

#551

PIONEER 10 & PIONEER 11
JUPITER ENCOUNTER TAPES

72-012A-11A

73-019A-11A

#551

PIONEER 10 & 11
ONE HOUR CRUISE AVERAGES
SATURN ENCOUNTER

72-012A-11B

73-019A-11B

73-019A-11C

#551

PIONEER 10 & 11
24 - HOUR CORRECTED CRUISE DATA

72-012A-11C

73-019A-11D

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1. INTRODUCTION:

The documentation for this data set was originally on paper, kept in NSSDC's Data Set Catalogs (DSCs). The paper documentation in the Data Set Catalogs have been made into digital images, and then collected into a single PDF file for each Data Set Catalog. The inventory information in these DSCs is current as of July 1, 2004. This inventory information is now no longer maintained in the DSCs, but is now managed in the inventory part of the NSSDC information system. The information existing in the DSCs is now not needed for locating the data files, but we did not remove that inventory information.

The offline tape datasets have now been migrated from the original magnetic tape to Archival Information Packages (AIP's).

A prior restoration may have been done on data sets, if a requestor of this data set has questions; they should send an inquiry to the request office to see if additional information exists.

2. ERRATA/CHANGE LOG:

NOTE: Changes are made in a text box, and will show up that way when displayed on screen with a PDF reader.

When printing, special settings may be required to make the text box appear on the printed output.

Version	Date	Person	Page	Description of Change
01				
02				

3 LINKS TO RELEVANT INFORMATION IN THE ONLINE NSSDC INFORMATION SYSTEM:

<http://nssdc.gsfc.nasa.gov/nmc/>

[NOTE: This link will take you to the main page of the NSSDC Master Catalog. There you will be able to perform searches to find additional information]

4. CATALOG MATERIALS:

- a. Associated Documents To find associated documents you will need to know the document ID number and then click here.
<http://nssdcftp.gsfc.nasa.gov/miscellaneous/documents/>

- b. Core Catalog Materials

PIONEER 10

PIONEER 11

JUPITER ENCOUNTER TAPES

72-012A-11A PSFP-00160

73-019A-11A PSFP-00218

This data set has been restored. There were originally 3 Pioneer 10 and 7 Pioneer 11 Binary 7-Track, 800 BPI tapes. There is one Pioneer 10 and two Pioneer 11 restored tapes. The DR tapes are 3480 cartridges and the DS tapes are 9-track, 6250 BPI. The tapes were created on a Univac 418 System III computer. The DR and DS numbers along with the corresponding D numbers and the time spans are as follows:

PIONEER 10 72-012A-11A

DR#	DS#	D#	FILES	TIME SPAN
DR00845	DS00845	D23344	1	11/25/73 - 12/04/73
		D23345	2	12/04/73 - 12/13/73
		D23346	3	12/13/73 - 12/18/73

PIONEER 11 73-019A-11A

DR00841	DS00841	D23347	1	11/19/74 - 11/21/74
		D23348	2	11/21/74 - 11/24/74
		D23349	3	11/24/74 - 11/28/74
		D23350	4	11/28/74 - 12/03/74
DR00842	DS00842	D23351	1	12/03/74 - 12/07/74
		D23352	2	12/07/74 - 12/10/74
		D23353	3	12/10/74 - 12/12/74

REQ. AGENT

VJP

RAND. NO.

RC55.

RD1110

ACQ. AGENT

DVR

RWV

PIONEER 10 + PIONEER 11

JUPITER ENCOUNTER TAPES

72-012A-11A

73-019A-11A

This data set consists of 3 Pioneer 10 and 7 Pioneer 11 Jupiter Encounter tapes. They are 7 track, BINARY, 800 BPI and have 1 file per tape. The tapes were created on an UNIVAC 418 System III computer. The tape format is the same for both data sets. The time spans, 'C' number and format are on the following pages.

PIONEER 10 72-012A-11A

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-23344	C-17683	11/25/73 - 12/04/73
D-23345	C-17684	12/04/73 - 12/13/73
D-23346	C-17685	12/13/73 - 12/18/73

Pioneer 11 73-019A-11A

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-23347	C-17688	11/19/74 - 11/21/74
D-23348	C-17689	11/21/74 - 11/24/74
D-23349	C-17690	11/24/74 - 11/28/74
D-23350	C-17691	11/28/74 - 12/03/74
D-23351	C-20288	12/03/74 - 12/07/74
D-23352	C-17692	12/07/74 - 12/10/74
D-23353	C-17693	12/10/74 - 12/12/74

DUMP OF TAPE X-213

O-2334
11/25/73 - 12/4/73

INPUT TAPE X-213 ON MS6
DATA INPUT 07 FL 1 2 2

FILE	1	RECORD	2	LENGTH	2208BYTES				
(0)	000111000511	000013000031	170554460000	000000000000	000613000000	200525252525	201525252525	000000000000	000000000000
(48)	200525252525	200525252525	000000000000	201525252525	201525252525	202400000000	000000000000	000000000000	000000000000
(96)	200525252525	000000000000	201525252525	200525252525	200525252525	202400000000	000000000000	000000000000	202400000000
(144)	202400000000	000000000000	000000000000	000000000000	200525252525	200525252525	201525252525	200525252525	200525252525
(192)	200525252525	201525252525	000000000000	000000000000	000000000000	200525252525	200525252525	200525252525	200525252525
(240)	200525252525	000000000000	201525252525	200525252525	200525252525	000000000000	202400000000	000000000000	200525252525
(288)	201525252525	202400000000	200525252525	201525252525	000000000000	000000000000	202400000000	000000000000	000000000000
(336)	200525252525	200525252525	200525252525	200525252525	000000000000	200525252525	200525252525	200525252525	000000000000
(384)	000000000000	200525252525	201525252525	200525252525	000000000000	201525252525	200525252525	201525252525	201525252525
(432)	200525252525	202400000000	000000000000	200525252525	200525252525	201525252525	201525252525	201525252525	201525252525
(480)	202525252525	200525252525	202400000000	200525252525	000000000000	202525252525	202400000000	200525252525	200525252525
(528)	000000000000	201525252525	200525252525	000000000000	200525252525	202525252525	202525252525	000000000000	200525252525
(576)	200525252525	200525252525	201525252525	200525252525	201525252525	202400000000	000000000000	000000000000	200525252525
(624)	200525252525	201525252525	200525252525	200525252525	201525252525	000000000000	000000000000	000000000000	000000000000
(672)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(720)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(768)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(816)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(864)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(912)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(960)	000000000000	202400000000	000000000000	200525252525	201525252525	202525252525	200525252525	200525252525	202525252525
(1008)	201525252525	201525252525	000000000000	202400000000	201525252525	202525252525	200525252525	200525252525	202525252525
(1056)	000000000000	201525252525	202400000000	200525252525	200525252525	200525252525	000000000000	200525252525	200525252525
(1104)	202400000000	200525252525	000000000000	200525252525	201525252525	000000000000	000000000000	000000000000	200525252525
(1152)	200525252525	000000000000	200525252525	200525252525	000000000000	000000000000	000000000000	000000000000	200525252525
(1200)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(1248)	000000000000	000000000000	200525252525	200525252525	200525252525	000000000000	000000000000	000000000000	000000000000
(1296)	000000000000	000000000000	010467000000	20572003166	205720052261	200611661162	200557455742	200676267622	000000000000
(1344)	200730473040	000000000000	000000000000	201447304724	177525252521	000000000000	000000000000	000000000000	000000000000
(1392)	374410201601	237745577332	742215201635	017701207673	073400207530	606275604064	012505226504	611365576050	000000000000
(1440)	127616204571	657152602050	342353200465	536350553330	756174226554	653356555156	164402553336	756225226530	000000000000
(1488)	550405224750	374553202650	452655200420	704712234761	314025211471	074760204537	225564202516	352442211515	000000000000
(1536)	200531211501	367641206526	223231173771	435272000466	000075000253	000432000041	000217000376	000005000163	000000000000
(1584)	000342000520	000127000305	000464000072	000251000431	000036000215	000373000002	000161000337	000516000124	000000000000
(1632)	000302000541	000147000326	000505000113	000272000451	000057000236	000415000023	000202000360	000536000145	000000000000
(1680)	000324000502	000111000270	000446000055	000233000412	000021000177	000355000044	000222000401	000010000166	000000000000
(1728)	000345000523	000132000311	000467000076	000255000433	000041000220	000376000005	000164000342	000521000130	000000000000
(1776)	000360000465	000074000251	000430000116	000275000454	000062000241	000420000026	000205000363	000542000151	000000000000
(1824)	000327000505	000114000273	000451000060	000236000415	000024000202	000361000054	000146000324	000503000171	000000000000
(1872)	000350000526	000135000314	000472000101	000260000436	000045000224	000402000010	000167000345	000524000133	000000000000
(1920)	000311000470	000077000255	000434000042	000221000377	000006000517	000126000304	000463000072	000250000427	000000000000
(1968)	000036000214	000373000001	000160000336	000515000123	000302000461	000067000246	000424000033	000212000370	000000000000
(2016)	000547000155	000333000317	000475000104	000263000441	000050000227	000405000014	000172000351	000530000136	000000000000
(2064)	000314000473	000102000260	000437000045	000224000403	000011000170	000347000054	000133000372	000000000157	000000000000
(2112)	000335000514	000123000301	000460000067	000245000424	000033000210	0003670000546	000154000333	000512000120	000000000000
(2160)	000277000456	000064000243	000421000027	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000

FILE	1	RECORD	2	LENGTH	2208BYTES				
(0)	000111000511	000013000031	172646664000	000000000000	000613000000	000000000000	200525252525	201525252525	000000000000
(48)	201525252525	200525252525	000000000000	200525252525	200525252525	000000000000	200525252525	000000000000	000000000000
(96)	201525252525	202525252525	202400000000	200525252525	000000000000	201525252525	000000000000	201525252525	000000000000
(144)	200525252525	000000000000	201525252525	200525252525	000000000000	000000000000	000000000000	000000000000	000000000000
(192)	201525252525	000000000000	000000000000	202400000000	200525252525	000000000000	200525252525	201525252525	000000000000
(240)	000000000000	000000000000	000000000000	202400000000	201525252525	200525252525	201525252525	202400000000	000000000000
(288)	000000000000	200525252525	000000000000	202525252525	201525252525	200525252525	201525252525	201525252525	201525252525
(336)	200525252525	200525252525	200525252525	200525252525	202400000000	201525252525	200525252525	201525252525	201525252525
(384)	202400000000	200525252525	200525252525	200525252525	201525252525	202400000000	201525252525	201525252525	201525252525
(432)	201525252525	000000000000	200525252525	201525252525	200525252525	000000000000	202400000000	000000000000	000000000000

