#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

PIONEER 10

PIONEER 11

JUPITER ENCOUNTER TAPES

72-012A-11A

73-019A-11A

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	RAND NO.	ACQ. AGENT
VJP	RC55. RD1110	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

D#	C#	TIME SPAN
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

D#	C#	TIME SPAN
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

D-23344
11/25/73 - 12/4/73

DUMP OF TAPE X-213

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

FILE	1 RECORD 73	1 LENGTH 25	2208BYTES					
(0)	000111000511	000013000031	170554460000	000000000000	000613000000	200525252525	201525252525	000000000000
(48)	200525252525	200525252525	000000000000	201525252525	201525252525	202400000000	000000000000	000000000000
(96)	200525252525	000000000000	201525252525	200525252525	200525252525	202400000000	000000000000	202400000000
(144)	202400000000	000000000000	000000000000	000000000000	200525252525	200525252525	201525252525	200525252525
(192)	200525252525	201525252525	000000000000	000000000000	000000000000	200525252525	200525252525	200525252525
(240)	200525252525	000000000000	201525252525	200525252525	200525252525	000000000000	202400000000	200525252525
(288)	201525252525	202400000000	200525252525	201525252525	000000000000	000000000000	202400000000	000000000000
(336)	200525252525	200525252525	200525252525	200525252525	000000000000	200525252525	200525252525	000000000000
(384)	000000000000	200525252525	201525252525	200525252525	000000000000	201525252525	200525252525	201525252525
(432)	200525252525	202400000000	000000000000	200525252525	200525252525	201525252525	201525252525	201525252525
(480)	202525252525	200525252525	202400000000	200525252525	000000000000	202525252525	202400000000	200525252525
(528)	000000000000	201525252525	200525252525	000000000000	200525252525	202525252525	000000000000	200525252525
(576)	200525252525	200525252525	201525252525	200525252525	201525252525	202400000000	000000000000	200525252525
(624)	200525252525	201525252525	200525252525	200525252525	201525252525	000000000000	000000000000	000000000000
(672)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(720)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(768)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(816)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(864)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(912)	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000	000000000000
(960)	000000000000	202400000000	000000000000	200525252525	201525252525	202525252525	200525252525	202525252525
(1008)	201525252525	201525252525	000000000000	202400000000	201525252525	201525252525	202400000000	202400000000
(1056)	000000000000	201525252525	202400000000	200525252525	200525252525	200525252525	000000000000	200525252525
(1104)	202400000000	200525252525	000000000000	200525252525	201525252525	000000000000	000000000000	200525252525
(1152)	200525252525	000000000000	200525252525	200525252525	000000000000	000000000000	000000000000	200525252525
(1200)	000000000000	000000000000	000000000000	000000000000	000000000000	200525252525	200525252525	000000000000
(1248)	000000000000	000000000000	200525252525	200525252525	200525252525	000000000000	000000000000	000000000000
(1296)	000000000000	000000000000	010467000000	205720003166	205720052261	200611661162	200557455742	200676267622
(1344)	200730473040	000000000000	000000000000	201447304724	177525252521	000000000000	000000000000	000032175632
(1392)	374410201601	237745577332	742215201635	017701207673	073400207530	606275604064	012505226564	611365576050
(1440)	127616204571	657152602050	342353200465	536350553336	756174226554	653356555156	164402553336	756225226530
(1488)	550405224750	374553202650	452655204420	704712234761	314025211471	074760204537	225564202516	352442211515
(1536)	200531211501	367641206526	223231173771	433272000466	000075000253	000432000041	000217000376	000005000163
(1584)	000342000520	000127000305	000464000072	000251000430	000036000215	000373000002	000161000337	000516000124
(1632)	000302000541	000147000326	000505000113	000272000451	000057000236	000415000023	000202000360	000536000145
(1680)	000324000502	000111000270	000446000055	000233000412	000021000177	000355000044	000222000401	000010000166
(1728)	000345000523	000132000311	000467000076	000255000433	000041000220	000376000005	000164000342	000521000130
(1776)	000306000465	000074000251	000430000116	000275000454	000062000241	000420000026	000205000363	000542000151
(1824)	000327000505	000114000273	000451000060	000236000415	000024000202	000361000540	000146000324	000503000171
(1872)	000350000526	000135000314	000472000101	000260000436	000045000224	000402000010	000167000345	000524000133
(1920)	000311000470	000077000255	000434000042	000221000377	000006000517	000126000304	000463000072	000250000427
(1968)	000036000214	000373000001	000160000336	000515000123	000302000461	000067000246	000424000033	000212000370
(2016)	000547000155	000333000317	000475000104	000263000441	000050000227	000405000014	000172000351	000530000136
(2064)	000314000473	000102000260	000437000045	000224000403	000011000170	000347000524	000133000372	000000000157
(2112)	000335000514	000123000301	000460000067	000245000424	000033000210	000367000546	000154000333	000512000120
(2160)	000277000456	000064000243	000421000027	000000000000	000000000000	000000000000	000000000000	000000000000

