Cassini Ultraviolet Imaging Spectrograph
UVIS HSP

Ring Stellar Occultation Atlas

Volume 1: Rev 00A – Rev 030

Version: 1.4
June 19, 2018

Table of Contents

The table lists all occultations in this volume, including the star name, rev number, indication of ingress (I) or egress (E), date of the occultation, duration of the occultation, radial range coverage and elevation angle of the star.

Occultations are presented chronologically in the order they were observed. To keep the file size of this atlas manageable, it is presented in multiple volumes, each one covering a subset of the occultations.

Introduction

Over the course of the Cassini mission, the High Speed Photometer (HSP) of the Ultraviolet Imaging Spectrograph (UVIS) observed 170 occultations of stars by Saturn's rings. Details on the UVIS instrument can be found in Esposito et al. (1998, 2004). Information on the handling of HSP ring occultation data as well as a summary of data calibration and reduction techniques for the first part of the Cassini mission are in Colwell et al. (2010). This document provides a tabular and visual overview of these stellar occultations.

Description of Data Products in the Atlas

The HSP data consist of a time series of measured photon counts. With the exception of observations of some faint stars where the background signal dominates or is a significant contribution, the measured signal is primarily due to starlight transmitted through the rings. The HSP integration times are 1, 2, 4, or 8 msec. The majority of occultations used a 1 msec integration period, with most of the rest at 2 msec. In this atlas the data are binned to 1 second.

The data are shown in two plots: (1) a plot spanning the range of 70,000 km to 150,000 km from Saturn for all occultations to allow direct comparison of signal and coverage on a single distance scale; and (2) a plot that shows the data zoomed to the radial range of coverage of the occultation.

Two additional geometry plots are included for each occultation: (1) the radial ring plane resolution of the occultation (in the frame of Saturn, not accounting for ring particle motion or diffraction); and (2) the value of ϕ, an angle measured in the ring plane in the counterclockwise sense from the outward radial vector at the measurement point to the direction to the star projected into the ring plane. Thus, an observation where the look vector to the star is tangent to the rings has ϕ=90 degrees.

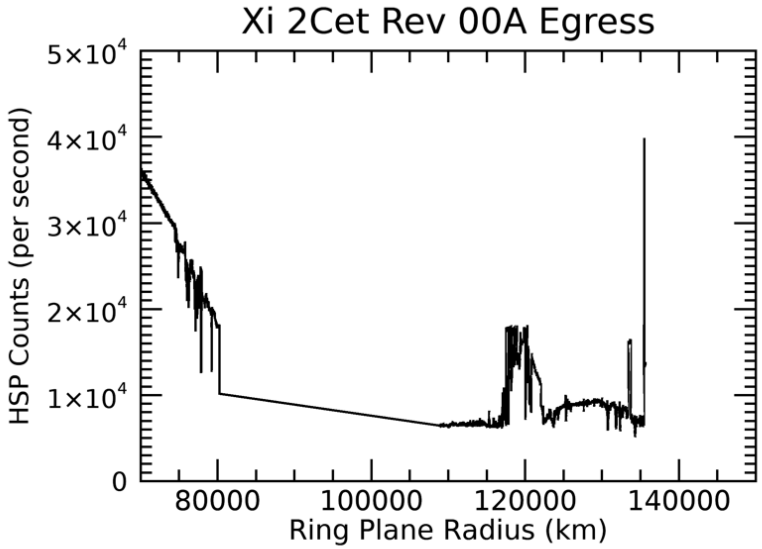
On the page following the data plots, a geometry visualization is shown at a time near the middle of the occultation. The position of the UVIS HSP field of view is labeled on each of these plots. Occultations that cut a chord across the rings, are presented here as separate "Ingress" and "Egress" occultations, referring to the portion of the occultation where the observation point is approaching or receding from Saturn, respectively. Some geometry visualizations are missing and will be included in the next revision of this volume.

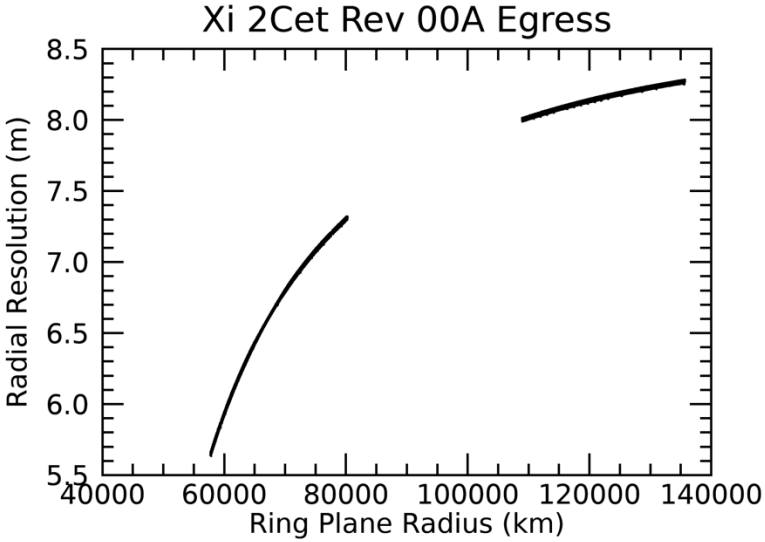
Document assembled by Joshua Colwell, UVIS Co-Investigator, University of Central Florida, with the assistance of Stephanie Eckert Grant, Richard Jerousek, and Tina Notrika, UCF.

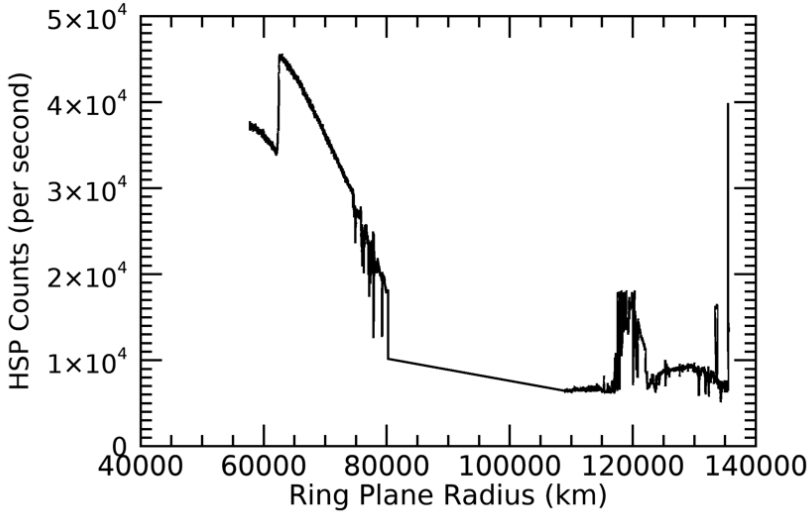
References

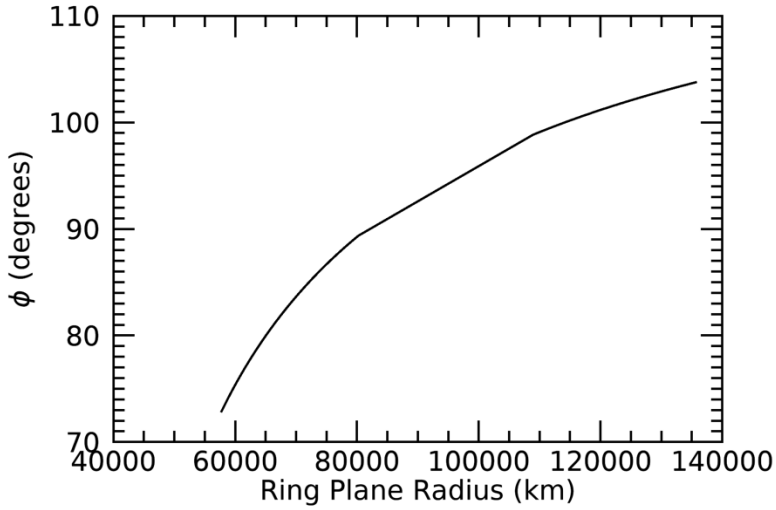
1. Colwell, J. E., L. W. Esposito, D. Pettis, M. Sremčević, R. G. Jerousek, E. T. Bradley 2010. Cassini UVIS Stellar Occultation Observations of Saturn's Rings. *Astron. J.* **140**, 1569-1578, doi:10.1088/0004-6256/140/6/1569.
2. Esposito, L. W., J. E. Colwell, and W. E. McClintock 1998. Cassini UVIS Observations of Saturn's Rings. *Planet. Space Sci.* **46**, 1221-1235.
3. Esposito, L. W., C. A. Barth, J. E. Colwell, G. M. Lawrence, W. E. McClintock, A. I. F. Stewart, H. U. Keller, , A. Korth, H. Lauche, M. Festou, A. L. Lane, C. J. Hansen, J. N. Maki, R. A. West, H. Jahn, R. Reulke, K. Warlich, D. E. Shemansky, and Y. L. Yung 2004. The Cassini Ultraviolet Imaging Spectrograph Investigation. *Space Sci. Rev.* **115**, 299-361.

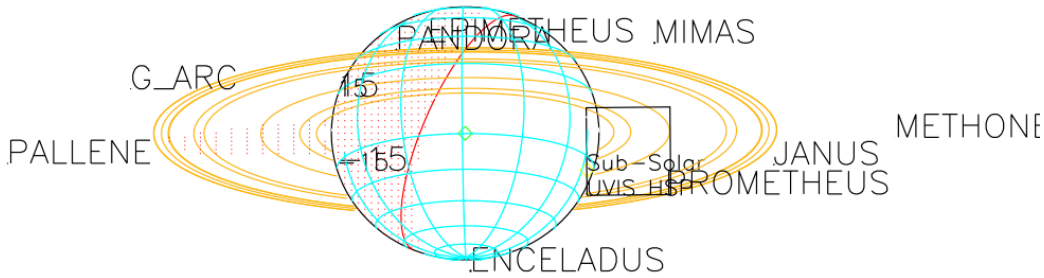
Star		Rev	Ing/Eg	Year/Day	B	ϕ	Radius	Duration (min)
ξ2	CET	A	E	2004-280	-14.9	72.9-103.8	57756-135650	1386.6
126	TAU	8	E	2005-139	-21.1	130.2- 88.8	70380-141388	531.5
α	VIR	8	E	2005-141	17.3	116.1- 82.2	118978-141736	42.2
α	VIR	8	I	2005-141	17.3	150.2-116.1	141954-118978	42.4
δ	AQR	8	E	2005-141	12.2	106.8-131.4	60687-169904	164.5
α	LEO	9	E	2005-159	-9.5	68.0- 98.4	114150-131551	44.4
α	LEO	9	I	2005-159	-9.5	10.7- 68.0	204717-114150	115.8
126	TAU	10	I	2005-175	-21.1	216.5-204.2	144811-103208	265
σ	SGR	11	I	2005-196	29.1	248.8-221.9	146929- 85971	95.3
α	SCO	13	E	2005-232	32.2	155.0-105.8	101173-146589	100.4
α	SCO	13	I	2005-232	32.2	208.4-155.0	155750-101173	114.6
α	ORI	26	I	2006-204	-11.7	313.6-325.7	139867-110946	45.5
ζ	OPH	26	E	2006-206	16.2	126.7-116.6	120941-149233	110.2
α	TAU	28	I	2006-252	-22.2	262.8-274.9	152783- 61662	118.5
λ	CET	28	I	2006-252	-15.4	258.5-304.0	144010- 74326	148.3
α	SCO	29	I	2006-269	32.2	274.2-327.3	149435- 79863	285.9
λ	SCO	29	E	2006-269	41.7	189.1-136.4	88478-143804	392
λ	SCO	29	I	2006-269	41.7	189.6-189.1	88480- 88478	2.2
α	VIR	30	I	2006-285	17.3	219.8-266.3	151545- 64010	79.5
ε	MIC	30	E	2006-292	31	189.1-174.6	97362-140215	273
γ	LUP	30	E	2006-286	47.4	157.1-102.7	83062-141051	314.1
γ	LUP	30	I	2006-286	47.4	185.9-157.1	94587- 83062	124.4


Xi 2Cet Rev 00A Egress
HSP Counts (per second)
5×10^4
4×10^4
3×10^4
2×10^4
1×10^4
0
80000
100000
120000
140000
Ring Plane Radius (km)


Xi 2Cet Rev 00A Egress
Radial Resolution (m)
8.5
8.0
7.5
7.0
6.5
6.0
5.5
40000
60000
80000
100000
120000
140000
Ring Plane Radius (km)


HSP Counts (per second)
5×10^4
4×10^4
3×10^4
2×10^4
1×10^4
0
40000
60000
80000
100000
120000
140000
Ring Plane Radius (km)


ϕ (degrees)
110
100
90
80
70
40000
60000
80000
100000
120000
140000
Ring Plane Radius (km)

