7252107 | SS | 0 | 1 | 0 | 0 | 0025371 | 0.5 |
| 17 | 808 | 72684 | 1000 | 0 | S | 7261935 | 7261950 | LAN | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 SS | 7260348 | SS | 0 | 8 | 0 | 0 | 1021211 | 1.4 |
| 17 | 810 | 72784 | 1000 | 0 | S | 7272120 | 7272135 | LAN | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 SS | 7270109 | SS | 0 | 11 | 0 | 0 | 1026211 | 2.4 |
| 17 | 917 | 81284 | 1000 | 0 | S | 8121610 | 8121700 | LAN | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 SS | 8120727 | OT | 8121235 | 3 | 0 | 4 | 1000213 | 6.5 |
| 17 | 936 | 81584 | 1000 | 0 | S | 8150014 | 0 | LAN | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 SS | 8142159 | | 0 | 3 | 0 | 2 | 1100221 | 5.1 |
| 17 | 956 | 81884 | 1000 | 0 | S | 8181955 | 0 | | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 SS | 8180657 | | 0 | 3 | 0 | 0 | 0045371 | 2.2 |
| 17 | 974 | 82184 | 0000 | 0 | S | 8210512 | 0 | | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 SS | 8202121 | AC | 8202152 | 3 | 0 | 0 | 0045373 | 1.1 |
| 17 | 1013 | 82584 | 1000 | 0 | S | 8251459 | 0 | | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 SS | 8250414 | | 0 | 3 | 0 | 0 | 1022131 | 1.8 |
| 17 | 1021 | 82684 | 1000 | 0 | S | 8261715 | 0 | | 0.0 | 1.5 | 0.0 | 0.0 | 0.0 SS | 8260301 | AC | 8261620 | 10 | 0 | 0 | 0045373 | 3.1 |
| 17 | 1039 | 82884 | 0000 | 0 | S | 8290134 | 0 | | 0.0 | 1.5 | 0.0 | 0.0 | 0.0 SS | 8282028 | | 0 | 3 | 0 | 0 | 0010211 | 4.4 |
| 5 | 143 | 12585 | 1000 | 0 | S | 1251227 | 0 | | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 SS | 1250543 | | 0 | 7 | 0 | 0 | 0045361 | 4.3 |
| 7 | 2395 | 10985 | 1000 | 0 | S | 1092202 | 0 | NG | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 SS | 1090113 | FA | 1092030 | 1 | 0 | 0 | 0045373 | 2.2 |
| 7 | 2428 | 11185 | 0000 | 0 | S | 1102353 | 0 | NG | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 SS | 1101236 | AC | 1101508 | 4 | 0 | 0 | 0045373 | 3.8 |
| 7 | 2765 | 12985 | 1000 | 0 | S | 1291100 | 1291151 | NG | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 SS | 1280258 | | 0 | 5 | 0 | 0 | 1025321 | 0.9 |
| 8 | 275 | 10285 | 1000 | 0 | S | 1021343 | 0 | | 3.5 | 0.5 | 0.0 | 0.0 | 0.0 SS | 1020252 | | 0 | 49 | 0 | 0 | 0045371 | 10.7 |
| 8 | 314 | 11885 | 1000 | 0 | S | 1182320 | 0 | | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 SS | 1181258 | | 0 | 2 | 0 | 0 | 1025321 | 0.3 |
| 8 | 319 | 11985 | 1000 | 0 | S | 1191622 | 0 | | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 SS | 1181838 | | 0 | 9 | 0 | 0 | 1021131 | 0.4 |
| 9 | 188 | 11985 | 1000 | 0 | S | 1190603 | 0 | | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 SS | 1190342 | | 0 | 3 | 0 | 0 | 0045371 | 2.1 |
| 12 | 115 | 10985 | 1000 | 0 | S | 1100712 | 0 | | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 SS | 1090307 | | 0 | 3 | 0 | 0 | 1025321 | 1.8 |
| 13 | 51 | 11785 | 1000 | 0 | N | 1181721 | 0 | | 0.0 | 0.0 | 0.0 | 3.2 | 0.0 SS | 1180411 | AC | 1180406 | 5 | 0 | 0 | 0045373 | 3.2 |
| 14 | 180 | 11185 | 1000 | 0 | S | 1111526 | 0 | | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 SS | 1110557 | | 0 | 2 | 0 | 0 | 0040001 | 2.0 |
| 14 | 222 | 12485 | 1100 | 0 | N | 0 | 0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 SS | 1242308 | FA | 1242140 | 1 | 0 | 0 | 1025133 | 0.0 |
| 14 | 223 | 12585 | 1000 | 0 | N | 1251709 | 0 | | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 SS | 0 | AC | 1251523 | 0 | 0 | 0 | 1045322 | 1.2 |
| 14 | 231 | 12785 | 1000 | 0 | N | 1280120 | 0 | | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 SS | 0 | AC | 1280120 | 0 | 0 | 0 | 0045002 | 0.4 |
| 14 | 237 | 13085 | 0100 | 0 | N | 1301943 | 0 | | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 SS | 0 | FA | 1301737 | 0 | 0 | 0 | 0045002 | 0.2 |
| 17 | 246 | 11085 | 1000 | 0 | S | 1101845 | 0 | | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 SS | 1101250 | | 0 | 30 | 0 | 0 | 1021341 | 7.0 |

## APPENDIX G

## NARRATIVES OF REAL DISTRESS CASES

CGD-07 35 FT SCORPION-- SARSAT MINOR
SAR CASE 3269

On 8 February 1983, CGD07 received numerous Aircraft ELT alerts in the area of Cay Sal Bank. An aircraft was diverted from training to the vicinity of the alerts. Using a homing device it located an anchored vessel and a lighted flare. There were four persons on board (POB), two women and two men.

The 35 foot pleasure craft was en route to Miami from Bimini when its compass failed and the crew became disoriented. The women were taken off, the men were left with the vessel and told to remain anchored until a Coast Guard surface vessel could arrive the next morning to assist them. Against Coast Guard advice, the vessel proceeded on its own back to port.

There was only one satellite pass with mutual visibility during the time the beacon was activated. This occurred after the distress was sighted so that the SARSAT information was not used in this case.

CGD-07 S/V WANDERING STAR -- OTHER ONLY
SAR CASE 3716

On the morning of 27 February 1983, S/V WANDERING STAR overturned in rough weather. The two POB were able to right the vessel, but it was dismasted and disabled. They manually activated their EPIRB. Several hours later, two aircraft picked up the signal and CGD07 was notified. A Coast Guard aircraft, already in the vicinity searching for an overdue vessel (S/V PRIMETIME), received the ELT, diverted on it and located S/V WANDERING STAR. The USCGC UNIMAK was dispatched to assist. The two POB taken on board UNIMAK had suffered minor injuries. Two UNIMAK crewmen boarded S/V WANDERING STAR to complete the tow to Matthewtown, Great Inagua.

During the almost 12 hours that the WANDERING STAR's EPIRB was activated the signal should have been picked up by at least one and possibly two satellite passes. According to the information received at TSC no SARSAT messages were received by District 07 on 27 February.

CGD-07 CESSNA -- OTHER ONLY
SAR CASE 5645

On 4 May 1983, a Coast Guard helicopter in CGD07 heard a momentary ELT signal on 243.0-MHz, followed by a mayday on UHF emergency frequency 121.5-MHz. The pilot of a Cessna aircraft, with engine difficulties 20-25 miles out from Freeport, believed that he would not make the Freeport Airport. There were two POB. A Coast Guard helicopter contacted Freeport Airport tower and diverted to the area to assist if necessary. The airport was already aware of the situation. The CESSNA landed safely with the 2 POB unharmed. The distress lasted only 20 minutes.

CGD-03 S/V WALRUS -- SARSAT ASSIST (LOCATE)
SAR CASE 0095

On 28 May 1983, CGD03 received Six SARSAT messages and several commercial aircraft notifications of an ELT/EPIRB heard about 200 nm northeast of Bermuda. CGD3 (LANTAREA) coordinated the case but instructed CGD05 to perform the sortie. The Coast Guard helicopter located the transmitting EPIRB on board the sailing vessel WALRUS in distress with one POB. The WALRUS had developed engine problems and rigging entanglements while en route to Bermuda from the New York area. The POB was exhausted and requested a recharger for his battery and some assistance to restart the engine. The Coast Guard broadcast a request for vessels in the area to render assistance. The Coast Guard helicopter established communication with a merchant vessel which aided the troubled S/V WALRUS, then departed the scene.

In this case SARSAT provided the first notification of the incident. The first SARSAT notification was at 1005 hours local time and the second at 1006 hours. Aircraft notification occurred shortly afterwards at 1020 hours. There was a total of 6 SARSAT messsages, the first two from Scott LUT, the others from Ottawa. The first rescue unit was notified at 1230 hours and the disabled S/V WALRUS was sighted at 1553 hours. The total planning time was 2 hours and 23 minutes; the search time was 30 minutes. The time of incidence occurrence is not known. The reported incidence location was Lat 36°11.6'N, Long 068°10.1'W and the actual position when located was Lat 35°55.6'N and Long 068°21.2'W. At the time of rescue the wind was 10 knots and seas 2-4 feet. In this case the aircraft notification was within 9 minutes of the first SARSAT notification. The EPIRB on the deck of the vessel was activated manually; it was turned off at 1600 hours local time.

lost their engine but had repaired their sails. The Coast Guard informed them that there were no Coast Guard vessels in the area and since the MICLARALUZ was in no immediate danger recommended they proceed to Jamaica. The MICLARALUZ acknowledged and requested no further Coast Guard assistance.

On 1-2 June 1983, CGD07 received six SARSAT messages. A helicopter was dispatched to the SARSAT coordinates and located the disabled MICLARALUZ. The MICLARALUZ encountered additional severe weather and became totally disabled. There were three POB, all in good health, except for one with a possible broken wrist. The Coast Guard diverted a nearby merchant vessel GOLDEN CHASE and then proceeded to contact the Jamaican Coast Guard vessel DISCOVERY BAY. DISCOVERY BAY towed the MICLARALUZ to Montego Bay Yacht Club.

The MICLARALUZ had departed Panama on 25 May 1983. The vessel was on the first leg of delivery from Panama to United States via Jamaica.

In this case SARSAT was the only source that provided an alert and the location of the incident. The incident was reported at Lat 18°50'N, Long 079°50'W and was located at Lat 18°50'N, Long 079°18'W. The time of incidence occurrence is not known. The time of the first SARSAT notification was on 1 June 2157 hours local time followed by second and third messages at 2348 and 2358 hours and a fourth and fifth message on 2 June at 0326 and 0510 hours respectively. The first rescue unit was notified 2 June at 0936 hours and the distress object sighted at 1020 hours. The planning time, from the first SARSAT notification, was 11 hours and 39 minutes and the searchtime was 0.8 hours. At rescue time the wind was 5 knots and seas 2-3 feet. The vessel's engine water pump was broken, all stays on the mainmast, except forward stay, were broken and all sails blown out. The EPIRB located on the vessel was activated manually for at least 12 hours prior to being sighted by the Coast Guard.

CGD-07 F/V PIONEER II -- SARSAT KEY
SAR CASE 7542

On 25 June 1983, CGD07 received a SARSAT message followed shortly by a telephone call from a distressed wife. Her husband was overdue from a fishing trip. She reported the boat, PIONEER II, had a history of engine trouble. There were five POB and the boat was equipped with an EPIRB. Additionally, the wife provided the LORAN-C positions of her husband's last trip. The LORAN-C coordinates corresponded roughly to

helicopter was dispatched and homed in on the transmitting EPIRB. The tanker, WORLD ZEAL, responding to the distress broadcast, arrived on scene first, followed by two Navy helicopters. Shortly after, one of the Navy helicopters recovered the crew members and returned to the USS KITTY HAWK.

In this case the incident occurred 23 July at 2005 hours local time and the Coast Guard was notified immediately by radio along with an approximate position. The first SARSAT alert message was received one hour and 54 minutes later. The second SARSAT alert was received 88 minutes after the first SARSAT alert. There were a total of 9 SARSAT messages. SARSAT played no role in the actual rescue because the distressed vessel was sighted within 2 hours and 40 minutes from the first notification. The planning time was reported to be 6 minutes and search time 1.6 hours. SARSAT later helped relocate the lifeboat with the EPIRB left on board. The EPIRB was turned off 24 July at 1834 hours local time.

CGD-14 F/V MAKAI -- OTHER ONLY
SAR CASE 0607

On 24 July 1983, CGD14 received several aircraft reports of an ELT. The Coast Guard launched a helicopter, but this first helicopter suffered mechanical problems and returned. A second helicopter was dispatched to scene. The EPIRB was located on board the fishing vessel MAKAI 23 miles south of Lehui Airport. The Coast Guard established communications with subject vessel. There were five POB, all in good condition. The vessel had suffered an engine failure. The Coast Guard issued a bulletin to all boats in vicinity to set up a tow. The EPIRB had been activated manually for a period of 5.5 hours. There were no satellite passes with mutual visibility between the MAKAI's EPIRB and a LUT during the 5.5 hours.

CGD-03 S/V GUSTO -- SARSAT ASSIST (LOCATE)
SAR CASE 0123

On 25 July 1983, CGD03 received several aircraft reports and several SARSAT messages for an ELT/EPIRB located about 100 nm off the coast of Bermuda. A merchant vessel in the approximate vicinity reported a distress call heard on Channel 16 to the Coast Guard. Due to severe thunderstorms, no rescue units were launched. While awaiting improved weather conditions, the Coast Guard broadcast a request for all vessels to watch for a distressed vessel at the coordinates provided by SARSAT. With improved weather, a Coast Guard helicopter departed for the scene and the sailing vessel GUSTO was located. The disabled vessel had a broken rudder. The one POB was well equipped

distress was sighted at 1510 hours. The total planning time was 6 hours and 38 minutes. The search time 0.8 hour and the response time 13 hours and 58 minutes. At the time of rescue it was rainy and overcast with ceiling of 300 feet and visibility 1 to 5 nm.

CGD-12 S/V BLONDIE -- SARSAT MINOR
SAR CASE 328

On 24 September 1983, at 1600 hours CGD12 received a call on Channel 16 from the S/V BLONDIE, 30 nm offshore, reporting 35 knot winds and 12 foot seas and requesting an hourly communications schedule. When the BLONDIE missed a scheduled communication, they activated their EPIRB between 2000 and 2100 hours local time. The Coast Guard was not aware that the vessel had an EPIRB. A C-130 and the patrol boat CGC CAPE CROSS was directed to search for BLONDIE in the vicinity of her last reported position. The CGC CAPE CROSS successfully located the BLONDIE by radar at 2350. The C-130 reported that it heard an EPIRB in the area where BLONDIE was located but was unable to DF on the weak signal. The BLONDIE with two POB was escorted to Crescent City by the CG. The BLONDIE, originating from Vancouver en route to Mexico, depended on a solar battery charger which became inoperable due to weather conditions.

In this case the Coast Guard was first notified by the distressed vessel 24 September, at 1600 hours local time and the first rescue unit was notified at 1945 hours. The first SARSAT notification occurred at 2157 hours or 1 to 2 hours after the EPIRB was activated. This SARSAT message was not associated with S/V BLONDIE since the Coast Guard was not aware that they carried an EPIRB. The second SARSAT message was received after the rescue 25 September at 0052 hours. This message was delayed at the USMCC for 3.5 hours. If this delay had not occurred, the SARSAT alert would have been received on 24 September at about 2122 hours, during the search. If this second hit had been received without delay it is likely that it would have been associated with BLONDIE and the position information would have aided in the search. In this case the total planning time was 3 hours and forty-five minutes, the search time 4.7 hours and the response time 8 hours and 15 minutes. The reported incident was at Lat 42°10'N, Long 124°54'W and was located at Lat 41°23.2'N, Long 124°53.6'N. At the time of rescue the Coast Guard reported the winds were at 15 knots, seas 6-7 feet and visibility 10 nm.

CGD-03 S/V ELITIJA -- SARSAT KEY
SAR CASE 7011

On 21-22 October 1983, CGD03 received numerous SARSAT and commercial aircraft notifications for an ELT 300 nm northwest of Bermuda. The Coast Guard

SAR Region. Had the SARSAT position accurately located the scene of the distress, the Coast Guard would not have been indicated as the responsible SAR agency. In either case no action would have been taken under present operating procedures with only a single SARSAT hit.

CGD-03 S/V LOON -- SARSAT MINOR
SAR CASE 0011

On 26-27 October 1983, CGD03 received numerous commercial aircraft reports and SARSAT notifications for an ELT. The Coast Guard diverted a C-130 en route to another SAR. The C-130 heard nothing and was released. About this time the aircraft and SARSAT alerts ceased.

It was not until some ten hours later that the Coast Guard received notification that the S/V LOON with two POB had suffered hull damage, had activated an EPIRB, and had been rescued by the S/V OSPREY. The transmitting EPIRB was left on-board the LOON, which sank. The S/V OSPREY took the two POB with them to Bermuda.

In this case the first notification was provided by an aircraft on 26 October at 1915 hours local time, followed by three SARSAT notifications at 2231, 2245, and 2318 hours. There were a total of 5 SARSAT alert messages. The first rescue unit was notified 27 October 25 0042 hours. The last SARSAT message was received at 0558 hours local time. A passing vessel, S/V OSPREY, rescued the two POB from the S/V LOON, leaving the vessel adrift close to sinking with the EPIRB still activated.

The Coast Guard was notified of the rescue at 1015 hours. The actual time of rescue is not known. The weather conditions are also unknown. The last two SARSAT messages reported the incident at Lat 39°20'N, Long 68°21'W and the abandoned S/V LOON was sighted at Lat 37°53'N, Long 68°13'W.

CGD-03 TRIMARAN BEEFEATER -- SARSAT ASSIST (LOCATE)
SAR CASE 09

On 26-27 October 1983, CGD03 received numerous aircraft reports of an ELT 500 nm offshore of New York in position 42°59'W. Soon after, SARSAT reports confirmed the ELT. A Coast Guard helicopter departed and located the source EPIRB as the TRIMARAN BEEFEATER. The BEEFEATER reportedly suffered hull damage to the port pontoon due to heavy seas. All three POB were safe. As the weather conditions deteriorated, the POB were removed by M/V TOSCA/SEMY and the TRIMARAN was sunk to prevent interference with navigation. The EPIRB was removed with the crew.

The exact time of beacon activation is not known but the beacon must have been on for at least 14 hours during which time five SARSAT messages were received. The first rescue unit was notified at 0615 on 7 November and the aircraft sighted at 0740. The search time of the private airplane is not known. The planning time was 10 hours and 56 minutes. The Coast Guard response time was 14 hours and 28 minutes.

CGD-03 S/V WINDEMERE -- SARSAT MINOR
SAR CASE 7020

On 11 November 1983, S/V WINDEMERE became disabled in 10 foot seas. They lost all their sails, and the electronic navigational aids and the auxiliary engine became inoperable. There were four POB. They were en route to Bermuda from Newport, RI.

The S/V WINDEMERE activated its EPIRB, then radioed CGD03 and provided their last navigational coordinates. The Coast Guard diverted a helicopter to the scene which located the subject vessel and established a communications link. At this time the Coast Guard dispatched a surface vessel to the scene to assist in ship repairs or if necessary to tow to Bermuda. While awaiting its arrival, two nearby merchant vessels assisted the WINDEMERE and the four POB.

SARSAT messages arrived during the search stage of the rescue on 121.5 and 243.0 MHz. The satellite information was not utilized since the Coast Guard already had the approximate coordinates of the vessel.

CGD-08 M/V DOMAR -- SARSAT MINOR
SAR CASE 0155

On 23 November 1983 at 0601 local time, CGD08 received a call on Channel 16 VHF-FM from the M/V Tug DOMAR. This vessel with six POB, was taking on water. The crew was abandoning ship. The tug DOMAR, pushing a 300 foot barge with 60,000 barrels of crude oil, was 30 nm south of Freshwater Bayou.

The Coast Guard immediately checked on other vessels in the area to lend assistance. Two vessels were contacted and directed to proceed to assist the six POB. A Coast Guard helicopter departed for the scene and established communications with the assisting vessel M/V EDISON. The M/V EDISION rescued the six POB and left the barge adrift. The M/V DOMAR capsized at 0746 and eventually sank at 1224.

The operator of the DOMAR reported they did have a functioning EPIRB on board but did not state what type or if the EPIRB was activated manually. Two SARSAT messages arrived at the RCC after the crew was rescued. The EPIRB on board the

The SARSAT information together with the aircraft ELT reports prompted the search in this case. With the SARSAT coordinates the actual search time once on scene was approximately five minutes. The weather on scene for the initial location of the MALUHIA was scattered clouds, wind 10 knots, and seas at 15 feet.

CGD-17 SINGLE ENGINE AIRCRAFT -- SARSAT ONLY
SAR CASE 0194

On 26-27 December 1983, CGD17 received numerous SARSAT/ELT reports for the vicinity of Montague Island in Southern Prince William Sound. The FSS in the area reported no overdue aircraft. The Coast Guard dispatched a HC-130 to the SARSAT positions. A single engine aircraft with a damaged propeller was located. The two POBs were uninjured. Arrangements were made through the Coast Guard for a new propeller to be delivered. COSPAS/SARSAT was the only means of notification. The planning time, in this case, was 17 hours 58 minutes, the response time was 20 hours and the search time was 25 minutes.

CGD-14 S/V GEATANA -- SARSAT MINOR
SAR CASE 0208

On 8 January 1984, at 0630 local time, the S/V GEATANA experienced a galley fire, which quickly consumed the vessel. The three POB abandoned ship to a liferaft equipped with an EPIRB. The GEATANA's position was 15 nm off Upolu Point, Hawaii.

Eight hours later, CGD14 received several aircraft reports of an ELT as well as one incomplete SARSAT message (the location portion of message was deleted due to a local system error). The Coast Guard launched a C-130 to the general vicinity of the aircraft reports. After searching for 40 minutes the liferaft was located at 1800 hours with all three POB in good condition. The three POB were later evacuated by a Coast Guard helicopter. All three POB were taken to the hospital but no medical treatment was necessary.

During the 11.5 hours that the beacon was activated prior to the location of the GEATANA there was only one satellite pass with mutual visibility. This resulted in the SARSAT message without location information. The RCC received a second SARSAT message from a satellite pass which occurred after the vessel was located.

CGD-17 F/V MARY LOU -- SARSAT ASSIST (LOCATE)
SAR CASE 238

On 17 January 1984, the fishing vessel MARY LOU departed Seattle, WA for Kodiak

the POB sitting on it. The adverse weather prevented hoisting operations, forcing the Coast Guard helicopter to conduct an instrument landing and taxi in the water to rescue the crew. The closest the Coast Guard helicopter could approach was 300 yards from the downed helicopter. A liferaft was utilized to ferry the survivors safely to the rescue helicopter. All six POB were transported safely to Venice and then taken to Sulphur Hospital for treatment of shock, lacerations, and hypothermia.

During the five hours that the beacon is believed to have been activated there were no satellite passes with mutual visibility between the beacon and a LUT.

CGD-07 S/V ELEDSJA -- SARSAT ASSIST (LOCATE)
SAR CASE 2782

On 10 February 1984, CGD07 received a Channel 16 radio report that the S/V ELEDSJA, 120 nm offshore, with four POB, experienced hydraulic steering problems but intended to proceed towards San Juan. This message originated from the S/V FAIRWIND who communicated with the ELEDSJA and agreed to radio distress to the Coast Guard on its behalf when within radio range.

Shortly after receipt of the FAIRWIND's message, CGD07 received two SARSAT alerts and an overflight notification for the approximate vicinity of the ELEDSJA. A Coast Guard helicopter departed for the SARSAT coordinates and sighted the vessel. The S/V ELEDSJA stated their EPIRB was activated earlier, but now it was turned off. At this time, the ELEDSJA refused Coast Guard assistance. About 26 hours later, the Coast Guard towed the ELEDSJA to San Juan when the weather conditions deteriorated.

CGD-03 S/V CALLOOH -- OTHER ONLY
SAR CASE 7060

On 16 February 1984, at 0850R (1350Z) CGD03 received a call from the FAA that two high flyers reported hearing an EPIRB in position 32°N, 70°W. A Coast Guard C-130 was diverted to the scene at 1400Z.

At 1428Z the helicopter located the S/V CALLOOH in position 33°07'N, 69°03.8'W. After establishing communications, the Coast Guard learned there were two POB, one of whom was in need of medical attention. The sick person was experiencing severe headaches, kidney pain, and a high fever.

The USCGC NORTHWIND was diverted to the scene to evacuate the passenger. A medical assistant on board treated the patient for dehydration/sea sickness. Her condition improved dramatically. She remained on board the NORTHWIND until it docked

CGD-03 PIPER ARROW -- SARSAT MINOR
SAR CASE 297

On 14 March 1984, while en route from Washington National Airport to Groton Airport, a Piper ARROW disappeared from FAA radar 10 miles short of the runway. The pilot reported icing conditions as he approached. At the time, weather conditions deteriorated to sleet and freezing rain. Subsequently an ELT was heard in the area.

The FAA notified the AFRCC, CGD03, and the Connecticut CAP. The Coast Guard notified an HH52A and two surface vessels to search the coastline. One SARSAT position was telephoned in from Scott AFB. The Coast Guard was recalled before arriving on scene, when the subject aircraft was sighted by a pilot on final approach. The Piper had crashed into Bakers Cove some 100 yards off the runway. The pilot did not survive the crash.

CGD-17 PIPER PA-18 -- SARSAT KEY
SAR CASE 341

On 20 March 1984, a Piper PA-18 from the Alaskan State Fish and Wildlife Protection made an unscheduled landing on the southeast tip of Montague Island, some 110 nm southeast of Anchorage. The aircraft sustained damage while landing and was grounded. The pilot activated the ELT, then secured it at nightfall approximately 24 hours later to conserve the battery. The pilot reactivated the ELT at first light and was located by a USAF C-130.

Beginning 20 March 1984, CGD17 received repeated SARSAT reports for Montague Island. Initially there were no reported overdues or overflight confirmations. As the SARSAT alerts continued and one overflight notification arrived, CGD17 diverted a C-130 and a HH-3F to investigate. Both aircraft conducted ELT shoreline searches with negative results.