FILE	1 RECORD	2 LENGTH	2208BYTES					
(0)	000111000511	000013000031	172646664000	000000000000	000613000000	000000000000	200525252525	201525252525
(48)	201525252525	200525252525	000000000000	200525252525	200525252525	000000000000	200525252525	000000000000
(96)	201525252525	202525252525	202400000000	200525252525	200525252525	201525252525	000000000000	201525252525
(144)	200525252525	000000000000	201525252525	200525252525	000000000000	000000000000	000000000000	000000000000
(192)	201525252525	000000000000	000000000000	202400000000	200525252525	000000000000	200525252525	201525252525
(240)	000000000000	000000000000	000000000000	202400000000	201525252525	200525252525	201525252525	202400000000
(288)	000000000000	200525252525	000000000000	202525252525	201525252525	200525252525	201525252525	201525252525
(336)	200525252525	200525252525	200525252525	202400000000	201525252525	200525252525	201525252525	201525252525
(384)	202400000000	200525252525	200525252525	200525252525	201525252525	202400000000	201525252525	200525252525
(432)	201525252525	000000000000	200525252525	201525252525	200525252525	000000000000	202400000000	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	054140204455	346052207567	065336236611	673377211451	340247210753	523412211523	537324210763
(1536)	311064210627	125257202606	516717174405	173026000117	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	000013000201	000366000004	000172000357	000545000163
(2064)	000350000536	000154000341	000527000145	000332000520	000136000323	000511000127	000314000232	000417000035
(2112)	000223000410	000026000213	000401000017	000204000372	000010000175	000363000001	000166000354	000542000157
(2160)	000345000533	000150000336	000524000141	176463623775	202604242632	201400152126	175651264502	000000000000

FILE 1 RECORD 73 7911 LENGTH 4 2208BYTES

(0)	000111000522	000014000004	175632070000	000000000000	000700000000	225640265212	225621137344	225713523662
(48)	225626134060	225640265212	225713523662	225614202161	225645422450	225700334646	225626134060	225665362245
(96)	225721305130	225607304025	225660060545	225672726162	225607304025	225700334646	225672726162	225614202161
(144)	225672726162	225665362245	225621137344	225700334646	225645422450	225640265212	225672726162	225611523246
(192)	225522542352	225566323474	225611523246	225522542352	225611523246	225566323474	225502102770	225566323474
(240)	225566323474	225502102770	225566323474	225544065662	225502102770	225611523246	225522542352	225522542352
(288)	225635715561	225522542352	225544065662	225635715561	225522542352	225522542352	225611523246	225502102770
(336)	225522542352	225665707074	225566524721	225661560534	225663013271	225646163140	225701557062	225646134540
(384)	225553471670	225664543734	225635711474	225560414672	225672603415	225624277204	225563015710	225676550712
(432)	225605754614	225600571234	225700323440	225573507156	225624277204	225706202060	225576130141	225623466245
(480)	225670625104	225565436672	225620636340	225700334646	225575643230	225713523662	225672726162	225571077770
(528)	225727132745	225665362245	225571077770	225721305137	225645422450	225602444416	225735025502	225645422450
(576)	225607304025	225721305130	225633170446	225621137344	225700334646	225607304025	225645422450	225713523662
(624)	225614202161	225665362245	225706006432	225614202161	225660060545	211710000000	211662525252	211715252525
(672)	211722525252	211635252525	211715252525	211625252525	211652525252	211645252525	211675252525	211665252525
(720)	211655252525	211662525252	211622525252	211625252525	211675252525	211732525252	211720000000	211700000000
(768)	211672525252	211675252525	211635252525	211655252525	211605252525	211652525252	211772525252	206500000000
(816)	207552525252	206552525252	206700000000	206700000000	206700000000	207440000000	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)	225477145670	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)	000463207525	633543600306	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	000333000520	000136000324	000511000427	000045000232	000420000035
(1728)	000223000411	000026000214	000402000017	000205000373	000010000176	000363000001	000167000354	000542000160
(1776)	000345000533	000151000336	000524000442	000060000245	000433000050	000236000423	000041000227	000414000032
(1824)	000220000405	000023000211	000376000014	000201000367	000005000172	000363000546	000163000351	000537000454
(1872)	000072000260	000446000063	000250000436	000054000241	000427000045	000232000420	000036000223	000411000026
(1920)	000214000402	000017000205	000373000010	000176000364	000001000542	000160000345	000533000150	000336000524
(1968)	000141000327	000515000132	000320000506	000123000311	000476000114	000302000467	000105000273	000460000076
(2016)	000264000451	000067000502	000120000305	000473000110	000276000463	000101000267	000455000072	000260000445
(2064)	000063000251	000436000054	000242000427	000045000233	000224000411	000027000515	000132000320	
(2112)	000506000123	000311000476	000114000301	000467000105	000273000460	000076000264	000451000067	000254000442
(2160)	000060000245	000433000051	000236000424	176467773140	202602474244	201400233573	176466643626	000000000000

