#721

VOYAGER 2

NEPTUNE CELESTIAL MECHANICS

77-076A-02J

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VOYAGER 2

NEPTUNE CELESTIAL MECHANICS

THIS DATA SET CONSISTS OF 2 TAPES. THE D TAPES ARE 9-TRACK, 6250 BPI, BINARY, AND THE C TAPES ARE 3480 CARTRIDES. THESE TAPES WERE WRITTEN IN VAX USING THE VAX BACKUP COMMAND, AND HAVE MULTIPLE SAVE_SETS ON THEM. THE TAPES HAVE BEEN CONVERTED. DIRECTORIES NAMES FOR THESE TAPES CAN BE FOUND ON THE FOLLWING PAGES.

THE D AND C NUMEBRS ALONG WITH THEIR TIME SPANS ARE AS FOLLOWING:

D#	C#	FILES	TIMESPANS
D-95306	C-29871	4	08/13/89-08/25/89
D-95307	C-29872	3	08/25/89-09/03/89

Jet Propulsion Laboratory
California Institute of Technology

4800 Oak Grove Drive
Pasadena, California 91109

(818) 354-4321

JPL

11 November, 1991

Refer to: 310-JDA:ep

Dr. James L. Green
Associate Chief for National Space Science Data Center
Mail Stop 26-146, Code 930.2
NASA/GSFC
Greenbelt, MD 20771

Dear Dr. Green:

SUBJECT: Submission of scientific data for Voyager/Neptune Radio Science Team, Celestial Mechanics Experiment, Responsible Team Member: John D. Anderson.

REFERENCE: G.L. Tyler, D.N. Sweetnam, J.D. Anderson, et al., "Voyager Radio Science Observations of Neptune and Triton," Science 246, 1466-1473 (1989).

I am enclosing two magnetic tapes containing data used for the Voyager/Neptune Celestial Mechanics Experiment. The data were generated by the Deep Space Network (DSN) in response to requirements of the Voyager Project. Data extend from day 225 (August 13) to day 246 (September 3), 1989. Previously published results (see enclosed copy of Reference) are based on this interval of time, as are current analyses being carried out under the NASA/OSSA Neptune Data Analysis Program (J.D. Anderson, PI). ☆

The most useful data on the tapes for purposes of Celestial Mechanics analysis are the coherent and noncoherent Doppler, and the range data generated with the DSN's Planetary Ranging Assembly (PRA). The specification of the data files on the tapes is included in the attached memo from Janet E. Hierath dated November 8, 1991. The format of the data is described in the enclosed DSN document, TRK-2-25, Archival Tracking Data File Interface. ☆☆

☆ Science, Vol. 246, p. 1466-1471
☆☆ Available in DSC#720 for similar data set.

Jet Propulsion Laboratory
California Institute of Technology

Questions regarding the application of these data to celestial mechanics experiments, including the determination of masses and the gravity field of Neptune, should be addressed to me at Mail Stop 301-230, FTS 792-3956, NASAMail JDANDERSON. Questions regarding the technicalities of reading the tapes and extracting data files should be addressed to Janet E. Hierath, Mail Stop 301-150, FTS 792-7411.

Sincerely yours,

John Anderson

John D. Anderson

cc: (without enclosures)

J.K. Campbell
G.L. Goltz
C.L. Hamilton
J.E. Hierath
R.A. Jacobson
N.A. Renzetti
G.P. Textor
G.L. Tyler (Stanford)

To: John D. Anderson

November 8, 1991

From: Janet E. Hierath

Subject: Voyager II Archival Tapes for Days 225 To 246, 1989

I have prepared two magnetic tapes that contain the Archival Tracking Data Files (ATDF) that you have requested. Seven files have been placed on the two magnetic tapes using VAX/VMS commands. They contain 1989 Voyager II ATDF from day 225 to day 246. I have included documentation entitled DSN Tracking System Interfaces, Archival Tracking Data File Interface, TRK -2-25, which contains a complete description of the data records on each file.