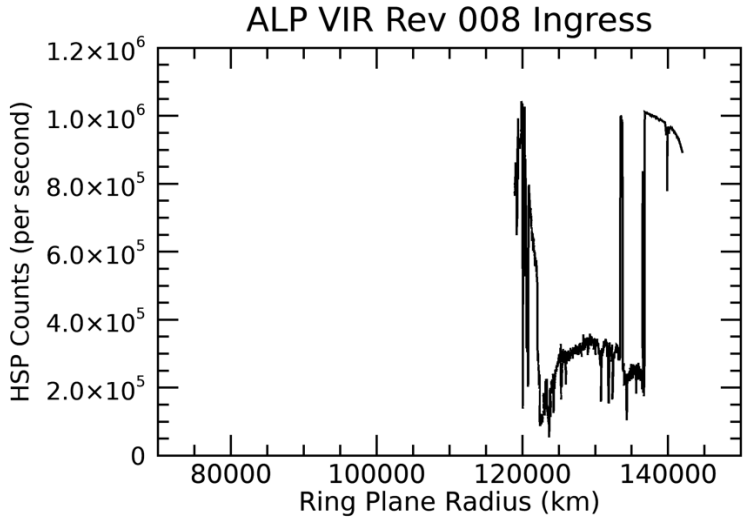


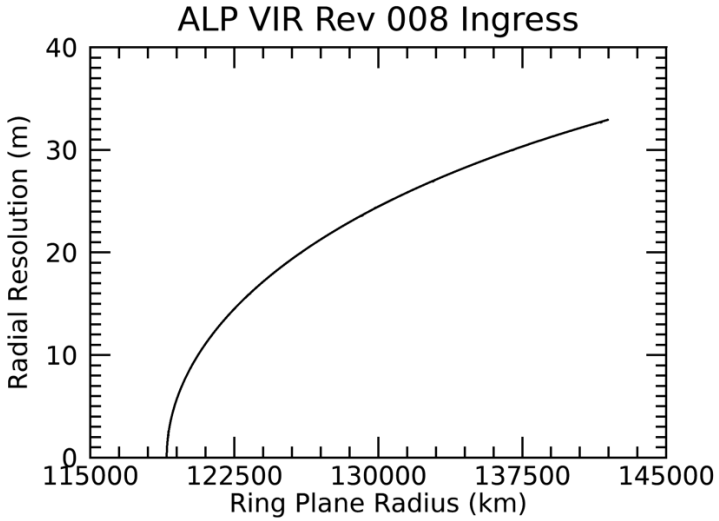
2004-280T23:59:00.000 6287586.3 km

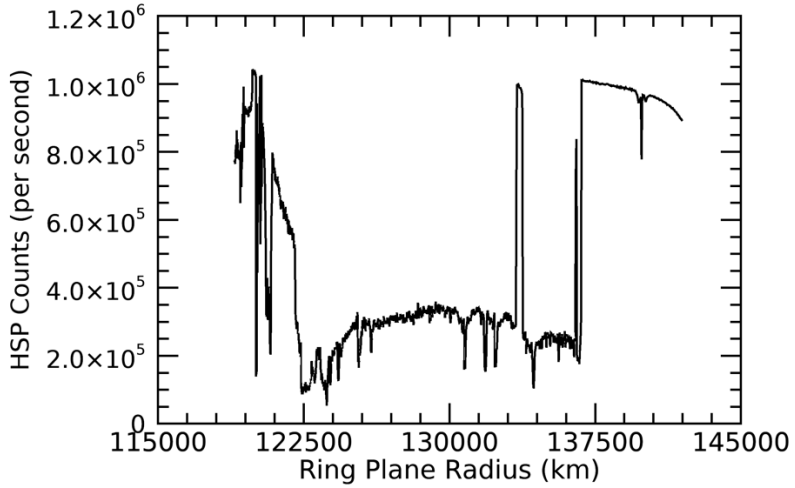
Target RA/dec: 37.78, 8.46

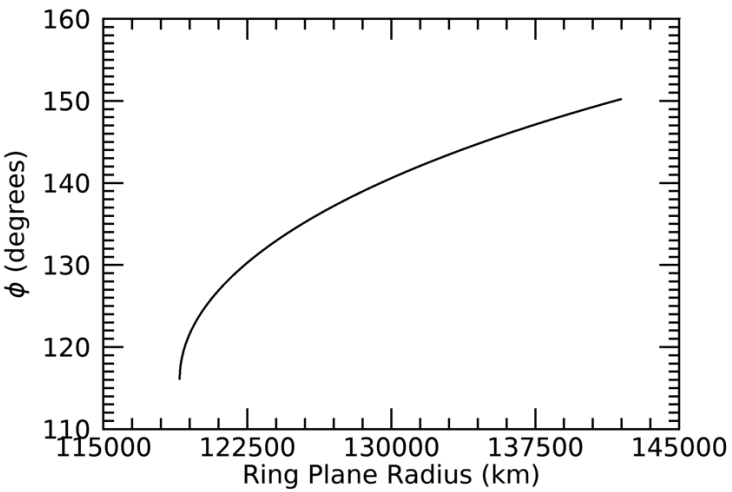
Subsolar lat/lon: -19.68, 138.24

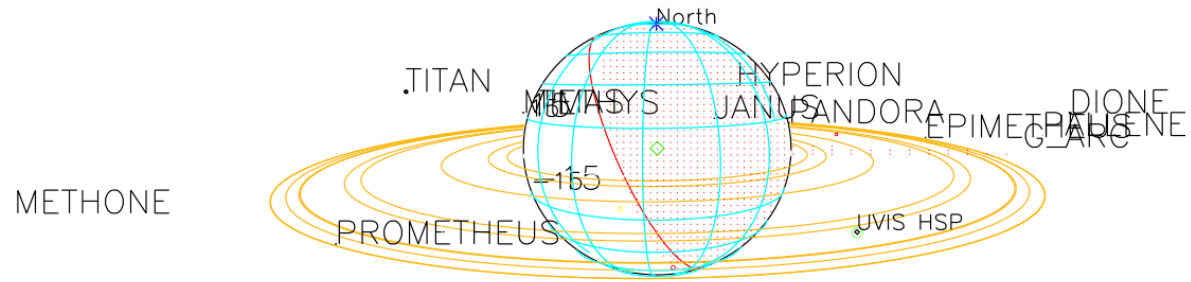
Sub-s/c lat/lon: -12.25, 61.60


ALP VIR Rev 008 Ingress
HSP Counts (per second)
1.2×10^6
1.0×10^6
8.0×10^5
6.0×10^5
4.0×10^5
2.0×10^5
0
80000
100000
120000
140000
Ring Plane Radius (km)


ALP VIR Rev 008 Ingress
Radial Resolution (m)
40
30
20
10
0
115000
122500
130000
137500
145000
Ring Plane Radius (km)


HSP Counts (per second)
1.2×10^6
1.0×10^6
8.0×10^5
6.0×10^5
4.0×10^5
2.0×10^5
0
115000
122500
130000
137500
145000
Ring Plane Radius (km)


ϕ (degrees)
160
150
140
130
120
110
115000
122500
130000
137500
145000
Ring Plane Radius (km)

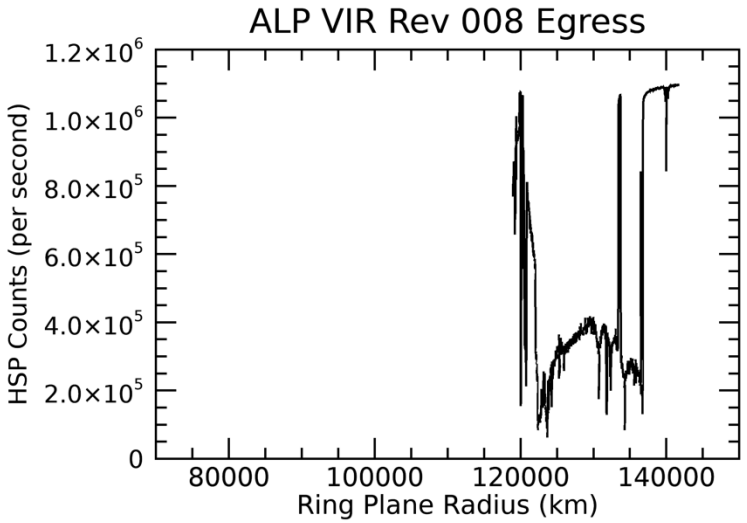


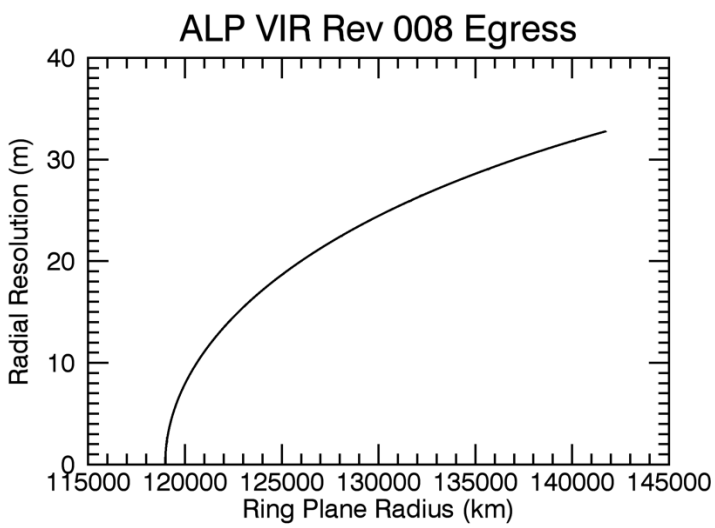
2005-141T05:25:00.000 218307.96 km

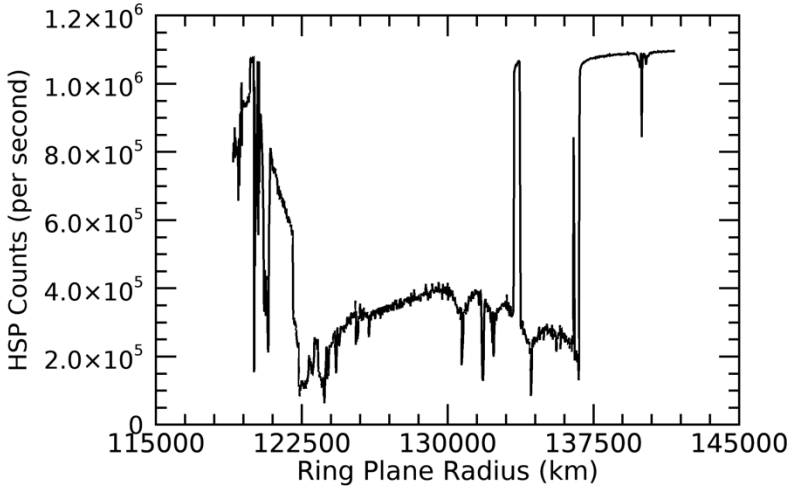
Target RA/dec: 224.69, -2.29

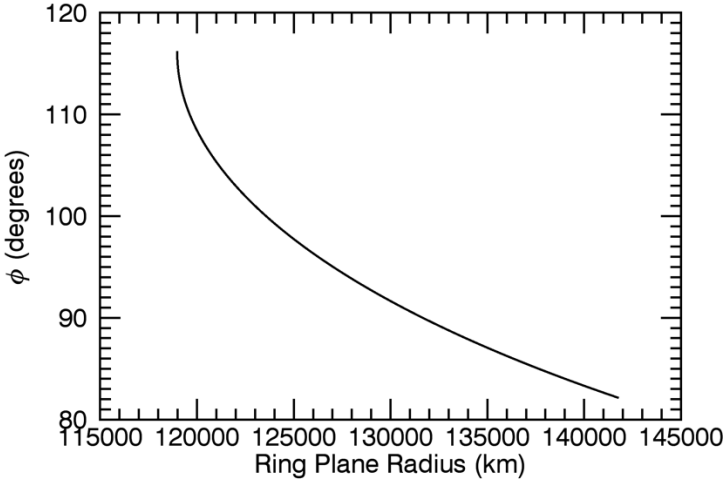
Subsolar lat/lon: -17.89, -36.12

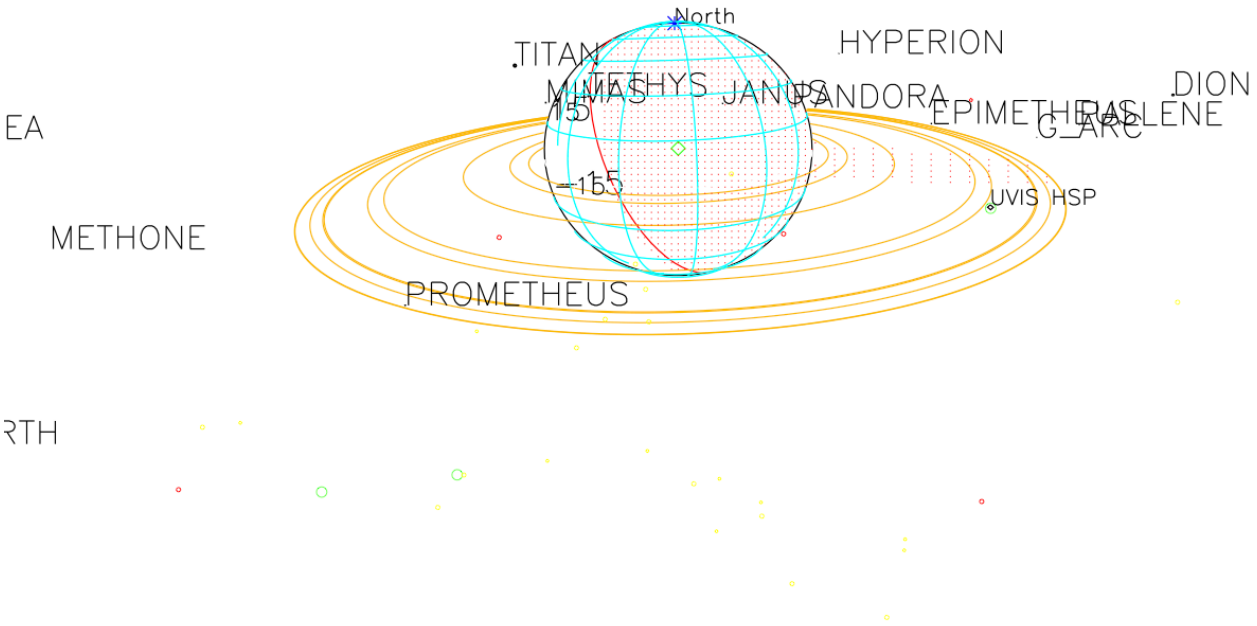
Sub-s/c lat/lon: 7.51, 65.46


ALP VIR Rev 008 Egress
HSP Counts (per second)
1.2×10^6
1.0×10^6
8.0×10^5
6.0×10^5
4.0×10^5
2.0×10^5
0
80000
100000
120000
140000
Ring Plane Radius (km)


ALP VIR Rev 008 Egress
Radial Resolution (m)
40
30
20
10
0
115000
120000
125000
130000
135000
140000
145000
Ring Plane Radius (km)


HSP Counts (per second)
1.2×10^6
1.0×10^6
8.0×10^5
6.0×10^5
4.0×10^5
2.0×10^5
0
115000
122500
130000
137500
145000
Ring Plane Radius (km)


ϕ (degrees)
120
110
100
90
80
115000
120000
125000
130000
135000
140000
145000
Ring Plane Radius (km)

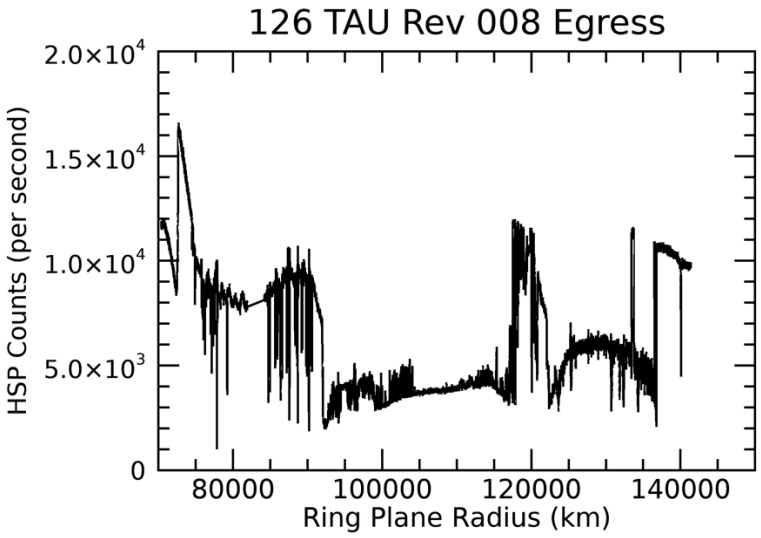


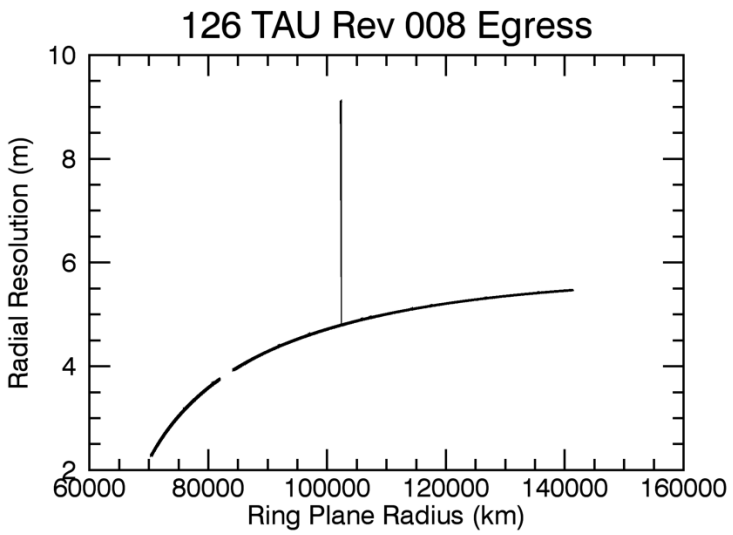
2005-141T06:07:00.000 216692.26 km

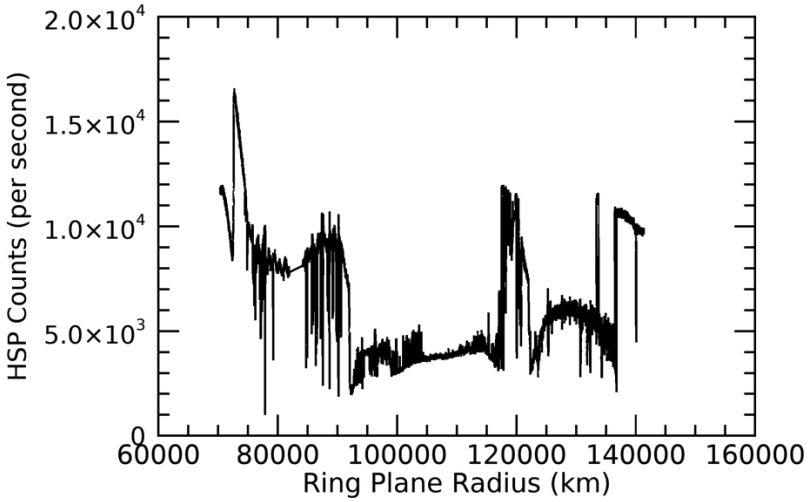
Target RA/dec: 235.89, -6.41

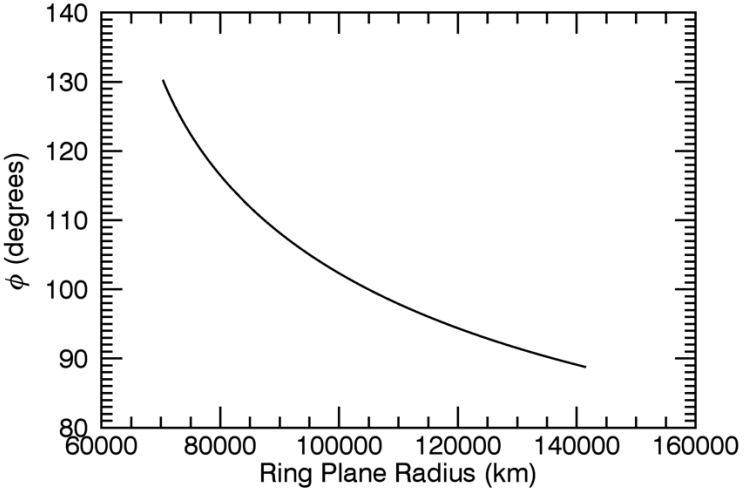
Subsolar lat/lon: -17.89, -59.77

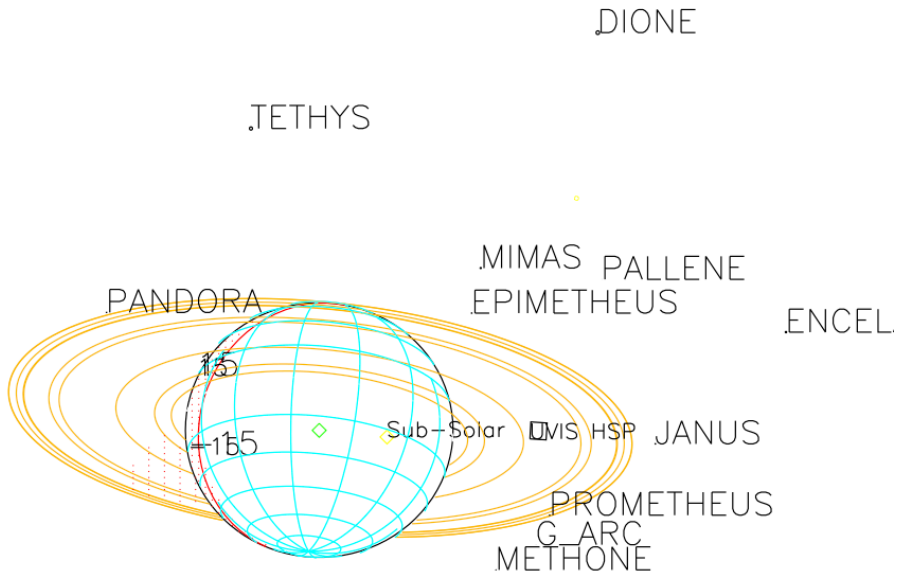
Sub-s/c lat/lon: 10.90, 53.26


126 TAU Rev 008 Egress
HSP Counts (per second)
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
80000
100000
120000
140000
Ring Plane Radius (km)