PIONEER 10

ONE-HOUR CRUISE AVERAGES

72-012A-11B

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

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

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	
replace Tape #5	NSSD_P10K_0005	72-012A-11D 72-012A-11B	89A through 96B	SFDU Format
✓Tape #5	One-Hour Averages Pioneer 10 Cruise	72-012A-11C	DOY 84 1988 to DOY 280 1996	Same as earlier submissions DSC 661
✓Tape #1	24-Hour Averages RTG and Temperature Corrected with Trajectory		covering from launch through DOY 280 1996	Same as earlier submissions
Pioneer 11				
replace Tape #5	NSSD_P11K_0005	73-019A-11E	89B through 95A	SFDU Format DSC 719

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.

Department of Physics and Astronomy 203 Van Allen Hall Iowa City, Iowa 52242-1479 319/335-1686 FAX 319/335-1753

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

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

cc: Dr. J. A. Van Allen/U. of Iowa
Dr. J. F. Cooper, NSSDC
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PIONEER 10 & 11

24-HOUR CORRECTED CRUISE AVGS+TRAJ

72-012A-11C

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
D-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   IN1VAX   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
C     DO 160 I = 1,LRSIZE,2
C             ITEMP(1) = IGET18 (%VAL(BUFADD),NEWREC)
C             ITEMP(2) = IGET18 (%VAL(BUFADD),NEWREC)
C             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/
C
        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.....................................................................
```

```
        .TITLE  IGET18
;       INTEGER FUNCTION IGET18
;       I = IGET18 (IBUF,RESET)
;               WHERE IBUF IS BYTE ARRAY
;               AND RESET IS A LOGICAL VARIABLE SET TO .TRUE.
;               ONLY AT BEGINNING OF A NEW IBUF ARRAY
;               RETURNS SUCCESSIVE 18-BIT ITEMS IN 32-BIT INTEGER
IBUF=4          ;ARGUMENT 1 OFFSET
RESET=8         ;ARGUMENT 2 OFFSET
INDEX=0         ;LOCAL VARIABLE 'INDEX' OFFSET
SHIFTS=4        ;LOCAL VARIABLE 'SHIFTS' OFFSET
ITEMP=8         ;LOCAL VARIABLE 'ITEMP' OFFSET
        ;
        .PSECT  IGET18_CODE,NOWRT
        ;
IGET18::
        .WORD   ^M<IV,R9,R10,R11>       ;REGISTER-SAVE-MASK
        MOVAL   LOCAL,R11               ;POINTER TO LOCAL VARIABLES
        MOVL    IBUF(AP),R10            ;R10=IBUF ADDRESS
        MOVL    INDEX(R11),R9           ;R9=INDEX=0,1,2,...
        BLBC    @RESET(AP),NO_RESET     ;CHECK RESET FLAG
        CLRL    @RESET(AP)              ;SET RESET TO FALSE
        CLRL    R9                      ;SET INDEX TO 0
        MOVL    #6,SHIFTS(R11)          ;SET SHIFTS TO -6
NO_RESET:
        ;
        ; GET NEXT THREE BYTES FROM IBUF
        ;
        MOVB     (R10)[R9],ITEMP+2(R11)
        MOVB    1(R10)[R9],ITEMP+1(R11)
        MOVB    2(R10)[R9],ITEMP(R11)
        ;
        ; EXTRACT 18 BITS FROM ITEMP
        ;
        EXTZV   SHIFTS(R11),#18,ITEMP(R11),R0
        ;
        ; UPDATE POINTERS
        ;
        ADDL2   #2,R9                           ;INDEX=INDEX+2
        SUBL3   #2,SHIFTS(R11),R10
        BGEQ    DONE
        MOVL    #6,R10
        INCL    R9                              ;INDEX=INDEX+1
DONE:
        MOVL    R9,INDEX(R11)
        MOVL    R10,SHIFTS(R11)
        RET
        ;
        .PSECT  IGET18_DATA,NOEXE
        ;
LOCAL:
        .LONG   0               ;INDEX
        .LONG   6               ;SHIFTS
        .BYTE   0,0,0,0         ;ITEMP
        .END
```

2222222222222222222222222222222222222222222222222222222222222222222222222222222222222

