[redacted]

#671

VOYAGER 2
URANUS ENCOUNTER
IRIS REDUCED DATA RECORDS (RDR)
77-076A-03C

REQ. AGENT	RAND NO.	ACQ. AGENT
DHG		PSB

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This data set consists of one 9-track, 6250 bpi tape with 7 data files, written in VAX binary. The original tape was written in VAX BACKUP format, indexed. The tape has been restored and converted from indexed to sequential format. The 'D' and 'C' numbers and save-set names are:

D#	C#	Time span
D-79137	C-26913	10/21/85 - 02/23/86

APPENDIX D

REDUCED DATA RECORD (RDR) TAPE DESCRIPTION AND FORMAT

Each standard magnetic tape contains complete IRIS records (header and data) in ascending FDSC order. All records can be read using a standard IBM FORTRAN unformatted READ statement:

```
DIMENSION RECORD(631)
READ (1) RECORD
```

The first 500 bytes of each record are the header information, which is a mix of full-word real values, full and half-word integers, and individual bytes. The remaining 2024 bytes are radiance data as a function of wavenumber, and are all full-word, real values.* A full-word is four bytes (32 bits).

The following illustrates graphically an IRIS RDR record:

```
<------------------------------2524 Bytes---------------------------->

<---500 Bytes--->&lt;-------------2024 Bytes---------------------------->

<---125 Words--->&lt;------------- 506 Words---------------------------->


<----Header----->&lt;-------------Radiance Values------------------------->
                        (in ascending wave number order)
```

The physical tape description is given in Table D1.

Table D1. RDR Tape Description

Tracks:	9
Density:	6250 BPI
Label:	No Label
Mount:	Foreign
Parity:	Odd
Record Format:	Fixed Length
Record Size:	2524 Bytes
File Organization:	Indexed

The contents of an RDR record are described in Table D2. The column headings are:

Column 1:	Field Number	a consecutive numbering of field quantities for reference.
Column 2:	Byte Location	contains the relative byte number of each word in the header
Column 3:	Format	contains the FORTRAN descriptor for the format of each word, e.g., R*4 = real four byte variable.
Column 4:	FI-SEDR Word	contains the origin of the navigation data from the fixed instrument SEDR data. NOTE: None of these data was placed into the IRIS header.
Column 5:	SP-SEDR Word	contains the origin of the navigation data from the Scan Platform SEDR data. These words are referenced in Appendix E.
Column 6:	Description	a description of the field quantities.

The abbreviations used in Table D2:

HK = Housekeeping.

IFM = Interferogram

PB = Picture Body. The body (planet or satellite) that the IRIS instrument is pointing at at the time of observation.

CB = Central Body. The planetary body at the center of the planet-moon system (i.e., Jupiter, Saturn).

Q5 = Defines intercept point of center of IRIS field of view with surface of target body. If the instrument is pointed off the limb (emission angle greater than 90 degrees), the Q5 data "looks good", but in fact is not.

S/C = Spacecraft.

ASD = Angular Semi-Diameter. The angle subtended in degrees at the spacecraft by the radius of the disc of the observed body.

Uranian Coordinate System 1: A coordinate system of reference which rotates at the same rate as Uranus' magnetic field.

The arrangement of the IRIS field of view is illustrated in Appendix E.

Table D2. RDR Record Contents

RDR FIELD NO.	BYTE LOCATION	FORMAT WORD	FI-SEDR WORD	SP-SEDR WORD	DESCRIPTION
1	1-4	I*4			Tape Creation Date (YY MM DD)
2	5-6	I*2			Record Type: Always 3
3	7-8	I*2			Calibration File Serial #
4	9-10	I*2			Source EDR Tape # -N = Preliminary +N = Final
5	11-12	I*2			Source Fixed Instrument SEDR Tape # 0 = None -N = Predict +N = Actual
6	13-14	I*2			Source Footprint SEDR Tape # 0 = None -N = Predict +N = Actual
7	15-16	I*2			# of Records in Average - Always 1
8	17-20	I*4			Starting FDSC Mod 2^{16}
9	21-24	I*4			Starting FDSC Mod 60
10	25-28	I*4			Ending FDSC Mod 2^{16} (Always = Field 8)
11	29-32	I*4			Ending FDSC Mod 60 (Always = Field 9)
12	33-34	I*2			Spacecraft ID 1 = Voyager 1 2 = Voyager 2
13	35-36	I*2			Data Mode from EDR Header: (10 = GS3 etc.)
14	37-38	I*2			Playback Flag 0 = Real Time 1 = Playback
15	39-40	I*2			Earth Received Time: Year
16	41-42	I*2			Earth Received Time: Day
17	43-44	I*2			Earth Received Time: Hour
18	45-46	I*2			Earth Received Time: Minutes
19	47-48	I*2			Earth Received Time: Seconds
20	49-50	I*2			Data Source as in EDR (1 = Real Time etc.)

