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ADVISORY GROUP FOR AEROSPACE RESEARCH & DEVELOPMENT

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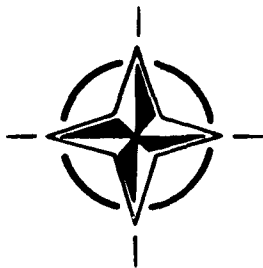
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AGARD REPORT 777

Directory of Factual and Numeric Databases of Relevance to Aerospace and Defence R & D

(Répertoire de Bases de données Factuelles ou
Numériques d'intérêt pour la R & D)

*This publication was sponsored by the
Technical Information Panel of AGARD.*



NORTH ATLANTIC TREATY ORGANIZATION

Published July 1992

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AGARD

ADVISORY GROUP FOR AEROSPACE RESEARCH & DEVELOPMENT

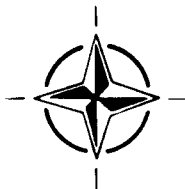
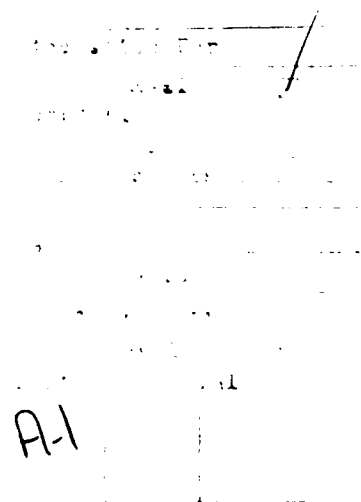
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North Atlantic Treaty Organization
Organisation du Traité de l'Atlantique Nord

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The Mission of AGARD

According to its Charter, the mission of AGARD is to bring together the leading personalities of the NATO nations in the fields of science and technology relating to aerospace for the following purposes:

- Recommending effective ways for the member nations to use their research and development capabilities for the common benefit of the NATO community;
- Providing scientific and technical advice and assistance to the Military Committee in the field of aerospace research and development (with particular regard to its military application);
- Continuously stimulating advances in the aerospace sciences relevant to strengthening the common defence posture;
- Improving the co-operation among member nations in aerospace research and development;
- Exchange of scientific and technical information;
- Providing assistance to member nations for the purpose of increasing their scientific and technical potential;
- Rendering scientific and technical assistance, as requested, to other NATO bodies and to member nations in connection with research and development problems in the aerospace field.

The highest authority within AGARD is the National Delegates Board consisting of officially appointed senior representatives from each member nation. The mission of AGARD is carried out through the Panels which are composed of experts appointed by the National Delegates, the Consultant and Exchange Programme and the Aerospace Applications Studies Programme. The results of AGARD work are reported to the member nations and the NATO Authorities through the AGARD series of publications of which this is one.

Participation in AGARD activities is by invitation only and is normally limited to citizens of the NATO nations.

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Preface

Among AGARD's aims are "improving the cooperation among member nations in aerospace research and development" and "exchange of scientific and technical information". This directory has been compiled in that spirit by the Technical Information Panel of AGARD. It lists factual/numeric databases that are potentially useful in aerospace and defence research and development efforts. It is intended to encourage sharing and cooperation in database work among organisations in the NATO countries, which, it is hoped, will result in cost sharing and minimising the duplication of effort.

Compared to bibliographic databases, machine-readable databases of factual and/or numeric data are relatively new. However, over the past decade they have become quite common in science and engineering, and will become more so as the demand for reliable data increases, and with it the pace of data generation. Often they are used directly by the end-user, the practising scientist or engineer, rather than by intermediaries, such as libraries or local information centres. In some fields, data are already being deposited directly into databases, by-passing the formal literature. In some, data are now being generated faster than the existing databases can accommodate them.

The data in many factual/numeric databases are the result of expensive measurements. Though data entry into a database may be relatively cheap, there is often a costly evaluation step for each data item, which adds value to the databases, but makes them expensive to maintain. Hence, cooperation in the compilation and use of these databases should be mutually beneficial.

It is the aim of this directory to report the existence of databases which have not been publicly announced or made available commercially, but have been maintained only within organisations for their own purposes. They might, nevertheless, be available within the NATO nations to organisations with common or similar interests.

This directory is a first edition, and therefore inevitably incomplete. It is based on responses to questionnaires distributed via AGARD National Panel Coordinators. While every effort has been made to collect accurate information, the Technical Information Panel and AGARD cannot guarantee that entries in the directory are correct or that any particular database is freely accessible. Readers interested in examining these databases should contact the reporting institution for conditions of access, copying, etc.

Organisations or individuals who would like to propose new entries for this directory can use the sample form found in the Appendix. They should be sent to:

AGARD TIP
7 rue Ancelle
92200 Neuilly-sur-Seine
France

If there is sufficient interest in updating the directory, the Panel will consider doing so, taking into account any comments that users may have.

Préface

La mission de l'AGARD inclut "l'amélioration de la coopération entre pays membres dans le domaine de la recherche et des réalisations aérospatiales" et "l'échange d'informations scientifiques et techniques". Ce répertoire, réalisé par le Panel AGARD de l'information technique, a été conçu dans le même esprit. Il énumère les bases de données numériques et factuelles présentant un intérêt pour ceux qui sont impliqués dans des projets de recherche et développement dans le domaine aérospatial et défense. Il doit favoriser la mise en commun et la coopération entre les organisations des pays membres de l'OTAN en ce qui concerne le travail sur les bases de données, avec, comme conséquence souhaitable, le partage des coûts et la réduction au minimum des doubles emplois.

Comparées aux bases de données bibliographiques, les bases de données factuelles et/ou numériques exploitables par une machine sont relativement nouvelles. Cependant, leur emploi dans les milieux scientifiques et techniques s'est banalisé au cours de la dernière décennie. Elles sont appelées à jouer un rôle plus important, à l'avenir, avec l'évolution de la demande d'informations fiables et l'accélération du rythme de génération des données. Les bases de données factuelles sont souvent utilisées directement par le scientifique ou l'ingénieur demandeur d'information, plutôt que par des intermédiaires, tels que bibliothèques ou centres d'information locaux. Dans certains domaines, les données sont déjà déposées directement dans les bases de données, en court-circuitant la littérature classique. Dans d'autres domaines, les données sont générées à une vitesse qui dépasse la capacité d'accueil des systèmes.

Les données stockées dans bon nombre de bases de données sont le résultat d'opérations de mesure coûteuses. Bien que la saisie des données soit relativement peu onéreuse, elle est souvent accompagnée d'un processus d'évaluation des données élémentaires qui est cher et qui, tout en ajoutant de la valeur à la base de données, la rend chère à entretenir. Pour cette raison, la coopération concernant la compilation et l'exploitation de ces bases de données devrait s'avérer avantageuse pour les deux parties concernées.

Ce répertoire a pour objet de signaler l'existence de bases de données qui n'ont pas été publiées et qui ne sont pas disponibles sur le marché, puisqu'elles ont servi jusqu'ici aux besoins internes des organisations détentrices en question. Toutefois, il se pourrait que ces bases de données puissent être mises à la disposition de différentes organisations des pays membres de l'OTAN ayant des intérêts communs ou similaires.

Ce premier tirage du répertoire est, par définition, incomplet. Il est basé sur des réponses à des questionnaires distribués par les coordonnateurs de Panel nationaux de l'AGARD. Bien que tous les efforts aient été consentis pour assurer la véracité des informations recueillies, ni le Panel de l'information technique ni l'AGARD ne peuvent garantir que les entrées du répertoire sont exactes ou que telle ou telle base de données soit totalement accessible. Le lecteur désireux de consulter ces bases de données doit contacter l'organisme référent pour connaître les conditions d'accès, les possibilités de reproduction etc.

Toute organisation ou particulier qui souhaite proposer de nouvelles entrées pour le répertoire est prié de renseigner la fiche ci-jointe en l'annexe et de la retourner à:

AGARD TIP
7 rue Ancelle
92200 Neuilly-sur-Seine
France

Si la mise à jour du répertoire suscite un intérêt adéquat, le Panel y réfléchira, en tenant compte des éventuels commentaires des utilisateurs.

Technical Information Panel

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***Note:** NASA Subject Categories are used (listed alphabetically) to identify the subject area of each of the database entries included in this publication. Each database entry has been numbered to make identification and referral to a particular database easier for the user.*

NASA Subject Category	Database Entry and Page Number(s)
Aerodynamics	001—016
Aeronautics (General)	017
Aerospace Medicine	018—021
Aircraft Design, Testing and Performance	022—023
Aircraft Propulsion and Power	024
Astronomy	025
Behavioral Sciences	026—027
Chemistry and Materials (General)	028—038
Communications and Radar	039
Composite Materials	040—044
Computer Programming and Software	045
Documentation and Information Science	046
Earth Resources and Remote Sensing	047—051
Engineering (General)	052
Environment Pollution	053
Fluid Mechanics and Heat Transfer	054—059
Inorganic and Physical Chemistry	059
Lunar and Planetary Exploration	060—074

NASA Subject Category	Database Entry and Page Number(s)
Mechanical Engineering	075
Metallic Materials	076–082
Meteorology and Climatology	053; 083–084
Nonmetallic Materials	085–087
Oceanography	088
Propellants and Fuels	038; 089
Quality Assurance and Reliability	090–091
Solid State Physics	092
Spacecraft Design, Testing and Performance	093–094
Space Radiation	095–098
Space Transportation	001–007 010–016; 093
Urban Technology and Transportation	099
Appendix	A
Blank Form for Submission of Further Entries	

DATABASE ENTRY NUMBER: 001

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Pressure Distribution of Solid
Rocket Booster (SRB) Forebody at
Angles of Attack

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: An aerodynamic investigation to determine the pressure distribution over the foresection of the current 146 inch diameter shuttle SRB. The test model consisted of a 0.0137 scale version of the SRB nose cone and a forward portion of the cylindrical body which was approximately 2.7 calibers in length. The pressure distributions are plotted as a function of longitudinal station ratioed to body diameter and circumferential location for each angle of attack and Mach number. A Reynolds number variations study was made for Mach numbers of 0.4 and 0.6 at an angle of attack of 270 degrees and roll angle of 180 degrees.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 002

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Supersonic Wind Tunnel Test of Jet
Plume Effects on a Space Shuttle
Integrated Vehicle Model

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The base pressure environment was investigated for the first and second stage mated vehicle in a supersonic flow field from Mach 1.55 through 2.20 with simulated rocket engine exhaust plumes. The pressure environment was investigated for the orbiter at various vent port locations at these same freestream conditions. The Mach number environment around the base of the model with rocket plumes simulated was examined. Data were obtained at angles of attack from -4 deg through +4 deg at zero yaw, and at yaw angles from -4 deg through +4 deg at zero angle of attack, with rocket plume sizes varying from smaller than nominal to much greater than nominal. Failed orbiter engine data were also obtained. Elevon hinge moments and wing panel load data were obtained during all runs. Photographs of the tested configurations are shown.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 003

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A
Tel: 1-504-257-4146

TITLE OF DATA BANK: Pressure Distribution Tests of
Space Shuttle Orbiter Model in
Hypersonic Wind Tunnel

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Test results of hypersonic pressure
distributions at simulated atmospheric entry conditions.
Pressure data were obtained at Mach numbers of 7.4 and 10.4 and
Reynolds numbers of 3.0 and 6.5 million per foot. Data are
presented in both plotted and tabulated data form. Photographs
of wind tunnel apparatus and test configurations are provided.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 004

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189
Tel: 1-504-257-4146

TITLE OF DATA BANK: Transonic Wind Tunnel Test of the
Space Shuttle Integrated Vehicle
Model

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Effect of cold jet gas plumes
generated from main propulsion system and solid rocket motor
nozzles on: (1) six-component force and moment data, (2) wing
static pressures, (3) wing hinge moment, (4) elevon hinge moment,
(5) rudder hinge moment, and (6) orbiter MPS nozzle pressure
loads. The effects of rudder deflection, nozzle gimbal angle,
and plume size were also obtained. Wind tunnel test was made on
the 0.019 scale space shuttle integrated vehicle model.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 005

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Supersonic Wind Tunnel
Investigation
of the Space Shuttle External Tank
Model

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Static pressure distributions for the external tank (ET) at reentry conditions. Basic configuration of the model was the MCR 0200 ET modified to include a rectangular crossbar at the aft ET/orbiter attach point. Mach numbers were 1.96, 3.48, and 4.96. Reynolds number per foot at these Mach numbers were 6.95 million, 6.42 million, and 4.95 million, respectively. Angle of attack range was -8 to 100 degrees and roll angle was 0 to 315 degrees. Occupancy hours were 104.

OUTPUT:

On-line access: No

DATABASE ENTRY NUMBER: 006

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Aerodynamic Separation Effects Test
on the Launch Configuration 3
(Model-OTS) Integrated Vehicle
Orbiter Tank

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Experimental data on a 0.01 scale model. The AEDC captive trajectory system was utilized in conjunction with the tunnel primary sector to obtain grid-type data for external tank abort from the orbiter, and for nominal separation on one solid rocket booster from the orbiter-tank combination. Booster separation was investigated with and without separation motors plume simulation. The plumes were generated by eight M sub j = 2.15 nozzles using a 1500 psia cold air supply. Free stream data were obtained for all models (orbiter, tank, orbiter-tank, and right-hand booster) to provide baselines for evaluation of proximity effects.