(1344)	225657421451	211656354230	176644064406	225526273270	222720061531	177473047304	207430151011	000032565021
(1392)	235333561071	162252213557	645723216712	107313207520	753745211412	070531175422	316365222651	342225573377
(1440)	754511207522	026061600306	350052201741	725263555311	462024555346	521075557331	502701555311	462017556066
(1488)	253723556231	054141020455	346052207567	065336236611	673377211451	340247210753	523412211523	537324210763
(1536)	311034210627	125257202606	516717174405	17302600117	000305000472	000110000276	000463000101	000266000454
(1584)	000072000257	000445000063	000250000436	000054000241	000427000044	000232000420	000035000223	000411000026
(1632)	000214000132	000317000505	000123000310	000476000113	000301000467	000104000272	000460000075	000263000451
(1680)	000056000254	000442000057	000245000432	000050000236	000423000041	000227000144	000332000520	000135000323
(1728)	000511000126	000314000501	000117000305	000472000110	000276000463	000101000267	000454000072	000257000445
(1776)	000063000250	000436000054	000241000157	000345000532	000150000336	000523000141	000326000514	000132000317
(1824)	000505000123	000310000476	000114000301	000467000104	000272000460	000075000263	000451000066	000254000172
(1872)	000357000545	000163000350	000536000153	000341000527	000144000332	000520000135	000323000511	000126000314
(1920)	000502000117	000305000472	000110000276	000463000101	000267000257	000445000062	000250000436	000053000241
(1968)	000427000044	000232000417	000035000223	000411000026	000214000402	000017000205	000372000010	000176000363
(2016)	000001000167	000354000217	000405000022	000210000376	000130000201	000366000004	000172000357	000450000163
(2064)	000350000536	000154000341	000527000145	000322000520	000136000323	000511000127	000314000232	000417000035
(2112)	000223000417	000026000213	000401000017	000204000372	000010000175	000363000001	000166000354	000542000157
(2160)	000345000533	000150000336	000524000141	176463623775	202604242632	201400152126	175651264502	000000000000

FILE	1	RECORD	7911	LENGTH	2208	BYTES							
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(48)	225626134060	225640265212	225713523662	225645422450	225700334646	225626134060	225665362245	225614202161					
(96)	225721305130	225607304025	225660060545	225672726162	225607304025	225700334646	225672726162	225611523246					
(144)	225672726162	225665362245	225621137344	225700334646	225645422450	225640265212	225672726162	225611523246					
(192)	225522542352	225566323474	225611523246	225522542352	225611523246	225566323474	225502102770	225566323474					
(240)	225566323474	225502102770	225544065662	225502102770	225611523246	225522542352	225522542352	225502102770					
(288)	225635715561	225522542352	225544065662	225635715561	225522542352	225522542352	225611523246	225502102770					
(336)	225522542352	225665707074	225566524721	225661560534	225663013271	225564163140	225701557062	225646134540					
(384)	225553471670	225664543734	225635711474	22560414672	225672603415	225624277204	225563015710	225676550712					
(432)	225605754614	225600571234	225700323440	225573507156	225624277204	225706202060	225576130141	225676550712					
(480)	225670625104	22565436672	225620636340	225700334646	225575643230	225713523662	225672726162	225571077770					
(528)	225727132745	225665362245	225571077770	225721305130	225645422450	225602444416	225735025502	225645422450					
(576)	225607304025	225721305130	225635170446	225621137344	225700334646	225607304025	225645422450	225713523662					
(624)	225614202161	225665362245	22570006432	225614202161	225600600545	211710000000	211662525252	211715252525					
(672)	211722525252	211635252525	211715252525	211625252525	211652525252	211645252525	211675252525	211665252525					
(720)	211652525252	211662525252	211625252525	211625252525	211652525252	211732525252	211720000000	211700000000					
(768)	211672525252	211675252525	211652525252	211652525252	211605252525	211652525252	211772525252	206500000000					
(816)	207552525252	206552525252	206700000000	206700000000	206700000000	207400000000	207465252525	206625252525					
(864)	207440000000	207425252525	207465252525	206625252525	207465252525	206652525252	206752525252	206725252525					
(912)	207465252525	206700000000	207400000000	207440000000	207540000000	207452525252	206700000000	207452525252					
(960)	207425252525	225566122535	225477142044	225542723372	225566123350	225477142662	225566123764	225542724422					
(1008)	225456504130	225542725045	225542725261	225456504772	225542725712	225520470316	225456505644	225566126341					
(1056)	225477146114	225477146114	225612321545	225477146564	225520472320	225612322446	225477147470	225477147720					
(1104)	225566131050	225456511024	225477150642	222717217005	222730007321	222676224772	222740724072	222717217005					
(1152)	222666020254	222740724072	222717217005	222666020254	222740724072	222706551305	222706551305	222763160734					
(1200)	222666020254	222717217005	222740724072	222666020254	222706551305	222751766601	222666020254	222730007321					
(1248)	222751766601	222666020254	222730007321	222730007321	222655731734	000000000000	000000000000	000000000000					
(1296)	000000000000	000000000000	011553000000	206460627524	206460634434	225652444541	225550553333	225631032111					
(1344)	225651732426	211665745564	177473047304	225525156136	222716012523	176644064406	207403542351	000032565126					
(1392)	340616561062	711107213573	474065216720	234032207520	422511211412	545576175427	372365222647	413232574014					
(1440)	000463007525	633543607306	353541201741	725701555317	450272555342	514064557340	012624555317	450265556055					
(1488)	551757556230	647271204455	344172207572	706074236611	674742211451	231621210753	727315211524	610536210765					
(1536)	433511210624	771462202604	710225174405	173026000402	000017000205	000373000010	000176000363	000001000167					
(1584)	000354000542	000160000345	000533000151	000336000524	000141000327	000515000132	000320000506	000123000311					
(1632)	000477000414	000032000220	000405000023	000210000376	000014000201	000367000005	000172000360	000546000163					
(1680)	000351000536	000154000342	000527000145	000333000523	000136000324	000511000427	000045000232	000420000035					
(1728)	000223000411	000026000214	000402000017	000205000373	00010000176	000363000001	000167000354	000542000160					
(1776)	000345000533	000151000336	000524000442	000060000245	000433000050	000236000423	000041000027	000414000032					
(1824)	000220000405	000023000211	000376000014	000201000367	000095000172	000360000546	000163000351	000537000454					
(1872)	000072000260	000446000063	000250000436	000054000241	000427000044	000232000420	000036000223	000411000026					
(1920)	000214000402	000017000205	000370000010	000176000364	000081000542	000160000345	000533000150	000336000524					
(1968)	000141000327	000515000132	000320000306	000123000311	000476000114	000302000467	000105000273	000460000076					
(2016)	000264000451	000067000502	000120000305	000473000110	000276000463	000101000267	000455000072	000260000445					
(2064)	000063000251	000436000054	000242000427	000045000233	000420000036	000224000411	000027000515	000132000320					
(2112)	000506000123	000311000476	000114000301	000467000105	000273000460	000076000264	000451000067	000254000442					
(2160)	000060000245	000433000051	000236000424	17646773140	202602474244	201400233573	176466643626	000000000000					

PIONEER 10

ONE-HOUR CRUISE AVERAGES

72-012A-11B SPHE-00104

This data set catalog consists of 6 tapes. The tapes are 6250 BPI, 9-track, binary, and were created on a VAX computer. The D and C numbers with the time span are as follows:

D#	C#	FILES	TIME SPAN
-----	-----	-----	-----
D-073998	C-026450	1	03/03/72 - 04/29/75
D-073999	C-026451	1	01/09/72 - 03/06/82
D-074000	C-026452	1	03/07/82 - 04/26/86
D-078672	C-028060	10	03/12/85 - 03/23/88
D-108056	C-031780	1	03/24/88 - 03/01/95
D-108770	C-032867	1	03/24/88 - 10/06/96

PIONEER 11

SATURN ENC. - CHARGED PARTICLES

73-019A-11B PSFP-00217

THIS DATA SET HAS BEEN RESTORED. ORIGINALLY IT CONTAINED ONE 9-TRACK, 1600 BPI TAPE WRITTEN IN BINARY. THERE IS ONE RESTORED TAPE. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPE WAS CREATED ON AN UNIVAC 418 COMPUTER AND WAS RESTORED ON THE MRS SYSTEM. THE DR AND DS NUMBER ALONG WITH THE CORRESPONDING D NUMBER AND THE TIME SPAN IS AS FOLLOWS:

DR#	DS#	D#	FILES	TIME SPAN
DR004403	DS004403	D048917	1	08/30/79 - 09/05/79

PIONEER 11

ONE-HOUR CRUISE AVERAGES

73-019A-11C SPHE-00097

This data set catalog consists of 5 tapes. These tapes are 6250 BPI, 9-track, binary, and were created on a VAX computer. The D and C numbers with the time spans are as follows:

D#	C#	FILES	TIME SPAN
-----	-----	-----	-----
D-074001	C-026453	1	04/06/73 - 12/01/76
D-074002	C-026454	1	12/01/76 - 05/29/81
D-074003	C-026455	1	05/29/81 - 04/25/86
D-078673	C-027410	9	11/15/85 - 03/28/88
D-108057	C-031781	1	03/30/88 - 01/23/95

THE UNIVERSITY OF IOWA

17 OCTOBER 1996



Dr. Joseph H King
National Space Science Data Center
World Data Center A for Rockets
and Satellites
Goddard Space Flight Center
Mailstop 633.0
Greenbelt, MD 20771

Dear Joe:

Subject: Transmittal of University of Iowa Archival
Data Tapes for Pioneer 10 and 11:

15 minute Average -- Interplanetary Cruise
Data -- Trajectory Merged -- SFDU Format

One-Hour Average Interplanetary Cruise Data
for Pioneer 10

24-Hour Average RTG and Temperature Corrected
Trajectory Merged Interplanetary Cruise Data
for Pioneer 10

The following University of Iowa/Geiger Tube Telescope
data are being sent under separate cover:

Pioneer 10	LABEL	PERIOD	
<i>replace</i> Tape #5	NSSD_P10K_0005	72-012A-11D 89A through 96B	SFDU Format
✓ Tape #5	One-Hour Averages Pioneer 10 Cruise	72-012A-11B DOY 84 1988 to DOY 280 1996	Same as earlier submissions
✓ Tape #1	24-Hour Averages RTG and Temperature Corrected with Trajectory	72-012A-11C covering from launch through DOY 280 1996	Same as earlier submissions

Pioneer 11

<i>replace</i> Tape #5	NSSD_P11K_0005	73-019A-11E 89B through 95A	SFDU Format
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For the tapes in the SFDU format, A means first six months
of calendar year and B means second six months of the calendar
year.

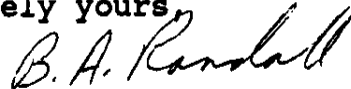
All of the data in the SFDU format have been written on nine-track tapes at 6250 BPI using DEC FILES-11 (VMS 5.4) . Each tape is labeled and contains the updated volume description file, the formats file, the software file, and the publications file. These are followed by the indicated data files. The SFDU format is as specified and approved by the NSSDC.
(DOY 280 1996 for Pioneer 10 and DOY 24 1995 for Pioneer 11)

All of the other tapes have been written on nine-track tapes at 6250 BPI and are VAX compatible.