21	51-52	I*2	Golay Encoded Flag 0 = No 1 = Yes
22	53-54	I*2	Phase Angle Serial # for Symmetrization
23	55-56	I*2	Spacecraft Event Time: Year
24	57-58	I*2	Spacecraft Event Time: Day
25	59-60	I*2	Spacecraft Event Time: Hour
26	61-62	I*2	Spacecraft Event Time: Minute
27	63-64	I*2	Spacecraft Event Time: Second
28	65-66	I*2	0 = Input by NORT File 1 = Input by EDR Proc (Scet Flag)
29	67-68	I*2	DSN Configuration 8 Bits (Low Order) as in EDR
30	69-70	I*2	DSN Station # 8 Bits (Low Order) as in EDR
31	71-72	I*2	Estimated Bit Error Count from EDR
32	73-74	I*2	
33	75-76	I*2	DQSW Sums over 10 Groups for
34	77-78	I*2	Bits 4, 3, 1, 0 (See EDR DQSW)
35	79-80	I*2	
36	81-82	I*2	# of Minor Frames, Golay Corrected
37	83-84	I*2	# of Minor Frames Containing Missing Data
38	85-86	I*2	Reject Code: 0 = OK 1 = Too Many Spikes 2 = Missing Data 3 = Zero Peak 4 = No IFM Present
39	87-88	I*2	# of Spikes, Corrected
40	89-90	I*2	Golay Bit Error Summation from EDR
41	91-92	I*2	Radiometer Data Present 0 = No 1 = Yes
42	93-96	R*4	Integrated Radiometer from HK (Watts)
43	97-100	R*4	
44	100-104	R*4	
45	105-108	R*4	
46	109-112	R*4	
47	113-116	R*4	Averages over HK Groups of
48	117-120	R*4	9 Temperature Channels
49	121-124	R*4	
50	125-128	R*4	

51	129-132	R*4	
52	133	L*1	Lock 1st Group HK LHK1 and LHK2 Logical and
53	134	L*1	Lock 2nd Group HK LHK3 and LHK4 Logical and
54	135	L*1	Neon Delay Lock ND1 or ND2 or ND3 or ND4 Logical or
55	136	L*1	Motor Position Lock Control MP1 or MP2 or MP3 or MP4 Logical or
56	137-140	R*4	
57	141-144	R*4	
58	145-148	R*4	
59	149-152	R*4	8 Radiometer Samples Normal Gain (Watts)
60	153-156	R*4	
61	157-160	R*4	
62	161-164	R*4	
63	165-168	R*4	
64	169-172	R*4	
65	173-176	R*4	
66	177-180	R*4	
67	181-184	R*4	8 Radiometer Samples High Gain (Watts)
68	185-188	R*4	
69	189-192	R*4	
70	193-196	R*4	
71	197-200	R*4	
72	201-204	R*4	Maximum of 8 Neon Samples (Volts)
73	205-208	R*4	Minimum of 8 Neon Samples (Volts)
74	209-212	R*4	Average Residual Square Difference of Phase Fit
75	213-216	R*4	Average 22 Micron Brightness Temperature (400-500 cm^{-1})
76	217-220	R*4	Average 5 Micron Brightness Temperature (2000-2050 cm^{-1})
77	221-224	R*4	Near IR Radiance (Voy. I - Not Used) (Voy. II - Integrated Radiance 3600-3800 cm^{-1})
78	225	L*1	
79	226	L*1	
80	227	L*1	HK Present 4 Groups
81	228	L*1	

(Bytes 229, 230 are not used)

