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Addendum

165

This report presents the results of a series of experiments to determine if three drugs; marihuana, librium and dexedrine have any effect on human performance in a divided attention laboratory task and AUCLA driving simulator. This study was a continuation of a previous NHTSA contract # FH-11-7305 where alcohol was shown to have an affect on both the laboratory task and the simulator. The drug treatments in this report was accounted in any where the drug, alcohol, and their Augustication placebos were given as treatments in a factorial design.

The results of the experiment showed the following:

- Only one divided attention laboratory task was conducted, librium and alcohol. Librium had no effect on performance but alcohol affected performance as was reported in the earlier study.
 - 2) In the marihuana driver simulator experiment there was no statistical significant effect of marihuana or alcohol.
- 3) In the librium experiment on the driver simulator, librium showed significant decrement at the 0.05 probability level. However the percent change in performance was 4.76%. On the other hand, alcohol showed no significant effect with a 26.8% change in per-formance.
 - 4) In the dexedrine study, statistical significance for either dexedrine or alcohol was marginal, i.e. 0.10 probability level.

On the basis of these results it is the opinion of NHTSA that no conclusion can be made on the effect of these drugs on driver performance. The reason for the lack of significance appears to be due to the large

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variation in performance scores of the subjects and group of subjects for the different experiments. This could be corrected in subsequent studies by, as the authors concluded, more careful screening and selection of subjects or as a separate alternative, better control of the subjects during the time that the subject is participating in the experiment.

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More studies should be conducted on these drugs using better control over the subjects.

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Reports and discus	ses the methodology and r	esults of experiments
in a driving simul	ator and soundproof chamb	er which tested the
effects of Alcohol	, Librium, Dexedrine and	Marihuana on human driving
performance. Alth	ough a trend was found fo	or divided attention re-
action time in the	simulator as affected by	marihuana, the results
are statistically	inconclusive. Librium al	so increased the reaction
time in the simula	tor. Dexedrine DECREASED	reaction time in the
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simulator and the combination of dexedrine with alcohol produced reaction times no different than placebo drives. Vehicle control scores were not effected except as an increase in variability. It is concluded that Marihuana and Librium require more study and Dexedrine tends to offset the effects of alcohol on reaction time.

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FINAL REPORT

EFFECTS OF DRUGS AND ALCOHOL ON DRIVER PERFORMANCE

Prepared for

U.S. Department of Transportation National Highway Traffic Safety Administration

Contract No. FH-11-7499

The Effects of Drugs and Alcohol in Combination with Drugs on Driver Performance

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PREFACE

This report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, under Contract No. FH-11-7499, entitled "The Effects of Drugs and Alcohol in Combination with Drugs on Driver Performance." The opinions, findings and conclusions expressed in this publication are those of the authors and not necessarily those of the U.S. Department of Transportation, National Highway Traffic Safety Administration.

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iii

CONTENTS

Sec	tion		Page
1.	INTR	ODUCTION AND SUMMARY	1
2.	THE	PROBLEM	3
3.	3. BACKGROUND		
	3.1	Alcohol	7
	3.2	Marihuana	8
	3.3	Divided Attention	13
		3.3.1 The Hypothesis	13
		3.3.2 The Subsidiary Task	14
		3.3.3 Task Loading	15
	3.4	Driving Simulation Laboratory	17
4.	4. PROCEDURE		
	4.1	Strategy and Approach	19
		4.1.1 Strategy	19
		4.1.2 Approach	19
		4.1.3 Subsidiary Task	20
		4.1.4 Driving Simulation Laboratory	22
		4.1.5 DSL Training Run	23
		4.1.6 Soundproof Booth	23
	4.2	General Experimental Procedure	25
	4.3	Librium and Alcohol	27
		4.3.1 Subject Procurement	27
		4.3.2 Subject Preparation	28

CONTENTS (CONT'D)

Section Page 4.3.3 Test Session Procedure 29 4.4 Dexedrine and Alcohol 31 4.4.1 Subject Procurement 31 4.4.2 Training Session 33 4.4.3 Test Session Procedure 33 4.5 Marihuana and Alcohol 36 4.5.1 Subject Procurement 36 4.5.2 Training Session 37 4.5.3 Test Session Procedure 38 41 4.6 Supplemental Experiment 5. RESULTS 43 5.1 Soundproof Booth 43 5.2 Vehicle Control 43 5.3 Subsidiary Task 44 5.3.1 Scoring 44 5.3.2 Task Loading 45 6. DISCUSSION AND CONCLUSIONS 77 6.1 General 77 6.2 Brain Levels, Drugs and Driving 82 7. REFERENCES 87 8. APPENDICES 91 91 A. Experimental Participant Release

CONTENTS (CONT'D)

Section

<u>Page</u>

в.	Subject Interview Forms	95
C.	General Information Sheet and Treatment Data Sheet	101
D.	Short Drug Effects Questionnaire	107
E.	Long Drug Effects Questionnaire	111
F.	Confidential Questionnaire	125
G.	Vehicle Control Scores	135
н.	Biomedical Computer Programs	157

.

TABLES

NO.	Caption	Page
1	Subsidiary Task Reaction Time, Marihuana Study, Alcohol Drink given with Placebo Smoke	47
2	Subsidiary Task Reaction Time, Marihuana Study, Placebo Drink given with Marihuana Smoke	48
3	Subsidiary Task Reaction Time, Marihuana Study, Marihuana Extract Drink given with Placebo Smoke	49
4	Subsidiary Task BMDX63 Statistics, Marihuana Study, All Responses Including Omissions	50
5	Subsidiary Task BMDX63 Statistics, Marihuana Study, All Responses Excluding Omissions	51
6	Subsidiary Task BMDX63 Statistics, Marihuana Study, All Initially Correct Responses	52
7	Subsidiary Task Reaction Time, Librium Study, Alcohol Drink given with Librium Pill	53
8	Subsidiary Task Reaction Time, Librium Study, Alcohol Drink given with Placebo Pill	54
9	Subsidiary Task Reaction Time, Librium Study, Placebo Drink given with Librium Pill	55
10	Subsidiary Task BMDX63 Statistics, Librium Study, All Responses Including Omissions	56
11	Subsidiary Task BMDX63 Statistics, Librium Study, All Responses Excluding Omissions	57
12	Subsidiary Task BMDX63 Statistics, Librium Study, All Initially Correct Responses	58
13	Subsidiary Task Reaction Time, Dexedrine Study, Alcohol Drink given with Placebo Fill	59
14	Subsidiary Task Reaction Time, Dexedrine Study, Alcohol Drink given with Dexedrine Pill	60
15	Subsidiary Task Reaction Time, Dexedrine Study, Placebo Drink given with Dexedrine Pill	61
16	Subsidiary Task BMDX63 Statistics, Dexedrine Study All Responses Including Omissions	62

ix

TABLES (CONT'D)

<u>No.</u>	Caption	Page
17	Subsidiary Task BMDX63 Statistics, Dexedrine Study, All Responses Excluding Omissions	63
18	Subsidiary Task BMDX63 Statistics, Dexedrine Study, All Initially Correct Responses	64
19	Subsidiary Task BMDO5V Statistics, Latin Squares, Marihuana Study, All Responses Including Omissions	65
20	Subsidiary Task BMD05V Statistics, Latin Squares, Marihuana Study, All Responses Excluding Omissions	65
21	Subsidiary Task BMDO5V Statistics, Latin Squares, Marihuana Study, All Initially Correct Responses	66
22	Subsidiary Task BMDO5V Statistics, Latin Squares, Librium Study, All Responses Including Omissions	66
23	Subsidiary Task BMDO5V Statistics, Latin Squares, Librium Study, All Responses Excluding Omissions	67
24	Subsidiary Task BMDO5V Statistics, Latin Squares, Librium Study, All Initially Correct Responses	67
25	Subsidiary Task BMD05V Statistics, Latin Squares, Dexedrine Study, All Responses Including Omissions	68
26	Subsidiary Task BMD05V Statistics, Latin Squares Dexedrine Study, All Responses Excluding Omissions	68
27	Subsidiary Task BMD05V Statistics, Latin Squares Dexedrine Study, All Initially Correct Responses	69
28	Subsidiary Task Reaction Time, Marihuana Study, Subjects Versus Treatments Across Subjects	70
29	Subsidiary Task Reaction Time, Marihuana Study, Events Versus Treatments Across Subjects	71
30	Subsidiary Task Reaction Time, Marihuana Study, Subjects Versus Runs Across Events	72
31	Sound Proof Booth Statistics, Librium	73

TABLES (CONT'D)

<u>No.</u>	<u>Caption</u>				<u>Paqe</u>
32	Soundproof Attention,	Booth Statistics, Percent Correct	Librium,	Concentrated	74
33	Soundproof Attention,	Booth Statistics, Percent Correct	Librium,	Divided	75
34	Soundproof Attention,	Booth Statistics, Interactions, Perc	Librium, cent Corre	Divided ect	76

1. INTRODUCTION AND SUMMARY

This study is only part of a larger program of research into the ways that various drugs (commonly used) affect driving safety. Therefore, it is based on the results of earlier projects that showed the effects of alcohol to be primarily on human attention, <u>not</u> on the vehicle control skills such as steering and speed control, except to increase the variability of these scores in the UCLA Driving Simulator.

For this reason, the present report deals with two types of laboratory measures: one has to do with two auditory tasks simultaneously presented; the other is comprised of two visual tasks (one of which is simulator driving) simultaneously presented. Because these research tasks are conducted in separate laboratories, they actually constitute two studies complete unto themselves.

Four different drugs (and drug-alcohol combinations) were studied in these two separate laboratories, making in all eight sub-studies, each related to the overall hypotheses and research strategy of the project. The report therefore deals with the overall concepts, describes each sub-study, then discusses the total implications of the results.

Evidence was found for an effect on driving behavior of marihuana. Although a trend was found for the visual subsidiary task as affected by marihuana, the results are statistically inconclusive. No effect was found on vehicle control scores and no tests were conducted on the auditory tests of attention.

Librium was shown to increase reaction time to the visual subsidiary task in the driving simulator laboratory, and Librium with alcohol increased reaction time even further. However, no Librium effect was found in the auditory

test of divided attention nor were there any marked changes in vehicle control scores under Librium even when combined with alcohol.

Dexedrine was found to decrease reaction time to the visual subsidiary task and the combination of Dexedrine with alcohol produced reaction times equal to the sober (placebo) drive sessions. Due to equipment failure, no data were analyzed for the auditory tests of divided attention under Dexedrine or marihuana.

These results support the following conclusions:

a. Marihuana affects visual divided attention while driving, but more data are needed to determine these effects more clearly.

b. Librium affects visual divided attention while driving, but does not affect auditory divided attention. Alcohol and Librium together appear to increase reaction time more than either alone. These results need further study.

c. Dexedrine does decrease reaction time while driving and when combined with alcohol does offset the alcohol effect on reaction time while driving. However, there is indication of some disruption of the normal pattern of divided attention reaction time relative to task loading.

2. THE PROBLEM

The U.S. population is increasingly a drug and medication taking society and also an automobile driving society. The combination of these two practices is producing an increase of hazardous drivers on the highways. This problem is the subject of the present study.

A nationwide survey done in 1957 (1) indicated that the purchase of drugs and medicines outside of the hospital amounted to 1.5 billion dollars, or accounted for 15% of the total amount spent for personal health services. In that same year, the American Institute of Public Opinion found that 7% of the surveyed population admitted to using tranquilizers. A decade later, a survey conducted by the Social Research Group of George Washington University (2) indicated that 26% of the surveyed population admitted to using tranquilizers. This represents almost four times the usage rate of the earlier survey.

Self-medication practices have increased considerably (3), resulting partly from the increased sophistication that people have about the substances that are available for purchase over the counter.

By far the most widely known drug related to traffic safety is alcohol. This problem dates back to antiquity where early Roman history relates a ban on drunken chariot drivers. This drug was the subject of previous studies in this UCLA series (4) sponsored by the U.S. Department of Transportation.

A frequently overlooked, yet important, factor is the synergistic effect of alcohol with many other drugs in which one potentiates the effect of the other, so that what might be a relatively safe amount of either alone, when combined in an unplanned way could result in adverse effects on driving as well as other behavior (5, 6, 7).

It is characteristic of other drugs, as distinguished from alcohol, that most of those with adverse effects produce these with relatively small doses. Furthermore, most are not easily or conveniently detected in the living subject, and many of them are slowly metabolized, resulting in long-term effects of relatively small doses.

While many types of drugs are possible offenders in creating impaired driving capability by themselves or in combination, this study will deal with a commonly used tranquilizer (Librium), a commonly used stimulant (Dexedrine), and a commonly used narcotic (marihuana). Of the first of these, Buttiglieri, Case <u>et al.</u>, in a textbook chapter (8), state:

"The series of benzodiazapine compounds is continuing to grow. The two best known derivatives are chlordiazepoxide (Librium) and diazepam (Valium). They both have mild sedative effects and are used mainly in treatment of anxiety. There is, in addition, a muscle relaxant effect, especially with Valium. There is considerable interest at present in their use for the treatment of alcoholism, especially in withdrawal symptoms and acute intoxication. Persons taking these medications must be concerned over possible drowsiness, fainting, and dizziness. There may be some special hazard in their effect on driving; but, as with so many of the drugs, this question requires further investigation (9).

The second drug (Dexedrine) is discussed as follows by these authors:

"Amphetamine and related compounds have become one of the most popular groups of self-administered drugs today. Amphetamine and dextroamphetamine (Benzedrine, Dexedrine) are potent central nervous system stimulants, the effect depending on the dose, the personality, and the current mental state. Usual effects are alertness,

wakefulness, elevated mood, improvement in simple task performance, and decreased sense of fatigue. These have been used illicitly for increasing the performance of athletes and race horses but whatever gain is achieved is only temporary and must be repaid out of the total economy of the organism. Prolonged use or large doses are followed very often by depression and fatigue. Amphetamine, methamphetamine, and similar compounds have been widely used as appetite suppressants and represent a serious health hazard. If used at all, they should be under strict medical supervision (10). These drugs are becoming an integral part of the drug culture of the younger generation of today where they are, among other terms, referred to as 'uppers' (11). Because of the widespread use, both acute and chronic intoxication is seen frequently. The effects commonly include restlessness, dizziness, tremor, hyperactive reflexes, overtalkativeness, irritability, and sleeplessness. Anxiety, confusion, panic, and even hallucinations may occur since psychotic reaction often of a paranoid type can develop with the large doses currently in use among individuals habituated to the drug (12)."

The last of the three (marihuana) is classed as an hallucinogen and is discussed by Buttiglieri, Case <u>et al.</u> in their chapter as follows:

"Marihuana is a mild hallucinogen which, however, is classified legally as a narcotic (13). We are in a rather peculiar position today of living in a society where the use of these drugs has become extremely widespread particularly in the youthful age groups, but where objective knowledge is meager and where research is severely limited by legal restrictions."

Marihuana is also known as Cannabis and is described as such by these authors:

"Cannabis is a very ancient drug obtained from the common hemp. In the Middle East and North Africa, the resinous extract is called 'hashish.' In India the material obtained from different parts of the plant are called 'bhang' and 'ganja.' In the United States the term marihuana is used for any part of the plant which is used to produce psychic change (14). The physiological effects are minimal in terms of effect on driving, although the subjective effect may vary from a dreamy reverie to various changes in perception, including that for time and space, to the extreme of vivid hallucinations. The response is very much determined by the personality of the user and the immediate situation; but there may be marked alterations of mood which may vary from extreme well-being and joyousness to hilarity and occasionally depression."

The driving and traffic safety implications of these responses seem obvious but just as with alcohol, even though effects seem important it has not been possible to clearly isolate and demonstrate them in a driving situation.

This is partly due to the oversimplified attempts that have been made to measure the driving task. Brake pedal reaction time is not greatly affected by the moderate doses we suspect are killing highway users. Steering ability also is not altered unless it is artifically increased in difficulty so as to place it far outside the range of driving task difficulty.

Driving judgment and multiple contingency assessment are much more difficult to assess and are the focus of this study, as it attempts to quantify those elusive qualities of highway driving and determine the effects of three drugs in comparison to and in combination with alcohol, the known killer.

3. BACKGROUND

3.1 <u>Alcohol</u>

The history of studies on alcohol and driving performance was described in an earlier report (15) of this total UCLA research program. A series of studies by Borkenstein (16) has clearly established that blood alcohol levels of 0.10% and 0.15% are associated with "an astonishing" 6- and 25-fold increase in morbidity, respectively. Zylman (17) has critically reviewed these studies and performed further analysis of the data.

Drivers with BAL's of 0.10% will not usually show any marked outward evidence of impaired driving capability. This was clearly revealed in initial research at UCLA ITTE where drivers were intoxicated and then had their performance measured in the UCLA Driving Simulator (18). It was not until a secondary visual task was added that the evidence of alcohol effects became clear. The underlying concept put forth by Moskowitz (15) is that driving is a task that requires a division of attention. In other words, the driver's single track mental system is used by the alert driver to sample the driving environment both outside and inside the vehicle and look for cues that will enable him to correctly predict and anticipate what lies ahead. Eye movement studies at Ohio State (19, 20) support this contention and also show marked changes under alcohol and fatigue.

The divided attention concept of why alcohol increases accident likelihood explains why simple reaction time may not be affected or may even be improved. The alcohol apparently serves to narrow the field of attention which can actually improve the ability to respond to a simple and expected change in the environment. The UCLA

work is showing that this holds true for auditory stimuli as well as for visual (21), which is evidence that the behavioral impairment takes place in the central nervous system and in particular reduces the driver's information handling capability. This concept helps to explain why visual acuity is not affected by BAL's of 0.10%.

When the driving task is considered in terms of the impairment in mental processing and environment sampling rate decrease caused by alcohol, it is readily understood how drunk drivers can fail to perform safely. They can fail by completely "not seeing" obstacles or other vehicles because their visual scanning rate is simply too slow. They can, and do, fluctuate speed greatly and erratically because their rate of speed monitoring is too slow to detect speed changes as efficiently as normal. Their steering performance may not vary greatly but it can demand nearly all of their limited attention whereas normally (sober) they need devote only a fraction of their attention to steering and have a great deal of attention available to devote to the detection and processing of other cues from the environment.

3.2 <u>Marihuana</u>

The evidence on the effects of smoking marihuana is being accumulated in a myriad of studies that are in various states of completion. A landmark study (22) by N.E. Zinberg and A.T. Weil at Boston University School of Medicine was so important to the public that an explanatory article was published 11 May 1969 in the New York Times Magazine (23) where the authors told of their approach to the study of marihuana effects. They set forth procedures and research policies that were aimed at the

ordinary or average user and administered the drug in the way that users take it, namely smoking in deep inhalations that are held for approximately 20 seconds, then exhaled. Their conclusions indicated that an 18-mg cigarette caused "a moderate increase in heart rate, but not enough to make subjects conscious of a rapid pulse, and it reddened whites of eyes. It had no effect on pupil size, blood sugar, or respiratory rate. Possibly the drug has a few other effects on the body... " They conclude that the lack of major physical effects points to "the uniqueness of hemp among psychoactive drugs" and makes it unlikely that marihuana has any serious detrimental effects in either short-term or long-term usage. A recently completed survey of world-wide reports led its author W.H. McGlothlin to similar conclusions.

The Weil <u>et al.</u> report also studies psychological reactions and concluded that "no one has shown any specific way in which a person, high on marihuana, is different from one who is not." They found no evidence of difference on an attention test (Continuous Performance Test) and a slight improvement on the Digit Symbol Substitution Test "even though they started out from good baseline scores." Apparently even the users themselves were surprised at how well they could perform when under the influence or "stoned."

Zinberg and Weil go on to state, "Apparently, getting high on marihuana is a much more subtle experience than getting high on alcohol... This hypothesis is consistent with the evidence that marihuana seems to affect little in the brain besides the highest center of thought, memory and perception. It has no general stimulating or depressive reaction on the nervous system (hence the absence of neurological as opposed to psychological changes during a high), no influence on lower centers like those controlling the mechanical aspects of speech and coordi-

nation (hence no slurred words or staggering gait). As a result it seems possible to ignore the effects of marihuana on consciousness, to adapt to them, and to control them to a significant degree... Users appear to be able to compensate 100 percent for the nonspecific adverse effects of ordinary doses of marihuana on ordinary psychological performance (including driving), according to the findings of a soon-to-be-published study..."

The study to which they refer was done by Crancer <u>et al.</u> (24) using a driver training simulator with special films of driving situations. Hulbert (one of the principal investigators of the present study) personally visited the Crancer study after it was completed. The findings of the important studies by Weil <u>et al.</u> and Crancer <u>et al.</u> are included in the research approach for the present study described in a later part of this report. Crancer compared the driving performance of 36 chronic marihuana users under three conditions:

a. No drug.

b. Marihuana smoked to a "normal social high" using 1.7 gm marihuana containing 1.3% THC.

c. Alcohol at a <u>predicted</u> blood level of 0.10% which is the legally recognized level of presumptive intoxication in many states.

Crancer did not store his marihuana in a refrigerated environment and may have thereby lost some potency in the drug. Driving performance was evaluated in a simulator with an observer placed behind the driver recording driver reactions on a checklist at pre-selected points in the movie. Speedometer, steering, braking, accelerator and signal errors were then totalled.

The <u>total scores</u> for subjects experiencing a normal social marihuana high did not differ significantly from their performance under control conditions. A sig-

nificant difference was found only in the number of speedometer errors. Since the speed of the movie is not under the subject's control, speedometer errors are related solely to the time spent monitoring the speedometer and in a previous study were not correlated with actual driving performance. In contrast these subjects, when intoxicated with alcohol, scored significantly greater errors in all categories when compared with their pre-drug scores. In addition, when retested, four chronic users showed no change in performance smoking three times as much marihuana.

Crancer's study suggests that persons can drive safely while high on marihuana. A closer look at Crancer's research, however, reveals that his equipment is relatively unsophisticated, and his subjects had no control over their simulated drive. Thus, for example, at a specific point in the movie, the car turned left whether or not the subject turned the steering wheel to the left. If he did not, a steering error was checked. Similarly, he had no control of the speed. Thus, the subject's illusion of actually driving the car was rapidly dispelled. In addition, although Crancer aimed for a blood alcohol level of 0.10%, careful calculation shows that the amount of alcohol given to each subject would have produced a blood alcohol level of 0.18% and a state of severe intoxication. In view of these deficiencies in equipment and experimental design, Crancer's findings, which imply that driving performance is not impaired by marihuana, must be considered suggestive rather than conclusive.

W.H. McGlothlin, in a recent report (25), states: "In summary, of the psycho-motor responses measured, those most strongly affected by Cannabis are ataxia and hand steadiness. With regard to other measures, the percentage impairment is largest for naive users, large

doses, and complex tasks.

Effect on Driving. The widespread use of marijuana has focused attention on its possible effects on driving skills. Survey results have indicated that marijuana users receive more traffic tickets than do nonusers (26, 27). Similar results have been derived from the traffic records of persons arrested for marijuana use, although the accident rate was not above average (28). Of course, these findings are simply correlates of marijuana use and do not indicate a causal relationship. The user's own assessment of the effect of marijuana intoxication on driving performance is apparently related to age-related involvement in the current marijuana controversy -- 17% of a sample of student and other young marijuana users felt their driving was impaired by the drug (29) in comparison to 72% of a sample who began using marijuana some 20 years ago (30).

"One study compared the effects of alcohol (1.2g/ kg body weight) and smoked marijuana (22 mg THC) on driving simulator performance (24). The alcohol dose significantly impaired simulator scores while the marijuana treatment produced minimal changes. Moskowitz <u>et al.</u> have examined the effect of marijuana on attentional aspects of driving, i.e., the ability to attend to peripheral cues while carrying out central tracking tasks (31). Smoked marijuana containing 15 mg THC significantly impaired this function in laboratory tests of both the visual and auditory modalities. The extent of decrement was approximately equivalent to that produced by a blood alcohol level of about 0.07%, i.e., the consumption of about 5 ounces of 80 proof liquor."

Recent unpublished results of Moskowitz's work at UCLA indicates that impairment due to marihuana is different in nature from that due to alcohol. Peripheral

attention and vision are affected differently and perhaps more seriously.

3.3 Divided Attention

3.3.1 The Hypothesis

Previous studies at UCLA (15, 18) have produced a rationale that considers driving as a divided-attention These studies have shown that divided-attention task. capability is reduced by alcohol both in an auditory task and in the simulated driving task. Studies done by others also indicate that it is the lack of ability to maintain simultaneously two aspects of driving that reveals performance decrement. For example, maintaining constant speed and steering simultaneously is affected by tranquilizing drugs. Kaluger (19) and Belt (20) at Ohio State also found similar results with alcohol and with fatigue. So there is some evidence that the dual aspects of driving are negatively affected by a variety of factors. Then the argument follows that if divided attention has been shown to be affected by alcohol, and alcohol has been shown to relate to increased likelihood of being involved in injury-producing accidents, then what needs to be established is some relationship between the UCLA laboratory tests of divided attention and those aspects of the driving task that might be causing accidents. This approach to the problem led to the creation of a subsidiary task in the Driving Simulation Laboratory.

3.3.2 <u>The Subsidiary Task</u>

The creation of this subsidiary task is thoroughly discussed in a recent ITTE report (18). It is described in the Procedure section (4.1.3) of this report, and therefore needs only be briefly mentioned here. The conclusions of that report are that while alcohol at the 0.10% level does not markedly affect <u>driving</u> scores in the Simulator, except to increase their variability (which is important), the addition of this subsidiary task did in fact as reported in (18) clearly show sensitivity to 0.10% BAL.

The subsidiary task as it was developed has two goals. First, it provides a task with a definite onset. In other words, the stimulus comes on at a very definite time: it is a light which comes on and to which the driver must react. This is in contrast to the more realistic traffic situations which occur in the motion picture driving scene, which do not have a very clear or definite beginning because they develop over time and space just as they do in actual driving. Therefore one goal of this subsidiary task is to produce a stimulus with a very clear and definite onset. Another goal of the subsidiary task is to produce a signal which, while it interrupts and becomes parallel to the driving, is not so strong a stimulus that it becomes a primary task. This is what the research work reported in (18) describes. Several subsidiary tasks and variations of subsidiary tasks were investigated before settling on this one.

3.3.3 <u>Task Loading</u>

The data that establish the fact that the secondary or subsidiary task is indeed a true secondary task have been developed in the following way. Since the onset of the secondary task is completely controllable, it was placed at certain locations along the 31-mile driving scene, at four different types of locations determined to have four different levels of task loading or task involvement.

Those sections of the 31 miles where there was no other traffic, and where the road was straight and level, constituted the lowest level of performance required from the driver. It left a maximum amount of what Broadbent and his fellow-researchers have called "spare mental capacity." It thus became the lowest of the four levels of task involvement.

The second level was chosen to represent those sections of the highway where there were curves or highway signs or intersections, or a straight level road with on-coming vehicles, but nothing very important happening to demand a high level of the driver's attention.

The next highest or third level of task loading involves combinations of other vehicles, roadway signs, curves, crossroads, intersections, with those factors occurring not alone but in combination. This represents a somewhat higher level of task loading, because there are several simultaneously occurring things for the driver to attend to.

The fourth or highest level were those situations wherein there were not only all of the factors involved in the third level, but some degree of threat or some unusual situation such as a car coming from a side road or some of the staged incidents that were created, such

as a large box tumbling off an approaching pickup truck or a swerving truck that looks as though it might be coming across the centerline of the road head-on at the driver.

Many experiences of the UCLA ITTE research staff with the 31 miles of driving scene in the Driving Simulator led to the preliminary selection of a number of roadway areas which were candidates for inclusion in the final selection of sections of roadway to be representative of each of the four levels of task involvement described above.

Three independent ratings of these candidate sections were made and compared. Only those sections of roadway on which there was complete agreement among the independent raters were included in the final selection.

Since these clearcut sections of types of traffic situations occurred at specific locations along the road, there was a need to insert additional occurrences of the subsidiary task. This was to provide a mixed assignment of the occurrence, in time, of the subsidiary task and therefore eliminate any way in which the drivers could begin to interpret or associate the occurrence of the subsidiary task with any particular type of roadway scene. In individual test sessions there was the usual mixing of films, i.e. of the order in which various sections of the roadway scene appeared; and some scenes appear in only one set of films. This is described more fully in Section 4. - Procedure.

3.4 Driving Simulation Laboratory

The ITTE Driving Simulation Laboratory (DSL) has been described in a previous report in this series (18), and was used in exactly the same way in the present study in order to permit comparisons among results of all studies in this series of drug studies.

4. PROCEDURE

4.1 Strategy and Approach

4.1.1 Strategy

The research strategy of this study was to determine the effect of the selected drugs on the driving task by using alcohol as a "comparison" drug. This strategy was chosen in light of the fact that other than alcohol, the drugs selected for the experiment do not have a history of field study data. Therefore, the experiment was designed to use the already well established research as well as field evidence relating alcohol to traffic accident involvement. The effects of the "no-data" drugs were compared to the effects of alcohol generated under the same experimental conditions. Then, by using the known relationship of alcohol to traffic accidents, the relationships of the other drugs to accident involvement could be determined.

4.1.2 Approach

Following the logic of the research strategy, the research approach developed for this project had three major facets. The first facet was related to the primary overall goal of the project, which was to establish whatever relationship possible between the various drugs chosen and the driving task. This overall approach then was to relate experimental alcohol-induced human performance decrement data to existing highway traffic field data which showed increased blood alcohol level associated with increased potential for involvement in injury-producing traffic accidents.

The next facet in the approach was to cope with the fact that as stated earlier there is no traffic accident data on the other drugs of interest (Librium, Dexedrine, marihuana) which can relate them directly to accident involvement. Therefore, it was planned to determine whether or not there were measurable effects of these drugs in the divided-attention laboratory, and then to see if those effects were also revealed in reaction-time scores on the subsidiary task in the Driving Simulation Laboratory. To the extent that these effects were similar to alcohol it would be possible to infer that there was also an effect similar to that of alcohol in the actual driving situation.

In addition to using alcohol as a comparison drug in the manner described above, the third facet of the approach endeavored to obtain data on the combination effect of these various drugs with alcohol. This is an additional and somewhat separate evaluation. The reason for this additional effort is that it is clear from field surveys that it is needed.

4.1.3 <u>Subsidiary Task</u>

All drivers were tested on this task which consists of the rapid discrimination of one of four light conditions. There are two small light boxes, with two colored bulbs in each box (amber and green). The two boxes are mounted above the driver's head near the junction of the roof line and the front window of the DSL vehicle. They are separated from each other by 12 inches, and are spaced equally on each side of the subject's line of sight. They are within and close to the edges of his peripheral vision.

On each side of the steering column is a response

lever. Each lever can be pushed upward or pulled downward. The two levers, each with two positions, make possible four distinct responses by means of which the subject can turn off any one of the four lights. The task is as follows: at 77 points during each drive, one of the four lights goes on, and remains on until either turned off by the subject through appropriate lever actuation, or until 10 seconds has passed without the driver moving the appropriate lever, at which point the light automatically goes out.

The points along the drive at which the lights are actuated are the same for all subjects, independent of differences in their behavior in handling the car, such as differing speeds. This is accomplished by placing a photoelectric cell in the film gate of the projector. The photo cell sends an impulse to a paper tape drive which advances for each film frame and the paper tape drive, in turn, controls the four lights. An electric counter and printer are used to record the points at which the lights go on. In essence, the system moves in synchrony with the film projector and controls the stimulus presentation. Two equivalent test films were created in this fashion.

Prior to running subjects in the Simulator, three independent observers rated the 77 points, at which one of the four lights went on, for each of the films, as to their introspective view of the attentional demands of the driving task. Their observations were averaged, and placed on a four-point scale, ranging from very little attentional demand, 1 to a very great attentional demand, 4.

4.1.4 Driving Simulation Laboratory

After a 10-minute training period with the subsidiary task, all subjects were instructed in the proper operation of the driving simulator. As described in an earlier report (18), the Driving Simulation Laboratory is comprised of an actual automobile placed in front of an extremely wide-angle motion picture projection screen, curved to fill approximately 160° of the forward visual angle of the subject's field of view. A rear screen shows a matching scene that is viewed in the rear view mirror. The rear wheels of the vehicle rest upon the rollers of a chassis dynomometer and are free to rotate. The subject is instructed in the operation of the vehicle controls, and then is told to start the car and drive at his own desired rate within a range of 20 to 70 miles per hour. His apparent driving speed, which is related to the speed of the projectors, is thus determined by the driver as he controls the speed of the engine of the car. A single 35-mm, 160-degree projector creates the front scene and a synchronized 16-mm projector shows the rearward The front wheels are free to turn and these descene. termine the azimuth rotation movement of the front projection system, so that within a small range (three feet of lateral movement) a realistic simulation of the results of turning the steering wheel is obtained. The significant point is that the subject sits in a standard automobile and faces a scene that gives him the illusion that the vehicle is responding to his manipulation of its controls, thus creating overall an unusually realistic simulation of the driving situation.

All the while he is "driving," of course, the subject's performance is being closely monitored, and continuous records of his physical actions and physiologi-

cal condition are being generated for subsequent analysis. These measured items are described in detail in the Results section, 5.

4.1.5 DSL Training Run

After the subject had learned the subsidiary task and had been instructed in operating the simulator vehicle, he received a 20-minute training session in which he "drove" the vehicle along a winding, two-lane mountain road while at the same time responding to the lights in the subsidiary task. This drive served to eliminate those subjects with unusual susceptibility to motion sickness as well as to familiarize them further with the DSL vehicle. Accepted subjects were then programmed for four test sessions, spaced one week apart, at the same time of day and same day of the week in order to control for any factors correlated with diurnal or weekly cycles.

Following completion of the DSL training run, the Librium and Dexedrine subjects were taken into another testing area which contained a soundproof booth (SPB).

4.1.6 Soundproof Booth

The apparatus was designed to measure the subject's information-processing capacity in both a divided-attention and concentrated-attention or vigilance situation utilizing auditory stimuli. The subject was seated in a comfortably upholstered chair located in a large sound-isolation chamber. A pair of high fidelity earphones were placed over the subject's ears. Each earphone was connected separately to one channel of a two-channel audio tape recorder. The

23

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tape recorder and the experimenters were in another room, and communication with the subject was by intercom.

All instructions and the attention tasks were pre-recorded on tape. On one channel of the tape was a series of bursts of random noise three seconds in duration and separated by seven-second intertrial silent intervals. Half of the noise bursts were chosen at random to contain a 1000-cycle/second tone of one-second duration recorded at an amplitude of 15 Db below the level of the noise burst. The position of the one-second tone within the three-second noise burst was randomly chosen. To prevent clicks, both the noise bursts and the tones were started and stopped gradually, using 50-millisecond envelopes of changing amplitudes.

On the second channel, a series of lists of six randomly-chosen digits was recorded. The six numbers occurred at a rate of one every half-second. Between each list was an intertrial interval of seven seconds. The three seconds required for each list began simultaneously with the three-second noise burst on the first channel.

During the experiment, channel one containing the noise burst and occasionally the tone was presented to the left ear, and the second channel containing the numbers was presented to the right ear.

Several tapes were prepared for the training and experimental sessions. Each tape contained two sets of 20 trials for practice purposes and two sets of 50 trials for the test conditions, for a total of 140 trials on each tape. Each tape began with instructions regarding the vigilance or concentrated-attention task. This task was to report verbally the absence or presence of the tone in each noise burst while ignoring the presence of the numbers. The instructions were followed by 20 practice
trials, with the correct response recorded on the tape after a delay for the subject's report. Then 50 test trials of the vigilance task were presented, with no information feedback on performance. The tape then continued with instructions for the divided-attention task. This task was first to repeat back the six numbers in correct order and then to report the presence or absence of a tone in the noise burst. Again 20 practice trials were presented, with feedback of results, followed by 50 test trials without feedback.

The physical stimuli were the same on all trials on both tasks -- six digits in one ear and a noise burst with occasionally a tone in the other. The only difference between tasks was the specification regarding what the subject had to report about these stimuli.

Following completion of the SPB training session, the subject was excused and reminded of his appointment the following week for the first of his four test sessions.

4.2 <u>General Experimental Procedure</u>

The procedures followed in conducting the three sub-experiments (Librium/alcohol, Dexedrine/alcohol and marihuana/alcohol) had much in common. However, there were enough procedural differences of significance to warrant separate discussion of each. A common element of all three experiments was the use of the UCLA Driving Simulator to generate driving performance scores. However, the soundproof chamber was used only for the Librium and Dexedrine. The subjects were recruited through advertisements and were paid for their services.

Balanced Latin square designs were used for all three drugs in order to counterbalance order effects due

to repeated runs on the Driving Simulator and in the soundproof booth. Appropriate analyses of variance statistical tests were performed to evaluate significance of subsidiary task and soundproof booth data. For the vehicle control scores, t-tests and analyses of variance were performed. Finally, all subjects were initially subjected to a screening procedure to eliminate those who would not be appropriate candidates for the study. Details of these procedures for each drug are given in the following sections.

Eight drivers were included in the Librium study to complete two replications of the 4x4 Latin square design:

	. Run 1	Run 2	Run 3	Run 4
Alcohol				
Placebo				
Librium				
Librium and Alcohol				

Sixteen drivers included in the Dexedrine study completed four replications of the 4x4 Latin square:

	Run 1	Run 2	Run 3	Run 4
Alcohol				
Placebo and Dexedrine				
Dexedrine and Alcohol				

Twelve drivers were included in the marihuana study to complete three replications of the 4x4 Latin

square:

	Run l	Run 2	Run 3	Run 4
Smoked marihua- na and liquid placebo				
Smoked placebo and liquid mari- huana				
Smoked placebo and alcohol				
Smoked placebo and liquid placebo				

Later a supplemental test session was conducted using some of the marihuana subjects who were given both smoked marihuana and liquid marihuana.

4.3 Librium and Alcohol

4.3.1 Subject Procurement

Notices were placed on bulletin boards in UCLA campus buildings asking for volunteer subjects to participate in a research study. The notices stated that only males, 21 and over, with valid California driver's licenses, need apply, and that subjects would be paid \$50.00 for completing the study.

When potential subjects called in response to the notice, they were asked the following questions regarding their medical history:

a. Do you have high blood pressure?

b. Do you have pressure in your eyes?

- c. Do you have a thyroid condition?
- d. Have you ever had glaucoma?
- e. Are you allergic to any drugs?
- f. Do you have diabetes?

A "yes" answer to any of these questions disqualified the applicant. Of the 32 applicants responding to the ad, 19 qualified for the study. They were told that the study necessitated taking a mild tranquilizer, and that alcohol would be consumed during the course of the study. They were also told that the entire series of tests would take from 20 to 25 hours.

Of the 19 qualified applicants, 10 subjects were subsequently dropped: two were excused because they did not want to take drugs; one quit after the first week because he felt he was being "slowed down" too much by the drug (he was on placebo); two quit due to nausea with emesis on their first alcohol run; two were excused due to motion sickness; one was dropped due to lack of cooperation; one failed to return to complete the experiment; and one was dropped from the analysis because he had been re-run too many times.

Thus, a total of nine subjects completed the full experiment; all were students, with an age range of 21 to 28 years and a mean age of 23.1 years.

4.3.2 <u>Subject Preparation</u>

Each subject was involved in the experiment for five weeks. Each week the subject was given a week's supply of tablets (either 10-mg Librium capsules or an identical-appearing placebo). These were in a bottle labelled with the subject's name and instructions to

take one tablet three times daily (morning, noon and afternoon). The label also requested that the subject return the bottle to the experiment office. Each week when the subject returned he was given a bottle of tablets for the following week. As a check, on several occasions, subjects were given an extra tablet intentionally; in all cases, the extra tablet was called to the attention of the experimenter by the subject at the end of the week.

The subject was scheduled for testing at the same time and same day of the week for five consecutive weeks. At the time of his first session, which was a training run, the subject was asked to sign an "Experimental Participant Release" similar to that shown in Appendix A.

4.3.3 <u>Test Session Procedure</u>

For each of the four test sessions, the subjects were instructed not to eat for four hours, and not to consume alcoholic beverages for 12 hours, prior to coming in. Each subject, of course, had been taking his pills (either placebo or Librium) regularly for the week preceding each test session. The prohibitions on food and beverage intake were to insure rapid absorption of the alcohol and to help obtain more uniform absorption rates among the subjects. Compliance was noted on a Treatment Data Sheet as shown in Appendix C.

There were four experimental conditions:

- a. Placebo/no alcohol
- b. Placebo/alcohol
- c. Librium/no alcohol
- d. Librium/alcohol

All subjects were exposed to all four of these conditions, with the order in which they were given randomly assigned to each subject.

Alcohol dosage was 1 oz. of 80-proof Vodka per 25 lb. of body weight, equivalent to 0.828 gm of alcohol per kg of body weight. For an alcohol session, the subject received an appropriate amount of alcohol mixed in an equal amount of pure orange juice, with one ice cube. For a no-alcohol session, the subject received orange juice to equal the total volume of liquid in the alcohol drink, plus one ice cube.

All drinks were administered in the "Treatment Room," a pleasantly-appointed waiting room adjacent to the DSL. The drinks were given 50 minutes prior to testing in the DSL: the subject was given 20 minutes to finish his drink, then remained in the Treatment Room for 30 minutes, reading and/or listening to music. Following this, the subject's blood alcohol level (BAL) was measured using a Breathalyzer, the respiration belt was attached to his chest, and he was immediately brought into the DSL for the test run, except in the case of one subject, who was taken to the SPB first, then to the DSL following the booster drink described in the following paragraph. A registered nurse was in attendance at all times to administer the treatment and to make the physiological measurements.

In the DSL, the subject drove for 40 minutes to one hour, depending on his choice of speed, viewing a composite film of mountain, freeway and city street driving randomly selected from one of the two equivalent films. The subject was then taken back to the Treatment Room for another BAL measurement, and then a "booster" of 1 oz. of 80-proof Vodka mixed with 1 oz. of orange juice (if he was in an alcohol session) or 2 oz. of orange juice (if he was in a no-alcohol session). In the event the subject was experiencing nausea, the booster was not given.

The subject was then taken to the room housing the soundproof booth (SPB), where he completed the tests described earlier, using a set of taped stimuli that were different from those he had experienced in the training session.

Following completion of testing in the SPB, each subject was taken back to the Treatment Room, where another BAL measurement was taken. The subject was then given food to eat (sandwiches and drinks of his choice). Following this, he was released if he had had a no-alcohol session, or kept in the Treatment Room until his BAL decreased to 0.03% if he had had an alcohol session, and then released. He was paid his \$50.00 at the completion of his last test session.

4.4 Dexedrine and Alcohol

4.4.1 Subject Procurement

An advertisement was placed in the UCLA Placement Center for male students to participate in a driving simulation experiment for \$2.50/hour. When applicants called, they were informed that subjects had to be 21 years of age or older, with valid driver's license for any state. Also, if they had ever been in the DSL before, they were disqualified. Applicants were further informed that they would be required to take a one-hour interview, and that the total time involved in the experiment would be approximately 20 to 25 hours. Following this, they were scheduled for an interview.

At the appointed time, the applicant was given a personal interview for about 10 minutes to explore the

applicant's medical history, experience with drugs, alcohol and so on. The interview questions are given in Appendix B. At the time of the interview, the subject was told that he would have to be available for 4 to 5 hours on one day a week for 5 weeks, and that he would be paid at the end of the 5 weeks. A General Information Sheet (Appendix C) was also filled out for the subject.

Following the interview, the subject was administered an MMPI in order to weed out those individuals with character disorders. Upon completion of the MMPI, the subject was told he would be contacted in a few days, and then excused.

The MMPI results were scored, profiled and interpreted. According to the pattern of their responses, applicants were placed into three categories: "Good," "Questionable," and "Do Not Use." The interview forms for the applicants with "Good" MMPI's were then evaluated, and if a subject had some experience with alcohol and was not a drug abuser he was called and scheduled for a training run.

Forty-two student applicants were interviewed; of these, 15 subjects qualified for the study and were trained. Of these, 10 completed the study. The other five were lost due to nausea or failure to return.

An additional group of subjects was obtained with the cooperation of the Long Beach, California, Naval Hospital, which made available Navy corpsmen for the study. Ten corpsmen were trained, six of whom completed the study. The other four were lost due to nausea or inability to meet the schedule. All were males, over 21, and licensed drivers. No interview or MMPI was administered to the corpsmen.

Thus a total of 16 subjects completed the Dexedrine/alcohol experiment.

4.4.2 Training Session

At the time of the first scheduled session following the interview session, the subject read and signed a consent and release form (Appendix A). Then he was weighed and his blood pressure taken. If his diastolic pressure was over 85, he was disqualified. All this was done in the Treatment Room.

The subject then was fitted with the respiration belt, entered the DSL and was given a 10-minute training session on the subsidiary task, followed by a 20-minute training in operating the DSL vehicle.

If the subject had no adverse reaction to the DSL, he was taken to the soundproof booth and given a 40-minute training session there. Following this, the subject returned to the Treatment Room and was scheduled for his four experimental sessions. He was told, as in the Librium/alcohol experiment, not to eat anything for four hours nor drink any alcoholic beverages for 12 hours prior to his next session. He was also told he could not smoke during the experimental sessions. He selected the food he wished to have ready for him after the experimental sessions from a list of sandwiches. Finally, he was told he would have to remain in the Treatment Room following the experimental sessions until his BAL returned to 0.03%.

4.4.3 Test Session Procedure

When the subject arrived at the Treatment Room for an experimental session, he was allowed to rest for 10 minutes. During this time he completed a Short Drug Effects Questionnaire (SDEQ), to provide information on

his personal reactions to the use of drugs. This SDEQ is shown in Appendix D.