The one-hour average cruise data start where the last submission on 1 June 1988 left off and continue to the present.
(DOY 280 1996 for Pioneer 10)

The 24-Hour averages have been corrected for temperature and RTG background per Van Allen and Randall [1985]. These data have also been merged with selected trajectory data. These files have the same format as the one-hour cruise data but have twenty additional integer words added to the record length for the trajectory information. The format is the same as the previous submission and the time period is from launch through the present.
(DOY 280 1996 Pioneer 10)

Sincerely yours,



B. A. Randall
Co-Investigator
ARC/NASA Grant NAG2-571

cc: Dr. J. A. Van Allen/U. of Iowa
Dr. J. F. Cooper, NSSDC
Dr. L. E. Lasher, Code 244-14/ARC
Mr. Fred Wirth, Code 224-14/ARC
Mr. R. L. Brechwald/U. of Iowa

PIONEER 10 & 11

24-HOUR CORRECTED CRUISE AVGS+TRAJ

72-012A-11C SPHE-00222

73-019A-11D

This data set catalog consists of 1 tape. The tape is 6250 BPI, 9-track, binary, has 2 files of data, and was created on a VAX computer. The D and C numbers with the time span are as follows:

D#	C#	FILES	TIME SPAN
D-078674	C-027512	1	03/03/72 - 06/10/96 (PIONEER 10)
		2	04/06/73 - 01/20/95 (PIONEER 11)

PIONEER 10 and 11

72-012A-11B & 11C

73-019A-11B

73-019A-11C & 11D

This data set catalog consists of 9 tapes. These tapes are 1600 BPI, 9-track, ASCII. The Saturn Encounter Tape was created on a Univac 418 computer but is Vax compatible. The others were created on a Vax computer. All tapes are phase encoded. The D and C numbers with the Time Span are as follows:

PIONEER 10 72-012A-11B One Hour Cruise Averages

D#	C#	FILES	TIME SPAN
D-73998	C-26450	1	03/03/72 - 04/29/75
D-73999	C-26451	1	01/19/72 - 03/06/82
D-74000	C-26452	1	03/07/82 - 04/25/86
D-78672	C-28060	10	03/12/85 - 03/23/88

PIONEER 11 73-019A-11B Saturn Encounter

D#	C#	FILES	TIME SPAN
J-48917	C-22460	1	08/30/79 - 09/05/79

PIONEER 11 73-019A-11C One Hour Cruise Averages

D#	C#	FILES	TIME SPAN
D-74001	C-26453	1	04/06/73 - 12/01/76
D-74002	C-26454	1	12/01/76 - 05/29/81
D-74003	C-26455	1	05/29/81 - 04/25/86
D-78673	C-27410	9	11/15/85 - 03/28/88

PIONEER 10 72-012A-11C 24-Hour Corrected Cruise Data

PIONEER 11 73-019A-11D 24-Hour Corrected Cruise Data

This data set catalog consists of 1 tape. The tape is 6250 BPI, 9-track, binary, has 2 files of data, and was created on a Vax computer. The D and C numbers with the time span are as follows:

D#	C#	FILES	TIME SPAN
D-78674	C-27512	2	03/03/72 - 03/23/88 (PIONEER 10) 04/06/73 - 03/29/88 (PIONEER 11)

```

SUBROUTINE INSET (IBLK,LRL,PAR,IEOF,ISZ,IST,LK)
*LABEL INIVAX SRC OCT 02 1984 13:55:57 FILE 000001
C-----
C THIS ROUTINE CAN BE USED FOR INPUT FROM TAPE OR DISK. IF READING
C FROM DISK, A PROMT FOR FILE NAME IS GIVEN. DISK FILE UNIT NUMBER
C IS 11.
C
C IBLK = THE NUMBER OF LOGICAL RECORD IN EACH BLOCK
C LRL = THE LENGTH, IN WORDS, OF THE LOGICAL RECORD
C PAR - 1 = GET 18 BIT WORDS, WITH BYTE FLIPPING
C 2 = GET 16 BIT WORDS, WITH BYTE FLIPPING
C 3 = GET 32 BIT WORDS
C 4 = GET 16 BIT WORDS
C IEOF = # OF CONSECUTIVE EOF'S THAT SHOULD BE ENCOUNTERED
C BEFORE THE TAPE IS REWOUND AND MORE INPUT IS
C REQUESTED BY THE SUBROUTINE
C ISZ = THE LENGTH, IN WORDS, OF THE CURRENT TAPE BLOCK
C AFTER FULFILLING EACH INPUT REQUEST
C IST = TAPE STATUS AFTER EACH INPUT REQUEST (1-5)
C-----

```

```

C
IMPLICIT INTEGER (A-Z)
INTEGER*2 IOSB(4)
CHARACTER*20 FLNAME
CHARACTER*1 ANS, IANS, ANSW
DIMENSION BUFFER(1), ITEMP(2)
LOGICAL NEWREC, NEWFLG
EXTERNAL LIB$GET_VM, LIB$PUT_OUTPUT, LIB$STOP, SYS$DASSGN
DATA IOPEN /0/, PEA /'A'/, PEC /'C'/
SAVE NBLKS, LRSIZE, NEOF, ISZADR, ISTADR, IANS, ANS, ANSW
SAVE ICHAN, LBLK, KEOF, LOOK, BUFADD, IOPEN
NBLKS = IBLK
LRSIZE = LRL
NEOF = IEOF
ISZADR = %LOC(ISZ)
ISTADR = %LOC(IST)
LOOK = LK
IPAR = PAR
IF (IPAR.EQ.1) NBYTES = NBLKS * LRL * 18 / 8
IF (IPAR.EQ.2) NBYTES = NBLKS * LRL * 2
IF (IPAR.EQ.3) NBYTES = NBLKS * LRL * 32 / 8
IF (IPAR.EQ.4) NBYTES = NBLKS * LRL * 2
C --- ALLOCATE DYNAMIC MEMORY ---
KSTAT = LIB$GET_VM (NBYTES, BUFADD)
IF (KSTAT.NE.1) THEN
CALL LIB$PUT_OUTPUT ('V.M. ALLOCATION FAILURE')
CALL LIB$STOP (%VAL(KSTAT))
ENDIF
C *** GET TAPE UNIT ASSIGNMENT ***
DO 20 WHILE(ANS.NE.'T'.AND.ANS.NE.'D')
PRINT *, 'ENTER INPUT DEVICE: '
PRINT *, ' TAPE(T), DISK(D) '
READ(6,1100) ANS
1100 FORMAT(A1)
20 CONTINUE
7500 CONTINUE
IF (ANS.EQ.'D') THEN ! DEVICE = DISK
PRINT *, 'ENTER FILE NAME '
READ(6,1101) FLNAME
1101 FORMAT(A20)
DO 30 WHILE (ANSW.NE.'Y')
PRINT *, FLNAME, ' IS THIS CORRECT? (Y/N) '

```

```

        READ(6,1100) ANSW
        IF(ANSW .EQ. 'N') THEN
            PRINT *, 'ENTER FILE NAME '
            READ(6,1101) FLNAME
        END IF
30    CONTINUE
        ANSW = ' '
        IF (NEWFLG) THEN
            CALL SYS%DASSGN(ICHAN)
        END IF
        ICHAN = 11
        OPEN (ACCESS='SEQUENTIAL',           !OPEN DISK FILE
1         RECORDTYPE='VARIABLE',
2         FORM='UNFORMATTED',
3         FILE=FLNAME,
4         UNIT=ICHAN,
5         STATUS='OLD',
6         BUFFERCOUNT=2,
7         RECL=8191,
9         READONLY,SHARED)
        PRINT *,FLNAME, ' OPENED'
        IF(NEWFLG) THEN
            NEWFLG = .FALSE.
            GO TO 200
        END IF
    ELSE                                     !DEVICE = TAPE
10     WRITE(*,11)
11     FORMAT(1X, 'ENTER INPUT TAPE DEVICE NUMBER (0,1,2)')
        READ(*,12) ITAPE
12     FORMAT(I1)
        IF(ITAPE.LT.0 .OR. ITAPE.GT.2) GO TO 10
        IF(ITAPE.EQ.0) CALL OPEN('MFA0:      ', ICHAN, III)
        IF(ITAPE.EQ.1) CALL OPEN('MFA1:      ', ICHAN, III)
        IF(ITAPE.EQ.2) CALL OPEN('MFA2:      ', ICHAN, III)
    END IF
    IF (ICHAN .EQ. 0) STOP
    IOPEN = 1
    LBLK = 1
    KEOF = 0
    RETURN
C .....
    ENTRY IN1 (BUFFER, ISERVO)
    IF (IOPEN .NE. 1) THEN
        CALL LIB$PUT_OUTPUT ('IN1 CALLED BEFORE INSET')
        STOP
    ENDIF
    IF (ISERVO .GT. 15) GO TO 5000
    IF (LBLK .NE. 1) GO TO 100
C ---
C --- READ IN A NEW PHYSICAL BLOCK ---
    CALL REDTAP (ICHAN,%VAL(BUFADD), NBYTES, JSTAT, IOSB)
C *** CHECK READ STATUS HERE ***
    IF (JSTAT .EQ. 1) THEN                                     ! END-OF-FILE?
        KEOF = KEOF + 1
        ISIZE = 0
        ISTAT = 2
        IF (KEOF .EQ. NEOF) GO TO 5000
        GO TO 200
    ENDIF
C *** ASSUME NO ERROR STATUS ***
    MBLKS = IOSB(2)
    IF (IPAR.EQ.1) MBLKS = MBLKS * 8 / 18 / LRSIZE

```

```

IF (IPAR.EQ.2) MBLKS = MBLKS / 2 / LRSIZE
IF (IPAR.EQ.3) MBLKS = MBLKS * 8 / 32 / LRSIZE
IF (IPAR.EQ.4) MBLKS = MBLKS * 8 / 16 / LRSIZE
IF (MBLKS.LT.1) MBLKS = 1
IF (MBLKS.GT.NBLKS) MBLKS = NBLKS
NEWREC = .TRUE.
KEOF=0

```

```
100 CONTINUE
```

```

C
C *** FOLLOWING FOR UNSIGNED INTEGERS
C

```

```

RSIZE = FLOAT(IOSB(2))
IF (IPAR.EQ.1) ISIZE = JNINT(RSIZE * 8. / 18.) ! # OF 18 BIT WORDS
IF (IPAR.EQ.2) ISIZE = JNINT(RSIZE / 2.) ! # OF 16 BIT WORDS
IF (IPAR.EQ.3) ISIZE = JNINT(RSIZE * 8. / 32.) ! # OF 32 BIT WORDS
IF (IPAR.EQ.4) ISIZE = JNINT(RSIZE * 8. / 16.) ! # OF 16 BIT WORDS
LIMIT = LRSIZE
IF (ISIZE . LT. LRSIZE) LIMIT = ISIZE
DO 150 I = 1,LIMIT
    IF (IPAR.EQ.1) BUFFER(I) = IGET18 (%VAL(BUFADD),NEWREC)
    IF (IPAR.EQ.2) BUFFER(I) = IGET16 (%VAL(BUFADD),NEWREC)
    IF (IPAR.EQ.3) BUFFER(I) = IGET32 (%VAL(BUFADD),NEWREC)
    IF (IPAR.EQ.4) BUFFER(I) = JGET16 (%VAL(BUFADD),NEWREC)

```

```
150 CONTINUE
```

```

C
C *** FOLLOWING FOR SINGLE PRECISION FLOATING POINT
C

```

```

DO 160 I = 1,LRSIZE,2
    ITEMP(1) = IGET18 (%VAL(BUFADD),NEWREC)
    ITEMP(2) = IGET18 (%VAL(BUFADD),NEWREC)
    BUFFER(I) = FP-UTOVAX (ITEMP)