OUTPUT:

On-line capability: No

DATABASE ENTRY NUMBER: 007

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Wind Tunnel Test Results of an Air
Data Probe on an Orbiter Forebody
Model

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Results are presented of a 0.10
scale orbiter forebody test with left and right mounted air data
probes (ADP) as well as a flight test probe (nose boom). Left
and right ADP data were obtained at Mach numbers of .3, .4, .5,
.6, .7, .8, .85, .9, .95, .98, 1.05 and 1.1 through a Reynolds
number range of 1.3 to 4.4 million. Nose boom data were obtained
at Mach numbers of .3, .4, .5, .6, .7, .9 and .98.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 008

NASA SUBJECT CATEGORY: Aerodynamics

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Low Speed Aeroelastic Buffet Test
of the 747 Cam/orbiter

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: A series of wind tunnel studies designed to assess the potential buffet problems resulting from orbiter wake characteristics with its tailcone removed are presented to provide design loads and acceleration environments, and to develop data on buffet sensitivity to various aerodynamic configurations and flight parameters. Data are intended to support subsequent analyses of structural fatigue life, crew efficiency, and equipment vibrations.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 009

NASA SUBJECT CATEGORY: Aerodynamics

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Transonic Wind Tunnel Test of
Orbiter
Shuttle
Tank Strut Model of the Space
Integrated Vehicle

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Test procedures, history, and data from the wind tunnel test are presented. Aero-loads were investigated on the updated configuration-5 space shuttle launch vehicle at Mach numbers from 0.600 to 1.205. Six-component vehicle forces and moments, base and sting-cavity pressures, elevon hinge moments, wing-root bending and torsion moments, and normal shear force data were obtained. Full simulation of updated vehicle protuberances and attach hardware was employed. Various elevon deflection angles were tested with two different forward orbiter-to-external-tank attach-strut configurations. The entire model was supported by means of a balance mounted in the orbiter through its base and suspended from a string.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 010

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Transonic Flutter Test of Space Shuttle Orbiter Fin/Rudder Model

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: A 0.14-scale dynamically scaled model of the space shuttle orbiter vertical tail was tested in a 16-foot transonic dynamic wind tunnel to determine flutter, buffet, and rudder buzz boundaries. Mach numbers between .5 and 1.11 were investigated. Rockwell shuttle model 55-0 was used for this investigation. A description of the test procedure, hardware, and results of this test is presented.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 011

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Langley Research Center

ADDRESS/POINT OF CONTACT: Paul M. Siemers, III
Langley Research Center
Hampton, VA
Tel: 804-827-3984

TITLE OF DATA BANK: Shuttle Entry Air Data System

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The development of the Shuttle Entry Air Data System (SEADS) necessitated the development of a flow field model data reductions technique. This flow field model is based on a data base of experimental data obtained in various NASA and Air Force research facilities as well as computational data obtained from inviscid computational codes. The wind tunnel data contained in the SEADS data base were obtained using these forward fuselage models (10%, 4% and 2%) over the Mach number range from 0.25 to 20. These data are supplemented by hypersonic computational data to match flight condition and experimental conditions at $\gamma = 1.4$ (air), $\gamma = 1.12$ (CF₄) and $\gamma = 1.67$ (He). The wind tunnel tests were designed to isolate facility as well as scale effects. The SEADS/orbiter forward fuselage data base provides the most complete set of comparison pressure data available not only for the SEADS, but also for the Development Flight Instrumentation (DFI) used by orbiter subsystem managers.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 012

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Wind Tunnel investigation of
Reynolds effects on integrated
Space Shuttle Launch vehicle elevon
hinge moments and wing panel at
Mach 0.6

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Wind tunnel investigations were conducted on a 0.010-scale representation of the VL70-000140C Integrated Space Shuttle Launch Vehicle. The primary test objective was to obtain Reynolds number effects on orbiter elevon hinge moments and wing bending/torsional moments. Launch vehicle aerodynamic force data were also recorded. The elevon hinge moments, wing bending/torsional moments, and vehicle force data were recorded over an angle of attack range of -6 deg to +6 deg, an angle of sideslip range of -6 deg to +6 deg, at Mach numbers of 0.6, 0.975, 1.05 and 1.25. The Reynolds number was varied from a minimum of 4.5 million/foot to a maximum of 11.5 million/foot. The complete integrated configuration was tested with the orbiter elevons set at 0 deg and deflected to 9 deg on the outboard elevon and 10 deg on the inboard elevon. Testing was conducted in the TWT 19.7% porous transonic test section with the model sting mounted through the orbiter base. All aerodynamic force data were obtained from internal strain gage balance located in the orbiter.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 013

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Wind Tunnel visualization tests of
space shuttle orbiter-tank mated
and orbiter configurations.

TYPE OF DATA: Imagery

DESCRIPTION OF COVERAGE: An 0.010-scale model of the space shuttle (orbiter-tank mated and orbiter configurations) was tested in the AEDC VKF Tunnel B to investigate aerodynamic flow patterns. The test tests utilized oil flow techniques to visualize the flow patterns. Tunnel free stream Mach number was 7.95 and nominal unit Reynolds number was 3.7 million per foot. Model angle of attack was varied from -5 deg through 10 deg and angle of sideslip was 0 deg and 2 deg. Photographs of resulting oil flow patterns are presented.

OUTPUT:
On-line access capability: No

DATABASE ENTRY NUMBER: 014

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Low speed wind tunnel tests of
Space Shuttle vehicle ferry
configuration afterbody fairing
effects on orbiter aerodynamic
characteristics

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The primary test objectives were to
define ferry configuration afterbody fairing effects on orbiter
stability and control characteristics and to substantiate wind
tunnel results. Parametric variations consisted entirely of
testing different afterbody fairing contours in an effort to
improve both the orbiter drag levels and lateral-directional
control characteristics. The three afterbody contours that were
tested consisted of the Boeing TC3 beavertail, the new Rockwell-
Boeing TC4 fairing, and a modification of an existing short
bumblebee fairing redesignated TC6.

OUTPUT:
On-line access capability: No

DATABASE ENTRY NUMBER: 015

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Wind Tunnel of Space Shuttle
orbiter model at Mach 20
aerodynamic

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Data obtained during a wind tunnel test of a 0.004-scale 140C modified configuration SSV orbiter are documented. The test was conducted during August 1974 with 80 occupancy hours charged, and all runs were conducted at a nominal Mach number of 20 and at Reynolds numbers of 0.7, 1.0, 1.8, and 1,100,000 based on body length. The complete -140C modified model was tested with various elevon settings at angles of attack from 10 to 50 degrees at zero yaw and from angles of sideslip of -10 to +10 at 35 deg angle of attack. The purpose of this test was to obtain high hypersonic longitudinal and lateral-directional stability and control characteristics of the updated SSV configuration.

OUTPUT:
On-line access capability: No

DATABASE ENTRY NUMBER: 016

NASA SUBJECT CATEGORY: Aerodynamics
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Data Operations Manager
Chrysler Electronic Systems
Box 2920
New Orleans, LA 70189, U.S.A.
Tel: 1-504-257-4146

TITLE OF DATA BANK: Heat transfer tests of thin-skin
space shuttle wind tunnel at Mach
3.7

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The results are presented of supersonic heat transfer tests performed on the .006 scale space shuttle vehicle model (41-OTS) in the Langley Research Center Unitary Plan Wind Tunnel. These tests were conducted to parametrically investigate ascent heating of the nominal Mach number of 3.7 and Reynolds number per foot of 2 and 5 million. The model configurations investigated were the integrated vehicle and each component alone (i.e. orbiter, tank and SRB). All the configurations were run with and without transition strips and through an angle of attack range of 0 deg to minus 5 deg with the exception of the SRB which was tested through an angle of attack range of minus 5 deg to 90 deg. The heat transfer data were obtained from 223 iron constantan thermocouples attached to stainless steel thin-skin areas of the model.

OUTPUT:
On-line access capability: No

DATABASE ENTRY NUMBER: 017

NASA SUBJECT CATEGORY: Aeronautics (General)

NAME OF ORGANIZATION: U.S. Army Natick RD&E Center

ADDRESS/POINT OF CONTACT: Mr. Steve Kunz
Aero-Mechanical Engineering
Directorate
Natick, MA 01760, U.S.A.
Tel: 1-508-651-5326

TITLE OF DATA BANK: Parachute Trajectory

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Contains spatial parachute trajectory data recorded along 3 axes at the rate of samples/second for approximately 50 seconds.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 018

NASA SUBJECT CATEGORY: Aerospace Medicine

NAME OF ORGANIZATION: US Air Force School of Aerospace
Medicine

ADDRESS/POINT OF CONTACT: Nancy Hopper
RDMS, RDCS
Building 110
Brooks AFB, TX 78235, U.S.A.

TITLE OF DATA BANK: DB AGARD "PILOTS"

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Cardiac function in military pilots.

INPUT: NATO Cardiac function.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: Yes.

COMMUNICATIONS NETWORK: Direct Dial.

DATABASE ENTRY NUMBER: 019

NASA SUBJECT CATEGORY: Aerospace Medicine

NAME OF ORGANIZATION: U.S. Army Aeromedical Research Laboratory

ADDRESS/POINT OF CONTACT: Mr. Ken A. Kimball
P.O. Box 577
Fort Rucker, AL 36362, U.S.A.
Tel: 1-205-255-6361
Fax: 1-205-255-6937

TITLE OF DATA BANK: U.S. Army Aviation Epidemiology Data Register

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: In 1983, the US Army Aviation epidemiology Data Register (AEDR) was begun as a joint effort of the US Army Aeromedical Activity (USAAMA) at Ft Rucker, AL. The AEDR is a permanent, computer accessible repository of medical information on the Army aviation population.

The medical information is taken from flying duty medical examinations (FDME) which are recorded on Standard Forms 88 (Report of Physical Examination), 93 (Report of Medical History) and 520 (Electrocardiographic Record), and an auxiliary form of health risk factors, family history, and flight experience. Medical transcribers enter the data from these forms into the AEDR database entering each record twice to minimize transcription errors. Each record is composed of 178 fields containing administrative data, patient medical history, physician medical history, screening test results, physical findings, health risk factors, anthropometric measurements, diagnoses, and dispositions. This information is gathered in medical examination facilities for the purpose of determining medical fitness for flying duty.

This automated database system provides data for developing and evaluating medial selection and retention standards, for conducting epidemiologic studies on health risk factors, and the natural history of disease in the aviation environment, for evaluating health hazard in the aviation environment, and for providing human factors input to engineers developing aircraft, weapons, and life support equipment.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 020

NASA SUBJECT CATEGORY: Aerospace Medicine

NAME OF ORGANIZATION: Technical Database Services

ADDRESS/POINT OF CONTACT: Wendy Stern Fenwik
10 Columbus Circle, Suite 2300
New York, NY 10019, U.S.A.
Tel: 1-212-245-0044
Fax: 1-212-247-0587

TITLE OF DATA BANK: Carcinogenicity Information
Database of Environment Substances

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: CIDES is a comprehensive source of numeric data compiled from the open literature on approximately 1000 chemical substances of environmental or health concern. The database contains 40,000 records which have been extracted from over 5600 references to a wide variety of studies pertaining to carcinogenicity and mutagenicity. In addition, numerous chemical properties relating to the transfer and persistence of each substance in the environment are provided for each substance in the database. The data files are organized into six categories of studies: human epidemiology, whole animal carcinogenesis, transformations in mammalian cell lines and in mammalian tissues and cells, bacterial tests and other assays. Both positive and negative results are included in all categories. For each CIDES substances, searches can be directed to specific areas of interest within each category, e.g., species, route of exposure, tumor site or tumor type. A unique feature in CIDES is the Carcinogenicity Ratio (CR), an objective procedure for evaluating potentially carcinogenic substances. The CR is a pair of numbers which indicates a substance's potential carcinogenicity: the Carcinogenicity Ratio (CR- a figure reflecting the percent of the studies which are positive in each category) and the Weight of the Evidence (W - the number of categories represented and the extent of the testing which have contributed to the calculation of the CR).

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: Yes.

COMMUNICATIONS NETWORK: Direct Dial.

DATABASE ENTRY NUMBER: 021

NASA SUBJECT CATEGORY: Aerospace Medicine

NAME OF ORGANIZATION: Military School for Parachutists
"Mendez Parada"
(Escuela Militar de Paracaidismo
"Mendez Parada")

ADDRESS/POINT OF CONTACT: Attention: Jacinto Fernandez Pardo

Carretera de Granada
Alcantarilla, Murcia, Spain
Tel: 34 (968) 800 300 (ext: 180)
Fax: 34 (968) 804 661

TITLE OF DATA BANK: FRCBASE

TYPE OF DATA: Numeric data

DESCRIPTION OF COVERAGE: Risk factors of coronary, prevailing
under the staff members of the school

INPUT:

Nature of Data: Sex, age, pathological antecedents, drugs,
smoking habits, BMI, BP, HR, LVH in ECG, total and HDL
cholesterol, tryglycerides, etc.

OUTPUT:

On-line access capability: No

By products (bulletins, etc.): Annual bulletins

Software Currently Used: DBASE III plus, Framework
III, SPSS/PC+

DATABASE ENTRY NUMBER: 022

NASA SUBJECT CATEGORY: Aircraft Design, Testing and Performance

NAME OF ORGANIZATION: National Aerospace Laboratory (NLR)

ADDRESS/POINT OF CONTACT: Attention: Ir J.B. de Jonge
P.O. Box 135
8300 AD Emmeloord, The Netherlands
Tel: 31 5274 8291
Fax: 31-5274 8210

TITLE OF DATA BANK: ACMS 747 Database

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Aircraft Mission (ACMS) profile fatigue-loads related data extracted from ACMS data tape produced during Boeing 747 aircraft operational flights. Reference: ASTM-STP-671, 1979, pp. 48-66; AGARD-R-734, 1980, pp. 7-1/7-14.

INPUT:

Nature of Data: Flight: date, take-off weight, departure, destination airport;
Profile: speed, altitude, aircraft weight and cabin pressure;
C.g. acceleration: peaks and troughs with time of occurrence.

Frequency of updating: Active from 1974 until 1989.

Number of Items: 24,000 flights, 120,000 flight hours;
56,000,000 nautical miles

OUTPUT: Aircraft usage statistics; gust statistics.

On-line access capability: Yes

SOFTWARE CURRENTLY USED: ANALY (development at NLR)

COMMUNICATIONS NETWORK: SURFNET, DATANET 1

COMMENTS ON COOPERATION: Exchange of data is welcome.

DATABASE ENTRY NUMBER: 023

NASA SUBJECT CATEGORY: Aircraft Design, Testing and Performance

NAME OF ORGANIZATION: TUSAS Aerospace Industries, Inc. (TAI)

ADDRESS/POINT OF CONTACT: P.O. Box 18
06690 Kavaklidere, Ankara, Turkey
Tel: 90 (4) 523 1800
Fax: 90 (4) 532 1425

TITLE OF DATA BANK: UAV Graphical Data Bank

TYPE OF DATA: Graphic data

DESCRIPTION OF COVERAGE: Graphical data for engineering drawings of unmanned air vehicles (UAV).