126 TAU Rev 008 Egress
Radial Resolution (m)
10
8
6
4
2
60000
80000
100000
120000
140000
160000
Ring Plane Radius (km)


HSP Counts (per second)
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
60000
80000
100000
120000
140000
160000
Ring Plane Radius (km)


φ (degrees)
140
130
120
110
100
90
80
60000
80000
100000
120000
140000
160000
Ring Plane Radius (km)

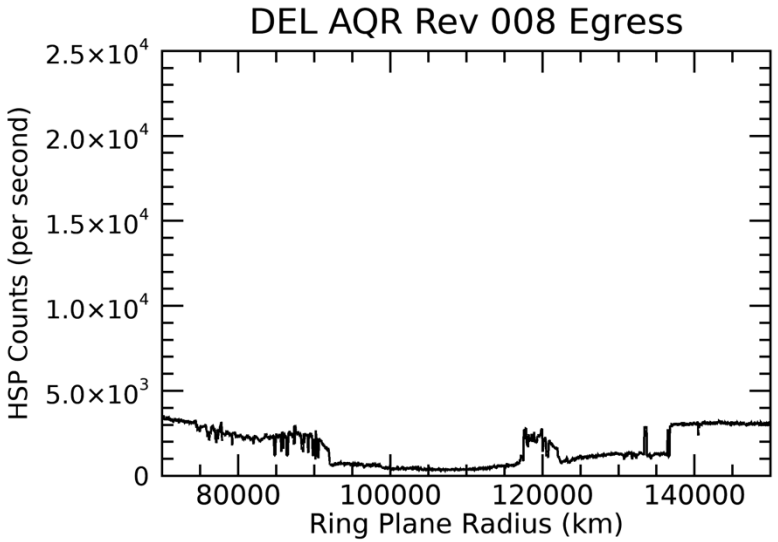


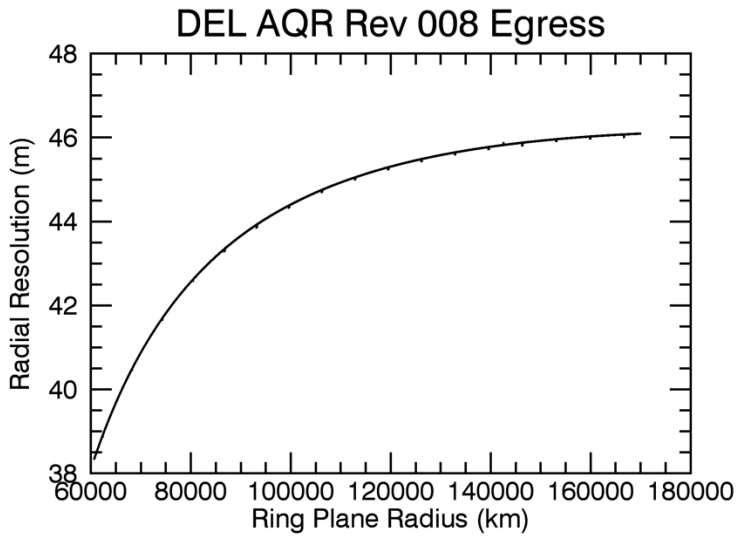
2005-139T10:10:00.000 1214803.0 km

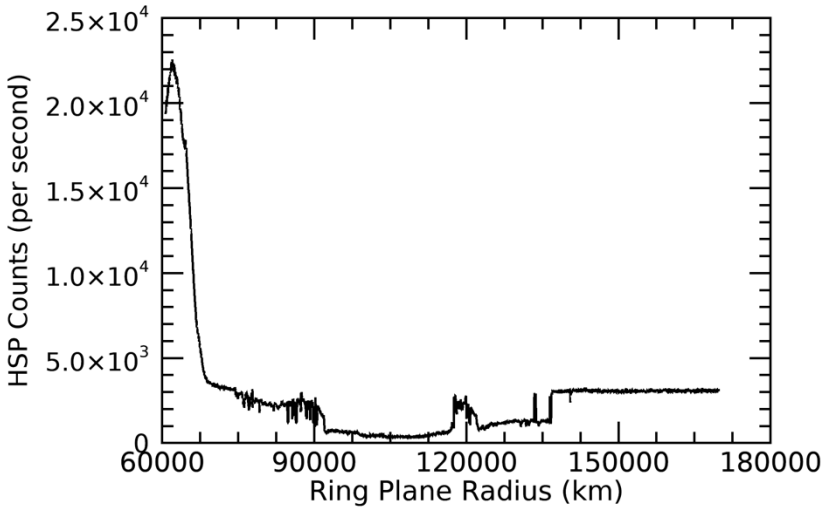
Target RA/dec: 90.24, 16.53

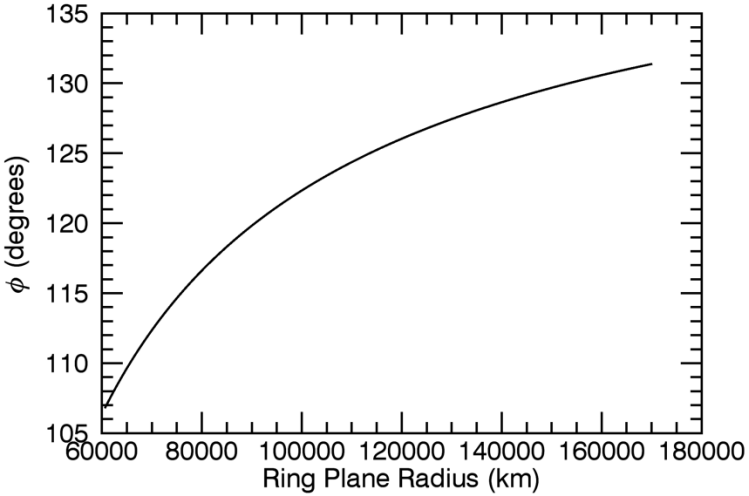
Subsolar lat/lon: -17.91, -15.04

Sub-s/c lat/lon: -17.20, -46.21

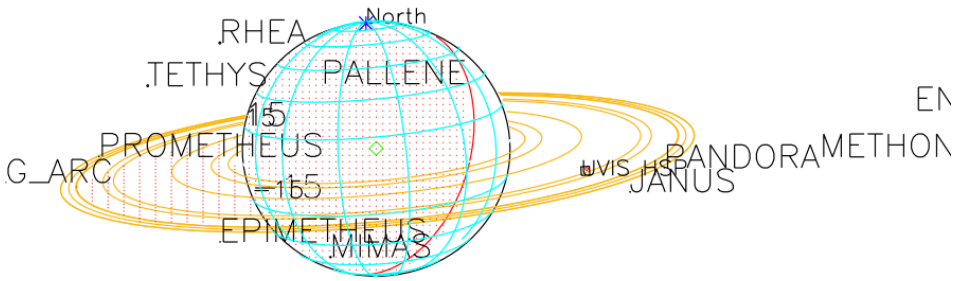

DEL AQR Rev 008 Egress
HSP Counts (per second)
2.5×10^4
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
80000
100000
120000
140000
Ring Plane Radius (km)


DEL AQR Rev 008 Egress
Radial Resolution (m)
48
46
44
42
40
38
60000
80000
100000
120000
140000
160000
180000
Ring Plane Radius (km)


HSP Counts (per second)
2.5×10^4
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
60000
90000
120000
150000
180000
Ring Plane Radius (km)


φ (degrees)
135
130
125
120
115
110
105
60000
80000
100000
120000
140000
160000
180000
Ring Plane Radius (km)

:BE

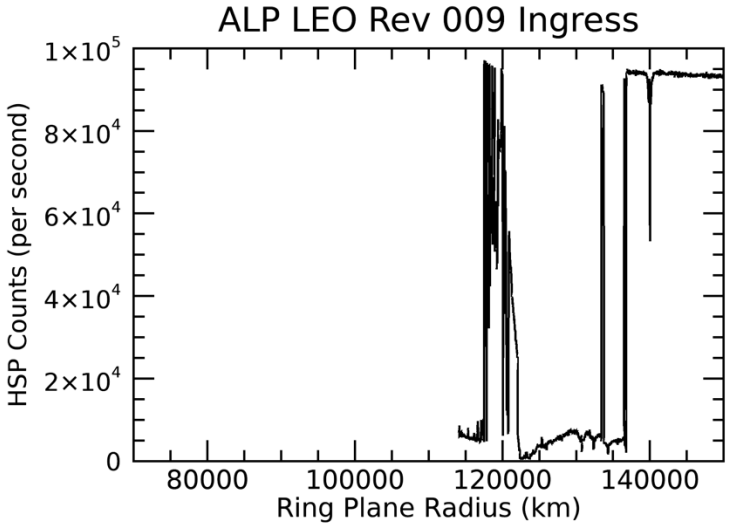


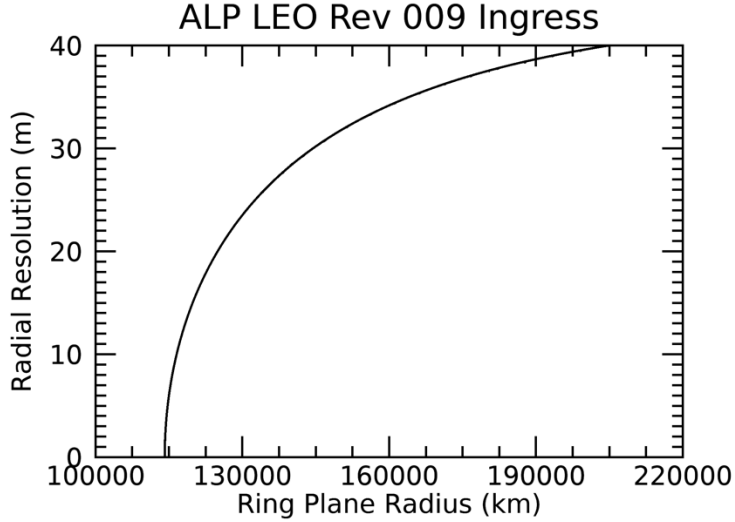
2005−141T22:13:00.000 619192.19 km

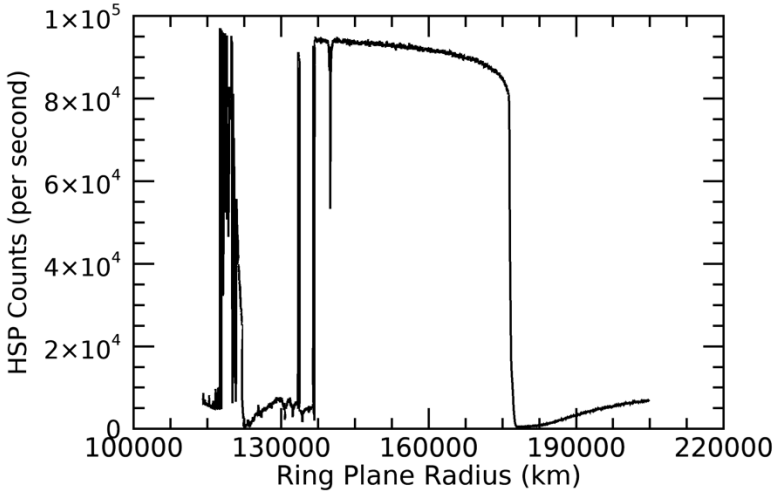
Target RA/dec: 352.75, −15.18

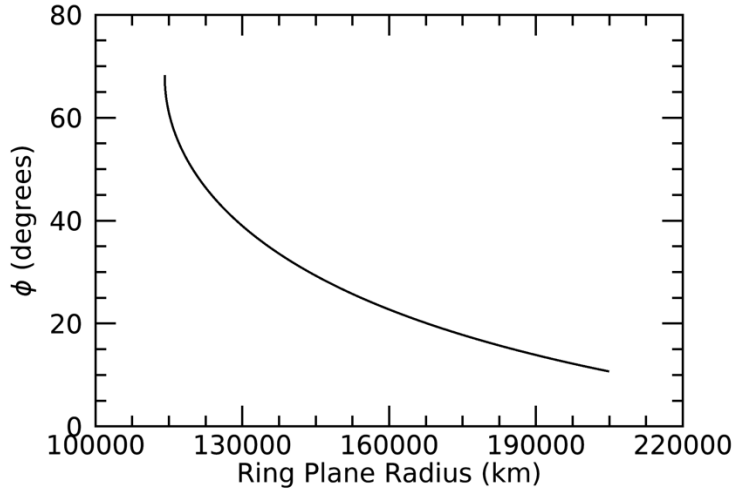
Subsolar lat/lon: −17.89, 116.36

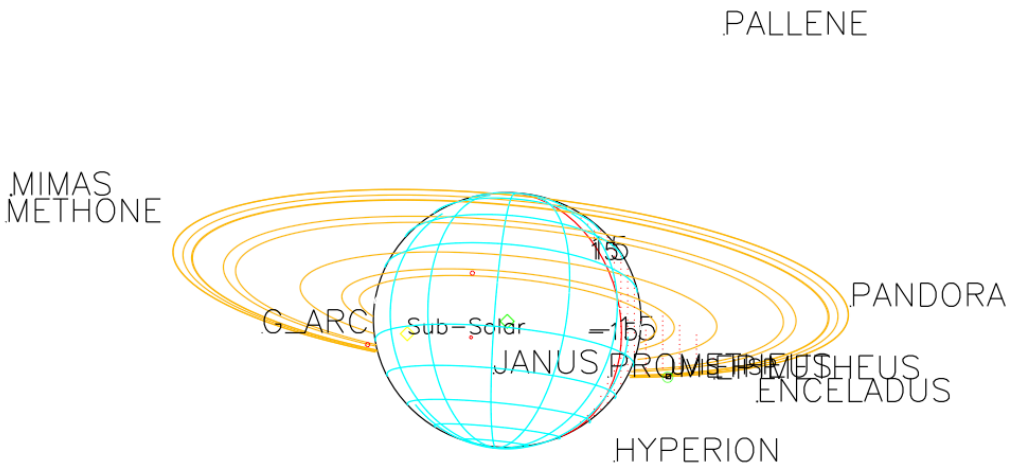
Sub−s/c lat/lon: 8.98, −12.98


ALP LEO Rev 009 Ingress
HSP Counts (per second)
1×10^5
8×10^4
6×10^4
4×10^4
2×10^4
0
80000
100000
120000
140000
Ring Plane Radius (km)


ALP LEO Rev 009 Ingress
Radial Resolution (m)
40
30
20
10
0
100000
130000
160000
190000
220000
Ring Plane Radius (km)