82	231-232	I*2			
83	233-234	I*2			EDR Subheader Without Spares
84	235-236	I*2			
85	237-240	R*4			X
86	241-244	R*4			Y
87	245-248	R*4			Z Cartesian State of Spacecraft
88	249-252	R*4			$\dot{X}$ Relative to Saturnian Magnetic Field
89	253-256	R*4			$\dot{Y}$
90	257-260	R*4			$\dot{Z}$
91	261-264	R*4			X
92	265-268	R*4			Y Cartesian State of Spacecraft
93	269-272	R*4			Z Saturn Centered, Saturn Mean Orbit and Prime
94	273-276	R*4			$\dot{X}$ Meridian in Sun Direction
95	277-280	R*4			$\dot{Y}$
96	281-284	R*4			$\dot{Z}$
97	285-288	R*4	157		Saturn Latitude of Spacecraft
98	289-292	R*4	158		Saturn Longitude of Spacecraft
99	293-296	R*4	159		
100	297-300	I*4			Indexed by (Uranus)-avg
101	301-316	R*4			Spare
102	317-320	I*4		2	CB Id.
103	321-324	R*4		36	Range CB → Sun (km)
104	325-328	R*4	176	40	Range S/C → CB (km)
105	329-332	R*4	184		Angle α CB - Sun - S/C (Deg)
106	333-336	R*4	186		Angle α Sun - CB - S/C (Deg)
107	337-340	I*4	239		Time Relative to Periapsis
108	341-344(86)	I*4		2	PB Id. IF PB is CB, PB = 0
109	345-348	R*4		37	Range, PB → Sun
110	349-352	R*4		40	Range, S/C → CB
111	353-356(89)	R*4		41	Range, S/C → PB
112	357-360	R*4		71	Range, S/C → PB Tangency Point
113	361-364	R*4		42	S/C Altitude Above PB
114	365-368	R*4		43	PB Sub Solar Pt. Latitude
115	369-372	R*4		44	PB Sub Solar Pt. Longitude
116	373-376	R*4		45	PB Sub-S/C Pt. Lat. 117 377-380
117	377-380	R*4		46	PB Sub-S/C Pt. Long.
118	381-384	R*4		47	S/C Phase α

119	385-388	R*4	48	PB ASD
120	389-392	R*4	70	Optic Axis
121	393-396	R*4	74	Solar Zenith Angle for Q5 Point
122	397-400	R*4	75	Emission Angle for PB Q5 Point
123	401-404	R*4	76	Phase Angle for PB Q5 Point
124	405-408	R*4	77	Sun Azimuth Angle for PB Q5 Point
125	409-412	R*4	82	Local Time (hr) for PB Q5 Point
126	413-416	R*4		CB Lat. of PB
127	417-420	R*4		CB Long. of PB (Jup. Sys. I)
128	421-424	R*4		CB Long. of PB (Jup. Sys. III)
129	425-428	R*4		X
130	429-432	R*4		Y Cartesian State of PB
131	433-436	R*4		Z Relative to Saturnian Magnetic Field
132	437-440	I*4	145/146	Q1 Lat. & Long., System 3, for Line Count 350
133	441-444	I*4	147/148	Q2 Lat. & Long., System 3, for Line Count 350
134	445-448	I*4	149/150	Q3 Lat. & Long., System 3, for Line Count 350
135	449-452	I*4	151/152	Q4 Lat. & Long., System 3, for Line Count 350
136	453-456	I*4	72/73	Q5 Lat. & Long., System 3, for Line Count 350 The Q5 point is the center point for the IRIS field of view
137	457-460	I*4	153/154	Q6 Lat. & Long., System 3, for Line Count 350
138	461-464	I*4	155/156	Q7 Lat. & Long., System 3, for Line Count 350
139	465-468	I*4	157/158	Q8 Lat. & Long., System 3, for Line Count 350
140	469-472	I*4	159/160	Q9 Lat. & Long., System 3, for Line Count 350
141	473-476	R*4		Integrated Radiance Across Spectrum (175. to 2500 cm^{-1})
142	477-480	R*4		Wave # at First Data Point, (Always 150.18 cm^{-1})
143	481-484	R*4		Wave # Spacing between Data Points, (Always 1.39051 cm^{-1})
144	485-486	I*2		# of Data Points, (Always 506)
145	487-488	I*2		Scan Platform in Motion Flag - Not Used