INPUT:

Nature of Data: Graphical data of engineering drawings

OUTPUT:

On-line access capability: No

SOFTWARE CURRENTLY USED: CADKEY

DATABASE ENTRY NUMBER: 024

NASA SUBJECT CATEGORY: Aircraft Propulsion and Power

NAME OF ORGANIZATION: Advisory Group for Aerospace Research and Development (AGARD)

ADDRESS/POINT OF CONTACT: Scientific Publications Executive
7, rue Ancelle
92200 Neuilly-Sur-Seine
France
Tel: 33-14-738-5795
Fax: 33-14-738-5799

TITLE OF DATA BANK: Internal Flows in Aero Engine Components

TYPE OF DATA: Numeric and Textual

DESCRIPTION OF COVERAGE: Analytical and experimental data of test cases of cascades, compressors, ducts and turbines, intended as support in the development of new and the refinement of existing codes for computing internal flows in axial turbomachinery. Reference: Tottner, I., (1990), Test Cases for Computation of Internal Flows in Aero Engine Components, AGARD-AR-275; ISBN-92-835-0573-5, 393 pps.

INPUT:

Nature of Data: 2D Euler codes and 2d potential flow model codes; analytical test cases relevant to steady, 2-dimensional, inviscid flow calculations; experimental test cases, relevant to steady, 2-dimensional, quasi- or fully 3-dimensional flow calculations for viscous flow calculations flows.

OUTPUT:

On-line Access Capability: No.

By-Products (bulletins, etc.): Data available as an appendix to AGARD Advisory Report No. 275 in microfiche form.

DATABASE ENTRY NUMBER: 025

NASA SUBJECT CATEGORY: Astronomy

NAME OF ORGANIZATION: European Space Agency (ESA)
Villafranca

ADDRESS/POINT OF CONTACT: Attention: Dr. M. Barylak
P.O. Box 50727
28080 Madrid, Spain
Tel: 34 (1) 813 1100
Fax: 34 (1) 813 1139

TITLE OF DATA BANK: VILSPA IUE Data bank

TYPE OF DATA: Numeric and graphic data

DESCRIPTION OF COVERAGE: UV spectral and photometrical data
acquired from the International ultraviolet Explorer (IUE)
satellite

INPUT:

Nature of Data: Ultraviolet (1150 to 3200 A) spectral data
of astronomical sources

OUTPUT:

On-line access capability: Yes

By products (bulletins, etc.): ESA IUE Newsletter; Merged
observing log (microfiche)

Software Currently Used: VAX/VMS1 Operating System
ADABAS/VMS Database
Management System

COMMUNICATION NETWORK: BITNET/EARN, SPAN (DECNET),
IBERPAC (X-25)

COMMENTS ON COOPERATION: Open to all European
scientists

DATABASE ENTRY NUMBER: 026

NASA SUBJECT CATEGORY: Behavioral Sciences

NAME OF ORGANIZATION: Crew System Ergonomic
Information Analysis Center

ADDRESS/POINT OF CONTACT: Mr. Donald J. Polzella
AAMRL/HE/CSERIAC
Wright-Patterson AFB, OH 45433
U.S.A.
Tel: 1-513-255-4842
Fax: 1-513-255-4823

TITLE OF DATA BANK: STRES Battery Data Base

TYPE OF DATA: Test and Numeric

DESCRIPTION OF COVERAGE: Information and data input by users
of the NATO/AGARD Standardized Tests for Research with
Environmental Stressors (STRES) Battery.

INPUT: Human performance measurements.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 027

NASA SUBJECT CATEGORY: Behavioral Sciences

NAME OF ORGANIZATION: Centre for Aerospace Medical
Instruction (CIMA)

ADDRESS/POINT OF CONTACT: Attention: J. J. Canton Romero
Arturo Soria 82
28027 Madrid, Spain

TITLE OF DATA BANK: Aptitude Tests of flight crews

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Aptitude tests of flight crews

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 028

NASA SUBJECT CATEGORY: Chemistry and Materials (General)

NAME OF ORGANIZATION: ESDU International PLC

ADDRESS/POINT OF CONTACT: Ms. Joyce M. Culling
Sales Office Manager
ESDU International PLC
27 Corsham Street
London NI 6UA UNITED KINGDOM
Tel: 44-071-490-5151
Fax: 44-071-490-2701

TITLE OF DATA BANK: Physical Data, Chemical Engineering
Sur-Series

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Evaluated physical and thermodynamic properties data for a wide range of organic liquids. Generally tabulates the variation of the property with temperature. Equations for the variation are always included. Vapour phase data are also provided for a more limited range of organic compounds. Some data for inorganic compounds are also included.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 029

NASA SUBJECT CATEGORY: Chemistry and Materials (General)

NAME OF ORGANIZATION: Institute of Chemical Engineers

ADDRESS/POINT OF CONTACT: Dr. Beryl Edmonds
165-171 Railway Terrace Rugby
Warwickshire CV21 3HQ
United Kingdom
Tel: 44-0788-578214
Fax: 44-0788-560833

TITLE OF DATA BANK: Physical Property Data Service

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The PPDS system consists of a set of mutually compatible computer packages which provide phase equilibrium, thermodynamic and transport data for a wide variety of pure components, and mixtures.

INPUT: Data derived from literature, in-house and contract measurements.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: Yes.

SOFTWARE CURRENTLY USED: VMS

COMMUNICATIONS NETWORK: Direct Dial

DATABASE ENTRY NUMBER: 030

NASA SUBJECT CATEGORY: Chemistry and Materials (General)

NAME OF ORGANIZATION: Bio-Rad Sadtler Division

ADDRESS/POINT OF CONTACT: Mr. Tom Levesque
3316 Spring Garden Street
Philadelphia, PA 19104, U.S.A.
Tel: 1-215-382-7800
Fax: 1-215-662-0585

TITLE OF DATA BANK: Infrared Spectra and Chemical
Property Data Files

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The Sadtler Commercial Libraries are IR spectra collections with associated chemical property data files. Using the Sadtler Search Software, one may identify unknown materials by comparing their IR spectra against any contained within the database.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 031

NASA SUBJECT CATEGORY: Chemistry and Materials (General)

NAME OF ORGANIZATION: NACE

ADDRESS/POINT OF CONTACT: Ms. Peggy Hansen
P.O. Box 218340
Houston, TX 77218, U.S.A.
Tel: 1-713-492-0535
Fax: 1-713-492-8254

TITLE OF DATA BANK: Cor Data Plus (Corrosion Tests Data)

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: COR DATA PLUS is a powerful database designed to logically organize your documented quantitative corrosion data. The database identifies material by using standardized terminology, environmental parameters associated with both laboratory and field corrosion tests, and comprehensive documentation of numeric data for general, pitting and crevice corrosion.

The program is designed to organize your technical data as you input the information into the system through a series on menu driven screens. Before you begin developing your database, a tutorial program teaches you the search and retrieval skills. The program has a simple data set from 300 field tests of nickel-containing alloys in sulfuric acid process environment involving approximately 4000 specimens.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 032

NASA SUBJECT CATEGORY: Chemistry and Materials (General)

NAME OF ORGANIZATION: Engineering Information Company,

ADDRESS/POINT OF CONTACT: J E Martini-Vvedensky
15-17 Ingate Place
London SW8 3NS
United Kingdom
Tel: 441-716 22 8155
Fax: 441-716 27 5076

TITLE OF DATA BANK: Materials User Service (MATUS)

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: MATUS contains information taken from the technical datasheets of materials manufacturers. MATUS describes engineering materials grade by grade: Plastics, composition, standard specification, application, mechanical, thermal or electrical properties, environmental behavior or processability.

INPUT: Data derived from manufacturers data sheets.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: Yes.

COMMUNICATIONS NETWORK: Direct Dial.

DATABASE ENTRY NUMBER: 033

NASA SUBJECT CATEGORY: Chemistry and Materials (General)

NAME OF ORGANIZATION: ASM International

ADDRESS/POINT OF CONTACT: Mr. Timothy L. Gall
Route 87
Materials Park, OH 44073, U.S.A.
Tel: 1-216-338-5151
Fax: 1-216-338-4634

TITLE OF DATA BANK: Mat.DB

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The Mat.DB system consists of three component parts: Mat.DB, Mat.DB Data, and EmPlot. Mat.DB is the database manager. It is capable of maintaining, searching, and displaying textual, tabular, and graphical information on engineered materials. Databases currently exist for aluminum, copper, magnesium, stainless steel, alloy steel, titanium, structural steel, and plastics. EmPlot is a graphic utility that can be used to analyze the data in the Mat.DB databases.

INPUT: Data derived from open literature, reference books, government data compilations, producer's literature.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 034

NASA SUBJECT CATEGORY: Chemistry and Materials (General)

NAME OF ORGANIZATION: Rolls-Royce Business Ventures, Ltd.

ADDRESS/POINT OF CONTACT: Mr. R. Wallace
Ansty Coventry CV7 9PN
United Kingdom
Tel: 44-203-623 623
Fax: 44-203-623 600

TITLE OF DATA BANK: RR Materials Property Database

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: This numeric database of particularly high temperature aerospace materials contains a wide range of physical and mechanical properties in an evaluated form for access by design, engineering or FEA programs. At present limited external entry is on a purely commercial basis after specific negotiation.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 035

NASA SUBJECT CATEGORY: Chemistry and Materials (General)

NAME OF ORGANIZATION: US Army Chemical Research,
Development and Evaluation Command

ADDRESS/POINT OF CONTACT: Mr. Stephen Lawhorne
Attn: SMCCR-MSD
Aberdeen Proving Ground
MD 21010-5423, U.S.A.
Tel: 1-301-671-2938
Fax: 1-301-671-3317

TITLE OF DATA BANK: CRDEC Materials Compatibility and
Permeability Database (Effects of
Chemical Warfare Agents and
Decontaminants on Chemical Defense
Materials)

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The CRDEC Materials Compatibility and
Permeability Data base is a collection of information on the
effects of chemical warfare agents and decontaminants on various
materials of interest to the Chemical Defense R & D community.
The information is primarily numeric, measuring a specific
property of a specific material under specified conditions. The
measurement for that property is made on the original material
and then repeated after the material has been exposed to or in
contact with a chemical agent, decontaminant, or other chemical
of interest to determine compatibility. One property of special
interest in the database is permeability. Permeation rates of
agents through barrier materials and gasket materials in
particular are presented when the materials have been considered
or screened for use in chemical defense material. Data is
available for a wide variety of materials. References are
included.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: Yes.

COMMUNICATIONS NETWORK: Direct Dial.

DATABASE ENTRY NUMBER: 036

NASA SUBJECT CATEGORY: Chemistry and Materials (General)

NAME OF ORGANIZATION: Technical Centre for Industrial
Mechanics - CETIM
(Centre Technique de Industriels
Mecaniques)

ADDRESS/PCINT OF CONTACT: Attention: M. Lebreton
P.O. Box 67
63304 Senlis Cedex
France
Tel: 33 (4) 4533266

TITLE OF DATA BANK: CETIM MATERIAUX

TYPE OF DATA: Numeric and textual data

DESCRIPTION OF COVERAGE: Physical, chemical and mechanical
description properties of materials (metallic and non-metallic
materials, composite materials, plastics, elastomers lubricants,
adhesives and ceramic materials)

INPUT:

Nature of Data: Results of mechanical, thermal, electrical,
physical, physico-chemical tests

OUTPUT:

On-line access capability: Yes

COMMUNICATION NETWORK: TRANSPAC

DATABASE ENTRY NUMBER: 037

NASA SUBJECT CATEGORY: Chemistry and Materials (General)

NAME OF ORGANIZATION: NASA Headquarters

ADDRESS/POINT OF CONTACT: John Nardone
Plastic Technial Evaluation Center
Bldg. 351N, Armament Research and
Development Center, AMCCOM
Dover, NJ 07801 U.S.A.
Tel: 201-724-4222

TITLE OF DATA BANK: Material Deterioration Data Deter

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The Materials Deterioration Data (DETER) Program is a specialized computer file developed for the retrieval of technical data describing the behavior of materials in various environments. DETER includes material performance data related to end item applications and data as the result of laboratory evaluation. The environments include atmospheric, chemical, stress, and temperature. End item data summarizes specific material problems in Army systems. All data are abstracted from available technical reports. The program is remote accessible and contains a user friendly interface for those not familiar with computer access technology. Data may be retrieved for specific materials or qualitatively selected for materials assessment or selection. A user manual is provided following receipt of authorization to access the program.

OUTPUT: On-line access capability: Yes

COMMUNICATION NETWORK: Direct Dial

DATABASE ENTRY NUMBER: 038

NASA SUBJECT CATEGORY: Propellants and Fuels
Chemistry and Materials (General)

NAME OF ORGANIZATION: Armament Research and Development
Center

ADDRESS/POINT OF CONTACT: Attention: John Nardone
Armament Research and Development
Center, AMCCOM
Building 351N
Dover, NJ 07801 U.S.A.
Tel: 201-724-4222

TITLE OF DATA BANK: Compatibility between polymers and
metals with Energetic materials

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: COMPAT is a specialized computer
program developed for storage and retrieval of compatibility data
between polymers (plastics, adhesives, and elastomers) with
energetic materials propellants and explosives). It also has
been expanded to include compatibility data for a number of
metals. it is so constructed that, by dialogue with the
computer, the user may obtain technical data about a given system
or various combinations of cross referenced data. The program
has been available by remote access to government and authorized
contractors for several years. A user manual is provided
following receipt of authorization to access the program.

OUTPUT:
On-line access capability: Yes

COMMUNICATION NETWORK: Direct Dial

DATABASE ENTRY NUMBER: 039

NASA SUBJECT CATEGORY: Communications and Radar

NAME OF ORGANIZATION: U.S. Army Aviation Systems Command

ADDRESS/POINT OF CONTACT: Mr. Jorge Rivera
Directorate for Life Cycle
Software Engineering
Avionics Division, AMSAV-WE
Building 2525
Fort Monmouth, NJ 07703, U.S.A.
Tel: 1-210-544-3550

TITLE OF DATA BANK: Automated Multiplex Interface
Control Document

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Electrical and protocol characteristics for aircraft multiplexed signals transmitted over a MIL-STD-1553 (STANAG 3838) data bus, documented in the form of a Multiplex Interface Control Document (MICD).