Upon further investigation, CGD17 learned RCC ELMENDORF was searching for an overdue Alaskan Fish and Wildlife aircraft well to the north of Montague Island. The satellite information provided them with an accurate location for the ELT. The subject aircraft was located at first light by the USAF. In addition to USCG and USAF personnel, other resources were utilized to search for the missing Piper. The total flight time was 187.5 hours, 70.0 hours of which were clocked as search times.

CGD-12 S/V ARCTIC WIND -- SARSAT ASSIST (ALERT)
SAR CASE 227

On the evening of 28 March 1984, the S/V ARCTIC WIND sustained rudder damage, lost communication capabilities, and high winds blew out the mainsail. The one POB

CGD-07 S/V ALBERTINE - SARSAT ASSIST (LOCATE)
SAR CASD 211

On 29 March 1984, CGD 7 received a high flier report of an ELT east of Jacksonville, FL at 2349Z. The Coast Guard immediately launched an HC130 to investigate, which was diverted to another SAR case after determining the source of distress to be within 400 sq. nm centered on 30-50N, 71-47W. Six SARSAT hits were received beginning March 30 at 1328Z through 31 March at 2352A, all in the vicinity of 30-10N, 72-30W. At 1745Z on March 30, the CG launched another HC130 to search for the ELT source. At 2140Z, the HC-130 located an orange liferaft with 3 POB in good condition in position 30-09N, 072-33W.

The persons on board stated that they were from the S/V ALBERTINE, which had sunk approximately 36 hours prior, coinciding with the passage of a severe weather front. An HC130 and an HU25A remained on scene at the location of the lifecraft until the M/V BAYAMON arrived to assist at 0318Z on 31 March. The M/V BAYAMON took the survivors on board and transported them to Cape Henry, VA.

The S/V ALBERTINE was an 11½ meter wooden vessel registered in Sandefjord, Norway, en route to Moorehead, NC from San Juan, PR. The survivers, two Norwegians and one German, reported that a large wave hit their vessel abeam, causing the S/V ALBERTINE to list so far that the mast touched the water. The force of this action separated the hull from the deck for most of the length of the vessel. The vessel was not completely submerged, but the flooding had progressed to the extreme, and abandonment became necessary. The 3 POB donned survival suits and entered the lifecraft, where they remained for over 36 hours until located by the CG.

A total of 4 sorties were undertaken with a total sortie time of 25.7 hours flown. The HC130's and one HU25A logged in a total of 12.2 hours of search time.

CGD-11 F/V DEBI-PAT - SARSAT MINOR
SAR CASE 10

On 3 April 1984, at a distance of 8 nm west of Point Arguello, CA, the F/V DEBI-PAT surfed down a large swell and breached. The two POB initiated mayday calls on Channel 16 with negative results. Soon after, the crew abandoned ship to a skiff equipped

CGD-03 S/V RELAX -- SARSAT ASSIST (LOCATE)
SAR CASE 7126

On 28 May 1984, Group Shinnecock received a radio report on 2182 kHz from the S/V RELAX. The RELAX reported themselves as disoriented, without navigational gear in dense fog, and out of fuel. The subject vessel was en route to Newport, RI from St. Thomas. The RELAX had been without power for the previous five days. The vessel was equipped with a six man life raft, flares, two survival life jackets, and a Class 2B EPIRB. They believed their position to be off Montauk Point, NY. There were five POB.

CGD03 established an hourly communication schedule and instructed the RELAX to energize the EPIRB. Initial attempts to locate the signal failed. Both SARSAT positions and Coast Guard direction finding equipment indicated the RELAX to be further south than originally reported. An HU-25 located the subject vessel in position 40°04.2'N, 072°46.6'W. A nearby fishing vessel was diverted to transfer fuel and provide assistance as required. The RELAX completed its voyage to Newport. The hourly communication schedule continued until the vessel landed.

CGD-03 S/V CARLOTTA -- SARSAT KEY
SAR CASE 7131

On 30 May 1984, CGD03 received a SARSAT alert at 2138Z with a location of 37°N, 71°W. On the following day, two SARSAT messages and several high flyer reports were received for the same area.

On 31 May 1984, at 1822Z, a C-130 located the S/V CARLOTTA, a 30 foot white ketch with four POB, at 37°N, 72°W. The engine was overheating, the sails were down in the water, and one POB was injured. The CARLOTTA was in rain, 40 mph wind, and 10 foot seas. The M/V CREDO came on scene and relieved the C-130.

The injured POB had possible rib fractures on the left side and was complaining of back pain. A doctor asked the people-on-board the CARLOTTA questions about the injured party and determined a medvac was not necessary. The BIBB arrived and the four POB were evacuated. The BIBB towed the CARLOTTA safely to shore.

CGD-03 S/V RANGER -- SARSAT KEY
SAR CASE 7134

On 30 May 1984, the S/V RANGER, with three POB, activated the on-board EPIRB after a storm ripped the sails and broke off the radio antennae. Moreover, they were dangerously low on fuel. At this time, they were 140 nm offshore of Bermuda.

CGD-07 A/C CESSNA (N2493E) -- SARSAT MINOR
SAR CASE 6107

On 08 June 1984, CGD7 received reports from two high flyers of an ELT in the vicinity of Banana River at 0104Z. Two subsequent SARSAT messages verified the information at 0140Z and 0144Z and provided a location of 28°12'N, 080°27'W. At 0150Z CGD7 received a call that an airplane was down in shallow water in need of immediate assistance.

At 0155Z the Coast Guard dispatched a CG 232501 to assist, and contacted Canaveral Locks to advise the lockmaster to have the locks open within five minutes. At 0200Z, the Coast Guard was contacted by the Cocoa Beach Police Department, (CBPB), who advised that the aircraft had been located in one-and-a-half feet of water, in position 28° 23'N, 080°37'W, and the 1 POB had been taken to Cape Canaveral Hospital with head injuries and a minor concussion. The CBPB advised the CG 232501 to return, as the A/C was no longer in need of assistance.

The CBPD witnessed the accident at 0020Z and assisted the pilot to shore by wading through ankle-to-waist deep water. The A/C, a white single engine CESSNA (n2493E), was rented by the pilot to distribute graduation congratulation leaflets to a local high school. Initial reports have human error as the cause of the accident, but the CBPD were notified by the Federal Aviation Administration and the National Transportation Safety Board that the Federal Aviation Administration will further investigate.

CGD-03 F/V MARGARITA --SARSAT ASSIST (LOCATE)
SAR CASE 7149

On 17 June 1984, CGD03 received SARSAT alerts and high flyer reports for a beacon in position 40°N, 72°W. At 18 June 0050Z, CGD03 requested CGD01 to provide a suitable aircraft to conduct an electronic search of the area.

A HU-25A was on the scene at 0258Z. The subject was the F/V MARGARITA with four POB. The HU-25A was not able to establish communications with the vessel. The Coast Guard diverted the P/C SURRENDER to the scene. The Coast Guard also directed the CGC POINT HERRON to proceed and assist.

On 18 June 1984, at 0510Z, the SURRENDER was on the scene (40°N, 72°W). The MARGARITA had lost all power and was adrift. The four POB were in good condition. At 0600Z the POINT HERRON arrived on scene and had the MARGARITA deactivate its EPIRB. The POINT HERRON safely towed the MARGARITA to Fire Island, NY.

At 1201, CGD01 COMMCEN received the first of numerous SARSAT reports for the vicinity 40°50'N, 69°00'W. It was followed at 1245Z by a report to the OPCEN from CGAS of an ELT/EPIRB heard momentarily by Nantucket. More SARSAT hits were received starting 1350Z, and a check was made at Boston Center. The SARSAT positions were verified by high flyer reports received via Scott AFB at 1405Z. Initially, the Coast Guard dispatched an HU-25A to the scene. The signal was received by the Coast Guard aircraft, but it was too erratic to home in on. While the HU-25A was still searching, a fishspotter aircraft reported sighting a man in a liferaft in position 40°55'N, 068°46'W. The HU-25A diverted, while an HH-3F departed to assist. The liferaft was spotted immediately, the EPIRB's signal still emanating from it. The four POB were enplaned by the HH-3F and transported to Hyannis, Cape Cod.

CGD-03 S/V ROTARCT CHALLENGE -- SARSAT KEY
SAR CASE 90

On 25 June 1984 LANTAREA received a report from RCC Halifax that they had gotten SARSAT hits from Trenton (Ottawa) and Toulouse for positions 43°45'N,41°11'W; 43°38'N, 41°09'W; and 43°35'N, 41°36'W. A check revealed that the USMCC had been struck by lightning and was out of operation from 0204Z to 1900Z. At 1612Z Scott MCC reported a hit at 43°13'N, 41°51'W, with TCA of 1518Z. At 1712Z NY Oceanic relayed an ELT report heard at 1905Z for 42°30'N, 43°55.6'W. The Coast Guard advised vessels in the area to be on alert and arranged for the AURORA P-3 to launch and investigate.

At 2139Z, the M/V TEMSE/ONAF received an SOS from the S/V ROTARCT CHALLENGE that the vessel was taking on water fast.

The TEMSE/ONAF and the AURORA P-3 arrived on scene and the one POB was removed by the M/V. The POB was weak and exhausted but otherwise in good condition. The ROTARCT CHALLENGE was left adrift at 43°27'N, 40°55'W.

CGD-03 S/V IBIS -- SARSAT KEY
SAR CASE 55

On 30 June 1984, at approximately 0200Z the S/V IBIS, a 23 foot craft, rolled through 360° and was dismasted. A second wave hit the vessel, throwing the two people overboard with a liferaft. The IBIS was capsized, but again righted herself, and the two POB were able to recover the EPIRB and open their liferaft. Then another wave hit the IBIS and she sank. Most of the liferafts and other lifesaving equipment taken from the vessel were lost in this final roll. The EPIRB had lost its antenna, but the survivors jury-rigged an antenna using a flashlight spring. They energized it at approximately 1130Z.

owned by Sea Ventures International, struck a channel light in position 25°28'N, 078°09'W, severely gouging the side of the vessel causing it to sink by the bow. The vessel, with 34 POB (7 crew and 27 passengers) attached a line to the channel light and activated the EPIRB on board after transmitting the Mayday on CH-16.

The Coast Guard launched an HU25A at 0824Z to assist, but it was delayed due to mechanical difficulties. The Mayday was answered by the M/V LETIA, a 42 foot motor yacht, which was on scene at the time the HU25A arrived. The HU25A successfully dropped a pump to the distressed vessel, but the pump was not enough to keep the vessel float. All 34 POB were safely transferred to the M/V LETIA, with the exception of the Master, who chose to remain with the vessel to prevent scavenging of diving equipment on board until a commercial salvage arrived.

The Coast Guard HU25A monitored the situation and departed the scene due to fuel after all POB were rescued, with a total sortie time of 3.1 hours.

CGD-13 S/V BUTTERFLY -- SARSAT ASSIST (LOCATE)
SAR CASE 368

On 17 July 1984, at 0640Z, CGD13 received a call on Channel 16 from the S/V BUTTERFLY. She was adrift in position 42°19.7'N, 124°50'W with a line in her screws. There were three POB the 34 foot ketch and none of them were highly skilled sailors. A 30 minute communications schedule was established with the vessel. At 0722Z, the Coast Guard received a request for assistance from the BUTTERFLY. The vessel was taking 35 degree rolls in 30-35 knot NW winds and 14-16 foot seas.

The MLB BM2 JENSEN and BM2 MANCILLAS were under way at 0831Z. At this time they were unable to make any headway against the winds and seas. North Bend directed station Coos Bay to get MLB INTREPID under way. The BUTTERFLY's VHF-FM receiver became inoperative at 1127Z. Broadcasting in the blind, they informed the Coast Guard that they had set off their EPIRB. Communications with the BUTTERFLY were lost at 1152Z. A SARSAT alert was received at 1239Z with a position of 42°13.0'N, 124°43.0'W.

The BUTTERFLY was located drifting in no immediate danger by a HH-52 in location 42°08'N, 124°48'W at 1419Z. The MLB BM1 BETHEL was ordered to get under way. The HH-52 departed to refuel and returned at 1714Z to relocate the BUTTERFLY in position 42°05'N, 124°42'W. They lowered a portable VHF-FM radio to the vessel and opened communications. The BETHEL arrived on the scene and assisted with the escort.

CGD-12 SINGLE ENGINE AIRCRAFT -- SARSAT ASSIST (LOCATE)
SAR CASE 267

On 11 August 1984, a Coast Guard Auxiliary radio operator received an ELT signal at 0825Z. This was immediately followed by several SARSAT alerts with locations near 36°34'N, 121°36'W. There were also high flyer reports for this same general area.

CGD12 contacted FAA Salinas Flight Services at 0842Z to advise them of the ELT signals. They indicated that they monitored the same signal for approximately fifteen seconds. FAA Salinas also indicated they were missing an aircraft on approach to North Monterey Airport. The last radar contact was two miles east of Monterey. Further investigation revealed that the aircraft was a light single engine craft with two POB.

Due to location information provided by SARSAT alerts and by FAA Salinas, both land and coastal searches were conducted. Floating units searched the aircraft's most probable overwater approach route to the airport, while a C-130 was used to DF the signal over land. In less than an hour the C-130 had fixed the ELT position on land at location 36°34'N, 121°47'W. This location is in the Hidden Hills area of Monterey. The Civil Air Patrol, Coast Guard Auxiliary, and local authorities continued rescue efforts on foot. Although survivors could be heard yelling for help, visual sighting was hampered by darkness and fog. When the rescuers located the two survivors, both were in fair condition. They were taken to Peninsula Hospital to be treated for various cuts, bruises, and broken bones. The cause of the crash is believed to have been instrument failure while on IFR approach to North Monterey Airport in near zero visibility.

CGD-17 A/C PA-12-N-92740 -- SARSAT ONLY
SAR CASE 936

On 14 August 1984, CGD17 received a SARSAT alert at 2159Z for position 58°14.4'N, 134°13.4'W, which is in the Juneau area. The Juneau Civil Air Patrol (CAP) was alerted at 0014Z on 15 August 1984. The CAP launched the first search A/C at 0055Z. This launch was followed by two SARSAT alerts at 0100Z and 0103Z.

The CAP located a crashed light A/C at the Eagle Crest ski area on Douglas Island, within five miles of Juneau. The Alaska State Troopers had responded to the report of an eyewitness to the crash and were already on the scene when the CAP arrived. The crashed A/C was a PA-12, N-92740, with two POB. There were no serious injuries and the troopers transported the two people back to town.

CGD-13 S/V SCUTTLE -- SARSAT KEY
SAR CASE 342

On 19 September 1984, CGD13 received a SARSAT alert at 1638Z with a location of 42°39.7'N, 125°09.4'W. A second SARSAT alert was received at 1802Z for an area within 12 nm of the first. These were followed at 1940Z by two aircraft reports of signals for the same area, plus a third SARSAT alert at 2015Z and two other SARSAT alerts.

At 1940Z Coast Guard Air Station North Bend was requested to launch a helicopter to search the area. The first HH-52 sent out had to return due to an inoperative DF. The second HH-52 was diverted from training to search at 2036Z.

The second helicopter located the S/V SCUTTLE, with a broken mast, at 2150Z in location 42°31.1'N, 125°27.4'W. The SCUTTLE, a 25 foot Coronado Sloop with two POB, was approximately 45 nm west of Cape Blanco, OR. The Rogue River Patrol was ordered to get underway at 2155Z. The helicopter dropped a strobe light, flares and radio, set up a 15 minute communications schedule, and departed the scene at 2444Z. The MLB 44311 established communications with the SCUTTLE and arrived on the scene at 0304Z on 20 September and the SCUTTLE was towed to Chetco River.

CGD-12 S/V INDIAN SUMMER -- SARSAT KEY
SAR CASE 494

On 21 September 1984, CGD12 began receiving SARSAT alerts at 2037Z for position 39°58.4'N, 126°26.5'W. A total of 30 alerts accompanied this case, all of which occurred between 2037Z and 1942Z of the next day. A distress call was received from the S/V INDIAN SUMMER on 22 September 1984 at 0215Z. They reported a broken boom and that they were taking on water. They were in a position approximately 80 nm off shore and in heavy weather.

A 15 minute communications schedule was established at 0220Z. Four HC-130 flights were involved in the assistance of the INDIAN SUMMER. The subject vessel was located at 0448Z in position 39°28'N, 125°26'W. Communications were established between the HC-130 and the S/V. It was learned that the two POB were in good health and that they had an EPIRB, flares, lifejackets, and a radio on board. There was no mention of a liferaft or a pump. The Coast Guard provided a pump and they were able to get the flooding under control. The HC-130 contacted the F/V TRINITY, which was in the vicinity. They requested the F/V to rendezvous with the INDIAN SUMMER and to remain on the scene until the weather conditions improved. The F/V arrived on the scene at 0755Z and confirmed that the two POB were in good health.

At 0600Z an HU-25 arrived on the scene with a pump, followed by an HH-3F with a second pump at 0642Z. By 0720Z the flooding was under control. The Coast Guard helicopters left the scene directing the F/V to restart their engine and to proceed westerly for a rendezvous with the USCGC CAPE HENELOPEN.

The cutter was on the scene with the F/V CAPTAIN LAVOEIRO at 0903Z. They escorted the subject vessel to Nantucket Island where permanent repairs were made to the shaft packing by a commercial diver.

Two SARSAT alerts were received. The first alert was at 0941Z, the second at 0944Z.

CGD-17 CESSNA 182 -- SARSAT KEY
SAR CASE 10

On 16 October 1984, CGD17 received a SARSAT alert at 0306Z for position 59°49.6'N, 147°26.8'W. This position is in the south end area of Montague Island. A second alert was received for the same area at 0506Z. Following this second alert they requested FAA Anchorage to notify overhead aircraft to monitor ELT frequencies. When they contacted the FSS in Cordova they were advised of an aircraft which was overdue from Montague Island. A CESSNA 182 had departed Merrill Field for the south east area of Montague Island. The two POB were on a hunting trip and were due to return on 16 October at 0200Z.

The Coast Guard launched a C-130 at 0734Z and located the disabled aircraft at 0820Z in position 59°58'N, 147°43'W. The two people were in good condition but the propeller had been damaged during their taxi. The C-130 departed the scene at 0850Z after informing the Coast Guard Air Station of the situation. Subsequently, the Coast Guard coordinated the delivery of food and parts supplied by a friend.

CGD-07 P/C ROAD RUNNER -- SARSAT ONLY
SAR CASE 498

On 20 October 1984, at 0439Z CGD7 began receiving SARSAT alert messages concentrated in the area of Little Bahama Bank, north of Grand Bahama Island, in position 27°23.4'N, 078°52.5'W. A total of five alerts were received at close intervals through 1142Z. At 1417Z the Coast Guard launched an HU25A to search the area indicated by the SARSAT messages, and at 1453Z the HU25A located the P/C ROAD RUNNER disabled in position 27°23.4'N, 078°50.1'W. After securing the EPIRB and reporting the situation at 1540Z the Coast Guard departed the scene en route to another SAR case.

At 1215Zm on 6 November 1984, the S/V AZOO, a 41 foot sloop from Warwick, RI, was located by the Coast Guard at 35°57.5'N, 65°49.2'W, an area 170 nm north of the coast of Bermuda. All four POB were reported in good condition. The S/V AZOO became disabled in heavy seas, resulting in torn sails, damaged rigging, and a flooded engine, which caused the crew to activate the EPIRB. The Coast Guard relayed the damaged vessel's position to the S/V RACHEL and EBENEEZER, and departed at 0025Z on 7 November 1984 when the two vessels were within 20 nm of each other and had made radio contact.

The S/V RACHEL and EBENEEZER provided a tow until the S/V AZOO was underway on its own power, and then proceeded in company to Bermuda with no further incident.

CGD-17 CESSNA 170 -- SARSAT KEY
SAR CASE 31

On 21 November 1984, CGD17 received a SARSAT alert at 0405Z for position 58°16.9'N, 157°33.8'W. The second alert, which arrived at 1110Z, was for a position within 3 nm of the first alert. Two more alerts followed for the same general area. On 22 November 1984, at 0150Z, a report was received from an overflying air taxi. They had spotted an overturned A/C in a position 37.5 nm southeast of King Salmon. The air taxi spotted two persons camped next to the downed CESSNA 170 (N2468D). The air taxi operator observed that the two people were in no immediate danger.

At 0208Z, an HH-3F departed Kodiak en route to the scene but had to turn back due to mechanical problems. A C-130 departed Elmendorf at 0230Z and arrived on the scene at 0315Z. They confirmed that the two people were safely camped alongside the A/C and were in no immediate danger.

An HH-3F was launched from Kodiak to locate and evacuate the two people from the crash A/C. The Coast Guard located them in position 58°13'N, 155°45'N at 1810Z and they were both evacuated to King Salmon.

CGD-17 F/V ISIS -- SARSAT MINOR
SAR CASE 214

On 19 December 1984 at 0115Z, NORPACSARCOORD received a report from the owner-operator of the F/V AVILLA stating he had seen the F/V ISIS with its bow under water in the vicinity of Onslow Point on the western shore of Ernest Sound near Wrangell, AK. He gave an approximate position of 55°50.3'N, 3132°18.5'W. He also stated that he

1. The 121.5-MHz output PERP is approximately 3dBm (2mW); its spectrum is considered coherent.

2. The 243.0-MHz output PERP is approximately -30dBm.

From the foregoing, it is concluded that the beacon was not picked up consistently by the satellites because its signal output was below the satellite pick up threshold and far below the nominal 75 mw EPIRB output. The low output power, however, was not traced to the battery, which exhibited a good charge even though it had exceeded its September 1983 replacement date by 15 months.

Further investigation revealed that the manufacturer, EBCO, went out of business in 1983. Their stock and facilities were taken over by Modern Products, 8912 152nd Avenue NE, Redmond WA, 98052, which now markets a redesigned unit. According to Modern Products, many EBCO EPIRBs have been observed with very low output power, which they attribute to manufacturing defects and poor quality control. Owners of the old EBCO units may obtain the redesigned unit from Modern Products at a discount.

In addition to the poor EPIRB performance and the AUTODIN failure, which resulted in two lost messages, it will be noted that one of the two received messages arrived at the RCC almost 24 hours after TCA.

# APPENDIX H

# RCC RESPONSE SCENARIOS

## H.1 RESPONSE TO SARSAT MESSAGES

Reponse to a SARSAT alert depends on whether or not non-SARSAT verification is received; single, uncorroborated SARSAT hits are generally not acted upon.

The conditions under which SARSAT messages are acted upon, and what that action entails, vary from district to district. During the Workload Assessment Task, TSC personnel carried out interviews with RCC controllers in Coast Guard Districts 01, 03, 07 and 12. The results have been reported in Reference H-1 and are extracted here to provide background for Section 4.

CGD01: After a single SARSAT message is processed, the Controllers at CGD01 wait for a verification. In most cases, they will solicit additional information. Verification may come from FAA Controllers at Boston Center who may call in aircraft report(s). In addition, verification may come from an independent phone call. Overdue boating calls are often received from families or friends. Other forms of correlating information are visual sitings or Overdue Vessel and Flight reports.

CGD01 Controllers will wait a variable period for correlating information. This variable period is sometimes based on the timing of next passes of satellites and the timing of high flying aircraft that could pick up the signal in question. After a period deemed sufficient by the Controller, the SARSAT message will be disregarded, and no further action will be taken.

If a second SARSAT hit is received without other verification, Controllers take action depending on the geographic position of the hits. If the hits have occurred in a zone not covered by high flying aircraft, the Controllers will generally authorize and coordinate a search of the area. If the position is within the high flyer zone, and Boston Center has not called the Operations Center, either the Assistant Controller or the Controller will call the FAA for possible aircraft reports.

CGD03: As previously described, no action is taken on a SARSAT hit unless it is flagged, at which point it is plotted. Once a position is plotted, CGD03 Controllers "become aware" of the position but usually do not take additional action. If a SARSAT location is plotted very close to a previous dot on the wall chart, that position is considered a third

Vessel Report would not justify a search. However, one SARSAT hit and a high flying aircraft verification probably would. After two hits with no verification, a Controller would at least call Oakland Center.

## H.2 RELATED SARSAT OPERATIONAL INFORMATION

### H.2.1 FAA Communications

Communications and relations with local FAA Centers vary according to the workload of the Controllers at the particular centers. It is understood that the primary responsibility of FAA Controllers is to control air traffic and not to transfer ELT/EPIRB information. The following is a description of Coast Guard Operations Center Controllers' views from experiences with FAA communications.

CGD01: Communications with FAA Controllers at Boston Center were described as fair. CGD01 Controllers realize that Boston Center only reported second ELT/EPIRB reports. In addition, Operations Center Controllers will often have to call Boston Center twice to obtain results of a requested query of aircraft flying over an area of possible distress.

CGD03: Controllers at CGD03 described FAA relations with New York Center and New York Ocean Center as good. FAA Controllers will definitely call if there is more than one aircraft report in an area. CGD03 Controllers may call the FAA after three SARSAT hits and encourage them to become more serious about reporting hits and/or having aircraft listen by stating they may launch a search.

If CGD03 receives an aircraft report without a SARSAT hit, they might use a chart of the District to plot and analyze the information.

CGD07: CGD07 Controllers consider Miami Center very reliable in transferring ELT/EPRIB reports from aircraft. FAA Controllers normally call CGD07 after a report.

If an aircraft report from the FAA arrives independent of SARSAT information, the aircraft hit will often be plotted with "acquired" and "lost" signal information on the SARSAT grease pencil chart.

CGD12: CGD12 Controllers described FAA relations as depending on the particular Controller on duty at Oakland Center. However, Oakland Center will rarely call upon the receipt of one aircraft report. For the most part, Operations Center Controllers consider the FAA Controllers responsive. However, there is concern as to what they do when asked to have overflights listen for an ELT/EPIRB in a certain area.

A new set of message formats began to evolve at the 1984 Users Conference. Two types were proposed: an ELT/EPIRB PASS SUMMARY, shown in Figure H-1 and an ELT/EPIRB ALERT, shown in Figure H-2. The PASS SUMMARY will contain in a single message all the single-hit locations produced by a satellite on a single pass over the U.S. The locations from the pass that correspond to existing "active sites" will cause an updated ALERT message to be issued for the site. This revision should reduce the number of alerts issued and at the same time highlight active case locations.