146	489-492	I*4	Q5 Lat. & Long., System 3, for Line Count 750
147	493-496	R*4	Emission Angle for Line Count 750
148	497-500		Spare
149	501-504	R*4	Radiance Value of First Data Point (W/cm^2/sr/cm
150	505-508	R*4	Radiance Value of Second Data Point (Always at 151.57 cm^{-1})
.	.	.	
.	.	.	
.	.	.	
.	.	.	
.	.	.	
	.	.	
654	2521-2524	R*4	Radiance Value of Last Data Point (Always at 852.39 cm^{-1})

The following example depicts one way to identify individual RDR field quantities:

```
      LOGICAL*1 BYTE
      INTEGER*2 I2VAL
      INTEGER*4 I4VAL
      REAL*4 RECORD, RAD, HEADER
      DIMENSION RECORD(631), BYTE(500), I2VAL(250), I4VAL(125),
     A          HEADER(125), RAD(506)
      EQUIVALENCE (RECORD(1), HEADER(1)),
     A          (HEADER(1), BYTE(1), I2VAL(1), I4VAL(1)),
     B          (RECORD(126), RAD(1))
```

Each data element can then be addressed simply by using the variable name associated with its type.

Since radiances only are stored in the data portion of the record (i.e., no associated wavenumber), the corresponding wavenumber must be computed using the 3 header fields:

REAL*4	Field #141	Starting Wave No. (Word #120)
REAL*4	Field #142	Wave No. Spacing (Word #121)
INTEGER*2	Field #143	No. of Data Points (Half-Word #243)

The following is one way to calculate and store these values for use with their corresponding radiances, using the above data definition statements to head the program:

```
      DIMENSION WAVE (506)
      WAVE(1) = RECORD(120)
      DWN = RECORD(121)
      N = I2VAL(243)
      DO 100  I = 2,N
      WAVE (I) = FLOAT (I-1) *DWN + WAVE(1)
  100 CONTINUE
```

(The number of data points (N) will always be 506.)

To read a series of RDR records with Fortran on a DEC-VAX computer, you could use the following code:

```
      OPEN (UNIT = 1, TYPE = 'OLD', FORM = 'UNFORMATTED', ACCESS = 'KEYED',
      ORGANIZATION = 'INDEXED', KEY = (297:300:INTEGER), FILE = RDR)
      KFDSC = 0
      IREAD = 0
      READ (1, KEYGE = KFDSC, IOSTAT = IOS, KEYID = 0) REC
100   IF (IREAD.EQ.1) READ (1, END = 999)REC
      IREAD = 1
      GOTO 100
999   STOP
      END
```

The decimal FDSC can be calculated in the following manner (it is recommended that FDSC be a double precision variable).

```
REAL*8 FDSC
FDSC = DFLOAT (I4VAL(5)*100 + I4VAL(6)) * 0.01D0
```

The decimal latitudes and longitudes of all the Q points (IRIS FOV descriptors) for <u>both</u> line counts 350 <u>and</u> 750 can be calculated as follows. The data are stored in the record as packed integers (I*4) ... $AAA_{G}AA$ $BBB_{G}BB$ where AAAAA is the latitude (-90.00 to +90.00) and BBBBB is the longitude (0.0 to 360.00) and '$_{G}$' represents the implied decimal point.

Example Q5 latitude and longitude calculation for line count 350.

```
REAL*4    Q5LAT, Q5LON
Q5LAT  =  FLOAT (I4VAL(114)/100000) * 0.01
Q5LON  =  FLOAT (MOD(IABS(I4VAL(114)),100000)) * 0.01
```