Next, the subject's blood pressure (both arms) and pulse rate were measured and recorded, as well as his BAL. He was then given a drink: the contents of the drink depended on which of the four experimental conditions was in effect for that session:

- a. Placebo/no alcohol
- b. Placebo/alcohol
- c. Dexedrine/no alcohol
- d. Dexedrine/alcohol

If the session called for alcohol, the drink contained (as in the Librium/alcohol experiment) 1 oz. of 80-proof Vodka for every 25 lb. of body weight, mixed with an equal amount of orange juice. For a placebo session, the drink consisted of orange juice in an amount equal in volume to the alcohol drink.

The subject was told he had no more than 30 minutes to finish the drink, and the time of finishing was recorded. The subject was then given his drug (or placebo). The drug was three 5-mg tablets of amphetamine (Dexedrine), while the placebo was three tablets of identical appearance. A double-blind procedure was followed -- the drugs were prepared ahead of time by non-experimental personnel, placed in an envelope and marked with the subject's number and test session number. These drug treatments were prepared using a Latin square statistical design.

Thirty minutes after he took the drug, the subject's blood pressure, pulse and BAL were again taken and recorded, the respiration belt was attached, and he went immediately to either the DSL or SPB for testing -- some subjects went to the DSL first and then the SPB, others followed the reverse order. The DSL and SPB test sessions followed the same procedures as in the Librium/alcohol experiment. Following the DSL or SPB session, the subject returned to the Treatment Room where a BAL measurement was made immediately, followed by blood pressure and pulse measurements.

The subject then was given an alcohol or placebo "booster" drink. Fifteen minutes after the booster, BAL, pulse and blood pressure measurements were again made, and the subject was taken to the SPB (or DSL) for the second part of the test session. Following this, the subject returned to the Treatment Room and again was given a Breathalyzer test followed by blood pressure and pulse measurements. A registered nurse administered these tests to all subjects in all experiments.

The subject was then given a Long Drug Effects Questionnaire (LDEQ) to complete and was allowed to eat. The LDEQ is shown in Appendix E. If the subject was in a placebo/no alcohol session, he was also given a confidential questionnaire to fill out, to obtain biographical background information that would be of use in interpreting his performance. This confidential questionnaire is shown in Appendix F. Finally, if the subject was not in an alcohol session, he was allowed to leave following completion of the confidential questionnaire and answering the questions listed below. If he was in an alcohol session, his BAL was checked every hour until it returned to 0.03%. Before leaving, each subject was asked the following questions, and his answers were recorded on the MAD Treatment Data Sheet as shown in Appendix C.

a. How many hours since you last consumed solid foods?

b. How many hours since you last consumed beverages?

c. During the past week have you consumed al-

coholic beverages? If yes, how many ounces?

d. During the past week have you taken any drugs, prescription or otherwise? If yes, what and how much?

The subject was then allowed to select his sandwiches for the next session. The four test sessions were scheduled at one week intervals (same time and same day of week, if possible). If a subject had to repeat a run due to equipment malfunction, he was rescheduled one week later, and the treatment was repeated.

4.5 <u>Marihuana and Alcohol</u>

4.5.1 Subject Procurement

Subjects were all UCLA students, obtained in similar fashion to that used in the previously described Dexedrine/alcohol experiment. All were males over 21 with valid driver's licenses. They were chosen on the basis of their MMPI profiles and personal interview data (Appendix B). Selection criteria included a "good" or "reasonably good" MMPI profile, plus a drug history of having used hallucinogenics no more than three times in the past year but a familiarity with marihuana usage (10 times minimum), plus good physical health.

When subjects were scheduled for their initial training session, they were told that there would be a minimum of four test sessions following the training session, that they would be required to stay for a minimum of four hours for each session, and that they would be paid \$2.50/hour for their participation in the study plus \$2.50 for the interview. Payment would be made only at the completion of the full series of sessions. Appli-

cants who failed to meet all criteria were given \$2.50 for participating in the interview and excused.

4.5.2 Training Session

When the subject appeared for his training session he was taken to the Treatment Room where he read and signed a consent and release form (Appendix A). At the same time, a General Information Sheet (Appendix C) was filled out for the subject. The subject was weighed, in order to compute the alcohol dosage and marihuana extract dosage. The procedure of the treatments was explained to the subject, i.e., that he would receive a drink followed by either 1 or 2 cigarettes, that he would then drive in the DSL, and that afterwards he would have to remain in the Treatment Room until he was "down." "Down" was to be interpreted as occurring no sooner than four hours after arrival plus whatever time was required for the subject's BAL to return to 0.03% and his pulse to return to within 15 beats per minute of what it had been prior to his treatment. The subject was told that his breath and pulse samples would be taken at various times during his stay and that there would be questionnaires to be filled out both before and after his drive.

The subject was then taken to the DSL for the training session on the subsidiary task and simulator vehicle. He was returned to the Treatment Room, scheduled for his next four (experimental) sessions, told about the eating and drinking prohibitions prior to coming in again, and given the list of sandwiches to select from.

4.5.3 <u>Test Session Procedure</u>

There were four different treatments. In each treatment the subject was required to both drink and smoke, but since the protocol differed for each treatment, the treatment times varied accordingly. The treatments were as follows:

Treatment	Smoke	Drink
1	Marihuana (dosage: 200 micrograms Delta-9THC per kg body weight)	Placebo
2	Placebo (post-extracted marihuana	Marihuana extract (dosage: 310 micro- grams Delta-9THC per kg body weight)
3	Placebo (post-extracted marihuana	Alcohol (0.69 gm per kg body weight)
4	Placebo (post-extracted marihuana	Placebo

The dosage levels were achieved in the following ways:

Alcohol drink: 1 oz. of 80-proof Vodka for each 30 lb of body weight, mixed with an equal amount of Mai-Tai mix, plus a placebo marihuana extract in the proportion of 1 cc per 80 lb of body weight.

Placebo drink: Same as above, except alcohol replaced by an equal amount of Mai-Tai mix.

Marihuana extract drink: Same as the placebo drink, except that placebo marihuana extract was replaced with an equal amount of active marihuana extract (1 cc/80 lb body weight, necessary to administer a dose of 310 micrograms per kg body weight, based on a 1.13% Delta-9THC assay for the liquid marihuana extract).

Marihuana smoke: Two hand-rolled, standard length

cigarettes, each containing approximately ½ gram of smoked marihuana material, necessary to administer a dose of 200 micrograms/kg body weight, based on a 1.5% Delta-9THC assay for the smoked marihuana material.

Placebo smoke: One or two hand-rolled, standard length cigarettes, each containing approximately $\frac{1}{2}$ gram of detoxified smoked marihuana material.

The treatments, as well as the films the subject would be viewing in the DSL, were randomized according to a Latin square statistical design. Three Latin squares were to be completed for the study.

When the subject arrived for a test session, he was allowed to rest for 10 minutes, during which time he filled out the SDEQ, and then his pulse was recorded as a baseline measure. He was then given his drink, and told that he had a maximum of 30 minutes in which to finish it. The time of beginning and of completion of the drink was recorded. A registered nurse was present at all times.

Immediately upon completion of the drink, the subject began his smoke. For his placebo session, the subject smoked two placebo cigarettes, and for his smoke session two marihuana cigarettes. For both the marihuana extract and alcohol sessions, he smoked one placebo cigarette. In each case, the time of the beginning and completion of the smoke was recorded. The subject could not differentiate between the marihuana and placebo cigarettes on the basis of appearance or feel. In every case, the subject was given a maximum of 10 minutes to smoke a cigarette (20 minutes maximum if his treatment called for smoking two cigarettes). All cigarettes were smoked to completion; they were placed in a special holder that permitted total reduction to ash. The smoking procedure for all cigarettes was identical, and was as follows:

a. 3-second "drag"

b. 20-second "hold"

c. 15-second exhalation and relaxation period

d. 3-second "drag," etc.

Immediately upon completion of the smoke, the subject's pulse and BAL were recorded -- except in the extract sessions, in which the smoke was followed by a 50 minute rest period to allow for ingestion of the extract. Subjects were allowed a small amount to eat during this time, if they so desired.

The respiration belt was then fitted on the subject and he was escorted to the DSL. The start time of his entry into the DSL was recorded on the MAD Treatment Data Sheet, see Appendix C. After the subject's drive, he was returned to the Treatment Room and the time of his return was recorded.

Immediately upon his return to the Treatment Room, pulse and BAL were once again measured and recorded and the subject was given the LDEQ to complete. Thereafter, the subject was fed and required to remain to the completion of the four hours plus whatever time was required for his pulse and BAL to return to the levels previously stated as prerequisites for his release. If the subject was in a placebo condition, he was given the previously-mentioned confidential questionnaire to fill out.

Before the subject was dismissed, he was asked the number of hours since he had last consumed solids; the number of hours since he had last consumed beverages; if during the week he had consumed any alcoholic beverages, and if so, how much; if during the past week the subject had taken any drugs, and if so, what and how much. This information was recorded on the data sheet. The subject was then allowed to select sandwiches for the next session.

Subjects were scheduled for test sessions one week apart. If a subject had to repeat a session due to equipment malfunction, he was rescheduled one week later and the treatment was repeated.

A record book was maintained containing the following items for each subject for each session:

- a. Date of session
- b. Treatment
- c. Film viewed
- d. Status of session (good or lost)
- e. Time of arrival
- f. Time of departure
- g. Total time
- h. Observations, notes and comments
- i. Contents of drink
- j. Weight of subject

4.6 Supplemental Experiment

After the experiment had been underway for some time, it was decided (with the concurrence of DOT) to add a fifth treatment condition, a combination of alcohol and marihuana extract. The treatment protocol for this marihuana/alcohol experiment was to be the same as for the marihuana extract runs. Three different dosage levels were to be used for this (fifth) test session, as follows:

a. 1/3 the original alcohol dosage + 2/3 the original marihuana extract dosage.

b. 1/2 the original alcohol dosage + 1/2 the original marihuana extract dosage.

c. 2/3 the original alcohol dosage + 1/3 the original marihuana extract dosage.

The three different levels were based on the dosage levels for the subjects as determined for the other experimental sessions.

Since three Latin Squares were to be completed for the four-session marihuana study, one Latin Square could be attempted with each of these various treatment levels.

Attempts were made to contact the 14 subjects who were already completed or in the process of being completed, to persuade them to come in or remain with the study for the additional test. Of these, ll were contacted and agreed to do so; 4 were given dosage level a., 3 were given dosage level b., and 4 were given level c.

5. RESULTS

5.1 Soundproof Booth

The soundproof booth (auditory task) was used on the Librium and Dexedrine studies. It was not used on the Marihuana study, and due to equipment malfunctions, only the Librium data could be analyzed. Tables 31-34 show the results of alcohol, Librium, and alcohol with Librium on both "concentrated attention" and "divided attention" scores. Table 31 shows some alcohol effect on concentrated attention in terms of a decrease in percent correct scores from a mean of 83.75 to 76.50. Combined Librium and alcohol mean is 77.75 but Librium alone is 81.50, almost identical to the placebo score. Divided attention scores show the expected overall decrease compared to concentrated attention scores. The same pattern of alcohol effect and combined Libriumalcohol effect is shown as for concentrated attention scores; however, Tables 32 and 33 reveal that these effects are significant only at the 0.25 level of confidence on the concentrated attention task while the effects on the divided attention task are significant at the 0.05 level. Apparently these effects are largely due to alcohol. The Librium data show little evidence of effect on percent correct scores although the differences are in the same direction as for the effects of alcohol, namely a decrease compared with placebo data.

5.2 <u>Vehicle Control</u>

Vehicle control scores are shown in Appendix G. They do not reveal any marked effects either on the "drive" scores or on the "event" scores for any of the drugs under study.

5.3 Subsidiary Task

5.3.1 Scoring

This score is presented in terms of driver response times as tallied in three different ways:

a. "All Responses Including Omissions" is a gross accumulation of response times including those when the driver initially made an incorrect response or made no response at all, in which case a time of 9.9 seconds was recorded for that event.

b. "All Responses Excluding Omissions" does not include any event score when the driver failed to respond and therefore is more indicative of reaction time when the stimulus is detected.

c. "All Initially Correct Responses" does not include those events to which an incorrect response (error) was made. This is closer to "pure" reaction time.

The subsidiary task data were analyzed using Biomedical Computer Programs BMDX63 and BMD05V. These routines (32, 33) perform general linear hypothesis and multivariate general linear hypothesis analyses of variance. The following tables are labeled with the appropriate program used. Details of these programs, including the algorithm used, are given in Appendix H.

Tables 1, 8, 13 show the purely alcohol effect for each of the three groups that were studied. Increases up to 16.5% in response time are shown as compared with the placebo times.

Tables 2, 3, 9, 15 show that there are increases in response time when drivers are given only marihuana or Librium, and a decrease when given only Dexedrine. The

analyses of variance in Tables 2, 3, 9, and 15 show that the purely marihuana effects are significant at the 0.25 level or better, the purely Librium effect at the 0.05 level, and the purely Dexedrine effect at the 0.05 level. These effects are clearer when the order effect of drug administration (prior treatment) is considered as a base line.

Tables 7 and 9 show that for the combination of Librium and alcohol there is an increase in response time compared with that for Librium alone. For the combination of Dexedrine with alcohol, as shown in Tables 14 and 15, there is a decrease in response time compared to that for alcohol alone and little difference from the placebo condition. The confounding which is present by virtue of the experimental design, reveals little or no treatment effect over the order effect on the combination of marihuana and alcohol as shown in Tables 28, 29, and 30.

5.3.2 <u>Task Loading</u>

The subsidiary task results are presented in terms of four levels of task loading in Tables 4-6, 10-12, 16-18. The placebo (P-P) rows of data in these tables show that all three groups of drivers while on placebos displayed a general increase in response time as the task load increased. This effect is significant at the 0.05 level of significance.

The tables also show that, for each drug in turn, the drug effects are produced across the four levels of task loading and in some instances appear to have more effect at the higher levels of task loading and to disrupt the orderly progression of reaction time increase from low to

high task load levels. This disruption is particularly clear when comparing Dexedrine effects mixed with alcohol effects. Apparently response time is returned to near placebo levels, but the orderly progression is disrupted.

Due to the unavoidable confounding of the order effect with the drug treatment effect, no task-loading analysis was performed on the marihuana in combination with the alcohol data.

SUBSIDIARY	TASK	REACTION	TIME,	MARIHUANA	STUDY, SMOKE	ALCOHOL	DRINK	GIVEN	WITH	PLACEBO	
					51101.2						

Table l

RESPONSE	REACTION	N TIME (SECONDS)	PERCENT	DEGREE	S OF		LEVEL
	PLACEBO DRINK AND SMOKE	ALCOHOL DRINK WITH PLACEBO SMOKE	CIMICH	NUME- RATOR	DENOM- INATOR	Ť	SIGNI- FICANCE
All responses including omissions	1.2796	1.2933	1.07	1	8	1.797	.25
All responses excluding omissions	1.2157	1.2445	2.37	1	8	1.023	_
All initially correct responses	1.1825	1.2087	2.22	1	8	1.317	-
Number of omissions	4	3		<u></u>	Lynn yw y bar tan yw an yn ar yn arbert y argel	· ·	

Ti	ab	le	2	2
		_		

SUBSIDIARY TASK REACTION TIME, MARIHUANA STUDY, PLACEBO DRINK GIVEN WITH MARIHUANA SMOKE

RESPONSE CATEGORIES	REACTION	N TIME (SECONDS)	PERCENT CHANGE	F	LEVEL OF		
	PLACEBO DRINK AND SMOKE	PLACEBO DRINK WITH MARIHUANA SMOKE		NUME- RATOR	DENOM- INATOR	- - - -	SIGNI- FICANCE
All responses including omissions	1.2796	1.2975	1.40	1	8	1.853	.25
All responses excluding omissions	1.2157	1.2658	4.12	1	8	2.149	•25
All initially correct responses	1.1825	1.2312	4.12	1	8	1.870	•25
Number of omissions	4	2		· · ·	<u> </u>	<u></u>	.

RESPONSE CATEGORIES	REACTION	N TIME (SECONDS)	PERCENT CHANGE	DEGREE	S OF M	F	LEVEL OF	
	PLACEBO DRINK AND SMOKE	MARIHUANA EX- TRACT DRINK WITH PLACEBO SMOKE		NUME- RATOR	DENOM- INATOR		SIGNI- FICANCE	
All responses including omissions	1.2796	1.3028	1.81	1	8	2.179	.25	
All responses excluding omissions	1.2157	1.2870	5.86	1	8.	3.608	.10	
All initially correct responses	1.1825	1.2397	4.84	1	8	3.787	.10	
Number of omissions	4	1		I	.			

SUBSIDIARY TASK REACTION TIME, MARIHUANA STUDY, MARIHUANA EXTRACT DRINK GIVEN WITH PLACEBO SMOKE

Table 3

Table 4

SUBSIDIARY TASK BMDX63 STATISTICS, MARIHUANA STUDY, ALL RESPONSES INCLUDING OMISSIONS

Source of Degrees of Freedom									E Level of											
Variati	on			N	Numerator Denominator									F.		Ś	iqn	ific	ance	
Order					3				8	· · · · · · · · · · · · · · · · · · ·	Τ	0.436						_		
Treatme	nts	:			3	6						0.621 -								
Load					3			<u></u>	6				5	•933 •05						
Task Lo	Load 1															4				
Level	evel: (Low) 2									3					(Hic	ah)				
Treat-	D	F	F		Sig.	D	F	F		Sig.	D	F	F		Sig.	D	F	F	d	Sig.
				+		-14	<u>_</u>				11	<u></u>				-11	<u>u</u>			
A-P/P-P	1	8	0.17	7.0	-	1	8	0.67	75	-	1	8	3.14	12	•25·	1	8	1.62	27	.25
P-S/P-P	1	8	0.99	91	-	1	8	1.35	59	-	1	8	1.89	94	.25	1	8	3.26	56	.25
E-P/P-P	1	8	1.60	04	.25	1	8	1.84	11	-	1	8 0.518 -					8	1.67	78	.25
* Alcoho	ວ່	drin	k gi	ven	with	pla	cel	oo sm	oke	, plac	ebo	o dr	ink o	giv	en wit	h m	ari	huan	a si	noke,
and ma	aril	nuan	a ex	tra	ct dri	.nk	gi	v en w	ith	place	bo	smo	oke,	eac	h sess	ion	-cò	mbin	atio	on
compar	<u>ced</u>	<u>wit</u>	<u>h sc</u>	ore	<u>s from</u>	ı pl	.ac	<u>ebo d</u>	<u>rin</u>	<u>k and</u>	Smc	ke	Sess	ion	•					
	Pai	red	Read	ctic	n Tim	es,	Ta	isk Lo	bad_	Level	vs	<u>.</u> Т	reatn	nent	t Cond	iti	on	acro	ss A	11
	Sub	ject	:S; 2	samp	DIE SI	ze	(n)	, Mea	in F	Reacti	on.	Tim	e (t,	, se	econds), :	sta	ndar	d	
Task Lo	ad	Idl	.011	(<u>5</u> D ,	seco	nas];	sessi	Lon-	-COMD1	nat	<u>10n</u>	scor	ces:		T				
Level	:]	-					2					3					4		
Treat- ments	n	t (sec)	SD	(sec)	n t (sec)SD (sec) r					n	t	(sec)	SD	(sec)	n	t	(sec)	SD	(sec)
P-P	12	1.1	763	0.]	0.1432 17 1.2977 0.2445				11	1.3	065	0.	3175	10	1.	3434	0.4	402		
A-P	P 12 1.1673 0.1249 17 1.2191 0.2063					2063	11	1.4	100	0.4	4222	10	11.	4268	0.3	462				
P-S	-S 12 1.2409 0.1444 17 1.2071 0.1134					1134	11	1.3	216	0.	2527	10	11.	4928	0.7	204				
E-P	12	1.25	598	0.3	771	17	1.	2946	0.	1925	11	1.1	637	0.	1195	10	1.	5194	0.4	039

Tabl	.e 5
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SUBSIDIARY TASK BMDX63 STATISTICS, MARIHUANA STUDY, ALL RESPONSES EXCLUDING OMISSIONS

Source	ot				Degr	ees	ot	<u>Free</u>	edor	n				Ŧ			Le	vel (DÍ		
Variati	on			1	Jumera	tor	D	enomi	Lnat	or						Significance					
Order					3		T		8		1		0.3	351					-		
Treatme	nts				3				6			1.424					-				
Load					3				6				9.1	17			05				
Houd							1				. I				<u>I</u>			•••	· · · · ·		
Task Lo	ad		1									-					4				
Level	evel: (Low)							F Level of Significance 0.351 1.424 9.117 - 3 - 3 - 4 - 9.117 .05 3 - 4 - 9.117 .05 3 - 4 - 9.117 .05 3 - 4 - 9.117 .05 3 - - 1 8 0.624 - 1 8 0.624 - 1 8 0.624 - 1 10 1 8 0.518 - 1 10 1 8 0.518 - 1 8 4.176 .10 .10 1 8 0.518 - 1 8 4.176 .10 .10 1 8 0.518 - 1 8 4.176 .10 .10 1 8 0.518 .1 8													
Treat-	D	F				DF					D	ਸ	<u> </u>				 ਸ	<u> </u>			
mente*	N	- 	F		Sig.	N	F Sig.			NT	<u> </u>	F		Sig.	NT	<u></u>	F		Sig.		
menes		<u> </u>	<u> i</u>													N	<u>D</u>				
A-P/P-P	1	8	0.17	70	-	1	8	1.50	9	-	1	8	0.62	24	-	1	8	1.56	0	.25	
P-S/P-P	1	8	0.97	76	-	1	8	2.27	'9	.25	1	8	1.95	55	•25	1	8	3.64	-5 ·	.10	
E-P/P-P	1	8	1.38	36.	-	1	1 8 3.593 .10 1					1 8 0.518 -					1 8 4.176 .10			.10	
* Alcoh	21	dri	nk gi	lven	with	pl	ace	bo sm	oke	, plac	ceb	o d	rink	qiv	ren wit	h r	nar	ihuan	a s	moke.	
and m	aril	hua	na ez	ctra	ct dr:	ink	ai	ven w	vith	່ກົລດ	bo	sm	oke.	eac	h ses	sion		ombin	ati	on	
compa	red	wi	th so	ore	s from	ກ່ກໍ	lac	ebo d	lrir	k and	gm	ok o	COCC	ior						011	
	Dai	rod	Poa	$\frac{1}{2}$	n Tim		<u>m</u> -		200	Torrol	370	<u> </u>	DCDD Imaatr	701	- Cond			2020		11	
	- 4 	100	the a				1-1		Jau	пелет	v 5	• -		uen -		1 L I 1	011 	acro	55 r 3	111	
1	ອີເມ	Jec		sant Van	DIE DI	ze	(1)	, Mea	in i	-combination scores:											
	aev	lat	ion	(SD	, seco	nas);	sessi	Lon-	-COMD1	abination scores:										
Task Lo	ad		1					2					3					4			
Level	:																	· · ·			
Treat-	-	+	1000	len	(600)		1	(0.00)	CD	(000)	_	1	(000)	CD	(202)	_			CD	(0.00)	
ments	11	L	(sec.	130	(Sec)			(sec)	עפן	(sec)	n	Γ	(seu	עכן	(sec)	n.	<u></u> Γ.	(sec)	30	(sec)	
P-P	12	1.	1763	0.1	432	17	1.	2017	0.1	.556	11	1.	1603	0.0	841	ho	h .	3434	0.4	402	
		_														Γ			Ŭ • - x		
A-P	12	1.	1673	0.1	249	17	11.	2191	0.2	063	111	1.	2665	0.2	2661	ПО	μ.	3500	0.1	877	
P-S	12	1.	2409	0.1	444	17	1.	2071	0.1	134	11	1.	3216	0.2	2527	10	þ.:	3498	0,3	323	
E-P	12	1.	2598	0.1	771	17	11.	2946	0.1	.925	11	1.	1637	0.1	195	10	h.	4394	0.3	801	

Table 6

SUBSIDIARY TASK BMDX63 STATISTICS, MARIHUANA STUDY, ALL INITIALLY CORRECT RESPONSES

Source	ource of I ariation Nur							Free	dor	n .	T				·····	Level of				
Variati	on			ľ	Numera	tor	TD	enom	Inat	or	1			F		S	ian	ifica	ance	
Order	<u>-</u>				3		T		8		\top		0.2	202				_		·
Treatme	nts	5			3				6				1.2	254						
Load					3			•	6				19.1	178				.01		
magic To	Pask Load 1																			
Task Lo	Level · (Low)							2					3			$(\pi + \pi + \lambda)$				
Level	Level: (LOW)							E I I								(Hign)				
ments*	N	D	F		Sig.	DF F Sig. N					<u>П</u> N	D	F		Sig.	N	P D	F		Sig.
A-P/P-F	1	8	0.3	39	-	1	8	1.55	52	.25	1	8	0.99	7	-	1	8	1.76	6	•25
P-S/P-P	1	8	0.8	63	-	1	8	2.53	.5	.25	1	8	2.91	.6	.25	1	8	0.92	26	-
E-P/P-P	1	8 1.557 .25 1 8 3.70						7	.10	1	1 8 0.818 -					1 8 5.982 .05				
* Alcoh	01	drin	nk g	iver	n with	pla	ace	bo sn	loke	, pla	ceb	ebo drink given wit					th marihuana smok			
and m	ari	huar	na ez	xtra	act dr	ink given with placeb					ebo	bo smoke, each se					n-c	ombir	nati	on
compa	red	<u>wit</u>	<u>:h s</u>	core	es fro	n p	placebo drink and smoke session.					1.					· .			
	Pai	red	Read	ctic	on Tim	es, Task Load Level				vs	. T	reatn	nent	c Cond	iti	on	acro	s s P	11	
	Sub	ject	s; i	Samp	ole Si	ze	(n)	, Mea	an F	Reaction	cion Time (t, seconds), standard									
	dev	<u>viati</u>	lon	(SD	Seco	nds):	Sess	ion-	-combine	nat	ion	scor	es	.	÷	•			
Task Lo	ad	1	Ĺ		•		•	2					3					4		
Level	:	- 				ļ	· · · · · ·		·····		ļ					<u> </u>				
Treat- ments	n	t (sec	SD	(sec)	n t (sec)SD (sec) r					n	t	(sec)	SD	(sec)	n	t	(sec)	SD	(sec)
P-P	12	þ.14	81	0.1	.439	17 1.1857 0.1797 1					11	1.	1496	0.1	.044	10	1.	2732	0.2	744
A-P	12	þ.13	326	0.0	756	17 1.2078 0.2399 1					11	1.	1660	0.1	201	10	1.	3790	0.2	464
P-S	12	þ.22	1.2242 0.1422 17 1.1676 0.1099						.099	11	1.	3186	0.2	2999	10	1.	2774	0.2	337	
E-P	-P 12 1.2389 0.1593 17 1.2687 0.1977							.977	11	11 1.1594 0.1061 10 1.332				3323	0.3	267				

Table	/
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SUBSIDIARY TASK REACTION TIME, LIBRIUM STUDY, ALCOHOL DRINK GIVEN WITH LIBRIUM PILL

RESPONSE	REACTION	N TIME (SECONDS)	PERCENT	DEGREE	S OF	म	LEVEL
	PLACEBO DRINK AND PILL	ALCOHOL DRINK WITH LIBRIUM PILL		NUME- RATOR	DENOM- INATOR	-	SIGNI- FICANCE
All responses including omissions	0.9484	1.2022	26.8	1	4	0.241	-
All responses excluding omissions	0.9484	1.1357	19.7	1	4	0.035	-
All initially correct responses	0.9251	1.0722	15.9	1	4	2.224	.25
Number of omissions	0	3			<u>La</u>		.

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SUBSIDIARY TASK REACTION TIME, LIBRIUM STUDY, ALCOHOL DRINK GIVEN WITH PLACEBO PILL

RESPONSE CATEGORIES	REACTION	I TIME (SECONDS)	PERCENT	DEGREE	S OF	ਸੰ	LEVEL
	PLACEBO DRINK AND PILL	ALCOHOL DRINK WITH PLACEBO PILL		NUME- RATOR	DENOM- INATOR	-	SIGNI- FICANCE
All responses including omissions	0.9484	1.0304	8.65	1	4	1.544	
All responses excluding omissions	0.9484	0.9843	3.79	1	4	0.360	<u> </u>
All initially correct responses	0.9251	0.9546	3.19	1	4	0.000	-
Number of omissions	0	2				· · · · · · · · · · · ·	

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\mathbf{T}_{i}	ab	1	е	9
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SUBSIDIARY TASK REACTION TIME, LIBRIUM STUDY, PLACEBO DRINK GIVEN WITH LIBRIUM PILL

RESPONSE CATEGORIES	REACTION	ITIME (SECONDS)	PERCENT CHANGE	DEGREE FREEDO	S OF M	F	LEVEL OF
	PLACEBO DRINK AND PILL	PLACEBO DRINK WITH LIBRIUM PILL		NUME- RATOR	DENOM- INATOR		SIGNI- FICANCE
All responses including omissions	0.9484	0.9935	4.76	1	4	4.938	.05
All responses excluding omissions	0.9484	0.9709	2.37	1	4	9.436	•05
All initially correct responses	0.9251	0.9235	-0.173	1	4	0.958	-
Number of omissions	0	1		L <u></u> .	I	<u> </u>	1

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Table 10

SUBSIDIARY TASK BMDX63 STATISTICS, LIBRIUM STUDY, ALL RESPONSES INCLUDING OMISSIONS

Source	ource of Degrees of Freedom										1-							110]	<u>_</u>		
Variati	on			N	Jumera	tor	TT		nat		-	•		\mathbf{F}		· c	ian	ifia			
Order				- -	3		┼╴╴	Z		.01	+		1 6	577		<u> </u>	TGU		ance		
Treatme	nt e				3				,				2 3	275							
Load	1163	•			3				- >				3/ 3					- 0E			
DOau							<u> </u>						54.2	40		 		.05			
Task Lo	að		1				2									4					
Level	:	(Low) 2										3			(High)						
Treat-	I)F			C.i.e.	DF						DF				DF			1		
ments*	N	D	£		51g.	N D F Sig. N					N	D F Sig.			N	N D F			Sig.		
A-L/P-P	1	4	1.32	26		1	4	0.29)1	-	1	4	0.69	90 (-	1	4	1.11	L 4	-	
A-P/P-P	1	4	1.13	36	-	1 4 1.263 - 1					1	4	0.36	50	-	1	4	2.36	51	-	
P-L/P-P	1	4	3.63	36	.25	1 4 2.438 - 1						1 4 1.514 -					4	2.61	L5	-	
*Alcoho with L drink	ibr and	lrink ium pla	wit pill cebo	ch I L, s p pi	ibriu essio 11 se	m pill, alcohol drink n-combination scores ssion.					nk s c	omp	h pla ared	acek wit	bo pil th tho	1, : se :	and fro	plac m pla	cebo aceb	drink o	
	Pai Sub dev	red ject viati	Read s; S on	ctic Samp (SD,	on Tim ole Si seco	es, Task Load Level ze (n), Mean Reactic					vs on nat	. T Tim ion	reatr e (t scor	nent , so ces	t Cond econds :	iti),	on sta	acro ndar	s s A d	11	
Task Lo Level	ad	1						2					3					4			
Treat- ments	n	t (sec)	SD	(sec)	n	t	(sec)	SD	(sec)	n	t	(sec)	SD	(sec)	n	t	(sec)	SD	(sec)	
P-P	12	0.89	98	0.0	699	17 0.9364 0.1255					11	0.	9624	0.]	L122	10	1.	0082	0.1	606	
A-L	12	1.05	60	0.2	253	17 1.2599 0.3685 1					11	11.	2672	0.3	3616	10	1.	2078	0.2	741	
A-P	12	0.93	85	0.0	544	17 1.1007 0.4227 1					11 0.9559 0.0869			0869	10	1.	1079	0.2	523		
P-L	12	0.93	44	0.1	158	17 1.0052 0.2700 1					11 0.9539 0.0747			747	10 1.0879 0.2047				047		

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SUBSIDIARY TASK BMDX63 STATISTICS, LIBRIUM STUDY, ALL RESPONSES EXCLUDING OMISSIONS

Source	of				Degr	ees	of	Free	edor	n	T						Le	vel d	of		
Variati	on			1	Numera	tor	D	enomi	inat	or	7			Ľ		S	ign	ifica	ance	2	
Order					3		T		4		Τ		1.8	315				-			
Treatme	nts				- 3				2		1		2.6	531				-			
Load					3				2				77.9	986				.05			
Task Lo	ađ		1					2		1			<u>`</u>				<u> </u>	4			
Level: (Low) 2								3						(Hic	<u>jh)</u>						
Treat- ments*	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						D N	DF NDF			Sig.	D	F D	F		Sig.					
A-L/P-P	1	4	1.32	26	-	1	4	0.00)1	-	1	4	0.69	0	-	1	4	1.11	4	-	
А-Р/Р-Р	1	4	1.13	36	-	1	4	0.08	6	-	1	4	0.36	50 .	-	1	4	2.36	1	.25	
P-L/P-P	1	4	3.63	36	.25	1 4 4.494 .10 1					1	1 4 0.767 –					1 4 2.615 .25				
*Alcoho	1 d	rin	k giv	7en	with 1	Lib	riu	m pil	.1,	alcoho	51 (dri	nk gi	ven	with	pla	acek	o pi	.11,	pla-	
cebo di	rin	k g	iven	wit	h Lib	riu	n p	ill,	eac	h ses	sio	n-c	ombin	ati	on sco	ores	s co	mpar	'ed '	with	
those	fro	m p	laceb	0.0	lrink a	and	pi	<u>11 se</u>	ssi	ons.											
	Pai	red	Read	ctio	on Tim	es,	Ta	sk Lo	bad	Level	l vs. Treatment Condition across A						11				
	Sub	jec	ts; S	Sam	ple Si	ze	(n)	, Mea	n F	Reacti	on .	Tim	e(t)	, se	econds),	sta	ndard	d	<i>.</i>	
ma ala Ta	dev	lat	10n	(SD	, seco	nds);	sessi	LON-	-COMD1	nat	<u>10n</u>	SCO1	ces:		<u> </u>					
Level	au :		1					2					3					4			
Treat- ments	n	t	(sec)	SD	(sec)	n t (sec)SD (sec) r				n	t	(sec)	SD	(sec)	n	t	(sec)	SD	(sec)		
P-P	12	0.8	39 9 8	0.0	699	17	0.	9364	0.1	255	11	0.	9624	0.1	122	μo	þ. c	082	0.1	606	
A-L	12	1.0	0560	0.2	253	17 1.1261 0.2470 1				11	1.	1631	0.3	011	μo	þ.2	2078	0.2	741		
A-P	12	0.	9385	0.0	0544 17 0.9592 0.1082				11	0.	9559	0.0	869	μo	þ.1	.079	0.2	523			
P-L	12	0.	9344	0.1	158	17	17 0.9382 0.0855 11				11 0.9539 0.0747				747	10	1 .0	879	0.2	047	

Τa	bl	е	1	2
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SUBSIDIARY TASK BMDX63 STATISTICS, LIBRIUM STUDY, ALL INITIALLY CORRECT RESPONSES

Source	of				Degr	ees	of	Free	don	n]_			5		Level of				
Variati	on			1	Jumera	tor	D	enomi	nat	or				F		S	ign	ifica	ance	•
Order			1		3				4				1.	147	, , , , , , , , , , , , , , , , , , , ,					
Treatme	nts				3				2				1.	019				-		
Load					3		1	*/************************************	2				50.	461	. <u> </u>			.05		
Task Lo	ađ		1		li e come			. 2		•			3					4		
Level	•		(LOV	<u>v)</u>			T3			<u>. </u>				7				(H10	jh)	
ments*	N N	r D	F		Sig.	DF F Sig.				U N	DF F Sig.		Sig.	D. N	<u>F</u> D	F		Sig.		
A-L/P-P	1	4	1.72	26	-	1	4	0.66	2	-	1	4	2.47	5	.25	1	4	0.83	3	-
A-P/P-P	1	4	1.72	23	-	1 4 0.014 - 1					1	4	1.04	3 -	-	1	4	4.06	6	.25
P-L/P-P	1	4	2.91	.1	.25	1 4 1.781 - 1				1	1 4 0.099 -					1 4 0.493 -				
*Alcoho	Ld	rink	c giv	ren	with I	ib:	riu	m pil	1,	alcoho	$\mathbf{p1}$	dri	nk gi	ven	with	pla	acel	bo pi	.11,	pla-
cebo di	rin	c gi	Lven	wit	h Libi	rium pill, session-co					com	oina	ation	sc	ores c	omp	ar	ed wi	th	those
or plac				and		session.														
	rai Cur	rea	Read		on Time	es, Task Load Level					vs	• T	reatr	nent	c Cond	iti	on	acros	5 5 A	γTT .
	പ്പാപ്പാപ്പാപ്പാപ്പാപ്പാപ്പാപ്പാപ്പാപ്പ	jec	cs; a ion	ani (cn	DIE DI	ze (n), Mean Reactio						ination scores.								
Task Lo	ad	Lau	1011		<u>seco</u>	l	<u> </u>	56221	-110.	-CONDT	lac	TOI	scor	es		1	···· •·····			
Level	:		1					2					3					4		
Treat- ments	n	t	(sec)	SD	(sec)	n t (sec)SD (sec)					n	t	(sec)	SD	(sec)	n	t	(sec)	SD	(sec)
P-P	12	0.8	3759	0.0	743	17 0.9260 0.1311			11	0.	9528	0.1	364	10	0	.9334	0.	0872		
A-L	12	1.0)234	0.2	759	17 1.0901 0.2783 1			11	1.	0556	0.1	996	10	1	.0857	ο.	2165		
A-P	12	0.9	9171	0.0	417	17 0.9564 0.1285 1			11	0.	9246	þ.1	029	10) 1	.0398	٥.	3072		
P-L	12	0.9)220 [`]	0.1	174	17 0.8941 0.0476				11 0.9106 0.0591				591	10	0	.9926	0.	1561	

TUNTE TO	т	ab	1	е]	.3	
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SUBSIDIARY TASK REACTION TIME, DEXEDRINE STUDY, ALCOHOL DRINK GIVEN WITH PLACEBO PILL

RESPONSE CATEGORIES	REACTION TIME (SECONDS)		PERCENT CHANGE	DEGREES OF FREEDOM		F	LEVĖL OF
	PLACEBO DRINK AND PILL	ALCOHOL DRINK WITH PLACEBO PILL		NUME- RATOR	DENOM- INATOR		SIGNI- FICANCE
All responses including omissions	1.1505	1.3401	16.5	1	12	3.215	.10
All responses excluding omissions	1.1505	1.2846	11.7	1	12	3.680	.10
All initially correct responses	1.0850	1.2129	11.8	1	12	5.386	.05
Number of omissions	0	5			<u> </u>	· ·	-

Table 14

SUBSIDIARY TASK REACTION TIME, DEXEDRINE STUDY, ALCOHOL DRINK GIVEN WITH DEXEDRINE PILL

RESPONSE CATEGORIES	REACTION TIME (SECONDS)		PERCENT	DEGREES OF		ਜ	LEVEL
	PLACEBO DRINK AND PILL	ALCOHOL DRINK WITH DEXEDRINE PILL		NUME- RATOR	DENOM- INATOR	-	SIGNI- FICANCE
All responses including omissions	1.1505	1.1493	-0.104	1	12	0.001	-
All responses excluding omissions	1.1505	1.1493	-0.104	ĺ	12	0.001	-
All initially correct responses	1.0850	1.0959	1.00	1	12	0.404	-
Number of omissions	0	0	· ·	<u>.</u>		<u> </u>	** * <u>*</u>
SUBSIDIARY TASK REACTION TIME, DEXEDRINE STUDY, PLACEBO DRINK GIVEN WITH DEXEDRINE PILL

RESPONSE CATEGORIES	REACTION	TIME (SECONDS)	PERCENT CHANGE	DEGREE	S OF M	F	LEVEL OF
	PLACEBO DRINK AND PILL	PLACEBO DRINK WITH DEXEDRINE PILL		NUME- RATOR	DENOM- INATOR		SIGNI- FICANCE
All responses including omissions	1.1505	1.0749	-6.57	1	12	3.331	.10
All responses excluding omissions	1.1505	1.0636	-7.55	1	12	7.654	.05
All initially correct responses	1.0850	1.0110	-6.82	1	12	4.954	.05
Number of omissions	0	1			.	<u> </u>	*****

SUBSIDIARY TASK BMDX63 STATISTICS, DEXEDRINE STUDY, ALL RESPONSES INCLUDING OMISSIONS

Courses					D														6	
Source	OI				Degr	ees	10	Free	eaor	<u>n</u>	-		•	F		~	.Le	vel (of	
Variati	on			1	umera	tor	1 1	enom:	Lnat	cor				- 16		<u>S</u>	ıqn	lfic	ance	2
Order					2		1						0.	240						
Treatme	nts				3							1.702			.25					
Load					3		1		10				3.6	517		.10				
Task Lo	ad		1		1					1		·····	· · ·					4		
Level	:		(Lov	v)			2				3			(High)						
Treat- ments*	D N	F	F		Sig.	D N	F D	F		Sig.	D	F D	F		Sig.	D	F D	F		Sig.
A-P/P-P	1	12	2.85	50	.25	1	12	3,11	9	.10	1	12	3.23	4	.10	1	12	0 32	7	·
			- 1 C					0.11		• - •				-	•10		14	0.52	- /	
A-D/P-P	L	12	2.16	5	.25	7	12	0.00	00	- .	1	12	1.01	.7	-	1	12	4.66	55	•05
P-D/P-P	1	12	0.64	16	_	1	12	3.03	89	.25	1	12	0.08	32	-	1	12	3.15	51	.10
*Alcoho	*Alcohol drink given with placebo pill, alcohol drink given with dexedrine pill,										1,									
placeb	o d	rink	giv	ren .	with o	dex	edr	ine p	ill	., ses	sio	n-c	ombin	ati	lon sco	ores	s co	ompar	ced:	with
placeb	<u>o</u> d	rink	anc	i pi	.11 se	SSI	on s	score	es.											
	Pai	red	Read	ctic	on Tim	es,	Ta	sk Lo	bad	Level	vs	. Т	reatr	nent	t Cond	iti	on	acro	ss A	11
	Sub	ject	s; S	Samr	ole Si	ze	(n)	, Mea	an I	Reacti	on	Tim	e (t,	, se	econds),	sta	ndar	đ	
	dev	<u>viati</u>	on	(SD	Seco	nds) ;	sess	ion	-combi	nat	ion	SCO	ces	:					<u>.</u>
Task Lo	ad	٦			,			2					3					4		
Level		-	· .	, 					-							<u> </u>				
Treat-	'n	t (sec)	SD	(sec)		+	(sec)	SD	(sec)	n	+	(sec)	SD	(sec)	In	+	(sec)	SD	(sec)
ments	ļ	`		<u> </u>		ļ	Ľ	(200)			<u> </u>		(000)				<u> </u>	(000)		
P-P	12	1:0	582	0.0	670	17	11.	1011	0.	1485	11	1.	1045	0.1	.184	10	1.3	3990	0.3	969
A-P	12	1.3	453	0.:	2648	17	11.	3018	0.	.2305	11	1.	2865	0.3	L993	10	1.	4570	0.4	490
A-D	12	1.1	557	0.	1434	17	1.	0955	0.	.0832	11	1.	1587	.0.1	1025	10	11.	2233	0.2	106
P-D	12	1.0	211	0.0	1525	117	1	0354		1121	1 1 1	1	0072		040			1021		174
1	1-2		~ + + -			1-1	<u> </u>	0004		╸୷⊥╱⊥		T •	00/3		J74U	1TO	1 L •	TAST	10.3	14

Table	17
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SUBSIDIARY TASK BMDX63 STATISTICS, DEXEDRINE STUDY, ALL RESPONSES EXCLUDING OMISSIONS

Source	of		<u> </u>	·	Degrees of Freedom												To		<u>_</u>	
Variati	on			۲	Jumera	tor	Th	enom	inat		-			\mathbf{F}		c	ian	ific	or Snac	
Order					3		+-	1	2		+	<u></u>	0.3	193			IGU	<u></u>	ance	
Treatme	ents	:			3			1	0				4.2	201				05		
Load					3			ī	0				7.3	352		.01				
															l					
Task Lo	ad		1					2					З			4				
Level			(Lor	<u>w)</u>														(Hio	gh)	
Treat- ments*	N N	D	F		Sig.	D. N	F D	F		Sig.	D N	F D	F		Sig.	D N	F D	F		Sig.
А-Р/Р-Р	1	12	3.1	70	.10	1	12	3.73	19	.10	1	12	3.23	34	.10	1	12	0.03	39	-
A-D/P-P	1	12	2.16	55	.25	1	12	0.00	00	-	1	12	1.01	.75	-	1	12	4.66	55	.10
P-D/P-P	1	12	0.64	16	-	1	12	3.03	9	.25	1	12	0.08	32	-	1	12	9.59	95	.10
*Alcoho	*Alcohol drink given with placebo pill, alcohol drink given with dexedrine pill,																			
placeb	o d	rin	c giv	zen .	with (dex	edr:	ine p)ill	, ses	sio	n-co	ombin	nati	on sco	ores	s co	ompar	ed	with
placed	<u>o d</u>	rin	<u>anc</u>	i pi	.11 se	SSI	on a	score	es.									•		
	Pai	.red	Read	ctic	on Tim	es,	Ta	sk Lo	bad	Level	vs	• T:	reatn	nent	: Cond	iti	on	acro	ss A	11
	Sur	jec	cs; S	samr	ble Si	ze	(n)	, Mea	n I	Reacti	on '	Tim	e (t,	, se	econds), :	sta	ndare	đ	
Magle To	dev	lat.	lon	(SD	seco	nas);	sessi	Lon-	-combi	nat	ion	SCOI	ces:	<u> </u>	T				
Lovol	au	•	1					2			1		3			l :		4		
Treate	<u> </u>	T	···	<u> </u>	· · · · · · · · · · · · · · · · · · ·	┢┈┈╸	<u> </u>	·				, <u> </u>				<u> </u>	1		·	<u> </u>
ments	n	t	(sec)	SD	(sec)	n	t	(sec)	SD	(sec)	n	t	(sec)	SD	(sec)	n	t	(sec)	SD	(sec)
P-P	12	1.0	582	0.0	0670	17	1.	1011	0.1	L485	11	1.	1045	0.1	184	10	1.	3990	0.3	969
A-P	12	1.1	974	0.1	L351	17	1.	2704	0.1	L587	11	1.	2865	0.1	.993	10	11.	4076	0.3	334
A-D	12	1.1	5 57	0.1	434	17	1.	0955	0.0	0832	11	1.	1587	0.1	.025	10	1.	2233	0.2	106
P-D	12	1.0	211	0.0)525	17	1.	0354	0.1	121	11	1.	0873	0.0	940	10	1.	1386	0.2	075