HSP Counts (per second)
1×10^5
8×10^4
6×10^4
4×10^4
2×10^4
0
100000
130000
160000
190000
220000
Ring Plane Radius (km)


ϕ (degrees)
80
60
40
20
0
100000
130000
160000
190000
220000
Ring Plane Radius (km)

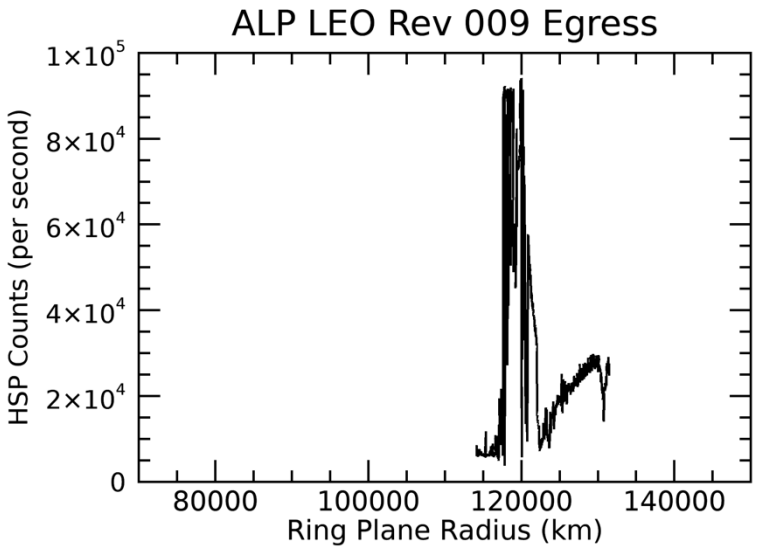


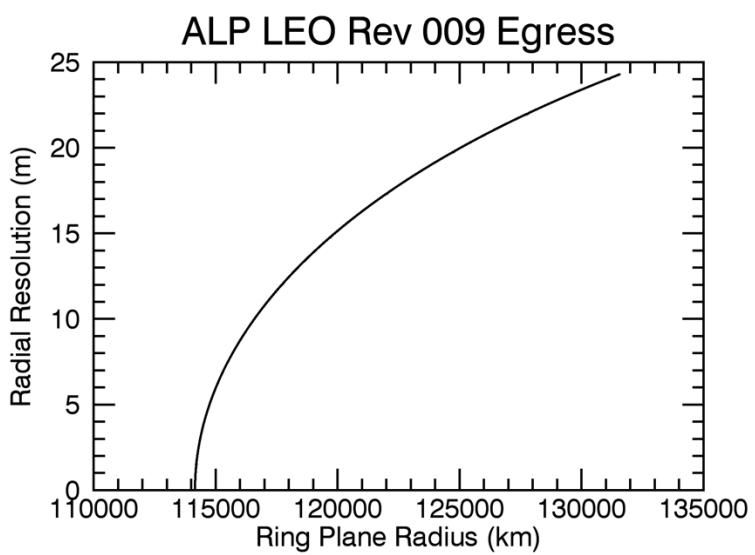
2005-159T05:03:34.000 316284.98 km

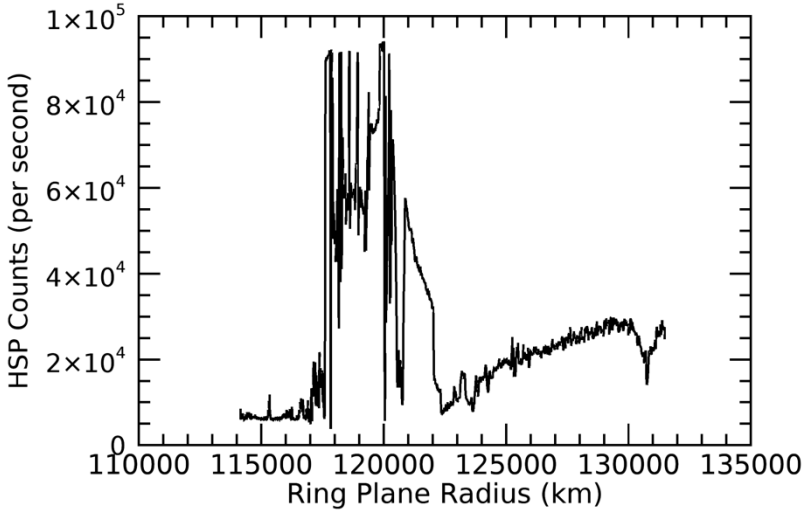
Target RA/dec: 165.44, 16.72

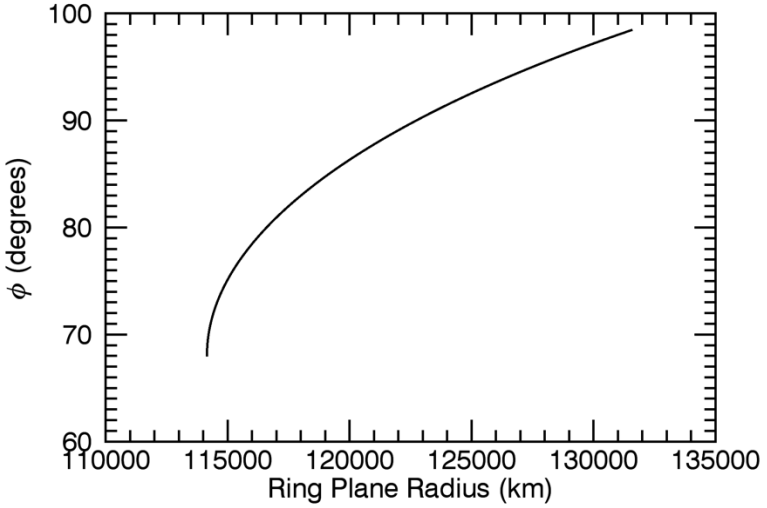
Subsolar lat/lon: -17.73, 142.35

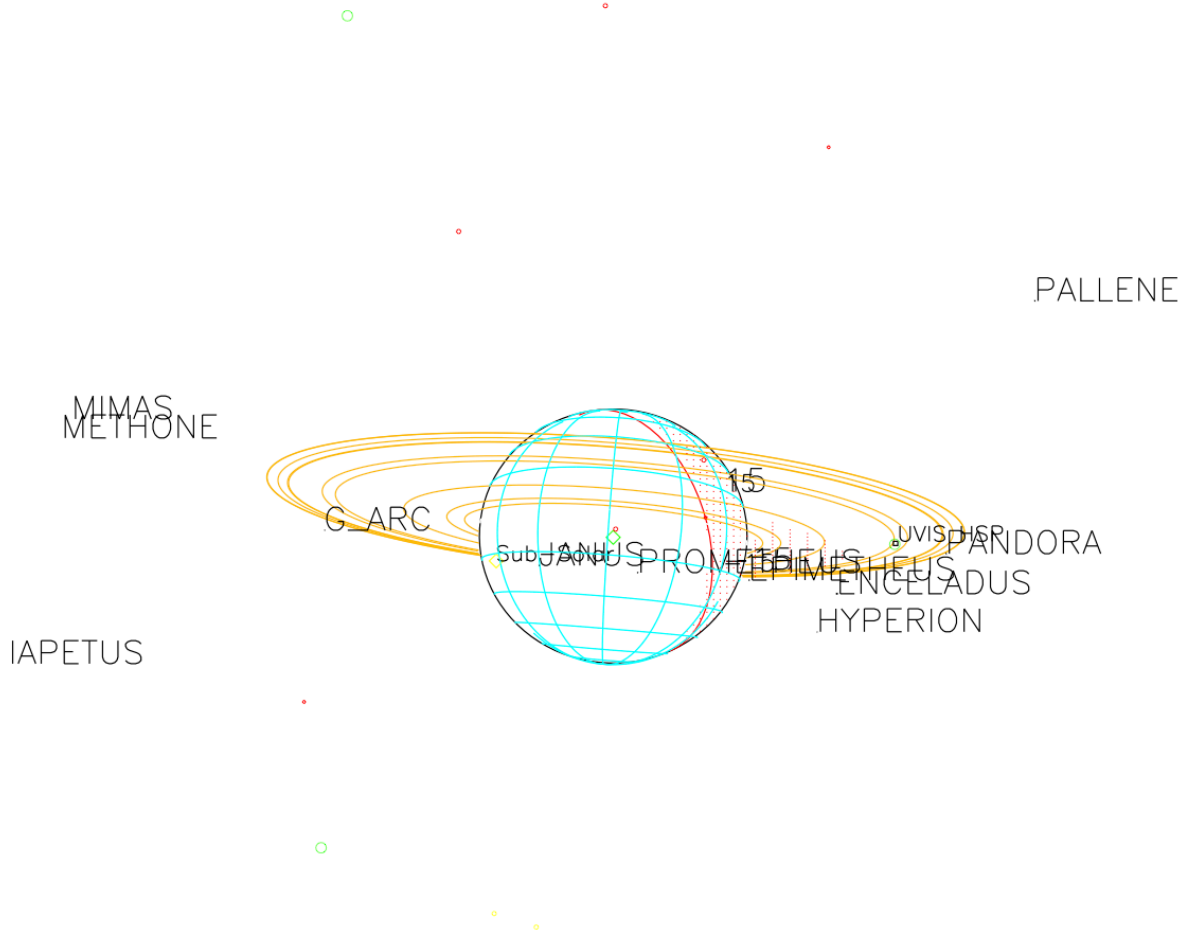
Sub-s/c lat/lon: -10.99, -174.66


ALP LEO Rev 009 Egress
HSP Counts (per second)
1×10^5
8×10^4
6×10^4
4×10^4
2×10^4
0
80000
100000
120000
140000
Ring Plane Radius (km)


ALP LEO Rev 009 Egress
Radial Resolution (m)
25
20
15
10
5
0
110000
115000
120000
125000
130000
135000
Ring Plane Radius (km)


HSP Counts (per second)
1×10^5
8×10^4
6×10^4
4×10^4
2×10^4
0
110000
115000
120000
125000
130000
135000
Ring Plane Radius (km)


ϕ (degrees)
100
90
80
70
60
110000
115000
120000
125000
130000
135000
Ring Plane Radius (km)

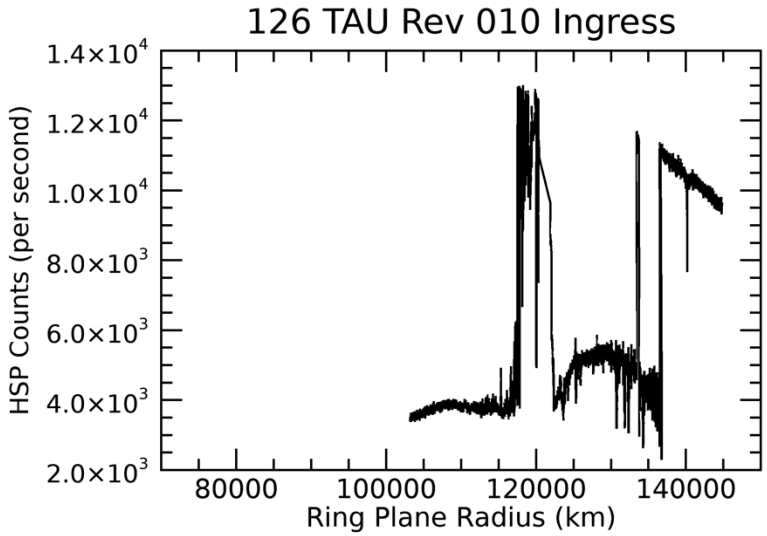


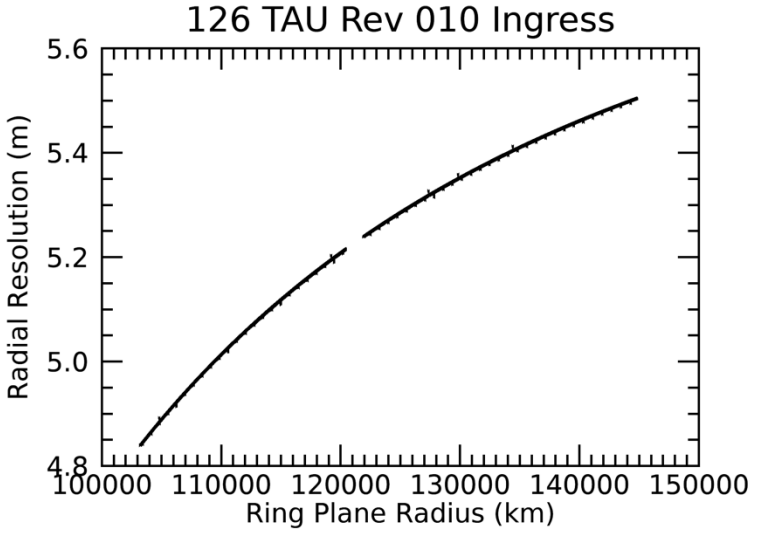
2005-159T06:23:00.000 280688.20 km

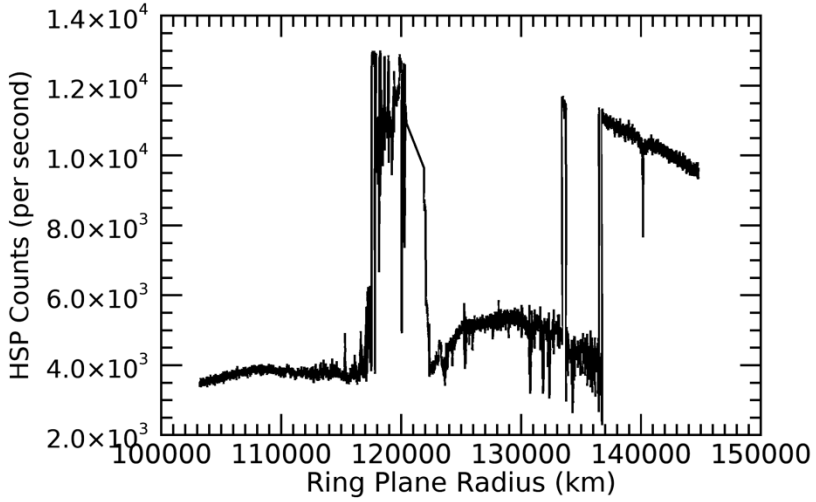
Target RA/dec: 177.50, 13.83

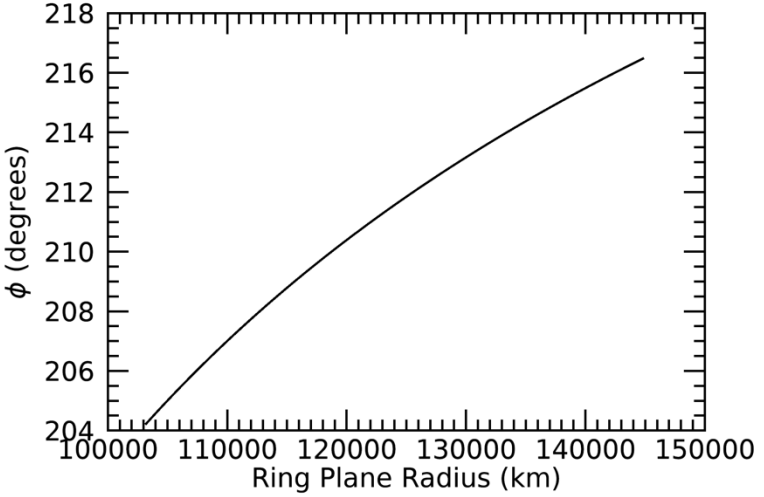
Subsolar lat/lon: -17.73, 97.62

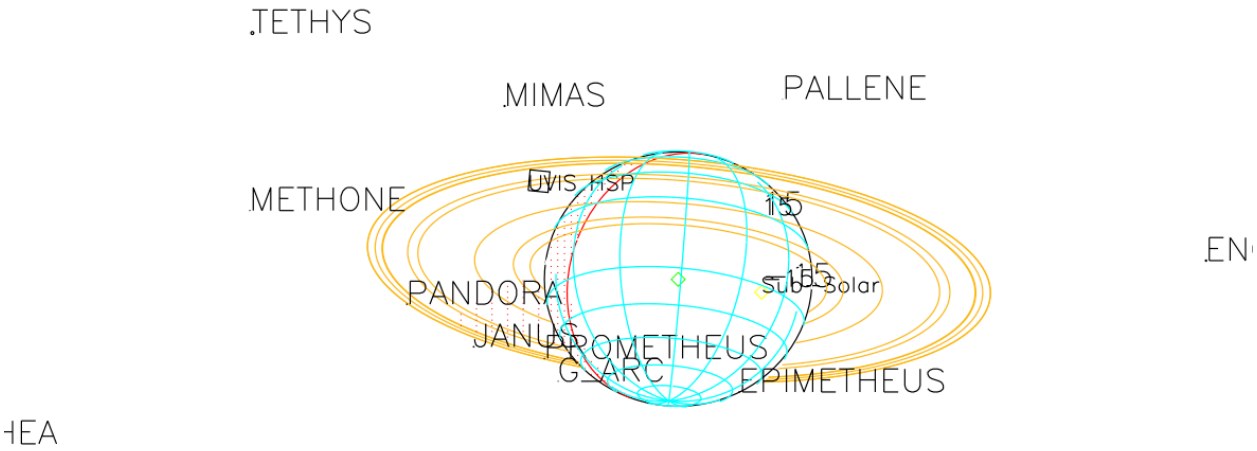
Sub-s/c lat/lon: -7.71, 152.16


126 TAU Rev 010 Ingress
HSP Counts (per second)
1.4×10^4
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
80000
100000
120000
140000
Ring Plane Radius (km)