## H.3 EXAMPLE OF SARSAT MESSAGE AND ANALYSIS OF ITS USE BY RCCs.

The following is a breakdown by District of the items that are read and utilized.

| SAMPLE MESSAGE REFERENCE LINE | USE/NOTES |
|---|---|
| CGD01: | |
| e | The Time of Transmission is read and compared to Line g. |
| f | The LUT information is read to determine if the Ottawa LUT received the SARSAT signal. If so, the satellite information on this line is utilized to calculate the next pass of the satellite over this LUT. The NEXT PASS THIS LUT-LOS entry (Line i) contains no time or date information in Ottawa cases. |
| g | The TIME OF CLOSEST APPROACH (TCA) is read and compared to the TIME OF TRANSMISSION (Line e). If there is a large discrepancy between these times, a controller may expedite the handling of this message. |
| h | If the FREQUENCY is 243.0-MHz, a controller knows that a military aircraft or vessel is involved and knows from whom to solicit additional information. |
| i | LATITUDE (LAT) and LONGITUDE (LONG) are used to plot the position. NEXT PASS THIS LUT-LOS is a factor in soliciting additional information. SRR is noted to determine District responsibility. |
| j | The flags (previous SARSAT hits that are identified within a certain radius of the message position) are used to identify potential multiple hits. |

CGD03:

| | |
|---|---|
| j | First, A and B positions are examined for flags. If there is no flag indicating a previous hit, the message is filed with no further action. |
| i | If there is a flagged position, the SRR item is examined to see which search region is involved. The LAT and LONG will be used for plotting, and NEXT PASS THIS LUT-LOS might be read. |
| g,h | If there is a limited amount of correlating information, a controller might look at TCA and FREQUENCY. |

CGD07:

| | |
|---|---|
| b | The internal (or computer system) time is sometimes read to get an idea of when the message was processed at the USMCC. |
| g | The TCA is read to determine when the signal was heard and often highlighted with a yellow marker. |
| h | FREQUENCY is read. |
| i | The entire line for a position falling in CGD07 is usually highlighted. However, normally only the LAT and LONG are used for plotting. |
| j | The last three numbers of the SITE number are highlighted. These are used for reference plotting numbers only. Flagged positions are not utilized. |

## REFERENCES

H-1. Preliminary Report on SARSAT Workload Assessment, James Leavitt, TSC-5, April 1984.

# APPENDIX I

# WORKLOAD ASSESSMENTS

The workload assessment falls into two major areas: the workload associated with maintaining and operating the Local User Terminals (LUTs), and the workload associated with receiving and processing the alert messages at the Rescue Coordination Centers (RCCs).

## I.1 LUT WORKLOAD ASSESSMENT

The Coast Guard operates two LUTs, one at COMMSTA San Francisco, and one at COMMSTA Kodiak. The impact of the COSPAS/SARSAT system on the COMMSTA workload was assessed by several field trips to the two LUT sites, by discussion with COMMSTA and contractor personnel, and by a review of training, operating and maintenance manuals. It is to be noted that these trips and reviews also produced information about the LUT hardware, software and training methods that are only indirectly connected with the workload assessment.

The impact of SARSAT on the Communications Stations was analyzed under two topics:

a. Type and frequency of SARSAT workload
b. Net workload increment due to SARSAT.

SARSAT-related travel. These infrequently-occurring tasks did affect the work sampling study and are treated more thoroughly in Subsection I.1.1.B.

Work sampling was used in this study for the purpose of analyzing the utilization of staff and equipment associated with Coast Guard LUT operations and for general information gathering. It was not employed to develop engineered time standards to determine delay allowances or to study work performance. While work sampling cannot provide as much detailed information as can be obtained from time study, the information is considered completely adequate for analyzing the type and relative frequency of the non-repetetive, non-infrequent tasks in the SARSAT LUT workload. From an industrial engineering perspective, there are three basic types of work efforts performed for SARSAT operations at the LUTs. They are:

1. Operator functions - Inputting or requesting information from the computer system through the terminal keyboard(s); mounting and demounting tapes; packing disk files; observing equipment panels, lights, meters, etc.; obtaining printouts; storing and purging data; running system tests.

2. Administrative/clerical tasks - Placing and receiving telephone calls; drafting and reading correspondence and messages; supply work, i.e., ordering and receiving parts and publications; updating manuals; writing logs; developing training materials; etc.

3. Technical/Analysis Tasks - Electronic maintenance on LUT system components, e.g., replacing bulbs and circuit boards, testing electronic components, etc.; mechanical parts maintenance/replacement; analyzing printout and display data for "health of the system" and detection of possible or actual malfunctions; studying technical publications; meeting/talking with contractor, NASA, Air Force, and other personnel concerned with system operation.

Analysis of the COSPAS/SARSAT tracking schedule as given in Reference 6 indicates that approximately 37.5 passes per day will occur at Kodiak in a four-satellite system. The number actually tracked depends on tracking and post-pass processing conflicts among satellites. It is estimated that with present software about 21 passes per day can be tracked in a four-satellite system. But it is also estimated that with improved processing and scheduling the number of passes actually tracked can be increased to about 25 per day. Although no estimates were made for Pt. Reyes it is reasonable to assume that the same improvement in efficiency (25 percent) occurs there, which would bring the present 12/day to about 15/day at Pt. Reyes.

The increase in passes observed and processed does not necessarily increase the workload significantly at the LUT. LUT operations are designed and function well as essentially automatic, hands-off processing for deterministic events. Only when the increased tracking and processing results in significantly increased probabilistic events is there a corresponding increase in workload.

Of the three types of SARSAT-related work, only the operator type functions (1) are required of the RM watchstanders. These include periodically observing the system data on the display to determine if operations are proceeding normally, changing the analog tape when filled with data, and extracting solution information from the system for transmission by message to the appropriate RCC's when the USMCC at Scott Air Force Base is down or communications are lost with the USMCC. This type of work is required and performed infrequently. The majority of this work was largely eliminated during the first year D&E by implementation of a computer program and interface to permit automatic message preparation from input instructions at the LUT terminal keyboard.

The preventive maintenance SARSAT workload at the two United States Coast Guard LUT's is clearly spelled out in the Hardware Preventative Maintenance Manual produced by CAL in December of 1982. This work is largely performed in accordance with the prescribed schedule by contractor personnel and on a more flexible basis by the Coast Guard personnel at the LUT's.

TABLE I-1. ACTIVITY/WORK PROFILES OF SARSAT DUTY PERSONNEL AT USCG LUTs

| Description of Observed Activity/Work Category | COMMSTA San Francisco | | COMMSTA Kodiak | |
|---|---|---|---|---|
| | Number of Observations | % | Number of Observations | % |
| Operator Tasks/ Functions | 97 | 16.4 | 125 | 24.0 |
| Admin/Clerical Tasks | 54 | 9.2 | 79 | 15.1 |
| Technical/Analysis Tasks | 183 | 31.1 | 146 | 28.0 |
| Other ET Work (non-SARSAT) | 103 | 17.5 | 105 | 20.1 |
| Standby/Self Teaching | 152 | 25.8 | 67 | 12.8 |
| TOTALS | 589 | 100 | 522 | 100 |

training session upon assignment to the COMMSTA, and one per year thereafter, the travel load will be approximately two days/year/ET over and above training time itself. Similarly about twelve days/year per LUT is estimated for conference attendance, based on two attendees per LUT.

### I.1.2 Net Workload Increment Due to SARSAT

Estimates can now be made of the total additional manpower required to operate the LUT. The estimates sought are annual labor years for an operational system. They are based on the following assumptions:

1. The operational equipment is similar to that presently installed.

2. The operational space segment consists of four satellites, resulting in about 15 tracked passes per day at Pt. Reyes and about 25 per day at Kodiak.

3. ELT/EPIRB alerts in the Regional and Global modes stay at present levels.

4. Equipment reliability and maintainability remain at present levels.

5. Operator workload is proportional to the number of tracked satellite passes per day at the LUT.

6. One full time ET billet is assigned to SARSAT at each LUT, as at present.

7. Existing contractor support is maintained in the operational system.

shown in Table I-1 can be interpreted as fractions of a labor year. Adjustments must be made, however, for several factors, which are now discussed.

a. The Operator Tasks/Functions workload for Pt. Reyes (0.164 labor years/year) is based on the number of tracked satellite passes per day at Pt. Reyes at the date of the Work Sampling, i.e., 12/day. The number at Kodiak at the same time was 14/day, corresponding to a workload of 0.191 labor year/year. The excess operator workload at Kodiak (0.239 - 0.191 = 0.048 labor year/year) is attributed to OJT occurring in the Work Sampling Study. It will be accounted for below.

The operator workload in an operational system will be greater than that observed during the Work Sampling because of the greater number of tracked passes in an operational system. This is estimated as being 15 per day at Pt. Reyes and 25 per day at Kodiak. As an upper limit, 100 percent of the operator workload is assumed to be proportional to the number of tracked passes. This results in estimates for Pt. Reyes and Kodiak of 0.205 and 0.342 labor year/year respectively.

b. The Administrative/Clerical Tasks at Kodiak are taken to be equal to those at Pt. Reyes, both requiring 0.092 labor year/year. The excess administrative workload at Kodiak (0.151 - 0.092 = 0.059 labor year/year) is also attributed to OJT, as accounted for below.

c. The Technical /Analysis Tasks workload is taken to be equal at both LUTs. An average value of 0.295 labor year/year is employed.

d. Informal OJT workload is obtained from (a) and (b) above as 0.048 + 0.059 = 0.107 labor year/year at Kodiak during the work Sampling. The same workload is assumed for Pt. Reyes LUT even though it did not actually occur there during the Work Sampling because of its infrequency.

labor year/year for each LUT. The contracted instructor does not add to the Coast Guard workload.

Finally, the major workload of the substitute ETs must be estimated. It is assumed that because of leave the SARSAT ET1 produces 1750 hours per year out of the maximum 2080 hours per year, or 0.159 labor years of leave per year, a typical production level. Further, he is assumed to be on travel approximately 0.030 labor year/year, which time must be made up by the other COMMSTA ETs. The total is 0.189 labor year/year at each LUT for the non-SARSAT ETs.

I.1.2.3 RM Workload - The Radio Man workload imposed by SARSAT was found to be minimal during the Work Sampling Study. He attends the LUT operator console during performance of his (or her) other duties and alerts the ET1 to unusual conditions. The RM will also change the analog tape if the ET1 is unavailable, or if he (the RM) finds he has both time and interest in doing so. A nominal value of 5 percent of the RM time was allowed for SARSAT-related tasks. This is considered an upper limit.

I.1.2.4 Total SARSAT Workload - The total SARSAT Workload at each LUT is shown in Table I-3. It is seen from this Table that although the SARSAT ET1 workload is close to 1.0 labor years/year the workload for the non-SARSAT ETs and RM at the COMMSTA totals to about 0.50 labor year/year. These estimates are conservative, i.e., they represent an upper limit of what can be expected. Nevertheless the non-SARSAT ET and RM workload is a substantial load that was not foreseen at the beginning of the program.

The estimates of Table I-3 are expected to prove greater than what actually will occur for several reasons. First, they apply to the fully operational four-satellite system. If the programming and computational efficiencies envisioned for the operational system are not realized the number of tracked passes at the LUTs will be less than that projected, and the workload will be

somewhat less than shown in the table. Secondly, operator workload is less than linearly related to number of tracked passes, as was assumed in I.1.2.1.a. Moreover, the table assumes no improvement in reliability and maintainability of the system compared to the experience of June - July 1983 (the time of the Work Sampling Study). Improved hardware and maintainance methods will probably increase the LUT reliability and maintainability, but these advances may be offset by aging of the equipment. Finally, the table allows for more adequate formal training of all ETs involved than is presently being realized.

### I.1.3 Conclusions on LUT Workload

In summary, it is concluded that sufficient personnel resources are available presently to accomplish the SARSAT workload at the two Coast Guard LUT's so long as the existing contractor support relationships are maintained. The presently assigned ET personnel performing SARSAT duties are doing an excellent job with a very minimum of external guidance. They have established and are maintaining excellent working relationships with the other government agencies (NASA, NOAA, USAF) and contractor organizations involved in the current Demonstration and Evaluation phase. The Coast Guard LUT's are considered ready for transition to an operational phase.

It is also concluded that the present ET SARSAT billet will be adequate for an operational four-satellite system, but that up to one-half labor years/year will be required from non-SARSAT ETs at each COMMSTA, particularly if adequate training levels are to be maintained.

The importance of training was recognized at the outset of the program but OJT has required the use of non-SARSAT resources not planned upon because it is essential that 24 hours on-site support be provided. Although a single ET1 can provide the major support it is essential to provide continued training to the other ETs for his relief.

## I.2.1 Staffing and Coverage

I.2.1.1 Staffing and Assignments - The Operations Centers of CGD01, CGD03, and CGD12 are similarly staffed. All three Districts have a Duty Officer (DO) functioning as a Controller and an Assistant Duty Officer (ADO) functioning as an Assistant Controller. In addition there is an administrative detail with no operational responsibilities. The distribution of SARSAT message handling responsibilities between the two controllers is similar in CGD01, CGD03, and CGD12. The Controller generally acts as a coordinator as he is aware of all activity. He examines the plots of SARSAT hits and sometimes calculates the next pass of a satellite with the Satellite Orbit Predictor in CGD01 and CGD12. The Assistant Controller usually retrieves SARSAT messages and plots them.

Because of its high volume of Search and Rescue (SAR) activity and significant commitment to law enforcement of drug traffic, CGD07 has a constant staff of three controllers. The ADO or assistant Controller has only SAR responsibilities. He does the plotting of SARSAT messages and handles much of the phone responsibility. The Law Enforcement Officer is responsible for district law enforcement. The DO or controller is primarily committed to assisting in the SAR process, but also will help in law enforcement. He is the supervisor of both operations. As in the other three districts, there is the Senior Controller and an administrative detail during the week.

I.2.1.2 District Area Coverage - Although each Coast Guard District is responsible for its complete seaside area from its coastline out to its borders, equal attention is not always placed on possible distress information, especially SARSAT, in different geographical locations within a District. For instance, CGD07 does not consider its shore and shoreline primarily SAR territory. In addition, SARSAT messages are not regarded as authoritative in the Nassau, Bermuda area where there are many boats and planes relatively close to land. In the Controllers' opinion, they would be overburdened with SAR-related work if they were to pursue every SARSAT hit in every possible location. Further, the possibility of actual distress in their shallow water locations is very low.

### I.2.2 Message Handling in the Communications Room

Before a SARSAT message reaches the Operations Center, it is received and processed in the Communications Room. SARSAT messages are received on Teletype machines through AUTODIN. All SARSAT messages are for "Immediate Action" referring to their priority in handling. As a rule, Immediate messages must be processed within 30 minutes. The following are descriptions of SARSAT message handling procedures and time estimates in the Communication Rooms of the four Districts.

CGD01: When messages come off the Teletype, they are examined for handling precedence. "Immediate" (including SARSAT) messages are taken off the Teletype as soon as possible depending on other operational activity. The messages are separated and carried over to a copier where two copies are made. From there, SARSAT messages are carried into the Operations Center. The carrier from the Communication Room alerts the controllers that he is giving them "Immediate Action" messages and then places them in a SARSAT "In Box". A maximum processing time from Teletype to Operations Center was estimated at five minutes. When the Communication Room is not busy, a minimum time for processing and handling SARSAT messages is probably about one minute.

CGD03: The message handling process in the CGD03 Communication Room involves two operators and a supervisor. The first operator removes the immediate messages as soon as they come off the Teletype. The messages are separated and stamped with a routing grid and the appropriate route is checked. Then the messages are handed over to the Communication Room Supervisor. He reviews routing and places the messages in a Reproduction Box. A second operator makes two copies of each SARSAT message. He places an Operations Center copy in a cylindrical container along with other Operations Center messages (both Immediate and Informational) and puts them in the pneumatic tube to the Operations Center. A maximum time estimate for the Teletype to pneumatic tube handling process is ten minutes. A minimum estimate is two to three minutes when there is little operational activity.

reason is that LANTAREA and PACAREA messages, which are duplicates of all their respective District messages, are added to the normal CGD03 and CGD12 SARSAT message traffic. A secondary load is also observed in CGD17.

TABLE I-4. SARSAT COMMCEN MESSAGE LOAD BY DISTRICT
(% OF TOTAL AUTODIN)

| CGD | August 1983 | September 1983 |
|---|---|---|
| 01 | 1.6 | 1.4 |
| 03 | 18.0 | 14.7 |
| 05 | 1.4 | 1.3 |
| 07 | 3.6 | 4.1 |
| 08 | 3.6 | 3.6 |
| 11 | 4.4 | 5.5 |
| 12 | 18.2 | 22.5 |
| 13 | 0.5 | 4.2 |
| 14 | 1.0 | 1.1 |
| 17 | 6.3 | 9.2 |

The impact of the SARSAT message load is greater than shown in Table I-4 because of daily peaking. Figure I-1 shows the total United States Coast Guard SARSAT message traffic as a function GMT. The peaks seen at 12:00 GMT and 14:00 GMT are averages over all U.S. time zones and are slightly lower than what can be expected at the individual Districts.

### I.2.3 Message Handling in the RCC

The entire process of handling SARSAT messages includes retrieving, reading, plotting, orbit calculating, and soliciting further information. The process is affected directly by non-SARSAT operational activity and indirectly by priority.

I.2.3.1 SARSAT Message Priority - A generalized priority ranking of Operations Center activity was developed from CGD03, CGD07, and CGD12 controller procedures. The following is a list of descending priority of operation activity:

a. Pressing, On-Going SAR;
b. Important Phone Communication and Other Priority Business; and
c. Message Traffic (including SARSAT).

Within the Message Traffic category, generalized priority ranking can be developed for certain incoming SAR information at CGD07. The following is a list of these categories of information in descending priority.

a. FAA Overdue Flight Message;
b. SARSAT Message; and
c. FAA High Flyer Report (from Miami Center).

In other words, an FAA Overdue Flight Message would rate as the highest priority, meaning that controllers would give it the most attention and probably solicit additional information. SARSAT and high flyer reports follow in that priority order.

I.2.3.2 Credibility, Arrival Frequency, Utilization - Credibility of SARSAT messages has a major impact on SARSAT handling and handling time. Approximately 95 percent of SARSAT messages do not result in SAR cases. This false alarm rate results in limited credence in the system at the operational level. With credibility in doubt, SARSAT's effective priority is lowered.

All Districts identified time patterns in the arrival of SARSAT messages into the Operations Center. CGD01 controllers claimed that SARSAT messages seemed to occur in clusters. In addition, they noted their message volume is seasonally-influenced. October through March produced fewer

CGD03: All messages arrive in cylindrical containers in the pneumatic tube. The container can be heard and seen as it falls down into the Operations Center. The messages are almost always retrieved immediately.

Normally, the Assistant Controller will take the message pile, stamp each message with the Operations Center day/time group, and physically separate all Immediate messages into a "do" pile.

The SARSAT message are read and those that are flagged are separated from those that represent a single hit. Both piles of SARSAT messages are brought over to the plotting area in front of the magnetic wall chart. Flagged messages are plotted with a red, numbered marker and filed in the "Active SARSAT File." Single hit messages are filed for future reference.

An average time from message arrival in the pneumatic tube to plotting is estimated at 15 minutes. With no other confirmation of a plotted hit, the marker is taken off the wall chart after 18 hours.

CGD07: All messages arrive in cylindrical containers that can be heard and seen when they fall into the Operations Center. There are two copies of each SARSAT message. As one of the controllers reviews the messages, he gives one copy of the SARSAT message to the other controller.

The Controller will only quickly review his copy. However, the Assistant Controller reads the message as described in Appendix H and walks over to plot the SARSAT hit on a grease pencil chart.

The average time for a single SARSAT message to be retrieved from the container and plotted is five minutes.

CGD12: Different Controllers have different SARSAT message handling procedures at CGD12. The following procedure seems to typify how SARSAT messages are handled.

## I.2.4 Assessment of Workload

The SARSAT messages impact the Districts and Area Commands in two areas: Workload due to message handling in the Communication Room; workload due to message handling in the Operations Center.

I.2.4.1 Operations Center Workload - The Operations Centers visited did not report significant workload problems as a result of the SARSAT system. Each District has adopted procedures and priorities for handling SARSAT messages that are strongly influenced by non-SARSAT workload, the volume of SARSAT message traffic, and the number of actual SAR cases at an Operations Center. These influences appear to be determining factors in how the messages are handled and what procedures have evolved to process them. Operational evidence of this is in (a) geographical responsibility, (b) orbit predictor use, and (c) plotting of hits:

a. CGD07 has made a significant commitment to Law Enforcement; receives a high volume of SARSAT messages; and prosecutes the greatest number of SAR cases. All of these factors contribute to its placing unequal handling and processing weight on SARSAT hits in different locations.

b. CGD07 and CGD03 which receive the most SARSAT messages of any Coast Guard District do not use the satellite orbit predictor at all. CGD01 which receives the least amount of messages and CGD12 often use the predictor to determine a satellite's next pass and the potential visibility of the location to that satellite.

c. CGD03 Controllers plot only SARSAT messages that represent at least a second hit. All other Districts also plot single hits.

Since there are no official, binding procedures for handling SARSAT messages, handling and priority given to handling have evolved in their own way

2. Certain portions of the SARSAT alert message are used very frequently; certain portions are used infrequently or ignored; and certain other information usefully may be added to the alert message may be of use. In general, a redesign of the alert message format may speed message handling and reduce controller workload. Two examples are:

a. Improved "NEXT PASS" information on the SARSAT alert message would reduce workload in some RCCs. The Coast Guard Districts 01 and 12 use the Visibility Predictor to determine when a satellite will next be in view of a given position, although CGD07 does not usually refer to NEXT PASS information. Nevertheless, having this information pre-calculated and placed on the alert message would reduce controller workload.

b. Indication on the alert messages of number and identification of previous "hits" on the given location. This would allow the Controllers to assess more rapidly the level of importance of the alert and to retrieve the previous messages expeditiously.

3. Retention of first 'hits' at a central information point, such as the OCC, rather than transmission via AUTODIN to the Districts would reduce RCC workload but at the expense of information that may be needed. These alerts need to be readily available to the RCCs for rapid comparison with aircraft, overdue, and other reports if any are received. Nevertheless, retention of first "hits" would eliminate about 86 percent of all messages coming into the RCCs.

# APPENDIX J

## VOLUME AND DELAYS IN THE SARSAT GROUND SYSTEM

### J.1 VOLUME AND DELAYS OF COSPAS/SARSAT MESSAGES RECEIVED BY U.S. COAST GUARD RCCS, AS RECORDED AT THE OCC, FEBRUARY 1983 - OCTOBER 1984 - TABULATED BY MONTH

Notes: (1) Data for December 1983, January 1984, February 1984 are unavailable.

(2) Data for April 1984 is incomplete.

(3) FLAG 1 = Initial site Identification.

FLAG 2 = Location coincides with a previous site.

FLAG 4 = Location coincides with a test location.

(4) MARITIME = CGD01, 03, 05, 07, 08, 11, 12, 13, 14, 17, 17A, 17J, 17K, CGPA, CGAA.

INLAND = AFRCC, AACRCC.