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 040

NASA SUBJECT CATEGORY: Composite Materials

NAME OF ORGANIZATION: Materials Sciences Corporation

ADDRESS/POINT OF CONTACT: Ms. Crystal H. Newton
930 Harvest Drive
Union Meeting Corporate Ctr II
Blue Bell, PA, U.S.A.
Tel: 1-215-542-8400
Fax: 1-215-542-8401

TITLE OF DATA BANK: MIL HDBK 17 Materials Properties Database

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Mechanical, thermal, electrical, chemical, etc., properties of polymer composites and continuous fiber. Data contained in Military Handbook 17B, "Polymer Matrix Composites."

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 041

NASA SUBJECT CATEGORY: Composite Materials

NAME OF ORGANIZATION: Martin Marietta Electronic Systems

ADDRESS/POINT OF CONTACT: Mr. Richard Fields
P.O. Box 628007
MP 1404
12506 Lake Underhill Rd
Orlando, FL, U.S.A.
Tel: 1-407-356-5842
Fax: 1-407-356-4964

TITLE OF DATA BANK: MMESDB

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Mechanical, thermal, electric, and physical properties of various composite materials.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 042

NASA SUBJECT CATEGORY: Composite Materials

NAME OF ORGANIZATION: Hitemp Project Office

ADDRESS/POINT OF CONTACT: Mr. C. Robert Ensign
NASA Lewis Research Center
21000 Brookpark Road
M.S. 49-1
Cleveland, OH 44126, U.S.A.
Tel: 1-216-433-3217

TITLE OF DATA BANK: Hitemp Materials Properties
Database

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: HTDB, which is presently being developed, will be a database of materials properties for high temperature composites currently being developed under the Advanced High Temperature Engine Materials Technology Project at Lewis Research Center. It will include a bibliography of research reports sponsored by the project.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 043

NASA SUBJECT CATEGORY: Composite Materials

NAME OF ORGANIZATION: Construcciones Aeronauticas SA
CASA
R&D Technology and Materials
Department

ADDRESS/POINT OF CONTACT: Attention: Jose Sanchez
GETAFE, 28065 Madrid, Spain
Tel: 34 (1) 624 2579
Fax: 34 (1) 682 4154

TITLE OF DATA BANK: Composite Materials Property Data

TYPE OF DATA: Numeric data

DESCRIPTION OF COVERAGE: Mechanical and physico-chemical
properties resulted from tests made on samples of composite
materials.

INPUT:

Nature of Data: Compression strength/modulus; etc.

Number of items: 2,000

OUTPUT:

On-line access capability: No

By-products (Bulletins, etc.): Data sheets on statistical
analysis of the test results

DATABASE ENTRY NUMBER: 044

NASA SUBJECT CATEGORY: Composite Materials

NAME OF ORGANIZATION: INASMET
Division of Composite Materials,
Ceramics and Coatings

ADDRESS/POINT OF CONTACT: Attention: J. F. Liceaga
Camino de Portuete, 12
20009 San Sebastian, Spain
Fax: 34 (43) 217560

TITLE OF DATA BANK: Composite Materials Databank

TYPE OF DATA: Numeric and graphic data

DESCRIPTION OF COVERAGE: Mechanical properties of organic and metal matrix composites; Alumina, Silicon Nitride and Carbide ceramics; thin-film and thick-film coatings

INPUT:

Nature of Data: Purity, densification, temperature and time of sintering, surface roughness, hardness, toughness, flexure resistance, Weibull modulus

OUTPUT:

On-line access capability: No

By-products (bulletins, etc.): Data sheets

SOFTWARE CURRENTLY USED: Macintosh

DATABASE ENTRY NUMBER: 045

NASA SUBJECT CATEGORY: Computer Programming and Software

NAME OF ORGANIZATION: NASA Lewis Research Center

ADDRESS/POINT OF CONTACT: Theodore E. Fessler
Mail Code 141-1
Lewis Research Center
Cleveland, OH 44135, U.S.A.
Tel: 1-216-433-4000, Ext 795

TITLE OF DATA BANK: Computer Code Abstracts and Index

TYPE OF DATA: Computer Programs

DESCRIPTION OF COVERAGE: An indexed, archival storage system implemented on the IBM Time Sharing System. The purpose of the system is to: (1) provide permanent storage (on tape) of computer codes developed for all the computer systems and other information related to computer sciences; (2) promote wider use of programs, subprograms and mathematical techniques developed by the Lewis staff and outside contractors; (3) serve as a working guide to documentation methods; and (4) provide simple up-to-date access to a large amount of programming material.

OUTPUT:

On-line capability: Yes

COMMUNICATION NETWORK: Direct Dial

DATABASE ENTRY NUMBER: 046

NASA SUBJECT CATEGORY: Documentation and Information Science

NAME OF ORGANIZATION: NASA Center for Aerospace Information

ADDRESS/POINT OF CONTACT: NASA Center for Aerospace Information
P.O. Box 8757
BWI, MD 21240 U.S.A.
Tel: 1- (301)-859-5300

TITLE OF DATA BANK: Directory of Numerical Databases

TYPE OF DATA: Textual

DESCRIPTION OF COVERAGE: The DND is an online, referral directory to numerical and factual databases which are funded by or administered by NASA, which are computer readable, and which may be sharable by NASA staff, NASA contractors, or others who are not directly associated with the generation of the data or the administration of the database. Databases listed may include those which are numerical, textual, imagery, graphical, structures, patterns, or combinations of these types. Excluded are such types as mathematical models (unless a factual database is embedded) and bibliographies.

INPUT:

Number of Items: 1,200 records

OUTPUT:

On-line access capability: Yes (NASA RECON)
Communications Network: PSCN/NPSS; NASANET; TELENET;
Direct Dial

DATABASE ENTRY NUMBER: 047

NASA SUBJECT CATEGORY: Earth Resources and Remote Sensing

NAME OF ORGANIZATION: National Institute of Aerospace
Technology
(Instituto Nacional de Tecnica
Aeroespacial [INTA])

ADDRESS/POINT OF CONTACT: Attention: Elisa Sugranez
Puerto Pinto Rosales, 34
28008 Madrid, Spain
Fax: 34 (1) 2480872

TITLE OF DATA BANK: Spanish Remote Sensing Images

TYPE OF DATA: Image data

DESCRIPTION OF COVERAGE: Remote sensing image data of the entire
Spanish area acquired since 1977 through processing of computer
compatible tape data received from the Landsat and Spot satellites

INPUT:

Nature of Data: Image data on computer compatible tapes or
as photograph prints

OUTPUT:

On-line access capability: No

By products (bulletins, etc.): Information sheets (issued
yearly)

COMMENTS ON COOPERATION: Images are for sale

DATABASE ENTRY NUMBER: 048

NASA SUBJECT CATEGORY: Earth Resources and Remote Sensing

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: Attention: William E. Valente
NASA Space Science Data Center
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Electrically Scanning Microwave Radiometer (NIMBUS 5)

TYPE OF DATA: Numeric-Imagery

DESCRIPTION OF COVERAGE: The mission of ESMR-5 is to explore the use of microwave radiometry for (1) mapping Earth surface features even in the presence of clouds; (2) map distribution of polar ice; and (3) map cloud liquid water content and areas of rain over ocean areas. The radiometer measures microwave radiance 1.55 cm expressed in degrees Kelvin. Calibration of the raw ESMR data involves the following steps: (1) compute brightness temperature at antenna/radiometer interfaces; (2) correct for loss in antenna (function of beam position, polarization, and phase shifter temperature); and (3) correct for antenna gain function (sidelobes). The data have been used for maps of sea ice concentration and rain rate over oceans, and for research on soil moisture, single/multiyear ice, winds over oceans, rain over land, snow cover and depth, snow water equivalent, atmospheric liquid water, and water vapor. Data Quality: The design goal for ESMR-5 brightness temperature data was an rms temperature of 1.5 K relative accuracy and 2.0 K absolute accuracy. Area Covered: The orbital swatch is 3000 km wide providing full global coverage twice each day. Spatial/Temporal Resolution: The FOV is 1.4 degrees by 1.4 degrees near nadir giving a footprint 25 km by 25 km. At the scan extremes the footprint is 40 km by 160 km. The scan period is 4 sec taking 78 samples per scan.

OUTPUT:

Output products: Tape products include Raw Data Tape, Level 0 both and CBTT, Calibrated Brightness Temperature tape, Level I both on 9-track 1600 bpi computer tape. Film products include orbital swaths on 70 mm rolls of film and available on positive or negative film or paper, and Experimental Color Images on 8 in. by 10 in. color positive prints.

On-line access capability: No

DATABASE ENTRY NUMBER: 049

NASA SUBJECT CATEGORY: Earth Resources and Remote Sensing

NAME OF ORGANIZATION: NASA Space Technology Labs.

ADDRESS/POINT OF CONTACT: Attention: Dr. R. H. Griffin
NASA Space Technology Labs.
Bay Saint Louis, MS U.S.A.
Tel: 601-688-3830

TITLE OF DATA BANK: Automated Cotton Acreage estimation
in Imperial Valley California

TYPE OF DATA: Numeric-Imagery

DESCRIPTION OF COVERAGE: A database designed to aid in the development of automated cotton acreage estimation techniques for Cotton, Inc. was compiled. Several sets of LANDSAT MSS Data that are multitemporally registered, georeferenced surface cover map of agricultural region, and ground truth data are provided. Area Covered: 1 deg x 1 deg area in Southern Calif. (Imperial Valley)

INPUT: Data Collection Method: LANDSAT satellite

OUTPUT: On-line access capability: No

DATABASE ENTRY NUMBER: 050

NASA SUBJECT CATEGORY: Earth Resources and Remote Sensing

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: Attention: Eugene R. Hoppe
NOAA/SDSD
World Weather Building
Washington, DC 20233 U.S.A.
Tel: 301-763-8111

TITLE OF DATA BANK: Wind Speed (SEASAT A Altimeter)

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Wind speed at the ocean derived from the measurements of radar backscatter obtained from the SEASAT A Altimeter are archived. The radar backscatter value is in dB; the wind speed is in meters/second. The SEASAT A Altimeter data were processed to give geophysical and sensor files. Data available include wind speed algorithms, and primary measurements, including radar backscatter coefficients used in the wind speed derivation. Files are also available containing derived engineering units. The backscatter coefficient was obtained by comparing the amplitudes of the return pulse with that of the transmitted pulse. The backscatter coefficient is determined principally by capillary waves which result from surface wind effects. Backscatter decreases with increasing wind speed.

OUTPUT:

Output products: The SEASAT A Altimeter data set is archived in two forms on 9-track 1600 bpi computer compatible tape. The Sensor Data Record (SDR), Level II contains all the basic data obtained by the SEASAT A Altimeter including orbit information, time of observation, nadir range, and AGC value. The Geophysical Data Record (GDR) contains measured nadir range, list of applied corrections, sea surface elevations, position (latitude and longitude), geoid information, significant wave heights, and wind speed.

On-line access capability: No

DATABASE ENTRY NUMBER: 051

NASA SUBJECT CATEGORY: Earth Resources and Remote Sensing

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: Attention: Jim Greaves
NASA Goddard Space Flight Center
Greenbelt, MD U.S.A.
Tel: 301-344-9132

TITLE OF DATA BANK: Radiance data of Earth's atmosphere
and surface

TYPE OF DATA: Image Data

DESCRIPTION OF COVERAGE: Geosynchronous satellite Visible
Infrared Spin Scan Radiometer (VISSR) radiance measurements of the
Earth's atmosphere and surface are made. The database contains raw
radiance data, scaled real radiance data, surface, and upper
atmosphere radiosonde data. Real number and image products are in
the file as well as text.

OUTPUT:
On-line access capability: No

DATABASE ENTRY NUMBER: 052

NASA SUBJECT CATEGORY: Engineering (General)

NAME OF ORGANIZATION: NASA Lewis Research Center

ADDRESS/POINT OF CONTACT: Attention: Jesse L. Strickland
NASA Lewis Research Center
Code 6831, Mail Stop 21-6
Cleveland, OH, U.S.A.
Tel: 216-433-4000

TITLE OF DATA BANK: NASA Standard Construction Specifications System for use on facility projects

TYPE OF DATA: Numeric-Textual

DESCRIPTION OF COVERAGE: NASA-developed system for automated preparation of standard construction specifications for use on all facility projects including construction, rehabilitation, modification, maintenance, and repair projects is provided. The Master Text includes approximately 350 separate sections organized into 16 Divisions consistent with the Construction Specifications Institute (CSI) format. These are stored on a rigid disk provided to NASA Centers by NASA Headquarters. Project Engineers select appropriate specification sections, mark-up sections according to project needs. Q1 microcomputer system. Master text and local supplement developed by individual Centers covers 85 to 90 percent of the specifications required for normal facility projects. The Q1 microcomputer system provides rapid and convenient adaptation of the Master Text. The SPECSINTACT inventory stipulates methods, materials, performance, testing, limitations, and other criteria that must be adhered to during the construction of a facility.

OUTPUT:
On-line access capability: No

DATABASE ENTRY NUMBER: 053

NASA SUBJECT CATEGORY: Meteorology and Climatology
Environment Pollution

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: Attention: William E. Valente
National Space Science Data Center
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: N02 (SAGE) Stratospheric Aerosol and
Jas Experiment Profiles

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Extinction profiles and number density profiles for N02, mostly taken equatorward of 60 degrees of latitude are archived. The N02 profiles contain the derived extinction coefficients and modeled number densities for aerosols, ozone, and N02, atmospheric molecular extinction coefficients, total extinction ratios, ozone and N02 mixing ratios, and corresponding error arrays as a function of altitude for each Sage sunrise and sunset observation. Data Quality: Each atmospheric profile array is accompanied by an error array, since the accuracy is a function of N02 density. An accuracy of 40 percent is typically obtained at an altitude of 22 to 24 km. Area Covered: Coverage ranges from 79 degrees N to 45 degrees S latitude during Northern hemisphere spring and summer and 46 degrees N to 79 degrees S latitude during fall and winter. Spatial/Temporal Resolution: The spatial resolution is 1 km in the vertical and horizontal across the line of sight, and 250 km in the horizontal along the line of sight.