```

```
C 160 CONTINUE
```

```

LBLK = LBLK + 1
IF (LBLK .GT. MBLKS) LBLK = 1
ISTAT = 1

```

```
200 CONTINUE
```

```

CALL PUT_STATUS (ISTAT, ISIZE, %VAL(ISTADR), %VAL(ISZADR))
RETURN

```

```
5000 CONTINUE
```

```
C *** REWIND TAPE,CLOSE FILE ***
```

```

CALL REWTAP (ICHAN)
IF(ANS.EQ.'T') THEN
    DO 300 WHILE( IANS.NE.'Y'.AND.IANS.NE.'N')
        WRITE(*,6000)
6000    FORMAT(1X,'MFA_: MORE INPUT? (Y/N)')
        READ(6,6001) IANS
6001    FORMAT(A1)
300    CONTINUE
    IF(IANS.EQ.'Y') THEN
        WRITE(*,6100)
6100    FORMAT(3X,'LOAD NEXT TAPE')
        PAUSE ' TYPE CONTINUE TO CONTINUE'
        IANS = ' '
        ISTAT = 3
        KEOF = 0
        GO TO 200
    END IF

```

```
ELSE
```

```

DO 400 WHILE ( IANS.NE.'Y' .AND. IANS.NE.'N')
WRITE(6,7200)FLNAME
7200    FORMAT(/,3X,'REACHED END OF THIS FILE: ',A20,/)
WRITE(6,7100)

```

```

7100      FORMAT(2X, 'OPEN NEW DISK FILE, OR RE-OPEN CURRENT FILE? (Y/N)')
        READ(6,7101) IANS
7101      FORMAT(A1)
400      CONTINUE
        IF(IANS.EQ. 'Y') THEN
            ISTAT = 3
            KEOF = 0
            IANS = ' '
            NEWFLG = .TRUE.
            GO TO 7500
        END IF
    END IF
    CALL SYS%DASSGN (ICHAN)
    ISTAT = 5
    ISIZE = 0
    IOPEN = 0
    ISERVO = -ISERVO-1                ! COMPLEMENT ISERVO
    GO TO 200
    END

```

```

C.....
SUBROUTINE PUT_STATUS (IST, ISZ, JST, JSZ)
IMPLICIT INTEGER*4 (A-Z)
JST = IST
JSZ = ISZ
RETURN
END

```

```

C.....
INTEGER FUNCTION IGET16 (IBUF, ISTART)

```

```

C
C GETS 16 BITS AT A TIME - FLIPS BYTES
C

```

```

    LOGICAL ISTART
    BYTE IBUF(1), ITEMP(4)
    INTEGER JTEMP
    EQUIVALENCE (ITEMP(1), JTEMP)
    DATA INDEX /1/

    IF (ISTART) INDEX = 1
    ISTART = .FALSE.
    JTEMP = 0
    ITEMP(1) = IBUF(INDEX+1)
    ITEMP(2) = IBUF(INDEX)
    JTEMP = 512*(JTEMP/256) + JIAND(JTEMP, 255)
    IGET16 = JTEMP
    INDEX = INDEX + 2
    RETURN
    END

```

```

C.....
INTEGER FUNCTION IGET32 (IBUF, ISTART)

```

```

C
C GETS 32 BITS AT A TIME
C

```

```

    LOGICAL ISTART
    DIMENSION IBUF(*)
    DATA INDEX/1/
    IF(ISTART) INDEX = 1
    ISTART = .FALSE.
    IGET32 = IBUF(INDEX)
    INDEX = INDEX + 1
    RETURN
    END

```

```

C.....

```



```

"          , (ARRAY(I, J, 10), J=4, 5), INT(ARRAY(I, 6, 10))
ELSE
  WRITE(IPRT, 6005) IDAYS(I), JNT(I), INT(ARRAY(I, 1, 8)),
"          (ARRAY(I, J, 8), J=4, 5, 1), INT(ARRAY(I, 6, 8))
"          , (ARRAY(I, J, 1), J=4, 5, 1), INT(ARRAY(I, 6, 1))
"          , (ARRAY(I, J, 4), J=4, 5, 1), INT(ARRAY(I, 6, 4))
"          , (ARRAY(I, J, 11), J=4, 5), INT(ARRAY(I, 6, 11))
END IF
50 CONTINUE
WRITE(IPRT, 6008) IDELTA, KYR, IMD, JDAY
6005 FORMAT(I4, F6. 2, 2X, I6, 4(2F9. 3, I4, 1X), <N>X, (2F9. 4, I4, 1X))
6004 FORMAT(I4, F6. 2, 2X, I6, 3(2F9. 3, I4, 1X), <N>X, 2(2F9. 4, I4, 1X))
11111 CONTINUE
  N = 46
C
C   PRINT SUMMARY SHEET
C
PAGE = PAGE + PFRAC
WRITE(IPRT, 6000) IA(1), IVN(II), YR, PAGE
WRITE(IPRT, 6007) IYEAR
DO 70 I=1, 48, 1
IF(KNT(I). NE. 0) GO TO 69
CALL DAYPER(II, I, PAGE, KDAY, FJNT)
WRITE(IPRT, 6009) KDAY, FJNT
GO TO 70
69 CONTINUE
WRITE(IPRT, 6006) IDAYS(I), JNT(I)
"          , ARRAY(I, 2, 2), ARRAY(I, 3, 2)
*          , ARRAY(I, 2, 3), ARRAY(I, 3, 3)
*          , ARRAY(I, 2, 7), ARRAY(I, 3, 7)
*          , ARRAY(I, 2, 8), ARRAY(I, 3, 8)
*          , ARRAY(I, 2, 11), ARRAY(I, 3, 11)
*          , ARRAY(I, 2, 5), ARRAY(I, 3, 5)
*          , ARRAY(I, 2, 12), ARRAY(I, 3, 12)
*          , ARRAY(I, 2, 10), ARRAY(I, 3, 10)
6006 FORMAT(I4, F6. 2, 2X, 5(F9. 3, F6. 3), 3(F8. 4, 1X, F6. 4))
70 CONTINUE
6007 FORMAT(5H YEAR, I4, 4X, 15H ---- A ---- ,
"          15H ---- B ---- ,
"          15H ---- C ---- ,
"          15H ---- D ---- ,
"          15H ---- G+G ---- ,
"          15H ---- AB ---- ,
"          15H ----ABC+ABC---- ,
"          15H ---- DEF ---- ,
"/
" 11H DAY PERIOD, 1X, 8(15H AVERAGE SD )//
6008 FORMAT(//, 50X, 22HF(PHI)=M*(1+K*COS(PHI-, A1, 2H)), 47X, I2, '//,
"I2, '//, I2)
WRITE(IPRT, 6010) (INT(ARRAY(I, 1, 8)), I=1, 32, 1), KYR, IMD, JDAY,
"(INT(ARRAY(I, 1, 8)), I=33, 48, 1)
6010 FORMAT(/16H NO. OF SAMPLES , 16I7, /, 16X, 16I7, /, 1X, I2, '//, I2, '//
", I2, 3X, 16I7)
79 IIP = 0
OPAGE = NPAGE
I7 = -1
DO 80 I=1, 48, 1
ARRAY(I, 1, 8) = 0.0
KNT(I) = 0
80 CONTINUE
PFRAC = .3
IF(IF. EQ. 2) GO TO 1

```


5

*LABEL PRTFAG SRC NOV 08 1984 11:02:16 FILE 000001 BLOCK 10
*EXECUTE PRTFAG MAP
*COMPILE PRTFAG

IMPLICIT REAL*8 (A-H, O-Z)
EQUIVALENCE (IYEAR, IA(2))
BYTE IDELTA
INTEGER*2 IMO, JDAY, KYR
INTEGER YR
INTEGER OPAGE
EQUIVALENCE (YR, IA(2))
DIMENSION IB(110)
DIMENSION ARRAY(48, 6, 12), A(105), IA(210), IV(5), IVN(6), IDAYS(48)
EQUIVALENCE (A(7), IA(13))
DIMENSION KNT(50)
REAL JNT
DIMENSION JNT(48)
VOLATILE ISIZE, ISTAT
DATA ICON /6/
DATA JCON /5/
DATA IPRT /14/
DATA IP /1/
DATA IVN(1) /'1/4 '
DATA IVN(2) /'1/2 '
DATA IVN(3) /'1 '
DATA IVN(4) /'3 '
DATA IVN(5) /'24 '
DATA IV(1) /15/
DATA IV(2) /30/
DATA IV(3) /60/
DATA IV(4) /180/
DATA IV(5) /1440/
DATA I7 /-1/
DATA N /46/
DATA PFRAC / .3/

C
C REQUEST THE INTERVAL TO BE PRINTED
C
CALL IDATE(IMO, JDAY, KYR)
IB(1) = 0
1 CONTINUE
C WRITE(ICON, 4000)
C 4000 FORMAT(55H TYPE THE INTERVAL IN MINUTES TO BE PRINTED (XXXX))
IF = 1
READ(JCON, 4001)INTERV
IF(INTERV.LT.0) STOP
CALL INSET(1, 210, 3, 1, ISIZE, ISTAT, 0)
REWIND 9
II = 6
C
4001 FORMAT(I4)
C
C CHECK TO SEE IF INTERVAL IS CORRECT
C
DO 10 II=1, 5, 1
IF(INTERV.EQ.IV(II)) GO TO 15
10 CONTINUE
C
C IF WE GET HERE THE WRONG INTERVAL WAS USED
C
WRITE(ICON, 4002)
4002 FORMAT(1X, 3(6HWRONG , 1X))
GO TO 1

```

C
C      TELL OPERATOR WHAT HE DID CHOOSE
C
15  WRITE(ICON,4003) IVN(II)
4003 FORMAT(27H YOU HAVE SELECTED TO PRINT      , 1X, A3, 1X,
"13HHOUR AVERAGE      )

```

```

C
C      INPUT DATA VECTOR
C

```

```

C      IPRT = 7
20  CONTINUE
    INSRV = 9
    CALL IN1(IA, INSRV)
    IF(ISTAT.EQ.3) GO TO 20
    IF(ISTAT.EQ.5) IF = 2
    IF(IF.EQ.2) GO TO 35