126 TAU Rev 010 Ingress
Radial Resolution (m)
5.6
5.4
5.2
5.0
4.8
100000
110000
120000
130000
140000
150000
Ring Plane Radius (km)

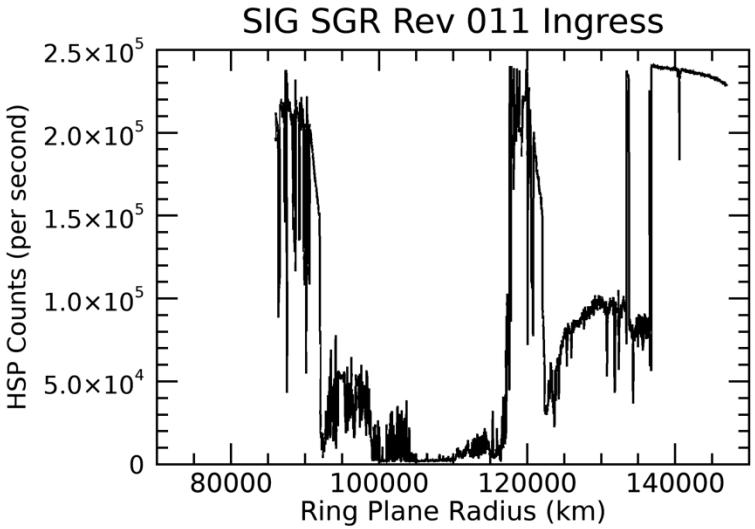

HSP Counts (per second)
1.4×10^4
1.2×10^4
1.0×10^4
8.0×10^3
6.0×10^3
4.0×10^3
2.0×10^3
100000
110000
120000
130000
140000
150000
Ring Plane Radius (km)

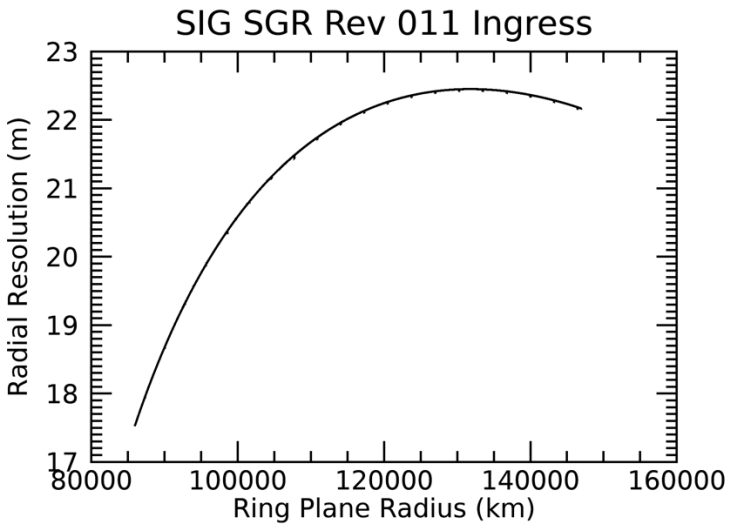

ϕ (degrees)
218
216
214
212
210
208
206
204
100000
110000
120000
130000
140000
150000
Ring Plane Radius (km)

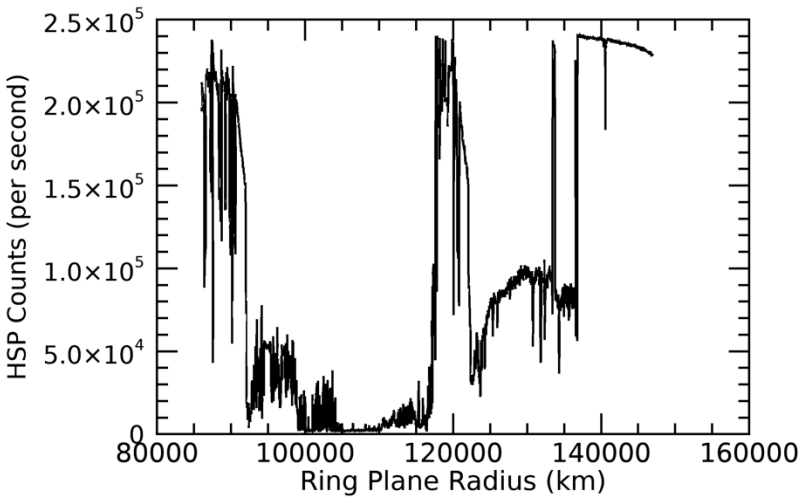


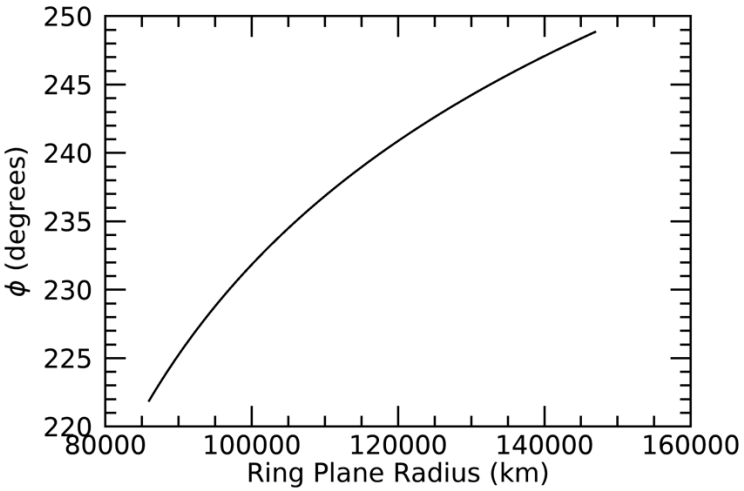
2005-175T02:26:00.000 1490223.2 km
Target RA/dec: 82.88, 14.85
Subsolar lat/lon: -17.59, -141.00
Sub-s/c lat/lon: -16.26, 178.80

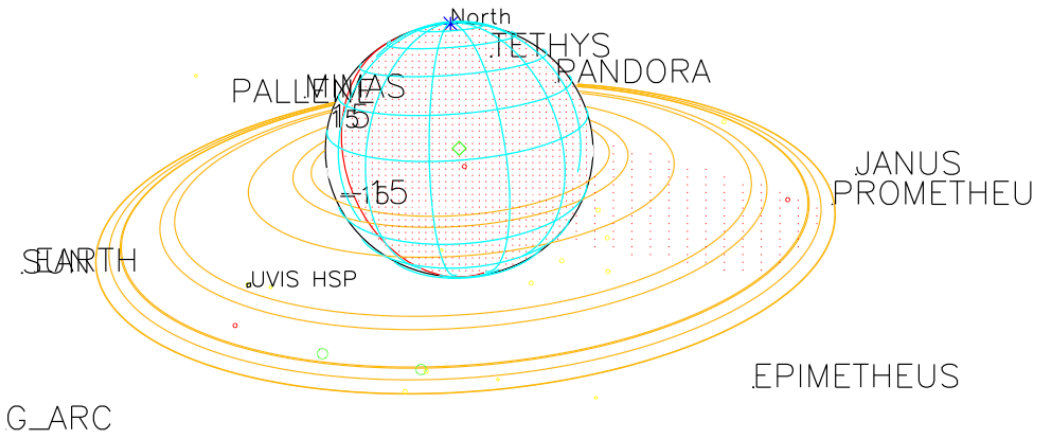
HYPERION


SIG SGR Rev 011 Ingress
HSP Counts (per second)
2.5×10^5
2.0×10^5
1.5×10^5
1.0×10^5
5.0×10^4
0
80000
100000
120000
140000
Ring Plane Radius (km)


SIG SGR Rev 011 Ingress
Radial Resolution (m)
23
22
21
20
19
18
17
80000
100000
120000
140000
160000
Ring Plane Radius (km)


HSP Counts (per second)
2.5×10^5
2.0×10^5
1.5×10^5
1.0×10^5
5.0×10^4
0
80000
100000
120000
140000
160000
Ring Plane Radius (km)


ϕ (degrees)
250
245
240
235
230
225
220
80000
100000
120000
140000
160000
Ring Plane Radius (km)

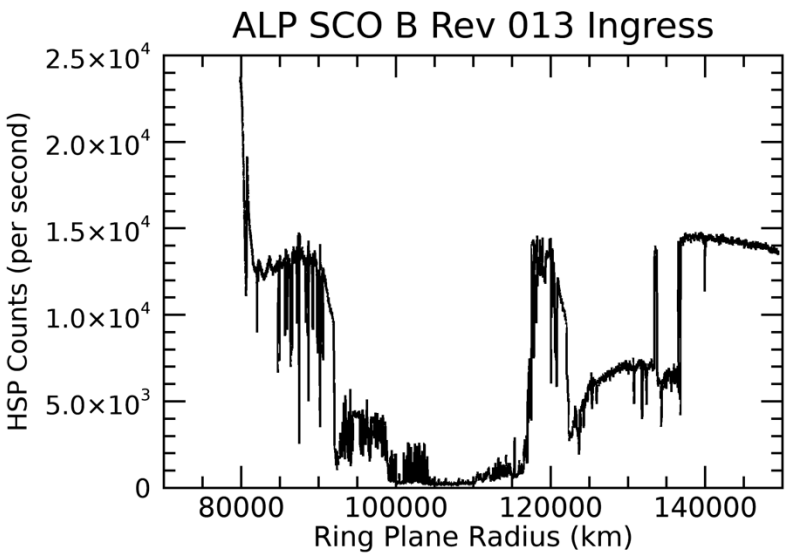


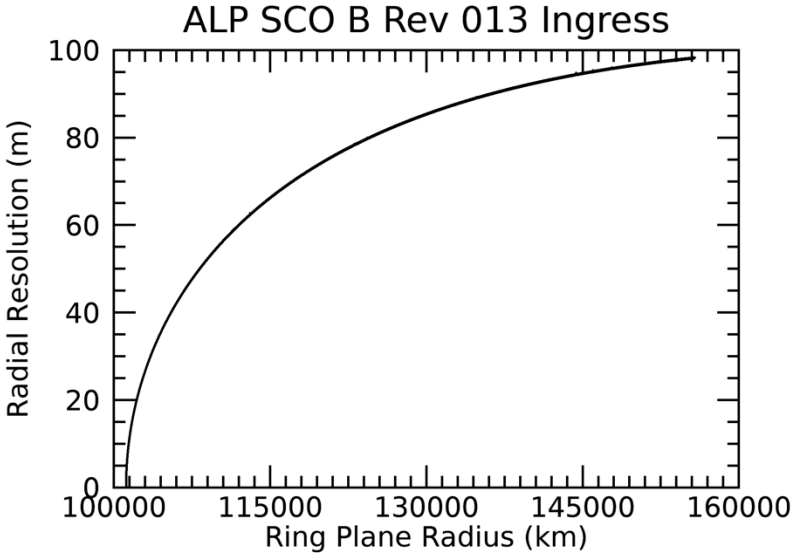
2005-195T23:38:00.000 226790.24 km

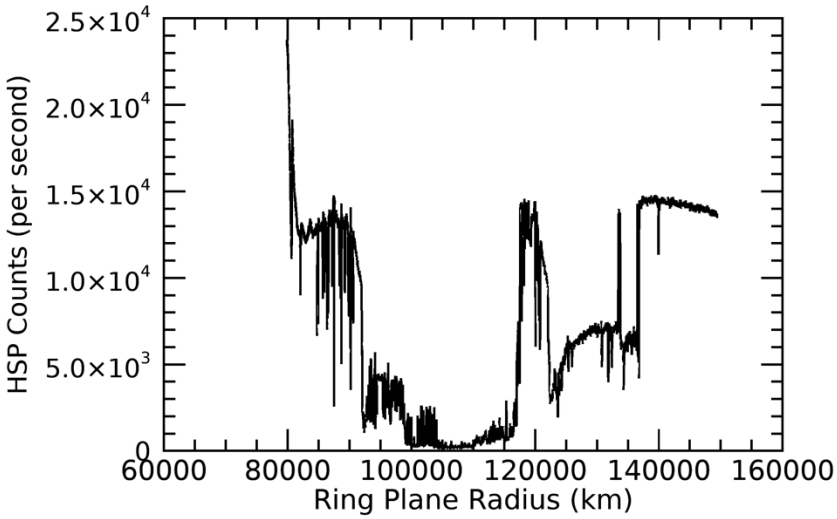
Target RA/dec: 258.23, -13.68

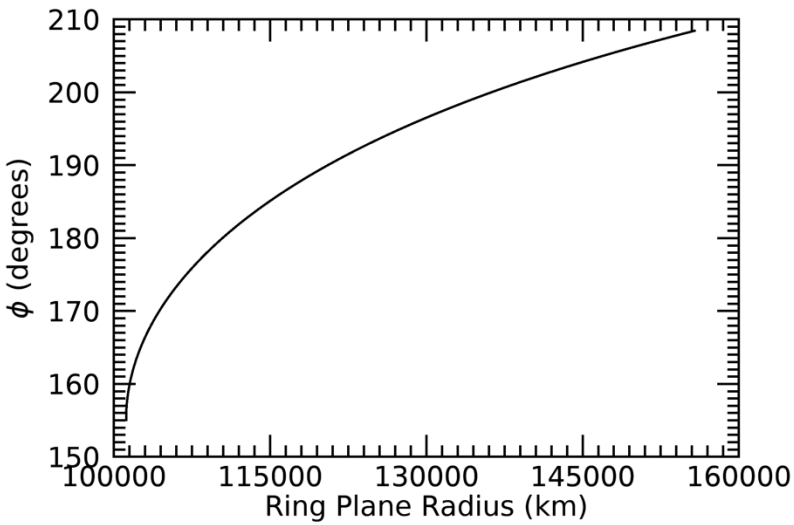
Subsolar lat/lon: -17.40, -152.32

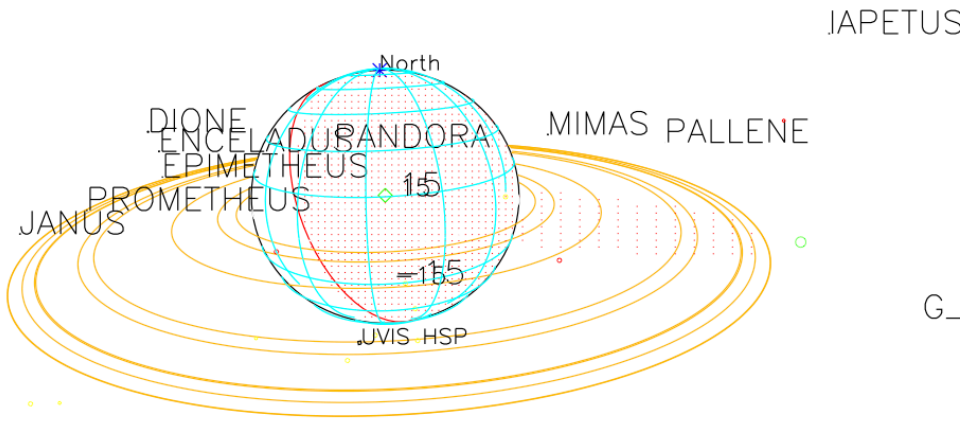
Sub-s/c lat/lon: 16.22, -18.17


ALP SCO B Rev 013 Ingress
HSP Counts (per second)
2.5×10^4
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
80000
100000
120000
140000
Ring Plane Radius (km)


ALP SCO B Rev 013 Ingress
Radial Resolution (m)
100
80
60
40
20
0
100000
115000
130000
145000
160000
Ring Plane Radius (km)