OUTPUT:

Output products: The SAGE PROFILES, Level II is available on 9-track, 1600 bpi computer tape.

On-line access capability: No

DATABASE ENTRY NUMBER: 054

NASA SUBJECT CATEGORY: Fluid Mechanics and Heat Transfer

NAME OF ORGANIZATION: Thermodynamics Research Center

ADDRESS/POINT OF CONTACT: Dr. Kenneth N. Marsh
Texas A & M University
College Station, TX 77843, U.S.A.
Tel: 1-409-845-4940
Fax: 1-409-845-8590

TITLE OF DATA BANK: TRC Databases for Chemistry and Engineering Vapor Pressure

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The TRC Database for Chemistry and Engineering - Vapor Pressure is a system for calculating and displaying tables of vapor pressure of pure compounds. The compounds are primarily organic, metal-organic, and non-metal inorganic. In the current version the values are calculated from constants in the Antoine equation or extended Antoine equation which have appeared in several printed compilations.

The Package consists of a data file, several index files, help files, and a user interface program. Access to all data is obtained by running the executable program "trcvp."

The principal kinds of information which can be retrieved include tables of vapor pressure as a function of temperature as a function of pressure for a specified compound. The compound may be identified by name, formula, or Chemical Abstracts Registry Number. The range of temperature or pressure and increments may also be specified. The other kind of information is the identification of all compounds in the database whose vapor pressure at a specified temperature falls within a specified range of pressure.

INPUT: Data derived from literature - extensive set of references (>200).

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 055

NASA SUBJECT CATEGORY: Fluid Mechanics and Heat Transfer

NAME OF ORGANIZATION: BDM

ADDRESS/POINT OF CONTACT: Mr. Neal E. Blackwell
BDM
Alexandria, VA., U.S.A.
Tel: 1-703-664-6031
Fax: 1-703-781-7073

TITLE OF DATA BANK: SICPS

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: This is a database for setting the heat transfer properties of a structure so a FORTRAN program can solve the equations that describe the situation.

INPUT: Derived from a larger program for calculating heat loss.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 056

NASA SUBJECT CATEGORY: Fluid Mechanics and Heat Transfer

NAME OF ORGANIZATION: Institute of Chemical Engineers

ADDRESS/POINT OF CONTACT: Dr. Beryl Edmonds
165-171 Railway Terrace Rugby
Warwickshire CV21 3HQ
United Kingdom
Tel: 44-0788-578214
Fax: 44-0788-560833

TITLE OF DATA BANK: Physical Properties Data Service

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The PPDS system consists of a database of evaluated coefficients for thermodynamic and transport properties of some 890 pure fluids which are accessed by a suite of FORTRAN programs to provide various physical property calculations for both pure fluids and mixtures. The FORTRAN code may be run interactively at a terminal or called by a user application program.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: Yes.

SOFTWARE CURRENTLY USED: CMS, MVS, VMS, MSDOS or PC DOS

COMMUNICATIONS NETWORK: Direct Dial.

DATABASE ENTRY NUMBER: 057

NASA SUBJECT CATEGORY: Fluid Mechanics and Heat Transfer

NAME OF ORGANIZATION: Advisory Group for Aerospace Research
and Development (AGARD)

ADDRESS/POINT OF CONTACT: Scientific Publications Executive
7, rue Ancelle
92200 Neuilly-Sur-Seine
France
Tel: 33-14-738-5795
Fax: 33-14-738-5799

TITLE OF DATA BANK: Unsteady Turbulent Boundary Layer

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The principles and methods applied
in the compilation of the data catalogue is described in reference:
Carr, L.W. (1981): A Compilation of Unsteady Turbulent Boundary
Layer Data, AGARD-AG-265; ISBN-92-835-1406-8; 56p.

INPUT:

Nature of Data: Profile tables.

OUTPUT:

On-line Access Capability: No

By-Products (bulletins, etc.): Microfiche and magnetic tape.

DATABASE ENTRY NUMBER: 058

NASA SUBJECT CATEGORY: Fluid Mechanics and Heat Transfer

NAME OF ORGANIZATION: Advisory Group for Aerospace Research
and Development (AGARD)

ADDRESS/POINT OF CONTACT: Scientific Publications Executive
7, rue Ancelle
92200 Neuilly-Sur-Seine
France
Tel: 33-14-738-5795
Fax: 33-14-738-5799

TITLE OF DATA BANK: Compressible Turbulent Boundary Layer

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The principles and methods applied
in the compilation of the data catablogue is described in
reference: Fernholz, H.H., Finley, P.J. (1977): A Critical
Compilation of Compressible Turbulent Boundary Layer Data, AGARD-
AG-223; ISBN-92-835-1245-6; 455p.

INPUT:

Nature of Data: Profile tables.

OUTPUT:

On-line Access Capability: No.

By Products (bulletins, etc.): Microfiche and magnetic tape.

DATABASE ENTRY NUMBER: 059

NASA SUBJECT CATEGORY: Fluid Mechanics and Heat Transfer
Inorganic and Physical Chemistry

NAME OF ORGANIZATION: National Bureau of Standards

ADDRESS/POINT OF CONTACT: Attention: C. Goldman
Phys. Building, Room A320
Washington, D.C. 20234 U.S.A.
Tel: 301-921-2228

TITLE OF DATA BANK: The NBS Chemical Thermodynamic
Database

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The NBS Chemical Thermodynamic Database contains recommended values of selected thermodynamic properties for over 15,000 inorganic substances and C1 and C2 hydrocarbons. Properties covered include enthalpy of formation from elements in their standard state, Gibbs (free) energy of formation from elements in their standard state, entropy, enthalpy content (H298-H0), and heat capacity at constant pressure (Cp), all at 298.15 K and 1 bar. Enthalpy of formation at 0 K is also given. Each data entry gives the chemical name and formula as well as the physical state.

OUTPUT:
On-line access capability: No

DATABASE ENTRY NUMBER: 060

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Reconstructed color photos of Mars
(Mariner 6 and 7)

TYPE OF DATA: Imagery

DESCRIPTION OF COVERAGE: This data set consists of reconstructed color photography from three of the original mariner 7 black and white frames taken through red, green, and blue filters. The originals also contained only 1/7 of the data, the rest being filled in by computer processing. The resulting photography shows more detail than can be seen from earth telescopic views. North polar and terminator haze and some craters can be distinguished on it. At present, NSSDC has only the press-release frame 71-HC-665.

INPUT: Data Collection Method: Two television vidicon cameras, one of medium resolution (wide angle) and the other of high resolution (narrow angle), were part of the Mariner 7 scientific instrumentation. The wide-angle camera, which had a FOV of 11 deg by 14 deg and a focal length of 50 mm, encompassed 100 times more surface area than the narrow-angle camera and was used only for near-encounter pictures. The narrow-angle camera, which was used for both near-and far-encounter pictures, had a focal length of 508 mm and provided 10 times the linear resolution of focal length of 508 mm and provided 10 times the linear resolution of the wide-angle camera. Camera shutters were alternated and timed to provide overlapping of the wide-angle and narrow-angle pictures, providing 126 pictures from the two systems (33 near-encounter and 93 far-encounter). The near-encounter pictures were taken between 20 min 26 s before closest approach and 2 min 6 s after closest approach along a roughly north-south course that intersected the Mariner 6 track and included the Martian south polar cap.

OUTPUT:

Output products: 1 - 4 x 5 in. color positive
transparency (NSSDC Dataset Code:
69-030A-01M)

On-line access capability: No

DATABASE ENTRY NUMBER: 061

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Mars images by Mariner 9

TYPE OF DATA: Imagery

DESCRIPTION OF COVERAGE: This data set which consists of 70-mm B/W film, is one of three versions reproduced from the digitized images transmitted from cameras on Mariner 9. These photographs, reproduced by the MTVS laboratory have had no enhancement, stretching, or filtering, and hence are raw data. The other two versions appear next to the raw version, followed by a data block containing the following information: mission designation, playback number, orbit (often not given), set (often not given), time from periapsis, slant range, viewing angle, phase angle, lighting angle, latitude and longitude of corners and center of frame, picture number, camera, filter, exposure time, DAS number, rate, pn errors, pixel spikes, frame number, stretch control, translation, and picture version. Below the picture are two graph charts, one showing data output and the other showing film output.

INPUT: Data Collection Method: This experiment consisted of a 2-in. vidicon television camera which transmitted photography from mars. It was a photometrically calibrated instrument providing overlapping, selectively filtered, low-resolution pictures and broadband (unfiltered) high-resolution pictures, each nested in a low-resolution overlap. Both types of pictures had approximately a 700-by 380-element format, and an order-of-magnitude difference in resolution between them. Resolution of 500 m/TVa line and 50 m?TV line resulted from low (11 deg by 14 deg) and high (1.1 deg by 1.4 deg) resolution pictures taken at a periapsis altitude of 2000 km.

OUTPUT:

Output products: 8461 - 70-mm black and white positive
film transparencies (NSSDC Dataset
Code: 71-051A-04A)

On-line access capability: No

DATABASE ENTRY NUMBER: 062

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Raw-analog far-encounter photos of Mars (Mariner 7, 1969)

TYPE OF DATA: Imagery

DESCRIPTION OF COVERAGE: This data set which consists of 93 unenhanced photographs taken by the narrow-angle camera. The photos are second generation copies on 70-mm positive film. Each photograph contains a limited view of the Martian surface.

INPUT: Data Collection Method: Two television vidicon cameras, one of medium resolution (wide angle) and the other of high resolution (narrow angle), were part of the Mariner 7 scientific instrumentation. The wide-angle camera, which had a FOV of 11 deg by 14 deg and a focal length of 50 mm, encompassed 100 times more surface area than the narrow-angle camera and was used only for near-encounter pictures. The narrow-angle camera, which was used for both near-and far-encounter pictures, had a focal length of 508 mm and provided 10 times the linear resolution of the wide-angle camera. Camera shutters were alternated and timed to provide overlapping of the wide-angle and narrow-angle pictures, providing 126 pictures from the two systems (33 near-encounter and 93 far-encounter). The near-encounter pictures were taken between 20 min 26 s before closest approach and 2 min 6 s after closest approach along a roughly north-south course that intersected the Mariner 6 track and included the martian south polar cap. The far-encounter pictures were obtained in three series of operations between 68 h and 5 h before closest approach. Two fractional pictures were obtained at the end of the first two series. The picture data were encoded and recorded within the onboard television and data storage subsystems.

OUTPUT:

Output products: 893 - 70-mm black and white negatives (NSSDC Dataset Code: 69-030A-01B)

On-line access capability: No

DATABASE ENTRY NUMBER: 063

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Mars image data

TYPE OF DATA: Image Data

DESCRIPTION OF COVERAGE: This data set consists of the Experimental Data Records (EDRs) for the approximately 7300 images obtained by the Mariner 9 TV experiment, stored on 6250-bpi magnetic tapes. The EDRs consist of unprocessed (raw) instrument data in VICAR format. Each image file consists of 22 blocks containing 31,944 bytes per block. Each block is composed of 33 logical records of 968 bytes each. The first logical record of the first block contains a label. The labels are followed by 700 logical records (one per image line) containing pixel and engineering data. Details of the data set are provided by Martin et al., "Planetary Image Conversion Task: Final report," JPL Publication 85-50, 1985, which is available at NSSDC. This publication includes the only catalog currently available for the data set. The catalog lists images by DAS time, a spacecraft clock count, against tape/file position. For this reason, it is necessary to be able to identify the DAS times of interest before placing an order.

INPUT: Data Collection Method: This experiment consisted of a 2-in. vidicon television camera which transmitted photography from Mars. It was a photometrically calibrated instrument providing overlapping, selectively filtered, low-resolution pictures and broadband (unfiltered) high-resolution pictures, each nested in a low-resolution overlap. Both types of pictures had approximately a 700- by 380-element format, and an order-of-magnitude difference in resolution between them. Resolution of 500 m/TV line and 50 m/TV line resulted from low (11 deg by 14 deg) and high (1.1 deg by 1.4 deg) resolution pictures taken at a periapsis altitude of 2000 km.

OUTPUT:

Output products: 34 - digital magnetic tapes
(NSSDC Dataset Code: 71-051A-04a)

On-line access capability: No

DATABASE ENTRY NUMBER: 064

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Flux and Energy Spectrum near Venus

TYPE OF DATA: Parametric

DESCRIPTION OF COVERAGE: This data set consists of electrometer output numbers (these are related to the measured current by a simple equation) and time for each energy-per-charge step. The data are contained on one 7-track, 800-bpi, binary magnetic tape in a 7904 DCS format.

INPUT: Data Collection Method: This experiment was designed to study the flux and energy spectrum of the positive ion component of the solar wind plasma. The experiment consisted of a cylindrical electrostatic analyzer with a faraday cup detector. This system separated positively-charged ions according to their energy per unit charge. The entrance aperture was 5 sq cm and rectangular. The aperture pointed to within 0.1 deg of the sun throughout the flight. The voltage on the analyzer plates was changed at intervals of about 18 s in an ascending sequence of 10 values from 231 V to 8824 V. A zero current reading and a calibration reading were then taken. The complete sequence of 12 measurements was repeated every 3.696 min (every 2.016 min near Venus). The instrument functioned normally over the entire flight and provided data almost continuously until December 30, 1962.

OUTPUT:

Output products: 1 - digital magnetic tapes
(NSSDC Dataset Code: 62-041A-06A)

On-line access capability: No

DATABASE ENTRY NUMBER: 065

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Infrared radiation temperatures
Mariner Venus 1962 project

TYPE OF DATA: Parametric

DESCRIPTION OF COVERAGE: These data set consists of radiation temperatures of the 8.4 - and 10.4-micron bands, which are available for three scans that were accomplished during planetary flyby on December 14, 1962. Each approximately meridional scan consists of about five to eight frames, with the first scan crossing the dark side near 50 deg longitude, the second near the terminator, and the third in the sunlit side near 60 deg longitude. The accuracy of the temperatures obtained varies from 2 deg for source temperatures near 500 deg K to 10 deg for source temperatures near 200 deg K. The spatial resolution is 1/250 for the total planetary area.