AFRCC = Alaska Air Command RCC

LUT 1 = Scott

LUT 2 = Pt. Reyes

LUT 3 = Kodiak

LUT 4 = SEDL

LUT 10 = Ottawa

TLPC = Time of LUT processing complete

TLCA = Time of LUT closest approach

TMCC = Time of US MCC processing complete

TOCC = Time of receipt of USCG OCC

TRCC = Time of receipt at USCG RCC

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SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 83/ 3/ 1 - 83/ 3/31

TOTAL MESSAGES PROCESSED: 932

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 930 | LUT1: | 381 | FLAG1: | 636 | FLAG1: | 762 |
| C02: | 0 | LUT2: | 257 | FLAG2: | 254 | FLAG2: | 102 |
| C03: | 0 | LUT3: | 225 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 0 | LUT4: | 69 | FLAG4: | 42 | FLAG4: | 6 |
| | | LUT10: | 0 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 3 | 8 | 1 |
| CGD03: | 60 | 109 | 4 |
| CGD05: | 5 | 8 | 0 |
| CGD07: | 60 | 58 | 26 |
| CGD08: | 55 | 42 | 10 |
| CGD11: | 80 | 75 | 3 |
| CGD12: | 57 | 100 | 10 |
| CGD13: | 27 | 18 | 7 |
| CGD14: | 33 | 45 | 7 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 24 | 23 | 4 |
| CGD17J: | 11 | 9 | 0 |
| CGD17K: | 50 | 47 | 3 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 262 | 182 | 7 |
| AACRCC: | 16 | 10 | 0 |
| CMCC: | 27 | 32 | 0 |
| MEXICO: | 12 | 27 | 0 |
| TSC: | 11 | 1 | 0 |
| OTHER: | 57 | 56 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 296 | 373 | 244 |
| INLAND: | 278 | 192 | 7 |
| OTHER: | 106 | 115 | 1 |

RECORD ERRORS = 182

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 931 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 35 | 251 | 3 | 586 | 0 |
| 0:06-0:10 | 171 | 119 | 26 | 28 | 8 |
| 0:11-0:15 | 265 | 89 | 87 | 33 | 48 |
| 0:16-0:20 | 199 | 72 | 107 | 29 | 72 |
| 0:21-0:25 | 116 | 51 | 109 | 25 | 62 |
| 0:26-0:30 | 67 | 50 | 81 | 31 | 75 |
| 0:31-0:45 | 71 | 118 | 182 | 39 | 178 |
| 0:46-1:00 | 4 | 35 | 107 | 30 | 97 |
| 1:01-1:15 | 1 | 21 | 65 | 17 | 77 |
| 1:16-1:30 | 0 | 7 | 26 | 16 | 33 |
| 1:31-2:00 | 0 | 21 | 28 | 38 | 61 |
| 2:01-2:30 | 0 | 16 | 17 | 15 | 58 |
| 2:31-3:00 | 0 | 18 | 12 | 5 | 27 |
| 3:01-3:30 | 1 | 17 | 27 | 9 | 20 |
| 3:31-4:00 | 0 | 6 | 12 | 0 | 31 |
| 4:01-4:30 | 0 | 14 | 10 | 0 | 12 |
| 4:31-5:00 | 0 | 0 | 5 | 0 | 13 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 4 | 4 | 3 | 6 |
| 6:01-6:30 | 1 | 3 | 4 | 8 | 5 |
| 6:31-7:00 | 0 | 1 | 1 | 1 | 9 |
| 7:01-7:30 | 0 | 3 | 0 | 0 | 2 |
| 7:31-8:00 | 0 | 2 | 5 | 8 | 8 |
| 8:01-8:30 | 0 | 1 | 0 | 1 | 6 |
| 8:31-9:00 | 0 | 0 | 1 | 4 | 3 |
| 9:01-9:30 | 0 | 1 | 1 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 4 |
| 10:01-... | 0 | 11 | 11 | 5 | 16 |
| MEAN | 17.6212 | 47.5515 | 65.1727 | 34.9689 | 100.1384 |
| STD | 16.0406 | 100.3361 | 101.2094 | 99.1160 | 138.2516 |

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SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 83/ 5/ 1 - 83/ 5/31

TOTAL MESSAGES PROCESSED: 528

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 405 | LUT1: | 226 | FLAG1: | 372 | FLAG1: | 81 |
| C02: | 123 | LUT2: | 220 | FLAG2: | 144 | FLAG2: | 18 |
| C03: | 0 | LUT3: | 81 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 0 | LUT4: | 0 | FLAG4: | 12 | FLAG4: | 0 |
| | | LUT10: | 1 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 9 | 8 | 0 |
| CGD03: | 30 | 60 | 5 |
| CGD05: | 1 | 3 | 0 |
| CGD07: | 28 | 31 | 13 |
| CGD08: | 34 | 24 | 9 |
| CGD11: | 35 | 45 | 2 |
| CGD12: | 36 | 38 | 5 |
| CGD13: | 18 | 23 | 3 |
| CGD14: | 17 | 27 | 13 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 6 | 15 | 0 |
| CGD17J: | 6 | 8 | 0 |
| CGD17K: | 22 | 42 | 5 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 142 | 97 | 0 |
| AACRCC: | 18 | 4 | 0 |
| CMCC: | 25 | 16 | 0 |
| MEXICO: | 17 | 12 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 29 | 19 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 149 | 231 | 148 |
| INLAND: | 160 | 102 | 0 |
| OTHER: | 71 | 47 | 0 |

RECORD ERRORS = 167

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 525 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 18 | 135 | 2 | 410 | 1 |
| 0:06-0:10 | 90 | 96 | 17 | 17 | 3 |
| 0:11-0:15 | 172 | 79 | 57 | 9 | 40 |
| 0:16-0:20 | 120 | 49 | 78 | 6 | 66 |
| 0:21-0:25 | 70 | 46 | 70 | 9 | 57 |
| 0:26-0:30 | 33 | 22 | 60 | 0 | 55 |
| 0:31-0:45 | 21 | 36 | 109 | 23 | 103 |
| 0:46-1:00 | 1 | 13 | 59 | 13 | 57 |
| 1:01-1:15 | 0 | 12 | 21 | 3 | 38 |
| 1:16-1:30 | 0 | 5 | 11 | 3 | 16 |
| 1:31-2:00 | 0 | 3 | 12 | 6 | 19 |
| 2:01-2:30 | 0 | 0 | 0 | 0 | 15 |
| 2:31-3:00 | 0 | 3 | 3 | 10 | 0 |
| 3:01-3:30 | 0 | 0 | 0 | 4 | 7 |
| 3:31-4:00 | 0 | 2 | 2 | 0 | 12 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 1 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 3 | 3 |
| 5:31-6:00 | 0 | 1 | 0 | 0 | 1 |
| 6:01-6:30 | 0 | 0 | 1 | 1 | 2 |
| 6:31-7:00 | 0 | 0 | 0 | 1 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 2 | 1 |
| 7:31-8:00 | 0 | 4 | 4 | 2 | 8 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 8 | 1 | 2 | 1 |
| 9:01-9:30 | 0 | 0 | 6 | 0 | 6 |
| 9:31-10:0 | 0 | 5 | 2 | 0 | 4 |
| 10:01-... | 0 | 6 | 10 | 0 | 10 |
| MEAN | 16.0455 | 43.4023 | 59.4478 | 20.9488 | 80.3965 |
| STD | 7.2157 | 119.4859 | 120.5156 | 67.4832 | 134.2486 |

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SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 83/ 7/ 1 - 83/ 7/31

TOTAL MESSAGES PROCESSED: 2059

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 879 | LUT1: | 757 | FLAG1: | 1515 | FLAG1: | 1751 |
| C02: | 626 | LUT2: | 316 | FLAG2: | 533 | FLAG2: | 296 |
| C03: | 0 | LUT3: | 375 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 555 | LUT4: | 0 | FLAG4: | 11 | FLAG4: | 3 |
| | | LUT10: | 611 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 24 | 37 | 3 |
| CGD03: | 181 | 302 | 37 |
| CGD05: | 60 | 35 | 6 |
| CGD07: | 184 | 146 | 95 |
| CGD08: | 78 | 79 | 13 |
| CGD11: | 121 | 136 | 6 |
| CGD12: | 98 | 140 | 18 |
| CGD13: | 50 | 65 | 6 |
| CGD14: | 41 | 58 | 4 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 29 | 51 | 3 |
| CGD17J: | 20 | 18 | 1 |
| CGD17K: | 71 | 111 | 22 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 566 | 391 | 2 |
| AACRCC: | 44 | 21 | 3 |
| CMCC: | 108 | 85 | 0 |
| MEXICO: | 69 | 64 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 95 | 100 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 651 | 873 | 520 |
| INLAND: | 611 | 412 | 5 |
| OTHER: | 272 | 249 | 0 |

RECORD ERRORS = 140

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 1441 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 60 | 269 | 2 | 1249 | 1 |
| 0:06-0:10 | 285 | 225 | 45 | 34 | 26 |
| 0:11-0:15 | 434 | 150 | 110 | 31 | 96 |
| 0:16-0:20 | 314 | 138 | 173 | 17 | 152 |
| 0:21-0:25 | 172 | 110 | 162 | 11 | 151 |
| 0:26-0:30 | 89 | 95 | 141 | 13 | 132 |
| 0:31-0:45 | 84 | 164 | 275 | 29 | 276 |
| 0:46-1:00 | 3 | 81 | 201 | 17 | 189 |
| 1:01-1:15 | 0 | 44 | 96 | 9 | 108 |
| 1:16-1:30 | 0 | 41 | 64 | 10 | 76 |
| 1:31-2:00 | 0 | 46 | 62 | 12 | 92 |
| 2:01-2:30 | 0 | 33 | 43 | 7 | 50 |
| 2:31-3:00 | 0 | 11 | 24 | 0 | 34 |
| 3:01-3:30 | 0 | 15 | 17 | 0 | 21 |
| 3:31-4:00 | 0 | 5 | 10 | 2 | 19 |
| 4:01-4:30 | 0 | 8 | 3 | 0 | 5 |
| 4:31-5:00 | 0 | 3 | 7 | 0 | 7 |
| 5:01-5:30 | 0 | 2 | 4 | 0 | 4 |
| 5:31-6:00 | 0 | 1 | 1 | 0 | 1 |
| 6:01-6:30 | 0 | 0 | 1 | 0 | 1 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 16.1029 | 33.2106 | 49.3135 | 6.3460 | 55.6491 |
| STD | 7.9832 | 45.1930 | 47.0110 | 19.1116 | 51.1297 |

SLIST GENERAL.SEP83

1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 83/ 9/ 1 - 83/ 9/30

TOTAL MESSAGES PROCESSED: 2295

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 738 | LUT1: | 605 | FLAG1: | 1720 | FLAG1: | 1980 |
| C02: | 725 | LUT2: | 437 | FLAG2: | 547 | FLAG2: | 310 |
| C03: | 0 | LUT3: | 391 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 832 | LUT4: | 0 | FLAG4: | 28 | FLAG4: | 5 |
| | | LUT10: | 862 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 40 | 42 | 6 |
| CGD03: | 261 | 239 | 45 |
| CGD05: | 36 | 42 | 3 |
| CGD07: | 141 | 195 | 119 |
| CGD08: | 82 | 95 | 15 |
| CGD11: | 143 | 165 | 51 |
| CGD12: | 74 | 105 | 6 |
| CGD13: | 44 | 59 | 5 |
| CGD14: | 36 | 60 | 17 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 32 | 69 | 3 |
| CGD17J: | 42 | 46 | 6 |
| CGD17K: | 149 | 155 | 49 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 503 | 373 | 0 |
| AACRCC: | 51 | 22 | 0 |
| CMCC: | 125 | 130 | 0 |
| MEXICO: | 85 | 58 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 125 | 115 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 698 | 890 | 707 |
| INLAND: | 554 | 395 | 0 |
| OTHER: | 336 | 303 | 0 |

RECORD ERRORS = 2

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 1431 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 84 | 233 | 3 | 1231 | 0 |
| 0:06-0:10 | 297 | 187 | 45 | 46 | 26 |
| 0:11-0:15 | 445 | 144 | 118 | 18 | 104 |
| 0:16-0:20 | 321 | 90 | 156 | 12 | 136 |
| 0:21-0:25 | 141 | 80 | 128 | 12 | 125 |
| 0:26-0:30 | 84 | 58 | 102 | 7 | 94 |
| 0:31-0:45 | 58 | 144 | 221 | 33 | 218 |
| 0:46-1:00 | 1 | 102 | 144 | 13 | 129 |
| 1:01-1:15 | 0 | 58 | 103 | 6 | 91 |
| 1:16-1:30 | 0 | 32 | 65 | 10 | 75 |
| 1:31-2:00 | 0 | 58 | 76 | 15 | 109 |
| 2:01-2:30 | 0 | 64 | 55 | 5 | 74 |
| 2:31-3:00 | 0 | 65 | 64 | 7 | 72 |
| 3:01-3:30 | 0 | 28 | 45 | 3 | 54 |
| 3:31-4:00 | 0 | 18 | 27 | 4 | 31 |
| 4:01-4:30 | 0 | 23 | 14 | 0 | 17 |
| 4:31-5:00 | 0 | 9 | 24 | 0 | 23 |
| 5:01-5:30 | 0 | 8 | 8 | 3 | 9 |
| 5:31-6:00 | 0 | 6 | 4 | 5 | 8 |
| 6:01-6:30 | 0 | 12 | 9 | 1 | 6 |
| 6:31-7:00 | 0 | 3 | 9 | 0 | 17 |
| 7:01-7:30 | 0 | 8 | 3 | 0 | 5 |
| 7:31-8:00 | 0 | 0 | 7 | 0 | 7 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 1 | 1 | 0 | 1 |
| MEAN | 15.3008 | 59.0258 | 74.3266 | 9.5806 | 83.9030 |
| STD | 7.3413 | 85.7843 | 88.0693 | 36.2290 | 94.1463 |

SLIST GENERAL.NOV83
1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 83/11/ 1 - 83/11/30

TOTAL MESSAGES PROCESSED: 1652

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 649 | LUT1: | 484 | FLAG1: | 1241 | FLAG1: | 0 |
| C02: | 415 | LUT2: | 295 | FLAG2: | 406 | FLAG2: | 0 |
| C03: | 0 | LUT3: | 141 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 588 | LUT4: | 413 | FLAG4: | 5 | FLAG4: | 0 |
| | | LUT10: | 319 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 18 | 18 | 1 |
| CGD03: | 158 | 224 | 20 |
| CGD05: | 26 | 22 | 3 |
| CGD07: | 185 | 186 | 106 |
| CGD08: | 149 | 113 | 21 |
| CGD11: | 171 | 142 | 19 |
| CGD12: | 67 | 71 | 13 |
| CGD13: | 26 | 41 | 1 |
| CGD14: | 39 | 73 | 7 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 13 | 16 | 0 |
| CGD17J: | 7 | 2 | 0 |
| CGD17K: | 48 | 59 | 5 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 349 | 277 | 0 |
| AACRCC: | 16 | 16 | 0 |
| CMCC: | 36 | 36 | 0 |
| MEXICO: | 73 | 71 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 75 | 89 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 489 | 549 | 614 |
| INLAND: | 365 | 293 | 0 |
| OTHER: | 184 | 196 | 0 |

RECORD ERRORS = 1

### *** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 1330 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 83 | 659 | 15 | 1141 | 3 |
| 0:06-0:10 | 252 | 197 | 132 | 14 | 90 |
| 0:11-0:15 | 387 | 80 | 225 | 11 | 175 |
| 0:16-0:20 | 321 | 70 | 198 | 6 | 191 |
| 0:21-0:25 | 142 | 54 | 172 | 9 | 150 |
| 0:26-0:30 | 74 | 41 | 133 | 9 | 113 |
| 0:31-0:45 | 65 | 109 | 181 | 13 | 187 |
| 0:46-1:00 | 6 | 34 | 123 | 9 | 131 |
| 1:01-1:15 | 0 | 30 | 57 | 12 | 73 |
| 1:16-1:30 | 0 | 21 | 31 | 4 | 39 |
| 1:31-2:00 | 0 | 24 | 40 | 1 | 53 |
| 2:01-2:30 | 0 | 4 | 16 | 11 | 18 |
| 2:31-3:00 | 0 | 4 | 1 | 12 | 15 |
| 3:01-3:30 | 0 | 1 | 4 | 5 | 12 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 5 |
| 4:01-4:30 | 0 | 0 | 0 | 12 | 6 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 5 |
| 5:01-5:30 | 0 | 0 | 0 | 2 | 2 |
| 5:31-6:00 | 0 | 0 | 0 | 7 | 6 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 2 |
| 6:31-7:00 | 0 | 1 | 1 | 6 | 1 |
| 7:01-7:30 | 0 | 1 | 1 | 4 | 3 |
| 7:31-8:00 | 0 | 0 | 0 | 3 | 11 |
| 8:01-8:30 | 0 | 0 | 0 | 1 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 3 | 2 |
| 9:01-9:30 | 0 | 0 | 0 | 9 | 7 |
| 9:31-10:0 | 0 | 0 | 0 | 7 | 1 |
| 10:01-... | 0 | 0 | 0 | 19 | 29 |
| MEAN | 15.8102 | 16.5469 | 32.3571 | 33.5934 | 65.9407 |
| STD | 7.9516 | 28.5332 | 30.7149 | 119.6926 | 122.0448 |

SLIST GENERAL.MAR84

1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 84/ 3/ 1 - 84/ 3/31

TOTAL MESSAGES PROCESSED: 1330

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 434 | LUT1: | 256 | FLAG1: | 1032 | FLAG1: | 252 |
| C02: | 398 | LUT2: | 188 | FLAG2: | 255 | FLAG2: | 41 |
| C03: | 0 | LUT3: | 178 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 498 | LUT4: | 323 | FLAG4: | 43 | FLAG4: | 2 |
| | | LUT10: | 385 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 18 | 17 | 0 |
| CGD03: | 139 | 194 | 20 |
| CGD05: | 23 | 20 | 6 |
| CGD07: | 108 | 123 | 82 |
| CGD08: | 73 | 69 | 17 |
| CGD11: | 72 | 103 | 13 |
| CGD12: | 73 | 79 | 9 |
| CGD13: | 22 | 52 | 6 |
| CGD14: | 31 | 33 | 1 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 11 | 24 | 1 |
| CGD17J: | 4 | 3 | 1 |
| CGD17K: | 37 | 42 | 3 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 331 | 269 | 0 |
| AACRCC: | 20 | 12 | 0 |
| CMCC: | 37 | 19 | 0 |
| MEXICO: | 51 | 35 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 121 | 77 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 412 | 560 | 358 |
| INLAND: | 351 | 281 | 0 |
| OTHER: | 209 | 131 | 0 |

RECORD ERRORS = 4

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 778 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 37 | 324 | 3 | 679 | 2 |
| 0:06-0:10 | 144 | 134 | 44 | 13 | 31 |
| 0:11-0:15 | 220 | 75 | 122 | 7 | 108 |
| 0:16-0:20 | 165 | 50 | 132 | 5 | 115 |
| 0:21-0:25 | 91 | 42 | 91 | 1 | 91 |
| 0:26-0:30 | 61 | 23 | 70 | 4 | 62 |
| 0:31-0:45 | 54 | 59 | 142 | 19 | 130 |
| 0:46-1:00 | 6 | 25 | 82 | 2 | 85 |
| 1:01-1:15 | 0 | 17 | 36 | 0 | 44 |
| 1:16-1:30 | 0 | 15 | 24 | 3 | 31 |
| 1:31-2:00 | 0 | 5 | 19 | 11 | 18 |
| 2:01-2:30 | 0 | 7 | 5 | 2 | 20 |
| 2:31-3:00 | 0 | 1 | 5 | 4 | 6 |
| 3:01-3:30 | 0 | 1 | 3 | 1 | 7 |
| 3:31-4:00 | 0 | 0 | 0 | 1 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 3 | 2 |
| 4:31-5:00 | 0 | 0 | 0 | 10 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 2 | 14 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 1 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 2 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 5 | 6 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 1 | 1 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 3 | 1 |
| 10:01-... | 0 | 0 | 0 | 0 | 3 |
| MEAN | 13.7852 | 13.8952 | 27.6762 | 14.7439 | 42.3206 |
| STD | 10.0799 | 22.3759 | 27.0272 | 64.8578 | 71.9376 |

SLIST GENERAL.MAY84

1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 84/ 5/ 1 - 84/ 5/31

TOTAL MESSAGES PROCESSED: 1101

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 306 | LUT1: | 288 | FLAG1: | 872 | FLAG1: | 16 |
| C02: | 354 | LUT2: | 205 | FLAG2: | 173 | FLAG2: | 1 |
| C03: | 0 | LUT3: | 2 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 439 | LUT4: | 232 | FLAG4: | 56 | FLAG4: | 0 |
| | | LUT10: | 374 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 21 | 21 | 5 |
| CGD03: | 161 | 204 | 14 |
| CGD05: | 27 | 23 | 2 |
| CGD07: | 77 | 100 | 81 |
| CGD08: | 59 | 56 | 9 |
| CGD11: | 68 | 80 | 1 |
| CGD12: | 45 | 71 | 4 |
| CGD13: | 24 | 30 | 1 |
| CGD14: | 12 | 15 | 2 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 2 | 4 | 0 |
| CGD17J: | 4 | 7 | 1 |
| CGD17K: | 17 | 15 | 10 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 308 | 243 | 0 |
| AACRCC: | 6 | 1 | 0 |
| CMCC: | 19 | 17 | 0 |
| MEXICO: | 49 | 34 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 72 | 50 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 345 | 454 | 302 |
| INLAND: | 314 | 244 | 0 |
| OTHER: | 140 | 101 | 0 |

RECORD ERRORS = 8

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 716 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 40 | 174 | 1 | 670 | 0 |
| 0:06-0:10 | 133 | 116 | 28 | 7 | 22 |
| 0:11-0:15 | 228 | 78 | 87 | 2 | 57 |
| 0:16-0:20 | 148 | 58 | 87 | 3 | 93 |
| 0:21-0:25 | 71 | 49 | 69 | 2 | 73 |
| 0:26-0:30 | 27 | 39 | 57 | 2 | 57 |
| 0:31-0:45 | 52 | 87 | 143 | 7 | 142 |
| 0:46-1:00 | 13 | 48 | 96 | 1 | 93 |
| 1:01-1:15 | 3 | 18 | 57 | 5 | 50 |
| 1:16-1:30 | 1 | 4 | 35 | 4 | 44 |
| 1:31-2:00 | 0 | 8 | 16 | 4 | 32 |
| 2:01-2:30 | 0 | 18 | 16 | 6 | 15 |
| 2:31-3:00 | 0 | 7 | 10 | 1 | 19 |
| 3:01-3:30 | 0 | 11 | 6 | 0 | 9 |
| 3:31-4:00 | 0 | 1 | 8 | 2 | 8 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 2 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 16.4952 | 26.9505 | 43.4457 | 5.3521 | 48.7909 |
| STD | 10.2108 | 36.6472 | 38.6616 | 21.8027 | 43.7734 |

SLIST GENERAL.JUL84

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 84/ 7/ 1 - 84/ 7/31

TOTAL MESSAGES PROCESSED: 1762

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| CO1: | 848 | LUT1: | 447 | FLAG1: | 1302 | FLAG1: | 0 |
| CO2: | 820 | LUT2: | 235 | FLAG2: | 453 | FLAG2: | 0 |
| CO3: | 0 | LUT3: | 321 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 94 | LUT4: | 204 | FLAG4: | 7 | FLAG4: | 0 |
| | | LUT10: | 555 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 26 | 30 | 0 |
| CGD03: | 187 | 293 | 20 |
| CGD05: | 19 | 24 | 0 |
| CGD07: | 149 | 149 | 58 |
| CGD08: | 110 | 87 | 12 |
| CGD11: | 133 | 125 | 4 |
| CGD12: | 82 | 105 | 9 |
| CGD13: | 59 | 61 | 9 |
| CGD14: | 38 | 72 | 6 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 25 | 35 | 5 |
| CGD17J: | 18 | 16 | 1 |
| CGD17K: | 49 | 69 | 4 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 493 | 362 | 0 |
| AACRCC: | 34 | 22 | 0 |
| CMCC: | 51 | 52 | 0 |
| MEXICO: | 75 | 55 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 71 | 61 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 552 | 724 | 486 |
| INLAND: | 527 | 384 | 0 |
| OTHER: | 197 | 168 | 0 |

RECORD ERRORS = 0

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 1203 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 62 | 665 | 7 | 1036 | 2 |
| 0:06-0:10 | 233 | 223 | 89 | 29 | 57 |
| 0:11-0:15 | 356 | 111 | 232 | 18 | 120 |
| 0:16-0:20 | 272 | 82 | 352 | 16 | 221 |
| 0:21-0:25 | 149 | 48 | 207 | 15 | 186 |
| 0:26-0:30 | 74 | 23 | 127 | 14 | 131 |
| 0:31-0:45 | 43 | 29 | 194 | 11 | 218 |
| 0:46-1:00 | 12 | 7 | 52 | 4 | 78 |
| 1:01-1:15 | 2 | 4 | 14 | 4 | 17 |
| 1:16-1:30 | 0 | 1 | 11 | 5 | 27 |
| 1:31-2:00 | 0 | 3 | 9 | 6 | 19 |
| 2:01-2:30 | 0 | 7 | 3 | 2 | 5 |
| 2:31-3:00 | 0 | 0 | 6 | 3 | 11 |
| 3:01-3:30 | 0 | 0 | 0 | 15 | 5 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 12 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 11 | 6 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 5 |
| 5:31-6:00 | 0 | 0 | 0 | 6 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 2 | 6 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 2 |
| 7:01-7:30 | 0 | 0 | 0 | 1 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 1 | 2 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 5 | 5 |
| MEAN | 15.9652 | 9.3919 | 25.3571 | 15.3670 | 40.7133 |
| STD | 8.2813 | 14.6964 | 18.7360 | 61.0982 | 66.4541 |

SLIST GENERAL.SEP84

1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 84/ 9/ 1 - 84/ 9/30

TOTAL MESSAGES PROCESSED: 2351

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 911 | LUT1: | 648 | FLAG1: | 1842 | FLAG1: | 2049 |
| C02: | 870 | LUT2: | 336 | FLAG2: | 451 | FLAG2: | 290 |
| C03: | 570 | LUT3: | 276 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 0 | LUT4: | 498 | FLAG4: | 58 | FLAG4: | 12 |
| | | LUT10: | 593 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 54 | 50 | 3 |
| CGD03: | 250 | 345 | 27 |
| CGD05: | 26 | 34 | 0 |
| CGD07: | 245 | 197 | 175 |
| CGD08: | 107 | 87 | 23 |
| CGD11: | 193 | 174 | 35 |
| CGD12: | 87 | 125 | 13 |
| CGD13: | 36 | 46 | 5 |
| CGD14: | 45 | 79 | 8 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 30 | 42 | 2 |
| CGD17J: | 7 | 11 | 5 |
| CGD17K: | 60 | 74 | 16 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 566 | 445 | 0 |
| AACRCC: | 28 | 17 | 0 |
| CMCC: | 68 | 53 | 0 |
| MEXICO: | 67 | 64 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 169 | 195 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 775 | 898 | 678 |
| INLAND: | 594 | 463 | 0 |
| OTHER: | 304 | 312 | 0 |

RECORD ERRORS = 1

### *** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 1749 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 102 | 599 | 7 | 1555 | 1 |
| 0:06-0:10 | 338 | 298 | 88 | 52 | 60 |
| 0:11-0:15 | 522 | 265 | 241 | 34 | 185 |
| 0:16-0:20 | 351 | 164 | 283 | 21 | 252 |
| 0:21-0:25 | 230 | 112 | 259 | 18 | 271 |
| 0:26-0:30 | 102 | 97 | 190 | 4 | 187 |
| 0:31-0:45 | 90 | 106 | 345 | 26 | 367 |
| 0:46-1:00 | 10 | 52 | 171 | 16 | 186 |
| 1:01-1:15 | 4 | 15 | 84 | 5 | 105 |
| 1:16-1:30 | 0 | 17 | 35 | 8 | 59 |
| 1:31-2:00 | 0 | 16 | 30 | 9 | 42 |
| 2:01-2:30 | 0 | 1 | 8 | 0 | 22 |
| 2:31-3:00 | 0 | 7 | 4 | 0 | 7 |
| 3:01-3:30 | 0 | 0 | 4 | 0 | 4 |
| 3:31-4:00 | 0 | 0 | 0 | 1 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 1 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 16.0643 | 15.7514 | 31.8151 | 4.5085 | 36.3163 |
| STD | 8.4576 | 19.4575 | 22.7930 | 13.4594 | 26.8238 |

J.2 VOLUME AND DELAYS OF COSPAS/SARSAT MESSAGES ASSOCIATED WITH ELT/EPIRB CASES, AS RECEIVED AT THE COAST GUARD RCCS, FEBRUARY 1983 -JANUARY 1985 -TABULATED BY MONTH

Notes: (1) See Notes (3) and (4) to Appendix J.1.