HSP Counts (per second)
2.5×10^4
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
60000
80000
100000
120000
140000
160000
Ring Plane Radius (km)


ϕ (degrees)
210
200
190
180
170
160
150
100000
115000
130000
145000
160000
Ring Plane Radius (km)

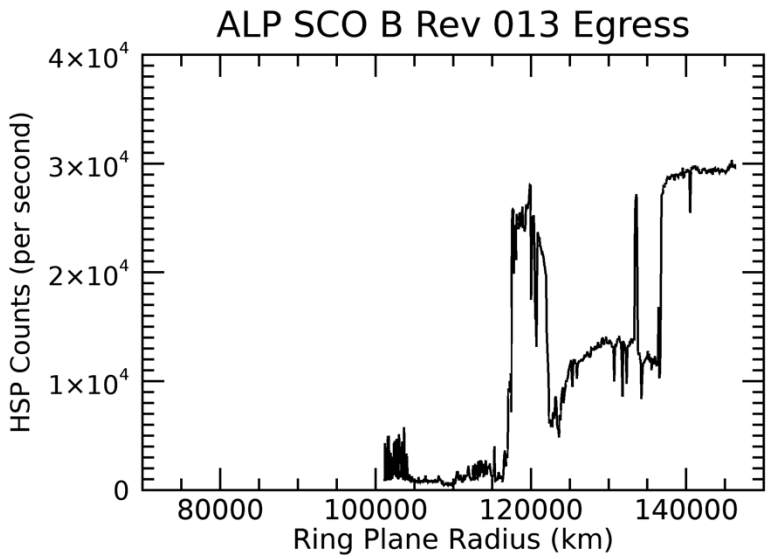


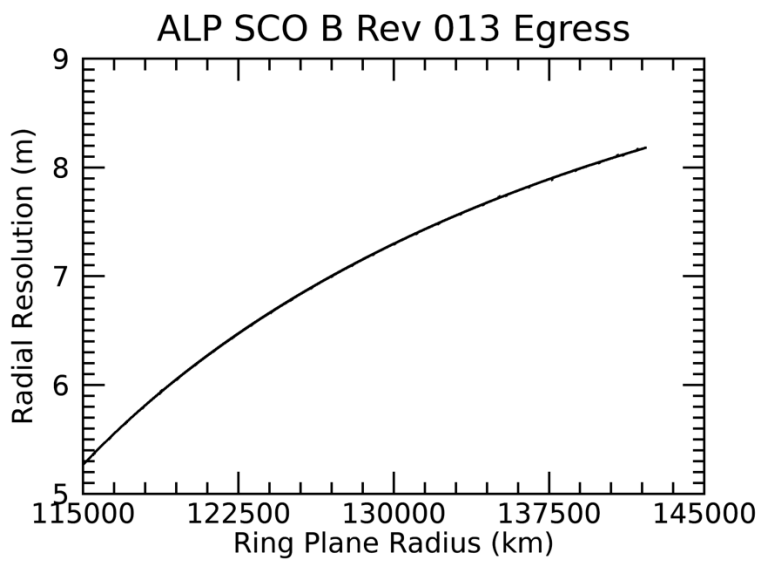
2005-232T11:48:00.000 217627.85 km

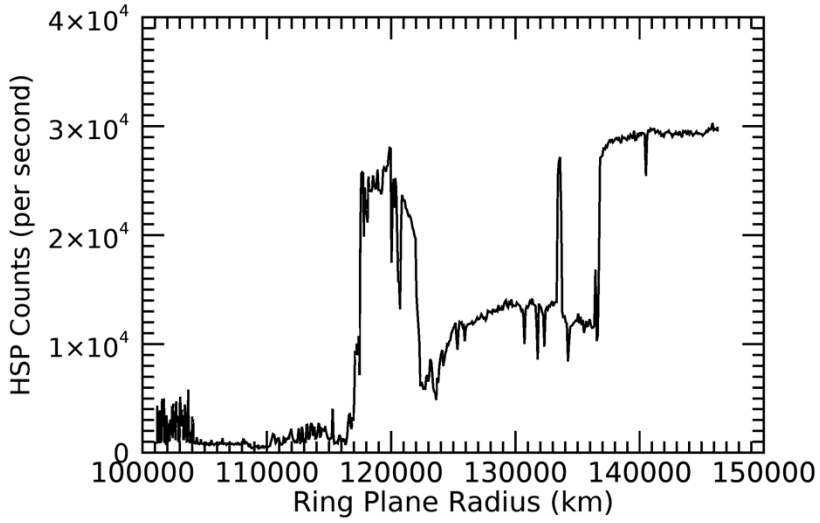
Target RA/dec: 243.97, -9.52

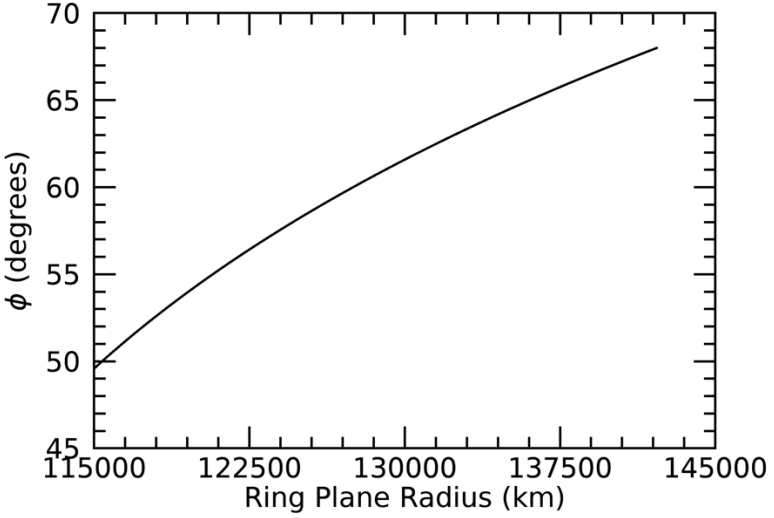
Subsolar lat/lon: -17.07, 129.44

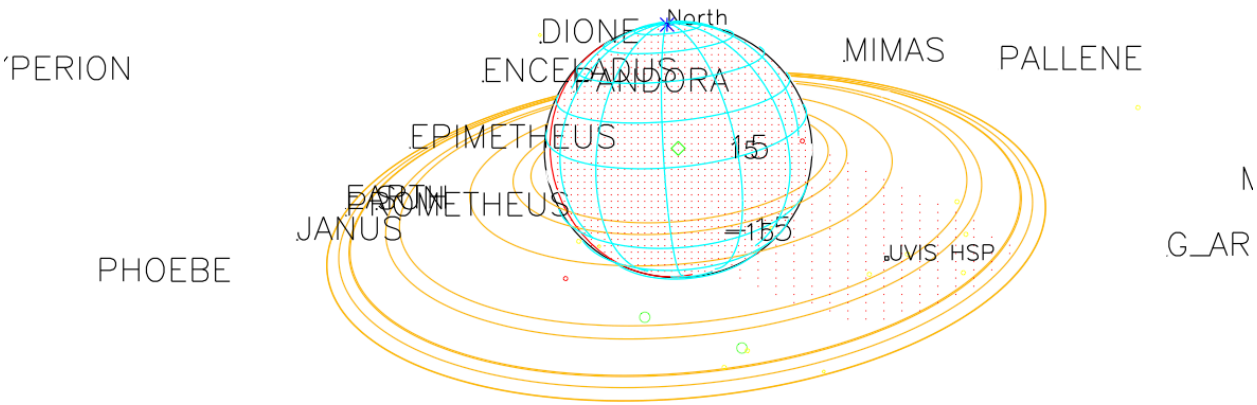
Sub-s/c lat/lon: 13.34, -112.62


ALP SCO B Rev 013 Egress
HSP Counts (per second)
4×10^4
3×10^4
2×10^4
1×10^4
0
80000
100000
120000
140000
Ring Plane Radius (km)

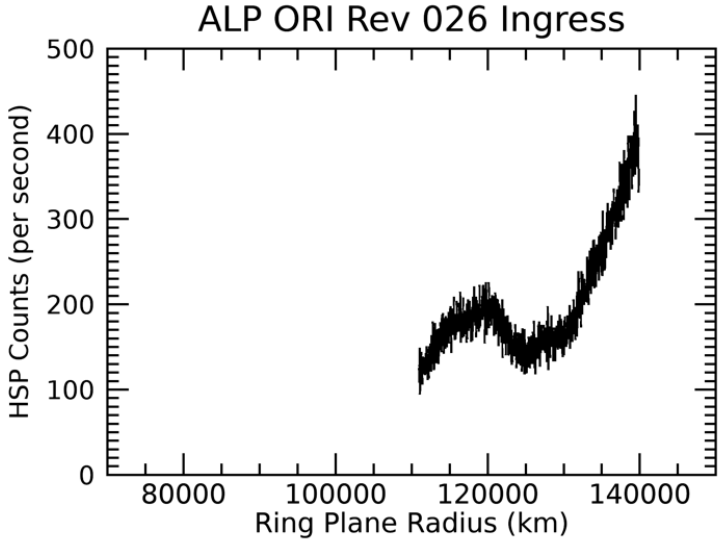

ALP SCO B Rev 013 Egress
Radial Resolution (m)
9
8
7
6
5
115000
122500
130000
137500
145000
Ring Plane Radius (km)

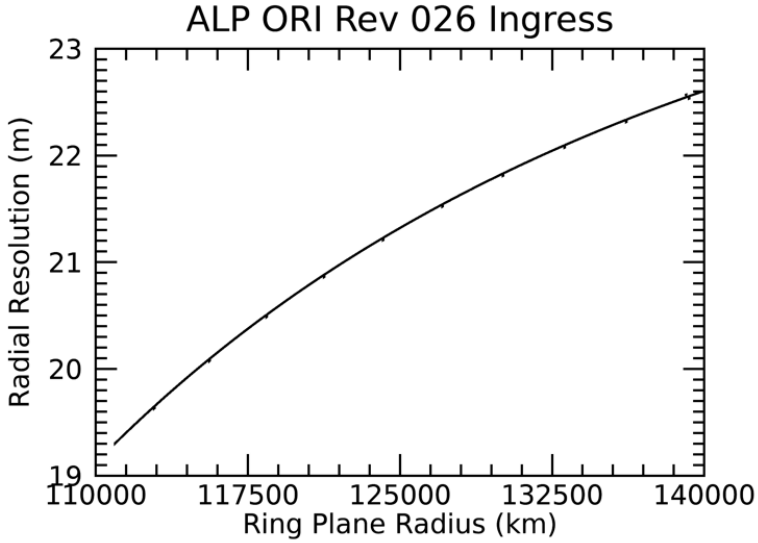

HSP Counts (per second)
4×10^4
3×10^4
2×10^4
1×10^4
0
100000
110000
120000
130000
140000
150000
Ring Plane Radius (km)

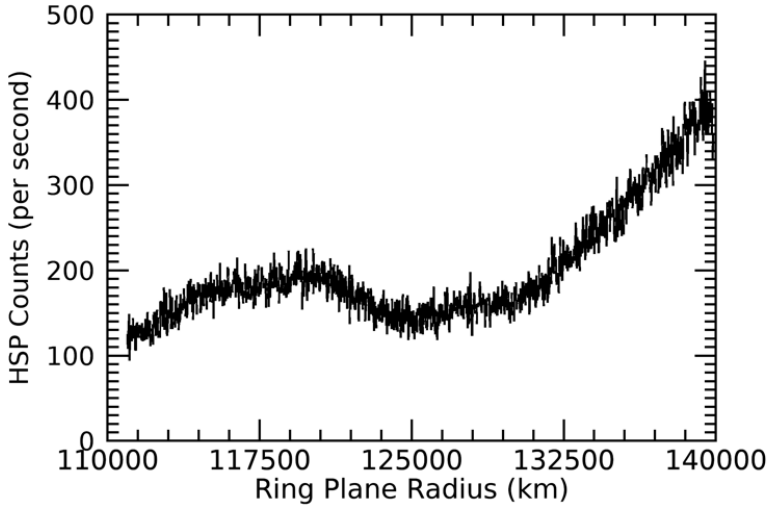

ϕ (degrees)
70
65
60
55
50
45
115000
122500
130000
137500
145000
Ring Plane Radius (km)

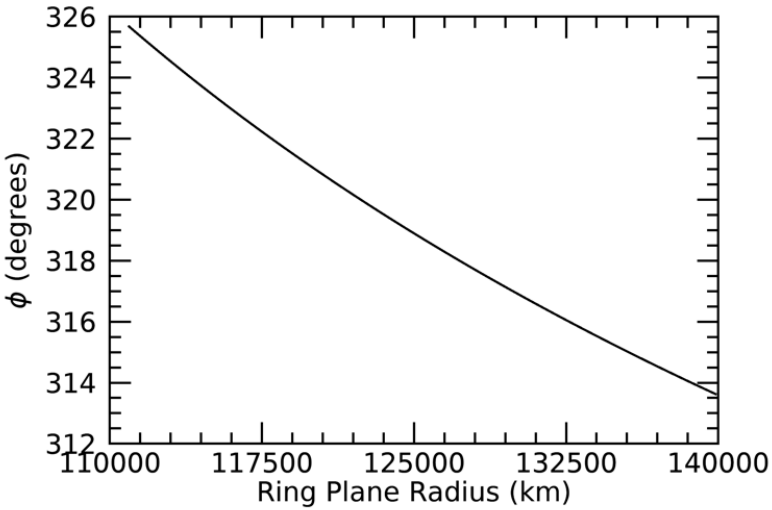


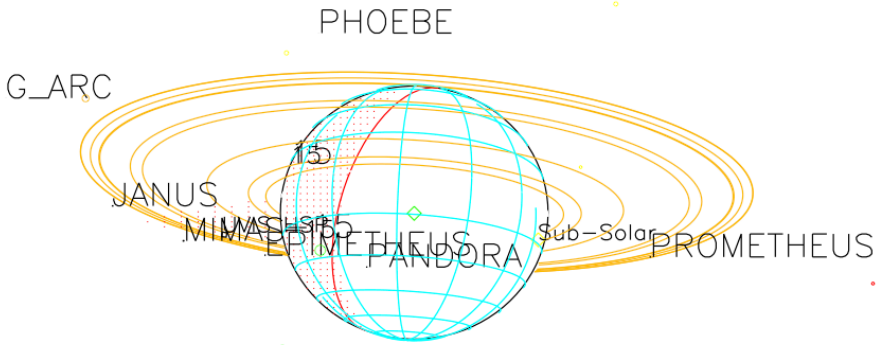
2005-232T13:35:00.000 238614.51 km
Target RA/dec: 271.73, -16.97
Subsolar lat/lon: -17.07, 69.20
Sub-s/c lat/lon: 18.11, -143.93


ALP ORI Rev 026 Ingress
HSP Counts (per second)
Ring Plane Radius (km)
0
100
200
300
400
500
80000
100000
120000
140000


ALP ORI Rev 026 Ingress
Radial Resolution (m)
Ring Plane Radius (km)
19
20
21
22
23
110000
117500
125000
132500
140000


HSP Counts (per second)
Ring Plane Radius (km)
0
100
200
300
400
500
110000
117500
125000
132500
140000


ϕ (degrees)
Ring Plane Radius (km)
312
314
316
318
320
322
324
326
110000
117500
125000
132500
140000