INPUT: Data Collection Method: The infrared radiometer on Mariner 2 was designed to measure the radiation temperatures of small areas of Venus in the 8.4- and 10.4-micrometer bands. Optically, the radiometer consisted of two similar lens systems whose axes were separated by 45 deg. One system, establishing the chopping reference, viewed dark space, and the other viewed the planet. The energy through the two systems was combined into a single chopped beam that was in turn split by a dichroic filter into two perpendicular beams that were incident on two thermistor bolometer detectors. Three successful scans were accomplished during planetary flyby on December 14, 1962. The accuracy of the radiation temperatures obtained varied from 2 deg for source temperatures near 200 deg K to 10 deg for source temperatures near 500 deg K.

OUTPUT:

Output products: 7 - 4 x 6 in. black and white
microfiche (NSSDC Dataset Code: 62-
041A-02A)

On-line access capability: No

DATABASE ENTRY NUMBER: 066

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Interplanetary and Venusian magnetic fields Mariner 2, 1963

TYPE OF DATA: Parametric

DESCRIPTION OF COVERAGE: These data set consists of two reels of 35-mm microfilm that were generated at NSSDC from hardcopy plots submitted by the experimenter. Each frame contains 2 h of data with data points presented every 36.96 s. The plots on each frame, from top to bottom, give approximate projections of the measured magnetic field on the solar equatorial plane and on a perpendicular plane containing the sun direction. A third graph gives the measured magnetic field magnitude and Mariner 2 plasma velocity data supplied by Dr. M. Neugebauer. These data, which are time ordered, cover approximately 70% of the period from August 29, 1962, to October 31, 1962.

INPUT: Data Collection Method: This experiment was designed to measure the magnitude and direction of the interplanetary and Venusian magnetic field. It consisted of three orthogonal fluxgate magnetometers mounted on top of a 152.4-m tower. One magnetometer axis was parallel to the spacecraft roll axis. In the high-sensitivity mode, each magnetometer had a dynamic range of -64 to +64 nT with an accuracy of + or -0.5 nT. In the low-sensitivity mode, this range was -320 to +320 nT with an accuracy of + or -2.5 nT. All three magnetometers were sampled within 8.64 s, and this sequence of sampling was repeated every 36.96 s (or every 20.16 s during the Venus encounter on December 14, 1962). An inflight calibration system was designed to check the sensitivity of the three magnetometers once during each 15.77-h period. Due to a failure in the control circuit, inflight calibrations were performed more often and in a random fashion. Other than the failure in the inflight calibration system, the experiment performed normally until January 3, 1963, when contact with Mariner 2 was lost.

OUTPUT:

Output products: 1 - digital magnetic tape
(NSSDC Dataset Code: 62-041A-03A)

On-line access capability: No

DATABASE ENTRY NUMBER: 067

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Interplanetary and Venusian magnetic field (Mariner 2, 1963)

TYPE OF DATA: Parametric

DESCRIPTION OF COVERAGE: These data set consists of 7-track, 556-bpi, binary tape, written on an IBM 7094, as submitted by the experimenter. The tape consists of 7709 physical records, each containing 21 logical records. There is one data point (logical record) on the tape for each 36.96 s. Each data point contains the time of the observation (day, h, min, and s), the heliocentric radius, solar colatitude, and solar longitude of the spacecraft, three orthogonal components in a quasi-solar equatorial coordinate system, plus the magnitude of the total field and an indication of whether an inflight calibration is occurring. The data are time ordered and cover approximately 70 percent of the period from August 29, 1962, to November 15, 1962.

INPUT: Data Collection Method: This experiment was designed to measure the magnitude and direction of the interplanetary and Venusian magnetic field. It consisted of three orthogonal fluxgate magnetometers mounted on top of a 152.4-m tower. One magnetometer axis was parallel to the spacecraft roll axis. In the high-sensitivity mode, each magnetometer had a dynamic range of -64 to +64 nT with an accuracy of + or -0.5 nT. In the low-sensitivity mode, this range was -320 to +320 nT with an accuracy of + or -2.5 nT. All three magnetometers were sampled within 8.64 s, and this sequence of sampling was repeated every 36.96 s (or every 20.16 s during the Venus encounter on December 14, 1962). An inflight calibration system was designed to check the sensitivity of the three magnetometers once during each 15.77-h period. Due to a failure in the control circuit, inflight calibrations were performed more often and in a random fashion. Other than the failure in the inflight calibration system, the experiment performed normally until January 3, 1963, when contact with Mariner 2 was lost.

OUTPUT:

Output products: 2 - 35mm microfilm
(NSSDC Dataset Code: 62-041A-03B)

On-line access capability: No

DATABASE ENTRY NUMBER: 068

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Venus and Mercury image data
(Mariner 10)

TYPE OF DATA: Imagery

DESCRIPTION OF COVERAGE: This data set consists of the Experiment Data Records (EDRs) for the approximately 8500 images obtained by the Mariner unprocessed (raw) instrument data in VICAR format. Each image file consists of 22 blocks containing 31,944 bytes per block. Each block is composed of 33 logical records of 968 bytes each. The first logical record of the first block contains a label. The labels are followed by 700 logical records (one per image line) containing pixel and engineering data.

INPUT: Data Collection Method: The objectives of this experiment were to photograph the surfaces (upper atmosphere in the case of Venus) of the planets Venus and Mercury. For Venus, the objectives were to investigate the time-dependent properties of the UV clouds, and to obtain high-resolution imagery of the main clouds. For Mercury, the objectives were to map its major physiographic provinces, determine its spin axis orientation, establish a cartographic coordinate system, and search for Mercurian satellites. The equipment consisted of two spherical (150 mm diameter) Cassegrain telescopes with eight filters, attached to GEC 1-inch vidicon tube cameras (1500 mm focal length and 0.5 deg field of view for narrow-angle photography. And auxiliary optical system mounted on each camera provided wide-angle (62 mm focal length and 11 x 14 deg field of view photography by moving a mirror on a filter wheel to a position in the optical path. Exposure time ranged from 3 ms to 12 s, and each camera took a picture every 42s. The TV picture consisted of 700 scan lines with 832 picture elements/line, which were digitally coded into 8-bit words for transmission. There were eight filter wheel positions: (1) wide-angle image relay mirror, (2) blue bandpass, (3) UV polarizing, (4) minus UV high pass, (5) clear, (6) UV bandpass, (7) defocusing lens (for calibration), and (8) yellow bandpass.

OUTPUT:

Output products: 57 - digital magnetic tapes
(NSSDC Dataset Code: 73-085A-01T)

On-line access capability: No

DATABASE ENTRY NUMBER: 069

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Magnetometer data taken during
Jupiter encounter (Pioneer 10)

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: These experimenter-supplied, Pioneer magnetometer data for Jupiter close encounters are written in two files on a 9-track, 1600-BPI, ASCII magnetic tape. The first file contains Pioneer 10 data inside seven Jupiter radii (r_J); the second file contains Pioneer 11 data inside seven Jupiter radii. A third file contains documentation describing the data. Each data record is 80-bytes long and contains the following: ground-received time in days (3.0=Dec. 3,00:00); distance of satellite from Jupiter (in Jupiter radii); latitude and longitude of satellite in the Jupiter-entered JG. Zenographic and 1-min average of X, Y, and Z components of field in JG. Zenographic (JG) coordinates are defined as follows: the X-axis is in the direction of G, the equatorial vector lying in the system III Prime Meridian 1957-0; the Z-axis is in the direction of J, the spin axis of Jupiter; and the Y-axis is parallel to Jupiter's equatorial plane and completes a right-handed orthogonal system.

INPUT: Data Collection Method: The magnetometer on Pioneer 10 (also carried on Pioneer 11) is a triaxial helium magnetometer with seven dynamic ranges, from plus or minus 2.5 nT to plus or minus 10 gauss. The linearity was 0.1%, and the noise threshold was 0.01% rms for 0-1 Hz. The accuracy was 0.5% of full scale range. The experiment worked as planned until November 1975, when the spacecraft was at about 8 au. No further useful data were obtained. The experimenter has used RTN coordinates in his data analysis. In this system, R (or X) is radially outward from the sun, T (or Y) is parallel to the sun's equatorial plane and has its direction given by the cross product of the sun's spin vector into the radial direction (i.e., into R) and N (or Z) completes the right-handed orthogonal system (positive northward).

OUTPUT:

Output products: 1 - digital magnetic tape
(NSSDC Dataset Code: 72-012A-01G)

On-line access capability: No

DATABASE ENTRY NUMBER: 070

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 301-344-6695

TITLE OF DATA BANK: Doppler tracking during solar opposition data to determine planetary masses and gravitational fields (Sun, Jupiter, and Galilean satellites)

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: These experimenter-supplied, Doppler tracking/solar opposition data are on 9-track, 6250-bpi, binary magnetic tape crated on a UNIVAC 1100/81 computer. Each logical record contains 5 double precision (72-bit) floating point words consisting of time in seconds since January 1, 1950, station number, tracking mode, Doppler cycle count, and pseudo-residuals. These data are written in 36-sector blocks of 100 points each (500 double precision words and 4 null words at the end of each block).

INPUT: Data Collection Method: In this investigation, carried on both Pioneers 10 and 11, two-way Doppler tracking of the spacecraft was used to make more precise determinations of planetary masses, the heliocentric orbit of Jupiter, and the gravitational fields of the sun, Jupiter, and the Galilean satellites.

OUTPUT:

Output products: 1 - digital magnetic tape
(NSSDC Dataset Code: 72-012A-09B)

On-line access capability: No

DATABASE ENTRY NUMBER: 071

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 1- (301)-344-6695

TITLE OF DATA BANK: Averaged vector magnetic field data

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: This data set consists of 7-track, 556-bpi, IBM 7094 binary tapes supplied by the experimenter. Each tape contains one file, and each physical record contains data for 1 h. Given are 30-s averages of the vector magnetic field components in solar ecliptic coordinates. The number of points in each average (up to 30) and the standard deviation are given. there is on spacecraft ephemeris information.

INPUT: Data Collection Method: A single, boom-mounted uniaxial fluxgate magnetometer, with a dynamic range of plus or minus 64 nT and plus or minus 0.25-nT resolution, obtained a complete vector magnetic field measurement by means of three measurements taken at equal time intervals during each spacecraft spin period (approximately 1 s) At telemetry bit rates less than or equal to 16 bps, averages were computed on board for transmission to each. The instrument worked well from launch to July 6, 1970. No useful data were obtained after that date.

OUTPUT:

Output products: 3 - digital magnetic tapes
(NSSDC Dataset Code: 65-105A-01A)

On-line access capability: No

DATABASE ENTRY NUMBER: 072

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 1- (301)-344-6695

TITLE OF DATA BANK: Magnetic component of electromagnetic waves in the solar wind channel, 6.8-1470 hz data on magnetic tape

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: This data set is written by a PDP on 9-track tapes, in binary code and at 1600 bpi. Each tape has a single file. The records are of different lengths. The first record is a header. It is followed by pairs of records: the first provides the day number and its fraction; the second provides several 8-s averaged values of the amplitude and peak values encountered during the 8-s interval, of the magnetic field components 8 frequency bands. These bands are centered at 6.8, 14.7, 31.6, 68, 147, 316, 681, and 1470 Hz, and have widths $\pm 50\%$ of the frequencies. The Z-component amplitude is taken in the direction of the spin axis, and the X-component from one of the equatorial plane antennas. Among other entries are the ecliptic longitude, latitude, and heliographic latitude of the spacecraft, and the Helios-sun-earth angle. Quality flags are also provided.

INPUT: Data Collection Method: This experiment (E4) was designed to investigate the magnetic component of electromagnetic waves in the solar wind from 0.3 to 1.0 AU. By means of its waveform channel (WFC) the rapid variations of the magnetic field were measured up from plus or minus 8.75 nT to plus or minus 275 nT in three orthogonal directions from 4 to 128 Hz. A spectrum analyzer observed the field components in the ecliptic plane and perpendicular to it, to obtain the power spectral density and peak values for eight logarithmically spaced channels in the range from 4.7 to 2200 Hz. Because of the large amount of data produced by this experiment, and adaptive data reduction was applied. For interesting time intervals selected by the fluxgate magnetometer (74-097A-01, Neubauer) or Gurnett (-04), waveform data could be read into an on-board memory at a rapid rate to be transmitted slowly afterwards.

OUTPUT:

Output products: 9 - digital magnetic tapes
(NSSDC Dataset Code: 74-097A-03A)

On-line access capability: No

DATABASE ENTRY NUMBER: 073

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 1- (301)-344-6695

TITLE OF DATA BANK: Intensity and polarization of the
Zodiacal light to information about
interplanetary dust particles

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: These 9-track tapes were written by PDP/10, in binary code, at 1600 bpi. Each tape is multifiled, and contains one month of data. The reduced data are not corrected for star light or plasma scattered light. The first file in each tape is a tape header file; the file contains, also, in sequence all the measuremental cycle header blocks. These blocks provide information about the status/health of the instruments, calibration, etc., for all the science data blocks in the tape. This tape header file is followed by a series of individual files, each providing science data. The file structure is as follows: The first block is a measuremental cycle header. (It is a repeat of the item in the tape header file.) The second block provides house keeping information, mainly the average temperatures of the sensors. The third block provides the reduced science data: Stokes parameters (Q) in Ultra-violet, Blue, and Visible lights (U.B.V), polarization angles, Stokes parameters (U), polarized intensities, total intensities, degree of polarization, again in the U, B, and V bands. The final, 4th block provides a number of coordinate values and velocity components of the spacecraft and some planets, angles such as earth-Helios-sun angle, aspect angles of some planets, etc.

INPUT: Data Collection Method: This experiment (E9) consisted of three photometers looking at 15 deg, 30 deg, and 90 deg from the ecliptic. These photometers observed the intensity and polarization of the Zodiacal light in UV, blue, selected visual bands, and white light. The purpose of this experiment was to obtain information about the spatial distribution, size, and nature of interplanetary dust particles.