```

```

C
C      SAVE VECTOR FOR PRINTOUT AFTER CHECKING TO SEE IF CORRECT SUM
C

```

```

C      IF(IA(10).NE.INTERV) GO TO 20
C
GO TO (140,130,120,110,100), II
100  NPAGE = (IA(3)-1)/48 + 1
    IP = MOD(IA(3)-1,48) + 1
    GO TO 150
110  NPAGE = (IA(3) - 1)/6 + 1
    IP = MOD(IA(3)-1,6)*8 + 1 + IA(9)/ 12
    GO TO 150
120  NPAGE = (IA(3) - 1) / 2 + 1
    IP = MOD(IA(3)-1,2)*24+1+IA(9)/4
    GO TO 150
130  NPAGE = IA(3)
    IP = IA(9)/2 + 1
    GO TO 150
140  NPAGE = (IA(3)-1)*2+1+IA(9)/48
    IP = MOD(IA(9),48) + 1
150  CONTINUE
    IF(OPAGE.EQ.0) OPAGE = NPAGE
23  CONTINUE
    IF(NPAGE.NE.OPAGE) GO TO 35
    IF(IP.GT.48) GO TO 20
    DO 30 I=1,12,1
    ARRAY(IP,1,I) = A(I+6)
    ARRAY(IP,2,I) = A(I+30)
    ARRAY(IP,3,I) = A(I+42)
    ARRAY(IP,4,I) = A(I+54)
    ARRAY(IP,5,I) = A(I+66)
    ARRAY(IP,6,I) = A(I+78)
    IF(ARRAY(IP,4,I).NE.0.0) PFRAC = .1
    IF(I.NE.12) GO TO 30
    IF(ARRAY(IP,4,I).NE.0.0) N = 0
30  CONTINUE
    IDAYS (IP) = IA( 3)
    JNT   (IP) = FLOAT(IA( 9))/4.
    I     = IA(11)
    KNT   (IP) = 1
    IIP = IIP + 1
    GO TO 20

```

```

C
C      PRINT OUT PAGE
C

```

```

35  CONTINUE

```

```

IF(IIP.EQ.0) GO TO 79
IDELTA = 100
PAGE = OPAGE
IF(PFRAC.NE..1) GO TO 11111
PAGE = PAGE + .1
WRITE(IPRT,6000) IA(1),IVN(II),YR,PAGE
6000 FORMAT(1H1,20X,18HUNIVERSITY OF IOWA,14X,7HPIONEER,1X,I3,7X,A3,3X,
"13HHOUR AVERAGES ,23X,5HPAGE ,I3,1H.,F5.1,2X,'(V)',/)
WRITE(IPRT,6001) IYEAR
6001 FORMAT(5H YEAR ,I4,2X,7H NO. OF ,8X,13HDETECTOR A ,5X,
* 5X,13HDETECTOR B ,5X,
* 5X,13HDETECTOR C ,5X,
* 5X,13HDETECTOR AB ,5X,
* 5X,13HDETECTOR ABC ,5X)
WRITE(IPRT,6002) IDELTA, IDELTA, IDELTA, IDELTA, IDELTA
6002 FORMAT(1BH DAY PERIOD SAMPLE,5(6X,1HM,8X,1HK,5X,A1,1X) )
DO 40 I=1,48,1
IF(KNT(I).NE.0) GO TO 39
CALL DAYPER(II,I,PAGE,KDAY,FJNT)
WRITE(IPRT,6009) KDAY,FJNT
GO TO 40
39 CONTINUE
IF(ARRAY(I,1,2).GT.100000.) ARRAY(I,1,2) = 99999.
IF(N.EQ.0) THEN
WRITE(IPRT,6004) IDAYS(I),JNT(I),INT(ARRAY(I,1,2)),
" (ARRAY(I,J,2),J=4,5,1),INT(ARRAY(I,6,2))
G , (ARRAY(I,J,3),J=4,5,1),INT(ARRAY(I,6,3))
G , (ARRAY(I,J,7),J=4,5,1),INT(ARRAY(I,6,7))
" , (ARRAY(I,J,5),J=4,5,1),INT(ARRAY(I,6,5))
" , (ARRAY(I,J,12),J=4,5,1),INT(ARRAY(I,6,12))
ELSE
WRITE(IPRT,6004) IDAYS(I),JNT(I),INT(ARRAY(I,1,2)),
" (ARRAY(I,J,2),J=4,5,1),INT(ARRAY(I,6,2))
" , (ARRAY(I,J,3),J=4,5,1),INT(ARRAY(I,6,3))
" , (ARRAY(I,J,7),J=4,5,1),INT(ARRAY(I,6,7))
END IF
40 CONTINUE
WRITE(IPRT,6008) IDELTA,KYR,IMO,JDAY
PAGE = PAGE + .1
WRITE(IPRT,6000) IA(1),IVN(II),YR,PAGE
WRITE(IPRT,6003) IYEAR
6003 FORMAT(5H YEAR ,I4,2X,7H NO. OF ,8X,13H DETECTOR D ,5X,
" 5X,13HDETECTOR G1 ,5X,
" 5X,13HDETECTOR G2 ,5X,
" 5X,13HDETECTOR G+G ,5X,
" 5X,13HDETECTOR DEF ,5X)
WRITE(IPRT,6002) IDELTA, IDELTA, IDELTA, IDELTA, IDELTA
DO 50 I=1,48,1
IF(KNT(I).NE.0) GO TO 49
CALL DAYPER(II,I,PAGE,KDAY,FJNT)
WRITE(IPRT,6009) KDAY,FJNT
GO TO 50
49 CONTINUE
IF(ARRAY(I,1,8).GT.100000.) ARRAY(I,1,8) = 99999.
IF(ARRAY(I,5,8).LT.0.001) ARRAY(I,5,8) = 0.0
IF(ARRAY(I,5,8).GT.100000.) ARRAY(I,5,8) = 99999.
IF(N.EQ.0) THEN
WRITE(IPRT,6005) IDAYS(I) , JNT(I),INT(ARRAY(I,1,8)),
" (ARRAY(I,J,8),J=4,5,1),INT(ARRAY(I,6,8))
" , (ARRAY(I,J,1),J=4,5,1),INT(ARRAY(I,6,1))
" , (ARRAY(I,J,4),J=4,5,1),INT(ARRAY(I,6,4))
" , (ARRAY(I,J,11),J=4,5),INT(ARRAY(I,6,11))

```


The University of Iowa

Iowa City, Iowa 52242



1847

Department of Physics and Astronomy

(319) 335-1686

1 June 1988

Dr. James Lauer Green
National Space Science Data Center
World Data Center A for Rockets
and Satellites
Goddard Space Flight Center
Greenbelt, MD 20771

Dear Jim:

Subject: Transmittal of University of Iowa Data Tapes
for Pioneers 10 and 11: One-Hour Average
Interplanetary Cruise Data and 24-Hour Average
RTG and Temperature Corrected -- Trajectory
Merged -- Interplanetary Cruise Data

The following University of Iowa/Geiger Tube Telescope data
are being sent under separate cover:

Pioneer 10 Cruise One-Hour Averages (1 tape)
-- DOY 327 of 1985 to DOY 83 of 1988.

Pioneer 11 Cruise One-Hour Averages (1 tape)
-- DOY 319 of 1985 to DOY 89 of 1988.

Pioneer 10 Cruise 24-Hour Corrected Averages with Trajectory,
covering launch to DOY 83 of 1988 and

Pioneer 11 Cruise 24-Hour Corrected Averages with Trajectory,
covering launch to DOY 89 of 1988
(all on one tape).

All of the data have been written on nine-track tapes at
~~1600~~ 6250 BPI and are VAX compatible.

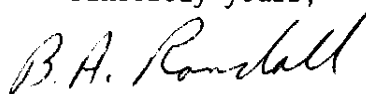
The one-hour average cruise data are an overlapping con-
tinuation of the data sent on 1 August 1986. The formats are the
same as before.

Enclosed is the format for the University of Iowa SUMERG
file. These data are 24-hour averages, corrected for temperature
and RTG background per Van Allen and Randall [1985]. These data

Dr. James Lauer Green
1 June 1988
Page 2

have also been merged with selected trajectory data. These files have the same format as the one-hour cruise data but have twenty additional integer words added to the record length for the trajectory information.

Sincerely yours,



B. A. Randall
Co-Investigator
ARC/NASA Contract NAS2-12327

Enclosures

cc: Dr. J. A. Van Allen/U. of Iowa
Mr. R. O. Fimmel, Code 224-8/ARC
Mr. R. L. Brechwald/U. of Iowa

1 June 1988

24-Hour Average RTG and Temperature Corrected -- Trajectory
Merged -- Interplanetary Cruise Data

SUMERG - PIONEER GTT TAPE FORMAT

Word (I)	Function
1	Spacecraft ID F, G
2	Year of Data 72, 73, ...
3	Day of Data
4	Spare
5-6	Begin Day Fraction
7-8	End Day Fraction
9	Spare
10	Length of Period in Minutes = 1440
11	Period Type 5 = 24 hour
12	Number of Samples This Interval
13-36	Spare
37-60	Spare
61-84	Counting Rate Ave counts/sec*
85-108	Standard Deviation of Count Rate*
109-132	Spare
133-156	Spare
157-180	Spare
181-204	Sum of Raw Counts*
205	Number of Errors This Interval
206-207	Time past 0 ^h January 1, 1950 (sec)
208-209	Earth-Spacecraft Distance (AU)
210-211	Earth-Sun Distance (AU)
212-213	Sun-Spacecraft Distance (AU)
214-215	Celestial Longitude of the Earth (deg)
216-217	Celestial Longitude of the Spacecraft (deg)
218-219	Longitude of Solar Equator +270° (deg)**
220-221	Celestial Latitude of the Earth (deg)
222-223	Celestial Latitude of the Spacecraft (deg)
224-225	Heliographic Latitude of the Spacecraft (deg)**
226-227	Heliographic Latitude of the Earth (deg)**
228-230	Spare

Note 1: Integers are stored as INTEGER*4; real numbers are stored in double precision (REAL*8).

For each string of 12, the quantities are related to the detectors as follows:

- 1 - G_1
- 2 - A
- 3 - B
- 4 - G_2
- 5 - AB
- 6 - ABC_1
- 7 - C
- 8 - D
- 9 - ABC_2
- 10 - DEF
- 11 - $G_1 + G_2$
- 12 - $ABC_1 + ABC_2$

Note 2: All positional coordinates are referred to the equinox/ecliptic of date.

*These quantities have been corrected for temperature and RTG background.

Reference Van Allen and Randall, *Interplanetary Cosmic Ray Intensity: 1972-1984 and Out to 32 AU*, J. Geophys. Res., 90, 1399-1412, 1985.

**Calculated quantities.

Inclination of solar equator to ecliptic, $I = 7^\circ 15'$.

Longitude of the ascending node of the solar equator on the ecliptic

$$\Omega = 73^\circ 40' + 50''.25 t$$

where t is the time in years reckoned from 1850.

Reference Explanatory Supplement to the Astronomical Ephemeris and the American Ephemeris and Nautical Almanac, 1961, page 307.

The University of Iowa

Iowa City, Iowa 52242



1847

Department of Physics and Astronomy

(319) 353-4343

1 August 1986

Dr. James L. Green
National Space Science Data Center
World Data Center A for Rockets
and Satellites
Goddard Space Flight Center
Greenbelt, MD 20771

Dear Jim:

Subject: Transmittal of University of Iowa Data Tapes
for Pioneers 10 and 11 Interplanetary Cruise

Enclosed are the formats for the University of Iowa Pioneer 10 and 11 data for the cruise phase. Also enclosed is a Fortran routine to read the tapes.

All of the data have been written on nine-track tapes at 1600 BPI and are VAX compatible.

The tapes are being sent under separate cover and consist of the following:

Pioneer 10 Cruise One-Hour Averages (3 tapes)
-- covering launch to DOY 115 1986.

Pioneer 11 Cruise One-Hour Averages (3 tapes)
-- covering launch to DOY 115 1986.