VAX/VMS Commands Used:

```
MOUNT M***:/FOR
BACKUP/VERIFY *.* M***:JPL*
```

Contents:

Save-set Name	File Name	# of Blocks
JPL1	89225T229.SC32	55818
"	89229T233.SC32	55929
"	89233T236.SC32	50274
JPL2	89236T237.SC32	57425
JPL	89237T238.SC32	58118
"	89238T241.SC32	53613
"	89241T246.SC32	57425

D 95306

FILE 1 RECORD 1 8064 BYTES

(0)	00000000	80000000	0A05900E	A0F03101	00000205	44446020	00415404	44600000	00000000	00000000
(40)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(80)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(280)	00000000	00000000	00000000	80000000	1E05900E	10000000	00000200	00000064	00010000	00000000
(320)	00038110	0000FCAF	80000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(360)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(400)	00000000	00000000	00000000	00000000	00000000	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)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(560)	00000000	00000000	00000000	00000000	00000004	00000000	5A05900E	10000000	00000200	23F01203
(600)	00000000	20004000	00001770	00002287	A0003E55	74000000	00000000	00000000	00000000	00000000
(640)	00000000	00000000	00000000	000D1F6C	F6000000	00000000	00000000	00000000	00000000	00000000
(680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(720)	00000000	00000000	00000000	00000000	00000000	00000000	00059000	00000000	00000000	20080000
(760)	00000000	000001FF	9BBFFFFF	FFAE0000	00000000	00000000	00000000	00000000	00000000	00000000
(800)	00000000	00000000	000007FF	5F620000	00000000	00000000	00000000	00000000	00000000	00000000
(840)	00000D1F	6CF60000	00000000	00000000	00000000	00000000	00000004	00000000	5A05900E	10000000
(880)	00000200	23F02203	00000000	20004000	00001770	000061A7	7000258C	80000000	00000000	00000000
(920)	00000000	00000000	00000000	00000000	00000000	000D1F6C	F6000000	00000000	00000000	00000000
(960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00146C00	00000000
(1040)	00000000	20104000	00000000	000001BF	A15FFFFF	FFAE0000	00000000	00000000	00000000	00000000
(1080)	00000000	00000000	00000000	00000000	000007FF	68680000	00000000	00000000	00000000	00000000
(1120)	00000000	00000000	00000D1F	6CF60000	00000000	00000000	00000000	00000000	00000004	00000000
(1160)	5A05900E	10000100	00000200	23F01203	00000000	20004000	00001770	000024C9	90003B42	82000000
(1200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	000D1F6C	F6000000	00000000
(1240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1280)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1320)	00058F00	00000000	00000000	20080000	00000000	000001FF	9BDFFFFF	FFC50000	00000000	00000000
(1360)	00000000	00000000	00000000	00000000	00000000	00000000	000007FF	5FAA0000	00000000	00000000
(1400)	00000000	00000000	00000000	00000000	00000D1F	6CF70000	00000000	00000000	00000000	00000000
(1440)	00000004	00000000	5A05900E	10000100	00000200	23F02203	00000000	20004000	00001770	00006606
(1480)	80008001	88000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	000D1F6C
(1520)	F6000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1600)	00000000	00000000	00146300	00000000	00000000	20104000	00000000	000001BF	A13FFFFF	FFC50000
(1640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	000007FF	683C0000
(1680)	00000000	00000000	00000000	00000000	00000000	00000000	00000D1F	6CF70000	00000000	00000000
(1720)	00000000	00000000	00000004	00000000	5A05900E	10000200	00000200	23F01203	00000000	20004000
(1760)	00001770	0000270B	80004C28	80000000	00000000	00000000	00000000	00000000	00000000	00000000
(1800)	00000000	000D1F6C	F8000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1880)	00000000	00000000	00000000	00000000	00059100	00000000	00000000	20080000	00000000	0000017F
(1920)	9B900000	00610000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1960)	000007FF	5F3E0000	00000000	00000000	00000000	00000000	00000000	00000000	00000D1F	6CF80000
(2000)	00000000	00000000	00000000	00000000	00000004	00000000	5A05900E	10000200	00000200	23F02203
(2040)	00000000	20004000	00001770	0000018A	20001BC5	44000000	00000000	00000000	00000000	00000000
(2080)	00000000	00000000	00000000	000D1F6C	F8000000	00000000	00000000	00000000	00000000	00000000
(2120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2160)	00000000	00000000	00000000	00000000	00000000	00000000	00146200	00000000	00000000	20104000
(2200)	00000000	0000033F	A1400000	00610000	00000000	00000000	00000000	00000000	00000000	00000000
(2240)	00000000	00000000	000007FF	68580000	00000000	00000000	00000000	00000000	00000000	00000000
(2280)	00000D1F	6CF80000	00000000	00000000	00000000	00000000	00000004	00000000	5A05900E	10000300