SUBSIDIARY TASK BMDX63 STATISTICS, DEXEDRINE STUDY, ALL INITIALLY CORRECT RESPONSES

Source	of		L		Degrees of Freedom					n				 			Le	vel d	of	
Variati	on			1	Jumera	tor	D	enomi	Inat	or				Г ———		S	ign	ifica	ance	2
Order					3			1	.2				0.1	85						
Treatme	nts				3			1	.0				3.9	04		•05				
Load					3			1	.0				14.0	18		<u>.01</u>				
Task Lo	ad	i	1				· ·				···,					4				
Level	:		(Lo	w)			2					3				(High)				
Treat- ments*	DN	F D	F		Sig.	D N	F D	F		Sig.	D N	F D	F		Sig.	D. N	F D	F		Sig.
A-P/P-P	1	12	3.4	28	.10	1	12	5.21	.7	.05	1	12	5.22	1	.05	1	12	0.77	7	-
A-D/P-P	1	12	1.1	13	-	1	12	0.05	51	-	1	12	2.11	0	.25	1	12	0.30	9	-
P-D/P-P	1	12	2.1	02	.25	1	12	3.41	.0	.10	1	12	0.14	3		1	12	10.7	16	.10
*Alcoho	1 d:	rin	k gi	ven	with	pla	ceb	o pil	.1,	alcoho	51 (dri	nk gi	ven	with	dez	cedi	rine	pil	1,
placeb	o di	rin	k gi	ven	with (dex	edr	ine p	i 11	, ses	SIO	n-c	ombin	ati	on sco	ores	3 C(ompar	ed	with
placeb	o di	rın	<u>k</u> and	d pi	.11 se	SSI	on	score	es.											
1	Pai	red	Rea	ctio	on Tim	es,	Ta	sk Lo	baid	Level	VS	<u>.</u> т	reatn	nent	: Cond	iti	on	acros	ss A	11
	Sub	jec	ts;	Sam	ple Si	ze	(n)	, Mea	an I	Reacti	on	Tim	e (t,	Se	econds),	sta	ndar	2	
	dev	lat	lon	(SD	, seco	nds);	sess:	ion-	-combi	nat	ion	SCOI	es:	<u> </u>	<u> </u>				
Level	ao :		1					2					3				•	4		
Treat- ments	n	t	(sec)SD	(sec)	n	t	(sec)	SD	(sec)	n	t	(sec)	SD	(sec)	n	t	(sec)	SD	(sec)
P-P	12	1.	0396	0.	0792	17	1.	0488	0.	0609	11	1.	0541	0.	1211	10	1.2	2484	.0.	3616
A-P	12	1.	1239	0.	1094	17	11.	2123	0.	1638	11	11.	2074	0.	1691	μo	1.:	3560	٥.	2739
A-D	12	1.	0811	0.	1139	17	1.	0399	0.	0726	11	1.	1119	0.	0755	þо	1.2	2072	٥.	2168
P-D	12	0.	9728	0.	0444	17	0.	9901	0.	0962	11	1.	0593	0.	1039	10	1.0	0510	0.	1073

SUBSIDIARY TASK BMD05V STATISTICS, LATIN SQUARES, MARIHUANA STUDY, ALL RESPONSES INCLUDING OMISSIONS

Source	df .	SS	MS	<u>F-ratio</u>	Sig-Level
Error	24	2.031	0.0846	-	-
Group	3	0.790	0.263	3.108	0.05
Sessions	3	0.381	0.127	1.501	0.25
Treat.	_ 3	0.254	0.0846	1.00	===
Rec'd.	6	0.529	0.088	1.040	· 🛶
Subjects	່ ອ	4.976	0.622	7.352	0.01

Table 20

SUBSIDIARY TASK BMDO5V STATISTICS, LATIN SQUARES, MARIHUANA STUDY, ALL RESPONSES EXCLUDING OMISSIONS

Source		df	SS	MS	F-ratio	Sig-Level
Error		24	1.156	0.048	• • • • • • • • • • • • • • • • • • •	-
Group		3	0.386	0.129	2.687	0.10
Session	•	3	0.146	0.049	1.020	-
Treat.		3	0.084	0.025	0.521	2
Rec'd	Ì	6	0.398	0.066	1.375	~
Subjects		8	3.505	0.438	9.125	0.01
			1	·	•	

4 x 4 Basic Latin Square

SUBSIDIARY TASK BMDO5V STATISTICS, LATIN SQUARES, MARIHUANA STUDY, ALL INITIALLY CORRECT RESPONSES

	4)	(4 Basic	Latin SC	luare	
Source	df	SS	MS	F-ratio	Sig-Level
Error	24	1.178	0.049		-
Group	3	0.210	0.070	1.428	0.25
Session	- 3	0.160	0.053	1.081	·
Treat.	3	0.142	0.047	0.969	
Rec'd.	; 6	0.532	0.089	1.816	0.25
Subjects	8	2.891	0.361	6.367	0.01
· •		,			

4 x 4 Basic Latin Square

Table 22

SUBSIDIARY TASK BMDO5V STATISTICS, LATIN SQUARES, LIBRIUM STUDY, ALL RESPONSES INCLUDING OMISSIONS

Source	df	SS	MS	F-ratio	Sig-Level
Error	12	0.547	0.046	•	
Group	3	0.628	0.209	4.550	0.05
Session	3	0.188	0.063	1.370	
Treat.	3	0.292	0.097	2.100	0.25
Rec'd.	6	0.320	0.053	1.150	
Subjects	4	0.510	0.128	2.790	0.10

SUBSIDIARY TASK BMDO5V STATISTICS, LATIN SQUARES, LIBRIUM STUDY, ALL RESPONSES EXCLUDING OMISSIONS

Source	df	SS	MS	F-ratio	Sig-Level
Error	12	0.158	0.0132	-	-
Group	3	0.439	0.146	11.05	0.01
Session	3	0.095	0.032	2.420	0.25
Treat.	3	0.184	0.061	4.630	0.05
Rec'd.	6	0.100	0.017	1.290	-
Subjects	4	0.337	0.084	6.370	0.01

Table 24

SUBSIDIARY TASK BMDO5V STATISTICS, LATIN SQUARES, LIBRIUM STUDY, ALL INITIALLY CORRECT RESPONSES

•				1444.4	
Source	df	SS	MS	<u>F-ratio</u>	Sig-Level
Error	12	0.220	0.018	n agen	-
Group	3	0.419	0,139	7.730	0.01
Session	3 .	0.086	0.029	1.610	0.25
Treat.	3	0.114	0.038	2.120	0.25
Rec'd.	, 6 '	0.081	0.013	0.723	
Subje cts	4	0.453	0.113	6.280	0.01
		•		×	

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SUBSIDIARY TASK BMDO5V STATISTICS, LATIN SQUARES, DEXEDRINE STUDY, ALL RESPONSES INCLUDING OMISSIONS

4 x 4 Basic Latin Square

Sourco	df	SS	MS	F-ratio	Sig- Level
Error	36	1.9854	.0550983	••	-
Group	3	.22566	.07522	1.368	· 🖬
Session	3	.14413	.048043	· ~1	·
Treat.	3	.60501	.20167	3.66	.05
Rec'd.	6,	.22892	.038153	<1	, but
Subjects	12	1.613	0.134	2.436	0.05
		•			

Table 26

SUBSIDIARY TASK BMDO5V STATISTICS, LATIN SQUARES, DEXEDRINE STUDY, ALL RESPONSES EXCLUDING OMISSIONS

4 x 4 Basic Latin Square

27214
40007 103 25
49887 .1.83 .23
2178 21 -
3787 5.07 .01
19002 ∠1 -
14 .4.22 0.01
) .) .

SUBSIDIARY TASK BMDO5V STATISTICS, LATIN SQUARES, DEXEDRINE STUDY, ALL INITIALLY CORRECT RESPONSES

			Danman Ddi		· · · · · · · · · · · · · · · · · · ·
Source	df	SS	MS	F-ratio	Sig-Level
Error	3 6	.75385	0.020940)3 –	
Group	3	.06362	.02121	1.01	
Session	3	.04072	.01357	~1	-
Treat.	3	.37257	.12419	5.93	.01
Rec ⁶ d.	6	.09243	.01541	∠1	the state of the s
Subjects	12	0.923	0.076	3.80	0.01
				• `	· · · ·

4 x 4 Basic Latin Square

SUBSIDIARY TASK REACTION TIME, MARIHUANA STUDY, SUBJECTS VERSUS TREATMENTS ACROSS EVENTS

RESPONSE CATEGORIES				TREATMEN	TS	
		Pla/Pla	Alc/Pla	Smk/Pla	Ext/Pla	Alc/Ext
All responses	N	550	538	550	549	529
including	Mean	1.2796	1.2930	1.2975	1.3028	1.2147
omissions	Std. dev.	0.9778	0.9409	0.7932	0.7322	0.6235
All responses	N	546	535	548	548	528
excluding	Mean	1.2157	1.2445	1.2658	1.2870	1.1981
omissions	Std. dev.	0.6340	0.6804	0.5950	0.6315	0.4930
All initially	N	473	451	467	499	471
correct	Mean	1.1825	1.2087	1.2312	1.2397	1.1665
responses	Std. dev.	0.5162	0.5744	0.5429	0.5643	0.4246

SUBS ID LARY	TASK	REACTION	TIME,	MARIHUANA	STUDY,	EVENTS	VERSUS	TREATMENTS	ACROSS
				SUBJI	ECTS				
				•			• •		

RESPONSE CATEGORIES			TREATMEN	TS		
		Pla/Pla	Alc/Pla	Smk/Pla	Ext/Pla	Alc/Ext
All responses	N	550	538	550	549	529
including	Mean	1.2796	1.2930	1.2975	1.3028	1.2147
omissions	Std. dev.	0.9778	0.9409	0.7932	0.7322	0.6235
All responses	N	546	535	548	548	528
excluding	Mean	1.2157	1.2445	1.2658	1.2870	1.1981
omissions	Std. dev.	0.6340	0.6804	0.5950	0.6315	0.4930
All initially	N	473	451	467	499	471
correct	Mean	1.1825	1.2087	1.2312	1.2397	1.1665
responses	Std. dev.	0.5162	0.5744	0.5429	0.5643	0.4246

SUBSIDIARY TASK REACTION TIME, MARIHUANA STUDY, SUBJECTS VERSUS RUNS ACROSS EVENTS

RESPONSE CATEGORIES			RUNS			
		1	2	3	4	5
All responses	N	550	550	548	539	529
including	Mean	1.3771	1.2195	1.2473	1.3299	1.2147
omissions	Std. dev.	1.0653	0.6054	0.6277	1.0482	0.6235
All responses	N	546	549	547	535	528
excluding	Mean	1.3140	1.2035	1.2313	1.2651	1.1981
omissions	Std. dev.	0.7711	0.4759	0.5044	0.7354	0.4930
All initially	N	493	466	469	462	471
correct	Mean	1.2598	1.1616	1.2173	1.2224	1.1665
responses	Std. dev.	0.6205	0.3869	0.5192	0.6311	0.4246

			Pla	Alc	Lib	Lib/Alc
Concentrated Attention	% Correct	Mean: SD:	83.75 5.42	76.50 15.22	81.50 6.98	77.75 11.89
	Delta-prime	Mean: SD:	2.10 0.57	1.79 1.10	1.97 0.56	1.70 0.73
	Beta	Mean: SD:	1.10 0.44	2.81* 4.28	1.22 0.80	0.99 0.56
Divided Attention	% Correct (Total)	Mean: SD:	57.75 21.24	43.25 20.24	52.50 19.35	44.00 24.51
	Delta-prime	Mean: SD:	1.87 0.63	1.32 0.70	1.84 0.65	1.35 0.65
	Beta	Me a n: SD:	0.98 0.45	0.82 0.28	0.88 0.60	0.90 0.31
	Det. % Correct	Mean: SD:	81.00 8.94	72.75 10.85	79.00 10.24	72.50 9.26
	# % Correct	Mean: SD:	66.25 23.20	56.00 24.89	65.25 21.39	56.00 29.29

SOUNDPROOF BOOTH STATISTICS, LIBRIUM

* Without extreme score, Mean = 1.21 SD = 0.76

SOUNDPROOF BOOTH STATISTICS, LIBRIUM, CONCENTRATED ATTENTION, PERCENT CORRECT

		Source	<u>df</u>	<u>SS</u>	MS	<u>F-ratio</u>	<u>Siglevel</u>
	1	Error	12	807.0	67.3	-	-
tin		Group	3	866.5	288.8	4.29	0.05
Ц Г		Session	3	288.5	96.1	1.43	-
asic	41	Treatment	3	268.5	89.5	1.33	-
4 B	uare	Residual	6	572.0	95.3	1.42	
4X	Sq	Subjects	4	1077.0	269.2	4.00	0.05
ent		Error	15(12)	807.0	67.3		-
re atm		Group	3	849.0	283.0	4.21	0.05
iqua Tre		Session	3	257.0	85.6	1.27	
in ior		Treatment	3	373.0	124.0	1.84	0.25
Lat Pr	ct	Prior	~	220.0	112 0	1:00	0.05
4 H	щ	Treatment	3	339.0	113.0	1.68	0.25
4 1 2	핍	Subjects	4	1078.0	270.0	4.01	0.05
a tr		Error	15(12)	807.0	67.3	-	-
a vi		Group	3	143.0	47.6	0.71	-
uare		Session	3	289.0	96.3	1.43	
atm		Treatment	3	307.0	102.0	1.52	0.25
Tre	ine	Prior					
4 Le ior	Se L	Base Line	3	427.0	142.0	2.11	0.25
4X Pr	Ba	Subjects	4	1077.0	269.0	4.00	0.05

SOUNDPROOF BOOTH STATISTICS, LIBRIUM, DIVIDED ATTENTION, PERCENT CORRECT

	Source	df	<u>SS</u>	MS	<u>F-ratio</u>	Siglevel
	Error	12	1275	106		-
in	Group	3	8067	2689	25.37	0.01
Lat	Session	3	350	117	1.10	-
sic	Treatment	3	1171	390	3.68	0.05
E B B B B B B B B B B B B B B B B B B B	Residual	6	465	77.5	0.73	-
4x4 c~~:	Subjects	4	4541	1135	10.70	0.01
<i>i</i> th	Error	15(12)	1275	106	-	-
ະ ອ	Group	3	7431	2477	23.37	0.01
qua ment	Session	3	392	131	1.24	-
n S Geat	Treatment	3	1453	484	4.57	0.05
Lati r Tr	Prior	2	445	140		
4 - 1 4	H H H H H H	5	440	140	1.40	-
4 0 6 X 7 4	Subjects	4	4321	1080	10.19	0.01
ith s	Error	15(12)	1275	106	-	-
α δ α	Group	3	1912	637	6.01	0.01
uar lent	Session	3	349	116	1.09	-
n Sg eatm	Treatment	3	1252	417	3.93	0.05
atir Tre	Prior					
4 Li ior Back	Base Line	3	383	128	1.21	· _
44 7 4 7 4	Subjects	4	4541	1135	10.71	0.01

SOUNDPROOF BOOTH STATISTICS, LIBRIUM, DIVIDED ATTENTION, INTERACTIONS, PERCENT CORRECT

Measure	<u>F-ratio</u>	<u>Significance</u>
Order	2.37	0.25
Treatments	29.17	0.05
Order X Treatments	1.57	-
Librium/Alcohol X Placebo	5.92	0.10
Alcohol X Placebo	45.46	0.01
Librium X Placebo	1.00	-
Alcohol X Librium	5.68	0.10
Librium/Alcohol X Librium	1.78	0.25
Librium/Alcohol X Alcohol	0.01	_

6. DISCUSSION AND CONCLUSIONS

6.1 General

The results of this study indicate that it has been successful in measuring some change in performance as a function of the various drugs and combinations of drugs tested. The data seem to be indicative not only of an increase in subsidiary task reaction time but also of some disruption of the normally orderly relationship between the driving task and reaction time to the visual subsidiary task that represents unexpected or suddenly occuring traffic events. This indication is shown by the change in pattern as well as by an increase in reaction time of the subsidiary task scores when they were analyzed in terms of the four levels of driving task load.

The driving-safety importance of these differences can now be discussed in comparison with the effects of alcohol; alcohol being the one drug in the group for which field studies have already established a significant relationship with the likelihood of accident involvement.

For the most part, it appears that Dexedrine, when taken alone, improves (decreases) reaction time as compared with the palcebo runs and with the alcohol runs. The alcohol runs showed the expected increase in reaction time; the combination of Dexedrine with alcohol apparently restored the reaction time to palcebo level, but there still remains the disruption of the relationship with the task loading level. This disruption is apparent in the alcohol, the Dexedrine, and the combination of Dexedrine with alcohol. The discovery of this disruption is relevant to certain other findings in concurrent studies. Perhaps the most important relationship in these other concurrent studies is between visual peripheral

attention and alcohol. This difference is also being found in marihuana by other researchers in the field (34). Their findings support the possibility that differences may be even more pronounced for marihuana than for alcohol.

The significance of the visual field studies is that the lack of spare mental capacity is associated with a narrowing of the perceptual field of attention. In other words, it seems that two factors are involved; one is a reduction in the rate of sampling the external environment, due to a slowdown in the central nervous systems processing of visual or auditory information (such as in the case of the soundproof chamber). The second factor is an actual narrowing of the visual field.

The overall result of the work that has been analyzed to date is summarized as follows:

a. On Dexedrine, alcohol continued to show the same effects on the subsidiary task as it did before. However, it did not show the direction of the differences to the same statistical degree.

b. Librium data were inconclusive but the direction of the differences were similar to that of alcohol and a potentiation when alcohol and Librium are combined.

c. Dexedrine shows a somewhat different result: while the drivers on alcohol showed the same decrement as before, their runs on Dexedrine alone showed a <u>decrease</u> in reaction time.

The Dexedrine result is similar to the results that were obtained in a study using certain cold remedies, with and without antihistamines. The cold remedies without antihistamine showed an improvement -- a decrease -- in reaction time, apparently due to the stimulants in these remedies.

The Dexedrine when combined with alcohol shows no change in reaction time in the subsidiary task as compared against the placebo runs. The results of the earlier cold remedy study and of the Librium portion of the study are consistent with each other. This is because the cold remedy contains stimulants which are apparently offset in those preparations containing antihistamine; the antihistamines overrule the stimulant effect. When the antihistamine is removed the stimulant effect remains and is revealed in decreased reaction time to the subsidiary task. However, with cold remedies, there was some displacement of the relationship to the levels of task loading. This is also found with Librium, Dexedrine, and marihuana.

The overall conclusion that can be reached at this point in the study is that marihuana affects reaction time in a direction similar to that of alcohol, but that there is some lack of comparison when it comes to the behavior of these subjects on their placebo runs. There are several possible explanations of such differences. For example, there was an overall longer reaction time as well as more variability on the placebo runs, for the marihuana group, than for the other two groups (Librium and Dexedrine). There was also more variability in this study than existed in the cold-remedy group of subjects.

More work should be conducted in an attempt to clear up these differences in behavior on the placebo run. Attention should be given to the possibility that differences in behavior of the marihuana subjects on the placebo run could be due to the fact that the placebo for marihuana is a much more effective placebo because it is not readily distinguishable from the marihuana containing the active THC ingredient. This could account for greater differences in performance on placebo runs. Another possible factor is that, of the marihuana subjects, those who are accustomed to using marihuana may be a more suggestible

group than the other groups of subjects. Combining this possibility of greater suggestibility with a less detectable placebo could explain the results.

Subsequent studies should include data collected with two kinds of control: one where subjects receive the same kind of placebo as before (a cigarette made from inactive material) and another run when they are administered no smoke at all. In this way the subjects would know they receive nothing on one of their runs. The comparison between these two runs could then reveal any suggestibility factor.

Subjects in subsequent studies should be more carefully screened and chosen. They should be somewhat older students, more likely graduates or employees. They should also have scored 65% or better in accuracy on the divided attention task before they are accepted into the Driving Simulator testing group. Therefore, they should be a more stable group, in performance, both in terms of reaction time to the divided attention task and in general, because of their greater maturity and reliability in normal everyday pursuits. In addition, they might be expected to be somewhat less suggestible, although to date there is no hard evidence to back up this assumption.

The Librium results are not clear; however, there is a possibility that upon running another group of subjects, they might produce cleaner results. Also, the important question has been raised as to whether the Librium would have this type of effect, or to this degree, if indeed the subjects were anxious people rather than ordainary students who presumably were not anxious in the clinical sense of the word. Therefore, it is hoped that it will be possible to obtain support for testing additional subjects on Librium who have been classified as clinically anxious. This would also produce another set of data for a cross-validation type of comparison with the present results.

The Dexedrine results are based upon 16 subjects, which is twice the number of subjects used in the Librium study; therefore, more confidence may be placed in the results. The results also came out in what can be considered an expected direction, namely decreasing reaction time when Dexedrine only is ingested, and the tendency to off-set the increased reaction time due to alcohol when Dexedrine and alcohol are combined.

Therefore, it appears that although it is inconclusive at this time that marihuana effects driving, it does show indications of impairing performance in a way similar to alcohol.

It further appears that marihuana should not be permitted while driving any more than is alcohol; in spite of the fact that the dose level effects remain more obscure than alcohol. On the trial runs of marihuana in combination with alcohol, there was no evidence of a potentiation effect.

The publication of such conclusions should await the collection and analysis of the next set of data currently being generated at ITTE, which should be available in the fall of 1972. As for Librium, it is not yet clear that this drug by itself also affects drivers in an unfortunate way similar to alcohol. Specifically, there appears to be an increase in reaction time to the subsidiary task and an even further increase when combined with alcohol than with either Librium or alcohol alone.

As far as Dexedrine is concerned, it seems that it does improve (decrease) reaction time, but it also tends to disrupt the normal relationship between the driving task and mental capacity. This relationship is not as clear as the researchers would like it, and as funds become available the data that has been collected will be analyzed further for the possibility of better understanding the

relationship between increased reaction time and disrupted relationship with task load level and driving safety. At this time, it would appear that Dexedrine should not be recommended until such time as more evidence becomes available. As far as the possibility of off-setting the deleterious effects of alcohol, this should remain only as a possibility until further, more detailed analysis can be made of the data or additional data collected.

The overall conclusion is that while results are statistically inconclusive, there is a trend of all three of these drugs alone and in combination with alcohol to in some way affect the driver's ability to share his attention and respond in a normal way while driving in the UCLA Driving Simulator. One can conclude that because this disruption of the normal ability is similar to that produced by 0.10% BAL, it is very likely to be related to increased probability of accident involvement. Consideration of the ways in which these effects may be operating led to the following hypothesis about brain levels, drugs and driving.

6.2 Brain Levels, Drugs and Driving

It has been well established that as humans learn physical skills such as walking, running or playing tennis, the coordination between nerves and muscles is at first ragged and unpredictable. Then, with practice, it becomes graceful and reliable. Studies have shown that this progression from rough to smooth performance is accomplished by shifting nervous system control from the upper brain centers to the lower brain and brain stem.

The control of these actions that are routinely practiced and well learned requires less and less conscious attention for successful performance; less and less effort is required to respond to even minimal cues. As a result, increasing confidence is gained (35).

These considerations may account for many of the difficulties associated with drugs and driving.

The ITTE research program has produced evidence that the activity of divided attention which is controlled by higher brain centers is affected at lower dosage levels of both drugs and alcohol than are the vehicle-control scores which are controlled by lower brain centers. In other words, this present research project has shown that the nature of the effect on driving is to produce performance decrements in higher brain centered activities such as CNS processing time of information inputs rather than lower brain centered activities such as learned motor skills. The relevance to traffic accident causation has been shown indirectly by means of the following research findings:

a. Subsidiary task (visual) scores.

b. Comparison of blood levels to field-test results (for alcohol).

c. Comparison with alcohol effects in the same drivers (for other drugs).

These findings have a profound implication on highway safety practices. For example, the sobriety tests in most states are based on physical skills (lower brain centered) which are not affected until fairly high levels of BAL are reached. Even the chemical tests are set at the 0.10% level or higher.

To make matters worse, drivers expecting to be affected in physical ways (lower brain centered) may set personal criteria (to drive or not) based on their subjective awareness of a deficit in physical performance. However, when they do not experience motor-skill degradation they then judge themselves as fit. This places them in double jeopardy, so to speak, because they then are not even looking for a deficit in the critical upper brain centered processes.

The nature of the deficit in the higher brain centers is little understood even by researchers. Drivers may only experience it as a sudden awareness of another vehicle on a collision course and blame the other driver for "darting out in front" of them. Researchers seeking driving effects in the lower brain center types of vehicle control (physical skills) are often disappointed since these are often not influenced by normal dosages. The disappointed researcher then tends to increase the skill level requirement of his tests beyond that actually used in driving. The drivers in turn tend to disregard performance decrements revealed by these increased demands on their skill because they recognize that these demands have been unnaturally exaggerated.

Other drugs, when combined with alcohol, can produce a potentiation. When this happens the effects are greater than the sum of the two individual doses. This can result in total effects that are even more subtle than either drug alone because the driver may assume he has only to be wary of the alcohol. He does not "read" the effects of the other drugs, nor of the combination.

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Other factors such as age and experience probably interact with the three facts noted above to produce strong likelihoods that:

a. Inexperienced drivers are more severely affected because more of their control is taking place in the higher brain centers.

b. Habitual drinkers or marihuana users learn to cope to some degree; the constantly impaired skills are adapted to by the lower centers.

c. Inexperienced drivers who are also inexperienced drinkers will constitute a particularly hazardous group. This fact was revealed by a recent study (36) that came to our attention after this hypothesis was formulated.

d. Older drivers gradually lose the lower brain center control skills and must use an increasing proportion of higher center activity.

e. Older, inexperienced drivers are <u>most</u> severely affected.

f. Occasional drinkers or marihuana users will be affected more than habitual ones by the same dosage.

Future work needs to be done to demonstrate how these effects of drugs on higher brain centers may actually cause drivers not only to respond more slowly but also to totally fail to detect hazardous situation cues. Visual search studies have the potential of revealing such effects.

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8. APPENDICES

Appendix A. <u>Experimental Participant Release</u>

SUBJECT CONSENT AND RELEASE FOR PSYCHOPHYSIOLOGICAL STUDY

I, the undersigned, agree and consent to participate in a scientific experiment designed to determine the effects of cannabis (marijuana) and alcohol intoxication. I understand that this experiment will be carried on in a psychophysiology laboratory located at UCLA and that appropriate legal approval has been obtained. I further understand that during the course of my participation in these studies I may be asked to smoke or drink substances which may or may not contain cannabis (marijuana) or alcohol and that, as a result, I may experience some degree of cannibis (marijuana) or alcohol intoxication.

I do hereby affirm that I have read the above, and do release the State of California, UCLA, and those scientists and their assistants conducting these experiments from all liability of any ill effect which I may experience as a result of participation in this experiment.

Witness

Subject

Date

Date

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Augustica D. Cubicat. Tateswinises Downe

Appendix B. <u>Subject Interview Forms</u>

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۲		
		I.D. No
		Date
	Interview	
12.20		
Address		
Phone N	umbers	
Availab	ility for experimental sessions: (dates, month	19)
Be	st days (5-hour duration)	
Be	st hours free	
Ca	n you be available between 8 a.m. and 1 p.m. Yo	es No
2. Rac	e	
3. Are	you a student: Yes No	
' Hea	lth:	
a.,	Have you ever had a serious illness? Yes	No
	Kind When	
h.	Do von now have a serious illness? Ves	No
	Vina	
	KING	
C .	Do you take any medication at present? Yes	No
	Kind	
đ.	Have you ever had a serious emotional illness?	YesNo
	Were you hospitalized? Mes No	
8.	Has anyone in your immediate family been hospi psychiatric reasons? YesNo	italized for
e. f.	Has anyone in your immediate family been hospipsychiatric reasons? YesNo Have you ever been in psychotherapy? Yes	italized for
e. f.	Has anyone in your immediate family been hospin psychiatric reasons? YesNo Have you ever been in psychotherapy? Yes Are you now in psychotherapy? YesNo	italized for
e. f. g.	Has anyone in your immediate family been hosp psychiatric reasons? YesNo Have you ever been in psychotherapy? Yes Are you now in psychotherapy? Yes No	italized for
€. f. g.	Has anyone in your immediate family been hosp psychiatric reasons? Yes <u>No</u> Have you ever been in psychotherapy? Yes Are you now in psychotherapy? Yes <u>No</u>	italized for
£. f. g.,	Has anyone in your immediate family been hosp: psychiatric reasons? Yes <u>No</u> Have you ever been in psychotherapy? Yes Are you now in psychotherapy? Yes <u>No</u>	italized for

I.D. No.

Ĵ,	Considering beer, wine and discilled liquor, about how many drinks
	do you average per seek?
5.	Has chere ever been a period when you averaged five or more drinks
	in one sitting, two or more times a week? Yes No
	When was it?

Do you currently, on occasion, have 5 or more drinks at one sitting? Yes No .

How often? once a year or less

2 - 11 times a year

once a month

once a week

two or more times a week_____

Except for medically prescribed use, have you ever used in the past 7。 or present, sedatives such as seconal, nembutal, phenobarbitol,

. .

doriden, etc.? Yes____ No____

Regularly Fairly frequently

Occasionally

Rarely

Except for medically prescribed use, have you ever used in the past 3. or present, stimulants such as dexamyl, dexedrine, elavil, preludin, ritalin. etc.? fes No

•

Have you ever had a serious unfavorable reaction to marijuana?

Yes NO

9.

I.D. No.

0. Have you ever taken:	Yes	No	Total No. of <u>Times</u>	No. of times in Last 12 months
LSD		san allara	analist connected in the last way	andred affines, 2 (1) als - Margaret Mangalanding affinitions affinitions affinitions
Other hallucinogens Peyote, mescalina, DMT: stc.)	anna an ta ann		60 00000,000 - 640. 0	

1. Grade point average in college

Would you be willing to participate in an experiment involving drugs mariguared amphetacdues, tranquillizers, etc.), alcohol of a combination of drugs and alcohol? Yes No

(Appropriate logal approval has been obtained for all experiments in which you would be asked to participate.)

Appendix C.

General Information Sheet and Treatment Data Sheet
SUBJECT CODE	· ·· · · · · · · · · · · · · · · · · ·					DATE		•		
	•									
ADDRESS CARD		F	· · .	•	,			••		
			• .							
NAME :	(Test)					(17:00	+- \			
	(Dast)			٠		(112			·	
ADDRESS :	I					•				
		· .			•					
CITY:	· .	· · · · · · · · · · · · · · · · · · ·							<u></u>	
PHONE:			CAL.	DR. 1	LICEI	NSE:				
						•				
	<u>*</u>	<u></u>								
FILM CARD										
BTC			MC				·			
BTC			MC							
BTC		• •	<u>s</u>				·			
BTC		·	<u>s</u>							
BTC		terestantes and	<u>s</u>		-		•			
<u>SII</u>			DVA		•••••••••••					
SH	TOR	TTC	DVA							•
<u>511</u>		TTC			<u> </u>	******				
AVE	BE	TTC		RV	V	•••••••				
AVE		<u> </u>	DS A	MS		-				
MC			OTHER:	, burner (1999)		الورديان معربانين (الجون او معربان				
		·								
										-

GENERAL INFORMATION SHEET - DRIVING SIMULATION LABORATORY

<u>(NFC</u>	DRMATION CARD	•		,		
	SEX	AGE	•		1	
	SIMULATOR	YES	NO			, produktion the spectra processed
	EXPERIMENTER			•		
	PROJECTIONIST					
	CONTROLLER					
<u>'ISI</u>	ON INFORMATION					
	DEFECTS None	M	н	A	0	
	GLASSES None	SL	B	T	_ C	
	RESTRICTION	YES	NC)		
	VISION TEST			, , ,		
DRIV	ING EXPERIENCE					
	DRIVER	NON-D	RIVER	•	'	
	YEARS DRIVEN					
	MILES PER YEAR				• • •	a anning faire an ann an
	PERCENT URBAN DR	IVING		4		
	CAR MAKE	MODEL	•	YEAR	· · ·	
	TRANSMISSION:STD	STE	ERING:STD.	BRAK	ES:STD.	
	AUTO	*	POWER		POWER	
TIN	ESS INFORMATION			,		
			VIN	DH	0	
	CAR		· · · · · · · · · · · · · · · · · · ·	- 	-	
	CINERAMA					
	SEASICK					
	AIRSICK	•				
	SWINGS		•			
	ROLLERCOASTERS					
	EYESTRAIN	1		· .		
	FLU, ETC.	•				
	EATING					
	DD THU THC					
	DUTINUTIO					
	OTHER				·	
	OTHER NO PAST HISTORY					
	OTHER NO PAST HISTORY REACTION TO DSL	· .	NoneV	tND	H	antigating Grant Learning
	OTHER NO PAST HISTORY REACTION TO DSL	•	NoneV	tNDE	H O	

MAD DATA SHEET

Subject Name	Subject Number	
	Date	
	Session	6 7 8 9 10 I
	Body Weight	12
•	Pulse	-13 -17 -15
•	Treatment	77 78
•		79
• :	Alcohol/Extram Consumed	20 21 22
	Consumption Started	
	Ended	
		27 28 29 30
	Smoke Started	31 32 33 34
	Ended	35 -36 -37 -38
	Pulse	
	Blood Alcohol	39 40 41
~	Time	42 43 44
•		-75 -48 -48
	Pulse	40 50 51
	Blood Alcohol	·
· · ·	Time	
·	DSL Started	80 / C OC CC
		59 30 51 62
	Pulse	63 64 65
	Blood Alcohol	·
	Time	
Number of Hours	Since last Consumed Solids and/or	09 /0 /1 /2
	Beverages	andink makin
During the past Consumed any	t week have you: Aicoholic Beverages (oz.)	73 74
•		75 78 77
- laken any Dru	ugs ipenscription/other! No Yes	78
What	How Much	

Appendix D. Short Drug Effects Questionnaire

<u>SDEQ</u>

. '

•••

	Nam	e of Subject	Subject Number	<u><u><u></u><u><u></u><u><u></u><u></u><u><u></u><u></u><u><u></u><u></u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u></u></u></u></u>	3
			Date $0 \frac{5}{6} \frac{1}{7} \frac{2}{8}$	$\frac{3}{1} + \frac{3}{7} + \frac{3}{10} + $	$\frac{5}{11}$
)			Session <u> </u> 12	•	
	1.	Does your head feel,	stuffier	Yes No	13
			clearer	Yes No	14
)	2.	Do colors seem,	duller	Yes No	-15
			brighter	Yes No	
	3.	Does your body feel more,	tense	Yes No	10
)			relaxed	Yes No	-17
			sluggish	Yes No	18
			energetic	Yes No	19
)	4.	Do you feel you have,	less control over your body	Yes No	20
			more control over your body	Yes No	21
	5.	Are you,	hungrier than usual	Yes No	22
I			less hungry than usual	Ves No	23
	6.	Do you feel,	worse than usual	Yes (Nô)	24
			better than usual	Yes (NG)	25
			more relaxed	Yes No	26
			more tense	Yes No	27
			happier	Yes (NO)	28
			sadder	Yes No	29
			more afraid	Yes No	30
			less afraid	Yes No	31
			more wide sweke	Ves No	32
			aloopior	Ver Are	33
			arechter	JED (NU)	34
			more nervous	res (NO)	35
			more calm and steady	Yes (No)	36

•				
7.	Do you feel,	more free than usual	Ves No	
		less free than usual	Yes No	39
8.	Is it,	easier to concentrate	Yes No	- 30
		harder to concentrate	Yes No	
9.	Are your thoughts moving,	slower	Yes No	40
		faster	Yes No	41
10.	Do you feel,	less like paying close attention to something	Yes No	42
		more like paying close attention to something	Yes	43
11.	Do you feel,	you can't hold on to thoughts as well	Yes No	45
		you can hold on to thoughts better	Yes (NO)	46
12.	Do you feel afraid of losin	g control over your thoughts	Yes No	47
13.	Do you feel your judgment i	s, worse	Yes No	48
		better	Yes No	49
14.	Do you feel your memory is,	better	Yes No	
		worse	Yes No	
15.	Do you feel as if you were	in a dream	Yes No	-52
16.	Does time seem to be going,	faster	Yes (No)	- 52
		slower	Yes No	
17.	Do you feel more,	suspicious than usual	Yes No	
		trusting than usual	Yes No	
18.	Do you feel more,	carefree than usual	Tes No	
		worried than usual	Yes No	5/
19.	Do ycu feel,	at peace with the world	Yes No	
		angrier than usual	Yes (No)	- 60

Appendix E. Long Drug Effects Questionnaire

Instructions for Subjective Drug Effects Questionnaire

These are some questions about how you have been feeling. Please indicate how you have been feeling since you took the drug. For example, you will be asked if your head felt lighter -- if it felt lighter than it usually feels, say yes for lighter. Then you will be asked if it felt heavier -- if it felt heavier than it usually feels, say yes for heavier. If if felt neither lighter nor heavier but the same as usual, say no for both.

Some of these questions will have meaning for you and others may not. We use this same list to see the effects of a number of different drugs on many different people. Just answer these as well as you can in terms of how you felt as compared with the way you <u>usually</u> feel.

' <i></i>	.e				,		
Nan	ne of Subject		_Subject Number	013	<u>bz 0</u>	<u> </u>	
			Date	$\frac{1}{0}$ $\frac{5}{5}$	$\frac{3}{1}$ $\frac{4}{2}$	$-\frac{1}{2}$	
			Session	$\frac{1}{12}$	8 9	0 10	11
The you 4 h	e first group of questi have been feeling phy ours.	ons has to do sically during	with how f the last				
Con	paring it with the way	you u su ally f	eel;				
1.	Did your head feel,	heavier			Yes	No	10
		lighter			Tes	No	
	• •	stuffier			Yes	No	20
		clearer			Yes	NO	22
2.	Did vour head ache?				Yes	NO	23
2	Did you feel a heavy	pressure on th	a sides or ton			$\mathbf{\nabla}$	25
3.	Did you teet a heavy		of your head?		Yes	NO	
4.	Did your eyelids feel	as if they we	ere closing?		Yes	NO	20
5.	Did your eyes feel st	rained?			Yes	NO	21
6	Did your mouth feel	drier			Vos	No	28
••	wid your mouth recry	watt a 7			Vac	No	20
-		wercer			165	ро	30
/.	Did your lips feel,	more numb			Yes	NO	32
		more sensitiv	'e		Yes	No	33
		stiffer			Yes	NO	35
		looser			Yes	No	
8.	Did your throat feel,	wetter			Yes	No	
		drier			Yes	No	38
9.	Did your eyesight see	m, better, cle	arer than usual		Yes	NO	. 39
		worse, more	blurred than u	sual	Yes	NO	41
		clearer in	the middle than				42
		around the	edges of your v	ision	Yes	No	

10. Did things look, closer	Yes No	
farther away	Yes No	45
ll. Did colors seem. duller	Yes No	46
brighter	(Var) NO	48
DIIGNEEL	A CO NO	49
12. Did something that you looked at stand out very clearly?	Yes No	51
13. Did things that are usually still seem to be moving?	Yes No	52
14. Did you see any imaginary things?	Yes No	
15. Did you see images when your eyes were closed?	Yes No	
16. Did your hearing seem, worse than usual	Yes No	54
better than usual	Yes No	55
17. Did sounds seem, farther away	Ves No	56
		58
closer		59
18. Did your ears seem under pressure	Yes (NO)	61
19. Did your voice sound, closer	Yes 🚺	62
farther away	Yes NO	
slower	Yes No	63
faster	Yes No	65
smoother	Yos MA	66
al urmad		68
Stutted		69
20. Did something that you listened to stand out very clearly?	(Yes) No	70
21 Did your sense of smell seem, sharper	Yes No	77
duller	Yes No	74
22. Have you been noticing the way your body feels,		12
less than you usually do	Yes No	7 A
more than you usually do	TER NO	/ 42
		75

23.	Dia your body feel.	more unsteady	Yes	No	
		steadier	Yes	NO	
		hotter	Yes	No	70
			<u>c</u>	ard 2	80
		c older	Yes	No	10
		more tense	Yes	No	
		more relaxed	Yes)	No	
		more sluggish	Yes	NO	
		more energetic	Yes	NO	24
		lighter	Yes	No	25
		heavier	(Yes)	No	27
		smaller	Yes	612	28
		larger	Yes	NO	30
		better than usual	Yes	NO	3;
		worse than usual	Yes	NO	33
24.	Did your movements seem.	faster	Yes	No	34
		clower	Ree	No	36
25	Did you feel you had less	control over your body	ন্দ্র কল্ল	No	37
4J.	Did you leer you had, less	concrot over your body	(IES)	NO	39
	MOLE	control over your body	Yes	NO	40
26.	Did you become afraid of lo	sing control over your body?	Yes	NO	42
27.	Did you feel as if part of ;	your body wasn't connected to the rest of your body?	Yes	NO	
28.	Did your arms or legs feel,	jumpier	Yes	No	43
		stronger	Yes	60	44
		weaker	Yes	NO	45
		tighter	Xes	NO	46
		looser	Yes I	No	49
					49

~~

	Did your arms or legs feel, more numb	Yes No
	more sensitive	Yes $\sqrt{9}$
	heavier	Yes No
	lighter	Yes No
	tingling	Yes No
29.	Did your hands or feel feel funny or strange?	No 57
30.	Did you become, more aware of your skin	Yes No
	less aware of your skin	Yes No
31.	Did your skin feel. funny	60 ∵es №
	tingling	Ye3 No
	drier	Yes No
	more perspiring	Yes 😡
32.	Did your heartbeat feel, slower	65 Yes (ිලි
	faster	Yes NV 67
33.	Did your breathing feel, lighter	Yes (NO) 68
	heavier	Yes No 70
34.	Did your stomach feel, heavier	Yes No
	lighter	7.
	IIgntei mana jittamu	74 74
	more jiccery	1es NO 76
~ ~	more pleasant	Yes (No 77
35.	Did you teel sick to your stomach?	Yes No -78
36.	Did you become, hungrier than usual	Yes No 79
	less hungry than usual	Yes No80

The sof y	next group of m our feelings and	uestions has to a d the mood you h	do with some ave been in.		Card 3	-
Comp	aring it with th	ne way you usual	ly feel:	\sim		
37.	Did you notice	your feelings,	more than usual	fes	No	ō
			less than usual	Yes	No	ī
38.	Did you feel,	worse than usua	1	Yes	No	3
		better than usu	al	Yes	No 24	ā
		more relaxed		Yes (No -21	5
		more tense		Yes	(NO	7
39.	Have you felt,	happier		Yes	No	ā
		sadder		Yes	No	5
		more afraid		Yes		2
		less afraid		Yes		2
		more wide awake		Yes	No	5
		sleepier		Yes	No	5
		pleasantly tire	d and sleepy	Yes	No	a
40.	Have you felt,	more nervous		Yes	NO	7
		more calm and s	teady	Yes	No	<u>5</u>
41.	Have you felt,	not a care in t	he world	Yes		5
		more worried		Yes		2
		more irritable		Yes	NO _	5
		less irritable		Yes	NO _	5
		more excited	, v	Yes	NO _	0
		dreamier		tes)	No	0
42.	Did you feel,	down in the dum	pa	Yes	(NO)	7
		on top of the w	orld	Yes		
		more at peace w	ith the world	Yes	No	- -
		angrier		Yes	$\frac{5}{5}$	3 7

ŧ

43. Did you feel, extreme well-being	Yes No	56
extreme anxiety	Yes No	50
dopey	Yes No	-50
dizzy	Yes No	59
high	Yes No	-61
more sober than usual	Yes No	-62
44. Did you have a weird feeling?	Yes No	
45. Did you feel as if you were floating?	Yes No	64
46. Did you feel, more free than usual	Yes No	05
less free than usual	Yes No	00
more serious	Yes No	-07
sillier	Ver No	
47. Did you feel, like crying	Yes NO	70
like laughing	Yes No	12
as if you see the comical side of things more	Yes No	75
like smiling or laughing at nothing particular	Yes No	-76
48. Did you have. a greater feeling of dislike for others	Yes No	
a greater feeling of love for others	Yes No	78
49. Did things seem, less pleasing than usual	Yes No	
Card 4		00
more pleasing than usual	Yes No	10
50. Did you feel as if you had, done something big and satisfying	Yes No	21
51. Did you feel as if you had, more control over your feelings	Yes KO	22
less control over your feelings	Xes 🔞	23

52. Did you feel afraid of losing control over your feelings?	Yes	(N)	75
53. Did you, like having people around more	Yes	(F)	20
like having people around less	Yes	No	26
like to talk less	(CGS)	No	27
like to talk more	Yes	No	29
54. Did you feel, talking was easier	Yes	No	30
talking was harder	Yes	No	32
55. Did it seem, barder than usual to describe in words			33
how you felt	Yes	No	35
easier than usual to describe in words	37	D '' -	
now you reit	res	NO	36
The next group of questions has to do with how your thinking has seemed to you.			
Comparing it with the way you usually are.			
comparing to wreat the way you abadily are.		\bigcirc	
56. Did your thinking seem, fuzzier	Yes	(NO)	30
clearer	Yes	(I)	<u> </u>
57. Did it become, easier to concentrate	Yes	No	- 39
harder to concentrate	Tes	No	41
58. Did thoughts move. slower	Yes	No	42
faster	Yes	No	44
59. Did you have, more things on your mind	Yes	No	45
less things on your mind	TES	No	47
60. Did your imagination become. less lively than usual	Ves	No	48
more lively than usual	Vac	No	50
and the second land line mender of the start of the second		1.9 . 0	51
or. Dro you reer, ress like paying crose attention to something		No	
more like paying close attention to			53

	62.	Did you keep thinking about some particular thing?	Yes (No)	
	63.	Did some things have a different meaning for you?	Yes No	
	64.	Did you feel that you, couldn't hold on to thoughts as well	Yes No	57
		could hold on to thoughts better	Yes No	50
1	65.	Did you feel that you had, more control over your thoughts	Yes No	61
		less control over your thoughts	Yes No	62
	66.	Did you feel afraid of losing control over your thoughts?	Yes No	64
	67.	Did you feel that your judgment was, worse	Ves No	65
		better	Yes No	
	68.	Did you feel that your memory was, better	Yes No	
		worse	Yes No	00
	The have around Comp	next group of questions has to do with the way you been seeing yourself and things and happenings nd you.		
		aring it with the way you usually are.		
	60	aring it with the way you usually are:		
	69.	aring it with the way you usually are: Did you become, more aware of yourself	Ves No	
	69.	aring it with the way you usually are: Did you become, more aware of yourself less aware of yourself	Yes No	
	69.	aring it with the way you usually are: Did you become, more aware of yourself less aware of yourself less aware of things around you	Ves No Yes No Yes No	<u>71</u> <u>72</u> <u>74</u>
	69.	aring it with the way you usually are: Did you become, more aware of yourself less aware of yourself less aware of things around you more aware of things around you	Ves No Yes No Yes No Ves No	71 72 74 75
	69. 70.	aring it with the way you usually are: Did you become, more aware of yourself less aware of yourself less aware of things around you more aware of things around you Did people, look different	Ves No Yes No Yes No Ves No Yes No	71 72 74 75 77
	69. 70.	aring it with the way you usually are: Did you become, more aware of yourself less aware of yourself less aware of things around you more aware of things around you Did people, look different seem more cheerful than usual	Ves No Yes No Yes No Yes No Yes No Yes No	71 72 74 75 77 77
	69. 70.	aring it with the way you usually are: Did you become, more aware of yourself less aware of yourself less aware of things around you more aware of things around you Did people, look different seem more cheerful than usual seem more sad than usual	VesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNo	71 72 74 75 77 77 78 79
	69. 70.	aring it with the way you usually are: Did you become, more aware of yourself less aware of yourself less aware of things around you more aware of things around you Did people, look different seem more cheerful than usual seem more sad than usual <u>Card 5</u>	Ves No Yes No Yes No Yes No Yes No Yes No	71 72 74 75 77 77 78 79
	69. 70. 71.	aring it with the way you usually are: Did you become, more aware of yourself less aware of yourself less aware of things around you more aware of things around you Did people, look different seem more cheerful than usual seem more sad than usual <u>Card 5</u> Did things in the room look different?	VesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNo	71 72 74 75 77 78 79 79
	69. 70. 71. 72.	aring it with the way you usually are: Did you become, more aware of yourself less aware of yourself less aware of things around you more aware of things around you Did people, look different seem more cheerful than usual seem more sad than usual <u>Card 5</u> Did things in the room look different? Did things seem more real than usual?	VesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNo	71 72 74 75 77 78 79 79 19 20

•

74.	Did you feel, like a different person	Yes No	- 77
	as if you were in a dream	Yes 😡	23
	controlled by something outside of		24
	yourself	res NO	25
75.	Did you notice the passing of time, more than you usually do	Yes 🔊	26
	less than you usually do	Yes No	27
76.	Did you, have a better sense of time	Yes No	29
	lose your sense of time	tes No	-30
77.	Did time seem to be going, faster	Yes No	- 37
	slower	Yes No	
78.	Did you like answering these questions?	Yes No	
79.	Did you dislike answering these questions?	Yes No	
80.	Do you think this drug was:		30
80.	Do you think this drug was: weak medium strong		
80.	Do you think this drug was: weakmediumstrong if weak: if strong:		38
80.	Do you think this drug was: weak medium strong if weak: if strong: somewhat somewhat		38
80.	Do you think this drug was: weak medium strong if weak: if strong: somewhat very very		38
80.	Do you think this drug was: weak medium strong if weak: if strong: somewhat somewhat very very very Was this experience pleasant?	Yes No	38
80.	Do you think this drug was: weak medium strong if weak: if strong: somewhat somewhat very very Was this experience pleasant? if yes, somewhat very	Yes No	38 38 39
80. 81. 82.	Do you think this drug was: weak medium strong if weak: if strong: somewhat somewhat very very Was this experience pleasant? if yes, somewhat very Was this experience unpleasant?	Yes No Yes No	38
80. 81. 82.	Do you think this drug was: weak	Yes No Yes No	38 38 39 40
80. 81. 82.	Do you think this drug was: weak medium strong	Yes No Yes No Yes No	38 38 39 40
80. 81. 82.	Do you think this drug was: weak medium strong if weak: if strong: somewhat somewhat very very very Was this experience pleasant? if yes, somewhat very Was this experience unpleasant? if yes, somewhat very Were you physically uncomfortable? if yes, somewhat very	Yes No Yes No Yes No	38 38 39 40 41
80. 81. 82. 83.	Do you think this drug was: weak	Yes No Yes No Yes Nc Yes Nc	38 38 39 40 41

-..