```
      INTEGER FUNCTION JGET16 (IBUF,ISTART)
C
C     GETS 16 BITS AT A TIME - NO BYTE FLIPPING
C
      LOGICAL ISTART
      BYTE IBUF(1),ITEMP(4)
      INTEGER JTEMP
      EQUIVALENCE (ITEMP(1),JTEMP)
      DATA INDEX /1/
C
      IF (ISTART) INDEX = 1
      ISTART = .FALSE.
      JTEMP = 0
      ITEMP(1) = IBUF(INDEX)
      ITEMP(2) = IBUF(INDEX+1)
      JGET16 = JTEMP
      INDEX = INDEX + 2
      RETURN
      END
```

```
     "                    ,(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,IMO,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,IMO,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
```

```
*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
      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(18H 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))
```

```
      GO TO 23
 6009 FORMAT(I4,F6.2)
      END
*COMPILE DAYPER
      SUBROUTINE DAYPER(II,I,PAGE,J,F)
      IPAGE = PAGE
      III = II
      GO TO (1,2,3,4,5),III
 1    J = (IPAGE+1)/2
      F = I + MOD(IPAGE+1,2) * 48
      F = (F-1.0) / 4.
      RETURN
 2    J = IPAGE
      F = FLOAT(I-1) / 2.0
      RETURN
 3    J = IPAGE*2 - 1 + I/25
      F = MOD(I-1,24)
      RETURN
 4    J = IPAGE * 6 - 5 + (I-1) / 8
      F = MOD(I-1,8) * 3
      RETURN
 5    J = I-1+IPAGE*48-47
      F = 0
      RETURN
      END
```

The University of Iowa
Iowa City, Iowa 52242

Department of Physics and Astronomy

(319) 335-1686

1 June 1988

1847

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).

D 78674

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 continuation 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

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

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

72-012A-11C
73-019A-11D

GTT-1

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

GTT-2

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° 15′.

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

$$\Omega = 73° \; 40' + 50''.25 \; t$$

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

Department of Physics and Astronomy
(319) 353-4343

1847

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

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

Word (I)	Word (R)	Function
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 xxxx)

c) Type @PRTFAG

B26141-000A

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 ~ 14°. 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 ~ 7°.

7trk, 800, BIN, 1 file

Tape Record Format

University of Iowa Pioneer Jupiter Encounter Data Files

Word	Variable Name PN10	Variable Name	Variable Name PN11	Description
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)	Frame-by Frame Data Matrix. Column Order: PN10 - G_1, A, B, G_2, AB, DEF, C, D PN11 - G_1, A, B, G_2, AB, ABC_1, C, D, ABC_2
.	.		.	
.	.		.	
.	.		.	
.	.		.	
.	.		.	
.	.		.	
.	.		.	
.	.		.	
441,442	.		A(23,9)	
443,444	A(26,8)		spares	

Word	Variable Name PN10	Variable Name PN11	Description
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	B1MAGR		Trajectory parameters. Refer to ARC Specification PC-262.04 for definitions.
656,657	B1LATP		
658,659	S5P		
660,661	XP1SFF		
662,663	YP1SFF		
664,665	ZP1SFF		
666,667	XP1		
668,669	YP1		
670,671	ZP1		
672,673	S5E		
674,675	E5P		
676,677	REARPR		
678,679	B1LONP		
680,681	LONE1		

Word	PN10	Variable Name	PN11	Description
682,683		RJ		Radial distance to Jupiter in R_J (= 71,372 km).
684,685		B1LON3		S/C system III (1957.0) longitude.
686,687		B1LT3Z		Latitude and System III (1957.0) longitude of S/C spin axis.
688,689		B1LN3Z		
690,691		B1LT3X		Latitude and System III (1957.0) longitude of S/C x-axis.
692,693		B1LN3X		
694,695		spares		

The University of Iowa

Iowa City, Iowa 52242

Department of Physics and Astronomy

(319) 353-~~4945~~ Bruce Randall 353-4245

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

23 July 1982

1847

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:

P11 - 11B Pioneer 11 Saturn Encounter (1 tape) - DOY 242 to 248 of 1979.

P10 11B Pioneer 10 Cruise One-Hour Averages (3 tapes) - covering launch to DOY 136 1982.

P11 - 11C Pioneer 11 Cruise One-Hour Averages (3 tapes) - covering launch to DOY 138 1982.

Sincerely yours,

J. A. Van Allen

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

Enclosures

cc: ARC/Mr. Richard O. Fimmel