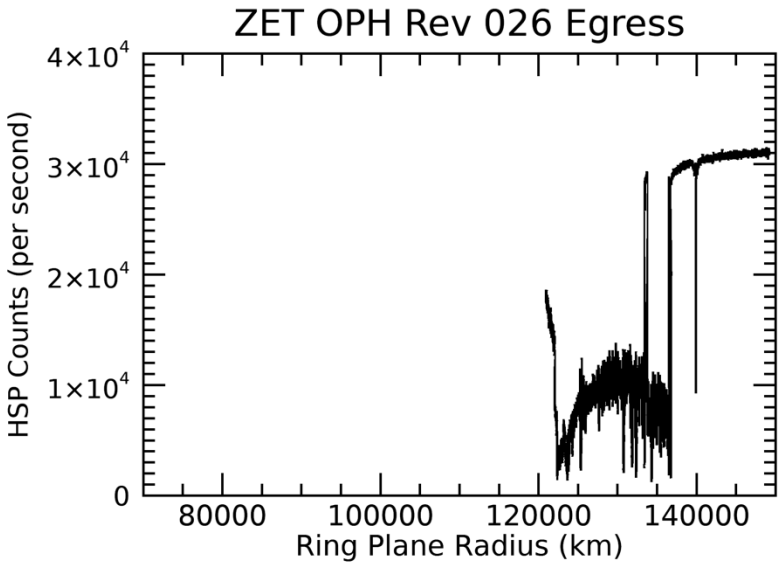


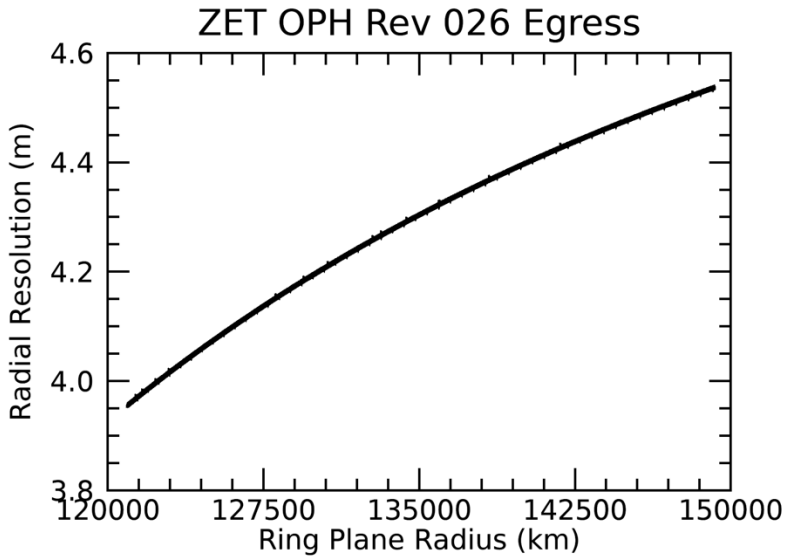
2006-204T16:37:00.000 324700.79 km

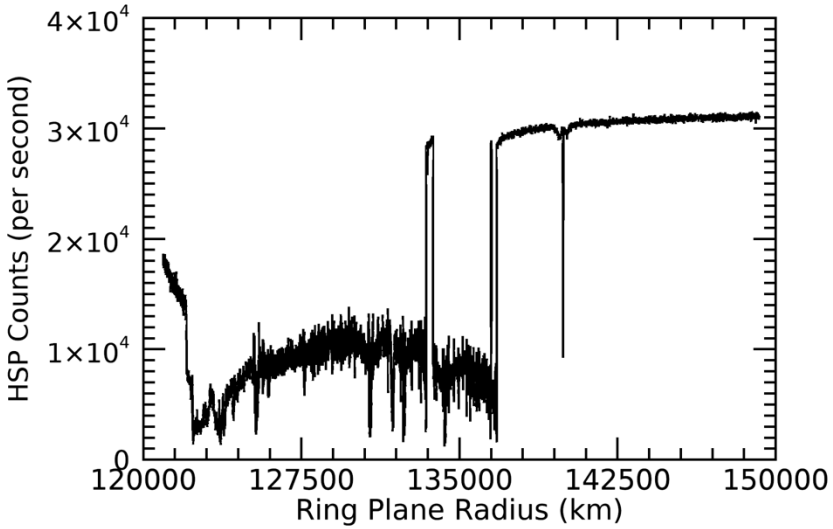
Target RA/dec: 73.69, 9.27

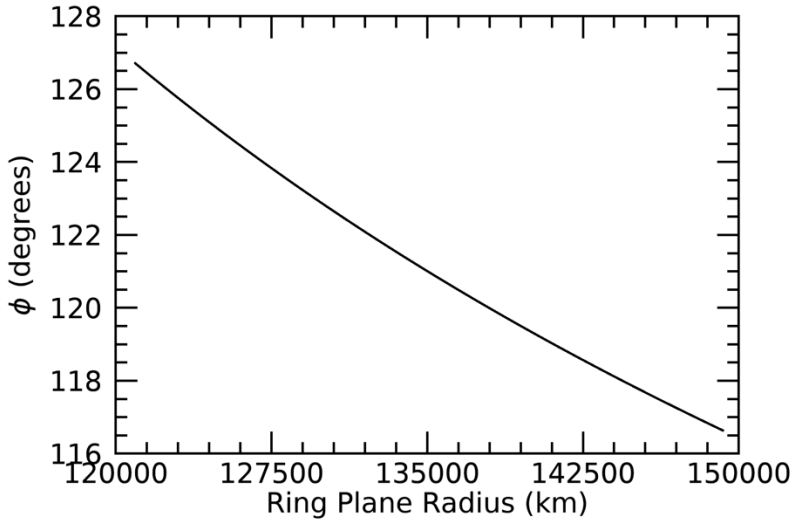
Subsolar lat/lon: -13.61, -18.53

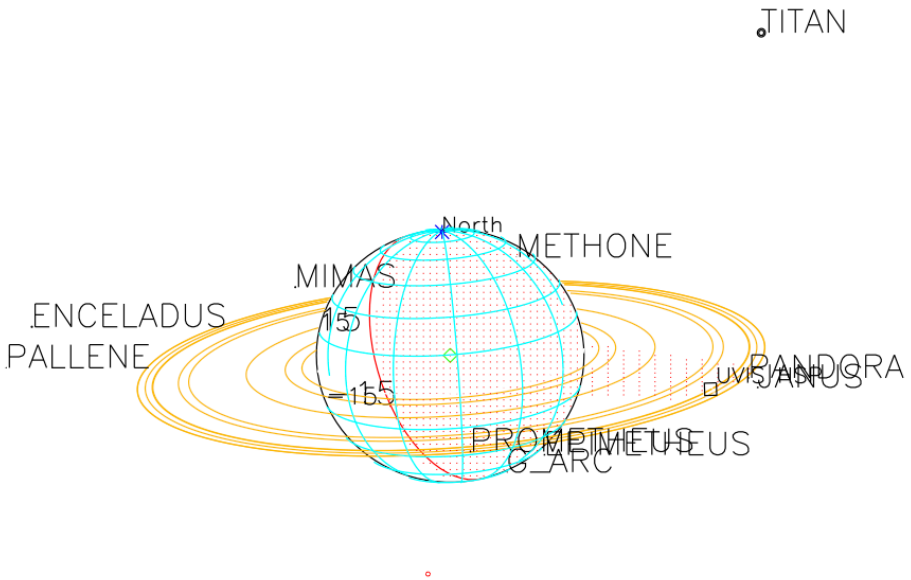
Sub-s/c lat/lon: -12.43, -83.00


ZET OPH Rev 026 Egress
HSP Counts (per second)
4×10^4
3×10^4
2×10^4
1×10^4
0
80000
100000
120000
140000
Ring Plane Radius (km)


ZET OPH Rev 026 Egress
Radial Resolution (m)
4.6
4.4
4.2
4.0
3.8
120000
127500
135000
142500
150000
Ring Plane Radius (km)


HSP Counts (per second)
4×10^4
3×10^4
2×10^4
1×10^4
0
120000
127500
135000
142500
150000
Ring Plane Radius (km)


ϕ (degrees)
128
126
124
122
120
118
116
120000
127500
135000
142500
150000
Ring Plane Radius (km)

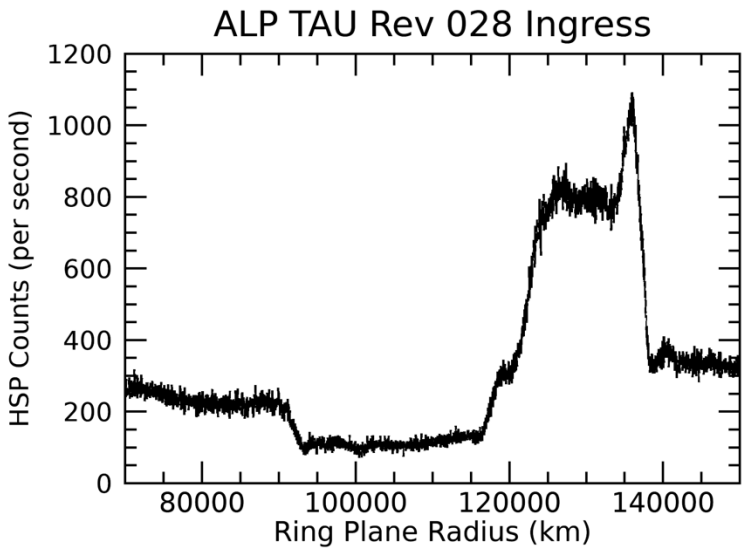


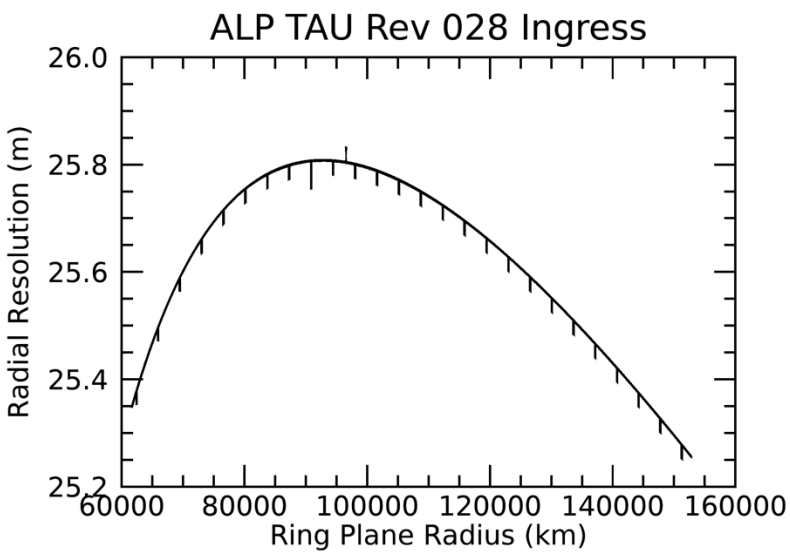
2006-206T00:59:00.000 885236.67 km

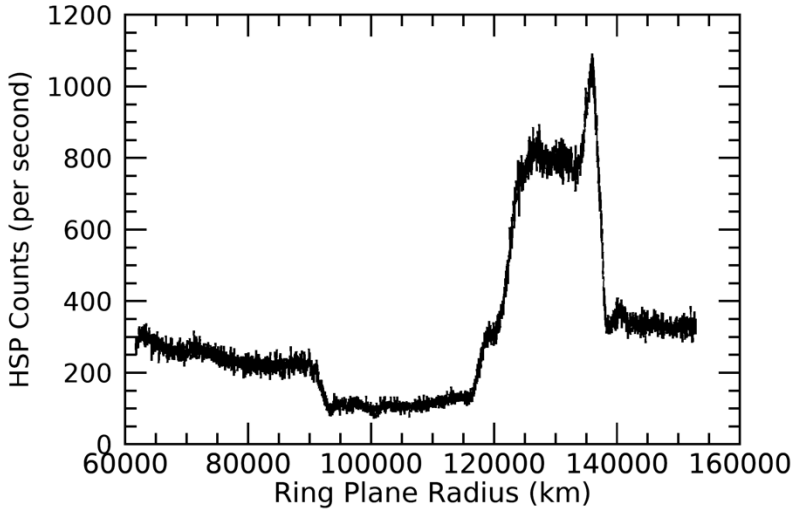
Target RA/dec: 256.92, -9.64

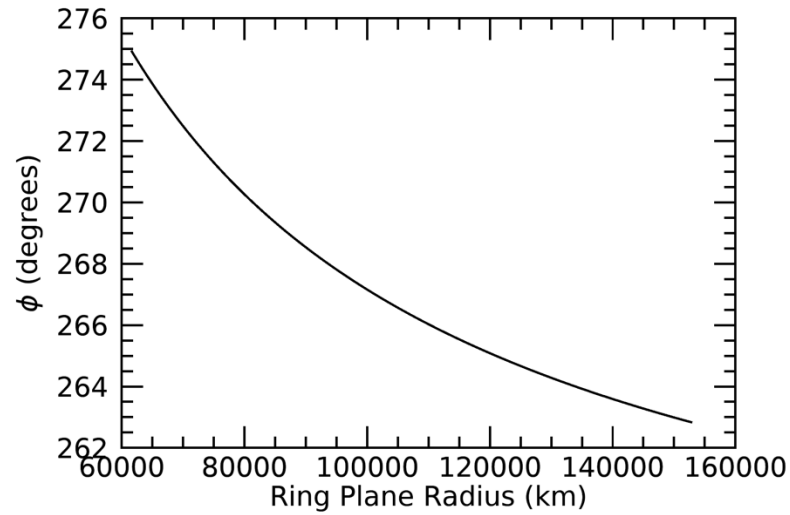
Subsolar lat/lon: -13.60, -31.91

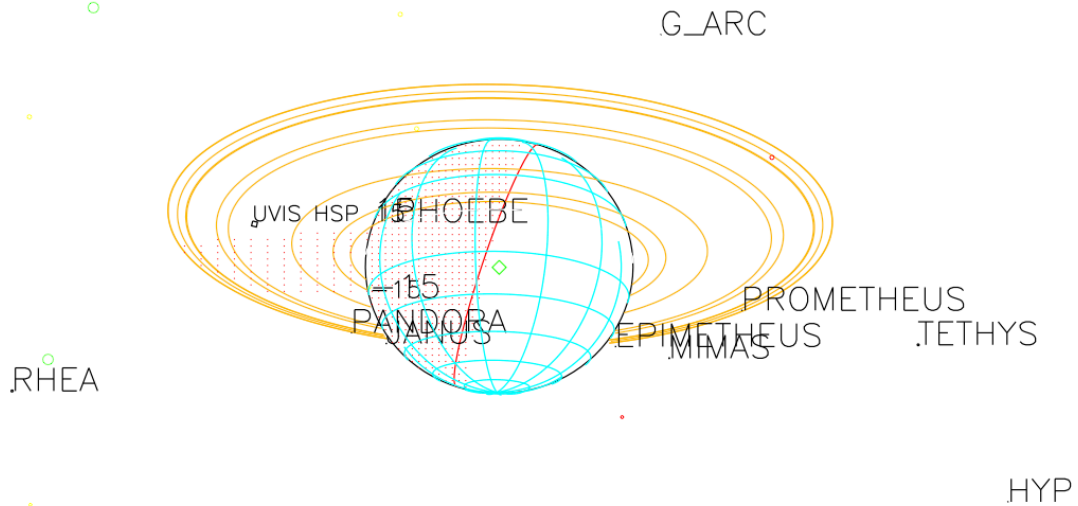
Sub-s/c lat/lon: 12.30, 86.89


ALP TAU Rev 028 Ingress
HSP Counts (per second)
Ring Plane Radius (km)
0
200
400
600
800
1000
1200
80000
100000
120000
140000


ALP TAU Rev 028 Ingress
Radial Resolution (m)
Ring Plane Radius (km)
25.2
25.4
25.6
25.8
26.0
60000
80000
100000
120000
140000
160000


HSP Counts (per second)
Ring Plane Radius (km)
0
200
400
600
800
1000
1200
60000
80000
100000
120000
140000
160000


ϕ (degrees)
Ring Plane Radius (km)
262
264
266
268
270
272
274
276
60000
80000
100000
120000
140000
160000