1

ţ

What drug do you think you have taken?

Marijuana Rum Punch

What do you think you have had to drink?

Please compare the strength of what you have been getting to what you have used in the past.

Drug: This was stronger____about the same____weaker_____

Drink: This was stronger____about the same____weaker____

How intoxicated do you feel?

Not at all	
Slightly	
Moderately	<u> </u>
Very	

(

ζ.

.

Appendix F. <u>Confidential Questionnaire</u>

...

CONFIDENTIAL

All information in this questionnaire will be held confidential. Please answer each question carefully. Your cooperation is greatly appreciated.

a severalla PLEASE PLACE A CHECK (~) NEXT TO THE ANSWER THAT IS CORRECT FOR YOU. Race or Ethnic Group: 1 ____1) Caucasian 1. 2) Mexican-American 3) Negro 4) Oriental 5) American-Indian 6) Other 2. Until you were 16 years old, with whom did you live most of the time? 1) both parents 2) one parent 3) relative (s) 4) guardian (s) 5) orphanage or other institution 6) other (specify) 3. If you did not live with both parents most of the time, was the reason: 1) divorce or separation 2) one parent died 3) both parents died

Before you were 13, how often were you punished for doing wrong?

(specify)

]) often 2) once in a while 3) seldom 4) never

4) court order

6) other ____

5) father not at home

How would you describe your childhood?

__l) happy 2) unhappy 3) sometimes happy and sometimes unhappy 4) other _____(specify)

10

11

What was your father's occupation

Describe his work._____

4.

5.

7. What is your occupation and job title?_____ Describe the work you do? (briefly)_____

12

13

14

15

3.6

17

8. How many jobs did you have prior to your enlistment?

> ___one to two jobs (1) three to four (2) _five to six (3) more than six (4)

9. How much do you like your present job?

> l) a lot 2) some 3) very little 4) not at all

10. How much stress and strain is there in your present job?

> 1) a lot 2) some 3) very little 4) not at all

11. What is the total yearly salary?

____1) less than \$3000

- 2) above \$3000 \$6000 3) above \$6000 less \$9000 4) above \$9000 less \$12,000
- 5) don't know

12. Are you presently single, married, divorced or widowed?

- 1) married
- 2) separated
- 3) divorced
- 4) widowed
- 5) common-law
- 6) never married

13.	Now far were you able to go in school?	
	 1) between grades 1 & 6 2) between grades 7 & 9 3) between grades 10 & 12 4) received a high school diploma 5) had some college 6) received a bachelor's degree 7) completed graduate school 8) have a professional degree of some type 	, 1 2
14.	Now often do you drive a car?	10
	<pre>1) three or more times a day 2) daily 3) several times a week 4) on the average once a week or less often</pre>	-19
15.	When you drive on the average how many miles per day do you usually travel?	20 21
16.	What is the average number of hours you drive during daytime?	
	<pre>1) less than one hour 2) one hour 3) two hours 4) three hours 5) more than three hours 6) don't travel during daytime</pre>	22
17.	What is the average number of hours you drive at nighttime?	
	<pre>l) less than one hour 2) one hour 3) two hours 4) three hours 5) more than three hours 6) don't travel during nighttime</pre>	23
18.	What type of roadway do you drive most on during weekdays?	
	<pre>1) freeways 2) small city streets (mostly stop signs) 3) large city streets (mostly signal lights) 4) small country roads 5) state highways (not freeways)</pre>	
	o, don't drive on weekdays	24

- 19. What type of roadway do you drive most on during weekends?
 - ____1) freeways
 ____2) small city streets (mostly stop signs)
 - 3) large city streets (mostly signal lights)
 - 4) small country roads
 - 5) state highways (not freeways)
 - 6) don't drive on weekends
- 20. In general, how often do you drive your car while you are angry or upset?

26

27

28

29

30

- 1) daily
- 2) several times a week
- 3) once a week
- 4) every two weeks
- 5) once a month or less often
- ____6) never

21. How often does driving itself upset you?

- ___l) often
- 2) sometimes
- _____3) rarely
- ____4) never

22. How does getting angry or upset effect your driving?

- ____1) may not drive as well as usual
- 2) may drive just the same as usual
- 3) may drive better than usual
- 4) don't drive when upset

23. How often do you drive around in your car to blow-off steam?

t

- ____1) often ____2) sometimes ____3) rarely
- ____4) never

24. Now often do you like to drive fast?

1) often 2) sometimes 3) rarely 4) never

2	25.	Which one of these statements best describes your car?		
•		<pre>1) it's only a means of transportation 2) it represents the type of person I am 3) it is a necessity but a pain in the neck 4) a source of pleasure as well as transportation 5) other (specify)</pre>		
		6) don't own a car	- 3	ī
Ĵ	26.	Now many accidents were you involved in during your lifetime when you were the driver?	32 3	3
	27.	How many of these do you think were largely your fault, no matter how they were actually reported?	34 3	5
:	28.	How many of these accidents caused an overall damage of \$300 or more?	36 3	7
2	.9.	Now many of these accidents were very minor accidents (small dents under \$250)?	38 31	9
	10.	Now did your, last accident occur?		
		1) my mind was on something else, didn't see in time 2) the other car caused it 3) something else caused it (an uninvolved car, a person crossing street, etc.) 4) I fell asleep 5) other		
		(specify)		
		 6) mechanical problems (such as brakes) 7) drove carelessly 8) had been drinking at the time 9) never in an accident 		Ĩ
-	1.	What type of driving habits do you have that could lead to an acc	4) Vident?	U
		<pre>l) you sometimes speed 2) your mind wanders 3) you often follow a car too closely 4) you often take your eyes off the road 5) you sometimes run stop signs or light signals 6) you often drive after taking a drink 6) you often drive after taking a drink 6) none that you are aware of</pre>	4	Ĩ

		+	Yes A Week Before	Yes A week to a Month	Yes A month to Two Months	No	
ì.	Engagement or marriage		-	Contemporation of the second	Quel Poly a Distances	ággarafjant gant site side	
2.	New responsibility or tasks at work or school	×	6		5111-2551-61-41-41-4	Berlinstein imme Berlift	42
з.	New financial debt						43
4.	New baby or pregnancy						44
5.	Death of a loved one	•			(frankriger van skriver)		45
6.			44-0-1-1 -1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-		fulligine (for explice of the	()	46
0.	never de separation					40 gadana (1947) ar 1948	47
7.	Break-up of a close friendship or argument with a close friend or spouse.				\$15555.55	لوروالإمروك مقربته طحا	Balling securi al
а.	Problems at school or work	·					413
9.	Trouble with the law					tang series sarang sake	49
10	Varatiza		0-14-11 -0-14-19-19-19-19-19-19-19-19-19-19-19-19-19-	-		<u> </u>	50
3.37.4	Vacacuon		•	0.0.1			51
11.	Change of Job		• ••••••••••••••••••••••••••••••••••••		Bradause interested		<u> </u>
12.	Change of residence		-	järnan kaita gängda sälle			20
	never in an accident			•			53
							54

32. Did any of the following events occur before your <u>last</u> accident? (Please check each statement)

Appendix G. <u>Vehicle Control Scores</u>

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COMPTLE DRIVE STATISTICS FOR ALL SUBJECTS

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137

DATE = 08/18/71

			-	MARIHUAN	A					
(A) (B) (C) (D) (F-TEST CR BOUN 0.19, 0.29, 3.47, 5.32) (T-TEST CR BOUN3.11,-2.20, 2.20, 3.11)	PL [CG 12	A/PL RUPI SUBS	EX (TG 12	T/PL PUPI SUBS	DIFFE (CC 12	RENCE FTG1 SUBS	NULL H	ST ST ST(T)	TT NULL / MU(C):	EST Hypoth =Ku(t)
	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	F	51G	т	SIG
AVG SPEED DURING THE DRIVE (MPH) (1)	28.336	5.656	24.290	9.020	4.096	11.567	0.55	0.	1-16	0.
S.D. OF SPEED DURING THE DRIVE (MPH) (2)	7.408	3.442	7.830	4.065	-0-421	5.778	0-72	0_	-0-24	0.
AVG SPD DURING THE DRIVE (FLM FRMS/SEC) (3)	21.645	3.270	21.305	4.297	0.340	6.100	0.58	0.	0.13	0.
SPEED REVS OF 5 MPH PER 25 FILM FRAMES (4)	0.821	2.482	2.649	4-550	-1-828	5.527	0.30	ñ.	-1.10	0.
AVE ACCEL POSITION (PP CT DEPRESSED) (5)	9.924	1.373	10.318	1.629	-0.394	2.134	0.71	ñ.	-0.60	<u>n</u> _
S.D. OF ACCEL POSITION (PR CT DEPRESSED)(6)	3.554	1.600	2.917	0.498	0-637	1.410	10.32	n n	1 50	<u> </u>
ACC REVS OF 2 PRCT PER 25 FILM FRAMES (7)	0.385	0.292	0.438	0.509	-0.053	n 504	10.32	n 0101	-0.30	0 •
ACC PEVS OF 5 PRCT PER 25 FILM FRAMES (8)	0.108	0.074	0.105	0.097	0 006	0.105	0.59	~	-0.50	0.
NO. OF BOK PPESSES DUPING THE DRIVE (9)	10.583	12.433	4.833	6 200	5 750	11 205	V• 30	0.01	0-12	0.
MAK PRESSURE DURING BRK PRS IPR CT MAXILION	20.667	19 407	30 166	22 / 25	-0.470	43 053	0.70	0.01	1+07	0.
AVERAGE STREPING WHEEL POSITION (DEGS) (11)	-29.281	10 006	-33 636	30.045	-7.4/9	42.993	0.34	0.	-0.73	0.
AVG TIME BET STR REVS OF 5 PR CT (SECS)(12)	1 3 2 5	1 004	- 33.030	20.004	4.377	14.977	0.98	<u>.</u>	0.96	e.
AVS DIE BETWEEN STR AND COMP (DECS) (13)	16 200	1.704	1+214	1.500	0.120	1.743	2.31	0.	0.23	0.
S.D. DE DIE BETWEEN STR AND FOUR (DECENTION	10.000	0.400	17.215	2+4/8	-0-413	4.5/1	1.39	0.	-0.30	9 •
MAX RATE OF CHO DE STREPTNO (DECS/CEC) (15)	23.004	2.043	21.351	8.353	-3.141	9.010	0.20	-0.05	-1.38	D -
STEER REVS DE 5 DECS PER 25 ETIM EDAMECTICA		- 494.472	- 35-120	459.505	-90-392	673.889	1.16	0.	-0.44	0.
STEED DEVS DE 10 DEC DED DE ETLA EDANCOLITA	0.920	0.652	0.786	0.554	· 0.140	0.660	2.37	С.	0.71	e .
- SICCH FLYS IN ID DEG FFR 25 FILM FRAMESTIN	0.309	0.152	0.259	0.076	0.049	0.143	3.96	0.05	1.15	0.
AVE STR RATE COINE INTO COME IDECACEEN AIRN	42.125	18.005	106-695	181.879	-63.971	181.130	0.01	-0.01	-1.17	0.
AV TH CON STOL OF STD TO WAN STD SCOLOON	0.	0.	0.	0.	D.	0.	-0.	-0.	-0-	-0.
AV THE FAM STEL UP STE TO MAX STE (SEC) (20)	0.	0.	0.	0.	0.	0.	-0.	-0.	-0.	-0.
AV SOU CHE UNKING ZOU FT BEF JURN (4PH)(21)	0.	0.	0	0.	_ C•	0.	-0.	-0.	-9.	-0.
AVG SPO LHG DURING TURNS (MPH) (22)	0-	D.	D.	0.	0.	0.	-0.	-0.	-0.	-0.
AV SPO CHS DUPING 200 FT AFT TURN (MPH)(23)	0.	0.	0.	0.	0.	0.	-0.	-0.	-0.	-0.
TIM FRM ACC LET-UP TO STRT OF TRN (SEC)(24)	0.	0.	0.	. 0.	0.	0.	-0.	-0.	-0.	-0.
TIM FRM END OF TRN TO ACC PRESS (SECS) (25)	с.	0.	0.	0.	0.	0.	-0.	-0.	-0.	-9-
AVG GSP BASE PATE DUR DRV (DIG UNITS) (26)	0.	D.	0.	0.	0.	0.	-0-	-0-	-0-	-0-
AV5 DRIFT OF GSR BASE RATE (DIG NN/SEC)(27)	0.		0			0.	-0.	-0.	-0-	-0.
TOT NO. OF GSR REACTIONS DURING THE DRV(28)	C.	٥.	υ.	0-	0.	0.	-0.	-0-	-2.	-0.
AVG MAG OF GSP PEACTIONS (DIG UNITS) (29)	0.	0.	0.	0.	0.	0.	-D.	-0-	-0-	-0-
AVG LENGTH OF BREATHS (SECONDS) (30)	1.960	0.278	2.125	0.495	-0.164	0.516	0.32	D-	-0.89	0.
S.D. OF LENGTH OF BREATHS (SECONDS) (31)	0.639	0.226	0.786	0.322	-0.146	0.432	0.49	D.	-1-12	0.
AVG DEPTH OF BREATHS (DIG UNITS) (32)	404.627	114.031	456.066	103.090	-51.438	111.548	1.77	0.	-1.53	ŏ.
S.D. OF DEPTH OF BREATHS (DIG UNITS) (33)	317.432	84.586	339.188	88.138	-21.756	76.385	0 92	6	-0.04	0.
TOT NO. OF BREATHS DURING THE DRIVE (34)	497.583	91.097	493.833	155-432	3.750	104.434	0.34	0	-0+74 D D6	0.
EPTHS WHP EXH TIM .LT. INH TIM (PR CT) (35)	49,200	4.790	46.933	5.375	2.265	8 013	0.79	~	0.05	0.
AVS BETH DEP/WID RATIO (DIG UN/ONT IND) (36)	214.342	64.388	229,195	51,841	-14-853	84 255	1 09	<u> </u>	0.74	0.
SO OF BRTH DEP/HID RAT (DIG UN/ENT INDIAN)	163.383	47 8.47	163-156	41.977	0.227	67.620	1.00	5.		U.
LENGTH OF DELVE (SECONDS) 1381	2906-000	465.272	3017.500	647 A10	-111 500	11 *** 5	1.04	U.	0.02	U.
IFUSTH OF OPIVE (FILM FRAMES) (20)	61516 000	3500 274	000 90170C	2517 147	16 000	2070 723	0.49		-0.43	0.
ITA OF PTH OF CAR FOR DRV IFO FIN FANSILAN	66727 100	3652 654	614-1 600 614-1 600	7000 33E	E 310		1.93	с. -	(• P1	<u>.</u> •
LITTO OF FO FIN FEMS TO REAL FIN FEMS (441)	1 757		1 505	0 A22	2.215 5.555	2007-2015	0.53	-	C . C 2	<u>-</u>
the factor of the second secon	1.4001	0+042	1.100	U . U . *	りゃりにと	1.1.6	1.56		C.19	<u></u>

COMPILED DRIVE STATISTICS FOR ALL SUBJECTS

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MARIHUANA

04TE = 08/18/71

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(A) (B) (C) (D) (E-IEST (R BOUN 0 19, 0 29, 3 47, 5 32)	PL	A/P <u>L</u>	SK	K/PL	DIFFE	RENCE	F7E	ST	TTE	ST
(T-TEST CR BOUN3.11,-2.20, 2.20, 3.11)	12	SUBS	12	SUBS	12	SUBS	SD(C)=	50(T1	MULCI*	ч90тн Ч9 (Т)
	MEAN	STD DEV	MEAN	STO DEV	MEAN	STO DEV	F	SIG	T	SIG
AVG SPEED DURING THE DRIVE (MPH) (1)	28.386	6.655	22.452	8.400	5.934	10.558	0.63	0.	1.86	0.
S.D. OF SPEED DURING THE DRIVE (MPH) (2)	7.408	3.442	7.852	4.343	-0.443	5.914	0-63	Ċ.	-0.25	0.
AVS SPD DURING THE DRIVE (FLM FRMS/SEC) (3)	21.645	3.270	20.849	4.160	0.796	4.754	0.52	b .	0.55	0.
SPEED REVS OF 5 MPH PER 25 FILM FPAMES (4)	0.821	2.482	1.616	2.367	-0.795	3.754	1.10	b.	-0.70	0.
AVS ACCEL POSITION (PR CT DEPRESSED) (5)	9. 924	1,373	10.261	1.537	-0.337	2.509	0.70	Ċ.	-0.45	D.
S.D. OF ACCEL POSITION (PR CT DEPRESSED)(6)	3.554	1.600	3.228	1.357	0.326	2.375	1.39	e.	0.45	0.
ACC REVS DF 2 PPCT PER 25 FILM FRAMES (7)	0.385	0.292	0.617	0.717	-0.232	0.739	0.17	-0.01	-1.04	0.
ACC REVS OF 5 PRCT PER 25 FILM FRAMES (8)	0.108	0.074	0.128	0.146	-0.019	0.163	0.26	-0.05	-0.39	0.
NO. OF BEK PRESSES DURING THE DRIVE (9)	10.583	12.433	6.333	5.850	4.250	12.397	3.28	0.	1.14	0.
MAX PRESSURE DUPING BRK PRS (PR CT MAX)(10)	20.667	19.497	26.979	29.366	-5.312	37.515	0.44	ē.	-0.55	0.
AVERAGE STEERING WHEEL POSITION (DEGS) (11)	-29.281	19.904	-28,161	12.507	-1,120	13.335	2.53	р.	-0-25	0.
AVS TIME PET STR REVS OF 5 PR CT (SECS)(12)	1.335	1.984	0.411	1-421	0.924	2.476	1.95	0_	1.24	<u>n.</u>
AVS DIF PETWEEN STR AND COMP (DEGS) (13)	16.800	6.458	15.323	5.439	1.477	4.797	1.41	0.	1.02	0
5.9. OF DIF BETHFEN STR AND COMP (DEGS)(14)	23.604	3.693	24.863	6.927	-1.259	5.141	D-28	-0.05	-0.31	0.
MAX RATE OF CHG OF STEERING (DEGS/SEC) (15)	-55.273	494.475	99.040	468.183	-154.312	401.363	1.12	c.	-1-28	0.
SIEER PEVS OF 5 DEGS PER 25 FILM FRAMES(16)	U-926	0.852	1,189	1.400	-0.263	.1.296	0.37	0.	-0.67	0.
STEER PEVS OF 10 DEG PER 25 FILM FRAMES(17)	0.309	0.152	0.346	0.300	-0.037	0.278	0.26	-0.05	-0.44	0.
MAX TIME PET STR REVS OF 5 DEGS (SECS) (18)	42.725	18.605	48.510	20.854	-5.784	21.575	0.80	0.	-0.89	0.
AVS STR PATE GDING INTO CRVS (DEG/SEC) (19)	0.	0.	D.	0_	0.	0.	-0-	-0-	-0.	-0-
AV TIM FPM STRT OF STR TO MAX STR (SEC)(20)	0.	0.	0.	0.	0.	· 0.	-0-	-9.	-0.	-0-
AV SPD CHG DUPING 200 FT BEF TURN (MPH)(21)	0.	0.	0.	0_	0.	0.	-0-	-0-	-0-	-0-
AVG SPD CHG DURING TUPNS (MPH) (22)	0.	0.	0.	0.	0.	0.	-0-	-0-	-0.	-0-
AV SPD CHS DURING 200 FT AFT TURN (MPH)(23)	0.	0.	0.	0	0.	0.	-0-	-0-	-0-	-0-
TIM FRM ACC LET-UP TO STRT OF TRN (SEC)(24)	0.	0	D-	0.	0.	0	-0.	-0-	-0-	-0.
TIN FON END OF TRN TO ACC PRESS (SECS) (25)	0_	0.	0_	0_	0.	0.	-0-	-0-	-0-	-0-
AV5 GSR BASE RATE DUR DRV (DIG UNITS) (26)	0.	0.	Ð.,	0-	9.	0.	-0-	-0-	-0-	-0.
AVS DPIFT OF GSP BASE RATE (DIG UN/SEC)(27)	0.	. 0.	0_	0_	0.	D.	-0-	-0-	-0-	-0-
TOT NO. OF GSP REACTIONS DURING THE DRV(28)	0.	0.	0.	D.	0.	0.	-0.	-0-	-0-	-0-
AVG MAG OF GSP PEACTIONS (DIG UNITS) (29)	0.	D.	0.	0.	0.	0.	-0.	-0-	-0.	-0-
AVE LENGTH OF BPEATHS (SECONDS) (30)	1.960	0.278	2.157	0.472	-0.197	0.605	0.35	2.	-1.05	0.
S.D. DE LENGTH DE BREATHS (SECONDS) (31)	0.639	0.276	0.780	0.311	-0-141	0.426	D.52	0_	-1.10	D.
AVS DEPTH OF BREATHS (DIG UNITS) (32)	404-627	114.031	419.244	138.257	-14.616	147.165	0.68	5	-0.33	0.
S.D. OF DEPTH OF HEFATHS (DIG UNITS) (33)	317.432	84.586	306-681	121-790	10.751	162.575	0-4B	<u>0</u> _	0.22	0
TOT NO. OF REPEATHS DURING THE DRIVE (34)	497.583	91.097	467-917	125-834	9-667	161-404	0.52	0_	0.20	0.
BRIHS WHR EXH TIM .LT. INH TIM (PR CT) (35)	49.200	4.790	48-060	5-540	1.140	8.753	0.75	0_	0.45	0.
AVE BETH DEPINIO PATID (DIG UN/ONT IND)(36)	214.342	64.388	208-587	75.775	5.755	77.587	D. 72	0.	0.25	0.
SD DF BRTH DEP/WID RAT (DIG UN/CHT IND)(37)	163.383	42 843	149_477	53.496	13.906	77-987	0-64	5.	0-63	5.
LENGTH OF DRIVE (SECONDS) (38)	2906-000	465.278	3030.750	558-413	-133.750	633.045	0-69		-0.70	Ď.
LENGTH OF DRIVE (FILM FRAMES) (39)	61514.000	3500.376	61328.000	6134,104	185.000	7670.094	0.37		5.08	.
LEN DE PTH OF CAR FOR DRY (ED FLH FRMS) (40)	66787.199	3654,456	66321.280	6777 559	465_919	9077.484	0.17	-1.11	0,17	<u>.</u>
PATIO OF EO FLH FRHS TO REAL FLM FRMS (41)	1.087	21042	3_079	0.037	0.008	0-132	1 27		0.85	č.
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	COMPILED DRIVE STATISTICS FOR ALL SUBJECTS				MARIHUAN	A			521	E = 08/	/18/71
	(A) (B) (C) (D) (F-TEST CR BOUN 0.19, 0.29, 3.47, 5.32)	PL (CG	A/PL RUP)	AL (TG	C/PL RUP)	DIFFE	RENCE -TG)	FTE NULL -	ST	TTE NULL F	EST
	(T-TEST CR BOUN3.11,-2.20, 2.20, 3.11)	12	SUBS	12	SUBS	12	SUB S	SD(C)=	SD(T)	40(C)=	±4U(T)
	-	KEAN	STD DEV	KEAN	STD DEV	HEAN	STD DEV	F	SIG	T	SIG
	AVS SPEED DURING THE DRIVE (MPH) (1)	28.385	6.666	27.186	8.544	1.200	7.005	0.61	ο.	0.57	0.
	S.D. DE SPEED DURING THE DRIVE (MPH) (2)	7.408	3.447	7.645	4-111	-0.236	3.141	D.70	0.	-0.25	0.
	4V7 SPD DUPING THE DPIVE (FLM FRMS/SEC) (3)	21.645	3.270	23.987	4.430	-2-341	4.997	0.54	0.	-1.55	0.
	SPEED REVS OF 5 MPH PER 25 FILM FRAMES (4)	0.821	2.432	1.465	3,159	-0.644	1.750	0.67	0.	-1.22	0.
	AVS ACCEL POSITION (PR CT DEPRESSED) (5)	9.924	1.373	10.762	2,206	-0-838	1.708	0.39	0.	-1.63	0_
	S.D. DF ACCEL POSITION (PR CT DEPRESSED)(6)	3,554	1.600	3,593	0.996	-0-040	1.521	2.59	0.	-0-09	0.
	ACC REVS OF 2 PRCT PER 25 FILM FRAMES (7)	0.385	- 0.292	0.290	0.113	0-095	0.325	6.61	0.01	0.97	0.
	ACC REVS OF 5 PRCT PER 25 FILM FRAMES (R)	0.108	0.074	0 096	0.050	0.013	0.078	2.24	C.	0.54	0.
	10. OF BPK PRESSES DURING THE DRIVE 191	10-583	12.433	7.500	8.271	3.083	13.238	2.26	ñ.	0.77	0
	MAX DEFOCIDE DIDING PRE DEC COD THE 197	20 667	10 407	22 612	27 007		23 025	0 48	ñ.	-0.28	n i
	AVERAGE STEERING WHEEL DOSITION (DECS) (11)	-20.281	10 004	-32 612	21+221	-1.,40	11 012	0.40	0.	1 00	5
	AVG TIME BET STR SEVS OF 5 DD CT (SECS)(12)	1 7 2 5	19.004	- 52.012	1 457	0 807	7 576	1 85	<u>~</u>	1.06	~
	AVG DIE RETWEEN STR AND COMP (DECS) (13)	16 200	6 468	- 15 747		1 053	· 3 785	1.00	<u>~</u>	1.00	~
	C D. OF DIE RETWEEN STR AND COMP (DECS) 111	22 604	507.0 503.5	22 245	6 650	1.000	6 012	00.1	<u>0</u>	0.72	n
	HAY PATE OF CHS OF STREPING (DECS/SEC) (15)	-56 272	LOL L75	121 118	404 121	-176 301	820 635	1 00	0. D	-0.30	ñ
	STEER REVS OF 5 DECS DED 25 ETIM FRAMESIAN	- 27.272	0.852	121+110 554	0 315	0 372	020.033	7 21	0.01	1 30	0.
	STEEP REVS OF TO DEC PER 25 FILM FRAMES(1)7	- 0 309	0.052	0 779	· 0.055	0.083	0.000	7 79	0.01	1 91	0
	MAY TIME BET STR REVS OF 5 DEGS (SECS) (18)	42 725	18 605	42 506	20 244	0.129	26 212	38 0	0.01	1.01	N
	AVE STR RATE GOING THIS CRUS (DEC/SEC) (10)	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	10.009		20.244	0.127	0	-0	-0	-0.02	-0
• • '	AV TIN FRM STAT OF STR TO VAY STR (SEC)1001	0	0	0	0	0.	. 0	-0 .	-0.	-0.	-0.
5	AV SOD FHE DURING ODD ET DEE TUON (MDH)/711	0.	0. n	0	0	0	. 0.	-0.	-0	~0.	-0
ö	AVE SPE FHE DURING TURNS (MPH) (27)	0 • .	0	/, · /,	. 0	~ ^	. 0.	-0.	-0-	-0.	-0.
	AVS SPO CHO DOMING TOMMS LIPHT (22)	· ·	0.	· D	0.	0.	0.	-0	-0.	-0.	-0.
	TIN FOR ACC LET-HD IN STDI DE TON (SECHOAN	0.	0	\ 0 -	0.	0.	0.	-0-	-0-	-0.	-0.
	TIN EDN FUD OF TON TO ACC DDESS (SEC7) 1251	0	0			· ·· ·· ·	V•	-0-	-0.	-0.	-0.
	AND AND AN AND AN AN AND AND AND AND AND	<u>.</u>	0	· •	0.	0.	0	-0-		-0.	-0.
	AVE DELET OF COD BASE SATE IDTO INVISEDITOR	0.	0.	0	0	0 • .	0.	-0.	-0-	-0-	-0.
	TAT OF ESS REALTING DUDING THE DEVICES			0				-0-	-0-	-0.	-0.
	AND NOT DE CSP REACTIONS DURING THE DRV(20)	0.	0.	0.	0.	0-	0-	-0.	-0.	-0.	-0.
	AND FENCTH DE ROEATNE (SECONDES) 1203	1 040	0.278	U	0 / 70	0.227	0.3(0)		-0-	-0.	-0.
		1.900	0.276	2-100	0.300	-0.227	0.309	0.35	<i>U</i> •	-2.04	0.
			0.220	0.199	0.350	-0-160	0.320	0.34	0.	-1-52	9.
		404.627	114-051	921-299	110-291	-52.672	135.299	1.07	0.	-1-29	C.
	S.D. OF DEPTH OF PERING THE DATE (33)	317.432	84.285	329.450	94.245	-12-028	105-183	0.81	D •	-0-38	0.
	UI N'I UN BREATHS DURING THE DRIVE (34)	497.583	91.047	402-083	92.458	95.500	110-473	0.97	D.	2.87	0.05
	- STINS BOR FAD IIS ALLA IND (IM LPK UT) (35)	47.200	4.190	48.6/1	5-/13	0.528	3.585	1.66	9.	0-49	0.
	- 143 HAIR UCT/FID MAILD (UIG UN/CN) IND(36)	214.342	64.288	220-998	43.037	-6.656	61-129	2.24	D.	-0-36	0.
	- SI OF BRITE DEPARTO KAL JUIS UN/UNI INU)[3/]	101-383	42.843	102-420	54.535	0.963	46.157	1.17	C.	C+ 07	0.
	EFERTIM OF DELVE (SECONDS) [33]	2906.000	403.278	2561.500	455.383	344.500	449.109	1.00	C.	2.29	0.05
	- LEVISTH OF OPINE THILM FRAMEST (39)	61514.000	3503.375	>5404.333	1263.949	2109.667	3659-059	7.67	5.01	1.91	с.
	LEN DE PIN DE CAR FUR DRV (EU FLM FEMS)(40)	05/0/.199	3624.426	03501.743	2254-921	31/5.456	40/5.473	2.56	2.	2.59	C+C5
	- FITID DH ED HEM FRMS TO PEAL FEM FRMS (41)	1.087	0.04Z	1.071	C.036	0.016	0.028	1.39		1.85	5.4

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COMPILED EVENT STATISTICS FOR ALL SUBJECTS ACROSS ALL EVENTS RESULTS OF DISTRIBUTION OF THE INDIVIDUAL SUBJECT MEANS

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MARIHUANA

	(A) (B) (C) (D) (F-TEST CR BOUN 0.19, 0.29, 3.47, 5.32) (T-TEST CP BOUN3.11,-2.20, 2.20, 3.11)	PL (CG 12	A/PL RUP] SUBS	EX1 (TG) 12	T/PL RUP) SUBS	DIFFER (CG- 12 S	ENCE TG1 SUBS	FTF NULL F SD(C)=	ST	TTE NULL H NU(C)=	ST (YPOTH (KU(T)
	· ·	KEAN	STD DEV	MEAN	STD DEV	_ MEAN	STD DEV	F	51 G	τ	SIG
	SPD AT THE BEGINVING OF THE EVENT (MPH) (1)	26.515	6.570	23.136	8.336	3.378	10.967	0.62	0.	1.02	0.
	SPJ AT THE END OF THE EVENT (MPH) (2)	26.478	6.865	23.300	8.283	3.178	11.315	0.69	0.	0.93	٥.
	MINIMUM SPEED DURING THE EVENT (MPH) (3)	21.145	7.679	16.860	10.373	4.286	13.943	0.55	0.	1.02	e.
	PARTHUM SPEED DURING THE EVENT (MPH) (4)	34.006	7.614	36.224	8.636	-2.218	10.330	0.78	C.	-0.71	0.
	SPRED REVS DE 5 MPR PER 25 FILM EPAMES (5)	0.821	2.543	2.700	4.672	1.879	5.681	0.30	0.	-1.10	0.
	AVERAGE SPEED DURING THE EVENT (MPH) [6]	26.689	6.575	23.002	8.452	3.687	11.176	0.61	0.	1.09	0.
	AVS SPD DURING THE EVENT (FLM FRMS/SEC) (7)	22,047	3.752	21.683	3.930	0.364	5.531	0.91	0.	0.22	0.
	ACC PEVS OF 2 PRCT PER 25 FILM FRAMES (8)	0.370	0.252	0.447	0.432	-0.077	0.498	0-34	C.	-0.51	0.
	ALL REVS OF 5 PPCT PER 25 FILM FRAMES (9)	0.092	0.074	0.099	0.076	-0.007	0.092	0.96	0.	-0-25	0.
	ITHE THIEST COMPLETE ACC LET-UP (SECS) (10)	0.656	0.606	0.672	0.818	-0.017	0.979	0.55	0.	-0.06	0.
	AVS ACCEL POSITION (PR CT DEPRESSED) [11]	9.726	1.709	10.080	1.668	-0.354	2.072	1.05	C.	-0.57	0.
	TIN TH IST ACC LET-UP OF 3 PR CT (SECS.(12)	2.696	0.491	2.759	0.594	-0.063	0.891	0.68	0.	-0.23	0.
	PAX POSITION OF ACCEL (PR CT DEPRESSED)(13)	14.341	3.340	14.043	1.697	0.298	2.931	3.87	0.05	0.34	0.
	TIM FOM ACC LET-UP TO 1ST ARK PRS (SEC)(14)	0.044	0-180	-0.011	0.160	0.054	. 0.189	1.25	0.	C.95	0.
	TIP TO IST BR PRS FRM STRT OF EVT (SEC)(15)	0.431	0.534	0.456	0.373	-0.035	0.709	2.04	0.	-0.16	0.
4	HAX AMT OF BRK PRESSURE (PR CT OF MAX) (16)	4.504	3.594	3.047	2.884	1.457	4.775	1.55	0.	1.01	0.
0	TIME TO DEP DIST IN BREATHING (SECS) (17)	0.		0.	0.	0.	0.	-0.	-0.	-0.	-0.
	TIME TO WID DIST IN BREATHING (SECS) (18)	0.	. D.	0.	D.	D.	0.	-0.	-0.	-0.	-0.
	AVEPAGE BREATHING RATE (BREATHS/SEC) (19)	0.485	0.073	0.455	0.109	0.030	0.136	0.45	0.	0.74	0.
	SEQUENCE NO. OF LAST MAN EVT MARKER (20)	116.587	92.328	99.646	69.638	16.941	134.977	1.76	b.	0.42	0.
	TIME OF LAST MAN EVT MARKER (SECS) (21)	1134.763	228.520	1197.983	296.658	-63.220	375.960	0.59	0.	-0.56	0.
	TIME AT THE BEGINNING OF EVT (SECS) (22)	1172.039	223.569	1230.489	312.531	-58.450	394.463	0.51	0.	-0.49	0.
	TIME AT THE END OF EVT (SECS) (23)	1186-707	225.601	1245.150	314.927	-58.443	397.800	0.51	C.	-0.49	0.
	LENGTH OF THE EVENT (SECONDS) (24)	14.669	2.365	14.661	2.790	0.007	3.739	0.72	0.	0.01	0.
	LENGTH OF THE EVENT (FILM FRAMES) (25)	300-107	15.239	300.049	15.399	0.058	0.909	C.98	9.	0.21	0.
	GSP BASE PATE FOR THE EVENT (DIG UNITS)(26)	0.	D_	D.	0.	0.	0.	-0.	-0.	-0.	-0.
	TIME TO A GSR CHG DE THE STD ANT ISECS)(27)	0.	0.	0.	0.	0.	0.	-0.	-0.	-0.	-0.
	TIME TO THE MAXIMUM GSR CHANGE (SECS) (28)	0.	• 0.	0.	0.	0.	0.	-0.	-0.	-0.	-0.
	MAX GSR CHG DUPING THE EVT (DIG UNITS) (29)	0.	D.	0.	0.	0.	0.	-0.	-0.	-0.	-0.
	AVE POSITION OF THE STR WHL (DEGS) (30)	-32.234	21.616	-37.418	21-253	5.184	17.110	1.03	0.	1.00	0.
	AVS PATE OF CHS DE STR WHL (DEG/SEC) (31)	157.517	27.078	153.757	19.617	3.759	26.130	1.91	0.	C.48	0.
	TIME TO BES OF STR INTO A TURN (SECS) (32)	0.	0.	. 0	0.	0.	0.	-0.	-0.	-0.	-0.
	MAX STR RATE GDING INTO TURN (DEG/SEC) (33)	· 0.	0.	0.	0.	0.	0.	-0.	-0.	-0.	-0.
	MAX TUEN DE THE STR WHL (DEGS) (34)	0.	0.	0.	0.	0_	0.	-0.	-0.	-0.	-0.
	MAX SIP PATE COMING OUT DE TURN (DG/SCI(35)	0.	0.	0.	0.	0.	0.	-0.	-0.	~0.	-0.
	SIFER PEVS DE 5 DEGS PER 25 FILM FRAMES(36)	1.241	1.473	1.033	0.716	0.208	1.188	4.24	0.05	0.58	0.
	STAR PERS OF 10 DEG PER 25 FILM FRAMES(37)	0.378	0.181	C.339	0-084	0.039	0.175	4.68	0.05	0.74	0.
	SITEM PEVS OF 15 DEG PER 25 FILM FRAMES(38)	0-266	0.096	0.238	0.045	0.02B	0.093	4.57	0.05	1.00	0.
	LEN THE PTH OF CAR IN EVT (EQ FLM FRMS) (39)	332.179	22.282	330.911	22.789	1.267	7.844	0.96	c.	0154	9.
	FATTU HE ED FLM FRMS TO REAL FLM FRMS (40)	1.116	0-042	1.112	0.030	0.005	0.032	1.96	5.	0.48	0.
	AVE DIE BETREEN STR AND STR COMP (DEGS)(41)	53.422	18.255	531508	16.918	-0.087	13.859	1-16	0.	-0.07	0.
	MAX DIF HETWFEN STR AND STR COMP [DEGS][42]	-10.100	·88.56D	-29.345	87.418	19.745	51.209	1.03	C .	1.26	р.