(2) The historgrams, their means, and standard deviations do not include.

(a) negative delays

(b) delays greater than 10 hours

(c) delays of messages from the Ottawa LUT.

SELECT OUTPUT2

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 93/ 2/ 1 - 93/ 2/28

TOTAL MESSAGES PROCESSED: 14

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| CO1: | 14 | LUT1: | 8 | FLAG1: | 6 | FLAG1: | 12 |
| CO2: | 0 | LUT2: | 1 | FLAG2: | 8 | FLAG2: | 2 |
| CO3: | 0 | LUT3: | 5 | FLAG3: | 0 | FLAG3: | 0 |
| 99 : | 0 | LUT4: | 0 | FLAG4: | 0 | FLAG4: | 0 |
| | | LUT10: | 0 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 0 | 0 | 0 |
| CGD03: | 0 | 0 | 0 |
| CGD05: | 0 | 0 | 0 |
| CGD07: | 0 | 0 | 0 |
| CGD08: | 0 | 0 | 0 |
| CGD11: | 0 | 0 | 0 |
| CGD12: | 3 | 3 | 4 |
| CGD13: | 0 | 0 | 0 |
| CGD14: | 0 | 0 | 0 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 0 | 0 | 0 |
| CGD17J: | 0 | 0 | 0 |
| CGD17K: | 3 | 1 | 0 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 2 | 3 | 0 |
| AACRCC: | 0 | 0 | 0 |
| CHCC: | 1 | 2 | 0 |
| MEXICO: | 0 | 0 | 0 |
| TSC: | 1 | 0 | 0 |
| OTHER: | 0 | 1 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 6 | 4 | 4 |
| INLAND: | 2 | 3 | 0 |
| OTHER: | 2 | 3 | 0 |

RECORD ERRORS = 0

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 14 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 2 | 11 | 0 | 8 | 0 |
| 0:06-0:10 | 3 | 2 | 3 | 0 | 1 |
| 0:11-0:15 | 5 | 0 | 5 | 1 | 1 |
| 0:16-0:20 | 4 | 0 | 3 | 1 | 3 |
| 0:21-0:25 | 0 | 1 | 2 | 0 | 1 |
| 0:26-0:30 | 0 | 0 | 0 | 0 | 3 |
| 0:31-0:45 | 0 | 0 | 1 | 1 | 0 |
| 0:46-1:00 | 0 | 0 | 0 | 0 | 2 |
| 1:01-1:15 | 0 | 0 | 0 | 0 | 0 |
| 1:16-1:30 | 0 | 0 | 0 | 0 | 0 |
| 1:31-2:00 | 0 | 0 | 0 | 1 | 1 |
| 2:01-2:30 | 0 | 0 | 0 | 1 | 1 |
| 2:31-3:00 | 0 | 0 | 0 | 0 | 0 |
| 3:01-3:30 | 0 | 0 | 0 | 0 | 0 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 1 | 1 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 11.5714 | 4.9286 | 16.5000 | 48.0000 | 64.5000 |
| STD | 4.1699 | 4.8472 | 7.2580 | 95.2598 | 93.2843 |

OK,

SLIST OUTPUT2 1

1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 83/ 4/ 1 - 83/ 4/30

TOTAL MESSAGES PROCESSED: 20

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 20 | LUT1: | 10 | FLAG1: | 10 | FLAG1: | 20 |
| C02: | 0 | LUT2: | 7 | FLAG2: | 10 | FLAG2: | 0 |
| C03: | 0 | LUT3: | 3 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 0 | LUT4: | 0 | FLAG4: | 0 | FLAG4: | 0 |
| | | LUT10: | 0 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 0 | 0 | 0 |
| CGD03: | 4 | 1 | 0 |
| CGD05: | 0 | 0 | 0 |
| CGD07: | 3 | 2 | 2 |
| CGD08: | 5 | 0 | 2 |
| CGD11: | 0 | 4 | 0 |
| CGD12: | 0 | 0 | 0 |
| CGD13: | 1 | 3 | 0 |
| CGD14: | 0 | 0 | 0 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 0 | 0 | 0 |
| CGD17J: | 0 | 0 | 0 |
| CGD17K: | 0 | 0 | 0 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 3 | 5 | 0 |
| AACRCC: | 0 | 0 | 0 |
| CMCC: | 0 | 0 | 0 |
| MEXICO: | 0 | 0 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 0 | 1 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 6 | 3 | 11 |
| INLAND: | 3 | 5 | 0 |
| OTHER: | 0 | 1 | 0 |

RECORD ERRORS = 13

1

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 20 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 2 | 5 | 0 | 13 | 0 |
| 0:06-0:10 | 3 | 5 | 3 | 1 | 1 |
| 0:11-0:15 | 6 | 2 | 0 | 1 | 1 |
| 0:16-0:20 | 2 | 5 | 4 | 0 | 3 |
| 0:21-0:25 | 5 | 1 | 0 | 0 | 2 |
| 0:26-0:30 | 1 | 0 | 2 | 0 | 1 |
| 0:31-0:45 | 1 | 2 | 9 | 0 | 6 |
| 0:46-1:00 | 0 | 0 | 2 | 0 | 1 |
| 1:01-1:15 | 0 | 0 | 0 | 0 | 0 |
| 1:16-1:30 | 0 | 0 | 0 | 0 | 0 |
| 1:31-2:00 | 0 | 0 | 0 | 1 | 0 |
| 2:01-2:30 | 0 | 0 | 0 | 2 | 1 |
| 2:31-3:00 | 0 | 0 | 0 | 0 | 2 |
| 3:01-3:30 | 0 | 0 | 0 | 0 | 0 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 1 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 1 |
| 8:01-8:30 | 0 | 0 | 0 | 1 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 1 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 16.3500 | 12.7000 | 29.0500 | 65.6500 | 94.7000 |
| STD | 7.3094 | 8.9056 | 13.0134 | 138.6262 | 143.0856 |

OK,

SLIST OUTPUT1 1

1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 83/ 6/ 1 - 83/ 6/30

TOTAL MESSAGES PROCESSED: 1

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 8 | LUT1: | 13 | FLAG1: | 11 | FLAG1: | 15 |
| C02: | 9 | LUT2: | 3 | FLAG2: | 6 | FLAG2: | 2 |
| C03: | 0 | LUT3: | 1 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 0 | LUT4: | 0 | FLAG4: | 0 | FLAG4: | 0 |
| | | LUT10: | 0 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 0 | 0 | 0 |
| CGD03: | 0 | 1 | 0 |
| CGD05: | 0 | 0 | 1 |
| CGD07: | 5 | 2 | 3 |
| CGD09: | 0 | 1 | 0 |
| CGD11: | 6 | 4 | 0 |
| CGD12: | 1 | 0 | 0 |
| CGD13: | 0 | 0 | 0 |
| CGD14: | 0 | 1 | 0 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 0 | 0 | 0 |
| CGD17J: | 0 | 0 | 0 |
| CGD17K: | 0 | 0 | 0 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 1 | 3 | 0 |
| AACRCC: | 0 | 0 | 0 |
| CMCC: | 0 | 0 | 0 |
| MEXICO: | 0 | 0 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 0 | 1 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 4 | 1 | 12 |
| INLAND: | 1 | 3 | 0 |
| OTHER: | 0 | 1 | 0 |

RECORD ERRORS = 12

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 17 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLGA | TMCC-TLPC | TMCC-TLGA | TGCC-TMCC | TGCC-TLGA |
|---|---|---|---|---|---|
| 0:00-0:05 | 2 | 4 | 0 | 14 | 0 |
| 0:06-0:10 | 7 | 4 | 3 | 2 | 1 |
| 0:11-0:15 | 5 | 3 | 0 | 0 | 2 |
| 0:16-0:20 | 2 | 1 | 4 | 0 | 2 |
| 0:21-0:25 | 1 | 3 | 2 | 0 | 3 |
| 0:26-0:30 | 0 | 0 | 3 | 0 | 1 |
| 0:31-0:45 | 0 | 1 | 3 | 0 | 5 |
| 0:46-1:00 | 0 | 0 | 1 | 0 | 0 |
| 1:01-1:15 | 0 | 0 | 0 | 0 | 1 |
| 1:16-1:30 | 0 | 0 | 0 | 0 | 0 |
| 1:31-2:00 | 0 | 1 | 1 | 1 | 1 |
| 2:01-2:30 | 0 | 0 | 0 | 0 | 1 |
| 2:31-3:00 | 0 | 0 | 0 | 0 | 0 |
| 3:01-3:30 | 0 | 0 | 0 | 0 | 0 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 10.7647 | 17.9412 | 28.7059 | 9.0000 | 37.7059 |
| STD | 4.6213 | 21.6264 | 21.4579 | 25.8320 | 31.9720 |

OK,

SLIST OUTPUT2 1

1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 83/ 8/ 1 - 83/ 8/31

TOTAL MESSAGES PROCESSED: 55

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 20 | LUT1: | 8 | FLAG1: | 30 | FLAG1: | 41 |
| C02: | 17 | LUT2: | 8 | FLAG2: | 25 | FLAG2: | 14 |
| C03: | 0 | LUT3: | 26 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 18 | LUT4: | 1 | FLAG4: | 0 | FLAG4: | 0 |
| | | LUT10: | 12 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 0 | 2 | 0 |
| CGD03: | 1 | 3 | 0 |
| CGD05: | 2 | 0 | 1 |
| CGD07: | 2 | 2 | 1 |
| CGD08: | 4 | 3 | 0 |
| CGD11: | 0 | 0 | 0 |
| CGD12: | 0 | 2 | 3 |
| CGD13: | 0 | 0 | 0 |
| CGD14: | 0 | 0 | 0 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 1 | 12 | 0 |
| CGD17J: | 0 | 4 | 0 |
| CGD17K: | 19 | 3 | 7 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 5 | 2 | 0 |
| AACRCC: | 2 | 0 | 0 |
| CMCC: | 3 | 6 | 0 |
| MEXICO: | 1 | 1 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 3 | 3 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 12 | 14 | 29 |
| INLAND: | 7 | 2 | 0 |
| OTHER: | 7 | 10 | 0 |

RECORD ERRORS = 0

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 43 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 2 | 5 | 0 | 14 | 0 |
| 0:06-0:10 | 7 | 8 | 1 | 17 | 0 |
| 0:11-0:15 | 27 | 3 | 0 | 6 | 1 |
| 0:16-0:20 | 5 | 0 | 7 | 1 | 0 |
| 0:21-0:25 | 2 | 2 | 2 | 2 | 3 |
| 0:26-0:30 | 0 | 1 | 4 | 2 | 3 |
| 0:31-0:45 | 0 | 5 | 4 | 1 | 10 |
| 0:46-1:00 | 0 | 6 | 5 | 0 | 7 |
| 1:01-1:15 | 0 | 4 | 7 | 0 | 4 |
| 1:16-1:30 | 0 | 2 | 2 | 0 | 3 |
| 1:31-2:00 | 0 | 2 | 4 | 0 | 2 |
| 2:01-2:30 | 0 | 3 | 2 | 0 | 3 |
| 2:31-3:00 | 0 | 2 | 2 | 0 | 2 |
| 3:01-3:30 | 0 | 0 | 1 | 0 | 2 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 12.4651 | 47.7442 | 60.2093 | 8.7674 | 68.9767 |
| STD | 3.4998 | 44.4648 | 44.9137 | 7.4517 | 45.1115 |

OK,

SLIST OUTPUT2

1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 83/10/ 1 - 83/10/31

TOTAL MESSAGES PROCESSED: 55

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 13 | LUT1: | 18 | FLAG1: | 20 | FLAG1: | 47 |
| C02: | 17 | LUT2: | 7 | FLAG2: | 35 | FLAG2: | 8 |
| C03: | 0 | LUT3: | 7 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 25 | LUT4: | 4 | FLAG4: | 0 | FLAG4: | 0 |
| | | LUT10: | 19 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 2 | 2 | 0 |
| CGD03: | 9 | 9 | 6 |
| CGD05: | 17 | 1 | 1 |
| CGD07: | 0 | 0 | 2 |
| CGD08: | 0 | 1 | 0 |
| CGD11: | 2 | 3 | 0 |
| CGD12: | 2 | 0 | 0 |
| CGD13: | 0 | 1 | 0 |
| CGD14: | 0 | 1 | 0 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 0 | 0 | 0 |
| CGD17J: | 4 | 0 | 0 |
| CGD17K: | 4 | 2 | 2 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 3 | 16 | 0 |
| AACRCC: | 0 | 0 | 0 |
| CMCC: | 0 | 5 | 0 |
| MEXICO: | 0 | 0 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 1 | 3 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 24 | 4 | 27 |
| INLAND: | 3 | 16 | 0 |
| OTHER: | 1 | 8 | 0 |

RECORD ERRORS = 1

1

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 36 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 0 | 8 | 0 | 25 | 0 |
| 0:06-0:10 | 10 | 3 | 0 | 6 | 1 |
| 0:11-0:15 | 19 | 4 | 8 | 0 | 3 |
| 0:16-0:20 | 2 | 2 | 3 | 0 | 6 |
| 0:21-0:25 | 3 | 2 | 2 | 0 | 2 |
| 0:26-0:30 | 1 | 5 | 2 | 0 | 2 |
| 0:31-0:45 | 0 | 3 | 8 | 4 | 4 |
| 0:46-1:00 | 1 | 4 | 4 | 0 | 5 |
| 1:01-1:15 | 0 | 0 | 3 | 0 | 4 |
| 1:16-1:30 | 0 | 3 | 2 | 0 | 3 |
| 1:31-2:00 | 0 | 1 | 2 | 0 | 2 |
| 2:01-2:30 | 0 | 0 | 1 | 0 | 2 |
| 2:31-3:00 | 0 | 1 | 1 | 0 | 1 |
| 3:01-3:30 | 0 | 0 | 0 | 0 | 0 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 1 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 1 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 14.5000 | 31.1944 | 45.6944 | 14.3333 | 59.7778 |
| STD | 8.1189 | 33.3940 | 35.4674 | 45.2818 | 58.3762 |

OK,

```
SLIST
      OUTPUT2                                                    1
1
                    SARSAT 243 AND 121.5 MHZ BEACON REPORT

                  --- GENERAL INFORMATION OUTPUT ---
                    OCC TIME: 83/12/ 1 - 83/12/31

          TOTAL MESSAGES PROCESSED:    49
```

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 12 | LUT1: | 11 | FLAG1: | 24 | FLAG1: | 34 |
| C02: | 16 | LUT2: | 12 | FLAG2: | 25 | FLAG2: | 15 |
| C03: | 0 | LUT3: | 12 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 21 | LUT4: | 6 | FLAG4: | 0 | FLAG4: | 0 |
| | | LUT10: | 8 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 2 | 4 | 0 |
| CGD03: | 1 | 3 | 0 |
| CGD05: | 0 | 0 | 0 |
| CGD07: | 5 | 3 | 3 |
| CGD08: | 5 | 3 | 0 |
| CGD11: | 1 | 1 | 0 |
| CGD12: | 3 | 3 | 6 |
| CGD13: | 0 | 0 | 0 |
| CGD14: | 0 | 0 | 0 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 1 | 1 | 0 |
| CGD17J: | 0 | 0 | 0 |
| CGD17K: | 4 | 4 | 6 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 6 | 5 | 0 |
| AACRCC: | 3 | 1 | 0 |
| CMCC: | 2 | 3 | 0 |
| MEXICO: | 0 | 1 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 1 | 2 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 12 | 12 | 25 |
| INLAND: | 9 | 6 | 0 |
| OTHER: | 3 | 6 | 0 |

RECORD ERRORS = 0

1

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 41 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 5 | 22 | 1 | 26 | 0 |
| 0:06-0:10 | 9 | 2 | 3 | 5 | 2 |
| 0:11-0:15 | 15 | 3 | 13 | 3 | 6 |
| 0:16-0:20 | 6 | 3 | 7 | 2 | 4 |
| 0:21-0:25 | 4 | 2 | 2 | 1 | 7 |
| 0:26-0:30 | 0 | 5 | 2 | 1 | 3 |
| 0:31-0:45 | 2 | 2 | 7 | 1 | 8 |
| 0:46-1:00 | 0 | 0 | 2 | 0 | 5 |
| 1:01-1:15 | 0 | 0 | 1 | 0 | 1 |
| 1:16-1:30 | 0 | 0 | 1 | 0 | 1 |
| 1:31-2:00 | 0 | 2 | 0 | 0 | 0 |
| 2:01-2:30 | 0 | 0 | 2 | 2 | 2 |
| 2:31-3:00 | 0 | 0 | 0 | 0 | 2 |
| 3:01-3:30 | 0 | 0 | 0 | 0 | 0 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 13.6585 | 15.6829 | 29.3171 | 12.9756 | 42.2927 |
| STD | 7.5663 | 24.0917 | 27.0739 | 30.1269 | 39.3014 |

OK,

```
   SLIST COUNT2                                                    1
Not found, COUNT2 (SLIST)
ER! SLIST OUTPUT2
1
```

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 84/ 2/ 1 - 84/ 2/29

TOTAL MESSAGES PROCESSED: 68

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 21 | LUT1: | 23 | FLAG1: | 32 | FLAG1: | 49 |
| C02: | 21 | LUT2: | 4 | FLAG2: | 36 | FLAG2: | 19 |
| C03: | 0 | LUT3: | 3 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 26 | LUT4: | 16 | FLAG4: | 0 | FLAG4: | 0 |
| | | LUT10: | 22 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 0 | 0 | 0 |
| CGD03: | 2 | 10 | 0 |
| CGD05: | 1 | 1 | 0 |
| CGD07: | 7 | 8 | 8 |
| CGD08: | 18 | 8 | 12 |
| CGD11: | 3 | 1 | 0 |
| CGD12: | 3 | 5 | 0 |
| CGD13: | 1 | 2 | 0 |
| CGD14: | 2 | 0 | 0 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 0 | 0 | 0 |
| CGD17J: | 0 | 0 | 0 |
| CGD17K: | 0 | 0 | 0 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 9 | 7 | 0 |
| AACRCC: | 0 | 0 | 0 |
| CMCC: | 0 | 1 | 0 |
| MEXICO: | 2 | 3 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 0 | 2 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 13 | 11 | 44 |
| INLAND: | 9 | 7 | 0 |
| OTHER: | 2 | 6 | 0 |

RECORD ERRORS = 0

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 46 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 3 | 21 | 0 | 17 | 0 |
| 0:06-0:10 | 11 | 4 | 5 | 7 | 3 |
| 0:11-0:15 | 10 | 7 | 4 | 1 | 4 |
| 0:16-0:20 | 14 | 2 | 9 | 1 | 2 |
| 0:21-0:25 | 5 | 4 | 10 | 0 | 2 |
| 0:26-0:30 | 1 | 1 | 2 | 3 | 6 |
| 0:31-0:45 | 2 | 1 | 8 | 2 | 5 |
| 0:46-1:00 | 0 | 4 | 2 | 3 | 3 |
| 1:01-1:15 | 0 | 1 | 4 | 1 | 4 |
| 1:16-1:30 | 0 | 1 | 1 | 2 | 7 |
| 1:31-2:00 | 0 | 0 | 1 | 2 | 1 |
| 2:01-2:30 | 0 | 0 | 0 | 5 | 1 |
| 2:31-3:00 | 0 | 0 | 0 | 1 | 3 |
| 3:01-3:30 | 0 | 0 | 0 | 1 | 3 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 2 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 14.8043 | 16.2826 | 31.0869 | 41.2391 | 71.9782 |
| STD | 6.9082 | 19.7205 | 20.5372 | 52.8839 | 64.7468 |

OK,

SLIST OUTPUT2

1

1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 84/ 4/ 1 - 84/ 4/30

TOTAL MESSAGES PROCESSED: 142

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 30 | LUT1: | 42 | FLAG1: | 71 | FLAG1: | 88 |
| C02: | 44 | LUT2: | 17 | FLAG2: | 71 | FLAG2: | 54 |
| C03: | 0 | LUT3: | 14 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 68 | LUT4: | 51 | FLAG4: | 0 | FLAG4: | 0 |
| | | LUT10: | 18 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 4 | 0 | 0 |
| CGD03: | 9 | 15 | 4 |
| CGD05: | 4 | 2 | 0 |
| CGD07: | 21 | 15 | 15 |
| CGD08: | 28 | 23 | 9 |
| CGD11: | 13 | 10 | 0 |
| CGD12: | 3 | 13 | 0 |
| CGD13: | 2 | 1 | 0 |
| CGD14: | 2 | 2 | 0 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 1 | 3 | 0 |
| CGD17J: | 0 | 0 | 0 |
| CGD17K: | 8 | 3 | 2 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 11 | 18 | 0 |
| AACRCC: | 0 | 0 | 0 |
| CNCC: | 1 | 4 | 0 |
| MEXICO: | 3 | 2 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 2 | 1 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 25 | 17 | 100 |
| INLAND: | 11 | 18 | 0 |
| OTHER: | 6 | 7 | 0 |

RECORD ERRORS = 8

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 124 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 12 | 57 | 4 | 68 | 1 |
| 0:06-0:10 | 26 | 15 | 13 | 7 | 6 |
| 0:11-0:15 | 52 | 8 | 22 | 2 | 8 |
| 0:16-0:20 | 23 | 13 | 20 | 5 | 15 |
| 0:21-0:25 | 8 | 9 | 16 | 3 | 16 |
| 0:26-0:30 | 3 | 4 | 8 | 2 | 7 |
| 0:31-0:45 | 0 | 6 | 20 | 5 | 17 |
| 0:46-1:00 | 0 | 3 | 7 | 2 | 15 |
| 1:01-1:15 | 0 | 3 | 5 | 2 | 4 |
| 1:16-1:30 | 0 | 3 | 3 | 3 | 3 |
| 1:31-2:00 | 0 | 0 | 3 | 2 | 5 |
| 2:01-2:30 | 0 | 3 | 1 | 2 | 2 |
| 2:31-3:00 | 0 | 0 | 2 | 4 | 4 |
| 3:01-3:30 | 0 | 0 | 0 | 4 | 3 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 2 |
| 4:01-4:30 | 0 | 0 | 0 | 3 | 1 |
| 4:31-5:00 | 0 | 0 | 0 | 4 | 6 |
| 5:01-5:30 | 0 | 0 | 0 | 4 | 3 |
| 5:31-6:00 | 0 | 0 | 0 | 1 | 2 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 1 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 1 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 1 |
| 7:31-8:00 | 0 | 0 | 0 | 1 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 1 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 12.8064 | 17.5564 | 30.3629 | 56.2177 | 86.5725 |
| STD | 5.2758 | 26.4649 | 27.9263 | 99.6840 | 107.6586 |

OK,

SLIST OUTPUT2

1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 84/ 6/ 1 - 84/ 6/30

TOTAL MESSAGES PROCESSED: 102

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 38 | LUT1: | 39 | FLAG1: | 48 | FLAG1: | 80 |
| C02: | 35 | LUT2: | 15 | FLAG2: | 54 | FLAG2: | 22 |
| C03: | 0 | LUT3: | 16 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 29 | LUT4: | 9 | FLAG4: | 0 | FLAG4: | 0 |
| | | LUT10: | 23 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 14 | 7 | 2 |
| CGD03: | 5 | 17 | 0 |
| CGD05: | 7 | 4 | 0 |
| CGD07: | 9 | 8 | 2 |
| CGD08: | 18 | 6 | 3 |
| CGD11: | 0 | 4 | 0 |
| CGD12: | 4 | 2 | 2 |
| CGD13: | 3 | 1 | 0 |
| CGD14: | 0 | 0 | 0 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 1 | 6 | 3 |
| CGD17J: | 2 | 2 | 0 |
| CGD17K: | 7 | 5 | 0 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 0 | 0 | 0 |
| AFRCC: | 8 | 16 | 0 |
| AACRCC: | 2 | 0 | 0 |
| CMCC: | 6 | 7 | 0 |
| MEXICO: | 0 | 1 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 4 | 4 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 28 | 20 | 54 |
| INLAND: | 10 | 16 | 0 |
| OTHER: | 10 | 12 | 0 |

RECORD ERRORS = 0

1

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 79 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 5 | 43 | 0 | 42 | 0 |
| 0:06-0:10 | 26 | 17 | 8 | 9 | 2 |
| 0:11-0:15 | 29 | 4 | 26 | 10 | 13 |
| 0:16-0:20 | 12 | 4 | 13 | 0 | 14 |
| 0:21-0:25 | 6 | 3 | 10 | 2 | 7 |
| 0:26-0:30 | 1 | 4 | 5 | 2 | 6 |
| 0:31-0:45 | 0 | 2 | 13 | 5 | 18 |
| 0:46-1:00 | 0 | 0 | 2 | 4 | 8 |
| 1:01-1:15 | 0 | 0 | 0 | 1 | 2 |
| 1:16-1:30 | 0 | 0 | 0 | 0 | 3 |
| 1:31-2:00 | 0 | 0 | 0 | 0 | 0 |
| 2:01-2:30 | 0 | 0 | 0 | 2 | 0 |
| 2:31-3:00 | 0 | 2 | 1 | 0 | 1 |
| 3:01-3:30 | 0 | 0 | 1 | 1 | 2 |
| 3:31-4:00 | 0 | 0 | 0 | 1 | 2 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 1 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 12.5696 | 11.9114 | 24.4810 | 19.4177 | 43.8734 |
| STD | 5.1697 | 24.9156 | 26.6818 | 39.9067 | 49.9223 |