D - 79137

FILE 1 RECORD 1 2524 BYTES

0126 = 294 = 10/21

0055 = 85

10/21/85 - 2/23/86

(0)	00000000	03000000	01000000	00000100	21500000	36000000	21500000	36000000	02000A00	00005500
(40)	26011400	21000000	00000000	00005500	21010000	00003800	01005100	02000000	00000000	00000000
(80)	2C000000	04000000	51C90000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(120)	00000000	00000000	00000000	00000000	80C00000	80C00000	80C00000	80C00000	80C00000	80C00000
(160)	80C00000	80C00000	80C00000	80C00000	80C00000	80C00000	80C00000	80C00000	80C00000	80C00000
(200)	FFFFFFFF	FFFFFFFF	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
(280)	00000000	00000000	00000000	00000000	1A612400	00000000	00000000	00000000	00000000	00000000
(320)	00000000	00000000	00000000	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	1644D22C
(480)	01403BFC	FA010000	00000000	00000000	00000000	0B37A51E	0C3731E0	0E37FFA0	1037F660	12371020
(520)	13373DDE	1537739B	17379C57	1937B612	1A37ABCC	1C377165	1E37FB3C	1F3740F3	21372FA8	23378F5B
(560)	2537E20D	26378D8E	2837B96D	2A37521B	2B3753C7	2D37B371	2F375F1A	303754C1	32378466	3437E609
(600)	353772AB	37371C4B	3837DCE8	3A37A384	3C376B1E	3D373186	3F37E44B	403781DF	4237F970	44374800
(640)	4537656D	47374716	4837EAA0	4A374427	4B374BAB	4D37F82C	4E3744AC	50372829	5137A5A3	5337A81B
(680)	54373191	56373704	5737B974	5B37A7E2	5A37034E	5B37C5B6	5D37E51C	5E375F80	5F3733E1	6137533F
(720)	62378D9A	633771F3	65376549	6637929C	6737F7EC	6937923A	6A375985	6B374BCD	6D376312	6E379F54
(760)	6F37FA93	703772D0	7237000A	7337A040	74375274	753714A5	7637E0D2	7737B4FD	79378C25	7A37674A
(800)	7B37446C	7C371D8B	7D37F6A6	7E37C1EF	7F376DD5	80372174	8037F6FB	81374682	82370E07	8237488A
(840)	8337000C	83372A8C	8437CB0A	8437DF87	85376603	85376170	8537D0F5	8637B26C	86370BE2	8737CC55
(880)	87370CB	8837AF38	8837CDA7	89375915	89375981	8937C8EB	8A37AC54	8A37FEBB	8B37C621	8B37FD85
(920)	8B37A8E8	8C37C749	8C3755A9	8D375807	8D37CD63	8D37B6DE	8E371618	8E37E96F	8E3733C6	8F37F21A
(960)	8F37276E	8F37D4BF	9037F70F	903796EE	9037AAAB	90373DF7	91374741	9137CE89	9137D4D0	92375416
(1000)	923755SA	9237D29C	9237000D	93375210	93375456	9337DC97	9337E6D2	94377800	94379244	94373176
(1040)	94375960	94370EE4	95374F16	95371A47	95377776	95375FA4	9537DBD0	9537E8FB	96378C25	9637C54D
(1080)	96379574	9637FB99	9637FB8D	96379720	97370001	9737A921	97371E40	9737375D	9737EF78	97375293
(1120)	97375SAC	97370C4	97375DDA	97375EEF	98371303	98376E15	98378126	98374036	9837B644	9837E151
(1160)	9837C45D	98376366	98378971	9837CE79	9837A280	98373886	98378C8A	9837AA8D	9837888F	98373690
(1200)	9837A88F	9837E88D	9837FA8A	9837D786	98378981	98370B7B	98376873	9837996A	9837A560	98378C55
(1240)	98375349	9837F73B	98377F2D	9837E81D	98373700	97377FEB	97379EB	9737A3D4	97379EBF	97378BA9
(1280)	97376692	97373774	97370061	97370146	97377C2B	97373207	9637E9F1	96379DD3	96375784	96371394