ENCLOSURE 1

Pioneer 10/11 One-Hour Cruise Data

Format		Name/Description
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)	Δ Phase angle
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 - $ABC_1 + ABC_2$

73-019A-11B

ENCLOSURE 2

Pioneer 11 Saturn Encounter File

Format		Name/Description
I3		Year
I3		Day
I3		Month
I3		Day of [redacted] 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	B1 MAGR	Saturn-S/C Distance (km)
E 20.8	B1 LATP	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	B1 MAGV	Velocity of S/C w.r.t. Saturn (km/sec)
E 20.8	XP1 SFF	X-Component of the S/C (Saturn centered)
E 20.8	YP1 SFF	Y-Component in km
E 20.8	ZP1 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	B1 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	clock angle to Sun
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 PAGE 72. 32. 3 (V)

YEAR 72 DAY	PERIOD	A AVERAGE	A SD	B AVERAGE	B SD	C AVERAGE	C SD	D AVERAGE	D SD	G+G AVERAGE	G+G SD	AB AVERAGE	AB SD	ABC+ABC AVERAGE	ABC+ABC SD	DEF AVERAGE	DEF 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
		3109	3136	3152	678	2965	3172	3177	3172	3165	2571	1496	0	2747	3172	3138	2589
86/ 7/28		314	2217	3124	3191	3191	3189	3191	3177	3166	3028	3063	3185	3175	3180	3178	3181

D-108056 PIONEER 10
72-012A-11B
3/24/88 – 3/1/95

RECORD 1 OF FILE 1
LENGTH = 840 BYTES

YEAR 88		DAY 84							
0A000000	58000000	54000000	00000000	2A3F40AB	00000000	543FE621	00000000	10000000	3C000000
03000000	00000000	48460000	00000000	48460000	00000000	48460000	00000000	48460000	00000000
48460000	00000000	48460000	00000000	48460000	00000000	48460000	00000000	48460000	00000000
48460000	00000000	C8460000	00000000	C8460000	00000000	7B46FFFF	00F20000	9746AAAA	00B20000
9046FFFF	00FD0000	8946AAAA	00B00000	95435555	00A00000	AA42ABAA	00000000	95465555	00540000
CA45AAAA	00CE0000	00000000	00000000	00000000	00000000	034755D5	80540000	AA42ABAA	00000000
A140AE47	850BB81E	C2402222	852BB81E	B9409999	C2955C8F	B0409D36	3D0AA470	BF3D8C25	EB511F85
DA3C0E74	7A1448E1	BF408B25	A3F00AD7	0140E8B4	EB311F85	00000000	00000000	00000000	00000000
A84025BF	E18AAE47	5A3C0E74	7A1448E1	843EBEB9	98E8B738	913E269E	88A00A13	8E3EA461	F5DD10FE
8A3EF8BB	D5808D7A	103D487E	B8EF66FB	9A3C4778	982655D6	903E487E	F4CA9C46	283E6054	CB9D154C
00000000	00000000	00000000	00000000	3F3E83FF	A9B883DB	1A3C4778	982655D6	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
BC44FFFF	80F50000	E3440080	000B0000	D944FF7F	80FB0000	CE440080	00080000	E0410000	00700000
00410000	00400000	DF44FFFF	00FE0000	18440000	801A0000	00000000	00000000	00000000	00000000
4545FFBF	C0FE0000	00410000	00400000	00000000	00000000	00000000	00000000	00000000	00000000

RECORD 18585 OF FILE 1
LENGTH = 840 BYTES

95 6C

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
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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

D-108057 PIONEER 11
73-019A-11C
3/30/88-1/23/95

YEAR 88 DAY 90

RECORD 1 OF FILE 1
LENGTH = 840 BYTES

0B000000	58000000	5A000000	00000000	003F491F	00000000	153FCB6F	00000000	0C000000	3C000000
03000000	00000000	CC450000	00000000	CC450000	00000000	CC450000	00000000	CC450000	00000000
CC450000	00000000	CC450000	00000000	CC450000	00000000	CC450000	00000000	CC450000	00000000
CC450000	00000000	4C460000	00000000	4C460000	00000000	C0430000	00600000	F0450000	003E0000
E245AAAA	00E00000	55435555	00C00000	2A42ABAA	00000000	00000000	00000000	F5455555	00A60000
1D455555	008C0000	2A42ABAA	00000000	00000000	00000000	15445555	00A00000	2A42ABAA	00000000
703EF1F0	69696969	96409696	7DBD7D7D	8E40E338	AFAFB0AF	053E30DB	C8C8C9C8	D63C812B	41414141
00000000	00000000	994044EF	8CCC8D8C	C53F1B70	0A0A0A0A	D63C812B	41414141	00000000	00000000
3B3E1166	19191919	563C812B	41414141	A03DA0A0	C8C8C4C8	B33E4296	786DE12B	AE3EF286	71FF7CEC
6F3D0373	8F594331	D63C812B	B60B0561	00000000	00000000	B53E4792	7922DE29	4D3E41A2	D6884ABA
D63C812B	B60B0561	00000000	00000000	483D6F56	041585DB	563C812B	B60B0561	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
10420000	00480000	34440000	802E0000	2A440000	00280000	A0410000	00500000	80400000	00400000
00000000	00000000	38440000	803C0000	6C430000	00520000	80400000	00400000	00000000	00000000
60420000	00700000	80400000	00400000	00000000	00000000	00000000	00000000	00000000	00000000

RECORD 13684 OF FILE 1
LENGTH = 840 BYTES

95 23