OK,

```
SLIST OUTPUT2                                                    1
1

                SARSAT 243 AND 121.5 MHZ BEACON REPORT

                --- GENERAL INFORMATION OUTPUT ---
                OCC TIME: 84/ 8/ 1 - 84/ 8/31

        TOTAL MESSAGES PROCESSED:   191

  SATELLITE COUNT      LUT COUNT       FLAGCOUNT A      FLAGCOUNT B
  ---------------      ---------       -----------      -----------
   CO1:  91            LUT1:  35       FLAG1: 105       FLAG1: 159
   CO2:  76            LUT2:  39       FLAG2:  86       FLAG2:  32
   CO3:  24            LUT3:  33       FLAG3:   0       FLAG3:   0
   SS :   0            LUT4:  25       FLAG4:   0       FLAG4:   0
                       LUT10: 59       FLAG5:   0       FLAG5:   0

                SEARCH AND RESCUE REGION COUNT

          SRR     ONLY A   ONLY B   BOTH A&B
          -------  ------   ------   --------
          CGD01:      1        1          0
          CGD03:     21       33         14
          CGD05:     12        1          0
          CGD07:     15        8          5
          CGD08:     23       11          4
          CGD11:      5        5          0
          CGD12:      3        3          2
          CGD13:      0        0          0
          CGD14:      2        1          0
          CGD17:      0        0          0
          CGD17A:     2        6          0
          CGD17J:    10        3          0
          CGD17K:    17       22         11
          CGPA:       0        0          0
          CGAA:       0        0          0
          AFRCC:     17       28          0
          AACRCC:     4        1          0
          CNCC:      17       14          0
          MEXICO:     1        3          0
          TSC:        0        0          0
          OTHER:      5       15          0

          SECTIONAL SEARCH AND RESCUE REGION COUNT

                    ONLY A   ONLY B   BOTH A&B
                    ------   ------   --------
          MARITIME:   61       44         86
          INLAND:     21       29          0
          OTHER:      23       32          0

RECORD ERRORS =    0
```

1

*** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 132 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TOCC-TMCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 5 | 81 | 1 | 65 | 0 |
| 0:06-0:10 | 26 | 24 | 10 | 14 | 2 |
| 0:11-0:15 | 45 | 6 | 31 | 9 | 18 |
| 0:16-0:20 | 23 | 7 | 30 | 7 | 17 |
| 0:21-0:25 | 7 | 5 | 12 | 3 | 15 |
| 0:26-0:30 | 9 | 3 | 9 | 5 | 13 |
| 0:31-0:45 | 7 | 4 | 21 | 4 | 16 |
| 0:46-1:00 | 7 | 1 | 8 | 8 | 15 |
| 1:01-1:15 | 1 | 1 | 5 | 8 | 12 |
| 1:16-1:30 | 2 | 0 | 5 | 5 | 8 |
| 1:31-2:00 | 0 | 0 | 0 | 0 | 5 |
| 2:01-2:30 | 0 | 0 | 0 | 1 | 5 |
| 2:31-3:00 | 0 | 0 | 0 | 1 | 3 |
| 3:01-3:30 | 0 | 0 | 0 | 1 | 2 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 1 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 1 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 18.6818 | 8.1515 | 26.8333 | 23.1818 | 49.9621 |
| STD | 13.9443 | 10.4378 | 18.4264 | 43.1898 | 48.9911 |

OK,

```
SLIST  COUNT.GENERAL.OCT84                                    1
1

                SARSAT 243 AND 121.5 MHZ BEACON REPORT

                --- GENERAL INFORMATION OUTPUT ---
                  RCC TIME: 84/10/ 1 - 84/10/31

          TOTAL MESSAGES PROCESSED:  170

 SATELLITE COUNT      LUT COUNT        FLAGCOUNT A      FLAGCOUNT B
 ---------------      ---------        -----------      -----------
   C01:  49           LUT1:  19        FLAG1:  95       FLAG1:  154
   C02:  65           LUT2:  40        FLAG2:  75       FLAG2:   16
   C03:  56           LUT3:  64        FLAG3:   0       FLAG3:    0
   SS :   0           LUT4:  25        FLAG4:   0       FLAG4:    0
                      LUT10: 22        FLAG5:   0       FLAG5:    0

                SEARCH AND RESCUE REGION COUNT

          SRR      ONLY A   ONLY B   BOTH A&B
          -------  ------   ------   --------
          CGD01:     13       1        1
          CGD03:      5      16        5
          CGD05:      6       3        0
          CGD07:      8       5        4
          CGD08:      7       2        4
          CGD11:      2       6        0
          CGD12:      0       0        3
          CGD13:      0       0        0
          CGD14:      5       1        5
          CGD17:      0       0        0
          CGD17A:     6      13        2
          CGD17J:     4      13        0
          CGD17K:    43      25       17
          CGPA:       0       0        0
          CGAA:       0       0        0
          AFRCC:      7      15        0
          AACRCC:     3       1        0
          CMCC:      12      16        0
          MEXICO:     1       2        0
          TSC:        0       0        0
          OTHER:      7      10        0

          SECTIONAL SEARCH AND RESCUE REGION COUNT

                    ONLY A   ONLY B   BOTH A&B
                    ------   ------   --------
          MARITIME:   44       30       96
          INLAND:     10       16        0
          OTHER:      20       28        0

RECORD ERRORS =   2
```

### *** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 145 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TRCC-TMCC | TRCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 13 | 98 | 2 | 60 | 0 |
| 0:06-0:10 | 38 | 14 | 18 | 22 | 2 |
| 0:11-0:15 | 58 | 2 | 48 | 23 | 18 |
| 0:16-0:20 | 25 | 12 | 25 | 15 | 19 |
| 0:21-0:25 | 8 | 0 | 15 | 9 | 17 |
| 0:26-0:30 | 1 | 3 | 10 | 2 | 20 |
| 0:31-0:45 | 2 | 2 | 10 | 6 | 38 |
| 0:46-1:00 | 0 | 3 | 2 | 2 | 6 |
| 1:01-1:15 | 0 | 0 | 4 | 2 | 7 |
| 1:16-1:30 | 0 | 0 | 0 | 3 | 2 |
| 1:31-2:00 | 0 | 0 | 0 | 1 | 4 |
| 2:01-2:30 | 0 | 5 | 5 | 0 | 2 |
| 2:31-3:00 | 0 | 0 | 0 | 0 | 4 |
| 3:01-3:30 | 0 | 1 | 1 | 0 | 1 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 0 |
| 4:01-4:30 | 0 | 1 | 1 | 0 | 0 |
| 4:31-5:00 | 0 | 1 | 0 | 0 | 1 |
| 5:01-5:30 | 0 | 0 | 1 | 0 | 1 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 1 | 1 | 0 | 0 |
| 7:01-7:30 | 0 | 1 | 0 | 0 | 1 |
| 7:31-8:00 | 0 | 0 | 1 | 0 | 1 |
| 8:01-8:30 | 0 | 1 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 1 | 0 | 1 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 12.4189 | 24.3919 | 36.8108 | 13.3649 | 50.1216 |
| STD | 5.5726 | 74.2173 | 73.7621 | 17.8814 | 74.8718 |

OK,

$LIST OUTPUT2

1

SARSAT 243 AND 121.5 MHZ BEACON REPORT

--- GENERAL INFORMATION OUTPUT ---
OCC TIME: 84/12/ 1 - 84/12/31

TOTAL MESSAGES PROCESSED: 52

| SATELLITE COUNT | | LUT COUNT | | FLAGCOUNT A | | FLAGCOUNT B | |
|---|---|---|---|---|---|---|---|
| C01: | 11 | LUT1: | 23 | FLAG1: | 32 | FLAG1: | 38 |
| C02: | 23 | LUT2: | 15 | FLAG2: | 20 | FLAG2: | 14 |
| C03: | 17 | LUT3: | 1 | FLAG3: | 0 | FLAG3: | 0 |
| SS : | 1 | LUT4: | 6 | FLAG4: | 0 | FLAG4: | 0 |
| | | LUT10: | 7 | FLAG5: | 0 | FLAG5: | 0 |

SEARCH AND RESCUE REGION COUNT

| SRR | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| CGD01: | 8 | 2 | 2 |
| CGD03: | 2 | 0 | 0 |
| CGD05: | 3 | 2 | 0 |
| CGD07: | 3 | 2 | 0 |
| CGD08: | 1 | 1 | 0 |
| CGD11: | 4 | 4 | 2 |
| CGD12: | 0 | 2 | 0 |
| CGD13: | 11 | 3 | 0 |
| CGD14: | 2 | 2 | 3 |
| CGD17: | 0 | 0 | 0 |
| CGD17A: | 1 | 3 | 0 |
| CGD17J: | 1 | 0 | 0 |
| CGD17K: | 0 | 1 | 0 |
| CGPA: | 0 | 0 | 0 |
| CGAA: | 3 | 4 | 0 |
| AFRCC: | 5 | 15 | 0 |
| AACRCC: | 0 | 0 | 0 |
| CNCC: | 0 | 3 | 0 |
| MEXICO: | 1 | 1 | 0 |
| TSC: | 0 | 0 | 0 |
| OTHER: | 0 | 0 | 0 |

SECTIONAL SEARCH AND RESCUE REGION COUNT

| | ONLY A | ONLY B | BOTH A&B |
|---|---|---|---|
| MARITIME: | 19 | 6 | 27 |
| INLAND: | 5 | 15 | 0 |
| OTHER: | 1 | 4 | 0 |

RECORD ERRORS = 3

1

### *** TIME DELAY TABLE FOR ALL LUTS ***
BASED ON 45 MESSAGES FROM U.S. LUTS

| HR:MINS | TLPC-TLCA | TNCC-TLPC | TNCC-TLCA | TOCC-TNCC | TOCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 4 | 33 | 1 | 23 | 0 |
| 0:06-0:10 | 21 | 5 | 14 | 9 | 6 |
| 0:11-0:15 | 16 | 3 | 12 | 3 | 9 |
| 0:16-0:20 | 4 | 2 | 8 | 1 | 6 |
| 0:21-0:25 | 0 | 0 | 6 | 1 | 6 |
| 0:26-0:30 | 0 | 0 | 1 | 1 | 3 |
| 0:31-0:45 | 0 | 1 | 2 | 2 | 7 |
| 0:46-1:00 | 0 | 0 | 0 | 1 | 2 |
| 1:01-1:15 | 0 | 1 | 1 | 2 | 1 |
| 1:16-1:30 | 0 | 0 | 0 | 1 | 2 |
| 1:31-2:00 | 0 | 0 | 0 | 0 | 2 |
| 2:01-2:30 | 0 | 0 | 0 | 0 | 0 |
| 2:31-3:00 | 0 | 0 | 0 | 1 | 1 |
| 3:01-3:30 | 0 | 0 | 0 | 0 | 0 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 10.0222 | 5.8667 | 15.8889 | 16.5555 | 32.3555 |
| STD | 3.6605 | 10.3012 | 11.1220 | 29.6465 | 31.3157 |

OK,

## J.3 VOLUME AND DELAYS OF COSPAS/SARSAT MESSAGES ASSOCIATED WITH ELT/EPIRB CASES, AS RECEIVED AT COAST GUARD RCCS, FEBRUARY 1983 - JANUARY 1985 -TABULATED BY RCC

Notes: (1) See Note (4) of Appendix J1

(2) See Note (2) of Appendix J2

SARSAT 243 AND 121.5 MHZ BEACON REPORT

----- CG DI 3 OUTPUT -----

NOTE: THE TLCA AND TLPC DATA ARE NOT AVAILABLE FOR THE OTTOWA LUT

RCC TIME: 83/ 2/ 1 - 85/ 1/31

TOTAL RCC # 3 COUNT: 224

# TIME DELAYS #

| | % 15 MINUTES OR LESS | % 30 MINUTES OR LESS | % 60 MINUTES OR LESS |
|---|---|---|---|
| TLPC-TLCA: | 84.4 | 99.1 | 100.0 |
| TMCC-TLPC: | 74.1 | 84.8 | 89.7 |
| TMCC-TLCA: | 43.3 | 72.8 | 87.1 |
| TRCC-TMCC: | 91.1 | 92.9 | 95.1 |

#### TIME DELAY TABLE FOR DISTR 3 ####

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TRCC-TMCC | TRCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 4 | 72 | 0 | 119 | 0 |
| 0:06-0:10 | 34 | 13 | 11 | 5 | 6 |
| 0:11-0:15 | 81 | 17 | 40 | 5 | 26 |
| 0:16-0:20 | 13 | 7 | 26 | 2 | 23 |
| 0:21-0:25 | 8 | 5 | 9 | 2 | 16 |
| 0:26-0:30 | 4 | 7 | 14 | 0 | 15 |
| 0:31-0:45 | 1 | 7 | 17 | 3 | 18 |
| 0:46-1:00 | 0 | 4 | 10 | 1 | 15 |
| 1:01-1:15 | 0 | 3 | 6 | 3 | 6 |
| 1:16-1:30 | 0 | 4 | 3 | 1 | 5 |
| 1:31-2:00 | 0 | 2 | 3 | 0 | 4 |
| 2:01-2:30 | 0 | 1 | 2 | 0 | 2 |
| 2:31-3:00 | 0 | 3 | 2 | 0 | 2 |
| 3:01-3:30 | 0 | 0 | 2 | 1 | 3 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 1 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 1 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 1 | 2 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 1 | 1 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 8.4911 | 12.5848 | 21.0759 | 9.9152 | 30.9464 |
| STD | 7.5546 | 27.5012 | 31.2734 | 48.5148 | 58.8775 |

SARSAT 243 AND 121.5 MHZ BEACON REPORT

----- CG DI 7 OUTPUT -----
NOTE: THE TLCA AND TLPC DATA ARE NOT AVAILABLE FOR THE OTTOWA LUT
RCC TIME: 83/ 2/ 1 - 85/ 1/31

TOTAL RCC # 7 COUNT: 300

# TIME DELAYS #

| | % 15 MINUTES OR LESS | % 30 MINUTES OR LESS | % 60 MINUTES OR LESS |
|---|---|---|---|
| TLPC-TLCA: | 51.7 | 98.0 | 99.3 |
| TMCC-TLPC: | 61.0 | 80.7 | 91.0 |
| TMCC-TLCA: | 22.3 | 60.3 | 88.0 |
| TRCC-TMCC: | 91.3 | 92.7 | 97.0 |

#### TIME DELAY TABLE FOR DISTR 7 ####

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TRCC-TMCC | TRCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 18 | 104 | 4 | 176 | 2 |
| 0:06-0:10 | 51 | 28 | 27 | 13 | 21 |
| 0:11-0:15 | 51 | 17 | 23 | 7 | 25 |
| 0:16-0:20 | 62 | 19 | 49 | 2 | 34 |
| 0:21-0:25 | 23 | 10 | 28 | 1 | 28 |
| 0:26-0:30 | 8 | 6 | 14 | 1 | 15 |
| 0:31-0:45 | 2 | 10 | 36 | 3 | 38 |
| 0:46-1:00 | 0 | 5 | 11 | 5 | 12 |
| 1:01-1:15 | 0 | 7 | 7 | 0 | 14 |
| 1:16-1:30 | 0 | 4 | 6 | 0 | 9 |
| 1:31-2:00 | 0 | 5 | 8 | 3 | 7 |
| 2:01-2:30 | 0 | 0 | 1 | 0 | 3 |
| 2:31-3:00 | 0 | 0 | 0 | 1 | 1 |
| 3:01-3:30 | 0 | 0 | 0 | 1 | 1 |
| 3:31-4:00 | 0 | 1 | 1 | 0 | 1 |
| 4:01-4:30 | 0 | 0 | 0 | 1 | 1 |
| 4:31-5:00 | 0 | 0 | 0 | 1 | 2 |
| 5:01-5:30 | 1 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 1 | 0 | 1 |
| 7:01-7:30 | 0 | 0 | 0 | 1 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 1 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 11.1867 | 11.9533 | 23.1400 | 8.2100 | 31.1900 |
| STD | 19.5419 | 23.2360 | 35.0879 | 37.5829 | 53.0540 |

SARSAT 243 AND 121.5 MHZ BEACON REPORT

----- CG DI11 OUTPUT -----

NOTE: THE TLCA AND TLPC DATA ARE NOT AVAILABLE FOR THE OTTOWA LUT

RCC TIME: 83/ 2/ 1 - 85/ 1/31

TOTAL RCC #11 COUNT: 78

* TIME DELAYS *

| | % 15 MINUTES OR LESS | % 30 MINUTES OR LESS | % 60 MINUTES OR LESS |
|---|---|---|---|
| TLPC-TLCA: | 82.1 | 98.7 | 100.0 |
| TMCC-TLPC: | 78.2 | 87.2 | 94.9 |
| TMCC-TLCA: | 44.9 | 82.1 | 92.3 |
| TRCC-TMCC: | 89.7 | 94.9 | 97.4 |

\#\#\#\# TIME DELAY TABLE FOR DISTRI1 \#\#\#\#

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TRCC-TMCC | TRCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 13 | 41 | 1 | 60 | 0 |
| 0:06-0:10 | 17 | 10 | 12 | 4 | 5 |
| 0:11-0:15 | 29 | 3 | 18 | 0 | 14 |
| 0:16-0:20 | 9 | 3 | 13 | 2 | 14 |
| 0:21-0:25 | 2 | 4 | 8 | 1 | 10 |
| 0:26-0:30 | 0 | 0 | 5 | 1 | 5 |
| 0:31-0:45 | 0 | 5 | 5 | 1 | 11 |
| 0:46-1:00 | 1 | 1 | 3 | 0 | 4 |
| 1:01-1:15 | 0 | 1 | 2 | 1 | 2 |
| 1:16-1:30 | 0 | 1 | 2 | 0 | 3 |
| 1:31-2:00 | 0 | 1 | 1 | 1 | 1 |
| 2:01-2:30 | 0 | 1 | 1 | 0 | 2 |
| 2:31-3:00 | 0 | 0 | 0 | 0 | 0 |
| 3:01-3:30 | 0 | 0 | 0 | 0 | 0 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 0 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 0 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 10.2949 | 12.2564 | 22.5513 | 5.7179 | 28.2436 |
| STD | 7.3713 | 22.0364 | 22.8527 | 15.7251 | 26.4881 |

SARSAT 243 AND 121.5 MHZ BEACON REPORT

----- CG DI13 OUTPUT -----
NOTE: THE TLCA AND TLPC DATA ARE NOT AVAILABLE FOR THE OTTOWA LUT
RCC TIME: 83/ 2/ 1 - 85/ 1/31

TOTAL RCC #13 COUNT: 45

% TIME DELAYS %

| | % 15 MINUTES OR LESS | % 30 MINUTES OR LESS | % 60 MINUTES OR LESS |
|---|---|---|---|
| TLPC-TLCA: | 84.4 | 97.8 | 100.0 |
| TMCC-TLPC: | 80.0 | 91.1 | 95.6 |
| TMCC-TLCA: | 55.6 | 82.2 | 95.6 |
| TRCC-TMCC: | 71.1 | 82.2 | 91.1 |

#### TIME DELAY TABLE FOR DISTR13 ####

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TRCC-TMCC | TRCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 6 | 26 | 0 | 7 | 0 |
| 0:06-0:10 | 21 | 3 | 15 | 16 | 0 |
| 0:11-0:15 | 8 | 5 | 9 | 7 | 6 |
| 0:16-0:20 | 6 | 4 | 1 | 3 | 8 |
| 0:21-0:25 | 0 | 1 | 5 | 0 | 6 |
| 0:26-0:30 | 0 | 0 | 5 | 2 | 3 |
| 0:31-0:45 | 1 | 1 | 4 | 3 | 7 |
| 0:46-1:00 | 0 | 1 | 2 | 0 | 6 |
| 1:01-1:15 | 0 | 0 | 0 | 0 | 1 |
| 1:16-1:30 | 0 | 0 | 0 | 0 | 0 |
| 1:31-2:00 | 0 | 1 | 1 | 0 | 1 |
| 2:01-2:30 | 0 | 0 | 0 | 2 | 0 |
| 2:31-3:00 | 0 | 0 | 0 | 1 | 3 |
| 3:01-3:30 | 0 | 0 | 0 | 0 | 0 |
| 3:31-4:00 | 0 | 0 | 0 | 0 | 0 |
| 4:01-4:30 | 0 | 0 | 0 | 1 | 0 |
| 4:31-5:00 | 0 | 0 | 0 | 0 | 1 |
| 5:01-5:30 | 0 | 0 | 0 | 0 | 0 |
| 5:31-6:00 | 0 | 0 | 0 | 0 | 0 |
| 6:01-6:30 | 0 | 0 | 0 | 0 | 0 |
| 6:31-7:00 | 0 | 0 | 0 | 0 | 0 |
| 7:01-7:30 | 0 | 0 | 0 | 0 | 0 |
| 7:31-8:00 | 0 | 0 | 0 | 0 | 0 |
| 8:01-8:30 | 0 | 0 | 0 | 0 | 0 |
| 8:31-9:00 | 0 | 0 | 0 | 0 | 0 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 9.6889 | 9.3778 | 19.0667 | 25.1556 | 44.2222 |
| STD | 5.9845 | 16.0226 | 17.9027 | 47.3432 | 53.7872 |

SARSAT 243 AND 121.5 MHZ BEACON REPORT

----- CG DI17 OUTPUT -----
NOTE: THE TLCA AND TLPC DATA ARE NOT AVAILABLE FOR THE OTTOWA LUT
RCC TIME: 83/ 2/ 1 - 85/ 1/31

TOTAL RCC #17 COUNT: 534

% TIME DELAYS %

| | % 15 MINUTES OR LESS | % 30 MINUTES OR LESS | % 60 MINUTES OR LESS |
|---|---|---|---|
| TLPC-TLCA: | 81.3 | 95.5 | 99.1 |
| TMCC-TLPC: | 67.0 | 79.8 | 87.3 |
| TMCC-TLCA: | 40.8 | 67.6 | 83.0 |
| TRCC-TMCC: | 71.7 | 87.3 | 92.9 |

#### TIME DELAY TABLE FOR DISTR17 ####

| HR:MINS | TLPC-TLCA | TMCC-TLPC | TMCC-TLCA | TRCC-TMCC | TRCC-TLCA |
|---|---|---|---|---|---|
| 0:00-0:05 | 42 | 255 | 4 | 119 | 0 |
| 0:06-0:10 | 121 | 55 | 50 | 147 | 4 |
| 0:11-0:15 | 229 | 19 | 147 | 80 | 23 |
| 0:16-0:20 | 52 | 31 | 57 | 36 | 71 |
| 0:21-0:25 | 13 | 14 | 35 | 30 | 64 |
| 0:26-0:30 | 10 | 18 | 36 | 14 | 53 |
| 0:31-0:45 | 11 | 25 | 50 | 21 | 91 |
| 0:46-1:00 | 7 | 14 | 30 | 9 | 49 |
| 1:01-1:15 | 1 | 11 | 19 | 13 | 33 |
| 1:16-1:30 | 2 | 8 | 13 | 7 | 20 |
| 1:31-2:00 | 0 | 10 | 14 | 1 | 21 |
| 2:01-2:30 | 0 | 13 | 13 | 4 | 17 |
| 2:31-3:00 | 0 | 5 | 7 | 3 | 16 |
| 3:01-3:30 | 0 | 1 | 1 | 2 | 5 |
| 3:31-4:00 | 0 | 2 | 3 | 1 | 4 |
| 4:01-4:30 | 0 | 1 | 1 | 0 | 2 |
| 4:31-5:00 | 0 | 1 | 1 | 0 | 2 |
| 5:01-5:30 | 2 | 2 | 2 | 1 | 5 |
| 5:31-6:00 | 0 | 0 | 1 | 0 | 2 |
| 6:01-6:30 | 0 | 2 | 0 | 1 | 1 |
| 6:31-7:00 | 0 | 1 | 4 | 0 | 3 |
| 7:01-7:30 | 0 | 1 | 0 | 0 | 1 |
| 7:31-8:00 | 0 | 0 | 1 | 0 | 1 |
| 8:01-8:30 | 0 | 1 | 0 | 1 | 0 |
| 8:31-9:00 | 0 | 0 | 1 | 0 | 2 |
| 9:01-9:30 | 0 | 0 | 0 | 0 | 0 |
| 9:31-10:0 | 0 | 0 | 0 | 0 | 0 |
| 10:01-... | 0 | 0 | 0 | 0 | 0 |
| MEAN | 13.3352 | 24.7453 | 38.0787 | 18.4813 | 56.5599 |
| STD | 20.7000 | 57.1307 | 61.3755 | 38.7059 | 73.4065 |