Sincerely yours,



B. A. Randall

Co-Investigator, ARC/NASA Contract NAS2-12327

Enclosures

cc: Dr. J. A. Van Allen/U. of Iowa
Mr. R. O. Fimmel, Code 224-8/ARC
Mr. R. L. Brechwald/U. of Iowa
Ms. R. M. Kraemer/U. of Iowa

Pioneer GTT One-Hour Sums
Tape Format

<u>Word (I)</u>	<u>Word (R)</u>	<u>Function</u>
1		Spacecraft ID (F, G)
2		Year of Data (72, 73 ...)
3		Day of Year
4		Spare
5-6	3	Begin Day Fraction
7-8	4	End Day Fraction
9		Quarter Hour Number
10		Length of Period 60 Minutes
11		Period Type 3=60 Min
12		Number of Samples
13-36	7-18	Effective Counts
37-60	19-30	(Sum of Raw Counts)/0.09375
61-84	31-42	Counting Rate Ave. Counts/Sec
85-108	43-54	Standard Deviation of Count Rate
109-132	55-66	M (Fourier Coefficients)
133-156	67-78	K $F(\varphi) = M (1 + K \cos(\varphi - \Delta))$
157-180	79-90	Δ
181-204	91-102	Sum of Raw Counts
205		Number of Errors This Interval
206-210		Spare

Note: Integers are stored as INTEGER*4, real numbers are stored in double precision (Real*8). Fourier coefficients may not be present in record.

For each string of 12, these quantities are related to the detectors as follows:

- 1 - G_1
- 2 - A
- 3 - B
- 4 - G_2
- 5 - AB
- 6 - ABC_1
- 7 - C
- 8 - D
- 9 - ABC_2
- 10 - DEF
- 11 - $G_1 + G_2$
- 12 - $ABC_1 + ABC_2$

Input: Redfag Sums or P1AN24 Sums
Output: Printout (FOR014)

(PRTFAG.COM)

```
$ASSIGN PRTFAG.DAT FOR005  
$!LINK [KRAEMER.RMK904.PIO]PRTFAG,JGET18,[KRAEMER.RMK904]TFINVAX,-  
!DUA0:[PRCLIB]MTAPEIO/L  
$ASSIGN DISK$1:[001200] FOR014  
$ASSIGN SYS$COMMAND SYS$INPUT  
$RUN PRTFAG
```

Sample 'Card' file (FOR005 → PRTFAG.DAT)

60
-1

PRTFAG

- a) Edit PRTFAG.DAT (Running instructions)
Choose time intervals needed (may choose from 1 to 5 values)
15 - Quarter hour
30 - Half hour
60 - One hour
180 - Three hour
1440 - Twenty-four hour
-1 - Signifies end of interval data
(this value must be present at end of file)
- b) Load and mount input tape (MOUNT/FORE xxx)
- c) Type @PRTFAG

DESCRIPTION OF THE UNIVERSITY OF IOWA PIONEERS 10 AND 11
JUPITER ENCOUNTER DATA FILES

Introduction

The University of Iowa Pioneers 10 and 11 Jupiter encounter data files consist of two separate sets of magnetic tapes containing frame-by-frame data recorded by the University of Iowa energetic particle detectors aboard Pioneers 10 and 11 during their respective encounter periods. The Pioneer 10 file comprises three tapes and covers the period DOY (day of year) 329 through 352, 1973. The Pioneer 11 file comprises seven tapes and covers the period DOY 323 through 347, 1974. Each tape record consists of a time cluster, a data matrix containing particle count rates from the various detectors, a corresponding angle matrix containing spacecraft roll angles, trajectory data on spacecraft position, and spacecraft orientation data. All counting rates have been corrected for dead time.

Tape Format and Parameter Description

The Pioneer Jupiter encounter data file is recorded on 7 track, single file magnetic tape by a Univac 418 system III computer. Each record consists of 695 18-bit words of odd parity at a density of 800 bpi. Integer data values each comprise a single word. All floating point values are single precision and comprise two words.

The parameters in the time cluster refer to the Universal Time of reception of the Pioneer telemetry signal at the Earth (ERT) centered on the mid-time of the record accumulation interval.

The frame-by-frame detector data are in counts per second and arranged in matrix form within each tape record. Each column of the matrix represents a different detector or coincidence combination. The left-to-right order of the columns in the Pioneer 10 file is G, A, B, G, AB, DEF, C, D; for the Pioneer 11 file it is G, A, B, G, AB, ABC, C, D, ABC. The number of rows in the respective data matrices for the two spacecraft was chosen such that a single column contains a nearly complete distribution in spacecraft roll angle. The Pioneer 10 data matrix has 26 rows yielding an angular resolution of $\sim 14^\circ$. The Pioneer 11 data matrix has 23 rows. However, due to the relationship between the prevailing Pioneer 11 spin and data sample periods, two records are required for complete angular coverage, yielding an angular resolution of $\sim 7^\circ$.

7th, 800, BIN, 1 file

Tape Record FormatUniversity of Iowa Pioneer Jupiter Encounter Data Files

<u>Word</u>	<u>PNLO</u>	<u>PNL1</u>	<u>Description</u>
1		IYR	Year
2		IDY	Integral Day of Year (DOY)
3		IMO	Month
4		IDM	Day of Month
5,6		FOD	Fraction of Day (ERT)
7,8		DLY	Propagation Delay (Milliseconds)
9,10		AV(1)	} Spin Averaged Data. Order - G ₁ , A, B, G ₂ , AB, ABC ₁ , C, D, ABC ₂ , DEF.
.		.	
.		.	
.		.	
.		.	
.		.	
.		.	
.		.	
27,28		AV(10)	
29,30	A(1,1)	A(1,1)	
.	.	.	
.	.	.	
.	.	.	
.	.	.	
.	.	.	
.	.	.	
.	.	.	
441,442	.	A(23,9)	
443,444	A(26,8)	spares	

Variable Name

<u>Word</u>	<u>PN10</u>	<u>PN11</u>	<u>Description</u>
445	NANG(1,1)	NANG(1,1)	Angular Data Matrix
.	.	.	
.	.	.	
.	.	.	
.	.	.	
.	.	.	
651	.	NANG(23,9)	
652	NANG(26,8)	spare	

653	IOCCUL	1 = Occultation
-----	--------	-----------------

654,655	BLMAGR	Trajectory parameters. Refer to ARC Specification PC-262.04 for definitions.
656,657	BLLATP	
658,659	S5P	
660,661	XPLSFF	
662,663	YPLSFF	
664,665	ZPLSFF	
666,667	XP1	
668,669	YP1	
670,671	ZP1	
672,673	S5E	
674,675	E5P	
676,677	REARPR	
678,679	BLONP	
680,681	LONEL	

<u>Word</u>	<u>PN10</u>	<u>PN11</u>	<u>Description</u>
682,683		RJ	Radial distance to Jupiter in R_J (= 71,372 km).
684,685		BLLON3	S/C system III (1957.0) longitude.
686,687		BLLT3Z	} Latitude and System III (1957.0) longitude of S/C spin axis.
688,689		BLLN3Z	
690,691		BLLT3X	} Latitude and System III (1957.0) longitude of S/C x-axis.
692,693		BLLN3X	
694,695		spares	

The University of Iowa

Iowa City, Iowa 52242

72-012A-11
73-019A-11



1847

Department of Physics and Astronomy

(319) 353-4043

Bruce Randall
353-4245

23 July 1982

Dr. James I. Vette
National Space Science Data Center
World Data Center A for Rockets
and Satellites
Goddard Space Flight Center/NASA
Greenbelt, MD 20771

Dear Dr. Vette:

Subject: Transmittal of University of Iowa Data Tapes
for Pioneers 10 and 11 -- Saturn Encounter
Data of Pioneer 11 and Interplanetary Cruise
Data of Pioneers 10 and 11

Enclosed are the formats for the University of Iowa Pioneer 11 Saturn encounter file and for the one-hour averaged counting rates for the cruise phases of both Pioneer 10 and Pioneer 11.

All of the data have been written on nine track tapes at 1600 BPI and are phase encoded. The Pioneer 11 Saturn encounter file has 5184 bytes per record and the cruise files have 1226 bytes/record and are blocked by 10.

The tapes are being sent under separate cover and consist of the following:

Pioneer 11 Saturn Encounter (1 tape) - DOY 242 to 248 of 1979.

Pioneer 10 Cruise One-Hour Averages (3 tapes) - covering launch to DOY 136 1982.

Pioneer 11 Cruise One-Hour Averages (3 tapes) - covering launch to DOY 138 1982.

Sincerely yours,

J. Van Allen

J. A. Van Allen
Principal Investigator
ARC/NASA Contract NAS2-11125

Enclosures

cc: ARC/Mr. Richard O. Fimmel

P11 - 11B
P10 - 11B
P11 - 11C

Pioneer 10/11 One-Hour Cruise Data

<u>Format</u>		<u>Name/Description</u>
A3		Spacecraft F(10) or G(11)
I4		Year
I4		Day
I4		Blank
F 10.7		Begin Day Fraction
F 10.7		End Day Fraction
I3		Quarter Hour Number (0, 4, ...)
I3		Period (60 Min)
I5		Type of Data (3)
I5		Number of Samples
12 E 12.5	E(12)	Effective Counts
12 E 12.5	S(12)	(Sum of Raw Counts)/0.09375
12 E 12.5	C(12)	Count Rate Ave (Counts/Sec)
12 E 12.5	σ (12)	Standard Deviation of Count Rate
12 E 12.5	M(12)	M (Fourier Coefficients)
12 E 12.5	K(12)	K $F(\varphi) = M (1 + M \cos (\varphi - \Delta))$ Phase Amplitude
12 E 12.5	Δ (12)	
12 E 12.5	R(12)	Sum of Raw Counts
I6		Number of Errors
5I3		Blanks

Note: Fourier coefficients may not be present in record.