0B000000	5F000000	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
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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

PIONEER 11
73-019A-11B
DR/D500 4403

RECORD 1 OF FILE 1
LENGTH = 5184 BYTES

79 24 2

20373932	34322020	38203330	20302E30	30333635	38372020	20302E30	30303030	33353920	20302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3236	36363636	3636452B	30312020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3533	33333333	3333452B	30312020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3236	36363636	3636452B	30312020	20202020	302E3533	33333333	3333452B	30312020
20202020	302E3533	33333333	3333452B	30312020	20202020	302E3533	33333333	3333452B	30312020
20202020	302E3533	33333333	3333452B	30312020	20202020	302E3130	36363636	3637452B	30322020
20202020	302E3236	36363636	3636452B	30312020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3533	33333333	3333452B	30312020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3236	36363636	3636452B	30312020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3236	36363636	3636452B	30312020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3236	36363636	3636452B	30312020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3236	36363636	3636452B	30312020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3236	36363636	3636452B	30312020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3236	36363636	3636452B	30312020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3236	36363636	3636452B	30312020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3533	33333333	3333452B	30312020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3236	36363636	3636452B	30312020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3236	36363636	3636452B	30312020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020
20202020	302E3030	30303030	3030452B	30302020	20202020	302E3030	30303030	3030452B	30302020

Pioneer 10
72-012A-11B
D-73998
03/03/72- 04/29/75

DUMP OF TAPE SOUT1

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

FILE 1 RECORD 72 1 LENGTH 63 840BYTES

(0)	0A000000	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	B04750D5	00000000	29465455	00000000
(160)	0B46FFFF	00000000	AB47A66A	00000000	00000000	00000000	2A42ABAA	00000000	0F46FFFF	00000000
(200)	2245AAAA	00000000	AA42ABAA	00000000	2A42ABAA	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	553EDFE5	00000000
(360)	273F645C	00000000	00000000	00000000	6C3C702A	00000000	583E9EEE	00000000	E63D6F90	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	7343EFFF	00000000	00410000	00000000	80400000	00000000
(800)	8246FC97	00000000	40410000	00000000	00000000	00000000	00000000	00000000	00000000	00000000

FILE 1 RECORD 73 23818 LENGTH 19 840BYTES

(0)	0A000000	4B000000	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	3B46FFFF	00000000	3546FFFF	00000000
(160)	39465555	00000000	2846AAAA	00000000	00000000	00000000	00000000	00000000	3B46FFFF	00000000
(200)	5D455555	00000000	2A42ABAA	00000000	2A42ABAA	00000000	B2465555	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)	6C3ECA0D	00000000	00000000	00000000	00000000	00000000	793E3837	00000000	0C3E7801	00000000
(400)	6D3C0473	00000000	6D3C0473	00000000	2B3EBDA1	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 RECS.	DATA RECORDS INPUT	MAX. SIZE	READ ERROR SUMMARY PERM	ZERO B	SHORT	UNDEF.	INPUT RETRIES #RECS.	TOTAL#
1	23818	23819	840	0	0	0	0	0	0

EOJ 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

$$

D-78673
11/15/85 — 3/28/88

DUMP OF TAPE JOUT1

INPUT TAPE JOUT1 ON HT0
DATA INPUT H9 NF 9 SR 1 1 1 SR 1 LAST 1 SR 9 1 1 SR 9 LAST 1

YEAR DAY 3F01 = 013F = DAY 319 = 11/15/85

FILE 1 RECORD 1 LENGTH 840 BYTES

(0)	0E000000	55000000	3F1000C0	00000000	6140D247	00000000	7F40E9EE	00000000	00000000	A0050000
(40)	05000000	00000000	1C470000	00000000	1C470000	00000000	1C470000	00000000	1C470000	00000000
(80)	1C470000	00000000	1C470000	00000000	1C470000	00000000	1C470000	00000000	1C470000	00000000
(120)	1C470000	00000000	9C470000	00000000	9C470000	00000000	1D455555	00000000	2C470000	00000000
(160)	1947AAAA	00000000	1D455555	00000000	C0430000	00000000	AA42ABAA	00000000	2C47AA2A	00000000
(200)	3D465555	00000000	2A42ABAA	00000000	55435555	00000000	9D455555	00000000	00430000	00000000
(240)	813E1118	00000000	8E40E65E	00000000	7C40C22B	00000000	813E1118	00000000	1D3DD889	00000000