File - 89225T229 SC32
8/13/89 - 8/17/89

FILE 1 RECORD 1 8064 BYTES \ Record of file2

(0)	00000000	80000000	0A05900F	F0E00504	00000205	44446020	00415404	44600000	00000000	00000000
(40)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(80)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(280)	00000000	00000000	00000000	80000000	1E05900E	50F00000	00000200	00000064	00010000	00000000
(320)	00038110	0000FCAF	80000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(360)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(400)	00000000	00000000	00000000	00000000	00000000	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)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(560)	00000000	00000000	00000000	00000000	00000004	00000000	5A05900E	50F00000	00000200	22B01201
(600)	00000000	20004000	000003E8	00002AEC	10006A47	F4000000	00000000	00000000	00000000	00000000
(640)	00000000	00000000	00000000	000D2199	EC000000	00000000	00000000	00000000	00000000	00000000
(680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(720)	00000000	00000000	00000000	00000000	00000000	00000000	00016F00	00000000	00000000	20080000
(760)	00000000	000001BF	9B4FFFFF	FFEB0000	00000000	00000000	00000000	00000000	00000000	00000000
(800)	00000000	00000000	000007FF	5EB20000	00000000	00000000	00000000	00000000	00000000	00000000
(840)	00000D1F	72320000	00000000	00000000	00000000	00000000	00000004	00000000	5A05900E	50F00000
(880)	00000200	22B02201	00000000	20004000	000003E8	0000592E	40006F56	34000000	00000000	00000000
(920)	00000000	00000000	00000000	00000000	00000000	000D2199	EC000000	00000000	00000000	00000000
(960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00054A00	00000000
(1040)	00000000	20104000	00000000	0000037F	A10FFFFF	FFEB0000	00000000	00000000	00000000	00000000
(1080)	00000000	00000000	00000000	00000000	000007FF	67EA0000	00000000	00000000	00000000	00000000
(1120)	00000000	00000000	00000D1F	72320000	00000000	00000000	00000000	00000000	00000004	00000000
(1160)	5A05900E	50F0000A	00000200	22B01201	00000000	20004000	000003E8	00002B4E	10000D0C	C2000000
(1200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	000D2199	EC000000	00000000
(1240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1280)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1320)	00017B00	00000000	00000000	20080000	00000000	000001BF	9B100000	004D0000	00000000	00000000
(1360)	00000000	00000000	00000000	00000000	00000000	00000000	000007FF	5E640000	00000000	00000000
(1400)	00000000	00000000	00000000	00000000	00000D1F	72320000	00000000	00000000	00000000	00000000
(1440)	00000004	00000000	5A05900E	50F0000A	00000200	22B02201	00000000	20004000	000003E8	000059EE
(1480)	D00017CC	34000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	000D2199
(1520)	EC000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1600)	00000000	00000000	00054F00	00000000	00000000	20104000	00000000	0000037F	A1000000	004D0000
(1640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	000007FF	67F00000
(1680)	00000000	00000000	00000000	00000000	00000000	00000000	00000D1F	72320000	00000000	00000000
(1720)	00000000	00000000	00000004	00000000	5A05900E	50F00014	00000200	22B01201	00000000	20004000
(1760)	000003E8	00002BB0	0000489B	E5000000	00000000	00000000	00000000	00000000	00000000	00000000
(1800)	00000000	000D2199	EC000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1880)	00000000	00000000	00000000	00000000	00018100	00000000	00000000	20080000	00000000	000001BF
(1920)	9AF00000	00840000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(1960)	000007FF	5E420000	00000000	00000000	00000000	00000000	00000000	00000000	00000D1F	72320000
(2000)	00000000	00000000	00000000	00000000	00000004	00000000	5A05900E	50F00014	00000200	22B02201
(2040)	00000000	20004000	000003E8	00005AAF	50005995	FA000000	00000000	00000000	00000000	00000000
(2080)	00000000	00000000	00000000	000D2199	EC000000	00000000	00000000	00000000	00000000	00000000
(2120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(2160)	00000000	00000000	00000000	00000000	00000000	00000000	00055300	00000000	00000000	20104000
(2200)	00000000	0000037F	A1000000	00840000	00000000	00000000	00000000	00000000	00000000	00000000
(2240)	00000000	00000000	000007FF	67EC0000	00000000	00000000	00000000	00000000	00000000	00000000
(2280)	00000D1F	72320000	00000000	00000000	00000000	00000000	00000004	00000000	5A05900E	50F0001E

File 2 8922ST233.SC32
8/17/89-8/21/89