OUTPUT:

Output products: 37 - digital magnetic tapes
(NSSDC Dataset Code: 76-003A-11A)

On-line access capability: No

DATABASE ENTRY NUMBER: 074

NASA SUBJECT CATEGORY: Lunar and Planetary Exploration

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 1- (301)-344-6695

TITLE OF DATA BANK: Interplanetary magnetic field 1964
(Flight to Mars)

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: This data set consists of three reels of IBM 7094, experimenter - generated, 556-bpi, binary, 7-track tape. The data consist of 50.4-s averages of the magnitude of the magnetic field and its three spherical components, in an inertial heliocentric equatorial coordinate system, expressed as functions of time. These tapes include all available data for the time period from November 28, 1964, to October 1, 1965. There are two significant data gaps, one from July 15 to August 3, and the other from August 31 to September 2. Each record contains 253 words (six bytes/word) and includes 21 data points.

INPUT: Data Collection Method: A vector low-field helium magnetometer, not to be confused with the rubidium vapor or helium vapor magnetometer, was used to measure the interplanetary magnetic field. The three components of the field were measured essentially simultaneously but later transmitted sequentially. Each observation represented an average over approximately 1 s. The response dropped 3 dB for frequencies of 1 Hz, and higher frequency information was essentially lost. In each data frame, four vector measurements were made separated by intervals of 1.5, 0.9, and 2.4 s. The whole frame was repeated every 12.5 s. There was an uncertainty of plus or minus 0.35 nT per component. NSSDC has all the data from this experiment. Most of the data from this investigation was of the interplanetary region, but some data were obtained at Mars.

OUTPUT:

Output products: 3 - digital magnetic tapes
(NSSDC Dataset Code: 64-077A-02B)

On-line access capability: No

DATABASE ENTRY NUMBER: 075

NASA SUBJECT CATEGORY: Mechanical Engineering

NAME OF ORGANIZATION: Metcut Research Associates, Inc.

ADDRESS/POINT OF CONTACT: Ms. Susan Moehring
11240 Cornell Park Drive
Cincinnati, OH 45242, U.S.A.
Tel: 1-513-489-6688
Fax: 1-513-489-3653

TITLE OF DATA BANK: Cutdata

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Cutdata is a personal computer-based system that helps you make the critical choices that directly affect machining productivity. Cutdata includes data for over 1,500 work materials and 40 matching and grinding operations. It provides specific machining recommendations for cutting speeds, feed rates, tool materials, tool geometries, and cutting fluids. Cutdata helps you plan machining processes for a part, determine machine-tool requirements, and estimate production time.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 076

NASA SUBJECT CATEGORY: Metallic Materials

NAME OF ORGANIZATION: Cortest Laboratories, Inc.

ADDRESS/POINT OF CONTACT: Sridharan Srinivasan
11115 Mills Road, Suite 102
Cypress, TX 77429, U.S.A.
Tel: 1-713-890-7575
Fax: 1-713-890-3356

TITLE OF DATA BANK: Corrosion/cracking of Corrosive
Resistant Alloys (CRAs)

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The database attempts to provide access to and document field and lab behavior of corrosion resistant alloys in corrosive environmental service, specifically in oil and gas field service. Each record contains information about an alloy (identified by UNS#) its mechanical properties, environmental description (H₂S, CO₂, CL, acids, S, fluid velocity, Gas to OM ratio, temperature, etc.). Susceptibility/resistance to corrosion/cracking and test results (constant load deflection, hydrogen induced cracking/pitting corrosion tests).

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 077

NASA SUBJECT CATEGORY: Metallic Materials

NAME OF ORGANIZATION: Copper Development Association

ADDRESS/POINT OF CONTACT: W. S. Lyman
2 Greenwich Office Park
Box 1840
Greenwich, CT 06836, U.S.A.
Tel: 1-203-625-8210
Fax: 1-203-625-0174

TITLE OF DATA BANK: Copperselect

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Copperselect is a computerized system for selecting appropriate coppers and copper alloys. You specify the properties and characteristics you need in an alloy; the system identified which meet your criteria and displays typical property and processing data. Menus guide you through every choice. Sample queries displayed at the beginning of each search show you how questions are asked. The data cover mechanical properties for each available mill or foundry product and temper, along with data on composition, physical properties, fabricating characteristic, end-use applications, and mill and distributor sources. Virtually all data can be used as the basis for selection and the results can be combined using AND, OR ANDNOT operations. The system also provides a cross index of the nine principal US specification systems for coppers and copper alloys.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 078

NASA SUBJECT CATEGORY: Metallic Materials

NAME OF ORGANIZATION: Society of Automotive Engineers

ADDRESS/POINT OF CONTACT: 400 Commonwealth Drive
Warrendale, PA 15096, U.S.A.

TITLE OF DATA BANK: AAASD - Properties of Aluminum

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: This database you can now search metal and alloys information accurately and efficiently with UNSearch, menu driven software based on the technical data contained in the printed edition of Metals and Alloys in the Unified Numbering System- Fifth Edition. This valuable engineering tool enables you to search metals and alloys information by exact chemical compositions, metal alloy description, common trade name, UNS designation, society designation, Federal Specification, and Military Specification.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 079

NASA SUBJECT CATEGORY: Metallic Materials

NAME OF ORGANIZATION: Iowa State University

ADDRESS/POINT OF CONTACT: Dr. Wallace W. Sanders Jr.
College of Engineering
104 Marston Hall
Ames, IA 50011, U.S.A.
Tel: 1-515-294-2336
Fax: 1-515-294-9273

TITLE OF DATA BANK: Aluminum Fatigue Behavior
Evaluation Task

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: This database contains detail on fatigue testing of metal structures. Consists of three data banks: the Literature Data Bank, General Information Data Bank and the Actual Test Results Data Bank.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 080

NASA SUBJECT CATEGORY: Metallic Materials

NAME OF ORGANIZATION: ESDU International Plc

ADDRESS/POINT OF CONTACT: Mr. Michael E. Grayley
27 Corsham Street
London N1 6UA
United Kingdom
Tel: 44-71-490-5151

TITLE OF DATA BANK: Metallic Materials Data Handbook
Defense Standard 00-932

TYPE OF DATA: Numeric

DESCRIPTIVE COVERAGE: Defense Standard 00-932 presents evaluated data for the properties of UK and European aerospace specification metallic materials. Properties covered include physical properties, mechanical properties, and a qualitative assessment of corrosion resistance and weldability.

INPUT: Test information statistically analyzed.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 081

NASA SUBJECT CATEGORY: Metallic Materials

NAME OF ORGANIZATION: Defense Research Agency-DRA
Royal Aerospace Establishment - RAE

ADDRESS/POINT OF CONTACT: Attention: Mr. C. Wilkinson
Farnborough
Hants GU14 6TD, United Kingdom
Tel: 44 (252) 24461
Fax: 44 (252) 512 327

TITLE OF DATA BANK: AGARD IN-718 Fatigue Data Bank

TYPE OF DATA: Numeric and graphic data

DESCRIPTION OF COVERAGE: Fatigue crack growth data of nickel-base superalloy Inconel 718 generated by the Work Group 26 of the AGARD Structural Materials Panel

INPUT:

Nature of Data: Crack length, temperature, frequency, tensile creep, strain-controlled and thermomechanical fatigue data.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 082

NASA SUBJECT CATEGORY: Metallic Materials

NAME OF ORGANIZATION: Autonomous University of Madrid
Faculty of Science
Institute of Materials Sciences
(Instituto de Ciencia de Materiales
Facultad de Ciencias, Universidad
Autonoma de Madrid)

ADDRESS/POINT OF CONTACT: Attention: F. Javier Perez y
Trujillo
Ciudad Universitaria
28040 Madrid, Spain
Tel: 34 (1) 394 4357, ext. 358
Fax: 34 (1) 243 3362

TITLE OF DATA BANK: High temperature corrosion data of
superalloys in molten salt mixtures

TYPE OF DATA: Numeric and image data

DESCRIPTION OF COVERAGE: Studies of hot corrosion in compressors
and combustion chambers of turboengines. Scanning electron
microscopy studies of the effects of exposures at high temperatures
in oxidizing (cathodic reaction) and in reducing (carbon rich)
environment on nickel-base superalloys immersed in various molten
salt mixtures

INPUT:

Nature of Data: Superalloys, environmental atmosphere (salt
mixtures, % carbon, temperature) and SEM analysis data

OUTPUT:

On-line access capability: No

By products (bulletins, etc.): Articles/papers published in
scientific journals

DATABASE ENTRY NUMBER: 083

NASA SUBJECT CATEGORY: Meteorology and Climatology

NAME OF ORGANIZATION: US Army Corps of Engineers

ADDRESS/POINT OF CONTACT: Mr. Doyle L. Jones
3909 Halls Ferry Road
ATTN: CEWES-CR-O
Vicksburg, MS 39180, U.S.A.
Tel: 1-601-634-2069
Fax: 1-601-634-4314

TITLE OF DATA BANK: Coastal Engineering Data Retrieval System

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: CEDRS is an interactive microcomputer (PC/MS-DOS) resident database system which provides both hindcast data and measured wind and wave data for use in the field of coastal engineering. The database for the pilot version contains data applicable to the Gulf and Atlantic coasts of Florida. Each CEDRS database will contain appropriate regional data from the Wave Information Study (WIS), computer model generated hindcast data. In addition the database contains measured data from the Littoral Environment Observation system (LEO), Coastal Engineering Research Center (CERC) Field Wave Gage Program (FWGP), and the National Oceanic and Atmospheric Administration (NOAA).

INPUT: Data provided by industry and US Army Corps of Engineers.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 084

NASA SUBJECT CATEGORY: Meteorology and Climatology

NAME OF ORGANIZATION: University of Aveiro
Group on Air Quality, Department of
Environment Control and Planning

ADDRESS/POINT OF CONTACT: Attention: C. Borrego
3800 Aveiro, Portugal
Tel: 351 (34) 25085/26511

TITLE OF DATA BANK: Meteodata

TYPE OF DATA: Numeric data

DESCRIPTION OF COVERAGE: Meteorological data on a regional scale
(1x 10m, 2x 30m, and 1x 100m mast), covering the region of Aveiro,
and also data on a national scale.

INPUT:

Nature of Data: Meteorological variables

OUTPUT:

On-line access capability: No

By products (bulletins, etc.): Data sheets (on request)

DATABASE ENTRY NUMBER: 085

NASA SUBJECT CATEGORY: Nonmetallic Materials

NAME OF ORGANIZATION: New Mexico Engineering Research
Institute

ADDRESS/POINT OF CONTACT: Mr. Ted A. Moore
University of Mexico
Albuquerque, NM 87131, U.S.A.
Tel: 1-505-768-7532
Fax: 1-505-768-7541

TITLE OF DATA BANK: NMERI Halocarbon Database Ver. 2.0

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: The New Mexico Engineering Research Institute (NMERI) at the University of New Mexico has established a program to develop halon alternatives. An essential element of this program has been the development of an extensive chemical database of potential halon and CFC alternatives. At present, this database contains physical and chemical property data, toxicity, safety, literature, environmental, cost, availability, and laboratory data fields on over 670 saturated halogenated hydrocarbons (halocarbons). This database is the most comprehensive digital collection of information known to exist specifically on halocarbons.

INPUT: Data provided by government and industry.

OUTPUT:

Output products: Available in hardcopy .

On-line access capability: Yes.

SOFTWARE CURRENTLY USED: UNIX System V, Version 4.0

COMMUNICATIONS NETWORK: Direct Dial

DATABASE ENTRY NUMBER: 086

NASA SUBJECT CATEGORY: Nonmetallic Materials

NAME OF ORGANIZATION: National Institute of Standards and Technology

ADDRESS/POINT OF CONTACT: Dr. W. G. Mallard
Building 222, Room A-260
Gaithersburg, MD 20899, U.S.A.
Tel: 1-301-975-2564
Fax: 1-301-330-3447

TITLE OF DATA BANK: Halon Alternatives Database

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: This database will provide designers of Halon Alternative fire suppression systems access to the thermodynamic, thermophysical and chemical kinetic properties of a wide range of possible Halon alternatives. In addition, it will provide thermodynamic data of important radical species that may be useful in estimating reaction rates.

Some toxicological data will be included, although exactly how this is to be incorporated is not firm. This database is being developed in conjunction with the Halon Alternatives Research Committee (HARC).

INPUT: Data derived from the literature - extensive set of references (>200).

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: No.

DATABASE ENTRY NUMBER: 087

NASA SUBJECT CATEGORY: Nonmetallic Materials

NAME OF ORGANIZATION: Pure Carbon Company

ADDRESS/POINT OF CONTACT: Mr. Stanley Chinowsky
441 Hall Ave.
St. Marys, PA 15857, U.S.A.
Tel: 1-814-781-1573
Fax: 1-814-781-9262

TITLE OF DATA BANK: Pure Carbon Engineering Data

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: This database consists of several files including a summary file. Separate files cover five different wear tests, thermal expansion, and oxidation. The summary file contains average results derived from individual files. All data are from Pure Carbon tests on carbon, graphite, ceramic and metallic materials including coatings. The purpose of the database is to assist Pure Carbon engineers and customers in selection of materials for tribological applications.

INPUT: Data derived from pure carbon tests.

OUTPUT:

Output products: Available in hardcopy.

On-line access capability: Yes.

SOFTWARE CURRENTLY USED: MSDOS or PCDOS 3.3

COMMUNICATIONS NETWORK: Direct Dial.

DATABASE ENTRY NUMBER: 088

NASA SUBJECT CATEGORY: Oceanography

NAME OF ORGANIZATION: Naval Oceanographic Office

ADDRESS/POINT OF CONTACT: Mr. David B. Johanson
Stennis Space Center, MS 39522
U.S.A.
Tel: 1-601-688-5625

TITLE OF DATA BANK: SAGEBATE

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: SAGEBATE (SA-linity, GE-ophysics, BA-thymetry, TE-mperature was developed as an improvement of the Oceanographic Data Acquisition System (ODAS). The ODAS tapes with a directory on disk for cross-reference. An effort is currently underway to digitize significant subsurface horizons from analog seismic data. In response to the need for a storage/retrieval system for these new data, it was decided to create software to interleave the seismic data with the existing data in SAGEBATE.