For each string of 12, these quantities are related to the detectors
as follows:

- 1 - G_1
- 2 - A
- 3 - B
- 4 - G_2
- 5 - AB
- 6 - ABC_1
- 7 - C
- 8 - D
- 9 - ABC_2
- 10 - DEF
- 11 - $G_1 + G_2$
- 12 - $ABC_1 + ABC_2$

73-φ19A-11B

ENCLOSURE 2

Pioneer 11 Saturn Encounter File

<u>Format</u>		<u>Name/Description</u>
I3		Year
I3		Day
I3		Month
I3		Day of Year MONTH
F 10.7		Fraction of Day ERT
F 10.5		Propagation Delay
I3		E-221 Temperature
I3		Blank
140 E 20.8	{ A(1, 1) A(14, 10) }	Count Rates -- Angular Data G ₁ , A, B, G ₂ , AB, ABC ₁ , C, D, ABC ₂ , and DEF
I3		Blank
140 I 5	{ IA(1, 1) IA(14, 10) }	Raw Data Compressed Format
5 I 3		Blanks
E 20.8		Sum of G ₁ Angles in Degrees
F 9.5		Start Time - 200 in Days
F 9.5		Stop Time - 200 in Days
10 E 20.8	{ AVE (1) AVE (10) }	Spin Averaged Count Rate Data - G ₁ , A, B, G ₂ , AB, ABC ₁ , C, D, ABC ₂ , DEF
I4		Number of Records in Average

Helium Vector Magnetometer
Magnetic Field Data JPL

E 20.8	B _x	Gammas
E 20.8	B _y	Gammas
E 20.8	B _z	Gammas
E 20.8	B	Gammas
E 20.8	Arc Cos (B _z / B)	Degrees
E 20.8	Arc Tan (B _y /B _x)	Degrees

Trajectory Data

E 20.8	Spacecraft Time Fraction of Day
E 20.8	Bl MAGR Saturn-S/C Distance (km)
E 20.8	Bl IATP Saturn Latitude of the S/C (degrees)
E 20.8	S5P Sun-Saturn-S/C (degrees)
E 20.8	HRANGP Heliocentric Radius to S/C (km)
E 20.8	Bl MAGV Velocity of S/C w.r.t. Saturn (km/sec)
E 20.8	XPl SFF X-Component of the S/C (Saturn centered)
E 20.8	YPl SFF Y-Component in km
E 20.8	ZPl SFF Z-Component
E 20.8	S5E Sun-Saturn-Earth (degrees)
E 20.8	E5P Earth-Saturn-S/C (degrees)
E 20.8	REARPR Geocentric Radius to S/C (km)
E 20.8	Bl LONP Saturn Longitude of S/C (degrees)
E 20.8	LON S1 Saturn Centered Longitude of Earth
E 20.8	RA S1 Saturn Centered Celestial Longitude of Sun
E 20.8	Local Time Degrees
E 20.8	LONE 1 Saturn Centered Longitude of Earth (degrees)
E 20.8	Radial Distance ($R_s = 60,000$ km)
F 15.7	Fraction of Day -- Time Delay

Angular Data

140 I 4	{ NANG (1, 1) ⋮ NANG (14, 10) }	Roll angles for each sample corresponding to A(1,1) through A(14,10)
F 12.4		CKAH <i>clock angle to sun</i>
F 12.4	Spin Period	
F 12.4	Celestial Longitude of Spin Axis	
F 12.4	Celestial Latitude of Spin Axis	
I5	Telemetry Mode	
I5	Telemetry Format	
I5	Data Rate	
I5	Station Number	

14 I 5 { ISPF (1)
 ⋮
 ISPF (14) }

14 F 10.7 { DFSW (1)
 ⋮
 DFSW (14) }

Day Fraction of the Sync Word for
Each Frame of Data

72-012A-11B/C

UNIVERSITY OF IOWA

PIONEER 10 1

HOUR AVERAGES

YEAR 72 DAY PERIOD	A		B		C		D		G+G		AB		ABC+ABC		DEF	
	AVERAGE	SD	AVERAGE	SD	AVERAGE	SD	AVERAGE	SD	AVERAGE	SD	AVERAGE	SD	AVERAGE	SD	AVERAGE	SD
63 0.00																
63 1.00																
63 2.00																
63 3.00	0.915	0.057	0.757	0.052	0.778	0.053	0.220	0.028	7.530	0.116	0.0000	0.0000	0.0054	0.0031	0.0036	0.0036
63 4.00	0.893	0.061	0.677	0.054	0.770	0.057	0.258	0.033	0.997	0.046	0.0127	0.0073	0.0042	0.0030	0.0000	0.0000
63 5.00																
63 6.00																
63 7.00																
63 8.00	0.856	0.068	0.715	0.062	0.824	0.067	0.304	0.041	0.702	0.044	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
63 9.00	0.856	0.054	0.750	0.051	0.805	0.052	0.303	0.032	0.730	0.035	0.0171	0.0076	0.0085	0.0038	0.0000	0.0000
63 10.00	0.863	0.065	0.775	0.062	0.750	0.061	0.353	0.042	0.667	0.040	0.0049	0.0049	0.0098	0.0049	0.0049	0.0049
63 11.00	0.899	0.056	0.802	0.053	0.816	0.053	0.251	0.030	0.657	0.034	0.0105	0.0060	0.0035	0.0025	0.0035	0.0035
63 12.00	0.786	0.051	0.800	0.052	0.826	0.053	0.238	0.028	0.652	0.033	0.0067	0.0047	0.0067	0.0033	0.0067	0.0047
63 13.00	0.872	0.054	0.745	0.050	0.765	0.051	0.225	0.027	0.686	0.034	0.0067	0.0047	0.0017	0.0017	0.0000	0.0000
63 14.00	0.798	0.053	0.808	0.053	0.690	0.049	0.254	0.030	0.674	0.034	0.0070	0.0049	0.0035	0.0025	0.0035	0.0035
63 15.00	0.888	0.062	0.669	0.054	0.806	0.059	0.270	0.034	0.654	0.037	0.0086	0.0061	0.0064	0.0037	0.0086	0.0061
63 16.00	0.803	0.052	0.693	0.049	0.765	0.051	0.196	0.026	0.672	0.034	0.0069	0.0049	0.0034	0.0024	0.0069	0.0049
63 17.00	0.830	0.053	0.684	0.048	0.786	0.052	0.286	0.031	0.740	0.035	0.0034	0.0034	0.0068	0.0034	0.0000	0.0000
63 18.00	0.832	0.053	0.765	0.051	0.802	0.052	0.301	0.032	0.616	0.032	0.0034	0.0034	0.0034	0.0024	0.0000	0.0000
63 19.00	0.771	0.110	0.692	0.104	0.755	0.109	0.205	0.057	0.739	0.076	0.0000	0.0000	0.0079	0.0079	0.0000	0.0000
63 20.00	0.903	0.057	0.799	0.054	0.867	0.056	0.309	0.033	0.752	0.037	0.0180	0.0080	0.0054	0.0031	0.0036	0.0036
63 21.00	0.891	0.055	0.780	0.051	0.760	0.051	0.276	0.030	0.639	0.033	0.0135	0.0067	0.0034	0.0024	0.0034	0.0034
63 22.00	0.863	0.054	0.718	0.049	0.782	0.051	0.312	0.032	0.645	0.033	0.0067	0.0047	0.0084	0.0038	0.0067	0.0047
63 23.00	0.821	0.053	0.851	0.053	0.750	0.050	0.323	0.033	0.666	0.033	0.0067	0.0048	0.0050	0.0029	0.0034	0.0034
64 0.00	0.853	0.054	0.836	0.053	0.748	0.050	0.266	0.030	0.617	0.032	0.0101	0.0058	0.0034	0.0024	0.0034	0.0034
64 1.00	0.838	0.059	0.805	0.058	0.776	0.057	0.257	0.033	0.699	0.038	0.0166	0.0083	0.0021	0.0021	0.0000	0.0000
64 2.00	1.020	0.085	0.734	0.072	0.856	0.078	0.321	0.048	0.663	0.049	0.0000	0.0000	0.0036	0.0036	0.0071	0.0071
64 3.00																
64 4.00	0.839	0.057	0.792	0.055	0.784	0.055	0.221	0.029	0.701	0.037	0.0078	0.0055	0.0019	0.0019	0.0039	0.0039
64 5.00	0.979	0.057	0.790	0.052	0.757	0.050	0.249	0.029	0.664	0.033	0.0101	0.0058	0.0017	0.0017	0.0067	0.0048
64 6.00	0.717	0.049	0.819	0.053	0.840	0.053	0.306	0.032	0.734	0.035	0.0000	0.0000	0.0102	0.0042	0.0034	0.0034
64 7.00	0.840	0.059	0.799	0.057	0.643	0.051	0.272	0.033	0.667	0.037	0.0041	0.0041	0.0041	0.0029	0.0041	0.0041
64 8.00	0.577	0.140	0.781	0.163	0.713	0.156	0.238	0.090	0.713	0.110	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
64 9.00	0.861	0.064	0.818	0.063	0.847	0.064	0.178	0.029	0.628	0.039	0.0144	0.0083	0.0096	0.0048	0.0048	0.0048
64 10.00	0.785	0.052	0.775	0.051	0.823	0.053	0.253	0.029	0.609	0.032	0.0137	0.0068	0.0017	0.0017	0.0034	0.0034
64 11.00	0.872	0.054	0.739	0.050	0.779	0.051	0.271	0.030	0.769	0.036	0.0301	0.0100	0.0050	0.0029	0.0000	0.0000
64 12.00	0.819	0.052	0.745	0.050	0.759	0.050	0.294	0.031	0.675	0.034	0.0000	0.0000	0.0067	0.0033	0.0067	0.0047
64 13.00	0.886	0.054	0.786	0.051	0.840	0.053	0.241	0.028	0.649	0.033	0.0134	0.0067	0.0017	0.0017	0.0000	0.0000
64 14.00	0.842	0.053	0.709	0.049	0.842	0.053	0.287	0.031	0.684	0.034	0.0167	0.0075	0.0050	0.0029	0.0000	0.0000
64 15.00	0.782	0.051	0.769	0.051	0.786	0.051	0.275	0.030	0.646	0.033	0.0134	0.0067	0.0067	0.0034	0.0034	0.0034
64 16.00	0.785	0.051	0.805	0.052	0.815	0.052	0.249	0.029	0.755	0.036	0.0135	0.0067	0.0067	0.0034	0.0067	0.0048
64 17.00	0.768	0.052	0.768	0.052	0.881	0.056	0.229	0.028	0.683	0.035	0.0106	0.0061	0.0053	0.0031	0.0000	0.0000
64 18.00	0.860	0.055	0.797	0.053	0.797	0.053	0.202	0.027	0.613	0.033	0.0139	0.0070	0.0035	0.0025	0.0035	0.0035
64 19.00	0.961	0.057	0.683	0.048	0.881	0.054	0.291	0.031	0.663	0.033	0.0067	0.0047	0.0017	0.0017	0.0134	0.0067
64 20.00	0.900	0.055	0.753	0.050	0.860	0.054	0.262	0.030	0.675	0.034	0.0067	0.0048	0.0034	0.0024	0.0000	0.0000
64 21.00	0.765	0.051	0.738	0.050	0.778	0.051	0.262	0.030	0.718	0.035	0.0067	0.0047	0.0117	0.0044	0.0034	0.0034
64 22.00	0.876	0.054	0.795	0.052	0.806	0.052	0.252	0.029	0.658	0.033	0.0235	0.0089	0.0017	0.0017	0.0101	0.0058
64 23.00	0.868	0.054	0.728	0.049	0.778	0.051	0.282	0.031	0.689	0.034	0.0000	0.0000	0.0000	0.0000	0.0034	0.0034
NO. OF SAMPLES	0	0	0	2960	2520	0	0	0	1968	3128	2176	3060	3188	3180	3061	2487
86/ 7/28	3109	3136	3152	678	2965	3172	3177	3172	3165	2571	1496	0	2747	3172	3138	2589
	314	2217	3124	3191	3191	3189	3191	3177	3166	3028	3063	3185	3175	3180	3178	3181