(280)	0C3CC10E	00000000	8340366B	00000000	9B3FB559	00000000	8C3BC10E	00000000	AF3CF10A	00000000
(320)	813E1118	00000000	D23B210D	00000000	063DF073	00000000	0D3E1931	00000000	043E7EE0	00000000
(360)	063DF073	00000000	523C210D	00000000	C63BCB09	00000000	073E7AA8	00000000	933D5E7E	00000000
(400)	8C3BC008	00000000	1C3C1F9C	00000000	BE3C2425	00000000	723BDC8B	00000000	813EF785	00000000
(440)	8E40 9BC9	00000000	7D401C8C	00000000	7C3EC74F	00000000	00000000	00000000	00000000	00000000
(480)	8340 6F37	00000000	993F4EED	00000000	00000000	00000000	00000000	00000000	7F3E644F	00000000
(520)	00000000	00000000	F83E85F0	00000000	3A3E71A2	00000000	833E832C	00000000	CD3FC443	00000000
(560)	00000000	00000000	00000000	00000000	4E3E3C63	00000000	333F1351	00000000	00000000	00000000
(600)	00000000	00000000	4E3F60F7	00000000	00000000	00000000	5444657A	00000000	DD43C25D	00000000
(640)	A7440C7E	00000000	E8431434	00000000	00000000	00000000	00000000	00000000	A0443C1E	00000000
(680)	9E44B86C	00000000	00000000	00000000	00000000	00000000	06444315	00000000	00000000	00000000
(720)	6C430000	00000000	824E0020	00000000	6645C0E0	00000000	6C430000	00000000	1042C000	00000000
(760)	00410300	00000000	70450040	00000000	8E440000	00000000	80400000	00000000	A0410000	00000000
(800)	EC430000	00000000	40410000	00000000	00000000	00000000	00000000	00000000	00000000	00000000

FILE 1 RECORD 81 LENGTH 840 BYTES

(0)	0E000000	56000000	2E000000	00000000	354022EE	00000000	4A40E94A	00000000	00000000	A0050000
(40)	05000000	00000000	82460000	00000000	82460000	00000000	82460000	00000000	82460000	00000000
(80)	8246C000	00000000	8246C000	00000000	8246C000	00000000	82460000	00000000	82460000	00000000
(120)	8246C000	00000000	C2470000	00000000	C2470000	00000000	4A44ABAA	00000000	9346C000	00000000
(160)	86465555	00000000	35445555	00000000	2A43ABAA	00000000	AA42ABAA	00000000	9546C000	00000000
(200)	9245AAAA	00000000	AA42ABAA	00000000	00000000	00000000	C0440000	00000000	2A43ABAA	00000000
(240)	473E798C	00000000	9C40C0BC	00000000	844C4444	00000000	323E2E8B	00000000	283D8C0A	00000000
(280)	A83C81CA	00000000	9243BB5	00000000	9C3FC6E9	00000000	A83C81CA	00000000	00000000	00000000
(320)	3D3EDC0B	00000000	A83C800A	00000000	373D531E	00000000	5C3EC98D	00000000	523E66D6	00000000
(360)	2D3D7536	00000000	A83C810A	00000000	6D3C59A5	00000000	5E3E940C	00000000	DC3DBB4D	00000000
(400)	6D3C59AE	00000000	00000000	00000000	FC3CC1CF	00000000	283C81CA	00000000	473EF787	00000000
(440)	9140D044	00000000	834079D1	00000000	303EF6E1	00000000	00000000	00000000	00000000	00000000
(480)	9240 24A2	00000000	913F697B	00000000	00000000	00000000	00000000	00000000	3D3E8B09	00000000
(520)	00000000	00000000	BC3EC299	00000000	A33EDDB3	00000000	0A3F85CA	00000000	6C3FBA93	00000000
(560)	00000000	00000000	00000000	00000000	5C3E9519	00000000	C83FE0FE	00000000	00000000	00000000
(600)	00000000	00000000	D13EF1DE	00000000	00000000	00000000	AF448FF3	00000000	D2425699	00000000
(640)	3B44B239	00000000	BF437140	00000000	00000000	00000000	00000000	00000000	1444715E	00000000
(680)	4343C0E3	00000000	00000000	00000000	00000000	00000000	8E436743	00000000	00000000	00000000
(720)	98420000	00000000	DC440C8C	00000000	C944C0E0	00000000	8842C000	00000000	8041C000	00000000
(760)	00410000	00000000	DF440080	00000000	DC430000	00000000	00410000	00000000	00000000	00000000
(800)	1043C000	00000000	8041C000	00000000	00000000	00000000	00000000	00000000	00000000	00000000

FILE	INPUT RECS.	DATA RECORDS INPUT	MAX. SIZE	READ ERROR SUMMARY PERM	ZERO B	SHORT	UNDEF.	INPUT RETRIES #RECS.	TOTAL#
1	81	82	840	0	0	0	0	0	0

FILE 9 RECORD 1 LENGTH 840 BYTES

(0)	0E000000	58000000	10000000	00000000	6A40245D	00000000	6A403CAE	00000000	54000000	3C000000
(40)	03000000	00000000	E0430000	00000000	E0430000	00000000	E0430000	00000000	E0430000	00000000
(80)	E0430000	00000000	E0430000	00000000	E0430000	00000000	E0430000	00000000	E0430000	00000000
(120)	E0430000	00000000	6C440000	00000000	6C440000	00000000	00000000	00000000	2044C000	00400000
(160)	20440000	00500000	2A42ABAA	00000000	00000000	00000000	00000000	00000000	EA43AEAA	0C200000
(200)	00000000	00000000	00000000	00000000	00000000	00000000	2A42ABAA	00000000	00000000	00000000
(240)	00000000	00000000	B64C6EDB	00000000	B64C6EDB	49129224	C33E310C	92242549	00000000	00000000
(280)	00000000	00000000	8640E11B	24C94992	00000000	00000000	00000000	00000000	00000000	00000000