## SARSAT D&E MESSAGES RECEIVED BY TSC BY WK/DIS

| WEEK OF | CGD1 | 3 | 5 | 7 | 8 | 11 | 12 | 13 | 14 | 17 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/1/83 | 5 | 59 | 11 | 39 | 26 | 32 | 8 | 7 | 7 | 13 | 207 |
| 2/7/83 | 7 | 39 | 1 | 38 | 11 | 46 | 27 | 10 | 16 | 57 | 252 |
| 2/14/83 | 9 | | 3 | | 13 | 14 | 28 | 4 | 14 | 63 | 148 |
| 2/21/83 | 7 | 57 | 8 | 21 | 9 | 20 | 24 | 11 | 15 | 30 | 202 |
| TOTAL | 28 | 155 | 23 | 98 | 59 | 112 | 87 | 32 | 52 | 163 | 809 |
| 2/28/83 | 1 | 93 | 11 | 25 | 11 | 38 | 51 | 7 | 23 | 28 | 288 |
| 3/7/83 | 9 | 92 | 3 | 69 | 44 | 41 | 75 | 23 | 31 | 47 | 434 |
| 3/14/83 | 6 | 58 | 4 | 53 | 23 | 36 | 49 | 18 | 16 | 67 | 330 |
| 3/21/83 | 5 | 57 | 1 | 40 | 79 | 31 | 32 | 12 | 16 | 37 | 310 |
| TOTAL | 21 | 300 | 19 | 187 | 157 | 146 | 207 | 60 | 86 | 179 | 1362 |
| 3/28/83 | 1 | 63 | 5 | 71 | 52 | 50 | 39 | 10 | 19 | 40 | 350 |
| 4/4/83 | 10 | 70 | 7 | 36 | | 35 | 38 | 17 | 14 | 44 | 271 |
| 4/11/83 | 19 | 84 | 5 | 67 | 70 | 24 | 42 | 21 | 9 | 76 | 417 |
| 4/18/83 | 3 | 17 | 2 | 10 | 7 | 10 | 8 | 2 | 6 | 27 | 92 |
| TOTAL | 33 | 234 | 19 | 184 | 129 | 119 | 127 | 50 | 48 | 187 | 1130 |
| 4/25/83 | 14 | 36 | 21 | 17 | 40 | 16 | 25 | 1 | 7 | 11 | 188 |
| 5/2/83 | | 54 | 1 | 51 | 11 | 11 | 44 | 6 | 24 | 13 | 215 |
| 5/9/83 | 6 | 24 | | 10 | 4 | 15 | 5 | 14 | 6 | 7 | 91 |
| 5/16/83 | 2 | 37 | 2 | 26 | 18 | 14 | 15 | 9 | 5 | 24 | 152 |
| TOTAL | 22 | 151 | 24 | 104 | 73 | 56 | 89 | 30 | 42 | 55 | 646 |
| 5/23/83 | 5 | 56 | 4 | 24 | 25 | 37 | 18 | 19 | 10 | 34 | 232 |
| 5/30/83 | 23 | 82 | 8 | 54 | 39 | 84 | 67 | 18 | 33 | 52 | 460 |
| 6/6/83 | 16 | 99 | 15 | 125 | 70 | 62 | 48 | 29 | 25 | 36 | 525 |
| 6/13/83 | 27 | 92 | 8 | 96 | 37 | 69 | 50 | 34 | 16 | 105 | 534 |
| TOTAL | 71 | 329 | 35 | 299 | 171 | 252 | 183 | 100 | 84 | 227 | 1751 |
| 6/20/83 | 9 | 84 | 11 | 66 | 31 | 45 | 71 | 12 | 18 | 64 | 411 |
| 6/27/83 | 13 | 94 | 12 | 33 | 30 | 40 | 62 | 12 | 21 | 107 | 424 |
| 7/3/83 | 17 | 115 | 15 | 56 | 33 | 74 | 64 | 53 | 37 | 118 | 582 |
| 7/10/83 | 25 | 145 | 22 | 62 | 34 | 70 | 67 | 21 | 16 | 117 | 579 |
| TOTAL | 64 | 438 | 60 | 217 | 128 | 229 | 264 | 98 | 92 | 406 | 1996 |
| 7/17/83 | 8 | 210 | 44 | 44 | 80 | 95 | 42 | 41 | 42 | 57 | 663 |
| 7/25/83 | 31 | 177 | 17 | 144 | 89 | 59 | 66 | 24 | 20 | 62 | 689 |
| 8/1/83 | 14 | 246 | 32 | 140 | 51 | 80 | 65 | 33 | 18 | 79 | 758 |
| 8/8/83 | 11 | 173 | 15 | 127 | | 48 | 79 | 36 | 19 | 118 | 626 |
| TOTAL | 64 | 806 | 108 | 455 | 220 | 282 | 252 | 134 | 99 | 316 | 2736 |
| 8/15/83 | 2 | 201 | 22 | 82 | 63 | 94 | 64 | 42 | 20 | 52 | 642 |
| 8/22/83 | | 244 | 19 | 95 | 69 | 77 | 87 | 31 | 40 | 95 | 757 |
| 8/29/83 | 1 | 86 | 25 | 79 | 33 | 74 | 41 | 28 | 23 | 89 | 479 |
| 9/5/83 | | 147 | 20 | 126 | 85 | 54 | 52 | 14 | 20 | 75 | 593 |
| TOTAL | 3 | 678 | 86 | 382 | 250 | 299 | 244 | 115 | 103 | 311 | 2471 |
| 9/12/83 | 13 | 165 | 16 | 110 | 22 | 67 | 30 | 18 | 29 | 309 | 779 |
| 9/19/83 | 39 | 79 | 15 | 55 | 22 | 125 | 31 | 37 | 32 | 70 | 505 |
| 9/26/83 | 23 | 204 | 26 | 158 | 54 | 139 | 64 | 21 | 28 | 59 | 776 |
| 10/3/83 | 22 | 151 | 12 | 117 | 71 | 88 | 80 | 49 | 33 | 68 | 691 |
| TOTAL | 97 | 599 | 69 | 440 | 169 | 419 | 205 | 125 | 122 | 506 | 2751 |

## SARSAT D&E MESSAGES RECEIVED BY TSC BY WK/DIS

| WEEK OF | CGD1 | 3 | 5 | 7 | 8 | 11 | 12 | 13 | 14 | 17 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6/18/84 | 23 | 230 | 34 | 108 | 49 | 58 | 63 | 30 | | 64 | 659 |
| 6/25/84 | 31 | 312 | 39 | 72 | 35 | 90 | 71 | 36 | | 72 | 758 |
| 7/2/84 | 26 | 230 | 15 | 234 | 83 | 121 | 73 | 15 | | 87 | 884 |
| 7/9/84 | 25 | 78 | 8 | 57 | 113 | 30 | 38 | 44 | 158 | 121 | 672 |
| TOTAL | 105 | 850 | 96 | 471 | 280 | 299 | 245 | 125 | 158 | 344 | 2973 |
| 7/16/84 | 16 | 111 | 9 | 117 | 48 | 58 | 20 | 45 | | 51 | 475 |
| 7/23/84 | 14 | 178 | 12 | 107 | 53 | 123 | 85 | 60 | | 111 | 743 |
| 7/30/84 | 22 | 208 | 39 | 30 | 86 | 128 | 102 | 37 | | 62 | 714 |
| 8/6/84 | 19 | 194 | 11 | 186 | 53 | 109 | 49 | 24 | 71 | 31 | 747 |
| TOTAL | 71 | 691 | 71 | 440 | 240 | 418 | 256 | 166 | 71 | 255 | 2679 |
| 8/13/84 | 29 | 127 | 30 | 61 | 10 | 76 | 77 | 35 | 28 | 158 | 631 |
| 8/20/84 | 25 | 236 | 19 | 165 | 171 | 120 | 103 | 32 | 45 | 89 | 1005 |
| 8/27/84 | 44 | 134 | 31 | 190 | 72 | 105 | 68 | 44 | 49 | 91 | 828 |
| 9/3/84 | 32 | 170 | 16 | 111 | 61 | 90 | 71 | 10 | 45 | 74 | 680 |
| TOTAL | 130 | 667 | 96 | 527 | 314 | 391 | 319 | 121 | 167 | 412 | 3144 |
| 9/10/84 | 47 | 151 | 8 | 83 | 23 | 83 | 26 | 19 | 21 | 64 | 525 |
| 9/17/84 | 15 | 202 | 15 | 255 | 58 | 269 | 62 | 35 | 26 | 45 | 982 |
| 9/24/84 | 9 | 131 | 9 | 177 | 99 | 115 | 140 | 21 | 35 | 60 | 796 |
| 10/1/84 | 16 | 86 | 10 | 74 | 8 | 83 | 84 | 31 | 21 | 29 | 442 |
| TOTAL | 87 | 570 | 42 | 589 | 188 | 550 | 312 | 106 | 103 | 198 | 2745 |
| 10/8/84 | 14 | 21 | 35 | 106 | 40 | 119 | 49 | 12 | 31 | 136 | 563 |
| 10/15/84 | 12 | 101 | 6 | 84 | 76 | 83 | 36 | 18 | 18 | 300 | 734 |
| 10/22/84 | 36 | 270 | 11 | 92 | 48 | 77 | 87 | 31 | 37 | 51 | 740 |
| 10/29/84 | 35 | 188 | 6 | 63 | 27 | 105 | | 41 | 30 | 66 | 561 |
| TOTAL | 97 | 580 | 58 | 345 | 191 | 384 | 172 | 102 | 116 | 553 | 2598 |
| 11/5/84 | 17 | 189 | 14 | 284 | 54 | 102 | 83 | | 39 | 31 | 813 |
| 11/12/84 | | 141 | 24 | 154 | 30 | 64 | 124 | 26 | 30 | 62 | 655 |
| 11/19/84 | 22 | 121 | 14 | 106 | 74 | 166 | 91 | 16 | 25 | 57 | 692 |
| 11/26/84 | 12 | 121 | 17 | 60 | 14 | 54 | 88 | 22 | 31 | 24 | 443 |
| TOTAL | 51 | 572 | 69 | 604 | 172 | 386 | 386 | 64 | 125 | 174 | 2603 |
| 12/3/84 | 21 | 77 | 18 | 88 | 26 | 81 | 46 | 17 | 44 | 29 | 447 |
| 12/10/84 | 16 | 92 | 10 | 184 | 14 | | 47 | 14 | 21 | 13 | 411 |
| 12/17/84 | | 101 | 15 | 92 | 69 | | 60 | 55 | 12 | 43 | 447 |
| 12/24/84 | 32 | 195 | 19 | 127 | 26 | 92 | 75 | 27 | 49 | 93 | 735 |
| TOTAL | 69 | 465 | 62 | 491 | 135 | 173 | 228 | 113 | 126 | 178 | 2040 |
| 12/31/84 | 1 | 106 | 3 | | | | 18 | | 8 | 46 | 182 |
| 1/7/85 | 12 | 101 | 21 | 300 | 102 | 96 | 115 | 48 | 89 | 111 | 995 |
| 1/14/85 | 11 | 94 | 16 | 153 | 87 | | 128 | 30 | 49 | 157 | 725 |
| 1/21/85 | 13 | 110 | 41 | 255 | 70 | 76 | 71 | 34 | 62 | 30 | 762 |
| TOTAL | 37 | 411 | 81 | 708 | 259 | 172 | 332 | 112 | 208 | 344 | 2664 |
| 1/28/85 | 12 | | 8 | 98 | 45 | 43 | | 33 | 33 | | 272 |
| TOTAL | 12 | 0 | 8 | 98 | 45 | 43 | 0 | 33 | 33 | 0 | 272 |
| D&E TOTAL | 160 | 13351 | 704 | 11371 | 5397 | 7824 | 6323 | 2491 | 2413 | 6644 | 59118 |

SARSAT D&E FLAG MESSAGES VED BY TSC BY WK/DIS

| WEEK OF | CGD1 | 3 | 5 | 7 | 8 | 11 | 12 | 13 | 14 | 17 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/1/83 | | | | | | | | | | | 0 |
| 2/7/83 | | | | | | | | | | | 0 |
| 2/14/83 | | | | | | | | | | | 0 |
| 2/21/83 | | | | | | | | | | | 0 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2/28/83 | | | | | | | | | | | 0 |
| 3/7/83 | | | | | | | | | | | 0 |
| 3/14/83 | | | | | | | | | | | 0 |
| 3/21/83 | | | | | | | | | | | 0 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3/28/83 | | | | | | | | | | | 0 |
| 4/4/83 | | | | | | | | | | | 0 |
| 4/11/83 | | | | | | | | | | | 0 |
| 4/18/83 | | | | | | | | | | | 0 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4/25/83 | | | | | | | | | | | 0 |
| 5/2/83 | | | | | | | | | | | 0 |
| 5/9/83 | | | | | | | | | | | 0 |
| 5/16/83 | | | | | | | | | | | 0 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5/23/83 | | | | | | | | | | | 0 |
| 5/30/83 | | | | | | | | | | | 0 |
| 6/6/83 | | | | | | | | | | | 0 |
| 6/13/83 | | | | | | | | | | | 0 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6/20/83 | | | | | | | | | | | 0 |
| 6/27/83 | | | | | | | | | | | 0 |
| 7/3/83 | | | | | | | | | | | 0 |
| 7/10/83 | | | | | | | | | | | 0 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7/17/83 | | | | | | | | | | | 0 |
| 7/25/83 | | | | | | | | | | | 0 |
| 8/1/83 | | | | | | | | | | 8 | 8 |
| 8/8/83 | | | | | | | | | | 46 | 46 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 54 |
| 8/15/83 | | | | | | | | | | 9 | 9 |
| 8/22/83 | | | | | | | | | | | 0 |
| 8/29/83 | | | 6 | 5 | | | | 1 | | 25 | 37 |
| 9/5/83 | | 12 | 1 | 18 | 22 | 8 | 2 | | | 10 | 73 |
| TOTAL | 0 | 12 | 7 | 23 | 22 | 8 | 2 | 1 | 0 | 44 | 119 |
| 9/12/83 | | 11 | 1 | 35 | | 11 | | | 3 | 94 | 155 |
| 9/19/83 | 6 | | | 8 | 2 | 69 | | 9 | 1 | 7 | 102 |
| 9/26/83 | 1 | 19 | | 32 | 8 | 49 | 2 | | | 17 | 128 |
| 10/3/83 | 3 | 6 | | 11 | 21 | 6 | 6 | 5 | | 6 | 64 |
| TOTAL | 10 | 36 | 1 | 86 | 31 | 135 | 8 | 14 | 4 | 124 | 449 |

SARSAT D&E FLAG MESSAGES VED BY TSC BY WK/DIS

| WEEK OF | CGD1 | 3 | 5 | 7 | 8 | 11 | 12 | 13 | 14 | 17 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6/18/84 | 5 | 8 | 1 | 10 | 12 | 4 | 15 | 1 | | 11 | 67 |
| 6/25/84 | 16 | 21 | 11 | 10 | 2 | 5 | 10 | 8 | | 20 | 103 |
| 7/2/84 | 2 | 16 | 1 | 76 | 29 | 37 | | | | 6 | 167 |
| 7/9/84 | 7 | 2 | | 17 | 48 | 2 | | 1 | 3 | 34 | 114 |
| TOTAL | 30 | 47 | 13 | 113 | 91 | 48 | 25 | 10 | 3 | 71 | 451 |
| 7/16/84 | 2 | 7 | | 15 | 9 | 5 | | 9 | | 5 | 52 |
| 7/23/84 | | 16 | 1 | 29 | 7 | 29 | 5 | 1 | | 30 | 118 |
| 7/30/84 | 1 | 11 | 13 | 11 | 21 | 15 | 2 | | | 9 | 83 |
| 8/6/84 | | 3 | 1 | 27 | 7 | 23 | | | 2 | 9 | 72 |
| TOTAL | 3 | 37 | 15 | 82 | 44 | 72 | 7 | 10 | 2 | 53 | 325 |
| 8/13/84 | | 4 | 5 | 7 | | 16 | | | | 27 | 59 |
| 8/20/84 | 5 | 15 | | 30 | 72 | 11 | 7 | 3 | | 2 | 145 |
| 8/27/84 | 9 | 16 | | 66 | 27 | 8 | 1 | 2 | | 18 | 147 |
| 9/3/84 | 8 | 6 | | 34 | 13 | 14 | 3 | | | 6 | 84 |
| TOTAL | 22 | 41 | 5 | 137 | 112 | 49 | 11 | 5 | 0 | 53 | 435 |
| 9/10/84 | 13 | 23 | | 16 | 3 | 16 | 1 | 1 | | 19 | 92 |
| 9/17/84 | | 3 | | 28 | 11 | 11 | | 3 | 1 | 5 | 62 |
| 9/24/84 | | 3 | | 6 | 17 | 20 | 42 | | 1 | 2 | 91 |
| 10/1/84 | 2 | 2 | | 2 | 1 | 13 | 12 | 1 | 7 | 4 | 44 |
| TOTAL | 15 | 31 | 0 | 52 | 32 | 60 | 55 | 5 | 9 | 30 | 289 |
| 10/8/84 | | | 6 | 1 | 4 | 10 | 2 | | 3 | 27 | 53 |
| 10/15/84 | 1 | 9 | | 22 | 30 | 13 | 1 | 1 | 2 | 87 | 166 |
| 10/22/84 | 2 | 4 | 1 | 16 | 11 | 9 | 4 | | | | 47 |
| 10/29/84 | 18 | 7 | | 16 | | 13 | | 3 | 1 | 11 | 69 |
| TOTAL | 21 | 20 | 7 | 55 | 45 | 45 | 7 | 4 | 6 | 125 | 335 |
| 11/5/84 | | 7 | | 113 | 22 | 30 | 11 | | | 3 | 186 |
| 11/12/84 | | 16 | | 62 | | 3 | 23 | 3 | | 4 | 111 |
| 11/19/84 | 1 | 8 | | 32 | 29 | 4 | 31 | | | 10 | 115 |
| 11/26/84 | | 22 | 1 | 18 | 2 | 2 | 1 | | 4 | 5 | 55 |
| TOTAL | 1 | 53 | 1 | 225 | 53 | 39 | 66 | 3 | 4 | 22 | 467 |
| 12/3/84 | | | 4 | 15 | 4 | 11 | 2 | | 1 | 5 | 42 |
| 12/10/84 | 3 | 1 | | 41 | | | 1 | | | | 46 |
| 12/17/84 | | 3 | 2 | 38 | 13 | | 2 | 28 | | | 86 |
| 12/24/84 | 1 | 4 | | 15 | | 8 | 2 | 1 | 2 | 16 | 49 |
| TOTAL | 4 | 8 | 6 | 109 | 17 | 19 | 7 | 29 | 3 | 21 | 223 |
| 12/31/84 | | | 2 | | | 2 | | | | 18 | 22 |
| 1/7/85 | 1 | 9 | | 83 | 29 | | 11 | | 3 | 36 | 172 |
| 1/14/85 | | 4 | 1 | 68 | 16 | | 21 | 1 | 3 | 81 | 195 |
| 1/21/85 | | 4 | 15 | 154 | 15 | 2 | | 2 | | 3 | 195 |
| TOTAL | 1 | 17 | 18 | 305 | 60 | 4 | 32 | 3 | 6 | 138 | 584 |
| 1/28/85 | | | 1 | 19 | 13 | 4 | | 3 | | | 40 |
| TOTAL | 0 | 0 | 1 | 19 | 13 | 4 | 0 | 3 | 0 | 0 | 40 |
| D&E TOTAL | 148 | 543 | 160 | 2234 | 1069 | 877 | 434 | 119 | 48 | 1069 | 6701.5 |

SARSAT CASES RECEIVED BY TSC BY WEEK/DIS

| WEEK OF | CGD1 | 3 | 5 | 7 | 8 | 9 | 11 | 12 | 13 | 14 | 17 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2/1/83 | 1 | | | 2 | 1 | | 1 | | | | | 5 |
| 2/7/83 | 1 | | | 1 | 2 | | 2 | | | | 1 | 7 |
| 2/14/83 | | | | | 1 | 1 | | | | | | 2 |
| 2/21/83 | 2 | | | 5 | 2 | | | 2 | | | | 11 |
| TOTAL | 4 | 0 | 0 | 8 | 6 | 1 | 3 | 2 | 0 | 0 | 1 | 25 |
| 2/28/83 | 1 | | | 1 | 5 | 1 | 1 | 1 | | | | 10 |
| 3/7/83 | 2 | 1 | | 3 | 3 | 1 | | 2 | | 2 | | 14 |
| 3/14/83 | 2 | 1 | 1 | 3 | 3 | | | | | 1 | | 11 |
| 3/21/83 | | | | 1 | 4 | | | | 1 | | | 6 |
| TOTAL | 5 | 2 | 1 | 8 | 15 | 2 | 1 | 3 | 1 | 3 | 0 | 41 |
| 3/28/83 | 2 | 1 | | 3 | | | | 1 | 1 | 1 | | 9 |
| 4/4/83 | 1 | | | 2 | | | | 1 | | 1 | | 5 |
| 4/11/83 | | 1 | 1 | 2 | 1 | | | | | | | 5 |
| 4/18/83 | 1 | | | 1 | 1 | | | | | | | 3 |
| TOTAL | 4 | 2 | 1 | 8 | 2 | 0 | 0 | 2 | 1 | 2 | 0 | 22 |
| 4/25/83 | 1 | | 3 | 1 | 1 | | | 1 | | 1 | | 8 |
| 5/2/83 | 1 | 2 | | 4 | | 2 | | | | | | 9 |
| 5/9/83 | 1 | | 1 | 2 | 1 | 1 | | | | | | 6 |
| 5/16/83 | 1 | | | | 3 | 1 | | 1 | | | | 6 |
| TOTAL | 4 | 2 | 4 | 7 | 5 | 4 | 0 | 2 | 0 | 1 | 0 | 29 |
| 5/23/83 | | 1 | | | 1 | | | | | 1 | 1 | 4 |
| 5/30/83 | 2 | 1 | 1 | 2 | 2 | | 1 | 2 | 1 | | | 12 |
| 6/6/83 | 1 | | | 2 | 1 | 1 | 1 | | | 1 | | 7 |
| 6/13/83 | 4 | | | 1 | 2 | 2 | | | | | | 9 |
| TOTAL | 7 | 2 | 1 | 5 | 6 | 3 | 2 | 2 | 1 | 2 | 1 | 32 |
| 6/20/83 | | | | 2 | 2 | | 1 | | | 1 | | 6 |
| 6/27/83 | | | | 2 | 3 | | 1 | 3 | | | | 9 |
| 7/3/83 | 3 | | | 2 | 1 | 1 | | 1 | 1 | | 1 | 10 |
| 7/10/83 | 6 | | | 3 | | | | 1 | | | 2 | 12 |
| TOTAL | 9 | 0 | 0 | 9 | 6 | 1 | 2 | 5 | 1 | 1 | 3 | 37 |
| 7/17/83 | 1 | | | 3 | 4 | | 1 | | | 1 | | 10 |
| 7/25/83 | 1 | 2 | | 1 | 1 | | 1 | | | 1 | | 7 |
| 8/1/83 | | | | 4 | 1 | 2 | | | | | | 7 |
| 8/8/83 | 1 | | 1 | 2 | | | | | | | 2 | 6 |
| TOTAL | 3 | 2 | 1 | 10 | 6 | 2 | 2 | 0 | 0 | 2 | 2 | 30 |
| 8/15/83 | 2 | | | 1 | 3 | | | 1 | | | 1 | 8 |
| 8/22/83 | | | 1 | | 3 | 1 | | 1 | | 1 | 1 | 8 |
| 8/29/83 | 1 | | 2 | 1 | | | | 1 | | | 1 | 6 |
| 9/5/83 | | | | 8 | 1 | | | | | | | 9 |
| TOTAL | 3 | 0 | 3 | 10 | 7 | 1 | 0 | 3 | 0 | 1 | 3 | 31 |
| 9/12/83 | 3 | | | 5 | | | 1 | | | 1 | 2 | 12 |
| 9/19/83 | 2 | | | 1 | | | | | | 2 | | 5 |
| 9/26/83 | 1 | 1 | 1 | 2 | 1 | | | 1 | | 1 | 2 | 10 |
| 10/3/83 | 2 | | | 1 | 2 | | | | | | 1 | 6 |
| TOTAL | 8 | 1 | 1 | 9 | 3 | 0 | 1 | 1 | 0 | 4 | 5 | 33 |
| 10/10/83 | | | 1 | | | | | | | | | 1 |
| 10/17/83 | 1 | | | 1 | 1 | | | | | | 1 | 4 |
| 10/24/83 | 1 | 3 | | 1 | 1 | | 1 | | | 2 | | 9 |
| 10/31/83 | | | | 3 | | | | | | | | 3 |
| TOTAL | 2 | 3 | 1 | 5 | 2 | 0 | 1 | 0 | 0 | 2 | 1 | 17 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9/10/84 | | 2 | | 2 | | | | | | | 3 | 7 |
| 9/17/84 | 3 | 1 | | 3 | 1 | 1 | | | 1 | | 1 | 11 |
| 9/24/84 | | | | 2 | 2 | | 1 | 2 | | | | 7 |
| 10/1/84 | | | | 0 | 1 | | | 1 | | 1 | | 3 |
| TOTAL | 3 | 3 | 0 | 7 | 4 | 1 | 1 | 3 | 1 | 1 | 4 | 28 |
| 10/8/84 | | | 2 | 1 | | | 1 | | | | | 4 |
| 10/15/84 | | | | 4 | | | | | 1 | | | 5 |
| 10/22/84 | | | 1 | 1 | | | | | | | | 2 |
| 10/29/84 | 1 | | | 1 | | | | | | | | 2 |
| TOTAL | 1 | 0 | 3 | 7 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 13 |
| 11/5/84 | | 1 | | 6 | 2 | | 1 | 1 | | | | 11 |
| 11/12/84 | | 1 | 1 | 1 | | | 1 | | | | | 4 |
| 11/19/84 | | | | 0 | | 1 | | | | | 2 | 3 |
| 11/26/84 | | 1 | | 1 | | | | | | 1 | | 3 |
| TOTAL | 0 | 3 | 1 | 8 | 2 | 1 | 2 | 1 | 0 | 1 | 2 | 21 |
| 12/3/84 | | | 1 | 3 | | | | | | | | 4 |
| 12/10/84 | 1 | | | 1 | | | | | | 1 | | 3 |
| 12/17/84 | | | | 1 | | | | | 4 | | 1 | 6 |
| 12/24/84 | | 1 | | 1 | | | | | | 2 | | 4 |
| TOTAL | 1 | 1 | 1 | 6 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 17 |
| 12/31/84 | | | 1 | | | | | | | | | 1 |
| 1/7/85 | | | | 7 | 1 | | | | | 1 | 1 | 10 |
| 1/14/85 | | | | 2 | 2 | 1 | | | 1 | | | 6 |
| 1/21/85 | | | 1 | 4 | | | | | | 3 | | 8 |
| TOTAL | 0 | 0 | 2 | 13 | 3 | 1 | 0 | 0 | 1 | 4 | 1 | 25 |
| 1/28/85 | | | | 1 | | | | | | 1 | | 2 |
| TOTAL | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| D&E TOTAL | 69 | 88 | 30 | 230 | 130 | 21 | 23 | 37 | 16 | 40 | 56 | 740 |

# APPENDIX K

## NUMBER OF MESSAGES ROUTED TO US COAST GUARD WITH REAL MARITIME POSITIONS

### K.1 INTRODUCTION

Each COSPAS/SARSAT alert message contains two positions, one representing the actual beacon or source location, and another representing its reflection (image) in the satellite orbital plane. The LUT computation attempts to distinguish these two locations, designating them as A-position (real) and B-position (image). On the average, the computer designation is correct about 55 percent to 85 percent of the time for 121.5/243.0-MHz beacons, as seen in field tests.

An alert message is routed to the US Coast Guard if either the A-position, B-position, or both are in the maritime (M) area. A duplicate message is also sent to the US Air Force Rescue Centers if the A-position or B-position is an inland (I) or other (O) area. If both A- and B-positions are inland or other, the Coast Guard does not receive the alert. Table J-1 shows the total number of 121.5/243.0-MHz messages received by the Coast Guard in the period February 1983 - November 1983, and February 1984 - October 1984, as recorded at the Operations Computer Center, broken down by area of the A&B positions:

TABLE K-1. USCG MESSAGE RECEIPTS BY A-B POSITION*

| | ONLY A | ONLY B | BOTH A AND B |
|---|---|---|---|
| Maritime (M) | 9487 | 12436 | 8057 |
| Inland (I) | 8340 | 5960 | 28 |
| Other (O) | 4202 | 3630 | 56 |

*Messages addressed to Area Commands are excluded.