RECORD 18585 OF FILE 1
LENGTH = 840 BYTES

95 60

0A000000	5F000000	3C000000	00000000	7540C76D	00000000	7E40FA6C	00000000	5C000000	3C000000
03000000	00000000	B0450000	00000000	B0450000	00000000	B0450000	00000000	B0450000	00000000
B0450000	00000000	B0450000	00000000	B0450000	00000000	B0450000	00000000	B0450000	00000000
B0450000	00000000	30460000	00000000	30460000	00000000	BD455555	00500000	D645AAAA	00B00000
D9455555	00600000	B5455555	00500000	2A42ABAA	00000000	2A42ABAA	00000000	FD455555	00600000
2245AAAA	00A00000	00000000	00000000	00000000	00000000	39465555	00500000	2A42ABAA	00000000
89406CB2	459774D1	9C40071F	D1C55D74	9E40830F	BAE88C2E	8340F8E0	2E3AA38B	F83C103E	00000000
F83C103E	00000000	B8400F3E	A28BBAE8	EC3F269B	2EBAA38B	00000000	00000000	00000000	00000000
8640B2C9	BA688C2E	783C103E	00000000	B83E65E2	10F07857	C43E7DDD	EEF4CE08	C63E8D15	92C6CBE0
B43EABEF	4C129445	F83C0F3E	F0C1177C	F83C0F3E	F0C1177C	D53E92DC	B2278834	723EBA5A	66DB49AC
00000000	00000000	00000000	00000000	813E3A58	DA10D3F3	783C0F3E	F0C1177C	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
0D44FFFF	00FC0000	21440000	00040000	23440000	00080000	0744FFFF	00FC0000	80400000	00400000
80400000	00400000	3E440000	00080000	7343FFFF	00F00000	00000000	00000000	00000000	00000000
8A44FFFF	00FC0000	80400000	00400000	00000000	00000000	00000000	00000000	00000000	00000000

18585 RECORDS IN FILE 1 OF TAPE

RECORD 13684 OF FILE 1
LENGTH = 840 BYTES

95 23

0B000000	15F000000	17000000	00000000	5640F243	00000000	5E408C7A	00000000	50000000	3C000000
03000000	00000000	08460000	00000000	08460000	00000000	08460000	00000000	08460000	00000000
08460000	00000000	08460000	00000000	08460000	00000000	08460000	00000000	08460000	00000000
08460000	00000000	88460000	00000000	88460000	00000000	0A44AAAA	00E00000	2E460000	00080000
0D46FFFF	00E00000	15445555	00800000	2A42ABAA	00000000	00000000	00000000	2346FFFF	00F40000
55455555	00400000	00000000	00000000	2A42ABAA	00000000	90440000	00300000	00000000	00000000
823E8282	B4B4B5B4	A340C3C3	4BCB4B4B	8540A5A5	87878887	8C3E8C8C	B4B4B5B4	A03CA0A0	F0F0F1F0
00000000	00000000	9A405A5A	0F4F0F0F	C83FC8C8	B4B4B5B4	00000000	00000000	A03CA0A0	F0F0F1F0
873E8787	B4B4B5B4	00000000	00000000	903DA2C9	B613FAA1	A23E4130	C0171FE6	923E7C84	35BC2DD1
963DD340	AA3F7469	A03CA0A0	C8C8C4C8	00000000	00000000	9D3E7D75	AB6C530D	333E4296	4B4DDD1D
00000000	00000000	A03CA0A0	C8C8C4C8	503D43A9	6E3466C7	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
50420000	00500000	82440080	00060000	5444FFFF	00D00000	60420000	00400000	80400000	00400000
00000000	00000000	7544FFFF	00EE0000	9F43FFFF	00F00000	00000000	00000000	80400000	00400000
D8420000	00480000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000

13684 RECORDS IN FILE 1 OF TAPE

DUMP OF TAPE SOUT1

Planes 10
72-012A-11B
D-73998

INPUT TAPE SOUT1 ON TB1
DATA INPUT H9 NF-1 FL-1 1 1

FILE	1	RECORD	LENGTH	840BYTES
(0)	0A300000	48000000	3F000000	00000000 023F2515 00000000 2A3F84A9 00000000 0C000000 3C000000
(40)	03000000	00000000	39460000	00000000 39460000 00000000 39460000 00000000 39460000 00000000
(80)	39460000	00000000	39460000	00000000 39460000 00000000 39460000 00000000 39460000 00000000
(120)	39460000	00000000	B9460000	00000000 B9460000 00000000 B9460000 00000000 B9460000 00000000 29465455 00000000
(160)	0B46FFFF	00000000	AB47A66A	00000000 00000000 00000000 2A42ABAA 00000000 0F46FFFF 00000000
(200)	2245AAAA	00000000	AA42A3AA	00000000 2A42A3AA 00000000 2E48FB1F 00000000 00430000 00000000
(240)	F441F1B2	00000000	6A401852	00000000 4140CEBA 00000000 ED411934 00000000 00000000 00000000
(280)	6C3C702A	00000000	4740CC43	00000000 613F7218 00000000 EC3C702A 00000000 6C3C702A 00000000
(320)	F04185F3	00000000	B13CD41F	00000000 293F0EFC 00000000 6B3ECD3D 00000000 553EDFES 00000000
(360)	273F645C	00000000	00000000	00000000 6C3C702A 00000000 583E9EEE 00000000 E6326F90 00000000
(400)	A63C92FE	00000000	6C3C702A	00000000 EE3EE88B 00000000 4C3C8A86 00000000 00000000 00000000
(440)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(480)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(520)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(560)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(600)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(640)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(680)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(720)	0446FC9F	00000000	7D44FDFF	00000000 5144FEFF 00000000 0046FC8F 00000000 00000000 00000000
(760)	80400000	00000000	5744FEFF	00000000 7343FEFF 00000000 00410000 00000000 80400000 00000000
(800)	8246FC97	00000000	40410000	00000000 00000000 00000000 00000000 00000000 00000000 00000000

FILE	1	RECORD	LENGTH	840BYTES
(0)	0A000000	48000000	77000000	00000000 4A40B1C2 00000000 55401952 00000000 4C000000 3C000000
(40)	03000000	00000000	38460000	00000000 38460000 00000000 38460000 00000000 38460000 00000000
(80)	38460000	00000000	38460000	00000000 38460000 00000000 38460000 00000000 38460000 00000000
(120)	38460000	00000000	B8460000	00000000 B8460000 00000000 B8460000 00000000 3846FFFF 00000000 3546FFFF 00000000
(160)	39465555	00000000	2046AAAA	00000000 00000000 00000000 00000000 00000000 3B46FFFF 00000000
(200)	5D455555	00000000	2A42ABAA	00000000 2A42ABAA 00000000 2A42ABAA 00000000 32465555 00000000 2A42ABAA 00000000
(240)	824059C8	00000000	7D40A637	00000000 804073ED 00000000 6A40AAAA 00000000 00000000 00000000
(280)	00000000	00000000	824059C8	00000000 A53FF819 00000000 6D3C0473 00000000 6D3C0473 00000000
(320)	7840AE1D	00000000	ED3B0473	00000000 793E3937 00000000 753EE534 00000000 773E2171 00000000
(360)	5C3ECA0D	00000000	00000000	00000000 00000000 00000000 793E3837 00000000 0C3E7801 00000000
(400)	6D3C0473	00000000	6D3C0473	00000000 2B3E8DA1 00000000 ED3B0473 00000000 00000000 00000000
(440)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(480)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(520)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(560)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(600)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(640)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(680)	00000000	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000 00000000
(720)	8D440000	00000000	88440080	00000000 8A44FFFF 00000000 7C44FFFF 00000000 00000000 00000000
(760)	00000000	00000000	8C44FFFF	00000000 B143FFFF 00000000 80400000 00000000 80400000 00000000
(800)	054500C0	00000000	80400000	00000000 00000000 00000000 00000000 00000000 00000000 00000000

FILE	INPUT	DATA RECORDS	MAX.	READ ERROR SUMMARY	INPUT RETRIES
	RECS.	INPUT	SIZE	PERM ZERO B SHORT UNDEF.	#RECS. TOTAL#
1	23818	23818	840	0 0 0 0	0 0

EQJ DUMP STOPPED AFTER FILE 1 # OF PERMANENT READ ERRORS 0

START TIME 01/02/87 12:03:08 STOP TIME 01/02/87 12:09:56

(320)	433E310C	92242549	00000000	00000000	00000000	00000000	EC3FA2DA	6ED85FC6	EC3FA2DA	DCE1ED1B
(360)	C33E300C	CFF3EE3C	00000000	00000000	00000000	00000000	A13F95B9	9BF7E9B5	00000000	00000000
(400)	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	433E300C	CFF3EE3C	00000000	00000000	00000000	00000000
(440)	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	00000000	00000000	00000000	00000000	00000000
(480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(520)	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	00000000	00000000	00000000	00000000	00000000	00000000
(560)	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	00000000	00000000	00000000	00000000
(600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(680)	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	00000000	00000000	00000000	00000000
(720)	CCCCCCCC	CCCCCCCC	7C420000	00000000	7C420000	00000000	00000000	00000000	00000000	00000000
(760)	00000000	00000000	30420000	00580000	00000000	00000000	00000000	00000000	00000000	00000000
(800)	864CCCCC	00400000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000

YEAR=88 DAY=88 = 3/28/88

FILE	S	RECORD	465	LENGTH	84CEYTES						
(0)	08000000	158000000	158000000	00000000	2A4C5BAE	00000000	2B4C7E12	00000000	40000000	3C000000	
(40)	03000000	00000000	80440000	00000000	80440000	00000000	80440000	00000000	80440000	00000000	
(80)	8C440000	00000000	8C440000	00000000	8C440000	00000000	80440000	00000000	80440000	00000000	
(120)	8C440000	00000000	00450000	00000000	00450000	00000000	00000000	00000000	0A44AEAA	00000000	
(160)	15445555	00000000	00000000	00000000	00000000	00000000	00000000	00000000	35445555	00000000	
(200)	AA42ABAA	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(240)	00000000	00000000	0A4CABAA	00000000	15445555	00000000	00000000	00000000	00000000	00000000	
(280)	00000000	00000000	35445555	00000000	AA3EABAA	00000000	00000000	00000000	00000000	00000000	
(320)	00000000	00000000	00000000	00000000	00000000	00000000	193F3CD6	B246B626	1F3FE0A4	392F71D4	
(360)	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	00000000	2F3F4EEB	9AC88FAA	713EEF5B	4E2CE5CE	
(400)	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	00000000	00000000	00000000	00000000	00000000	
(440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(520)	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	00000000	00000000	00000000	00000000	00000000	
(560)	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	00000000	00000000	00000000	00000000	00000000	
(600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(640)	CCCCCCCC	CCCCCCCC	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	
(680)	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	00000000	00000000	00000000	00000000	00000000	
(720)	00000000	00000000	50420000	00000000	5F42FFFF	00000000	00000000	00000000	00000000	00000000	
(760)	00000000	00000000	8742FFFF	00000000	00410000	00400000	00000000	00000000	00000000	00000000	
(800)	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	CCCCCCCC	00000000	00000000	00000000	00000000	00000000	

FILE	INFLT RECS.	DATA INPUT	RECORDS	MAX. SIZE	READ ERROR SUMMARY				INFLT RETRIES		
					PERM	ZERO	B	SHORT	UNDEF.	#RECS.	TOTAL#
9	465	466		840	0	0	0	0	0	0	0

ECU DUMP STOPPED AFTER FILE 9 # OF PERMANENT READ ERRORS 0

START TIME 11/17/85 18:26:30 STCP TIME 11/17/85 18:27:46

\$\$
\$ASS IN HT1
\$EXE TPDUPC BS