DATE # 05/18/71

COMPILED EVENT STATISTICS FOR ALL SUBJECTS ACROSS ALL EVENTS RESULTS OF DISTRIBUTION OF THE INDIVIDUAL SUBJECT MEANS

MARIHUANA

(A) (B) (C) (D)	PL	A/PL	SHI	K/PL	DIFFE	RENCE	FTE	57	TTE	51
(F-TEST CR ROUN 0.19, 0.29, 3.47, 5.32)	(CG	RUPI	(TG	RUPI	(CG-	-TG)	NULL H	HTCAY	NULL H	IYPOTH
(T-TEST CR BOUN3.11,-2.20, 2.20, 3.11)	12	SUBS	12	SUBS	12	SUBS	SD(C)=	SDITE	원()(C)=	WU(T)
_						•				
-	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	F	SIG	т	SIG
SPD AT THE BEGINNING OF THE EVENT (MPH) (1)	26.925	7.042	21.587	7.969	5.338	10.771	0.78	0.	1.64	0.
SPD AT THE END BE THE EVENT (MPH) (2)	26.881	7.238	20-847	8.180	6.034	11.528	0.79	0.	1.74	0.
MINIMUM SPEED DURING THE EVENT (MPH) (3)	21.539	8.023	14.258	9.222	7.281	13.267	0.76	0.	1.82	0.
MAXIMUM SPEED DURING THE EVENT (MPH) (4)	34.330	8.009	34-675	10.770	-0.345	12.000	0.55	0.	-0.10	0.
SPEED PEVS DE 5 MPH PER 25 FILM FRAMES (5)	0.813	2.545	1.803	2.613	-0.991	4-010	0.95	C.	-0.82	0.
AVERAGE SPEED DURING THE EVENT (MPH) (6)	27.004	7.024	21.331	7.823	5.673	10.476	0.81	0.	1.50	0.
AVG SPD DURING THE EVENT (FLM FRMS/SEC) (7)	22.347	3.954	21-723	3.792	0.624	4.159	1.09	0.	0.50	0.
ACC PEVS OF 7 PRCT PER 25 FILM FRAMES (8)	0.386	0.280	0.537	0.559	-0.151	0.556	0.25	-0.05	-0.90	0.
ACC PEVS OF 5 PPCT PEP 25 FILM FRAMES (9)	0.094	0-074	0.098	0.096	-0.003	0.111	D-60	0.	-0.10	0.
TINE TO IST COMPLETE ACC LET-UP (SECS) (10)	0.583	0.602	0-609	0.932	-0.026	0.731	0.42	0.	-0.11	0.
AVS ACCEL POSITION (PR CT DEPRESSED) (11)	9.811	1.702	9.476	1.244	D.335	2.506	1.87	0.	0.44	0.
TIN TO IST ACC LET-UP OF 3 PR CT (SECS. (12)	2.592	0.516	2.714	0.746	-0.022	1.056	0.48	0.	-0.97	0.
MAX POSITION OF ACCEL (PR CT DEPRESSED)(13)	14.529	3.564	13.465	2.190	1.064	4.653	2.55	c.	0.76	0.
TIN FPM ACC LET-UP TO IST BRK PRS (SEC)(14)	0.055	0.148	0.035	0.261	0.019	0.292	0.32	0.	0.22	0.
TIM TO IST BR PRS FRM STRT OF EVT (SEC)(15)	0.490	0.601	0.696	0.730	-0.206	0.885	0.48	0.	-0.77	0.
MAX ANT DE BRK PRESSURE (PR CT DE MAX) (16)	5.305	4.199	8.415	10.452	-3.109	11.649	C 6	-0.01	-0.89	0.
TIME TO DEP DIST IN BREATHING (SECS) (17)	• 0.	0.	0.	0.	0.	0.	-0.	-0.	-0.	-0-
TIME TO WID DIST IN BREATHING (SECS) (18)	0.	0.	0.	0.	0.	. 0.	-0.	-0.	-0.	-0.
AVERAGE BREATHING RATE (BREATHS/SEC) (19)	0.493	0.058	0.459	0.082	0.035	0.127	0.69	0	C. 90	0.
SEQUENCE NO. OF LAST MAN EVT MAPKER (20)	124.533	98.529	128.136	70.947	-3.603	115.256	1.93	0.	-0.10	0.
TIME OF LAST MAN EVT MARKER (SECS) (21)	1231.378	175.851	1334.477	237-636	-103.099	372.221	0.55	0.	-1.06	0.
TIME AT THE BEGINNING OF FVT (SECS) . (22)	1270.278	174.974	1401.766	267.065	-131.488	335.971	0.43	э.	-1.30	0.
TIME AT THE END DE EVT (SECS) (23)	1285.470	176.733	1417.588	269.813	-132.119	338.466	0.43	0.	-1.29	9.
LENGTH OF THE EVENT (SECONDS) [24]	15.192	2.249	15.822	3.394	-0.631	2.745	0-44	0.	-0.76	0.
LENGTH OF THE EVENT (FILM FRAMES) (25)	314,578	8.537	315-263	8.775	-0.685	1.132	D.95	0.	-2.01	0
GSR BASE PATE FOP THE EVENT (DIG UNITS) (26)	. 0.	0.	0.	0.	0.	D.	-0.	-0-	-0.	-0-
TIME TO A GSR CHG OF THE STD AMT (SECS)(27)	0.	0.	0.	0.	0.	0.	-D.	-0-	-0.	-0-
TIME TO THE MAXIMUM GSR CHANGE (SECS) [28]	0.	0.	0.	0.	0.	0.	- 0 -	-0-	-0.	-0_
MAX GSR CHG DUPING THE EVT (DIG UNITS) (29)	0.	0.	0.	0.	D.	0.	-0-	-).	-0.	-0-
AVG POSITION OF THE STR WHL (DEGS) (30)	-31.427	21.135	-29.162	11.469	-2.265	16.886	3.40	0.	-0.44	0_
AVG RATE OF CHG OF STR WHL (DEG/SEC) (31)	156.890	27.833	160.077	31.703	-3.188	32.009	0.77	0.	-0.33	0_
TIME TO BEG OF STE INTO A TURN (SECS) (32)	0.	0.	0.	0.	D.	0.	-0-	-0-	-0-	-0-
MAX STR RATE GOING INTO TURN (DEG/SEC) (33)	0.	0.	0.	0.	0.	0.	-0-	-0.	-0-	-0-
MAX THRN OF THE STR WHL (DEGS) (34)	0.	ο.	· 0.	0.	0.	0.	·-D.	-0-	-0-	-0-
MAX STR RATE COMING OUT OF TUPN (DG/SC)(35)	0.	0.	0.	0.	D.	0.	-0-	-0-	-0-	-0-
STEER REVS DE 5 DEGS PER 25 FILM FRAMES(35)	1.257	1.627	1.454	1.406	-0.197	1.624	1.34	0.	-0.40	0.
STEER REVS OF 10 DEG PER 25 FILM FRAMES(37)	0.356	0.161	0.392	0.242	-0.035	0.219	0.46	0	-0.54	0
STEEP REVS OF 15 DEG PER 25 FILM FPAMES(38)	0.242	0.077	0.234	0.093	0.008	0.102	0_6R	5.	0.26	0_
LEN OF PTH OF CAR IN EVT (ED FLM FRMS) (39)	348.249	12.945	347.239	14.871	1.010	11.985	0_76		5.25	ň_
PETTO OF FO FLM FRMS TO PFAL FLM FRMS (40)	1.115	0.034	1.106	0.035	0.009	0.029	0.90 AP.0	2	1.54	<u>^</u>
LVS DIF BETWEEN STR AND STR COMP (DEGS) (41)	53.038	15.103	47.992	15.236	5.046	14.545	1.41	~	1,19	~ ·
HIX DIF BETWEEN STR AND STR COMP (DEGS) (42)	-8.914	87.155	-23.473	81.424	14.559	49.625	1.15		0.97	0 .
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COMPILED **EVENT** STATISTICS FOR ALL SUBJECTS ACROSS ALL EVENTS ACCUSS OF DISTRIBUTION OF THE INDIVIDUAL SUBJECT MEANS

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MERTHUANA

CATE = 08/18/71

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(A) (B) (C) (D) (F-TEST CR BOUN 0.19, 0.29, 3.47, 5.32) (T-TEST CR BOUN3.11, -2.20, 2.20, 3.11)	P1 (CC 12	A/PL SRUP1 SUBS	4L (T3 12	C/PL RUP) SUBS	DIFFER {CG- 12 S	NENCE -TG) SUBS	FTE RULL H SD(C)=	ST YPOTH SO(T]	HULL F	EST HYPDTH HU(T)
	MEAN	_STD DEV	MEAN	STD DEV	MEAN	STD DEV	F	SIG	T	SIG
SPD AT THE REGINNING OF THE EVENT (MPH) (1)	27.186	6.519	25.753	8.057	1.433	6.054	0.65	0.	0.78	0.
SPJ AT THE END OF THE EVENT (MPH) (2)	27.016	7.094	25.073	7.827	1.943	7.377	0.82	D.	0.87	0.
PINIMUM SPEED DURING THE EVENT (MPH) (3)	21.598	7.986	18.782	9.838	2.817	8.407	0.66	0.	1.11	0.
PARIMUM SPEED DUPING THE EVENT (MPH) (4)	34.356	7.912	36.891	10.207	-2.535	7.969	0.60	C.	-1.06	0.
SPEED REVS OF 5 MPH PER 25 FILM FRAMES (5)	0.800	2.502	1.585	3.512	-0.785	1.880	0.51	0.	-1.39	0.
AVERAGE SPEED DURING THE EVENT (MPH) (6)	27.056	6.992	25.405	7.877	1.651	6.692	0.79	C.	0.82	0.
LVS SPD DUPING THE EVENT (FLH FRMS/SEC) (7)	22.377	3.929	24.672	4.909	-2.296	5.165	0.64	Ο.	-1.47	0.
ACC REVS OF 2 PRCT PER 25 FILM FRAMES (8)	0.387	0.280	0.295	0.143	0.092	0.292	3.84	0.05	1.04	0.
ACC REVS OF 5 PRCT PEP 25 FILM FRAMES (9)	0.093	0.074	0.090	0.046	0.003	C.067	2.63	0.	0.15	0.
TIME TO IST COMPLETE ACC LET-UP (SECS) (10)	0.602	0.644	0.403	0.593	0.200	0.576	1.18	0.	1,15	Ċ.
AVG ACCEL POSITION (PR CT DEPRESSED) (11)	9.832	1.739	9.990	2.183	-0.158	1.701	0.63	0.	-0.31	0.
TIM TO IST ACC LET-UP OF 3 PR CT (SECS-(12)	2.562	0.430	1.963	0.709	0.599	0.807	0.37	0.	2.45	0.05
MAX POSITION OF ACCEL (PR CT DEPRESSED)(13)	14.519	3.599	14.939	3.092	-9,471	2.145	1.36	0	-0.73	0.
TIM FPM ACC LET-UP TO IST BRK PRS (SEC)(14)	0.042	0.173	0.041	0.190	0.001	0.237	0.82	0.	0.01	0.
TIM TO 1ST BR PRS FRM STRT OF EVT (SEC)(15)	0.472	0.586	0.772	0.687	-0.301	0.619	0.73	0.	-1.61	0.
HAX ANT OF BER PRESSURE (PR OT BE MAX) (16)	5.105	4.063	7.551	8.039	-2.445	7.174	0.26	-0.05	-1.13	0.
TIME TO DEP DIST IN BREATHING (SECS) (17)	0.	0.	0.	0.	0.	0.	-0.	-1-	-0-	-0-
TIME TO WID DIST IN BREATHING (SECS) (18)	0.	0.	0.	0-	0.	. 0.	- D -	-1.	-0.	-0.
AVERAGE BREATHING RATE (BREATHS/SEC) (19)	0.491	0,065	0-436	0-078	0.055	0.084	0.70	n.	2.17	0.
SEQUENCE NO. OF LAST MAN EVT MAPKER (20)	123.352	- 98-016	123-015	91.575	0.338	103-649	1.15	0.	0 01	õ
TIME OF LAST MAN EVT MARKER (SECS) (21)	1231.831	191-019	1205-007	218-981	26.824	191.418	0.76	n.	6 46	0.
TIME AT THE BEGINNING OF EVT (SECS) (22)	1269.727	186-368	1235-032	215-622	34-696	220-112	0.74	0.	0.52	0-
TIME AT THE END OF EVT (SECS) (23)	1284.769	188-195	1248.779	219.445	36.039	222.311	0.74	0.	0.56	0.
LENGTH OF THE EVENT (SECONDS) (24)	15-041	2.324	13.608	3.018	1.344	2 636	0.14	n	1 69	· · ·
LENGTH OF THE EVENT (FILM FRAMES) (25)	311.818	9 426	312,531	9.590	-0 713	0 525	0.07	0	-6 50	~0.01
GSR BASE PATE FOR THE EVENT (DIG UNITS) (26)	. 0.	0-	0.	0.	-0+115	0.525	-0.	-0	-9.00	-0.01
TIME TO A GSR CHG OF THE STD AMT (SECS) (27)	0.		0.	0	, 0 -		-0.	-0	-0	-0.
TIME TO THE MAXIMUM GSR CHANGE (SECS) (28)	0.	0.	0.	0	0.	0.	-0-	-0.	-0	-0.
MAX GSR CHG DURING THE EVT (DIG UNITS) (29)	0.	0.	0.	0	0	ñ.	-0	-0.	-0-	-0.
AVS POSITION OF THE STR WHL (DESS) (30)	-30, 584	21.989	-32.983	27 645	2.300	13.337	0 94	0.	0.60	0.
AVS RATE OF CHS OF STE WHE (DEG/SEC) (31)	157-612	27 455	154.503	22.047	2 0 1 9	20.379	1 55	0	0.33	N
TIME TO BES OF STR INTO A TURY (SECS) (32)	0.	0	0	0	01010	0.	-0.	-0.	-0	-0.
MAX STR RATE GOING INTO TURN (DEG/SEC) (33)	0.	0.	0.	0	0.	0	-0	_0	-0	-0.
MAX TURN OF THE STR WHI (DEGS) (34)	0.	0		0.	0.	0.	-0.	-0	-0.	-0.
MAX STR RATE CONTING DUT OF TURN (DG/SC1135)	0.	0.	0.	0.	0.	0.	-0.	- J.	-0-	-0.
STEER REVS OF 5 DEGS PER 25 ETIM FRAMESISAN	_ 1 272	0.	O•	0.200	0 5/5	1 594	17 20	- 0. - 11	-0.	-0.
STEER REVS OF 10 DES PER 25 FTIM FRAMESIST	1 · C · C	1.021	0.201	0.025	0+242	L • J 7 •	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	r ne	1+17	0
STEER PEVS OF 15 DEG PER 25 ETT & FRAMESTARY	D 244	0 000	0.271	0.065		0.151	2.04	- C + 29 - A	1 43	
LEN DE PTH DE CAR IN EVE (ED ELA EPACI (30)	768 237	14 657	24617	20000 10 / 20	U + U Z M 3 3 5 4	ショルウベ マードさら	1 20		1 67	<u>.</u>
FATTO DE ED FLM FRMS TO REAL FLK FRMS 1401	2007 215	14+221	242+110	12+424	5+170	1+175 N 596	1 22		1 + 41 5 - L7	~
4VS DIF BETWEEN STR AND STR COMP (DECS)(43)	52 470	0.000 18 401	57 / 73	0.001	2.4230	U+127 15 617	1.75	<u>.</u>	r 27	
			201742	470.50	2.701	116 °C '	Q . 7 .	-	• • • • 4	- •

COMPILED DRIVE STATISTICS FOR ALL SUBJECTS	MARIHUANA AND ALCOHOL						DATE = 09/20/71				
(A) (B) (C) (D) (F-TEST CR BOUN 0.17, 0.27, 3.72, 5.85) (T-TEST CR BOUN3.17, -2.23, 2.23, 3.17)	PLA/PL (CGRUP) 11 SUBS		ALC/EX (TGRUP) 11 SUBS		DIFFERENCE (CG-TG) 11 SUBS		FTEST NULL HYFCTH SD(C)=SC(T)		TIEST NULL HYPOTH HUIC)=HUIT)		
-	HEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	F	51 G	T	SIG	
AVG SPEED DURING THE DRIVE (MPH) (1)	24.724	7.381	- 27,278	4.767	-2.554	10.443	2.40	о	+0.77	0.	
5.7. OF SPEED DURING THE DOLVE (MOH) (2)	7 4 7 4	6 007	6 050	3 507	1 574	100 1	1 71	0	1 0 7	õ	
AVG SPD DURING THE DRIVE LEIN EDNS/SECT (2)	21 720	7 707	21 000	3, 700	1.570	7.007	1.51	5.	1.02	0 •	
SPEED DEVE DE 5 HDH DED DE ETTH FRANCE 141	21.120	2.101	21.099	_ 5.109	0.021	3.372	(0.))	0.01	0.59	0.	
AND ACCEL DOCITION ADD AT DEDDECCEDI ACT	1.005	2.251		0.045	0.939	2.000	40.51	0+01	1.15	0.	
S D DE ACCEL POSITION (DD CT DEDBECCED)(A)	8.787	2+191	1.522	2.912	0.935	1.280	0.57	0.	0.82	0.	
S.J. DE ALLEL PUSITION (PR LI DEPRESSEDI(6)	_ 3.150	0-898	3.121	1.252	0.039	1.027	0.51	C.	0.12	0.	
ACC REVS OF 2 PRCT PER 25 FILM FRAMES (7)	0.371	0.300	0+207	0.139	0.164	0.343	4.58	0.05	1.51	0.	
ALL REVS OF 5 PRCT PER 25 FILM FRAMES (8)	0.109	D. 083	0.057	0.035	0.052	0.082	5.56	0.05	2.01	0.	
NUL UF BPK PRESSES DURING THE DRIVE (9)	9.455	13-131	3.273	3.466	6.182	11.831	14.35	0.01	1.65	0.	
MAX PRESSURE DURING BRK PRS (PP CT MAX)(10)	18.341	21.034	11.955	14.601	6.385	27.837	2.08	0.	0.73	0.	
AVERAGE STEERING WHEEL POSITION (DEGS) (11)	-29.532	24.935	-33-041	27.261	3.509	17.464	0-84	0.	0.64	с.	
AVG TIME BET STR REVS OF 5 PR CT (SECS)(12)	1.091	2.036	1.113	2.034	-0.022	2.161	1.00	С.	-0.03	0.	
AVG DIF BETWEEN STR AND COMP (DEGS) (13)	18.724	5.849	22.341	5.989	-3.618	7.953	0.95	0.	-1.44	0.	
S.D. OF DIF BETWEEN STR AND COMP (DEGS)(14)	23.728	3.837	26-562	13.486	-2-833	11.351	D. 08	-0.01	-0.79	0.	
MAX RATE OF CHG OF STEERING (DEGS/SEC) (15)	-138,503	520-782	172.385	406-185	-310-888	675.387	1.64	0.	-1.46	0.	
STEER REVS OF 5 DEGS PER 25 FILM FRAMES(16)	1,171	0.937	0.985	1.092	0.186	0.719	0.74	0.	D.82	Ő.	
STEER REVS OF 10 DEG PER 25 FILM ERAMES(17)	0.340	0.162	0.308	0.247	0.032	0 211	E 4 0	N	0.02	Å.	
MAX TIME BET STE REVS DE 5 DEGS (SECS) (18)	42.591	10 820	162 540	270 857	-120 050	282 100			-1 26	N	
AVG STR RATE GDING INTO CRVS (DEC/SEC) (19)	, 42400 <u>1</u>		105+540		-120-930	202.170	-0-51	-0.01	-1.50	0.	
AV TIM FRM STRT OF SIR TO MAY STR (SCC) (1)	0.	0.	0	0	0.	<u>.</u>	-0.	-0.	-0.	-0.	
AV SPD CHG DUGING 200 ET HEE TUDA (MOHIJOI)	0.	0.	0.	0.	0.	0.	-0-	-0.	-0.	-0.	
THE SED CHE DURING THE PER TOKA CAPITIZES		<u> </u>	V•	0			-0-	-0-	-0.	-0.	
	0.	0.	0.	0.	U.	0.	-0.	-0.	-0.	-0.	
THE FOR ACC LET UP TO FUT OF THE LOCALIZATION	0.	0.	0.	0.	0.	0.	-0.	-0.	-0-	-0.	
THE FRE ALL LET-UP TO STRE UP TRA (SEL)(24)	· 0.		. 0		0.	0.	-0.	-9.	-0-	-0.	
114 FRM END OF TRN TO ALL PRESS (SECS) (25)	0.	0.	D -	0	• • •	0.	-0.	-0.	-0.	-0.	
AVE GEN DASE RATE OUR DRV IDIG UNITS) (26)	0.	.0 .	0	0.	0.	0.	-0.	-0.	-0-	-0. .	
AVG URIFT OF GSR BASE RATE ONG UN/SECH2/1	0.	0.		0.	_ 0.	0.	-0-	-0.	-0.	-0.	
TUI NO. DE GER REALTIONS DUPING THE DRV(28)	0.	0.	0.	0.	0.	0.	-0.	-0-	-0-	-0.	
AVE MAG OF GSP REACTIONS (DIG UNITS) (29)	0.	0_	0.	0.	0.	0.	-0 .	-0.	-0-	-0.	
AVG LENGTH OF BREATHS (SECONDS) (30)	2.026	0.334	1.926	0.149	0.101	C.372	5.01	0.05	C+86	0.	
S.D. OF LENGTH OF BREATHS (SECONDS) (31)	0.689	0.267	0.663	0-231	0.026	0.331	1.34	0.	0.25	0.	
AVG DEPTH OF BREATHS (DIG UNITS) (32)	363.330	82.128	379.713	117.996	-16.382	93.590	0.48	0.	-0-55	0.	
S-D- OF DEPTH OF BREATHS (DIG UNITS) (33)	287.983	66.187	317.312	110.073	-29.330	91.073	0.36	٥.	-1.02	0.	
TOT NO. OF BREATHS DUPING THE DRIVE (34)	489.182	83.790	50°-455	92.102	-19-273	95.552	0.83	0-	-0-64	0.	
BETHS WHR FXH TIM .LT. INH TIM (PR CT) (35)	48.717	4.926	47.855	3.454	D.852	5.713	2-03	5.	0-4R	0_	
AVS SOTH DEPINID RATIO (DIG UN/CNT IND)(36)	186.926	43.241	201.640	55.001	-14.714	53.592	0.67	0.	-0.87	0	
SD OF BRTH DEP/WID RAT (DIG UN/ONT IND)(37)	147.360	31.834	164.304	53.285	-16.944	47.691	0.36	<u> </u>	+1.24	<u>^</u>	
LENGTH OF DPIVE (SECONDS) (38)	2921.636	334.477	2940-187	537.788	-18.545	477.708	0.30	~	_^		
IFNOTH OF DRIVE (FILM FRAMES) (39)	62629.363	2674-076	60070-454	2595-169	2558.909	3412 050	0.02	~			
IFN DE PTH DE CAR FOR DRY (FO FIM EPMS) (40)	63702.457	2972.784	669941671	31-7.576	1507.575	6266 267	0.33 * 27	- •	6. • 2. 4	<u> </u>	
FATIO OF EQ FLM FRMS TO PEAL FLM FRMS 1411	1.098	5.039	1.114	0.027	-0.016		2 11	~			
					~ ~			-			

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COMPTLED EVENT STATISTICS FOR ALL SUBJECTS ACROSS ALL EVENTS RESULTS OF DISTRIBUTION OF THE INDIVIDUAL SUBJECT HEANS

44

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MARTHUANA AND ALOCHOL

(A) (B) (C) (D) IF-TEST CR BOUN 0.17. 0.27. 3.72. 5.85) IT-TEST CR BOUN3.172.23. 2.23. 3.17)	PLA/PL (CGRUP) 11 SUBS		ALC/EX (TGRUP) 11 SUBS		DIFFERENCE (CG-TG) 11 SUBS		FIESI NULL HYPOTH SD(C)=SC(T)		TIEST NULL HYPOTH MU(C)=MU(T)	
-	. KEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	F	S1G	T	SIG
SPD AT THE REGINNING OF THE EVENT (MPH) (1)	23.653	7.458	27.209	5.863	-3.556	9.354	1.52	0.	-1.20	0.
SPD AT THE END OF THE EVENT (MPH) (2)	23.519	7.565 _	26.869	5.542	-3.350	9.358	1.85	C.	-1.12	0.
RINITUR SPEED DURING THE EVENT (MPH) (3)	17.873	9.385	21.969	5.265	-4.096	11.658	3.18	c.	-1.11	0.
SPEED REVS OF E HOW DED DE ETTM FDANEE (4)	33.959	9.193	31.374	6.480	2.566	7-151	2.01	°.	1.14	0.
JAERACE EREED DUDING THE EVENT ANDRES (5)	1.005	2.605	0.044	0.036	0.951	2.598	25.31	0.01	1.17	0.
AVERAGE SPEED DURING THE EVENT (MPH) (6)	23.359	7.801	26.959	5.657	-3.600	9.699	1.90	0.	-1.17	0.
AVG SPU DURING THE EVENT (FEM FRMS/SEC) (/)	22.133	3.395	23.536	4.017	-1.402	4-599	0.71	0.	-0.96	0.
ALL REVO OF E PROT PER 25 FILM FRAMES [8]	0.307		0.173	0.119	0-134	0.264	4.04	0.05	1.61	0.
HECKEVS OF 5 PRUT PER 25 FILM FRAMES (9)	0.068	0.061	0.043	0.035	0.026	0.051	3.02	0.	1.33	0.
AVE AVE TO IST LUBPLETE ACC LET-OP (SECSI (10)	0.903	0.801	0.926	0.792	-0.022	0.892	1-02	0.	-0-08	0.
AVS ALLEL PUSITION (PR LI DEPRESSED) (III)	8-462	2.543	7.916	2.867	0.646	3.468	0.79	0.	0.59	0.
THE TO IST ALL LET-TIP OF 3 PR LT (SELS.(12)	2.363	0.569	1.856	0.706	10+507	0.962	0.65	0.	1.67	0.
THE FOUND OF ALLEL (PR L) DEPRESSION (3)	12.834	3.925	11-289	3.911	1.545	4.732	1.01	0.	1.03	0.
TIM FRM ALL LEI-UP TU IST BRK PPS (SEL)(14)	0.009	0.182	-0.046	0.190	0.055	0.290	0.92	0.	0.60	0.
114 IU ISI DE PES FEM SIRI DE EVI (SEC)(IS)	C-451	0.566	0.309	0.529	0.142	-0.599	1.15	0.	C.75	0.
MEX AMI DE DEK PRESSURE (PE LI DE MAX) (16)	5-192	5.641	4.325	6.212	0.857	6.270	0.82	C .	0-44	0.
TIME TO DEP DIST IN BPLATHING (SECS) (17)	C.	. 0.	0.	0.	0.	0.	-0.	-0-	-0.	-0.
TIME TO WID DIST IN BREATHING (SEUS) (18)	с.	0.	0.	0.	0.	0.	-0.	-0.	-0.	-0.
AVERAGE BREATHING PATE (BREATHS/SEC) (19)	0.473	0.092	0.498	0.038	-0.025	0.104	5.93	0.01	-0.77	0-
SEDULNCE NO. OF LAST MAN EVI MARKER (20)	120.777	99.102	86.608	59.319	34.169	129.773	2.79	0.	0.83	0.
TIME OF LAST MAY EVE MARKER (SEUS) (21)	1209-895	198.586	1167-269	329.175	42.626	224.817	0.36	5.	0.50	0.
TIME AT THE BEGINNING OF EVIL (SECS) (22)	1248,489	200-258	1225.320	263.870	22.159	190.746	0.58	0.	0.37	0.
ATME AT THE END OF EVI (SECS) (23)	1263-183	202.206	1240.160	265.896	23.023	192.744	0.58	0-	0-38	0.
LENGTH OF THE EVENT (SECONDS) (24)	14.694	2.226	13.840	2.576	0.854	2.490	0.75	0.	1.09	0.
LENSIN OF THE EVENT (FILM FRAMES) (25)	307.783	13.915	308.018	14.093	-0.235	0.679	. 0.97	5.	-1.09	0.
USA BESE RATE FUR THE EVENT (516 UNTIS)(26)	e .	0.	C•		0.	. 0.	-0.	-0-	-0-	-0.
TIPE TO A GSR CHG OF THE STD AMT (SECS)(27)	0.	0.	0.	0.	0-	0.	-0.	-9-	-0.	-0.
TIPE TO THE MAXIMUM GSP CHANGE (SECS) (28)	0.	0.	0+	0.	0.	5.	-0.	-3.	-0-	-0-
MAX SSR CHG DOPING THE EVI (DIG UNIIS) (29)	0.	0.	0.	0.	0.	0.	-0.	-3.	-0.	-0.
AVS PUSITION OF THE STR WHL (DEGS) (30)	-31-206	27.049	-34.267	28.159	3.061	17.566	0.92	0.	0-55	0.
AVG PATE OF LHG OF STR WHL (DEG/SEC) (31)	173.385	33.912	172.385	29.526	1.000	29.227	1.32	0.	0.11	0.
TIME TO BEG OF STR INTO A TURN (SECS) (32)	0.		0.	. 0.	0.	0.	-0.	-0.	-0.	-0-
PAR SIP RATE GUING INTH TURN (DEG/SEC) (33)	0.	0.	0	0.	0.	0.	-0.	-3.	-0.	-0+
MAX TUEN DE THE STP WHL (DEGS) (34)	0.	٥.	0.	0.	0.	0.	-0.	-0.	-0.	-0.
MAX SIR RALE COMING OUT OF TUPN (DE/SCI135)	0.	0.	0.	· D.	0.	0.	-0.	-5.	-0.	-0.
STEER REVS DE 5 DEGS PER 25 FILM FRAMES(36)	1.866	2.076	1-417	1.554	0.449	1.557	1.76	0.	0.91	0-
STEER PEVS OF 10 DEG PER 25 FILM FRAMES(37)	- 0.451	0.299	0.331	0.206	0-120	0.348	2.11	D.	1.09	0.
SIETE MEVS THE ID DEG PER 25 FILM FRAMES(38)	0.276	0.108	0.199	0.073	0.077	9.113	2.18	5.	2.16	9 .
LEN OF PIN OF CAR IN EVI IFO FLM FPMS) (39)	345.245	21.725	347.274	17.068	-2.029	10.746	1.30	3.	-6.60	U.
VALLU OF EU FLM FRMS TO REAL FLM FRMS (40)	1.130	0.042	1.132	0.026	-0.00Z	C.079	2.57		-1.13	U.
AND DIE BEIHEEN SIR AND SIE COMP (DERS)(41)	58-194	17.412	45.551	12.549	-7.357	15.530	1.93		-1.46	<u>.</u> .
MAX-DIP BEIHEEN SIR AND STR COMP (DEGS)(42)	6.062	95.111	29.235	103.583	-25.003	57.579	0.54	- •	-1-13	U e