Similarly, the 12,436 messages with ONLY B in the maritime area are composed of two types:

(1) Real position inland or other, correctly designated A, with image in maritime area, correctly designated B.

(2) Real position in maritime area, incorrectly labelled B, with image position inland or other, incorrectly labelled A.

With the notation of Table K-2, these are

$$9487 = (N_M^I + N_M^O)P + (N_I^M + N_O^M)Q, \quad (1)$$

$$12436 = (N_M^I + N_M^O)Q + (N_I^M + N_O^M)P. \quad (2)$$

Similarly, the Inland ONLY A and ONLY B totals are:

$$8340 = (N_I^M)P + (N_M^I)Q, \quad (3)$$

$$5960 = (N_I^M)Q + (N_M^I)P, \quad (4)$$

and the Other ONLY A and ONLY B totals are:

$$4202 = (N_O^M)P + (N_M^O)Q, \quad (5)$$

$$3630 = (N_O^M)Q + (N_M^O)P. \quad (6)$$

The solutions of (1) and (2) are:

$N_M^I + N_M^O$ = Number of alerts with real position in Maritime and image Inland or Other

$$= (9487P - 12436Q)/(P-Q) \quad (7)$$

$N_O^M + N_I^M$ = Number of alerts with image in Maritime and real position Inland or Other

$$= (12436P - 9487Q)/(P-Q) \quad (8)$$

However, equations (3) through (6) give:

$$N_I^M = (8340P - 5960Q)/(P-Q) \quad (9)$$

$$N_M^I = (5960P - 8340Q)/(P-Q) \quad (10)$$

$$N_O^M = (4202P - 3630Q)/(P-Q) \quad (11)$$

$$N_M^O = (3630P - 4202Q)/(P-Q) \quad (12)$$

## K.3 RESULTS

Figure K-1 shows the estimated number of alerts with real position in the maritime area (lower curve, $N_M^I + N_M^O$) and the number with image position in the maritime area (upper curve, $N_I^M + N_O^M$), both as functions of the probability P of correct designation of the real position as 'A' by the LUT algorithm. Similar curves can be generated from (9) through (12).

The controlled tests during the first year D&E show that the probability P for 121.5/243.0-MHz beacons ranges from 58 percent to 83 percent, the average being 67 percent on land and 74 percent floating. At P = 0.67, corresponding to land tests, Figure K-1 shows that about 22 percent of the messages received by the Coast Guard had real positions located in the maritime area, and 51 percent were images. At P = 26 percent of the messages corresponding to floating EPIRB tests over the year, about 26 percent of the messages had real maritime positions, while 47 percent were images. At P = 0.83, the highest A-Probability obtained in floating tests (2nd Nantucket Tests,

February 1984), about 29 percent of the messages correspond to real maritime positions, and 44 percent correspond to image positions located in the maritime area. Regardless of the value of P, about 27 percent of the messages had both real and image in the maritime area.

Table K-3 summarizes the results for P = 0.71. This value of P is considered the best estimate of P for all messages received by the Coast Guard, allowing an approximately equal division between land-based and at-sea beacons.

TABLE K-3. ESTIMATED PERCENTAGE OF MESSAGES WITH REAL OR IMAGE POSITIONS IN MARITIME AREA, BASED ON P = 0.71

| | |
|---|---|
| Real positon in Maritime area, image Inland or Other | 25% |
| Image position in Maritime area, real Inland or Other | 48% |
| Both image and real in Maritime area | 27% |

Table K-3 is an estimate of the number of messages, not number of sources or beacons. In general, there are two messages per beacon or other source and the Coast Guard gets one if one position is Inland or Other and the other Maritime. If both positions are Maritime, but in different Coast Guard Districts, the Coast Guard receives both messages. If both positions are Maritime, but in the same Coast Guard District, the Coast Guard gets only one message. The 27 percent shown in Table K-3 represents both duplicated and non-duplicated messages with real and image in Maritime area. The 26 percent consists of about 16 percent duplicated messages and 11 percent non-duplicated messages. In calculating the image alarm rate, one-half of the duplicated messages, or 8 percent of all messages, should be considered image alarms, i.e., messages due to the image phenomenon. Therefore, the image alarm rate is 48 percent + 8 percent = 56 percent of all messages received by the Coast Guard.

# APPENDIX L

## DISTRIBUTION OF WAITING TIME

A fixed point on the earth will experience satellite passes with TCAs separated by intervals $y_i$, i=1, 2, 3, .... The distribution f(y) of these inter-pass intervals over a long period of time can be obtained by simulation for a given satellite configuration. Given f(y) what is the distribution g(x) of waiting time x from activation to the first satellite pass?

Assume that the beacon is activated at a random time and that the interval in which the activation falls is of length y, where $y \geq x$. Then the conditional distributions of x are as shown in Figure K-1(a), where G(x|y) is the cumulative distribution and g(x|y) is the density distribution. From the conditional distribution one may obtain g(x):

$$
\begin{aligned}
g(x) &= \int_0^\infty g(x,y)\, dy, \\
&= \int_0^\infty g(x|y)\, f^*(y)\, dy, \\
&= \int_x^\infty (1/y)\, f^*(y)\, dy, \qquad x \leq y, \\
&= \int_0^x (o)\, f^*(y)\, dy, \qquad x > y.
\end{aligned}
$$

where g(x,y) is the joint probability density distribution of x and y,

g(x|y) is the probability density distribution of x, given y,

f*(y)dy is the probability that the interval in which the activation occurs is of length y to y + dy.

The distribution f*(y) is not the same as f(y). The latter is the probability that any interval randomly selected from all intervals is of length y. But f*(y) can be obtained from f(y) as follows:

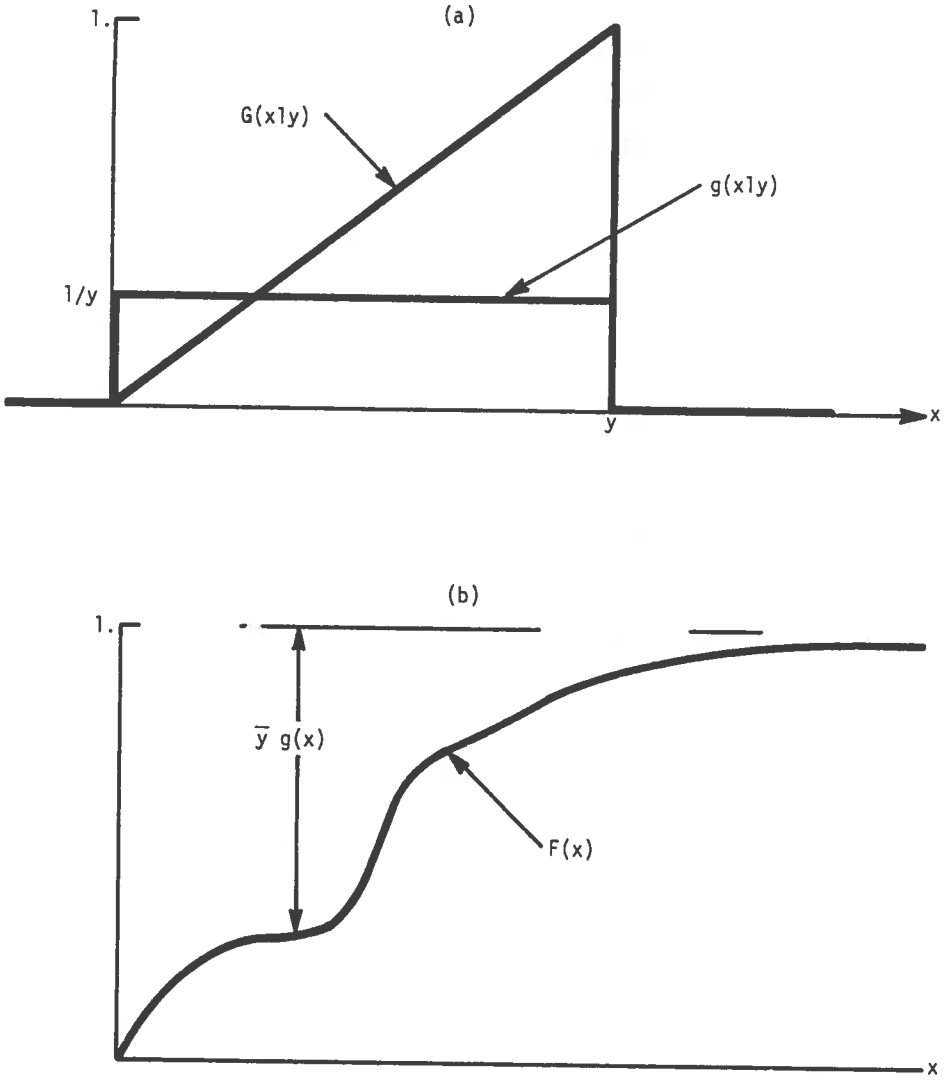


FIGURE L-1. CONDITIONAL AND MARGINAL DISTRIBUTIONS OF WAITING TIME

# APPENDIX M

## A METHOD OF ESTIMATING THE TOTAL NUMBER OF DISTRESS CASES INVOLVING AN ACTUATED ELT OR EPIRB

During the SARSAT D&E, 72 distress cases involving an ELT or EPIRB were prosecuted by the US Coast Guard. Of these

58 were reported by SARSAT
62 were reported by means other than SARSAT
48 were reported by both SARSAT and other means.

This appendix describes a method for estimating the number not reported, based on the number that are reported by SARSAT and by other means. (Note: 'SARSAT' here refers to the COSPAS/SARSAT system.)

Let N be the number of beacon activations in the period of interest. Let x be the number reported by SARSAT and let y be the number reported by means other than SARSAT. Finally, let z be the number of activations reported both by SARSAT and by other means.

It is assumed that the probability $P_S$ of an activated beacon being reported by SARSAT is a fixed number from activation to activation and that this number does not depend on whether any previous or subsequent beacon was reported by SARSAT or by any other means. Similar assumptions are made for $P_O$, the probability that an activated beacon is reported by means other than SARSAT. Then:

$$x = P_S N$$
$$y = P_O N$$
$$z = P_S P_O N$$

APPPENDIX N

COST MODELS FOR SCENARIOS 1 AND 2

This Appendix is based on work performed by ORI, Inc. under contract to TSC (See Reference N-1.)

N.1 Cost Models for Scenario 1. (see Table N-1)

Item 1.0 Program Management - Based upon experience with similar programs and discussions with Coast Guard SARSAT project personnel, two officer billets should be allocated for program management. An amount of $44,000 per year per officer (unburdened) was assumed, consistent with present Coast Guard accounting practice. Program management includes procurement support, regulatory support, and training management.

Item 2.0 Space Segment - Discussions with NOAA and NASA program management personnel have concluded with the assumption that the Coast Guard will not be responsible for funding any portion of the space segment. Long established precedent for this assumption exists in the environmental satellite area.

Item 3.0 LUTs - The assumption is made that two additional Coast Guard LUTs will be acquired, installed and in operation before 1990. The Coast Guard operational system is assumed to consist of four LUTs located at Kodiak, AK, Point Reyes, CA, Hawaii, and the Caribbean Area. It is assumed that the LUTs will be replaced by a technically improved LUT during the period 2000 to 2005.

Item 3.1 LUT Refurbishment - It is assumed that the two current LUT antennas will be replaced during the period 1990 to 1995 (1992, 1994) and the antennas for the two new LUTs (Hawaii and Caribbean) will be replaced during the period 1995 - 2000 (1997, 1999). Other refurbishment of the LUT is not considered a necessary additional cost, since these costs are covered in the maintenance contract.

Item 3.2 LUT Replacement - It is assumed that the current LUT design (10 ft antenna, HP-1000, FPS array processor, etc.) will be replaced by a new LUT with a smaller antenna and, replacing the general purpose computer and array processor, a hardware/firmware system developed specifically for the LUT. The cost for LUT

development is assumed to be borne by NASA and/or industry as in the past SARSAT program. Because of this approach, the recurring LUT cost to the U.S. Coast Guard is assumed to be comparable to the current LUT, thereby counteracting increases due to inflation. Acquisition and installation costs for the replacement LUTs are therefore assumed to be $1.1 million per LUT with an additional $25,000 per site allocated for facility modifications required by the new LUT.

Item 3.3 LUT Personnel - Discussions with Coast Guard personnel at Pt. Reyes and Kodiak have led to the conclusion that one engineering technician (ET) at each LUT site would be required to support LUT operations. As stated in Section 5, a workload at each site between 1 and 1.6 labor years per year is now required at each LUT for the operational system. The rationale for a requirement of only 1 labor year in the 1990 -2010 period is based upon the following assumptions: 1) reduction of effort for D&E and pre-operational requirements; 2) simplification of operations and equipment by elimination of the analog tape recorder and other recordkeeping; and 3) improved system operating efficiency. Furthermore, during the past three years of operation no apparent hardships have been experienced from the current staffing approach. The major problem which was identified, and affects the staffing level, was insufficient training. The ET labor year cost was taken as $21,500 per year, unburdened.

Item 3.4 LUT Maintenance Support - It was assumed that the LUT system would not be entered into the U.S. Coast Guard inventory because of the small number of systems. Therefore, the current method of LUT maintenance support was assumed to continue during the full operational period. This support relies on the U.S. Coast Guard on-site ET and others trained in the LUT system to perform routine maintenance and troubleshooting and replacement repairs (at the circuit board level) with a maintenance contractor providing all other maintenance support including spare parts and equipment refurbishment as necessary. The cost of $110,000 per year is that of the current contract.

Item 3.5 LUT Training - It was assumed that the LUT maintenance contractor would be tasked to provide training at a central facility like the SEDL at NASA's Goddard Space Flight Center. He would provide a 2 week course each year. The SARSAT ETs would attend the full 2 weeks and two other ETs from each LUT

5.2. It is also assumed tht the OCC will continue to function as a Coast Guard decision support system and would be budgeted at the same level of operations with or without SARSAT, therefore no budgetary estimate is included for Item 5.3.

Items 5.1-5.3 OCC Hardware, Software Development and Operational Costs - It is assumed that no additional costs will be incurred by the additon of SARSAT data.

Item 5.4 OCC SARSAT Software Modifications - It is assumed that like the MCC there will be continuing minor modifications to the OCC to support the Coast Guard SARSAT operations. No hardware changes are anticipated. Three months of programming support per year is assumed adequate to cover changing requirements.

Item 6.1 AUTODIN - It is assumed that AUTODIN will still be required for backup communicaton and other support, however, it is understood that all AUTODIN costs are funded by DOD, as at present.

Item 6.2 LUT Communication Lines - It is assumed that a dedicated communication line will be leased by Coast Guard between each LUT and the MCC as in the present system. It is assumed that if satellite communications are implemented for any or all of these communication lines, they will be comparable or less costly. The present cost of these lines is estimated by NASA to be about $120,000.

Item 6.3 MCC to OCC Communictions - Based upon the concept that the OCC will function as a decision support system it is assumed that a dedicated communication line is required between the OCC at Governors' Island and the MCC at Suitland, MD. The $5,000 estimate is based on current costs for similar lines.

Item 6.4 RCC Communication Lines - It is assumed that communications to and from the Coast Guard RCCs will utilize one or more of the following communication systems: AUTODIN, ODIN or TELENET. It is also assumed that the cost for ODIN and TELENET are general Coast Guard communications costs that would not change appreciably due to the SARSAT service requirements, therefore no budget estimate has been made.

Item 6.5 International Communications - It is assumed that NOAA will fund all international communications costs based upon the precedent established in the D&E and also the environmental operations that NOAA has been responsible for in the past.

Item 9.0 SAR Forces - It was determined that there will be no additional requirements generated by SARSAT operations.

Item 9.1 406-MHz Homing Development - It is assumed that the 406-MHz EPIRBs will continue to be equipped with a 121.5-MHz transmitter for homing purposes. Whereas it is envisioned that some experimentation with homing on 406-MHz will take place, there is no reason to believe it will necessarily be incorporated into the operational system in this scenario.

Item 9.2 406-MHz Homing Equipment - It is assumed that the SAR Forces will not be equipped with 406-MHz homing equipment.

Item 9.3 406-MHz ELTs - It is assumed that Coast Guard aircraft will not be equipped with 406-MHz ELTS.

Item 10.0 406-MHz EPIRBs - Based upon the scenario that 406-MHz EPIRBs will not be made mandatory, no extensive Coast Guard effort is anticipated in this area. The requirements of the marketplace are assumed to dominate.

Items 10.1-10.2 406-MHz EPIRB Development - It is assumed that the development effort required to make 406-MHz EPIRBs available to the maritime community on a voluntary basis will be accomplished prior to 1990 and therefore will be sunk costs.

Item 10.3 Beacon User Costs - The beacon costs to users for Scenario 1 are detailed in Table N-2. The complement of 10,000 121.5/243.0-MHz EPIRBs shown in Figure N-1 at the begining of the planning period (1990) are assumed to be replaced as they wear out by similar units, at a cost of $250 per unit, 1985 dollars. A use life of 5 years is assumed so that beacons will be replaced at an average rate of 2,000 per year. This will cost the user community $500,000 per year, starting in 1990. These costs, however, would be sustained by the user community even in the absence of SARSAT, as they were prior to and during the D&E. Therefore, they are subtracted out in Table N-2.

The 406-MHz EPIRB costs, however, are reasonably considered SARSAT induced costs to the user. A purchase rate of 500 per year at $500 for each unit is assumed, in addition to a replacement rate of 500 per year starting in 1996 (five year use life). These are shown in the first two columns of Table N-2. The net cost from Table N-2 is entered into Table N-1.

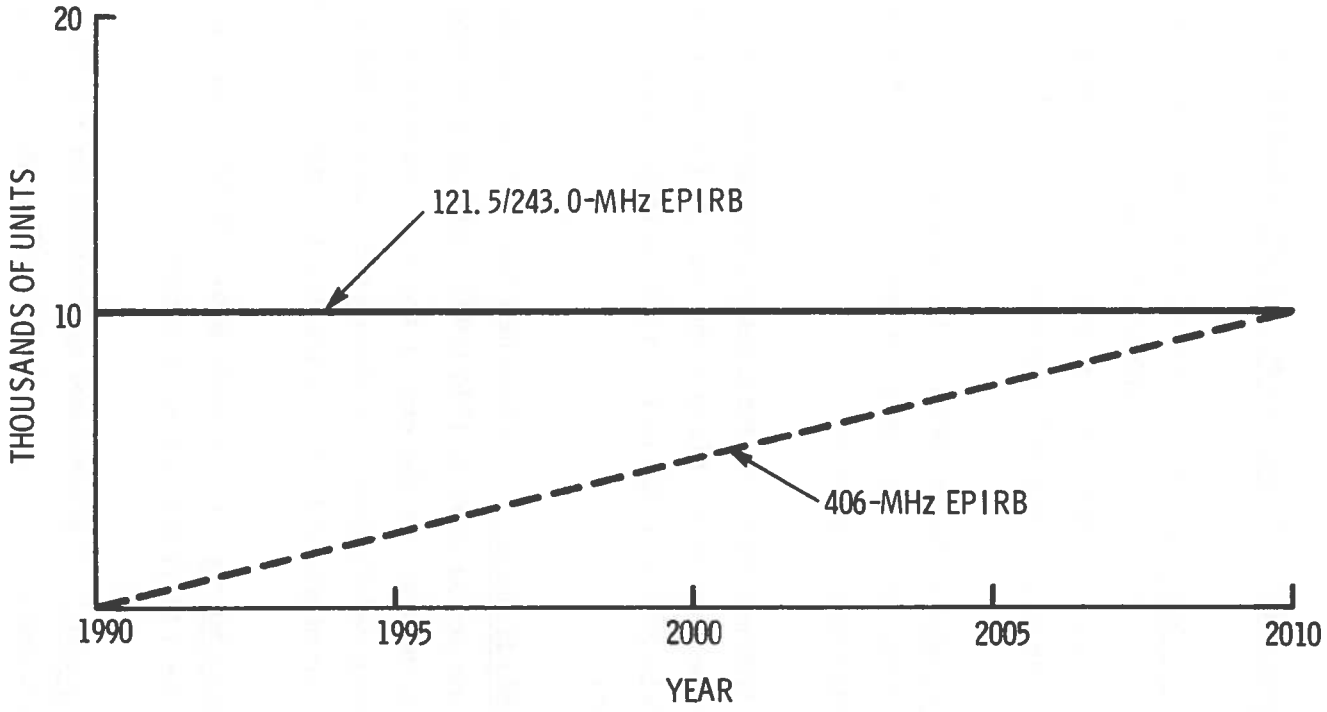


FIGURE N-1. ASSUMED EPIRB POPULATIONS, SCENARIO 1

# TABLE N-3. MARITIME COSTS FOR SARSAT SYSTEM 1990-2010
## (AMOUNTS IN THOUSANDS OF DOLLARS)

| ITEM NO. | DESCRIPTION/YEAR | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | MANAGEMENT | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 |
| 1.3 | REGULATORY SUPPORT | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2.0 | SPACE SEGMENT | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 3.1 | LUT REFURBISHMENT | - | - | 250 | - | 250 | - | - | 250 | - | 250 | - | - | - | - | - | - | - | - | - | - |
| 3.2 | LUT REPLACEMENT | - | - | - | - | - | - | - | - | - | - | - | - | 2.3M | 2.2M | - | - | - | - | - | - |
| 3.3 | LUT PERSONNEL | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| 3.4 | LUT MAINTENANCE SUPPORT | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 | 440 |
| 3.5 | LUT TRAINING | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| 4. | USCG MCC REQUIREMENTS | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| 5.4 | OCC-SARSAT SOFTWARE MODS | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| 6.2 | LUT COMMO. LINES TO MCC | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| 6.3 | MCC-OCC COMMO. LINES | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 7.4 | 406 BEACON REGISTRATION | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| 8.0 | USCG OPCENS | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9.1 | 406 HOMING DEVELOPMENT | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9.2 | 406 HOMING EQUIPMENT | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10.3 | EPRIB COST TO USERS | 250 | 250 | 250 | 250 | 250 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| TOTAL COST 1985 DOLLARS | | 1175 | 1175 | 1425 | 1175 | 1425 | 1425 | 1425 | 1675 | 1425 | 1675 | 1425 | 1425 | 3725 | 3625 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 |
| TOTAL COST DISCOUNTED TO 1990 $s DOLLARS | | 1175 | 1068 | 1178 | 883 | 973 | 885 | 804 | 860 | 665 | 710 | 549 | 499 | 1187 | 1050 | 375 | 341 | 310 | 282 | 256 | 233 |

GRAND TOTAL DISCOUNTED TO 1990 DOLLARS 14,283

Item 8.1 Communications Center - Same assumptions as Scenario 1.

Item 8.2 RCC Personnel - Same assumptions as Scenario 1. With the advent of more reliable 406 Beacons having ID, it can be assumed that some reduction in workload may result.

Item 8.3 RCC Hardware - Same assumptions as Scenario 1.

Item 9.0 SAR Forces - It is assumed that the only additional costs due to SARSAT will be a requirement to develop a 406-MHz homer and to equip the SAR forces.

Item 9.1 406-MHz Homing Development - It is assumed that 406-MHz homing equipment will be required to equip SAR forces with the capability prior to the year 2000. Between 1990 and 2000 it is assumed that 121.5-MHz will be used for homing and after 2000 only 406-MHz will be used. To follow the timeline of Scenario 2 it is assumed that the 406-MHz homing capability will be developed prior to 1990 and costs will be considered sunk costs.

Item 9.2 406-MHz Homing Equipment - It is assumed that all U.S. Coast Guard ships and planes that currently have a 121.5-MHz homing capability would be equipped with 406-MHz homers before 2000. Review of Coast Guard data indicate that approximately 300 ships and 180 aircraft will have to be equipped. For costing purposes it was assumed that 10 percent of the ships and aircraft would be equipped each year until all are equipped. Review of data from previous homer procurement (such as the ANS-4 purchases) and installation indicate that each homer will cost approximately $7,000 when installed by Coast Guard personnel.

Item 9.3 406-MHz ELTs - It is assumed that all Coast Guard aircraft (180) will be equipped with 406-MHz ELTs.

Item 10.0 406-MHz EPIRBs - Based on the scenario that 406-MHz EPIRBs will be made mandatory and 121.5-MHz EPIRBs will all be phased out by the year 2000. It is assmed that the Coast Guard will take an active role in assuring that effective 406-MHz EPIRBs will replace the 121.5-MHz units; the cost of the resulting unit is assumed to be $250, competitive with the 121.5/243.0-MHz units.

TABLE N-4. EPIRB COSTS TO USERS, SCENARIO 2, $K

| | 406-MHz EPIRBS | | | 121.5/243.-MHz EPIRBS | | |
|---|---|---|---|---|---|---|
| Year | Purchase | + Replacement | + | Replacement | - Scenario 1 Replacement | |
| 1990 | 375 | | | 250 | 500 | |
| 91 | 375 | | | 250 | 500 | |
| 92 | 375 | | | 250 | 500 | |
| 93 | 375 | | | 250 | 500 | |
| 94 | 375 | | | 250 | 500 | |
| 95 | 375 | 375 | | | 500 | |
| 96 | 375 | 375 | | | 500 | |
| 97 | 375 | 375 | | | 500 | |
| 98 | 375 | 375 | | | 500 | |
| 99 | 375 | 375 | | | 500 | |
| 2000 | 125 | 750 | | | 500 | |
| 01 | 125 | 750 | | | 500 | |
| 02 | 125 | 750 | | | 500 | |
| 03 | 125 | 750 | | | 500 | |
| 04 | 125 | 750 | | | 500 | |
| 05 | 125 | 875 | | | 500 | |
| 06 | 125 | 875 | | | 500 | |
| 07 | 125 | 875 | | | 500 | |
| 08 | 125 | 875 | | | 500 | |
| 09 | 125 | 875 | | | 500 | |

## REFERENCES

N-1. U.S. Coast Guard SARSAT Operational System Cost Study, B. Trudell, ORI Technical Report 2423, 31 March 1985.

125 copies

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