(1320)	9637D772	9637A350	96377B2D	96375F09	95375124	95375788	95376D97	95379B6F	9537DE46	95373B1D
(1360)	9437B5F2	94374BC7	94370198	9437D86D	94370138	9437F510	93373EE1	93378BB0	9337517F	93371B4D
(1400)	93371C1A	92374BE6	9237AFB1	92374870	92371A46	92372B0F	91377107	9137FE9E	9137C365	9137CF2B
(1440)	90371FF1	90378785	90379879	9037C13C	8F3736FF	8F37FEC0	8F371582	8F377E42	8F373D02	8E3752C1
(1480)	8E378F7F	8E37885D	8D37A8FA	8D37307	8D371373	8D375A2E	8C3704C9	8C3717A3	8C378F5C	8C377415
(1520)	8B37C5CD	8B378385	8B37813C	8A3751F3	8A3765A9	8A37EB5E	8A37EF13	893767C8	89375C7C	8937CF2F
(1560)	8837C2E2	88373595	88372847	8737A3F8	8737A1A9	87372B5A	87373C0A	8637DA89	86370569	8637C017
(1600)	85370BC6	8537E873	85375C21	84376CEE	84370678	84373F27	83371403	8337887E	83379929	82374BD4
(1640)	8237A07E	82379728	81373502	81377C7B	81370624	8037FDCC	80374275	80373610	7F37B089	7E374DD8
(1680)	7E375626	7D37CA73	7C37A7C0	7C37F00C	7B37A658	7A37D9A3	79378EE	7937A738	78373F82	77376CB
(1720)	77370814	76372A5C	7537DFA3	743721EB	7437EA31	73374E78	723747BE	7237D803	7137F948	7037C48D
(1760)	6F3729D2	6F373516	6E37E659	6D37399D	6C3740E0	6C37F122	6B375665	6A3766A7	693733E9	6937B62A
(1800)	6837F76B	6737F5AC	6637ACED	6637D2EE	6537736E	643782AE	63375EEE	6337F42D	62376A6D	6137A6AC
(1840)	6037C6EB	6037AF2A	5F377669	5E3719A8	5D3798E6	5D37F324	5C373163	5B3757A1	5A375BDF	5A37501D
(1880)	5937305B	5837FB98	5737AFD6	5737B814	5637FC51	5537BD8F	543719CD	54379A0A	5337B48	52379A85
(1920)	51371903	51379300	5037173E	4F379E7B	4E372F89	4D37CBF6	4D376B34	4C371D72	4B37DFAF	4A37B2ED
(1960)	4A37932B	4937BD69	4B379AA7	4737BCE5	4737D424	46375D62	4537DAA0	443775DF	4437E1E	4337065D
(2000)	4237079C	41372EDB	41377A1A	4037EA59	3F376B99	3E3758D9	3E374C19	3D377759	3C370099	3B375CDA
(2040)	3B37171B	3A370B5C	3937359D	38379DDE	38373220	37370262	36371AA4	3537B4E6	3537EE28	3437BB6B
(2080)	3337C9AE	323719F2	3237B135	3137B579	3037A6BD	3037DF02	2F37C246	2E37B98B	2D37000D1	2D379016
(2120)	2C37715C	2B379CA2	2A371BE9	2A37EA2F	29370077	28377CBE	28374706	2737644E	26370696	2537A3DF
(2160)	2537C128	24373F72	2337176C	23374906	22370250	2137BF9B	2037D5E7	2037AF32	1F37B77E	1E371BCB
(2200)	1E37E717	10371365	1C37A362	1C379200	1B37EB4E	1A37A89D	1937CDEC	1937593C	1837498C	1737A6DC
(2240)	17376D2D	16379D7E	15375400	15373C22	1437A874	13378DC7	1337DB1A	12378F6E	1137BAC2	11375917
(2280)	10376560	0F37D7C1	0F37C217	0E37216E	0D37F2C4	0D37371C	0C37EC73	0B3718CC	0B37BA24	0A37D57D

(2320)	09375907	09375831	0837026B	0737C2E6	07372B42	0637069E	05375FFA	05373057	04377B84	04373C12
(2360)	03377970	023731CF	0237662E	0137178E	00373DEE	0037E64E	FF361260	FE364C23	FC368CE7	FB36BAAC
(2400)	FA36EC72	F936183A	F8363B02	F63661CB	F5368895	F436AB60	F336C52C	F136DFF9	F03600C8	EF362297
(2440)	EE364167	ED365B38	EC367E0A	EA36A3DD	E936CAB1	E836EC86	E736155D	E6364534	E536780C	E336ADE5
(2480)	E236E08F	E1361E9B	E0366177	DF36AB54	DE36F432	DD363912	DB3698F2	DA36F5D3	D9365686	D8366399
(2520)	D736287E									