Image: Construction of the problem	COMPILE DRIVE STATISTICS FOR ALL SUBJECTS	LIBRIUM						CA/16/71					
KEAN STD DEV MEAN STD DEV MEAN STD DEV MEAN STD DEV F STG T STE AVG SPEED DUBING THE DRIVE (MPH) 11 40.998 -0.33 -42.800 42.800 -2.702 10.571 3.476 -0.555 0. AVG SPEED DUBING THE DRIVE (MPH) 121 8.646 -2.779 -2.116 3.120 1.312 -032 0. AVG SPED DUBING THE DRIVE (THA FRANS/SEC) 132.27.133 3.128 24.800 0.2779 -2.116 3.120 1.322 001.9 0.014 0.030 0.017 0.001 0.610 0.660 0.2751 0.765 0.7757 0.765 1.41 0.72 0.721 0.722 0.771 0.720 0.3399 0.664 -0.244 0.735 1.61 0.771 0.720 0.337 0.102 -0.076 0.720 3.791 0.627 0.775 0.775 0.775 0.775 0.775 0.775 0.775 0.775 0.775 0.775 0.775 0.775	(A) (B) (C) (D) (F-TEST CR: BOUN -+ 0.11, C.20, 5.00, B.85) (T-TEST CR BOUN -+ -3.50, -2.36, 2.36, 3.50)	PL/PL (CGRUP) 8 SUBS		AL. (TG	AL/PL (TGRUP) 8 SUBS		DIFFERENCE (CG-TG) 8 SUBS		NULL HYPOTH		TTEST NULL HYPOTM MULC)=MULT)		
AVG SPEED DURING THE DRIVE (KPH) 11 40.598 0.033 42.600 4.866 2.2202 10.511 3.47 C. -0.55 0. AVG SPD DURING THE DRIVE (FLM FRAS/SEC) (3) 22.713 3.188 24.830 2.779 -2.116 -3.120 1.32 C. -1.13 0. AVG SPD DURING THE DRIVE (FLM FRAS/SEC) (3) 22.713 3.188 24.830 2.779 -2.116 3.120 1.32 C. -1.13 0. AVG SPD DURING THE DRIVE (FLM FRAS/SEC) (3) 11.188 1.003 11.045 0.627 -0.757 0.763 2.476 -1.647 0.763 1.41 C. -2.42 0.264 -0.644 -0.647 0.763 1.42 0. 0.757 0.765 0.765 0.777 1.625 6.333 3.30 0. -0.68 0. 1.50 0.757 0.765 1.130 0.53 -0.262 0.571 1.50 0.775 0.765 1.32 0.71 1.425 6.333 3.30 0. 0.68 0.737 0.765 1.32 0.710 0.505 0.757 0.765 0.710 0		MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	۶	SIG	Т	516		
Sub. DF SPEED DUPING THE DRIVE (MPH) 121 5.466 2.197 8.952 2.176 -0.206 2.496 1.01 00.32 0. SV 50P DRIVS THE DRIVE (THE FRANS/SEC) 131 22,713 3.128 24.830 2.7792116 3.120 1.32 01.9 0. SV 50P REVS DF 5 MAH PLP 25 FILM FRANS/SEC) 131 11.81 1.003 11.945 0.627 -0.757 0.763 2.66 02.76 -0.764 S.D. 0F 4CCEL POSITIC: THE TO FRANSSED) (5) 11.188 1.003 11.945 0.627 -0.763 1.41 C7.24 0. SC FUS DF 5 FRANCE TO FRANSSED) (5) 11.188 1.003 11.945 0.627 -0.0640.763 2.66 07.27 0. S.D. 0F 4CCEL POSITIC: THE TO FRANSSED) (5) 11.188 1.003 11.945 0.627 -0.0640.783 2.66 07.27 0. S.D. 0F 4CCEL POSITIC: THE PESS FILM FRAMSS (8) 0.667 0.071 0.113 0.053 -0.026 0.426 1.80 01.57 0. N. 0F BMK PFSSES DUINS THE DRIVE (9) 6.075 10.5175250 5.717 1.4625 6.363 3.380 0. 0.768 0. PX PRESSUME DIFING BK PRS TP CT MAXILLO RESS (11) -20.921 1.832 -24.137 1.722 3.217 2.491 1.13 0. 3.49 0.05 AVE ARK STEPTOY WHELE POSITICU THEOSI (11) -20.921 1.832 -24.137 1.722 3.217 2.491 1.13 0. 0.490 0. AVE ARK STEPTOY WHELE POSITICU THEOSI (11) -20.921 1.832 -24.137 1.722 5.263716 6.80 0.50 0.39 0. S.D. 0F DIF BFTHFY NRA DC ONY DRESSI (11) -20.921 1.832 -24.137 1.722 5.263716 8.10 0.50 0.53 0. AVE ARK STEPTOY WHELE POSITICU THEOSI (13) 9.717 3.172 9.378 1.264 0.338 2.2630748.28 0.578 0.37 0. AVE ARK STEPTOY WHE DESSI (14) 22.447 16.339 23.496 4.346 4.551 15.435 14.17 6.01 0.78 0. S.D. 0F DIF DFTAFFN STR AND COMP DRESSI (14) 22.447 16.339 24.266262.2630748.28 0.570 0. AVE THE PS THE PS THE MEN COMP DRESSI (14) 22.721 8.007 0079 0.468 0.70 0. AVE THE PS THE PT THE REVS F 5 DESS THE FORM MAH121) 0.0 AVE THE PS THE PT THE REVS F 5 DESS THE STER STER STER STER STER STER STER STE	AVE SPEED DURING THE DRIVE (MPH) (1)	40.598	9.033	42.800	4.846	-2.202	10.571	3.47	C	-0.55	°.		
AVG SPD JURING THE DRIVE (THE FRANS/SEC) [3] 22,713 3,128 24,30 2,779 - 2,116 3,120, 1,32 C, -1,39 0, SPETD BLYG DF 5 MEN DP2 55 FILM FRANS(5 (4) 0,030 0,014 0,030 0,017 0,001 0,010 0,060 C, 0,19 0, AVG ALCEL POSITION (PR CT DEPRESSED) (5) 11.18R 1,003 11.945 0.627 -0.757 0,763 2,56 C, -2,62 -0,75 S.D. OF ALCEL POSITION (PR CT DEPRESSED) (5) 11.18R 1,003 11.945 0.627 -0.757 0,763 2,56 C, -2,62 -0,75 S.D. OF ALCEL POSITION (PR CT DEPRESSED) (5) 11.18R 1,003 11.945 0.627 -0.767 0,763 2,56 C, -1,76 0, ALCE PLYS OF 2 PACT PF 25 FILM FRANSS (7) 0,271 0,202 0.357 0.102 -0.0646 0.220 3,97 C, -1,76 0, ALCE PLYS OF 2 PACT PF 25 FILM FRANSS (8) 0,667 0.071 0,113 0,053 -0.026 0.263 1,80 0, -1,57 0, S.D. OF ALCE DEPING BK PPS (FP C MAXIIO) 8,156 5,244 5,562 4,684 2,494 5,735 1,25 C, 1,15 0, AVE ARGESSED SULING THE DRIVE (9) 6,675 10,917 5,262 3,717 1,1625 6,633 3,88 0, -0,768 0, AVE ARGESSED SULING THE DRIVE (9) 2,091 0,618 1,361 0,041 2,494 5,735 1,25 C, 1,15 0, AVE ARGESSED SULING THE DRIVE (9) 2,091 0,618 1,361 0,041 2,499 1,13 0, 3,49 0,076 AVS DIFE BETWFFY STR AND COMP (DEGS) (11) -20,921 1,832 -24,137 1,722 3,217 2,439 1,13 0, 3,49 0,076 AVS DIFE BETWFFY STR AND COMP (DEGS) (11) 9,717 3,172 9,378 1,264 0,338 2,716 6,30 C,05 0,33 0, S.D. OF DIFE BETWFFY STR AND COMP (DEGS) (11) 3,717 3,172 9,378 1,264 0,338 2,716 6,30 C,05 0,33 0, S.D. OF DIFE BETWFFY STR AND COMP (DEGS) (11) 0,270 0,151 0,300 0,162 -0,030 0,048 0,070 0, -0,31 0, AVX THE DF T STR REVS DF 5 D GGS STECS 1 (15) 3,37,176 300.759 4,538 492,266 352,638 474.628 0,37 0, -0,31 0, MY TH FFY STR REVS DF 5 D GGS STECS 1 (15) 3,37,176 300.759 4,538 492,266 352,638 474.628 0,01 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,	S.D. OF SPEED DURING THE DRIVE (MPH) (2)	8.546	2,197	8-952	2.174	-0.306	2.496	1.21	0.	-0.32	0.		
SPEED REVS DF 5 MEM PEP 25 FILM FFAMES [12] 0.030 0.011 0.030 0.017 0.001 0.010 0.66 0. 0.19 0. 47 ACCEL POSITION (PR CT DEPRESSED) (5) 11.18A 1.003 11.945 0.627 -0.757 0.763 1.41 C2.24 045 5.D. 0F 4CCEL POSITION (PR CT DEPRESSED) (5) 12.118A 1.003 11.945 0.627 -0.757 0.763 1.41 C2.24 045 C. PSUS DF 2 PCCT PE 25 FILM FFAMES [13] 0.067 0.071 0.113 0.053 -0.026 0.0265 1.80 01.57 0. ACC FEVS DF 5 PACT PEP 25 FILM FFAMES [14] 0.067 0.071 0.113 0.053 -0.026 0.0265 1.80 01.57 0. ACC FEVS DF 5 PACT PEP 25 FILM FFAMES [14] 0.067 0.071 0.113 0.053 -0.026 0.0265 1.80 01.57 0. ACC FEVS DF 5 PACT PEP 25 FILM FFAMES [14] 0.067 0.071 0.113 0.053 -0.026 0.0265 1.80 01.57 0. ACC FEVS DF 5 PACT PEP 25 FILM FFAMES [14] 0.0617 0.071 0.113 0.053 -0.026 0.0265 1.80 01.57 0. ACC FEVS DF 5 PACT PEP 25 FILM FFAMES [14] 0.0617 0.071 0.113 0.053 -0.026 0.0265 1.80 01.57 0. ACC FEVS DF 5 PACT PEP 25 FILM FFAMES [14] 0.0617 1120.021 1.832 -24.137 1.722 3.217 2.439 1.13 0. 3.49 0.06 AVE ALL PEPTOS MEEL POSITION (DEGS) [11] -20.021 1.832 -24.137 1.722 3.217 2.439 1.13 0. 3.49 0.06 AVE DIF BETMEN SIR AND COMP (DEGS) [13] 9.717 3.172 9.378 1.264 0.338 0.2716 6.30 C.050 0.33 0. S.D. DF DIF BETMEN SIR AND COMP (DEGS) [13] 9.717 3.172 9.378 1.264 0.338 6.476.828 0.37 0. 1.95 0. AVE ALL PLOE OF DIF BETMEN (DEGS) [13] 9.717 3.172 9.378 1.264 6.4551 1.5.435 1.4.17 0.01 0.187 0. AVE ALL PLOE OF DIF BETMEN SIR AND COMP (DEGS) [13] 35.717 6.300 7.790 4.4586 422.266 3.25.438 4.76.828 0.37 0. 1.95 0. S.D. DF DIF BETMEN SIR AND COMP (DEGS) [11] 2.0030 C.479 0.662 0.573 -0.059 0.468 0.70 00. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0	AVS SPD DURING THE DRIVE (FLM FRMS/SEC) (3)	22.713	3.188	24.830	2.779	-2.116		1.32	C	-1.19	0		
2Y3 ACCEL POSITION (PA CT DEPRESSED) is) 11.18A 1.003 11.945 0.627 -0.757 0.763 2.56 62.62 0.52 2CD DF CCEL POSITION (PA CT DEPRESSED) 0.711 0.202 0.357 0.102 -0.666 0.220 3.92 c1.64 0. 2CD FEVS DF 2 PECT PF 25 FILM FRAMES (1) 0.201 0.202 0.357 0.102 -0.066 0.220 3.92 c1.64 0. ACT REVS DF 2 PECT PF 25 FILM FRAMES (1) 6.875 10.517 5.250 5.717 .1.625 6.363 3.38 0. 0.668 0.071 0.113 0.051 1.25 0.115 0.046 0.045 1.331 0.246 0.048 2.494 5.333 3.38 0. 0.668 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.045 0.052 0.057 0.052 0.045 0.053 0.056 0.056 0.056 0.056 0.056 0.057 0.052 0.057 0.052 <td< td=""><td>SPEED REVS OF 5 HPH PEP 25 FILM FRAMES (4)</td><td>0.030</td><td>0.014</td><td>0.030</td><td>0.017</td><td>0.001</td><td>0.010</td><td>0.66</td><td>0.</td><td>0.19</td><td>0_</td></td<>	SPEED REVS OF 5 HPH PEP 25 FILM FRAMES (4)	0.030	0.014	0.030	0.017	0.001	0.010	0.66	0.	0.19	0_		
S.D. OF ACCEL POSITION (PR CT DEPRESEDIC) 2,751 0,765 3,399 0,0.644 -0.647 , 0.76,73 1,41 2, -2,22 0, -2,24 0, 25 0, 25 2 PRCT PR 25 FILM FRAMES (1) 0,271 0,202 0,357 0,102 -0.066 0,220 3,92 c -1,06 0, 25 0,771 1,625 6,353 3,38 0, 0,66 0, -2,75 0	AVS ACCEL POSITION (PR CT DEPRESSED) (5)	11.188	1.003	11.945	0.627	-0.757	0.763	2.56	C.	-2.62	-0.05		
420 PUS OF 2 PECT PF 25 FILM FRAMES: (7) 0.271 0.202 0.357 0.102 -0.086 0.220 3.92 C. -1.64 0. 825 REVS OF 5 PACT PER 25 FILM FRAMES: (8) 0.687 10.517 5.250 5.717 1.625 6.363 3.38 0. 0.48 0. NY. OF BWK PPESSES DUFING THE DRIVE (9) 6.875 10.517 5.250 5.717 1.625 6.363 3.38 0. 0.48 0.488 AVE ARGE SIEFPING WHELL POSITION LOEGS (11) -20.921 1.832 -24.137 1.722 3.217 2.439 1.13 0. 3.49 0.06 AVS ING RET SPROT PER 25 FILM PER AND COMP (DEGS) (13) 9.717 3.172 9.378 2.246 4.551 15.435 14.17 0.107 0.175 0.353 0.356 2.716 6.30 C.65 0.33 0.36 0.356 0.357 0.105 0.336 2.716 0.30 0.356 0.256 0.256 0.256 0.256 0.256 0.356 0.356 0.357 0.105 0.30 0.357 0.105 0.30 0.357 0.27	S.D. OF ACCEL POSITION (PR CT DEPRESSED)(6)	2.751	0.765	3.399	0.644	-0.647	0.763	1.41	2.	-7.24	0.		
ACC REVS OF 5 PACT PEP 25 FLW FRAMES (B) 0.067 0.071 0.113 0.053 -0.026 0.45 1.80 01.57 0. PX: OF BMX PPESSURE DIPING BEX PPS (P2 CT MXX)(10) 8.156 5.244 5.662 4.684 2.494 5.735 1.25 0. 1.15 0. PX: PPESSURE DIPING BEX PPS (P2 CT MXX)(10) 8.156 5.244 5.662 4.684 2.494 5.735 1.25 0. 1.15 0. PX: PPESSURE DIPING BEX PPS (P2 CT MXX)(10) 8.156 5.244 7.172 3.217 2.491 1.30 3.49 0.06 PX: PPESSURE DIPING BEX PPS (P2 CT MXX)(10) 10.0531 (1) -20.921 1.832 -24.137 1.723 3.217 2.459 1.13 0. 3.49 0.06 PX: PPESSURE DIPING BEX PPS (P2 CT MXX)(10) 8.156 5.244 7.16.32 -24.137 1.723 3.217 2.459 1.13 0. 3.49 0.06 PX: DIF BETWEEN SIR AND COMP (DGS) (13) 9.717 3.172 9.438 1.264 0.338 2.716 6.380 C.05 0.33 0. S.D. OF DIF BETWEEN SIR AND COMP (DGS) (13) 9.717 3.172 9.438 1.426 0.338 4.436 4.551 15.435 14.17 0.01 0.78 0. PX: RATE CHG OF SIECHING (DGS) (15) 1.357.176 300.759 4.438 4.436 4.551 15.435 14.17 0.01 0.78 0. PX: RATE CHG OF SIECHING (DGS) (15) 1.357.176 300.759 4.438 4.426 3.526.332.438 4.478.28 0.37 0. 1.95 0. SIFER REVS DF 5 DEGS PER 25 FILM FRAMESILAD 0.603 0.479 0.662 0.573 -0.059 0.408 0.70 00.31 0. SIFER REVS DF 5 DEGS (SECS) (18) 1.23.508 227.187 44.485 28.120 79.022 23.612 65.28 0.01 0.99 0. AV TIME BFT SIR REVS DF 5 DEGS (SECS) (18) 1.23.508 2.27.187 44.485 28.120 79.022 23.612 65.28 0.01 0.99 0. AV SPD CMG DURING TUBMS (DEG/SECI 19) 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	ACC REVS OF 2 PPCT PEF 25 FILM FRAMES (7)	0.271	0.202	0-357	0.102	-0.086	0.220	3.92	C.	-1.04	0.		
N** 0° BWK PPESSES DULING THE DRIVE (9) 6.875 10.517 5.250 5.717 1.625 6.363 3.38 0. 0.68 0. M*X PPESSURE DDPING BKK PPS (PP CT MAXIIO) 8.156 5.244 5.662 4.664 2.494 5.735 1.25 0. 1.15 0. AVE ARAFE STERPING WHELE PRINTION (DEGS) (112) 1.019 2.041 0.618 1.340 0.401 2.455 2.55 2. 0.40 0. AVG DIF BETWFFM STR AND COMP (DIGS) (12) 1.019 2.041 0.618 1.340 0.401 2.455 2.55 2. 0.40 0. AVG DIF BETWFFM STR AND COMP (DIGS) (13) 9.717 3.172 9.378 1.264 0.338 2.716 6.30 C.05 0.33 0. AVG DIF BETWFFM STR AND COMP (DIGS) (13) 9.717 3.172 9.378 1.264 0.338 2.716 6.30 C.05 0.33 0. AVG DIF BETWFFM STR AND COMP (DIGS) (13) 9.717 3.172 9.378 1.264 0.338 2.716 6.30 C.05 0.33 0. AVG DIF BETWFFM STR AND COMP (DIGS) (15) 357.176 300.759 4.538 492.266 352.638 476.628 0.37 0. 1.95 0. AVX THE BET STR DE STAINC DEMP (DEGS) (15) 357.176 0.000 0.162 -0.030 0.068 0.87 C0.31 0. STFER RIVS OF 5 DIG GF SECS FILM FRAMESILG 0.603 C.479 0.662 0.573 -0.059 0.498 0.70 00.31 0. STFER RIVS OF 5 DIG GF SECS SILM FRAMESILG 0.000 0.151 0.300 0.162 -0.030 0.068 0.87 C0.93 0. MAX TIME BET STR REVS OF 5 DEGS (SECS) (18) 122.500 227.181 44.485 22.120 79.022 234.612 65.28 0.01 0.89 0. AV STR RATE 001% INTO CAVS (DEG/SECI (19) 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	ACC REVS OF 5 PRCT PEP 25 FILM FRAMES (8)	0.087	0.071	0.113	0.053	-0.026	0.045	1.80	0.	-1.57	0.		
MAX TYPESSURE DIPING BEA PPS [PB CT MAX1(10) A:156 5.224 5.662 2.468 2.494 5.735 1.25 0. 1.15 0. VERANCE STEPTING NUELL POSITION (DEGS) (11) -0.0921 1.632 -24.137 1.722 3.217 2.439 1.13 0. 3.49 0.06 AVS DIF BETWEFN STR REVS OF 5 PP CT (SECS) (12) 1.019 2.041 0.618 1.361 0.401 2.665 2.25 0. 0.40 0. AVS DIF BETWEFN STR AND COMP (DEGS) (13) 9.717 3.172 9.378 1.264 0.338 2.716 6.30 C.05 0.33 0. AVS DIF BETWEFN STR AND COMP (DEGS) (13) 9.717 3.172 9.378 1.264 0.338 2.716 6.30 C.05 0.33 0. MAX TARE OF CHG OF STEELING (DEGS/SEC) (15) 357.176 300.759 2.378 4.346 4.356 4.551 15.433 14.17 0.01 0.78 0. MAX TARE OF DIF DEFTMEFN STR DIM COMP (DEGS/SEC) (15) 357.176 300.759 4.558 992.266 352.688 4.478.628 0.37 0. 1.95 0. STEER REVS OF 5 DOES FFR 25 FLW FRAMESILE) 0.600 0.479 0.662 0.573 -0.059 0.4498 0.70 00.31 0. STEER REVS OF 5 DOES (SECS) (18) 1.23.508 2.27187 44.445 2.8120 79.022 224.612 6.528 0.01 0.89 0. AVT THE BET STR REVS OF 5 DOES (SECS) (18) 1.23.508 2.718 44.445 2.8120 79.022 224.612 6.528 0.01 0.89 0. AVT THE FM STPT ON MX STR (SECL(21) 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	NO. OF BRK PRESSES DURING THE DRIVE (9)	6.875	10.517	5.250	5.717	1.625	6.363	3.38	0.	0.68	0.		
LVERAGE STEEPING WHELE PRSTION (DEGS) (1) -20.021 1.032 -24.137 1.722 3.217 2.439 1.13 0. 3.40 0.0 AVS IME AET STR REVS OF 5 PR CT (SECS)(12) 1.019 2.041 0.618 1.361 0.401 2.655 2.25 0.400 0.338 0.337 0.400 0.401 2.655 2.25 0.400 0.338 0.501 0.338 0.411 0.401 2.655 2.25 0.400 0.338 0.505 0.433 0.55 0.555 0.555 0.555 0.555 0.555 0.55 </td <td>MAX PRESSURE DUPING BEK PRS (PR CT MAX)(10)</td> <td>8.156</td> <td>5.244</td> <td>5.662</td> <td>4.684</td> <td>2.494</td> <td>5.735</td> <td>1.25</td> <td>G</td> <td>1.15</td> <td>0.</td>	MAX PRESSURE DUPING BEK PRS (PR CT MAX)(10)	8.156	5.244	5.662	4.684	2.494	5.735	1.25	G	1.15	0.		
AYG DIF BETWERN SIR REVS OF 5 PP CT (SECS)[12] 1.019 2.041 0.618 1.861 0.601 2.655 2.25 0.40 0.40 AYG DIF BETWERN SIR AND COMP (DIGS) 113 9.717 3.172 9.378 1.264 0.338 2.716 6.30 C.50 0.33 0. MAX RATE OF CHG OF SIELERING (DEGS/SEC) (15) 357.176 300.759 4.538 4.246 4.551 14.17 0.01 0.78 0. MAX RATE OF CHG OF SIELERING (DEGS/SEC) (15) 357.176 300.759 4.538 4.266 352.638 478.628 0.370 -0.310 0. SIFER REVS OF 5 DEGS SECS (112) 0.270 0.151 0.300 0.162 -0.030 0.666 0.870 0. -0.93 0. AVT SIR RATE COLNG INCOMY OF SEG (SECS) (119) 0. <td>AVERAGE STEERING WHEEL POSITION (DEGS) (11)</td> <td>-20-921</td> <td>1.832</td> <td>-24.137</td> <td>1.722</td> <td>3.217</td> <td>2.439</td> <td>1.13</td> <td>0.</td> <td>3.49</td> <td>0.05</td>	AVERAGE STEERING WHEEL POSITION (DEGS) (11)	-20-921	1.832	-24.137	1.722	3.217	2.439	1.13	0.	3.49	0.05		
AVG DIF BETWERN STR AND COMP.TOFCSS. (13) 9,717 3,172 9,378 1,224 0,338 2,716 6,30 0,630 0,78 S.D. OF DIF BETWERN STR AND COMP.TOCSS. (13) 357,176 300,759 4,538 42,46 4,551 15,435 14,17 0,01 0,78 0,78 STEER REVS OF 5 DEES FILM FRAMESITIO 0,2603 0,479 0,662 0,573 -0,059 0,498 0,70 0,-0,31 0,-0,31 0,-0,30 0,289 0,498 0,70 0,-0,31 0,-0,30 0,289 0,-0,-0,-0,-0,-0,-0,-0,-0,-0,-0,-0,-0,-0	AVG TIME BET STR REVS OF 5 PP CT (SECS)(12)	1.019	2.041	0-618	1.361	0.401	2.655	2.25	Š.	0.40	0.		
S.D. OF DIF BITWERN SID AND COMP IDESSITIAL 22.447 16.359 23.006 4.366 4.351 15.435 14.17 0.01 0.78 0. MAX RATE OF CHG OF SIEERING (DEGS/SEC) (IS) .357.176 .300.759 .4.538 .492.266 .352.638 .476.628 6.37 0.059 0.498 0.70 0031 0. SIFER REVS OF 50FGS PR 25 FILM FRAMESITID 0.200 0.151 0.300 0.162 -0.030 0.266 0.87 c0.93 0. AVT SIFER REVS OF 50FGS SECS (SC) (IB) 123.508 .227.187 .44.485 28.120 79.022 23.612 65.28 0.01 0.89 0. .497 16.300 0.162 -0.030 0.06 0.	AVG DIF BETWEEN STR AND COMP (DEGS) (13)	9.717	3,172	9.378	1.264	0.338	2.716	6.30	C. 05	0.33	0_		
DAX PATE OF LIG OF STEERING (DEGS/SEC) (15) 357,176 300.759 4.538 492.266 352.638 478.828 0.37 0. -0.31 0. STEER REVS OF 5 DEGS PER 25 FILM FRAMESIIG) 0.603 0.479 0.662 0.573 -0.059 0.498 0.70 0. -0.31 0. MAX TIME BFT STR REVS OF 5 DEGS FILM FRAMESIIG) 0.270 0.151 0.300 0.162 -0.030 0.0266 0.87 0. -0.93 0. MAX TIME BFT STR REVS OF 5 DEGS (SEC) (19) 0. <td< td=""><td>S.D. OF DIE BETWEEN STE AND COMP (DESS)(14)</td><td>28.447</td><td>16.359</td><td>23-396</td><td>4.346</td><td>4.551</td><td>15-435</td><td>14.17</td><td>0.01</td><td>0.78</td><td>0_</td></td<>	S.D. OF DIE BETWEEN STE AND COMP (DESS)(14)	28.447	16.359	23-396	4.346	4.551	15-435	14.17	0.01	0.78	0_		
STEER REVS OF 5 DEGS PER 25 FILM FRAMESILG) 0.603 0.479 0.662 0.573 -0.030 0.086 0.70 -0.31 0. STFER REVS OF 10 DEG PER 25 FILM FRAMESILT) 0.270 0.300 0.162 -0.030 0.086 0.87 00.31 0. AVT STR REVS OF 5 DEGS (SECS) '[18] 123.508 227.187 44.485 28.120 79.022 234.612 65.28 0.0 -0.93 0. AVT STR RATE COLMG INTO CRVS [DEG/SEC] (19) 0.	MAX RATE OF CHG OF STEERING (DEGS/SEC) (15)	357.176	300.759	4.538	492.266	352.638	478.828	0.37	0_	1-95	0.		
STFER REVS OF 10 DFG PER 25 FILM FRAMESIT7 0.270 0.151 0.300 0.162 -0.030 0.086 0.87 0. -0.03 0. MAX TIME BFT STR REVS OF 5 DEGS (SECS) (18) 123.508 271.187 44.485 28.120 79.022 234.612 65.28 0.01 0.890 0.	STEER REVS OF 5 DEGS PER 25 FILM FRAMES[16]	0.603	0.479	0.662	0.573	-0.059	0.498	0.70	0.	-0.31	0.		
MAX TIME BFT STR REVS 0F 5 DEGS (SECS) (18) 123,508 227.187 44.485 28.120 79.022 234.012 65.28 0.01 0.89 0. AVG STR RATE COING INID CRVS (DEG/SEC) (19) 0.	STEER REVS OF 10 DEG PER 25 FILM FRAMES[17]	0.270	0.151	0.300	0.162	-0.030	0.086	0.87	Č.	-0.93	0.		
AVF, STR RATE GOING INTO CRVS (DEG/SEC) (19) 0.	MAX TIME BET STR REVS OF 5 DEGS (SECS) (18)	123-508	227.187	44.485	28-120	79.022	234.612	65.28	0-01	0.89	0.		
AV TIM FRM STRT OF STP TO MAX STR (SEC)(20) 0.	AVG STR RATE GOING INTO CRVS (DEG/SEC) (19)	0.	0.	C.	0.	0.	0.	-0-	-0-	-0-	-0-		
LV SPD CHG DURING 200 FT BEF TURN (MPH)(21) 0.	AV TIM FRM STRT OF STP TO MAX STR (SEC)(20)	0.	0.	0_	0.	0.	0-	-0-	-0-	-0-	-0.		
LVG SPD CHG DURING TUPHS (MPH) (22) 0. <td>AV SPD CHG DURING 200 FT BEF TURN (MPH)(21)</td> <td>0.</td> <td>Ċ.</td> <td>0.</td> <td>0.</td> <td>0.</td> <td>0.</td> <td>-0-</td> <td>-0-</td> <td>-0-</td> <td>÷0.</td>	AV SPD CHG DURING 200 FT BEF TURN (MPH)(21)	0.	Ċ.	0.	0.	0.	0.	-0-	-0-	-0-	÷0.		
AV SPD CHG DURING 200 FT AFT TURN (MPH)[23] 0.	AVG SPD CHG DURING TURNS (MPH) [22]	0.	0.	0.	0.	0.	0.	-0-	-0-	-0-	-0.		
TIM FPM ACC LET-UP TO STRT OF TRN (SEC)(24) 0.	AV SPD CHS DURING 200 FT AFT TURN (MPH)(23)	0.	Ô.	0_	0.	0.	0_	-0-	-0-	-0-	-0		
TIM FRM FND OF TRN TO ACC PPESS (SECS) (25) 0.	TIM FPM ACC LET-UP TO STRT OF TRN (SEC)(24)	0.	0.	0.	0.	0.	0.	-0.	-0-	-0.	-0.		
AVG. GSR BASE RATE DUB DRV (D1G UNITS) (26) 0.	TIM FRM END OF TRN TO ACC PPESS (SECS) (25)	0.	0.	0.	0	0.	0.	-0-	-0.	-0.	-0.		
AVS DPIFT OF GSP PASE PATE (DIG UN/SEC)(27) 0.	AVG GSR BASE RATE DUR DRV (DIG UNITS) (26)	0.	0.	0	0.	0_	0-	-0.	-0-	-0-	-0		
TOT NO. OF GSR RFACTIONS DURING THE DRV(2R) C. C. D.	AVS DOIFT OF GSP BASE PATE (DIG UN/SEC) (27)	0.	· 0.	0.	0.	0.	0.	-0-	-0-	-0-	-0		
LVS MAG OF GSR PEACTIONS (DIG UNITS) (29) 0. <td< td=""><td>TOT NO. OF GSR REACTIONS DURING THE DRV(28)</td><td>с.</td><td>¢.</td><td>0.</td><td>0.</td><td>0.</td><td>0.</td><td>-0-</td><td>-0-</td><td>-0.</td><td>-0.</td></td<>	TOT NO. OF GSR REACTIONS DURING THE DRV(28)	с.	¢.	0.	0.	0.	0.	-0-	-0-	-0.	-0.		
AVS LENGTH OF BFEATHS (SLCONDS) (30) 1.744 0.673 1.751 0.683 -0.006 0.905 0.977 0. -0.02 0. S.D. OF LENGTH DF BREATHS (SECONDS) (31) 0.614 0.254 0.570 0.222 0.043 0.371 1.31 0. G.31 0. AVS DEPTH OF BREATHS (DIG UNITS) (32) 434.505 202.287 240.420 153.157 194.084 312.972 1.74 0. 1.64 0. S.D. OF DEPTH OF BREATHS (DIG UNITS) (33) 406.166 170.821 273.928 222.628 132.238 363.787 0.59 C. 0.96 0. TOT NO. OF BREATHS DUPING THE DRIVE (34) 387.250 151.342 358.250 149.729 29.000 245.624 1.02 C. 0.31 0. PETHS WH? EXH TIM .LT. INH TIM (PR CT) (35) 44.431 17.194 42.656 16.322 1.775 23.549 1.11 0. 0.20 0. AVG BRTH DEP/WID RATIO (DIG UN/CNT IND)(36) 222.460 100.768 124.741 82.493 97.719 165.116 1.49 C. 1.57<	AVS MAG OF GSR PEACTIONS (DIG UNITS) (29)	Ċ.	0.	0.	0.	0_	0-	-0-	-0-	-0-	-0.		
S.D. OF LENSTH DF BREATHS (SECONDS) (31) 0.614 0.254 0.570 0.222 0.043 0.371 1.31 0. 0.31 0. AVS DEPTH DF BREATHS (DIS UNITS) (32) 434.505 202.287 240.420 153.157 194.084 312.072 1.74 0. 1.64 0. S.D. DF DEPTH DF BREATHS (DIG UNITS) (33) 406.166 170.821 273.928 222.628 132.238 363.787 0.59 C. 0.96 0. TOT NO. DF BREATHS DUPING THE DRIVE (34) 387.250 151.342 358.250 149.729 29.000 245.624 1.02 C. 0.31 0. PETHS WH? EXH TIM .LT. INH TIM (PR CT) (35) 44.431 17.194 42.656 16.322 1.775 23.549 1.11 D. 0.20 0. AVG BRTH DEP/WID RATIO (DIG UN/ONT IND)(36) 222.460 100.768 124.741 82.493 97.719 165.116 1.49 C. 1.57 0. SD OF BRTH DEP/WID RAT (DIS UN/ONT IND)(36) 222.460 145.111 120.980 61.376 195.075 0.52 C. 0.83 0. LENSTH UF DFIVE (SECONDS) (38) 2770.375 417.697 2405.125 262.520 365.250 524.350 2.18 C. 1.54 0. LENSTH UF DFIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4070.141 0.20 C. 1.56 C. LENSTH UF DFIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4070.141 0.20 C. 1.56 C. LENSTH UF DFIVE (FOR FRMS) (40) 6360.667 2175.551 61051.658 4619.323 2605.475 4550.754 7.72 C. 1.56 C. LENSTH UF DFIVE (FOR FRMS) (40) 6360.667 2175.551 61051.658 4619.323 2605.475 (5000 1.000 1.150 0.20 C. 1.57 0. LENSTH UF DFIVE (FOR FRMS) (40) 6360.667 2175.551 61051.658 4619.323 2605.475 (5000 1.000 1.150 0.20 C. 1.56 C. 1.56 C. 1.56 0. LENSTH UF DFIVE (FOR FRMS) (40) 6360.667 2175.551 61051.658 4619.323 2605.475 (5000 1.000 1.150 0.20 C. 1.57 0. LENSTH UF DFIVE (FOR FRMS) (41) 1.033 0.006 1.033 0.007 0.0000 0.000 0.000 0.000 0.000 0.000 0.0000 0.000 0.000 0.000 0.000 0	AVE LENGTH OF BREATHS (SECONDS) (30).	1.744	0,673	1.751	0.683	-0-006	0.906	0.97	6.	-0-02	D .		
AVS DEPTH OF BREATHS (DIG UNITS) (32) 434.505 202.287 240.420 153.157 194.084 312.072 1.74 0. 1.64 0. S.D. DF DEPTH OF BPEATHS (DIG UNITS) (33) .406.166 .170.821 273.928 222.628 132.238 363.787 0.59 C. 0.96 0.96 TOT NO. OF BREATHS DUPING THE DRIVE (34) 387.250 151.342 358.250 149.729 29.000 245.624 1.02 0. 0.96 0. PETHS WH? EXH TIM .LT. INH TIM (PR CT) (35) 44.431 17.194 42.656 16.322 1.775 23.549 1.11 0. 0.20 0. AVG BRTH DEP/WID RATIO (DIG UN/CNT IND)(36) .222.460 .100.768 .124.741 82.493 .97.719 165.116 1.49 0. 1.57 0. SO DF BRTH DEP/WID RAT (DIS UN/CNT IND)(37) .206.496 86.560 145.111 120.980 61.376 195.078 0.52 C. C. 83 0. SO DF BRTH DEP/WID RAT (DIS UN/CNT IND)(37) .206.496 86.560 145.111 120.980 61.376 195.078 0.52	S.D. OF LENGTH OF BREATHS (SECONDS) (31)	0.614	0.254	C-570	0.222	0.043	0.371	1.31	0.	0.31	0.		
S.D. DF DEPTH OF BPEATHS (DIG UNITS) (33) 406.166 170.821 273.928 222.628 132.238 363.787 0.59 C. 0.96 D. TOT NO. DF BRFATHS DUPING THE DRIVE (34) 387.250 151.342 358.250 149.729 29.000 245.624 1.02 C. 0.31 D. PETHS WH? EXH TIM .LT. INH TIM (PR CT) (35) 44.431 17.194 42.656 16.322 1.775 23.549 1.11 D. 0.20 D. AVG BRTH DEP/WID RATIO (DIG UN/CNT IND)(36) 222.460 100.768 124.741 82.493 97.719 165.116 1.49 C. 1.57 C. SD DF BRTH DEP/WID RATIO (DIG UN/CNT IND)(36) 222.460 100.768 124.741 82.493 97.719 165.116 1.49 C. 1.57 C. SD DF BRTH DEP/WID RAT (DIS UN/CNT IND)(37) 206.4%6 86.560 145.111 120.980 61.376 195.578 0.52 C. C.83 C. LENGTH OF DRIVE (SECONDS) (38) 277C.375 417.697 2405.125 262.520 365.750 524.750 2.18 C. 1.54 O. LENGTH UF DFIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4000.400 4000.400 1.56 C. LENGTH UF DFIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4000.400 4000.400 1.56 C. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4000.400 1.57 C. LENGTH UF DFIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4000.400 1.56 C. LENGTH UF DFIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4000.400 1.56 C. LENGTH UF DFIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 1.56 C. LENGTH UF DFIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 1.56 C. LENGTH UF DFIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 1.56 C. LENGTH UF DFINE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 1.56 C. LENGTH UF DFINE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 1.56 C. LENGTH UF DFINE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 1.56 C. LENGTH UF DFINE (SECONDS) (30) 63660.667 2175.551 610051.658 4619.323 26000 40000.400 1.575 C. 1.56 C. LENGTH UF DFINE (SECONDS) (41) 1.033 0.000 1.533 0.607 0.508 C. 76 C. 12 C. 130 C.	AVS DEPTH OF BREATHS (DIS UNITS) (32)	434.505	202-287	242.420	153.157	194-084	312.972	1.74	0_	1.64	0		
TOT NO. OF BREATHS DUPING THE DRIVE (34) 387.250 151.342 358.250 149.729 29.000 245.624 1.02 0. 0.31 0. PETHS WH? EXH TIM .LT. INH TIM (PR CT) (35) 44.431 17.194 42.656 16.322 1.775 23.549 1.11 D. 0.20 0. AVG BRTH DEP/WID RATID (DIG UN/ONT IND)(36) 222.460 100.768 124.741 82.493 97.719 165.116 1.49 0. 1.57 0. SO DE PRTH DEP/WID RAT (DIS UN/ONT IND)(37) 206.426 86.560 145.111 120.980 61.376 195.078 0.52 C. 0.83 0. LENGTH OF DRIVE (SECONDS) (38) 2770.375 417.697 2405.125 262.520 365.750 524.750 2.18 C. 1.54 0. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4000.400 4000.400 1.56 0. LENGTH OF DRIVE (FILM FRAMES) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4000.400 4000.400 1.56 0. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4000.400 1.56 0. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4000.400 1.56 0. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4000.400 1.56 0. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4000.400 1.56 0. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 1.56 0. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 1.56 0. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 0. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 0. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 0. LENGTH OF DRIVE (SECONDS) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 40000.400 0. LENGTH OF DRIVE (SECONDS) (39) 63660.667 2175.551 610051.658 4619.323 26000 40000.400 0. LENGTH OF DRIVE (SECONDS) (50) C.0000 0.0000 0. LENGTH OF DRIVE (SECONDS) (50) FLM FRMS (41) 1.033 0.0000 0.0000 0.0000 0.0000 0.0000 0. COULD 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.000	S.D. OF DEPTH OF SPEATHS (DIG UNITS) (33)	406.166	170.821	273.928	222.628	132.738	363-787	0.59	Ċ.	0.96	.		
PFTHS WH? EXH TIM .LT. INH TIM (PR CT) (35) 44.431 17.194 42.656 16.322 1.775 23.549 1.11 0.20 0.20 AVG BKTH DEP/WID RATID (DIG UN/ONT IND)(36) 222.460 100.768 124.741 82.493 97.719 165.116 1.49 0.20 0.20 SO DF PRTH DEP/WID RAT (DIG UN/ONT IND)(36) 222.460 100.768 124.741 82.493 97.719 165.116 1.49 0.20 0.20 SO DF PRTH DEP/WID RAT (DIG UN/ONT IND)(37) 206.426 86.560 145.111 120.980 61.376 195.078 0.52 0.20 0.2	TOT NO. OF BREATHS DURING THE DRIVE (34)	387.250	151,342	358.250	149.729	29.000	245.624	1.02	<u>.</u> .	0.31	<u>.</u>		
Avg BkTH DEP/WID RATID (DIG UN/ONT IND)(36) 222.460 100.768 124.741 82.493 97.719 165.116 1.49 0. SD DE RRTH DEP/WID RAT (DIG UN/ONT IND)(37) 206.496 86.560 145.111 120.980 61.376 195.078 0.52 0. LENGTH DE DEIVE (SECONDS) (38) 2770.375 417.697 2405.125 262.520 365.750 574.750 2.18 0. LENGTH OF DEIVE (SECONDS) (39) 61647.275 2054.459 59128.375 4554.242 2527.000 4000.161 0.52 0. LENGTH OF DETVE (FILM FP/MES) (39) 61647.275 2054.459 59128.375 4554.242 2527.000 4000.161 0.52 0. LENGTH OF DETVE (FILM FP/MES) (39) 61647.275 2054.459 59128.375 4554.242 2527.000 4000.161 0.52 0. 1.56 0. LENGTH OF PTH OF CAR FOP DRV (ED FLM FPMS)(40) 63660.667 2175.551 61051.658 4619.323 2605.479 4540.774 1.52 0. FATID OF EO FLM FFMS 10 PEAL FLM FRMS (41) 1.033 0.006 1.033 0.007 0.008 <td>BETHS WHR EXH TIM .LT. INH TIM (PR CT) (35)</td> <td>44.431</td> <td>17,194</td> <td>42.656</td> <td>16.322</td> <td>1.775</td> <td>23.549</td> <td>1.11</td> <td>õ.</td> <td>0.20</td> <td>0</td>	BETHS WHR EXH TIM .LT. INH TIM (PR CT) (35)	44.431	17,194	42.656	16.322	1.775	23.549	1.11	õ.	0.20	0		
SD DF BRTH DFP/WID RAT (DIG UN/ONT IND)(37) 206.496 86.560 145.111 120.980 61.376 195.378 0.52 C. 83 0. LENGTH DF DFIVE (SECONDS) (38) 2770.375 417.697 2405.125 262.920 365.750 524.750 2.18 1.54 0. LENGTH UF DFIVE (SECONDS) (38) 2770.375 2054.459 59125.375 452.222 2527.005 420.161 0.202 1.54 0. LENGTH UF DFIVE (FILM FP/MES) (39) 61647.275 2054.459 59125.375 4554.242 2527.005 4200.161 0.202 1.56 1.56 1.56 1.55 0.202 1.55 0.202 1.56 1.56 1.55 0.201 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202 1.55 0.202	AVG BETH DEP/WID RATIO (DIG UN/ONT IND)(36)	222.460	100.768	124.741	82.493	97.719	165.114	1.40	<u>.</u>	1.57	0		
[FNGTH OF DFIVE (SFCONDS) (38) 2770.375 417.697 2405.125 262.920 365.250 524.250 2.18 1.64 0. LENGTH OF DFIVE (FILM FP/MES) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4070.61 0.20 1.64 0. LENGTH OF DFIVE (FILM FP/MES) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4070.61 0.20 1.56 0. LENGTH OF DFIVE (FILM FP/MES) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4070.61 0.20 1.56 0. LENGTH OF DFIVE (FILM FP/MES) (39) 61647.275 2054.459 59125.375 4554.242 2527.000 4070.61 0.20 1.56 0. LENGTH OF DFIVE (FILM FP/MES) (40) 63660.067 2175.551 61051.658 4616.323 2600.4000 1.52 0. 1.52 0. LENGTH OF E0 FLM FRMS 10 PEAL FLM FRMS (41) 1.033 0.006 1.033 0.007 0.008 0.008 0.13 0.013	SO OF BRTH DEP/WID RAT (DIG UN/CNT IND)(37)	205.486	86.560	145.111	120.980	61.376	195.078	0.52	<u>.</u>	. с. ва	0		
LENGTH UF DRIVE (FILM FRAMES) (39) 61647.375 2054.459 59125.375 4554.242 2527.000 4070.161 0.20 0. 1.56 0. LEN DE PTH OF CAR FOR DRV (ED FLM FRMS)(40) 63660.667 2175.551 61051.658 4619.323 2605.479 4500.754 0.02 0. 1.52 0. FATID OF ED FLM FRMS 10 PEAL FLM FRMS (41) 1.033 0.006 1.033 0.007 0.000 0.008 0.74 0. 0.13 0	LENGTH OF DRIVE (SECONDS) (38)	2770.375	417.597	2405.125	282.920	365.250	524,255	2.18		1,24	0		
LEN DE PTH DE CAR FOR DRV (ED FLM FRMS)(40) 63660.667 2175.551 61051.658 4619.323 2605.479 4500.744 1.07 1. 1.52 0. FATID DE ED FLM FRMS 10 PEAL FLM FRMS (41) 1.033 0.006 1.033 0.007 0.000 0.008 0.074 0.000	I ENSTH OF DEIVE (FILM EPIMES) (39)	61647-275	2054 450	591251375	4554.742	2522-005	4	0.20	· ·	· · · · ·	r r		
FATID OF EO FLM FRMS TO PEAL FLM FRMS (41) 1.033 0.006 1.033 0.007 0.000 0.008 0.74 0. 0.13 0	IEN DE PTH DE CAR EGP DRV LED FLM FEMSILADI	63680-667	2)75.55)	61051-658	46191323	26081-79	4515.744		•	1 5 7	5 • · · · · · · · · · · · · · · · · · ·		
	FATID OF EO FLM FRMS 10 PEAL FLM FRMS (41)	1.033	5,006	1.033	0.007	cco.)	1.018	C.74		13			

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COMPILE. PRIVE STATISTICS FOR ALL SUBJECTS

LIBRIUM

SATE : 03/19/71

(A) (B) (C) (D) (F-TEST CR BOUN 0.11, 0.20, 5.00, 8.85) (T-TEST CR BOUN3.50, -2.36, 2.36, 3.50)	Ρ <u>τ</u> (CG	/PL RUP1 SUBS	۹۲ ۲۵۶ –	(DR RUP) SUBS	DIFFE (CG- 8	RENCE - TG) SUBS	NULL H	СТ СУЛПТН (SCIT)	116 :-:::[[F ::::[] FU(C)]=	ST TPOTH HU(T)
-	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	F	SIG	т	510
AVG SPEED DUPING THE DRIVE (MPH) [1]	40.598	9.033	40.534	5.193	- 0-054	5,180	3.03	0.	0.03	۰.
S.D. DE SPEED DURING THE DEIVE (MPH) (2)	8.646	2.137	10.300	4.191	-1.654	5.323	0.27	0.	-0.82	0
AVG SPD DHRING THE DRIVE (FLM FRMS/SEC) (3)		3.188_		. 2.545 .	0-945		1.57	0.	-0.74	0.
SPEED PEVS OF 5 MPH PER 25 FILM FRAMES (4)	0.030	0.014	0.024	0.011	0.007	0.005	1.64	0.	3.49	0.0
AVG ACCEL POSITION (PR CT DEPRESSED) (5)	11.189	1.003	11.025	0.871	0.163	1.080	1.33	0.	0.40	с.
S.D. OF ACCEL POSITION (PR CT DEPRESSED)(6)	2.751 _	0.765_	3.017 _	0.701	0-255	0.783	1.19	с.	-0.90	9.
FOUREVS OF 2 PECT PEP 25 FILM FRAMES [7]	0.271	0.202	0.378	0.273	-0.107	0.343	0.55	с.	-0.83	0.
ACC REVS OF 5 PECT PEP 25 FILM FRAMES (8)	0.087	0.071	0.111	0.069	-0.024	0.072	1.07	ο.	-0.90	0.
BUS OF BRK PRESSES DURING THE DRIVE [9]		10.517_	5.125 _	6.900	1.750 .	3.992	2.32	C	1.16	C
PAR PPESSURE DURING BAR PRS (PP (1 MAX)(10)	8.156	5.244	6.537	5.043	1.519	7.544	1.08	0.	0.57	0.
-VERAGE STREPTING WHEEL PUSITION (DEGS) [11]	-20.921	1.832	-21.252	2.757	0.332	3.747	C.44	0-	0.23	0.
AVS TITE BET STR KEVS UP 5 PK L1 (SELSTILZ)	1.019_			1.371 _		2.651	2.22	0	0.14	0
TAN OLE DIE BETUERN SIK AND COMP (DECENTION	9.717	3.172	9.828	3.645	-0.111	4.688	0.76	0.	-0.06	0.
NAY DATE DE ENC DE ETCEDINO (DECEDINA)	28.447	15.359	28.021	13.172	0.426	20.172	1.54	с.	0.05	0.
STEED DENS DE 5 DEUS DED DE ETIM CONNECTION			292.413_	493.426	649.529	563.397	0.37	Ũ	3.05	6.0
STEER REVS OF 10 DEC DED DE ETIM CONVESSION	. 0.003	0.479	0.503	• 0.271	0.100	0.330	3.11	0.	0.80	0.
WAY TIME RET CTO DEMONS OF A DEMONSTRATESTING	122 500	0.151	0.238	0.087	0.031	0.116	3.04	0.	C. 72	0.
AVE STRUPATE COINC INTO COVE IDEC/SCC1 (10)	220 208_		139.238 _				0.98	P.	-0.12	0. 5.
AV TIM FPM SIPT OF SIR TO MAY STR (SEC1120)	0.	0.	0.	0.	0.	0.	-0.	-0-	-0.	-0.
AV SPD CHG DURING 200 FT REF TUPN (MPH1/21)	0	0.	0.	0.	0.	0.	-0-	-0-	-0.	-0.
AVG SPD CHG BURING TUPNS (MPH) (22)	0	0	0	······	······································	~ <u> </u>	-0-	-0-	-0.	-0
AV SPC CHG DURING 200 FT AFT TUPN (MPH) (23)	0.	0	0.	0.	0	0.	-0.	-0-	-0.	-0.
TIM FPM ACC LET-UP TO STRT OF TRN (SEC)(24)	0.	0.	0	0	0	0.	-0.	-0.	-0.	-0+
TIM FOM FND OF TRN TO ACC PEESS (SECS) (25)	0.	0-	0.		. 0.	0.	-0		-0	-0
AVG GSR PASE RATE DUR DEV (DIG UNITS) (26)	0.	0.	0.	0.	0.	0.	-0-	-0.	-0.	-0-
AVG DRIFT OF GSP BASE RATE (DIG UN/SEC)(27)	0.	0.	0.	· 0.	0-	. 0.	-0.	-0-	-0-	-0-
TOT NO. OF GSR FEACTIONS DUPING THE DRV(28)	0.	0.	0.	0.	0.	0.	-0.	-0-	-0-	-0.
AVG MAG OF GSR REACTIONS (DIG UNITS) (29)	0.	0.	D.	0.	0.	0.	-0.	-C.	-0.	-0.
AVG LENGTH OF BREATHS (SECONDS) . (30)	1.744 -		2.075	0.212	-0.331	0.834	10.07	0.01	-1.05	C
S-D- OF LENGTH OF BREATHS (SECONDS) (31)	0.614	0.254	0.704	0.085	-0+090	0.307	8.83	0.05	-0.78	0.
AVS DEPTH OF PREATHS (DIG UNITS) (32)	434.505	202.287	261.222	148.259	173-283	194.438	1.86	0.	2.36	ο.
S.D. OF DEPTH OF BREATHS (DIG UNITS)(33)	406.166_	170.821_		169.884	142.665	187.061	1.01	0.	2.02	0
THT NO. OF BREATHS DUFING THE DPIVE (34)	387.250	151.342	414.125	66.067	-26.875	130-715	5.25	0.05	-0.54	0.
PRTHS WHR EXH TIM .LT. INH TIM (PR CT) (35)	44.431	17.194	51.159	2.791	-6.728	16.976	37.95	0.01	-1.05	0.
AVG BRTH DEP/WID RATID (DIG UN/CNT IND)(36)	222.460 -			79.849	- 87-355	101.166	1.59	C	- Z.2B	C.
SO DE BRIH DEP/WID PAT (DIG UN/ONT IND)(37)	206.486	86.860	136.025	85.826	70.461	94.403	1.02	с.	1.97	0.
LENGTH DE DRIVE (SECONDS) (38)	2770.375	417-697	2625.250	316-179	145-125	457.104	1.75	ç.	0.84	0 .
LENGTH D- DRIVE (FILM FRAMES) (39)	61647.375	.2054.459	61060.250	2095.992	. 527.125	2703.720	0.96	2.	D.57	5 .
LT' OF PTH DE CAR FOR CRV (FO FLM FPMS)(40)	63680.467	2175-551	63165.505	2034.251	615.157	2793.381	1.14	C •	0.5E	ς.
FITTO DE ED FLM FPMS TO PEAL FLM FRMS (41)	1.033	0.006	1.033	0.010	-0.	1.010	0.39	ί.	-^.	-2.

146

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	COMPILED DRIVE STATISTICS FOR ALL SUBJECTS	IS LIBRIUM						:ATE: 05/15/7:					
	(A) (B) (C) (D) (F-TEST CF BOUN 0.11, 0.20, 5.00, 8.85) (T-TEST CF BOUN3.50,-2.36, 2.36, 3.50)	PL (CG	/PL RUP) SUBS	۵۱ ۲۵ (۲۵ 88	/DR RUP) SUBS	DIFFE (CG B	RENCE - TG1 SUBS	NULL HYPOTH SD(C)=SD(T	TTEST- NULL HYPO FU(C]=40[ту Т)			
		NEAN	STD DEV	ME AN	STD DEV	MEAN	STD DEV	F SIG	T 51	ŀ			
147	AVSSPEED DUFING THE DRIVE (MPH)(1)S-D. OF SPEED DURING THE DRIVE (FLM FPMS/SEC)_(3)AVG SPD DURING THE DRIVE (FLM FPMS/SEC)_(3)SPEED FFYS OF 5 MPH PER 25 FILM FPAMES(4)AVSACCEL POSITION (PR CT DEPRESSED)S-D. OF ACCEL POSITION (PR CT DEPRESSED)(6)ACC REVS OF 2 PFCT PER 25 FILM FRAMES(7)ACC REVS OF 5 PRCT PER 25 FILM FRAMES(8)NO. CF BPK PRESSES DURING THE DRIVE(9)MAX PRESSURE DURING BPK PPS(PR CT MAX)(10)AVERAGE STEERING WHEEL POSITION (DEGS)(11)AVG TIME BET STR REVS OF 5 PR CT (SFCS)(12)AVG DIF BETWEEN STR AND COMP (DEGS)(13)S.D. OF DIF BETWEEN STR AND COMP (DEGS)(13)S.D. OF DIF BETWEEN STR AND COMP (DEGS)(14)MAX RATE OF CHG OF STEERING (DEGS/SEC)(15)STFER REVS OF 5 DEGS PER 25 FILM FRAMES(16)STEFR REVS OF 10 DEG PER 25 FILM FRAMES(16)STEFR REVS OF 10 DEG PER 25 FILM FRAMES(16)STEFR REVS OF 10 DEG PER 25 FILM FRAMES(17)MAX TIME RET STR REVS OF 5 DEGS (SECS) (18)AVG SPD CHG DURING 200 FT BEF TURN (MPH)(21)AV SPD CHG DURING 200 FT AFT TURN (MPH)(23)TIM FRM ACC LET-UP TD STRT UF TRN (SEC)(27)AVS DRIFT OF GSR BASE PATE (DIG UNITS)AVG SPD CHG DURING 200 FT AFT TURN (MPH)(23)TIM FRM ACC LET-UP TD STRT UF TRN (SEC)(27)AVS DRIFT OF GSR BASE PATE (DIG UNITS)AVG DRIFT OF GSR BASE PATE (DIG UNITS)AVG DRIFT OF GSR BASE PATE (DIG UNITS)AVG DRIFT OF GSR BASE TATHS (DIG UNITS)AVG DRIFT OF GSR PREATHS (SECONDS)	$\begin{array}{c} 40.593\\ 8.646\\ 22.713\\ 0.030\\ 11.168\\ 2.751\\ 0.271\\ 0.271\\ 0.087\\ 6.875\\ 8.156\\ -20.921\\ 1.019\\ 9.717\\ 28.447\\ 357.176\\ 0.603\\ 0.270\\ 123.508\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.$	9.033 2.187 3.188 0.014 1.003 0.765 0.202 0.071 10.517 5.244 1.832 2.041 3.172 16.359 300.759 0.479 9.151 227.187 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	$\begin{array}{c} 40.405\\ 9.559\\ 24.831\\ 0.035\\ 11.737\\ 3.891\\ 0.347\\ 0.106\\ 6.509\\ 6.637\\ -25.818\\ 0.469\\ 11.052\\ 31.375\\ -8.358\\ 0.884\\ 0.369\\ 42.451\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.\\ 0.$	5.432 2.866 2.510 0.030 0.534 1.279 0.172 0.054 7.382 3.831 13.159 0.856 5.208 20.880 515.839 0.772 0.300 30.054 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	$\begin{array}{c} 0.193 \\ -0.912 \\ -2.118 \\ -0.005 \\ -0.548 \\ -1.140 \\ -0.076 \\ -0.019 \\ 0.375 \\ 1.519 \\ 4.898 \\ 0.549 \\ -1.335 \\ -2.929 \\ 365.534 \\ -0.281 \\ -0.281 \\ -0.099 \\ 81.057 \\ 0. \\ 0. \\ 0. \\ 0. \\ 0. \\ 0. \\ 0. \\ 0$	11.901 4.026 4.257 0.023 1.066 1.287 0.148 0.025 5.384 5.590 12.690 2.300 6.454 28.996 480.598 0.968 0.968 0.355 234.844 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	$\begin{array}{c} 2.77 & C. \\ 0.58 & C. \\ 1.61 & C. \\ 0.21 & 0. \\ 1.45 & 0. \\ 0.36 & 0. \\ 1.38 & C. \\ 1.73 & C. \\ 2.03 & C. \\ 1.87 & C. \\ 2.03 & C. \\ 1.87 & C. \\ 0.02 & -0. \\ 0.02 & -0. \\ 0.02 & -0. \\ 0.02 & -0. \\ 0.038 & 0. \\ 0.38 & 0. \\ 0.38 & 0. \\ 0.38 & 0. \\ 0.38 & 0. \\ 0.38 & 0. \\ 0.38 & 0. \\ 0.38 & 0. \\ 0.38 & 0. \\ 0.38 & 0. \\ 0.38 & 0. \\ 0.38 & 0. \\ 0.38 & 0. \\ 0.5 & 0. \\ 0.61 & 0. \\ 0.61 & 0. \\ 0.61 & 0. \\ 0.61 & 0. \\ 0.61 & 0. \\ 0.61 & 0. \\ 0.61 & 0. \\ 0.61 & 0. \\ 0.61 & 0. \\ 0.63 & 0. \\ 0.63 & 0. \\ 0.66 & $	$\begin{array}{cccccccccccccccccccccccccccccccccccc$				
	LENSTH OF DPIVE (SLEOKDS) (39) LENSTH OF DPIVE (FILM FRAMES) (39) LEN DF PTH OF CAR FOR DRV (EC FLM FRMS)(40) PATIO OF FO FLM FRMS TO FEAL FLM FRMS (41)	61647.375 636°C.667 1.033	417.547 _2054.459 2175.551 0.006	2474.900 60248.250 62935.556 1.034	2651.080 2856.566 0.005	295.815 799.125 745.111 -0.001	448.392 4120.359 4125.018 6.007	2.51 D. 0.59 T. 0.58 T. 1.53 T.	1.75 D. 5.51 C. 5.45 C. -0.44 D.				