INPUT: Collected underway aboard oceanographic survey ships.

OUTPUT:

Output products: Available in Hardcopy and floppy
diskette

On-line access capability: No

SOFTWARE CUPRENTLY USED: UNISYS Exec 8

DATABASE ENTRY NUMBER: 089

NASA SUBJECT CATEGORY: Propellants and Fuels

NAME OF ORGANIZATION: Armament Research and Development Center

ADDRESS/POINT OF CONTACT: Attention: John Nardone
Armament Research and Development Center, AMCCOM
Building 351N
Dover, NJ 07801 U.S.A.
Tel: 201-724-4222

TITLE OF DATA BANK: Hazard analysis of explosives and propellants

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: HAZARD is a specialized computer program developed to centralize the technical data for the many hazard analysis studies performed in support of the Army munitions production facilities. The program details the potential hazards that energetic materials (primarily explosives and propellants) present during manufacture. The analysis data is supplemented with laboratory data describing the sensitivity of energetic material in various forms. All data is abstracted from available technical reports. The program features a remote access, user friendly interface to retrieve data based on user desires. A user manual is provided following receipt of authorization to access the program.

OUTPUT: On-line access capability: Yes

COMMUNICATION NETWORK: Direct Dial

DATABASE ENTRY NUMBER: 090

NASA SUBJECT CATEGORY: Quality Assurance and Reliability

NAME OF ORGANIZATION: Construcciones Aeronauticas SA
CASA

ADDRESS/POINT OF CONTACT: Attention: J. Pascual
Laboratory
Aeropuerto de San Pablo
41007 Sevilla, Spain
Tel: 34 (95) 459 4048
Fax: 34 (95) 452 7132

TITLE OF DATA BANK: Quality Assurance laboratory

TYPE OF DATA: Numeric data

DESCRIPTION OF COVERAGE: Nondestructive test data and physico-chemical analysis data: surface treatment, Contamination of hydraulic fluids, fuels, etc.

INPUT:

Nature of Data: X-ray, ultrasonic, eddy current, magnetic data; Hydraulic fluids: viscosity, water content, particle and fibre content; Chemical analysis of surface treatment solution; 150 test parameters.

OUTPUT:

On-line access capability: No

By products (bulletins, etc.): Forms completed by type - or hand writing

DATABASE ENTRY NUMBER: 091
NASA SUBJECT CATEGORY: Quality Assurance and Reliability
NAME OF ORGANIZATION: Reliability Analysis Center
ADDRESS/POINT OF CONTACT: Mr. Steve Flint
P.O. Box 4700
Rome, NY 13440, U.S.A.
Tel: 1-315-337-0900
Fax: 1-315-337-9932

TITLE OF DATA BANK: Failure Analysis of Electronic Components

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: This Database provides failure rate data on electronic, electromechanical, and mechanical parts; failure rate data on electronic systems; screening data on microcircuits; failure analysis data on parts; electrostatic discharge susceptibility data on semiconductors; bibliographic information on reliability-related documents.

INPUT: Data provided by military maintenance activities, government test labs, part manufacturers, industrial organizations and commercial organizations.

OUTPUT:

Output products: Available in hardcopy and floppy diskette.

On-line access capability: No

DATABASE ENTRY NUMBER: 092

NASA SUBJECT CATEGORY: Solid State Physics

NAME OF ORGANIZATION: National Bureau of Standards

ADDRESS/POINT OF CONTACT: Attention: C. Goldman
Phys. Building, Room A320
Washington, D.C. 20234 U.S.A.
Tel: 301-921-2228

TITLE OF DATA BANK: The NBS Crystal Data Identification
File

TYPE OF DATA: Numeric-Textual

DESCRIPTION OF COVERAGE: The NBS Crystal Data Identification
File contains data characterizing over 60,000 crystalline
substances. Data include reduced cell parameters, reduced cell
volume, space group number and symbol, experimental and calculated
density, chemical type classification, and chemical name and
formula.

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 09J

NASA SUBJECT CATEGORY: Spacecraft Design, Testing and
Performance
Space Transportation

NAME OF ORGANIZATION: NASA Johnson Space Center

ADDRESS/POINT OF CONTACT: Ivy F. Hooks, LD
Johnson Space Center
Houston, TX U.S.A.
Tel: 713-483-5523

TITLE OF DATA BANK: Master Measurements Database for
Space Shuttle flight tests

TYPE OF DATA: Other

DESCRIPTION OF COVERAGE: The Master Measuring DataBase (MMDB) - JSC provides an automated information storage and retrieval system for use as a single authoritative source of measurement/stimuli information for the Shuttle Program. The measurement/stimuli data pertain to the characteristics of each measurement or stimulus for each shuttle vehicle for each flight. Specifically, information about calibration characteristics, wire and plug assignments, bus terminal unit channelization assignments, telemetry format, subsystem configuration monitor assignment, CRT display requirements, and command uplink assignments is contained in the data base. The MMDB-JSC contains all information needed to trace a measurement from sensor to recorder or from command to actuator. The status is operational. Features of the database include: operator mode: Interactive inquiry & update; terminals: Hazeltine 2000 and 4000G and STS standard terminals at JSC; Hazeltine 2000 compatible terminals at KSC, MSFC and VAFC and VAFB; software: special purpose; computer: Cyber 174, JSC; and communications: 300 and 1200 baud, asynchronous, ASCII; dedicated lines at JSC, via Telenet are remote locations.

OUTPUT: On-line access capability: Yes

COMMUNICATION NETWORK: TELENET

DATABASE ENTRY NUMBER: 094

NASA SUBJECT CATEGORY: Spacecraft Design, Testing and Performance

NAME OF ORGANIZATION: British Aerospace Space System

ADDRESS/POINT OF CONTACT: Attention: Norman Loukes
Argyle Way
Stevenage, SG1 2AS Herts,
United Kingdom
Tel: 44 (438) 313456

TITLE OF DATA BANK: Marketbase

TYPE OF DATA: Numerical, textual and graphical data

DESCRIPTION OF COVERAGE: Technical and commercial data of geostationary satellites: manufacturers, alliances, space-related organizations, launchers, etc.

INPUT:

Nature of Data: Technical and commercial parameters

Number of Items: More than 220 basic satellite entries

OUTPUT:

On-line access capability: No

DATABASE ENTRY NUMBER: 095

NASA SUBJECT CATEGORY: Space Radiation

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC, Code 601.4
Goddard Space Flight Center
Greenbelt, MD 20771, U.S.A.
Tel: 1-301-344-6695

TITLE OF DATA BANK: Electrostatic and Electromagnetic
Data of Plasma Waves

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: These data of experimenter-generated 35-mm microfilm summarize maximum and minimum 400-Hz level, maximum and minimum 22-kHz level, and the average of two (step 7) 100-Hz broadband levels, presented for each experiment cycle (1024 main telemetry frames) in the full data plots. They represent about one to eight data points per hour.

INPUT: Electrostatic and electromagnetic plasma waves were measured in the solar wind near 1 AU using an unbalanced dipole antenna.

OUTPUT:

Output Product: 2 reels of 35-mm microfilm (NSSDC Dataset
Code 67-123A-07B)

On-line access capability: No

DATABASE ENTRY NUMBER: 096

NASA SUBJECT CATEGORY: Space Radiation

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC, Code 601.4
Goddard Space Flight Center
Greenbelt, MD 20771, U.S.A.
Tel: 1-301-344-6695

TITLE OF DATA BANK: Galactic and Solar Cosmic Ray Fluxes

TYPE OF DATA: Textual

DESCRIPTION OF COVERAGE: Microfilmed copy of hardcopy count rate plots supplied by the experimenter. Each frame consists of data for 7 days. Hourly averaged count rates for the omnidirectional integral-energy and energy-window modes are presented, as are relative count rates from the Deep River Neutron Monitor. The decreasing percent coverage with time is readily apparent. This experiment was designed primarily to measure the directional characteristics of galactic and solar cosmic-ray fluxes. The particle detector was a CsI (Tl) scintillator crystal that was set into an anticoincidence plastic scintillator collimator cup.

OUTPUT:

Output products: 1 35-mm microfilm (NSSDC Dataset Code 65-105A-05B)

On-line access capability: No

DATABASE ENTRY NUMBER: 097

NASA SUBJECT CATEGORY: Space Radiation

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC, Code 601.4
Goddard Space Flight Center
Greenbelt, MD 20771, U.S.A.
Tel: 1-301-344-6695

TITLE OF DATA BANK: Electronic Flux Data Measured Between
Launch and Jupiter Encounter

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: This experiment consisted of an array of five particle detectors with electron thresholds in the range .01 to 35 MeV and proton thresholds in the range 0.15 to 80 MeV. Each 300-word record contains one complete data summary and consists of satellite number; mode of reduction; start and stop time of summary in Cole time (ms); day of year and year; EDR tape name; binary reduction tape name; data format; bit rate; roundtrip light time (ms); minimum, maximum and average pulse temperature and high voltage regulator current and detector C temperature; pulse data consisting of average number of counts per reading, RMS deviation, maximum and minimum residue, number of readings, total counts, total time (in seconds), average number of counts/seconds, and probable error; electrometer data consisting of average reading, RMS deviation, maximum and minimum residue, average current and number of readings, and ephemeris information for one of three modes: earth traversal, cruise, or Jupiter encounter.

OUTPUT:

Output product: 1 digital magnetic tape (NSSDC
Dataset Code 72-012A-05D)

On-line access capability: No

DATABASE ENTRY NUMBER: 098

NASA SUBJECT CATEGORY: Space Radiation

NAME OF ORGANIZATION: NASA Goddard Space Flight Center

ADDRESS/POINT OF CONTACT: NSSDC
Code 601.4
Greenbelt, MD 20771 U.S.A.
Tel: 1- (301)-344-6695

TITLE OF DATA BANK: Interplanetary electron scatter
measured between launch and Jupiter
encounter

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: These summary data are on 556-bpi, 7-track, binary magnetic tape created on a CDC 3600 computer from raw data tapes using a reduction program. Each 300-word (48-bit words) record contains one complete data summary (108 s each), along with associated information, including satellite number; mode of reduction (earth traversal, cruise or Jupiter encounter); time and data; bit rates; and pulse, electrometer, and trajectory data for the cruise mode.

INPUT: Data Collection Method: This experiment consisted of an array of five particle detectors with electron thresholds in the range .01 to 35 MeV and proton thresholds in the range 0.15 to 80 MeV. A Cerenkov counter (C) had four output channels (C1, C2, C3, and CDC) sensitive to electrons having energies above 6, 9, 13, and 1 MeV, respectively. An electron-scatter counter (E) had three output channels (E1, E2, and E3) sensitive to electrons above .16, .26, and .46 MeV. A minimum ionization counter (M) had three output channels, M1 that measured background, and M3 that was sensitive to protons having energies greater than 80 MeV. The last two sensors were scintillator detectors (SP and SE), both of which had energy thresholds of 10 keV for electrons and 150 keV for protons. The sensitivity of the SE detector to protons was about a factor of 10 lower than its sensitivity to electrons. Thus, the SEDC channel effectively measured the electron flux, which could then be subtracted from the SPDC channel response to obtain the proton flux. Several other channels, listed above, required corrections to obtain the fluxes of the species indicated. Three of the channels (CDC, SPDC, and SEDC) were read out through a common electrometer.

OUTPUT:

Output products: 3 - digital magnetic tapes
(NSSDC Dataset Code: 72-012A-05C)

On-line access capability: No

DATABASE ENTRY NUMBER: 099

NASA SUBJECT CATEGORY: Urban Technology and Transport

NAME OF ORGANIZATION: Water Resources Support Center

ADDRESS/POINT OF CONTACT: Mr. David Lichy
Casey Building
Fort Belvoir, VA 22060, U.S.A.
Tel: 1-202-355-3052

TITLE OF DATA BANK: Waterborne Commerce and Lock
Performance Monitoring System

TYPE OF DATA: Numeric

DESCRIPTION OF COVERAGE: Waterborne Commerce of the United States (WCUS) contains statistics on the commercial movement of foreign and domestic cargo. WCUS contains aggregated information on waterborne commodity movement by 26 geographical areas. Principal Ports Tonnage Reports ranks US Ports for a calendar year by total tons, domestic and foreign. State Tonnage Report contains total waterborne commerce by state. Transportation Lines of the United States lists vessel operators and their addresses, type and physical description of vessels, principal service, location, and commodity served.

Port facilities data consist of the physical and intermodal characteristics of the coastal, Great Lakes, and inland ports in the United States. Reports consist of complete descriptions of a port area's waterfront facilities, including detailed information on berthing accommodations, petroleum bulk handling terminals, grain elevators, warehouses, cranes, transit sheds, marine repair plants, fleeting areas and floating equipment. The locations of the facilities are depicted on aerial photographic maps of the waterfront areas.

Lock Performance Monitoring data consist of information describing the traffic through the locks as well as the physical aspects of the lockages. Specifically data is collected regarding shift and significant weather or navigation condition changes. Lockage data to include: vessel name, number, river direction, number of cuts, lockage, entry and exit type, arrival time, and lockage time. Vessel data to include: vessel name and number, flotilla dimensions, number of passengers, barge types, number and type of tonnage.

INPUT: Data supplied by industry and US Army Corps of Engineers.

OUTPUT:

Output products: Available in hardcopy .

On-line access capability: No

APPENDIX

(Blank entry form for submission of databases to be included in the next update of this publication).

NASA SUBJECT CATEGORY CODE:

NAME OF ORGANIZATION:

ADDRESS/POINT OF CONTACT:

TITLE OF DATA BANK:

TYPE OF DATA:

DESCRIPTION OF COVERAGE:

INPUT:

Nature of Data:

Frequency of Updating:

Number of Items:

On-line Input Capability:

OUTPUT:

On-line Access Capability:

By Products (bulletins, etc.):

COMMUNICATIONS NETWORK:

SOFTWARE CURRENTLY USED:

COMMENTS ON COOPERATION:

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