```
(  320)  433E310C  92242549  00000000  00000000  00000000  00000000  EC3FA2DA  6EC89FC6  EC3FA2DA  DCE1ED1B
(  360)  C33E300C  CFF3EE3C  00000000  00000000  00000000  00000000  A13F95B9  9BF7E9B5  00000000  00000000
(  400)  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  433E300C  CFF3EE3C  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC
(  440)  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC
(  480)  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000
(  520)  CCCCCCCC  CCCCCCCC  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000
(  560)  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC
(  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  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC
(  720)  CCCCCCCC  CCCCCCCC  7C42CCCC  CCECCCCC  7C42CCCC  0C7ECCCC  804CCCCC  CC4CCCCC  CCCCCCCC  CCCCCCCC
(  760)  00000000  00000000  30420000  00580000  00000000  00000000  00000000  00000000  00000000  00000000
(  800)  804CCCCC  00400000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000
```

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

```
FILE        9  RECORD    465  LENGTH    840BYTES
(    0)  0B000000  58000000  58000000  00000000  2A4C5BAE  CCCCCCCC  2B4C7E12  CCCCCCCC  40CCCCCC  3CCCCCCC
(   40)  03000000  00000000  80440000  00000000  80440000  00000000  80440000  00000000  80440000  00000000
(   80)  8C44CCCC  CCCCCCCC  8C44CCCC  CCCCCCCC  8C44CCCC  CCCCCCCC  8044CCCC  00000000  80440000  00000000
(  120)  8C44CCCC  CCCCCCCC  CC45CCCC  CCCCCCCC  CC45CCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CA44AEAA  CCCCCCCC
(  160)  15445555  00000000  00000000  00000000  00000000  00000000  00000000  00000000  35445555  CCCCCCCC
(  200)  AA42ABAA  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000
(  240)  CCCCCCCC  CCCCCCCC  CA4CABAA  CCCCCCCC  154C5555  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC
(  280)  00000000  00000000  354C5555  CCCCCCCC  AA3EABAA  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC
(  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  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC
(  440)  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  CCCCCCCC  CCCCCCCC
(  480)  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000  00000000
(  520)  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  00000000
(  560)  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC
(  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  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC
(  720)  00000000  00000000  50420000  00E00000  5F42FFFF  0C8CCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC
(  760)  00000000  00000000  8742FFFF  00C00000  00410000  00400000  00000000  00000000  00000000  00000000
(  800)  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  CCCCCCCC  00000000
```

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

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

START TIME 11/17/85 18:26:30 STOP TIME 11/17/85 18:27:48

```
$$
$ASS IN HT1
$EXE TPDUPC BS
```