COMPILED EVENT STATISTICS FOR ALL SUBJECTS ACROSS ALL EVENTS RESULTS OF DISTRIBUTION OF THE INDIVIDUAL SUBJECT MEANS

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LIBRIUM

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DATE: 28/18/71

(A) (B) (C) (D) (F-TEST CR BOUN 0.11, 0.20, 5.00, 8.85)_ (T-TEST CD BOUN 2.27, 5.00, 8.85)_	PL/	'ΡL UP)	AL/ (TGP	(PL (UP)	DIFFE:	RENCE TG1	FTE NULL H	57 NPOTH	ITE NUL H	ST YPQTH_
13-1231 CF BUGN3.50,-2.36, 2.36, 3.501	8 5	085	8 5	2082	8 5	SUBS	SD(C)=	SO(7)	₩U(C)=	20(T)
	HEAN	_STD DEV	MEAN	_ STD. DEV	_ MEAN	STD DEV	F	SIG	т	SIG
SPD AT THE BEGINNING OF THE EVENT (MPH) (1)	37.383	7.660	39.156	4.078	-1.773	8.258	3.53	0.	-0.57	0.
SPD AT THE END OF THE EVENT (MPH)[2]_	37.522 _	7.609	39.272 _	4.545	-1.750	8.271	2.20	0.	-0.55	0
MINIMUM SPEED DURING THE EVENT (MPH) (3)	33.105	8.046	35.094	5.159	-1.989	8.420	2.43	0.	-0.63	0.
"1XINUM SPEED DURING THE EVENT (MPH) (4)	40.820	7.616	42.763	3.831	-1.943	8.326	3.95	C.	-0.62	0.
SPEED REVS OF 5 MPH PER 25 FILM FRAMES [5]	0.021			0.013	-0.000	0.008	1.29	с.	-0.13	0.
AVERAGE SPEED DURING THE EVENT (MPH) (6)	37.219	7.777	39-474	4.901	-2.255	8.691	2.52	C.	-0.69	0.
AVG SPD DURING THE EVENT (FLM FRMS/SEC) (7)	23.572	3.056	25.647	2.599	-2.075	2.879	1.39	0	-1.91	0.
ACC REVS OF 2 PRCT PER 25 FILM FRAMES _ (8) _	0.278	0.224	0.421	0.262	-0.143	0.384	0.73	0.	-0.99	0.
ACC REVS OF 5 PRCT PER 25 FILM FRAMES (9)	0.081	0.079	0.118	0.050	-0.036	0.061	2.52	с .	-1-58	0.
TIME TO IST COMPLETE ACC LET-UP (SECS) (10)	0.124	0.280	0-235	0.311	-0.111	0.124	0.81	0.	-2.36	0.
AVG ACCEL POSITION (PR CT DEPRESSED) (11).			11-694	0.874	-0.734	0.623	1.09	0.	-3.12	-0.05
TIM TO 1ST ACC LET-UP OF 3 PR CT (SECS.(12)	1.896	0.697	2-063	0.464	-0-167	0.615	2.26	ñ	-0.72	0.
MAX POSITION OF ACCEL (PR CT DEPRESSED)(13)	14.745	1.155	16.059	1.509	-1.314	1.115	0.59	n.	~3.12	~0.05
TIM FRM ACC LET-UP TO IST PRK PRS (SEC)(14)	0.081	0.114	0 097	0 081	-0.010	0 106	1.99	0	-0.26	0
TIM TO IST BE PPS FRM STRT OF EVT (SEC)(15)	0.417	0.553	0 617.	0.766	-0 200	0 452	0 52	Č.	-1 17	0
MAX ANT OF BRK PRESSURE IPR (TOF MAX) (16)	9.210	15 879	V 309	4 573	4 813	12 000	12 32	5.01	0 01	0
TIME TO DEP DIST IN BREATHING (SECS) (17)	· · ·	12.017	4.370	4. 223	4.015	13.777		-0	-0	
TIME TO WID DIST IN BREATHING (SECS) (11)	U•	······································	······································			~- U.	-0.	-0+ -	-0.	
LYERAGE BREATHING DATE INDEATHS/SECSI (10)	0.610	0 1 4 7	0-(10	0.173	-0-008	0.726	-0-00		-0.09	~0.
SEDUENCE NOL DE LAST MAN EVE VARKER (20)	62 319	53 205	74 477	0-1/3	-0.000	0.200	0.59	0	-0.66	0.
TIME DE LAST MAN'ENT MARKER ISECSI (21)	028 707		020 576	02.0901	0 177	266 603	1 16	<u>ю</u> .	-0.04	0
TIME AT THE BEGINNING OF ENT (SECS) (22)	1172 014	730.737	320+714	277.241	75 071	200.402	1.10	<u> </u>	0.00	0.
TIME AT THE FUD OF EVELOPERSY (22)	1126-214	219.940	1047+093	249.202	12.021	170 500	0.78	V.	1.17	0.
	1120+240			271.024	10+404 .		0.10	- Un - C	. 1.13	U
	12+221	2.313	12.083	2.144	0.043	2.134	1-17	0.	0.80	0.
CS2 RASE DATE END THE EVENT IDIC INITISIDA	505-671	14.951	303.884	15.313	-0.012	0.161	0.95	0.	-0,04	0.
TINE TO A COD FUE OF THE STD ANT (SECONDER)	U•	0	0 <i>_</i>	V• ·			-0-	-0.	-0-	-0
TIME TO A GSR UNG OF THE SHEART (SECSIL2/)	0.	0.	0.	0-	0.	0.	-0-	- U.	-0.	-0.
THE TO THE MAXIMUM WER CHAPPE (SEUS) (28)	0.	0.	0.	0.	0.	0.	-0.	-0.	-0.	~0.
AND BOSITION OF THE CTD INT (DIG DATIS) (29).	······································			······ 0• ·······			-0-	-0		~0
AVG PUSITING OF THE STR WILL (DECORECT (30)	-23.680	4.027	-27.582	4.727	3.902	6.748	0-13	U.	1.73	e.
THE TO DEC OF STR INTO A TION ACCORD 1311	129.105	13-838	134.498	20.486	-5.393	12.611	0-46	Ŭ•	-1-13	0.
THE TO BLO OF STR INTO A TURN (SELST (32).	U		0•	0•			-0-	-0	0.	-0
FAX STR RATE GUING PHILITURN (DEG/SEC) (33)	0.	0.	0.	0.	0-	0.	-0.	-0.	-0.	-0.
The DE THE STP WHL (DEGS) (34)	0.	0.	0.	0.	0.	0.	-0.	-0.	-0.	-0-
MAX SIP RATE COMING OUT OF TUPN (DG/SC)(35).			0.	0	0	0.	-0-	-0		-0
STEER REVS DE 5 DEGS PER 25 FILM FRAMES(36)	0.774	0.535	C.746	0.539	0.029	0.358	0.98	0.	0.21	0.
STEER REVS OF 10 DEG PER 25 FILM FRAMES(37)	0.316	0-160	0.361	0.141	-0.045	9.107	1.30	С.	-1.11	0.
STEEP PEVS OF 15 DEG PER 25 FILM FRAMES(38).		0.097		0.113	0.063	0.095	C.73	2.	-1.75	0
LEN DE PTH DE CAR IN EVT (ED ELM ERMS) (39)	319.501	15.572	321.724	15.615	-1.823	3.332	0.99	5.	-1.45	۰.
FATIO OF ED FLM FERS TO PEAL FLM FEMS (40)	1.066	0.0091	1.079	0.017	-0.013	0.015	0.76	Ο.	-2.25	<u>C.</u>
AND DIF BETREEN STP AND STP COMP (DEGS)(41)	31.419	3.457	. 33.632	4.857	2.213	3.794	0.51	1 e .	-1.54	· ·
HAY DIF BETWEEN STR AND STR COMP (DEGS)(42)	-36.587	10.808	-45.135	11.042	11.450	10.714	C•96		2.83	0105

COMPILED EV ENT STATISTICS FOR ALL SUBJECTS PESULTS OF DISTRIBUTION OF THE INDIVIDUAL SU	ACPOSS ALL BJECT MEANS	EVENTS	LIERIUM				CATE: 05/15/73				
· _					-						
(A) (B) (C) (D)	PL/	PL	PL/	DR	DIFFER	ENCE	FTES	·	TTE	51	
(F-TEST CR BOUN 0.11, 0.20, 5.00, 8.35)		UP)	(TGR	UP)	ICG-	-IG)	NULL HY	POTH	NULL H	YPCTH	
(T-TEST CR BOUN3.50,-2.36, 2.36, 3.50)	8 5	508 5	8 3	UBS	8 5	SUB S	SD(C) = S	DITE	¥U(C)=	PU(T)	
						•					
• • • • • • • • • • • • • • • • • • • •	ME 4N	STD_DEV	MEAN	STD DEV	MEAN	STD DEV	F	SIG	τ	21e	
				5			*	•		•	
SPD AF THE REGINNING OF THE EVENT (SPH) (1)	37.483	1.222	38-566	5.8/9	-1-083	4.009	1.51	U.	-0.10	0.	
AT THE END OF THE EVENT IMPHI	3/•598			2.522	1.010	2.940.		Ue	0.07		
HYTHIN COED DUDING THE EVENT (NOD) (3)	33.239	1.514	34-091	5.(0)	-1-428	4-417	3 - 1 1	C.	-0.60	0	
SPEED DEVE DE E NOU DED DE ETIM EDAVEE (4)	40.920	1.281	41.450	5.690	-1.034	2.932	1.07	0. D	1 70	<u>0</u> .	
THE ARE CREEN NUDTHE THE EVENT FRANCS_ 121_		0.017		U•U15	1 0.000		1 71	· · · · · ·	- 1 - 20	0	
AVS COD DUDING THE EVENT (EVENT (MENT) (O)	31.510	7 1411	20.424	2.522	-1.130	1 840	1.56	5	-1 35	0.	
ALS REVS OF 2 DECT DED 25 ETTA EDAVES (R)	23.130	5.149	0 370	0 125	-0.690	D 204	1.51	<u>.</u>	-1 17	0.	
ACC EVE DE 5 DECT DER 25 ETTA ERAVES - 101	0 087	0 087	0.096	0.059	0.000	0.064	1 08	0 .	-0 38	0.	
TIME TO IST COMPLETE ACC LET-UP (SECS) (10)	0.007	0.359	0.090	0.009	0 107	0 415	3 36	<u>.</u>	0.69	0.	
AVS AFTER POSITION (PR CT OFDERSEN) (11)	10 093	0.370	10 830	0.594	0.153	0.583	1 77	n .	P 40	õ.	
TIM ID IST ACC IFT-HP DE 3 PR CT (SECS (12)	1 876	0.647	2 274	0 618	-0-448	_ 0.769	1.08	0	-1 54	0.	
MAX POSITION OF ACCEL (PR CT DEPRESSED)(13)	14.831	1,105	14.883	1.977	-0-052	1.406	0.31	<u>.</u>	-0.10	0.	
TIM FRM ACC LET-UP TO IST BRK PRS (SEC)(14)	0.088	0.126	0.081	0.076	0.007	0.116	2.77	0.	0.15	0.	
TIN TO 1ST BE PRS FPM STRT OF EVT (SEC)(15)	0.452	0.521	0.772	0.758	-0.310	0.347	0.67	0.	-2.36	0.	
MAX ANT DE PRK PRESSURE (PR CT DE MAX) (16)	9.040	15.894	3.651	4.224	5.389	16.408	14.16	0.01	0.87	e.	
TIME TO DEP DIST IN BREATHING (SECS) (17)	0.	0.	0.	0.	0.	0.	-0	Ð.	-0.	-0.	
TIME TH WID DIST IN BREATHING (SECS) (18)	0.	0.	0.	0.	0.	0.	-0	с.	-0.	-0.	
AVERAGE BREATHING RATE (BREATHS/SEC) [19]	0.408	0.159	0.429	0.074	-0.021	0.098	4.63	0.	-0.57	0.	
SEQUENCE NO. OF LAST MAN EVT MARKER	62.983	_ 58.347	92.936	80.384	-29.953	79.212	0.53	0.	-1.00	0.	
TIME OF LAST MAN EVT MARKER (SECS) (21)	944.012	428.034	948.408	382.991	-4.396	511.349	1.25	0.	-0.02	0.	
TIME AT THE BEGINNING DE EVT (SECS) (22)	1142.213	209.795	1113.853	153.175	28.360	140.882	1.88	0.	0.53	0.	
TIME AT THE END OF EVT (SECS)	_1155.351_	_211.310_	_1126.814_	153.405	28.537	_141.768	. 1.90	0	0.53	0.	
LENGTH OF THE EVENT (SECONDS) (24)	13.138	1.925	12.961	1.232	0.177	1.763	2.44	0.	0.27	0.	
LENSTH OF THE EVENT (FILM FRAMES) (25)	302.568	13.334	302.567	13.464	0.001	0.631	0.98	C.	0.01	0.	
GSP BASE RATE FOR THE EVENT (DIG UNITS) (26).						_ 0.	-0	•0•	-0.	-0	
TIME TO A GSR CHG OF THE STD AMT (SECS)(27)	0.	· 0.	0.	0.	0.	0.	-0	·C.	-0.	-0.	
TIME TO THE MAXIMUM GSR CHANGE (SECS) (28)	0.	0.	0.	0.	0.	0.	-0	•0.	-0-	-0.	
MAX GSR CHG DURING THE EVT (DIG UNITS) (29)		D •		0	0		0	·C•	0-	-0	
AV3 POSITION OF THE STR WHL (DEGS) (30)	-24.280	4.166	-22.829	2.790	-1.452	3.813	2.23	D.	-1-01	0.	
AVG RATE OF LHG OF STR WHL (DEG/SEC) (31)	128.682	12.168	127.869	8.224	0.812	6.660	2.19	0.	0.32	0.	
TIME TO BEG UP STR INTO A ORN (SECS) (32).		0	0	0	0	D.	-0	•0•	-0.	-0	
MAX STR RATE GUING INTO TORN (DEG/SEC) (33)	0.	0-	0.	0.	0.	0.	-0	·0.	-0.	-0+	
MAX TURN OF THE STR WHL (DESS) (34)	0.	0.	0.	0.	0.	0-	-0	-0.	-0.	-0.	
THE SEAS US & DECK DED OF EACH COMPLEXION	V•	V•	V•	V•	V•	V•	-0	·U•	0.	-0	
STEEN NEVO UN DIVIUS MEN ZO FILM ENAMESISOF	0.351	0.000	0.200	0.107	0.067	0.443	3.46	U.	1.55	e.	
SITTE FINS OF IS DER DER DE FILM FRAMES(S/)	0.351	0.177	0.258	0.103	0.053	0.1:3	3.15	Ü.	1.25	С. С	
IS SER FERSION IN THE PERSON FILM FRAMESION.	U•248 319:533		0.219.	U.UDZ		U•U/1	3.31	i	1.08	· · · · ·	
-FLA DE EU ELA EDAG IN DEVI ELA EDAGE IVAN -FLA DE ELU DI LAM IN CAN (DA EFU EKAP) (941-	315.323	13,401	075 • 71C	124121	-0-255	3.000	U - 79		-0.52	U.	
-FALLY IN CHILL FRID TO REAL FET FRID. 14401 - FAR AND RETAREN STR NON STR PROD INFORMANT	1.JCD	0.000	1.010 31 C14	3+012 5-766	-0.004		0.16 -			5. 0	
WHY DIE RETWEEN STR AND STR COMP IDECSIADI	01+040 _ 569			12,121	-6 427	- 2+459	0 • 4 7 6 · 5 7			C.	
= 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1		GETUD		******		11+752	(•		U	

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COMPILE EVENT STATISTICS FOR ALL SUBJECTS ACROSS ALL EVENTS RESULTS OF DISTRIBUTION OF THE INDIVIDUAL SUBJECT REAMS

LIBRIUM

DATE ; 08/18/71

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NUMBER SUBS	(A) (B) (C) (I (F-TEST CR BOIN 0.11, 0.20, 5.00, 8 (T-TEST CR BOIN 0.11, 0.20, 5.00, 8)	0) •851	PL/	ראנ (UP)	۲۵ ۲۵	OR SUP)	DIFFE:	RENCE -TG)	FTE NULL F	ST	TTE NULL H	ST
MEAN SID DEV MEAN SID DEV MEAN SID DEV F SIG T SIE SP2 AT THE REGIVITIG DF THE THE THE STC TH THE STC STC <td>(1-1231 CR BUUN = -3.50, -2.30, 2.35, 3)</td> <td>• 501</td> <td>8 5</td> <td>5085</td> <td>8 3</td> <td>SUBS</td> <td>8 3</td> <td>SUB S</td> <td>SDIC)=</td> <td>SD(T)</td> <td>PU(C)=</td> <td>FU(T)</td>	(1-1231 CR BUUN = -3.50, -2.30, 2.35, 3)	• 501	8 5	508 5	8 3	SUBS	8 3	SUB S	SDIC)=	SD(T)	PU(C)=	FU(T)
S72 AT THE REGIVING OF THE EVENT (MPH) [1] 37.525 7.376 37.256 5.670 0.266 0.664 1.57 0. 0.276 0. S72 AT THE EVD OF THE EVENT (MPH) [1] 33.173 7.844 32.364 5.738 0.6034 0.2786 10.103 1.56 0. 0.07 0. MINIMUS SPEED DURING THE EVENT (MPH) [1] 33.173 7.844 32.364 5.738 0.803 10.6101 1.37 0. 0.280 0. S72 AT THE EVENT (MPH) [1] 41.101 7.424 41.325 6.342 0.314 10.014 1.37 0. 0.208 0. S72 AT THE EVENT (MPH) [1] 41.4101 7.424 41.325 6.342 0.314 0.0161 1.37 0. 0.208 0. S72 DURING THE EVENT (MPH) [1] 37.343 7.376 37.030 5.275 0.314 0.4091 1.016 1.37 0. 0.208 0. S72 DURING THE EVENT (MPH) [1] 37.343 7.376 37.030 5.275 0.314 0.4091 1.0.212 1.940 01.32 0. S72 DURING THE EVENT (MPH) [1] 0.742 0.223 0.347 0.164 -0.075 0.112 1.940 01.32 0. S72 DURING THE EVENT (MPH FRAMES [1] 0.227 0.223 0.347 0.1164 -0.075 0.012 1.940 01.10 0. S74 S7 DURING THE EVENT (MPH FRAMES [1] 0.227 0.223 0.347 0.1164 -0.075 0.012 1.940 00.6 0. S74 S7 DURING THE EVENT (MPH FRAMES [1] 0.227 0.223 0.347 0.1164 -0.075 0.012 1.940 00.6 0. S74 S7 DURING THE EVENT (MPH FRAMES [1] 0.226 0.095 0.2127 0.1176 0.031 0.074 0.237 0.208 0.007 0.017 0.037 0.017 0.000 0.017 0.030 0.017 0.000 0.000 0.017 0.000 0.017 0.000 0.000 0.017 0.000 0.000 0.017 0.000 0.000 0.000 0.017 0.000	- · · · · ·	-	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	F	SIG	т	21¢ -
57:2 A1 TPS (P) THE EVENT (MPH) 12) 37:675 37:641 37:390 6.034 0.286 10.073 1.56 0.07 0.01 VILMUM SPEED DURING THE EVENT (MPH) 13) 33:173 7:644 32:364 5.738 0.0809 10.013 1.87 0.026 0.037 -0.018 0.035 C.20.025 -0.016 0.035 C.20.025 0.017 0.018 0.037 -0.018 0.035 C.20.025 0.131 0.035 C.20.025 0.131 0.017 0.018 0.037 0.018 0.035 C.20.025 0.131 0.017 0.018 0.017 0.018 0.017 0.018 0.012 1.030 0.127 0.017 0.016 0.017 0.016 0.026 0.026 0.017 0.016 0.026 0.026 0.017 0.016 0.027 0.0163 0.026 0.026 0.026 0.026 0.027 0.0163 0.027 0.0163 0.027 0.0163 0.027 0.0163 0.027 0.0163 0.027 0.0163 0.027 0.0163 0.027 0.0163 0.026 0.027	SPD AT THE REGINNING DE THE EVENT (MPH)	(1)	37.525	7.376	37.256	5.879	0.269	9.664	1.57	0.	C.07	0.
P1:14HS SPEED Duraling THE EVENT (MPH) (13) 33.173 7.844 32.364 5.738 0.eg9 10.103 1.87 0. 0.21 0. SPEED Duraling The EVENT (MPH) (4) (11) 7.424 41.325 6.342 -0.314 10.014 1.37 0. -0.28 0. SPEED Duraling THE EVENT (MPH) (6) 37.343 7.576 37.030 5.025 0.314 9.049 1.63 0. -1.32 0. SPEED TOURING THE EVENT (HE WERK SEC) (7) 23.631 3.283 25.618 3.274 -1.788 3.583 1.01 0. -1.32 0. SEC PEVS OF SPECT PER ZS FILM FRAMES (13) 0.024 0.039 0.637 -0.104 0.024 1.94 0. -1.10 0. SEC PEVS OF SPECT PER ZS FILM FRAMES (13) 0.024 0.039 0.637 -0.101 0.024 1.94 0. -1.100 0. 1.115 0.017 0.017 0.007 0.017 0.0317 4.33 0. -2.46 0.111 1.115 0.017 0.017 0.017 0.017 0.017 0.017 0.0	SPD AT THE END OF THE EVENT (MPH)	. (2)			37.389 _	6.034	0.286	. 10-093	1.56	0.	0.07	0
PARTMAR SPEED DURING THE EVENT (MPH1 (4) (4).011 7.424 (4).255 6.342 -0.314 10.016 1.37 0. -0.088 0.037 -0.018 0.037 0.0477 1.038 0.0477 1.038 0.0477 1.038 0.0477 1.038 0.0477 1.038 0.0477 1.038 0.0477 1.038 0.0477 1.038 0.0477 1.038 0.0477 1.038 0.0476 <	MINIMUM SPEED DURING THE EVENT (MPH)	(3)	33.173	7.844	32.364	5.738	0.809	10.103	1.87	0.	0.21	0.
57:50 REVS OF 5 MPH PER 25 FILW FRAMES_ (5) 0.021 0.017 -0.037 -0.018 0.035 0.025 0.035 0.025 0.035 0.025 0.035 0.014 0.025 0.035 0.014 0.025 0.035 0.014 0.025 0.048 0.081 0.016 0.035 0.059 -0.014 0.023 0.024 0.036 0.035 0.017 0.005 0.035 0.017 0.037 0.017 0.037 0.017 0.037 0.017 0.037 0.017 0.037 0.016 0.023 0.0124 0.017 0.0165 0.014 0.014 0.014 0.014 0.014 0.023 0.0124 0.017 0.017 0.017 0.017 0.017 0.0163 0.0163 0.0103 0.0103 0.0103 0.0103 0.0103 0.0103 0.0103 0.0103 0.0103<	MAXIMUM SPEED DURING THE EVENT (MPH)	(4)	41.011	7.424	41.325	6.342	-0:314	10.014	1.37	0.	-0-08	0.
APPE 265 SPEED DURING THE EVENT (MPH) (6) 37,343 7,576 37,030 5,925 0.314 9,949 1.63 C. 0.08 0. APPE 265 SPEED DURING THE EVENT (FLM FRAMES) (8) C. 272 0.223 0.347 0.164 -0.075 0.102 1.940 0. -1.130 0. -1.130 0. -1.130 0. -1.130 0. -1.130 0.059 -0.014 0.059 -0.014 0.050 0.012 0.017 0.0317 4.83 0. 0.810 0. 0.863	SPEED REVS OF 5 MPH PER 25 FILM FRAMES_	(5)			0.038		-0.018	0.035	0.20	-0.05	-1.33	0.
2455 SPD DURING THE EVENT LFLM FRMMSEC1 (7) 23.831 3.283 25.618 3.274 -1.788 3.583 1.01 0. -1.32 0. 255 PECT PER 25 FILM FRAMES (9) 0.084 0.092 0.099 -0.014 0.024 1.94 0. -1.10 0. 255 PECT PER 25 FILM FRAMES (9) 0.024 0.390 -0.059 -0.014 0.024 1.940 0. -1.10 0. -1.10 0. -1.80 0. 0.059 -0.014 0.024 1.940 0.065 -1.108 0.007 0.317 4.33 0.007 1.386 0.750 0.466 -0.360 0.043 0.046 0.77 1.38 0.42 -2.63 -0.06 0.011 0.053 0.020 0.053 0.020 0.055 1.026 6.572 1.010 6.533 0.020 0.020 0.031 0.565 1.555 1.455 1.455 1.455 1.455 1.455 1.455 1.455 1.455 1.455 1.455 1.455 1.4565 1.4565 1.4565 1.4565 1.4565 1	AVERAGE SPEED DURING THE EVENT (MPH)	[6]	37.343	7.576	37.030	5.925	0.314	9.949	1.63	C.	0.08	с.
ACC #VS 0° 2 PECT PER 25 FILM FRAMES [8]Z722230.3470.1640.1670.10294 01.96 01.	AVG SPD DURING THE EVENT (FLM FRMS/SEC)	(7)	23.831	3.283	25.618	3.274	-1.788	3.583	1.01	0.	-1.32	0.
ACC PAYS OF 5 PRCT PER 25 FILM FRAMES (9) 0.084 0.092 0.099 0.059 -0.014 0.024 0.880 0.177 0.097 0.317 4.33 0.860 0.810 AVS ACCEL POSITION IPM CT DEPARSSEDI (11) 10.943 0.805 11.304 0.868 -0.360 0.883 0.866 C. -1.08 0.717 0.977 0.317 4.33 0.866 C. -1.08 0.717 0.977 0.483 0.866 C. -1.08 0.710 1.411 1.411 0.971 0.380 0.424 0.610 -2.081 1.518 0.444 0.974 0.423 0.629 0.011 0.904 6.57 0.553 0.001 0.094 6.57 0.566 0.700 0.440 0.493 0.553 0.001 0.031 0.405 0.049 0.011 1.500 0.904 0.553 0.001 0.031 0.405 0.040 0.433 0.553 0.001 0.031 0.405 0.040 0.049 0.011 0.90 0.040 0.90 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.000 <td>ACC REVS OF 2 PRCT PER 25 FILM FRAMES</td> <td>(3)</td> <td> 0.272</td> <td></td> <td></td> <td> D.154</td> <td>-0.075</td> <td>0-102</td> <td>. 1.94</td> <td>0</td> <td>-1.95</td> <td>0.</td>	ACC REVS OF 2 PRCT PER 25 FILM FRAMES	(3)	0.272			D.154	-0.075	0-102	. 1.94	0	-1.95	0.
IIVE TO 15T COMPLETE ACC LET-UP (STC5) (10) 0.224 0.388 0.127 0.177 0.097 0.317 4.83 0. 0.81 0.86 00.85 0.45 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.8	ACC REVS OF 5 PRCT PER 25 FILM FRAMES	(9)	0.084	0.032	0.099	0.059	-0.014	0.034	1.94	0.	-1.10	0.
AYS ACCSL POSITION (PR CT DEPRESSED) (11) 10.943 0.805 11.304 0.808 -0.260 0.883 0.86 C. -1.08 0.700 T14 TO IST ACC LET-UP PC 3 PR CT (SECS.122) 1.886 0.750 2.416 0.638 -0.530 0.477 1.88 02.94 -0.65 T14 TO IST ARK PRS (SEC) 111 1.4.964 1.068 16.945 1.615 -2.081 1.818 0.476 0.530 0.477 1.80 02.04 -0.65 0.031 0.094 6.57 C.05 0.668 0.017 0.003 0.094 6.57 C.05 0.668 0.017 1.50 0.000 0.027 1.304 0.004 0.000 0.0131 1.004 0.000 0.010 0.017 1.305 0.000 0.017 1.305 0.000 0.010 0.017 1.305 0.000 0.017 1.305 0.0231 0.001 0.010 0.017 1.305 0.000 0.017 1.305 0.000 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015 0.015	TIME TO IST COMPLETE ACC LETHUP (SECS)	(10)	0.224	0.388	0.127	0.177	0.097	0.317	4.83	0.	0.81	0.
The TD 151 ACC LET-UP DF 3 PR CT (SECS.(12) 1.886 0.750 2.416 0.638 -0.550 0.477 1.38 02.06 -0.64 FX PRSTUDEN DF ACCEL (PR CT DEPRESSUB0113) 14.864 1.068 16.945 1.615 -2.081 1.518 0.44 03.63 -0.01 114 FEM ACC LET-UP TO 151 SR KR PRS (SEC)115) 0.493 0.629 0.493 0.553 0.000 0.371 1.30 0. 0.00 0. MAX 44T 0F BRK PRTSSURE (PR CT DF MAX1116) 9.407 15.855 6.952 4.533 2.455 14.905 12.23 C.01 0.44 0. 114E TO DLP DIST IN REFAILTING (SECS) (17) 0. 0. 0. 0. 0. 0. 0. 0. 0. 0C000. 215 DEP NES FAM STAT OF FWT (SECS) (19) 0.413 0.160 0.380 0.183 0.033 0.305 0.76 00.90 0. 215 DEP NES MAX FAT MARKER (20) 6.575 0.59.863 75.479 47.962 -0.723 65.233 1.56 00.39 0. 215 DEP NES MAX FAT MARKER (SECS) (21) 965.959 424.831 1025.338 159.740 -39.800 415.030 7.07 0.05 -0.25 0. 214 DE ALT MAX FAT MARKER (SECS) (21) 195.142 163.880 1154.219 88.791 40.923 223.100 3.41 0. 0.48 0. 114 E ALT MAX FAT MARKER (SECS) (22) 1135.142 163.880 1154.219 88.791 40.923 225.070 3.41 0. 0.49 0. 114 ST THE EVENT (SECN) (23) 13.543 1.845 12.943 1.494 0.600 2.362 1.53 0. 0.67 0. 253 BASE RATE FOR THE EVENT (DIG UNITS) (26) 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	AVG ACCEL POSITION (PR CT DEPRESSED)	(11)	10.943	0. 805 _	11.304	0.868	-0.360	0.883	0.86	Ċ.	-1.08	0.
PIX PRSITION OF ACCEL (RR CT OFPRESSED)(13) 14,P64 1.068 16.945 1.615 -2.081 1.418 0.44 02.363 -0.071 T1M TO IST DR PRS FRW STAT OF FVT (SEC)115) 0.093 0.629 0.493 0.553 0.001 0.0371 1.30 0.00 0.001 0.0371 1.30 0.000 0.90 0.473 VEX ANT OF BRX PRSSINGE (PR CT OF MAX) (16) 9.407 15.855 6.952 4.533 2.455 14.905 12.23 C.01 0.44 0. TIME TO BRX PRSSINGE (PR CT OF MAX) (16) 9.407 15.855 6.952 4.533 2.455 14.905 12.23 C.01 0.44 0.	TIN TO IST ACC LET-UP DE 3 PR CT (SECS.	(12)	1.886	0.750	2.416	0.638	-0.530	° 0.477	1.38	0.	-2.94	-0.05
114 FEM ACC LET-UP TO IST SHK PRS (SEC)(14) 0.093 0.629 0.493 0.553 0.000 0.371 1.30 0. 0.00 0. MAX ANT OF RRK PR(SSURE (PR CT OF MAX) (16) 9.407 15.855 6.952 4.533 2.455 14.905 12.23 C.01 0.44 0. TIME TO DEP DIST IN BREATHING (SECS) (17) 0. 0. 0. 0. 0. 0. 0. 00000.	FIX POSITION OF ACCEL (PR CT DEPRESSED)	(13)	14.864	1.068	16.945	1.615	-2.081	1.518	0.44	0 .	-3.63	-0.01
TIM TO IST DR PRS FRM STRT OF FVT (SEC) (15) 0.493 0.629 0.493 0.553 0.000 0.371 1.30 0. 0.90 0. TIME TO DEP DIST IN BREATHING (SECS) (17) 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	114 FRM ACC LET-UP TO 1ST BRK PRS (SEC)	(14)	0.093	0.127	0.063	0.049	0.031	0.094	6.57	0.05	0.86	0.
Max Avt OF RRK PRESSURE (PR CT OF MAX) (16) 9.407 15.855 6.952 4.533 2.455 14.905 12.23 C.01 0.40 0. IIME TO DEP DIST IN BREATHING (SECS) (17) 0.	TIM TO IST BR PRS FRM STRT OF EVE (SEC)	(15)	0.493	0.629	0.493	0.553	0.000	0.371	1.30	0_	0.00	0.
TIME TO DEP DIST IN BEATHING (SECS) -(17)OOO	MAX AMT OF BRK PRESSURE (PR CT OF MAX)	(16)	9.407	15,855	6-952	4.533	2.455	14.905	12.23	č. 01	10.44	0
TIME TO HID DIST IN REATHING (SECS) (19) 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	TIME TO DEP DIST IN BREATHING (SECS) .	(17)	0-	. 0.	0.772	0.	0.	0	-0	-0	-0	-0
EVEPAGE 6FEATHING PATE (BREATHS/SEC) (19) 0.413 0.160 0.380 0.183 0.033 0.305 0.76 0. 0.29 0. SEQUENCE NO. OF LAST MAN EVT MARKER (20) 65.756 59.863 75.479 47.962 -9.723 65.233 1.56 0. 0.390 0. TIME OF LAST MAN EVT MARKER (SECS) (21) 98.959 424.831 1025.338 159.740 -39.380 415.03 70.05 <t< td=""><td>TIME TO WID DIST IN BREATHING (SECS)</td><td>(13)</td><td>0.</td><td></td><td>0.</td><td>0.</td><td>0</td><td>. 0.</td><td>-0.</td><td>-0.</td><td>-0.</td><td>-0</td></t<>	TIME TO WID DIST IN BREATHING (SECS)	(13)	0.		0.	0.	0	. 0.	-0.	-0.	-0.	-0
STOUENCE NO. OF LAST MAN EVT MARKER (20) 65.756 59.863 75.479 47.962 -0.723 65.233 1.56 00.39 0. INTE OF LAST MAN EVT MARKER (SECS) (21) 785.959 424.831 1025.338 159.740 -39.380 415.030 7.07 0.05 -0.25 0. INTE AT THE BEGINNING OF EVT (SECS) (22) 1181.599 162.447 1141.276 87.944 40.323 223.106 3.41 0. 0.48 0. INTE AT THE ERD DE EVT (SECS) (23) 1195.142 163.880 1154.219 88.791 40.923 225.070 3.41 0. 0.48 0. INTE AT THE EVENT (SECNONDS) (24) 13.543 1.865 12.943 1.494 0.600 2.362 1.53 0. 0.67 0. LENGTH OF THE EVENT (FILM FRAMES) (25) 312.509 10.320 312.645 10.384 -0.135 1.001 0.99 00.36 0. SS BASE RATE FUR THE EVENT (DIG UNITS)(26) 0. 0. 0. 0. 0. 0. 0. 0. 0. 000	AVERAGE BEEATHING PATE (AREATHS/SEC)	(19)	0.413	0.160	0.380	0.183	0.033	· 0.305	0 76	ñ.	0.20	0
TIME OF LAST MAY FOT MARKER (SECS) (21) 985.959 624.831 1025.338 159.740 -39.800 415.030 7.07 0.05 -0.25 0. TIME AT THE REGINGING OF EVT (SECS) (22) 1181.599 162.447 1141.276 87.944 40.323 223.106 3.41 0. 0.48 0. TIME AT THE END OF EVT (SECS) (22) 1181.599 162.447 1141.276 87.944 40.323 223.106 3.41 0. 0.48 0. LFNGTH OF THE EVENT (SECS) (23) 113.543 1.845 12.943 1.494 0.600 2.362 1.53 0. 0.67 0. LFNGTH OF THE EVENT (FLUM FRAMES) (25) 312.509 10.320 312.645 10.384 -0.135 1.001 0.90 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.0 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.<	SEQUENCE NO. OF LAST MAN EVT MARKER	(20)	65.756	59-863	75 479	47-962	-9 723	65 233	1 56	C.	-0.30	n -
TIME AT THE REGINVING OF FVT (SECS) (22) 11R1.599 162.447 1141.276 87.944 40.323 223.106 3.41 0. 0.48 0. TIME AT THE END OF EVT (SECS) (23) 1195.142 163.880 1154.219 88.791 40.923 225.070 3.41 0. 0.48 0. LINGTH OF THE EVENT (SECS) (24) 13.543 1.845 12.943 1.494 0.600 2.362 1.53 0. 0.48 0. LINGTH OF THE EVENT (FILM FRAMES) (25) 312.509 10.320 312.645 10.384 -0.135 1.001 0.99 0. -0.36 0. GSR BASE RATE FUR THE EVENT (DIG UNITS) (26) 0.	TIME OF LAST MAN EVT MARKER (SECS)	(21)	285.959	424.831	1025-338	159.740	-39.380	415.030	7.07	0.05	-0.25	n.
TIME AT THE END OF EVT (SECS) 123) 1195.142 163.880 1154.219 88.791 40.923 225.070 3.41 0. 0.48 0. LFNGTH OF THE EVENT (SECDNDS) (24) 13.543 1.845 12.943 1.494 0.600 2.362 1.53 0. 0.67 0. SSR BASE RATE FUR THE EVENT (DIG UNITS)(26) 0.	TIME AT THE REGINALING OF FVT (SECS)	(22)	1181.599	152-447	1141.276	87.944	40-323	223.106	3.41	0.	0.48	0 .
LINGTH OF THE EVENT (SECONDS) (24) 13.543 1.845 12.943 1.494 0.600 2.362 1.53 0.067 0.077 LENGTH OF THE EVENT (FILM FRAMES) (25) 312.509 10.320 312.645 10.384 -0.135 1.001 0.99 0.070 -0.36 0.077 THE TO A GSR CHG OF THE STD AMT (SECS)(27) 0.0 0.0 0.0 0.070 <td< td=""><td>TIME AT THE END OF EVT (SECS)</td><td>(23)</td><td>1195.147</td><td>163.880</td><td>1156 219</td><td>88 791</td><td>40 923</td><td>225 070</td><td>3 41</td><td>0</td><td>0 48</td><td>õ</td></td<>	TIME AT THE END OF EVT (SECS)	(23)	1195.147	163.880	1156 219	88 791	40 923	225 070	3 41	0	0 48	õ
LFNGTH OF THE EVENT (FILM FRAMES) (25) 312.509 10.320 312.645 10.384 -0.135 1.001 0.99 0. -0.36 0. GSR RASE RATE FUR THE EVENT (DIG UNITS)(26) 0.	LENGTH OF THE EVENT (SECONDS)	(24)	13.543	1.845	12.943	1.494	0.600	2.362	1 53	ວ.	0.67	<u> </u>
SSR BASE RATE FUR THE EVENT (DIG UNITS)(26) 0.	LENGTH OF THE EVENT (FILM FRAMES)	(25)	312,509	10 3 20	312 645	10 384	-0 135	1 001	0 00	<u>0</u>	-0.26	0
TIME TO A GSR CHG OF THE STD AMT (SECS)(27) 0.	GSR BASE RATE FOR THE EVENT (DIG UNITS)	(26)	0.	0	D12+0+J	10.004	0.155	n .	-0	_0	-0.50	-0
TIME TO THE MAXIMUM GSR CHANGE (SECS) (28) 0.	TIME TO A GSR CHG OF THE STD AMT (SECS)	(27)	0.	0.	<u>0</u>	U• ···	U•	0	0.	-0		~0.
Max GSR CHS DUFING THE EVT (DIG UNITS) (29) 0.	TIME TO THE MAXIMUM GSR CHANGE (SECS)	(28)	0.	0.	0	0	0.	0	-0-	-0. -D	-0.	-0
AVG POSITION OF THE STR WHL (DEGS) (30) -24.344 4.152 -26.744 12.269 2.400 10.854 0.11 - 0.05 0.59 0. AVG RATE OF CHG OF STR WHL (DEG/SEC) (31) 128.975 12.963 156.913 60.233 -27.938 68.423 0.05 - 0.01 -1.08 0. TIME TO BGG OF STR INTO A TURN (SECS) (32) 0. 0. 0. 0. 0. 0. -0.	MAX GSR CHS DUPING THE EVT (DIG UNITS)	(29)	0.	0.	0	0	0	0	-0	-0.	-0.	-0
AVS RATE OF CHG OF STR WHL (DEG/SEC) (31) 128.975 12.963 156.913 60.233 -27.938 68.423 0.05 -0.01 -1.08 0. TIME TO BSG OF SIR INTO A TURN (SECS) (32) 0. <t< td=""><td>AVG POSITION OF THE STR WHE (DEGS)</td><td>(30)</td><td>-74.344</td><td>4.152</td><td>-76 744</td><td>12.260</td><td>2 400</td><td>10.854</td><td>0 11</td><td>-0.05</td><td>0.50</td><td>- J</td></t<>	AVG POSITION OF THE STR WHE (DEGS)	(30)	-74.344	4.152	-76 744	12.260	2 400	10.854	0 11	-0.05	0.50	- J
TIME TO BSG OF STR INTO A TURN (SECS) [32] 0.	AVS RATE OF CHG OF STR WHL (DEG/SEC)	(31)	128,975	12 963	156 013	60 233	-77 938	68 423	0.05	-0.03	-1 08	n.
MAX_STR_RATE GDING INTO TURN (DEG/SEC) (33) 0.	TIME TO BEG OF STR INTO A TURN (SECS)	(32)	0.	D.	E	0.	0	0.425	-0.	-0.	-0	-0.
MAX TURN DF THF STR WHL (DEGS) (34) 0. <td>MAX STR RATE GOING INTO TURN (DEG/SEC)</td> <td>(33)</td> <td>0.</td> <td></td> <td><u> </u></td> <td>0.</td> <td> U•</td> <td>0.</td> <td>-0</td> <td>-0.</td> <td>-0</td> <td>-0.</td>	MAX STR RATE GOING INTO TURN (DEG/SEC)	(33)	0.		<u> </u>	0.	U•	0.	-0	-0.	-0	-0.
MAY SIR FATE COMING CUT OF TURN (DG/SC)(35) 0.	MAX TURN DE THE STR WHL (DEGS)	(34)	0.	0	0	0	0-	0	-0.	-0-	-0-	-2.
STEFR REVS OF 5 DEGS PFR 25 FILM FRAMES(36) 0.833 0.650 0.963 0.608 -0.030 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.14 0. -0.020 0.919 1.15 0.919 1.15 0.919 1.15 0.919 1.15 0.925 0.925 1.910 0.919 1.15 0.919 1.15 0.919 1.15 0.919 1.15 0.919 1.15 0.919 1.15 0.915 0.9010 0.919 1.15 <	MAY STR PATE COMING OUT OF TURN (DG/SC)	(35)	0.	D_	0_	0.	0.	0.	-0.	~0.	-0.	-0.
STEER PEVS OF 10 DFG PER 25 FILM FRAMES(37) 0.349 0.209 0.373 0.171 -0.025 0.205 1.49 0. -0.32 0. STELP PEVS OF 15 DEG PER 25 FILM FRAMES(38) 0.246 0.115 0.266 0.108 -0.025 0.209 1.13 -0.53 0. LFN OF PTH OF CAR IN EVT (E0 FLM FRAMES(38) 0.246 0.115 0.266 0.108 -0.020 0.097 1.13 -0.53 0. LFN OF PTH OF CAR IN EVT (E0 FLM FRAMES(38) 0.39 328.835 10.171 330.027 11.154 -1.192 3.164 0.83 -1.00 0. LFN OF FD FLM FRMS TO REAL FLM FRMS (40) 1.065 0.007 1.069 0.008 -0.004 0.013 0.77 -0.91 0. LFN DIF BETWEEN SIF AND STR COMP (DEGS)(41) 31.554 3.110 36.452 15.176 -6.999 16.575 0.04 -0.01 0.04 LFN DIF BETWEEN STR AND STR COMP (DEGS)(42) -3.33 7.592 10.374 10.375 0.04 -0.01 0.05	STEER REVS OF 5 DEGS PER 25 FILM FRAMES	(36)	0.833	0 650		0 608	-0.030	0.919	1 14	6	-0.00	~
STFLP FEVS OF 15 DEG PER 25 FILM FRAMES(38)	STEER PEVS OF 10 DEG PER 25 FILM FRAMES	(37)	0.349	0.209	0.372	0.171	-0.025	0.205	1 40	с.	-0.37	ñ.
LFN OF PTH OF CAR IN EVT (E0 FLM FRMS) (39) 328.835 10.171 330.027 11.154 -1.192 3.164 0.83 C1.00 C. FATIO OF FO FLM FRMS TO REAL FLM FRMS (40) 1.065 0.007 1.069 0.008 -C.CO4 0.013 0.77 C0.81 C. 4.5 DIF BETWEEN SIF AND STR COMP (DEGS)(41)31.5543.11C 36.45215.176 -6.899 16.575 0.04 -1.01 -1.10 0	STELP PEVS OF 15 DEG PER 25 FILM FRAMES	(38)	0-246	0.115	0.244	0.108	-0.020	0.027	1.17	~	-0.52	<u> </u>
F4TID DF FO FLM FRMS TD REAL FLM FFMS (40) 1.055 0.007 1.069 0.008 -0.013 0.77 -0.91 0. 4.5 DIF BETWEEN SIF AND STR COMP (DEGS)(41) 31.554 3.110 36.452 15.176 -6.999 16.575 0.04 -1.01 -1.01 0.11 MAY DIF BETWEEN STR AND STR COMP (DEGS)(41) 31.554 3.110 36.452 15.176 -6.999 16.575 0.04 -1.01 -1.01 0.	LES DE PTH OF CAR IN EVI (ED FIM FRAS)	(39)	328.635	10 171	230 007	11 162	-1 1020	2 144	V 53 Y+13	~	-1 00	
4.5 DIF BETWEEN SIP AND SIR COMP (DEGS)(41)	FATIO OF FO FLM FRMS TO REAL FLM FRMS	(-0)	3.065	10.111	1202021	5 559	-1+176	0.012 0.012	0.35 n 77	-	-2.50	<u>.</u>
MAY DIF BETWEEN STR AND STR COMP (DEGS)(42) - BECALL - JEAN - JEA	4.5 DIF BETWEEN STR AND STR COMP (DEGS)	(4))	31,554	2.110	1 - 207 31 - 253	15 174		14 475	0.14		-1 10	0
- ディー・マット・ション・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	MAY DIF BETWEEN STR AND STR COMP (DEGS)	[42]	-39.313	7.582		34.376	3,575	14,350	0.25	5.	0.66	<u> </u>

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IDMPILED DRIVE STATISTICS FOR ALL SUBJECTS

			<u> </u>	<u>edreze</u> -						
(A) (B) (C) (D) (F-TEST CR BOUN 0.25, 0.35, 2.87, 4.07) (F-TEST CR BOUN2.95, -2.13, 2.13, 2.95)	0) (CG 75	ADP)	00 173 76	/ (M RUP) (Ditet	RENCE (-TS)	NULL S	EST	ANTEL -	257 3723*4
	10	5035	10	3003	10	2003	37101	-20111		= J \ J
-	MEAN	STD DEV	KEAN	STD DEV	REAN	STO DEV	F	515	τ	SIG
AVG SPEED DURING THE DRIVE (MPH)	24.812	5,198	24.672	5.061	0.191	5-545	1.06	r	0 11	0
S.D. THE SPEED DUPING THE DRIVE (MPH) (2)	5.953	2.750	5.697	2-035	1-256	3.481	1.83	5	0.79	<u>^</u>
445 SPD DURING THE DRIVE (FLM FRMS/SEC) (3)	23.401	2.334	23.602	4.917	-0-200	4.551	0.23	-0.01	-0.17	^
SPEED REVS OF 5 MPH PER 25 FILM FRAMES (4)	0.250	0.839	0.220	0.576	0.031	1 112	1 54	-2:01	0 11	
AV5 ACCEL POSITION (PR CT DEPPESSED) (5)	7.954	6,230	5-928	3,021	2 035	6 978	4 25	č 01	1 1/	0. A
S.D. OF ACCEL POSITION (PR CT DEPRESSED) (6)	2.658	1.079	2.567	1 030	0 101	1 1 2 8	1 09	0.01	1 - 1 4	0.
ADD REVS OF 2 PRCT PER 25 FILM FRAMES (7)	0.159		0-147	D _084	- 0.101	_ 1.120	1.00		0.37	0 • .
ACD REVS OF 5 PRCT PER 25 FTLM FRAMES (8)	0.040	0 033	0.043	0.047	-0.012	0.073	1+12	U.	0.49	0.
NO. OF BRK PRESSES DURING THE DRIVE 101	5 500	7 705	6 500	7 096		7 7 7 0	0.00	9.	-0.34	<u>0</u> -
HAT PRESSURE DURING BER PRS IPR CT HAYNING	15 119	18 353	17 701	1. 1. 304		1.150	0.93	C.	-0.50	0.
AVEPAGE STEEPING WHEEL POSITION (DECS) (11)	-3 767	10.000	-5 253	14+/10	2.331	18./12	1.56	0.	0.48	0.
AVS TIME BET STR REVS OF 5 PR CT (SECS)(12)	-3.707	1.322	-2.272	0.104	1.485	3-024	0.69	5.	1.90	_ 0 .
AVS DIE BETWEEN STR AND COMP (DECS) (12)		· 1+419 .		_ 1.561	-0.504	2.509	0.82	0.	-C.78	0.
S.D. OF DIE BETWEEN STR AND FORD (DECOMPANY)	27+571	2+337	24.332	1-213	1-049	2.569	3.72	D.05	1.58	0.
HAY RATE OF CHE OF STEEDING (DECSICIA)	22.104	10+011	21+331	5-215	1.513	13.587	7.01	0.01	0.45	0.
KIFFR REVE OF 5 DECC DED DE ETIM EDIMECTICA	223.010		267.956	396.991	-44.390	536-935	1.21	0.	-0.32	0.
STEED DEVO OF TO DED DE ETTH ENTRES(10)	0.477	0.257	0.537	0.349		0.287	0.67	э.	-0.80	0.
NAX TIME BET STD DENS DE E DECS VSECCA (10)	0.224	0.125	0.252	0.133	-0.038	0.068	0.85	0.	-2.17	-0.05
AVE STR RATE COINC THIS CARS (DEC/SCC) (15)	61.108	(2.053	50.457	. 59.724	10.641	109.778	1.16	0.	0.38	0.
AVE STR FAIL GUING THTO LEVE TO TO THE STR TERMINE	0.	0.	0.	0.	0.	0.	-0.	-0.	-0.	-0.
THE FUE DUDING DOD FT DEF TUDE (VEW) (20)	0.	0.	0.	0.	0.	· 0.	-0.	-0.	-0.	-0.
AVE SED EVE DURING ZUD FI BEF IDAN (APH)[21)		0•'	<u> </u>		0.	0.	-0.	-0.	-0.	-0.
AVS SPU CHS UJKING IUPNS (SPH) (22)	0.	0.	0.	0.	D.	0.	-0.	-0.	-0.	-0-
AV SPU LAS DURING 200 FT AFT TURN (APH)(23)	0.	0.	0.	0.	. 0 .	0.	-0.	-0-	-0.	-0.
TIN FRA ALL LEITUP IN SIKI UP IKN (SEL)[24)	0.	0.	0.	0	0.	0	-0.	-0.	-0.	-0.
THE FREE END OF TRN TO ALL PRESS (SELS) [25]	0.	0.	· D.	0.	0.	0.	-0-	-0.	-0.	-0.
AVG 654 8452 FAIF 000 DAV (016 UNITS) (26)	0.	9.	0.	0.	0.	0.	-9.	-0.	-0.	-0.
SVS TRIFT OF GSR BASE PATE 1015 UN/SEC)[27]	. 0	0.		0.	0.	0.	-0.	-0.	-0.	-0.
10' NJ. OF GSR REALTIONS DURING THE DRV(28)	0.	0.	D.	D.	0.	0.	-0.	-C.	-0.	-0.
AVG MAG OF GSR REACTIONS (DIG UNITS) (29)	0.	٥.	D.	0.	5.	0.	-0.	-0.	-0.	-0_
AVE LENGTH OF BREATHS (SECONDS) (30)	1.882	0.311	1.992	0.353	-0.110	0-495	0.78	D.	-0.86	0_
S.D. DF LENGTH OF BREATHS (SECONDS) (31)	0.559	J.158	D-685	0.401	-0.126	0-454	0-17	-0.01	-1.07	0.
AVG DEPTH OF BREATHS (DIG UNITS) (32)	370.438	93.175	380.963	87.795	-10.525	75.206	1.05	0	-0-54	0.
S.D. OF DEPTH OF BREATHS (DIG UNITS) (33)	263.745	133.259	280.552	81.502	-16.816	142.114	2.55	0	-0.45	n.
TOT NO. OF BPEATHS DURING THE DRIVE (34)	453.937	85.465	472.375	111.266	-18.437	132.071	0.59	Ċ.	-0.54	D.
ERTHS WHR FXH TIM .LT. INH TIM (PR CT) (35)	44.794	7.127	49.07B	5-044	-4.284	7.310	2.00	0.	-7.77	-0. 15
AV3 BRTH DEP/WID RATIO (DIG UN/ONT IND)(36)	203.402	40.899	198.425	45.000	4.976	36.056	0.83	6.	0.53	0
SO OF BRIH DEP/WID RAT (DIG UN/ONT IND)(37)	143.075	64.255	144.330	41.500	-1.256	67 453	7_39		-0.07	<u> </u>
LENGTH OF DRIVE (SECONDS) (38)	2516.500	332.659	2775.552	571.728	-260.052	581.725	0.34	-1, 15	-1 72	n.
LENGTH OF DRIVE (FILM FRAMES) (39)	58447.625	6045.656	53023.250	4011.364	-4575.625	7594.811	2.27	-	-2 22	
LEN OF PTH OF CAP FOR DRV (ED FLM FRMS)(40)	66524.518	6795.754	71582.533	4037.232	-5058.016	85441305	5.85	~	-2-22	
RETID OF FR FLK FRYS TO REAL FLK FRMS (41)	1.138	5.010	1.136	0.014	5.007		5.5	- •		

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(A) (B) (C) (D)	01	122	A)	6748	DISES	seves		~ •		
(F-TEST CR BOUN 0.25, 0.35, 2.87, 4.07)	. (CG	RU2)	116	2123	101110	-701) -		31
IT-TEST CR BOUN2.95,-2.13, 2.13, 2.95)	15	SUBS	15	SUBS	164	- 137 51135		1 - 32 - 4 5 - 5 - 5 - 5	NULL H	45014
•			••		10	3033	20101#	23113	¥U(C)×	MU(I)
·	MEAN	STD DEV	MEAN	STD DEV	REAN	STD DEV	F	515	T	SIG
AVE SPEED DURING THE DRIVE (KPH) (1)	24.912	5.198	24.536	3,601		5 005	2 00	•		-
S.J. OF SPEED DURING THE DRIVE (MPH) (2)	5.953	2.750	6.189	2.199	-2.236	2.610	2.08	C.	0.21	с .
AVD SPD DURING THE DPIVE (FLM FRMS/SEC) (3)	23.401	2.334	72-753	3.741	0-668	2.410	1	9 .	-0-33	5.
SPEED REVS OF 5 MPH PER 25 FILM FRAMES (4)	0.250	0.839	D-D38	0.020	0.212	2.201	17 67		0.70	C.
AVG ACCEL POSITION (PR CT DEPRESSED) (5)	7.954	6.230	7.605	6.050	0.359	9 617	13.47	0.01	0.98	0.
S.D. OF ACCEL POSITION (PR CT DEPRESSED)(6)	2.558	1.079	3.531	1.754	-0-863	1 597	1.00	5.	0.16	0.
ADD REVS OF 2 PRCT PER 25 FILM FRAMES (7)	0-159	0.111	0.237	0.774	-0.079	- 1.207	0.30	U. 	-2-11	0.
ACC REVS OF 5 PRCT PER 25 FILM FRAMES (8)	0.040	0.033	0.070	0.055	-0.030	0.165	0.21	-0.02	-1+54	0.
NO. OF BRK PPESSES DURING THE DRIVE (9)	5.500	7.705	11-625	12.619	-6 175	11 152	5.20	0.	-2.15	-0.05
MAX PRESSURE DURING BRK PRS (PR CT MAX)(10)	15.119	18,353	12.784	11.068	2 226	15 770	2 75	ີ.	-2-13	0.
AVERAGE STEERING WHEEL POSITION (DEGS) (11)	-3.767	7.377	-3.445	7.970	-9 222	17+627	2.13	ы. О	0.59	0.
AVE TIME BET STR REVS OF 5 PR CT (SECS)(12)	0.215	1.414	0.323	0.721	-0.323	3.432	3 94	0.	-0.36	0.
AVE DIF BETWEEN STR AND COMP (DEGS) (13)	25.351	2.339	25.022	2.423	-J.100	2 570	2.64	0.05	-0.25	0.
S.D. OF DIF BETWEEN STR AND COMP (DEGS)(14)	73-164	13.811	25.096	9.700	_1 023	14 404	2 03	. 0.	0.35	0.
MAX RATE OF CHG OF STEEPING (DEGS/SEC) (15)	223.576	437.185	322,125	355 306	-1-733	10.000	2.03	0.	-0.45	0.
SIEER REVS OF 5 DEGS PER 25 FILM FRAMES(16)	0-477	0.287	0 687		-70.049		1+71	0.	-0.34	D .
STEER REVS OF 10 DEG PER 25 FILM FRAMES(17)	0-224	0125	n 200	0.171	-0.210	0.051	0.21	-0.01	-1.45	0.
MAX TIME BET STR REVS OF 5 DEGS (SECS) (18)	61_108	75 043	116 230	. 201 504	-53 122	20110	J-53	9.	-2.19	-0.05
AVE STR RATE GOING INTO CRVS (DEG/SEC) (19)	0.	0	n n	201-395	-22+122	221-228	0.14	-0-01	-0.93	0.
AV TIM FRM STRT OF STR TO MAX STR (SEC) (20)	0.	<u>,</u>	0.	0-	0.	0.	-0.	~0.	-0-	-0.
AV SPD CHG DURING 200 FT BEE TURN (NPH)(21)	0.	0-	0.	0-	0.	0.	-0-	-3-	-0-	-0.
AVG SPD CHG DURING TUPNS (MPH) (22)	<u> </u>	V•				0.	-0.	-0.	-0.	-0-
AV SPD CHG DURING 200 FT AFT TURN (HPH)(23)	0.	0	0-	· •	u.,	U	-0.	-0.	-0-	-C.
TIN FRM ACC LET-UP TO STRT OF TRN (SEC)(24)	0.	0	<u> </u>	0	0.	0-	-0.	-0-	-0.	-0-
TIM FPM END OF TRN TO ACC PRESS (SECS) (25)	ñ	0°•	U.	V•	<u>v</u> •		-0-	-0.	-0.	-0
AVE GSR BASE PATE DUR DRV (DIG UNITS) (26)	0_	D.	<u> </u>	0.	U	. 0.	-0-	~0.	-0-	-0-
AVE DRIFT OF GSR BASE RATE (DIG UN/SEC)(27)	0.	0.	0-	0			-0.	-0-	-0.	-3.
TOT NO. DE GER REACTIONS DURING THE DRV(28)	0.	n.		U•	0•	0	-0.	-0.	-0.	-0-
AVE MAG OF GSR REACTIONS (DIG UNITS) (29)	0_	0.	0_	0.	. 0.	0	-0.	-0-	-0-	-0-
AVS LENGTH OF BREATHS (SECONDS) (30)	1.882	0.311	1.965	0,090	-0-083	0.316	11.93	-J	-1 02	-0 .
S.D. OF LENGTH OF BREATHS (SECONDS) (31)	0.559	0.168	0.566	0_089	-0-026	0.166	3.57	0.05	-0.15	0. 0
AVG DEPTH DE BPEATHS (DIG UNITS) (32)	370.438	90,175	365-991	65.982	4:447	99.614	1.87	6	-0.17	0
S.D. DE DEPTH OF BREATHS (DIG UNITS) (33)	253.745	130.259	262.592	68-623	1,153	112.800	3.60	0.05	0.11	<u> </u>
TOT NO. OF BREATHS DURING THE DRIVE (34)	453.937	85-465	467-175	86.895	-13,187	136-620	0.97	n 01	-0.37	0-
BRTHS WHR EXH TIM .LT. INH TIM (PR CT) (35)	44.794	7.127	47-651	3-645	-2- 957	6_89R	3_87	5.05	-1 40	-D -
AVS BRTH DEP/WID RATIN (DIG UN/ENT IND)(36)	203.402	40.899	192.372	35,980	11.030	45.559	1.29	3.	100	0. 0
SD OF BRTH DEP/HID RAT (DIG UN/ENT IND)(37)	143.075	64.256	140-393	34.703	2.581	57,151	3.43	5. 65	D. 1 R	<u>0</u> .
LENGTH OF DRIVE (SECONDS) (38)	2516.500	332.659	2761-375	453-947	-744-875	535 283	0-51		-1.77	0.
LEWSTH DE DRIVE (FILM FRAMES) (39)	58447.625	6045.555	61165.437	1934.396	-2718.812	5610,131	9.77		-1 - 1 - 1	~
LEN OF PTH OF CAP FOR DRY (EQ FLM FRHS) (40)	66524.518	67551754	694361797	1913-221	-2913.779	64301867	12-67		-1.75	0 .
PATIO OF EQ FLM FRMS TO REAL FLM FRMS [41]	1.138	0.010	1.135	0_014	0.003	0.010	0.55		1.11	<u>.</u>

CATE = 09715/71

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CCMPILED EVENT STATISTICS FOR ALL SUBJECTS ACROSS ALL EVENTS RESULTS OF DISTRIBUTION OF THE INDIVIDUAL SUBJECT MEANS

DENEDRINE

(A) (A) (C) (D)	, DJ	1/PL	0J	/44	DIFFE	RENCE	FTEST	TTEST
1-1EST CR BOUY 0.25, 0.35, 2.87, 4.07)	103	RUP)	ITG	RUPI	(26	-TG)	NULL HYPOTH	NULL HYPOTH
LI-TEST CR BOUN2.95,-2.13, 2.13, 2.95)	16	SU3 S	15	SU85	16	SUB S	SD(C)=SD(T)	HU(C)=HU(T)
	MEAN	STD DEV	KEAN	STD DEV	MEAN	. STD DEV	F SIG	T SIG
SPD AT THE RECTIVITIE DE THE EVENT (MOUL (1)								
SPD AT THE END OF THE EVENT (NOW)	23.985	5.906	22.859	4.324	1.126	6.217	1.87 C.	0.70 0.
HINING COUNT AND CUT AND	_ 23.477	5.855	23.175	3.985	0.302	6.210	2.17 0.	0.19 0.
MYTRIN SPEED DUDING THE EVENT (MORE) (3)	18.882	5.537	18.299	5.367	D.583	8-215	1.53 0.	0.27 0.
SPEED REVE OF E NOW DED OF CAN FOLLOW (4)	29.342	5.549	28.318	4-143	0.525	5.764	1.86 0.	- 0.35 0. ·
AVERAGE SPEED DUDING THE FUCULT FUCULT	0.256	0.931	0.207	0.630	0.059	1.162	2.18 J.	0.20 0.
AVE SOD DUDING THE EVENT (APR) (6)	23.717	6.319	23.072	4.084	D-645	6.554	2.39 0.	0.38 0.
ATT STY OF 2 DET DED DE FILM FEMS/SEC) (7)	24.294	2.948	Z4-094	5.523	0.200	4.208	0.28 -0.05	0.18 0.
ACT REVS OF E PROT PER 25 FILM FRAMES (8)	0.134	0.108	0.134	0.079	0.000	0.085	1.89 D.	0.01 0.
TIME TO IST CONDUCTS ACC ARTING ACCORD (9)	0.037	0.039	0.034	0.040	0.003	0.035	0.96 C.	0.33 0.
AVE ACCEL POSITION (DD CT DEDECCED) (10)	1.079	0.532	0.914	0.593	0.165	0.901	0.96 0.	0.71 0.
THE TO IST ACCULT UP OF D DD OT ACCOR 111	7.353	6.150	5+540	2.943	1.813	6.887	4.37 0.01	1.02 0
HAY DOSITION OF ASSESS ADD OF BERLINGS	1.226	0.738	1.452	1.117	-0.235	0.976	0.44 0.	-0.93 D.
TIM FOR AFF 1 FT UD TO 1 FT DEV RESSED1[13]	10.436	6.636	8.475	3.905	1.962	7.298	2.89 0.05	1.04 0.
THE TO JET DO DOT TOU IST PRK PPS (SEC)(14)	-0.125	0.284	0.006	0.295		0.383	0.93 0.	-1.20 0.
114 10 ISI BR PRS FRA SIRI UF EVI (SEC)(15)	0.331	0.433	0.611	- D.879	-0.280	0.521	0.24 -0.01	-2-09 0.
THE TO DED DIET IN DESITING (DE MAX) (16)	4.750	5.365	5.271	5.809	-0.511	5.542	0.85 0.	-0.35 0.
THE TO HER DIST IN BREATHING (SECS) (17)	- O.	D.	_ 0.	0.	0.	0.	-0).	-00.
AVERAGE REFEATING DATE ADDITING (SECS) (18)	· 0.	0.	0.	0.	D.	0.	-00.	-00.
AVERAGE SECAIBING PALE (BPEATHS/SEC) (19)	0.517	0.077	0.473	0.078	5-044	0.111	0.98 C .	1.53 0.
SEQUENCE NUM DE LASE MAN EVE MARKER (20)	165.767	83.805	_ 134.225	81.956	31.542	107.424	1.05 0.	1.14 0.
TIME OF LAST MAN EVE MARKER (SELS) (21)	1191.336	188.150	1162-650	260.751	28.686	157.766	0.52 C.	0.70 0.
THE AT THE BEGINNING OF EVI (SECS) (22)	1243.459	155.864	1219.018	233.254	24.441	158.587	0.45 0.	0.60 0.
TITE AT THE END OF EVI (SECS) [23]	1256-954	158.401	1233.069	_235.446 _	23.885	160.061	0.45 0.	0.58 0.
LENGTH DE THE EVENT (SECONDS) (24)	13.495	1.816	14.050	2.610	-0.555	1.731	0.48 0.	-1-24 0.
LENGTH OF THE EVENT (FILM FRAMES) (25)	312.504	9.545	312.108	8.910	0-496	1.369	1.15 C.	1.40 0.
SSC BASE RATE FOR THE EVENT (DIG UNITS)(26)	. 0	<u> </u>	0.	0.	_ D.	0.	-00.	-00.
114E TU A GSR CHG UF THE SID AMT (SECS)(27)	0.	э.	0.	0.	D.	0.	-00.	-00.
11PE IJ THE MAXIMUM GSR LHANGE (SECS) (28)	0	0.	0.	0.	0.	٥.	-03.	-00.
=4X GSR LHG DURING THE EVT (DIG UNITS) (29)	. 0	D.	0.	0.	0.	0.	-00.	-00.
AVG POSITING OF THE STR WEL (DEGS) (30)	-4,484	9.249	-7.747	9-658	3.264	4.768	0.92 5.	2.55 0.05
AVS RATE OF CHU OF STP WHL (DEG/SEC) (31)	142.023	17.236	140.994	17-181	1.028	10-817	1.01 0.	0.37 0.
ATTE TO BEG OF STR INTO A TURN (SECS) [32]	0.	0 .	0.	0	٥.	0.	-00.	-00.
MAX SIR RATE GUING INTO TURN (DEG/SEC) (33)	0.	0.	0.	0.	0-	Ο.	-03.	-00.
MAX TURN UP THE STR WHL (DERS) (34)	0.	0.	0.	0.	0.	0.	-00.	-00.
MAX STR MATE CONTING DUT DE TURN (DG/SC)(35)	0.	0.	0		0.	0.	-02.	-00.
SI-ER KEVS UP 5 DEGS PER 25 FILM FRAMES(36)	0.500	0.453	0.630	0.376	-0.030	0.397	1.45 0.	-C.29 D.
STEER REVS UP 10 DEG PER 25 FILM FRAMES(37)	0.272	0.144	D-297	0.152	-0.025	0.076	0.90 0.	-1.31 C.
STEER REVS OF 15 DEG PEP 25 FILM FRAMES(38)	0.190	0.080	0.214	C.098	-0.024	0.056	D.57 C.	-1.55 C.
LEV OF PTH OF CAR IN EVT (FO FLM FRMS) (39)	359.588	11.780	359.310	12.821	0.378	5.511	0.84 5.	0.27 5.
RATID DF ED FLM FPMS TO REAL FLM FRMS (40)	1.164	0.021	1.150	0.023	5.004	0.040	0.83 Ĵ.	0.37 0.
LYS DIE FETREEN STR AND STR CRMP (DEGS)(41)	74.902	5.329	72.314	3.163	2.588	4.869	2.84 1.	2.05 0.
MAX DIF BETWEEN STR AND STR COMP (DEGS)(42)	111.324	5.255	116.554	12.237	-5.230	10.752	0.45 1.	

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COMPILED EVENT STATISTICS FOR ALL SUBJECTS	ACROSS ALL	EVENTS	· .					5.17	E = 29/	15/71
TINELD DE DISERIOUIDA DE LEE LADIALOURE ID	DUCUI AZAN		:	<u>DER EDREKE</u>	-					
(A) (B) (C) (D)	- 03	/PL	14	CZAR	DIFFE	reste		- -	- + -	
(F-TEST CR BOUN 0.25, 0.35, 2.87, 4.07)	· (CG	RUPI	(13	RUPI	100-	-101		21		51
(T-TEST CR BOUN2.952.13, 2.13, 2.95)	15	SUB S	16	SUBS	15	รับอร	SDICIT	57171	- NULC N	ा∽⊒ । म - भग्र 17 क
-							55(67-	2 / 1 / 1	F0101-	- 11 (1
· •·	MEAN	STD DEV	MEAN	STD DEV	KEAN	STD DEV	F	51G	т	SIG
SPD AT THE BEGINNING OF THE EVENT (HPH) (1)	24,053	5.951	23.742	3-011	0-312	6.5=6	2 01	2 25	0 1 2	•
SPD AT THE END DE THE EVENT (MPH) (2)	Z3.534	5.053	23.711	2.809	-2.177	6.447	6.66	0.01	-0.33	
VINIMUM SPEED DURING THE EVENT (MPH) (3)	18.982	6.638	18.921	2.737	0.062	7.705	5-88	0.01	0 03	0
KAXIMUM SPEED DUPING THE EVENT (MPH) (4)	29.405	5.682	27.678	2.843	1.727	5.485	4.00	0.05	1.22	<u>0</u>
SPRED REVS OF 5 HPH PEP 25 FILM FRAMES (5)	0.262	0.920	0.024	0.014	0.238	0.922	66.50	0.01	1.00	0_
AVER45E SREED DURING THE EVENT (HPH) (6)	23.521	5.985	23.452	2.859	0.158	5.440	4.38	0.01	0.10	0.
AVS SPO DUPING THE EVENT (FLM FRHS/SEC) (7)	24.235	Z.954	23.476	3.239	-0-759	2.366	0.84	э.	1.24	0_
ALL REVS OF 2 PRCT PER 25 FILM FRAMES (8)	0.134	0.109	0-270	0.321	-0.136	0.316	0.11	-0.01	-1.67	0.
ALL REVS UP 5 PROT PER 25 FILM FRAMES (9)	0.036	0.038	0.059	0.045	-0.023	0.043	0.70	C.	-2.05	0.
ACCEL DOSITION (OD CT DEDDCCCED) (10)	1.078	0.599	0.918	0.71B	0.150	1_006	0.70	Ð.	0-62	0.
TIN TO JET AND LET UP DE P DE CT LEFER (11)		6.173	7.345	6.197	0-029	8.494	0.99	٥.	0.01	0.
WY POSITION OF ACCEN (NP of DEODECCED)(12)	1-204	0.702	1.298	0.761	-0.093	0.710	0.85	э.	-0.51	0.
TIN FON ACC LET UP TO DET POR DOS JESSIONIDA	10.450	5.615	11.866	6.970	-1.417	8.276	0.90	0.	-0.55	0.
THE TO IST PROPERTY FOR FOR FUT (SEC)(14)	-0.115	0.284	-0.057	0.217		0.259	1.75	0.	-0.83	0.
MAY ANT DE BOX DOELENDE ADD ET DE MAX ANA	. 0.324	0.412	0.683	0.556	-0.359	0.421	0.53	с.	-3.30	-0.01
TINE TO DEP DIST IN PORTIUMO (SECON 110)	4.701	5.401	9.462	9.438	-4.751	8.514	0.33	-0-05	-2.14	-0.05
TINE TO USE DISE IN DREATHING ISECSE (17)	0.				_ 0.	0.	-0.	-0.	-0.	-0.
AVERAGE PREATHING DATE ADDEDTUCKETCH (18)	0.	0.	0.	0.	0.	0.	-0-	-0.	-0.	-9.
SECTENCE NO DECEMENT NAME ENT MADE TO CON	0.515	0.075	0.480	0.040	0.036	0.083	3-48	. 0.05	1.68	0.
TIME DE LAST HAN ENT HADVED AFFERT	105-268	83.476_	111-715	55.337	53.553	135.303	5.58	٥.	1.53	0.
TINE AT THE REGIMMING OF EVELSECTION (21)	1182-998	185.438	1153-585	215.229	29.413	162.409	0.75	C.	0.70	0.
TIME AT THE END OF EVILLECSI (22)	1232.342	155.991.	1208.778	174-220	26.754	150.549	0.81	0.	0.69	0.
IFNOTH OF THE EVENT ISECONDSI (24)	12 304	128+218 .	_1223-306	1/4-886	25.520	_149.978	0-82	0.	0.66	0.
IFNGTH OF THE EVENT (FILM ERANEC) (25)	209 507	1.001	14.728	2.652	-1.244	1.948	0-34	-2.05	-2.61	-0.05
GST BASE RATE FOR THE EVENT (DIG UNITS)(26)	. 0	11+440	>U8-2UB	11.322	0.389	0.673	1-02	υ.	2.24	0.05
TIME TO A GSP CHG OF THE STO AMT (SECS)(27)	··· 0• ·	0		0•	0	0.	-0.	-0.	-0.	-0+
TIME TO THE MAXIMUM GSR CHANGE (SECS) (28)	0.	0	·U•	0.	0.	U -	-0-	-0-	-0.	-0.
MAX 558 CHG DURING THE EVI (DIG UNITS) (29)	0_	0.	0.	0.	0.		-0.	-9-	-0.	-0.
AVS POSITION OF THE STP WHL (DEGS) (30)	-2.789	8.501		V•		- U. 5 070	~0.00	~U.	-0.	-0.
AVS PATE OF CHS OF STA WHL (DEG/SEC) (31)	141.605	17.233	143 087	21 756	2.397	3.970	0.43	5. n	1-50	0-
TIME TO BES OF STR INTO A TURN (SECS) (32)	0.	D.	L 45 4 002	- 21 - 1 34	-1-411	12-011	-0		-0-41	0.
MAX STR RATE GOING INTO TURN (DEG/SEC) (33)	0.	0.	* *		. 0	0	-0.	-0	-0.	-0-
MAX TURN OF THE STR WHL (DEGS) (34)	0.	0.	0.	0.	· · · · · · · · · · · · · · · · · · ·	<u> </u>	-0.	-0-	-0-	-0-
MAX STR RATE COMING OUT OF TURN (DG/SCH(35)	0.	0.	0.	0.	0.	0.	-0-	-5.	-0.	-0
STEER PEVS DE 5 DEGS PER 25 FILM FRAMES(36)	0.602	0.453	D_79n	0,615	-0-188	0.478	0-54	2.	-1 20	-0 -
STEER REVS OF 10 DEG PER 25 FILM FRAMES(37)	0.274	0.144	0.353	0.176	-0-079	0.145	0.57	5	-1+20	<u>^</u>
STEER REVS OF 15 DEG PER 25 FILM FRAMES(38)	0-189	0.030	G_749	0,122	-0-050	0.140	0-47	5.	-2.10	-0.55
LEN DE PTH DE CAR IN EVT (ED FLK EPMS) (39)	354.717	14.016	355-000	13.019	-2.283	4.513	1.14	22	-0.23	<u> </u>
FATIO OF ED FLM FRMS TO REAL FLM FRMS (40)	1.158	C.015	1.158	0.014	0.000	0.016	1.77	5	0.03	<u>,</u>
AVD DIF RETHEEN STR AND STR COMP (DEGS)(41)	75-245	4.597	72.044	5.960	2.201	5.788	0.69		1.51	ē.
MAX DIF BETWEEN STR AND STR COMP (QEGS)142)	111.596	- E.210	115.672	5.582	-5.075	6.218	1.51		-7.17	-0.03

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(A) (B) (C)	(0)	D. 1	721	5:5	/ P1	DIFFE	SENCE				
F-TEST CR BOUN 0.25. 0.35. 2.87.	4.071	1 105	21(P)	170	1121	100-	-701	- N			
IT-TEST CR BOUN2.95,-2.13, 2.13,	2.95)	15	SUBS	16 (2845	1007		sorer-	115 Jam. 157 (73)	NUCL -	- 117 Jan - 117 T 1
		± •	2020	10 .	-	10 .	3003	30(07-		-0107-	
		HEAN _	STD DEV _	MEAN	STD DEV	MEAN	STD DEV	۶	510	т	SIG
SPO AT THE BEGINNING DE THE EVENT INPH	3 (1)	26 026	5.938	73 777	1 635			17 (7			•
SPD AT THE END OF THE EVENT EMPHY	121	23 579	5 958	22.122	1.000 .	-0.405	2+202	12.42	1.01	0-22	0.
MINIHUH SPEED DIDING THE EVENT (MOH)	121		J•9JO		1.4904		2.223	9+20	0.21	-0.42	е.
MAKINUH SPEED QURING THE EVENT (MOH)	141	10.202	5 - 204 5 - 709	13+122	2+239	-0-214	D+354	4.50	0.01	-0.13	9.
SPEED REVS OF 5 MOH DED 25 ETTH EDINCE	151	27.000	5.100	28.014	2.193	1.3/1	5.703	5.78	0.01	0.93	0.
AVERAGE SPEED DEDING THE EVENT LUDIN	124	0+207		0.045		- 0.220	0.940	00.43	C-01	0,90	0
AVE SPE DURING THE EVENT LEW EDWERTER	101	23-570	5.999	23.730	1.922	-0-160	5.402	9.74	0.01	-0.11	°-
STE REVE DE O DOFT DER DE ETTA EDAVER	1 (1)	24.295	2.953	23.504	2.589	0.790	Z.470	1.21	0.	1.24	0.
ATT REVS OF E ROOT DED OF FILM FRAMES	(8)	0.131	0.107	0.210	0.171	_ =0.079	0.125	0.39	Ċ.	-2.44	-0+05
TIME TO IST COUDIETE ACC ACT UN ACCORT	193	C-035	0.038	0.064	0.059	-0.028	0.041	0.41	5.	-2.54	-0.05
TYPE TO IST COMPLETE ALL LETHOP (SEUS)	(10)	1.054	0.529	1.450	0.740	-0.396	0.814	0.51	0.	-1.83	0.
THE TO IST ACC LET UP OF D DD ST ACCOR		7.348	8.149	8.108	6.396	-0.760	9.409	0.92	0.	-0.31	0.
WY DELTER OF ACCES OF SPR CI ISES.	.(12)	1.236	0.741	1.414	0.835	-0.178	0.571	0.79	0.	-1.21	0.
THE FOR THE THE ACCEL THE LT DEPRESSED)(13)	10.441	5.626	13.032	7-473	-2.590	9.98Z	0.78	0.	-1.01	0.
THE PRE ACC LETEUP TO IST BER PRS (SEC)	7(14)	-0.112	0.275	-0.165	0.217	0.053	0.372	1.52	ō.	0.55	0.
114 10 ISI ER PRS FRM STRT OF EVT ISEC){15}	0.332	0.437	0.413	0.659	-0.031	0.457	0.44	0.	-0.67	0.
PAK ANT OF BAK PRESSURE (PA CT DE MAX)	(16)	4.608	5.052	5.722	6.596	-1.114	4.877	0.59	0.	-0.83	0.
THE TO DEP DIST IN BREATHING ISECS)	(17)	- 0.	0.	0.	0.	. 0.	0.	-0-	-0.	-0.	-0-
TIRE 10 RED DIST IN BREATHING (SECS)	(18)	0.	0.	9.	0.	0.	0.	-0.	-0.	-0.	-0.
AVERAGE BREATHING PATE (BREATHS/SEC)	(19)	0.518	0.077	0.471	0.030	0-048	0.079	5.52	0.01	2.32	0.05
SEQUENCE ND. DE LAST MAN EVT MARKER	[20]	165.393	83.568	128.000	77.260	37.393	104.457	1.17	5.	1.39	0.
TIME OF LAST HAN EVT MARKER (SECS)	(21)	1187.293	185.357	1135.279	218.343	52.014	137.080	0.73	0.	1.47	0_
TIME AT THE BEGINNING DE EVT (SECS)	(22)	1239.993	153.845	1212.272	204.897	27.721	148.245	0.56	0_	0.77	0.
TIME AT THE END OF EVT ISECSI	[23]	1253.438	155.087	1227.139	207.478	26.249	150.492	0.56	0.	0.68	0.
LENGTH DF THE EVENT (SECONDS)	{24}	13.445	1.478	14.917	3.424	-1.472	3.206	0.19	-0-01	-1-78	0.
LENGTH OF THE EVENT IFILK FRAMES)	[25]	312.593	9.371	312.134	8.927	0.459	1.337	1.10	5.	1.33	0-
GSR BASE RATE FOR THE EVENT IDIG UNITS:	1(26)	_ 0_	0.	0.	0.	0.	0.	-0.	-0-	-0.	-0-
TIME TO A GSR CHG DF THE STD AMT (SECS)	1271	0.	0.	0.	0.	0.	0.	-0-	-0-	-0.	-0
TIME TO THE HAXIBUH GSR CHANGE (SECS)	(28)	0.	0.	0.	0.	0.	0_	-0-	+D_	-0	-0
MAX GSR CHG DURING THE EVT (DIG UNITS)	(29)	0.	0.	0.	0.	0.	0.	-0-	-0-	-0	-0
AVS POSITION OF THE STR WHL (DEGS)	(30)	-4.053	9.073	-7.944	9.427	3.891	5.550	0_93	n.	7 77	0.05
AVG RATE DF CHG DF STR WHL (DEG/SFC)	(31)	141.382	16.756	140.700	14.878	D-682	10.753	1.27	n -	2 - 12	0.05
TIME TO BES OF STR INTO A TURN (SECS)	(32)	0.	0.	0.	0.	0.	0.	-0		-0-25	- 0
MAX STR RATE GOING INTO TURN (DEG/SEC)	(33)	0.	0.	0.	0.	0.	0.	-0	-0-	-0.	-0.
MAX TURN OF THE STR WHL (DEGS)	(34)	0.	0.	D.	0.	0.	0_	-0	-0.	-0-	-0.
MAX STR RATE COMING DUT OF TURN (DG/SC)	1(35)	0 .	0_	D-	0.	0.	0	-0-	-0.	-0-	-0.
STEER PEVS OF 5 DEGS PER 25 FILH FRAMES	5(36)	0.595	0.430	0.632	0.547		 	0.47	-0.	-0.	-0-
STEER REVS OF 10 DEG PER 25 FILH FRAMES	51371	0.274	0.144	0.305	0.185	+0.031	0.077	0.02	U	-0.58	0.
STEER REVS OF 15 DEG PER 25 FILM FRAMES	5(35)	0.190	0.093	. 0.225	0.176	-0.025		0.01	· •	-1.47	0.
LEN DE PTH DE CAR IN EVT (ED FLH FRHS)	(39)	359-109	10,091	357-672	11_639	1 497	6 570		1	-2.17	-0.05
PATTO OF EQ FLM FPHS TO REAL FLM FRHS	(40)	1_155	0.323	1.149	0,010	1.440/	0.010	0.75	τ.	0.18	C.
AVS DIF BETWEEN STR AND STR COMP (DEGS)	1411	74 823	5,255	71 194	4.741	3 620		1-07	~	1.85	? •
MAX DIE BETWEEN STR AND STR COMP IDEAS	1421	111.454	7 954	115 105	- 1 - 1	2 + D 2 M -7 (F R		1.24	Ü.	Z+34	CL 05
			* • ? <i>2</i> *	1 C I C I C I C I C I C I C I C I C I C	0 e 7 J 7		1118	0.89	Ξ.	-2.59	-0.05

COMPILED EVENT STATISTICS FOR ALL SUBJECTS FOR SS ALL EVENTS Results of Distribution of the individual subject means

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Appendix H. Biomedical Computer Programs

BMDX63 MULTIVARIATE GENERAL LINEAR HYPOTHESIS

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1. GENERAL DESCRIPTION

- a. This program performs a multiple regression where the dependent variable is a vector. It computes U-statistics and approximate \vec{r} statistics to test hypotheses of the form ABC' = D where B is a matrix of regression coefficients and where A, C, and D are matrices specified by the user. Estimates of $\vec{r} = ABC' - D$ and the covariance matrix of its estimator are also obtained. With proper specification it can be used to carry out balanced or unbalanced multivariate analyses of variance and covariance.
- b. Output from this program includes:
 - (1) Gross-product matrix (X, Y)'(X, Y)
 - (2) Regression coefficients, $B = (X'Y)^{-1}X'Y$ and residual crossproduct matrix R = Y'Y - B'X'Y
 - (3) For each hypothesis, A, C, D, ABC'-D, A(X'X)⁻¹A' and CKC' matrices are printed.
 - (4) For each hypothesis, the hypothesis sum of products matrix, Ustatistic, F-statistic, and degrees of freedom are printed.

. RESTRICTIONS

with p independent variables and g dependent variables, the following routriction must be satisfied for each hypothesis being tested.

$$(p+q)^{2} + [r,q]p + [p,q]r + [r,s]q + qs < 9000$$

where x is the number of rows in A, s is the number of rows in C, and [x, y] denotes the larger of x and y. In any case, if $(p+q) \le 55$, the inequally is satisfied. No transgenerations are available.

3. COMPUTATIONAL PROCEDURE

Let $X = \{x_{ij}\}$ j = 1, 2, ..., p; i = 1, 2, ..., nand $Y = \{y_{ij}\}$ j = 1, 2, ..., q; i = 1, 2, ..., n

denote the independent and dependent variables respectively. The model used is

in retinate B and the residual cross-product matrix the following matrices are formed and printed:

q. Cross-product matrix

$$(\mathbf{X}, \mathbf{Y})'(\mathbf{X}, \mathbf{Y}) = \left(\frac{\mathbf{X}'\mathbf{X}}{\mathbf{Y}'\mathbf{X}} + \frac{\mathbf{X}'\mathbf{Y}}{\mathbf{Y}'\mathbf{Y}}\right)$$

b, Inverse of X'X

 c_i Regression coefficients $B = (X'X)^{-1}X'Y$

For each hypothesis of the form ABC' = D, the matrices A, C, and D are printed followed by

 $e_i = ABC' = D$

$$F_{i} = V = \Lambda(X'X)^{-1}A$$

 $a_{\star} = S = CRG^{\dagger}$

- $H = G'V^{-1}G$ (the hypothesis sum of product matrix)
- 1. Determinant (S) = d_1
- .) Determinant $(S+H) = d_2$
- k. U-statistic = d_1/d_2 with degrees of freedom (s, r, n-p)

Approximate F-statistic

$$F = \frac{1-y}{y} + \frac{h}{rs}$$
 with rs and h degrees of freedom

where

$$y = 0$$

$$t = \sqrt{\frac{\frac{2}{r} \frac{2}{\theta} - 4}{r^{2} + \theta^{2} - 5}} \quad \text{if } r^{2} + \theta^{2} \neq 5$$

$$t = 1 \qquad \qquad \text{if } r^{2} + \theta^{2} = 5$$

$$h = (n - p - \frac{\theta - r + 1}{2})t - \frac{r\theta}{2} + 1$$

This gives an exact test if r or s is 1 or 2.

BMD05V GENERAL LINEAR HYPOTHESIS

1. GENERAL DESCRIPTION

- a. This program performs the calculations required for a general linear hypothesis model. The independent variables are of two general types:
 - (1) Variables used to specify the analysis-of-variance classifications.
 - (2) Variables used as covariates.

By use of these variables, the program can be used for balanced or unbalanced analysis-of-variance or covariance designs and missing-value problems.

- b. The output of this program includes:
 - (1) Means and standard deviations of the dependent variable and means of the covariates.
 - (2) Sums of squares explained by hypotheses.
 - (3) Estimates of regression coefficients.
 - (4) Residual sums of squares.
 - (5) F-tests and degrees of freedom.
 - (6) Accuracy of coefficients.
- c. Limitations per problem:
 - (1) p, number of variables used to specify analysis-of-variance design $(1 \le p \le 60)$
 - (2) q, number of covariates $(1 \le p+q \le 60)$
 - (3) d, number of sets of Design Cards $(1 \le d \le 999)$
 - (4) R_i , number of replicates for the ith set of Design Cards ($1 \le R_i \le 99$)
 - (5) H, number of Hypothesis Cards $(1 \le H \le 57)$
 - (6) m, number of Transgeneration Cards $(0 \le m \le 60)$
 - (7) k, number of Variable Format Cards $(1 \le k \le 5)$

2. COMPUTATIONAL PROCEDURE

Let x_1, \ldots, x_p denote the design variables, x_{p+1}, \ldots, x_{p+q} denote the covariates, and y denote the dependent variable. The general linear hypothesis model is

 $y = \beta_1 x_1 + \cdots + \beta_\ell x_\ell + e$ where $\ell = p+q$

The data are read in groups. Within each group the values of the design variables x_1, \ldots, x_p are constant and are read in first.

These are followed by one or more sets of values of x_{p+1}, \ldots, p_{p+1}

 x_{p+q} , y to represent the covariates z_1, \ldots, z_q and the dependent variable.

Step 1. For each group the number of cases in the group, the mean and standard deviation of the dependent variable, and the means of the covariates are computed.

Let n denote the total number of cases, let X denote the $n \times l$ matrix of observed values of the independent variables x_1, \ldots, x_l , and let y denote the vector of

observed values of the dependent variable. A hypothesis h is a vector of l zeros and ones. Let X_h denote the matrix

obtained from X by eliminating the j^{th} column of X if and only if the j^{th} coordinate of h is zero. Three hypotheses are automatically added to the list defined in 3.g. These

have the form

0, 0, ..., 0 1, 1, ..., 1 1, 0, ..., 0

The first two are added to the beginning of the list, and the last is added to the end of the list. Note that if h_2 denotes the second hypothesis in the list, then $X_{h_2} = X$.

Step 2. For each hypothesis h the program computes:

(1) Least squares estimates β_h by solving the normal equations

 $\mathbf{X}_{\mathbf{h}}^{i} \mathbf{X}_{\mathbf{h}}^{i} \boldsymbol{\beta}_{\mathbf{h}} = \mathbf{X}_{\mathbf{h}}^{i} \mathbf{y}$

These equations may be singular.

(2) Sum of squares explained by hypothesis

 $ss_h = y' X_h \beta_h$

(3) Residual sum of squares

..

$$R_{h} = y' y - y' X_{h} \beta_{h}$$

(4) Degrees of freedom of residuals

$$df_{h} = n - Rank \left(X_{h}^{t} X_{\ell}\right)$$

(5) Accuracy of coefficients

$$\mathbf{a}_{\mathbf{h}} = \mathbf{X}_{\mathbf{h}}^{t} \mathbf{X}_{\mathbf{h}} \boldsymbol{\beta}_{\mathbf{h}} = \mathbf{X}_{\mathbf{h}}^{t} \mathbf{y}$$

(6) F-test

$$F_{h} = \begin{bmatrix} df_{h_{2}} \\ df_{h} - df_{h_{2}} \end{bmatrix} \times \begin{bmatrix} R_{h} - R_{h_{2}} \\ R_{h_{2}} \end{bmatrix}$$