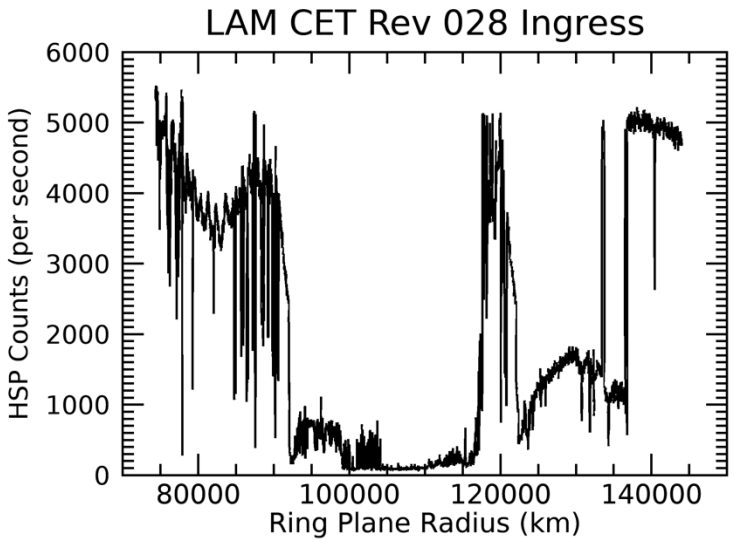


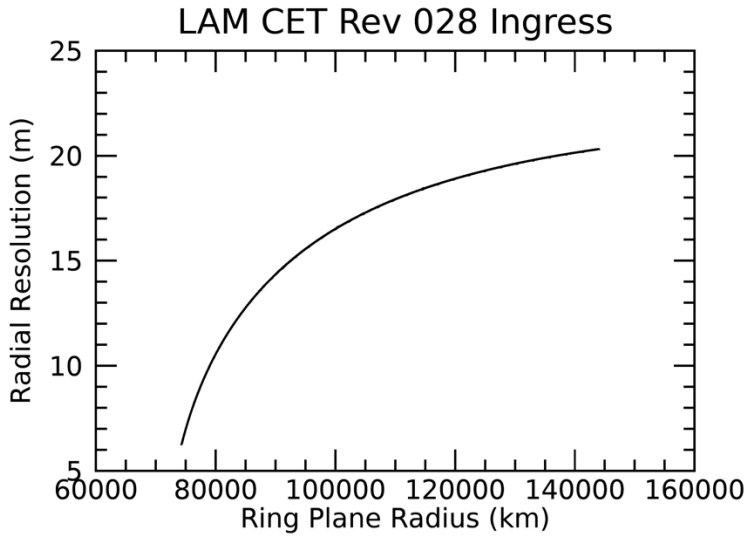
2006-252T11:08:00.000 340742.25 km

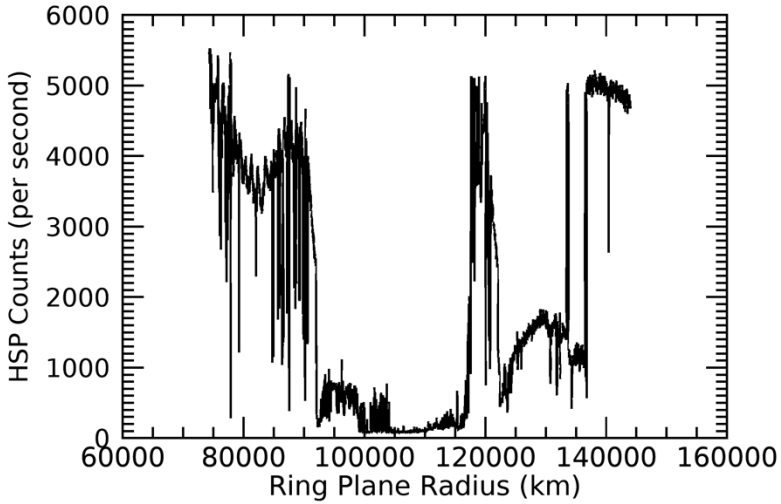
Target RA/dec: 50.04, 14.16

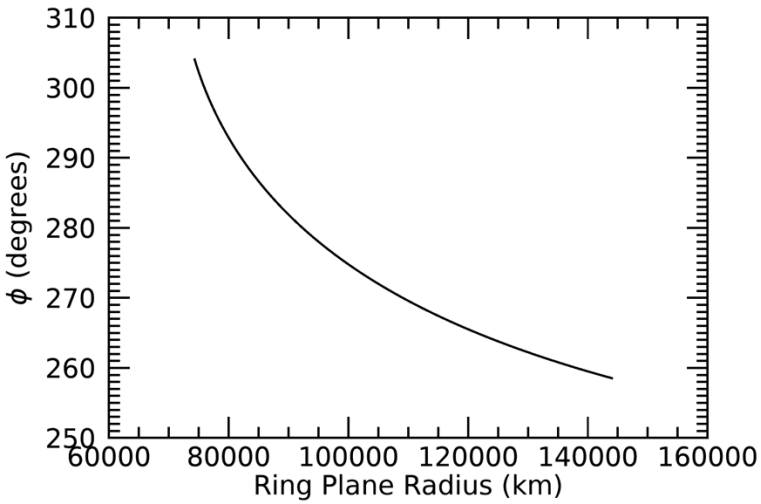
Subsolar lat/lon: -13.08, 130.29

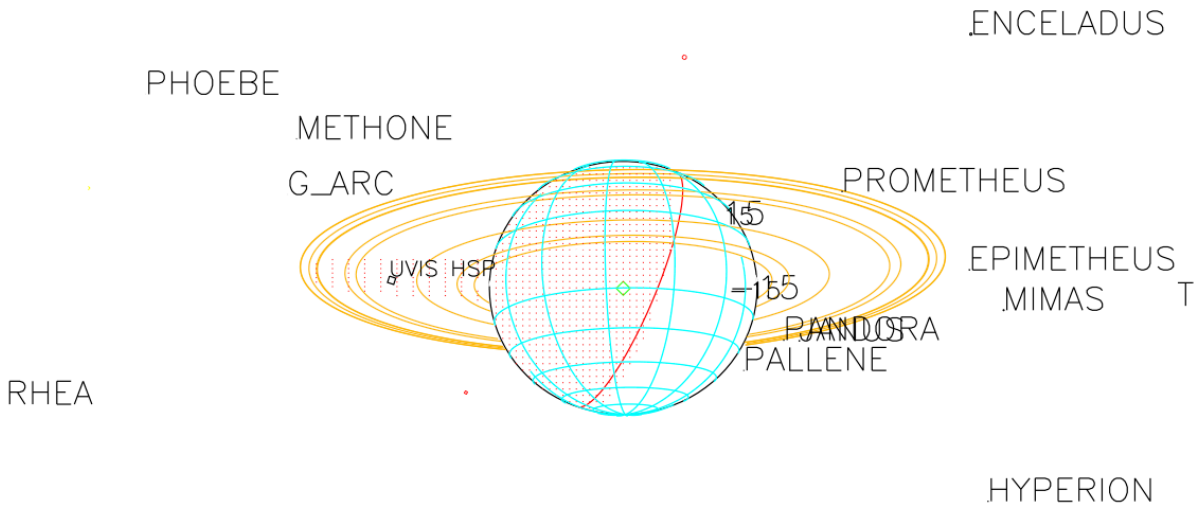
Sub-s/c lat/lon: -17.50, 40.08


LAM CET Rev 028 Ingress
HSP Counts (per second)
Ring Plane Radius (km)
0
1000
2000
3000
4000
5000
6000
80000
100000
120000
140000


LAM CET Rev 028 Ingress
Radial Resolution (m)
Ring Plane Radius (km)
5
10
15
20
25
60000
80000
100000
120000
140000
160000


HSP Counts (per second)
Ring Plane Radius (km)
0
1000
2000
3000
4000
5000
6000
60000
80000
100000
120000
140000
160000


ϕ (degrees)
Ring Plane Radius (km)
250
260
270
280
290
300
310
60000
80000
100000
120000
140000
160000

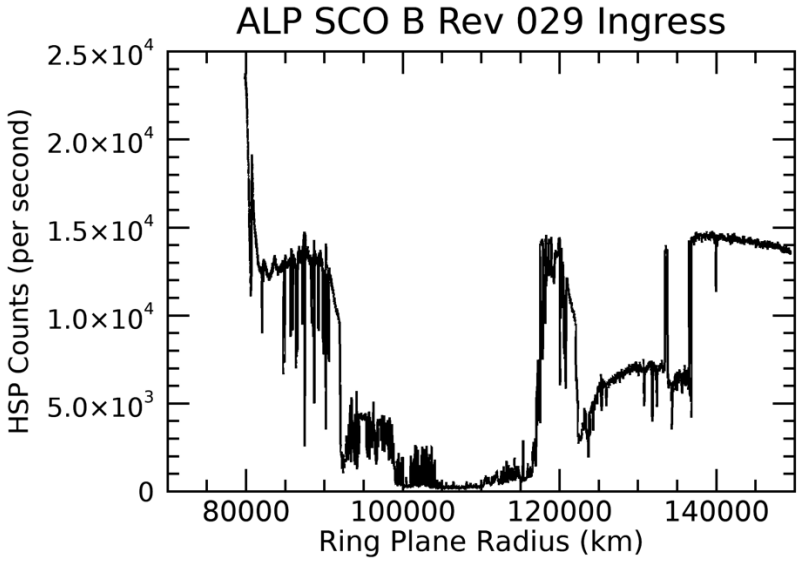


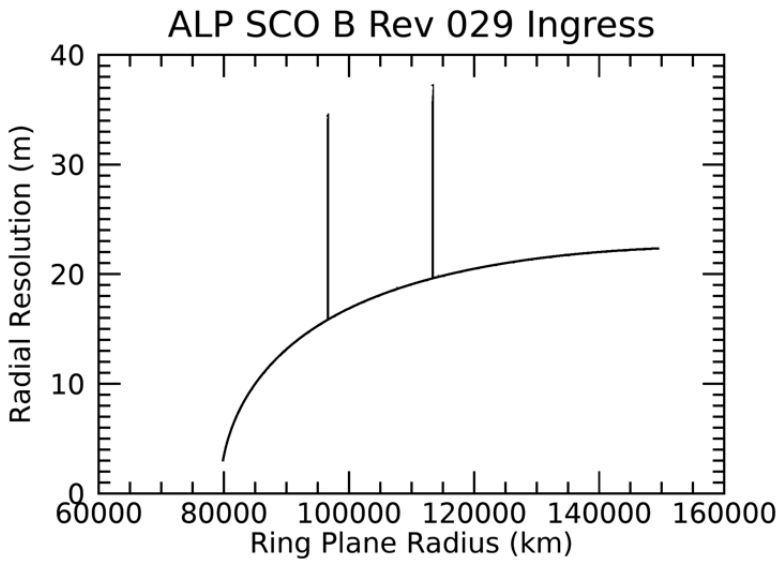
2006-252T07:07:00.000 469561.26 km

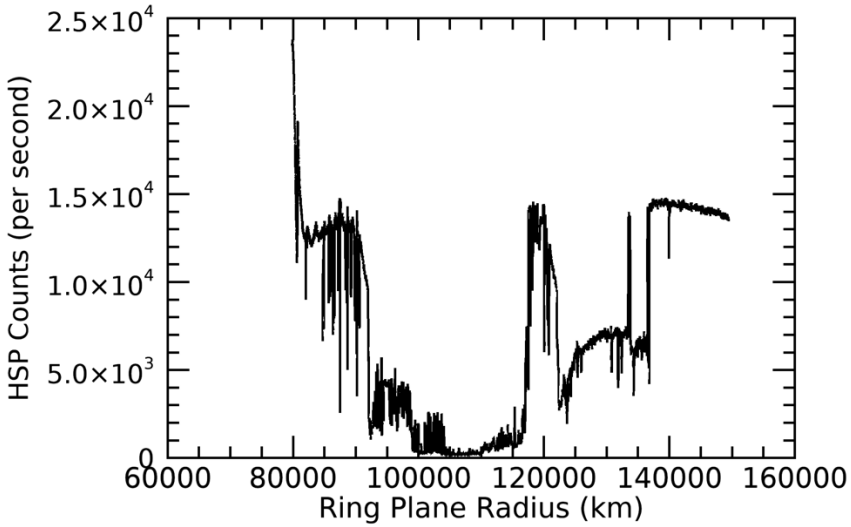
Target RA/dec: 32.20, 8.78

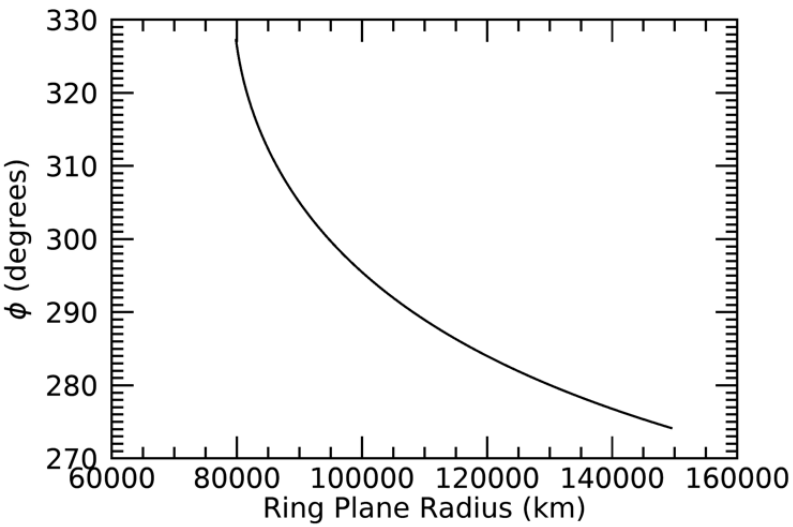
Subsolar lat/lon: -13.08, -94.01

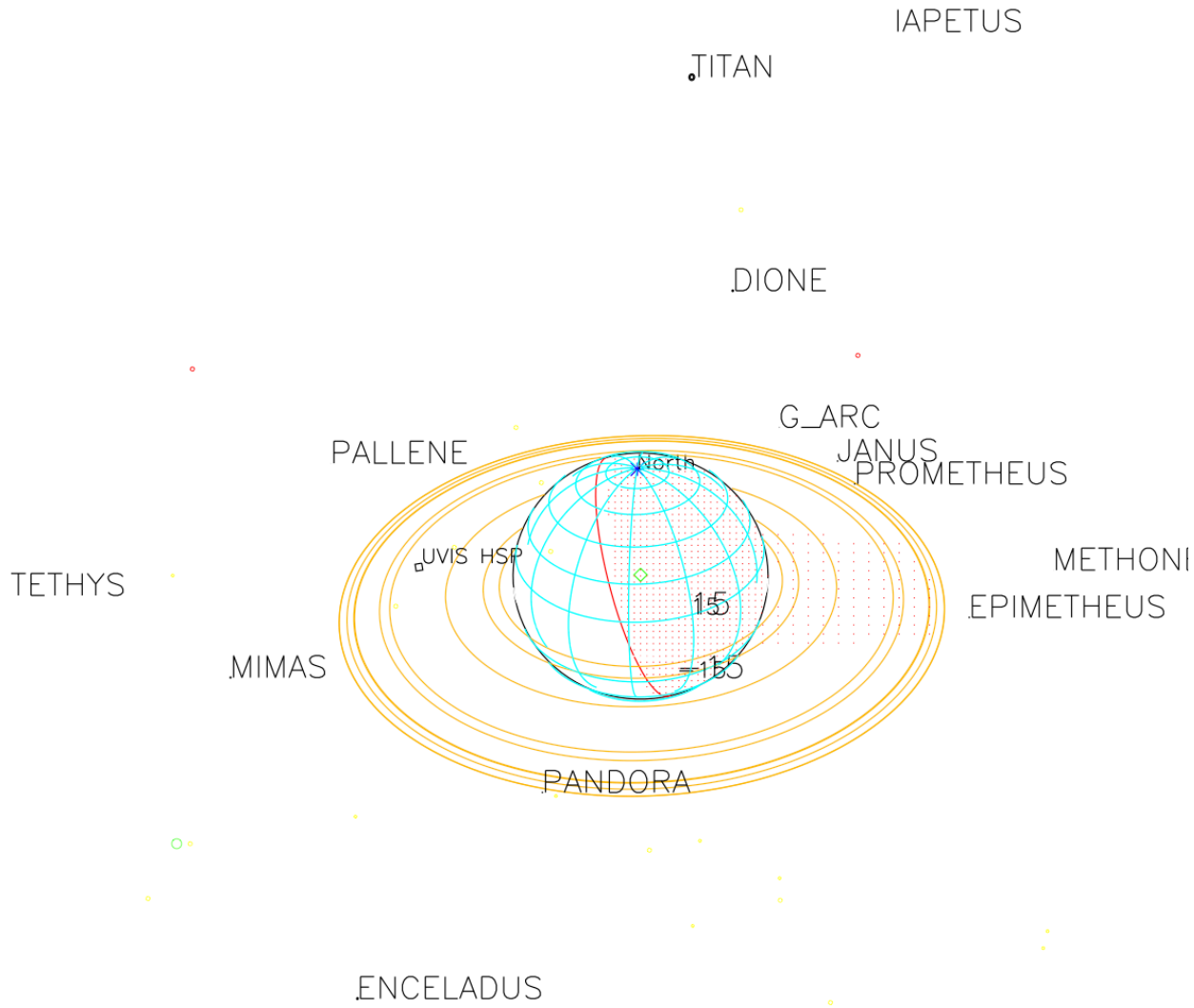
Sub-s/c lat/lon: -12.74, 157.39


ALP SCO B Rev 029 Ingress
HSP Counts (per second)
2.5×10^4
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
80000
100000
120000
140000
Ring Plane Radius (km)


ALP SCO B Rev 029 Ingress
Radial Resolution (m)
40
30
20
10
0
60000
80000
100000
120000
140000
160000
Ring Plane Radius (km)


HSP Counts (per second)
2.5×10^4
2.0×10^4
1.5×10^4
1.0×10^4
5.0×10^3
0
60000
80000
100000
120000
140000
160000
Ring Plane Radius (km)


ϕ (degrees)
330
320
310
300
290
280
270
60000
80000
100000
120000
140000
160000
Ring Plane Radius (km)

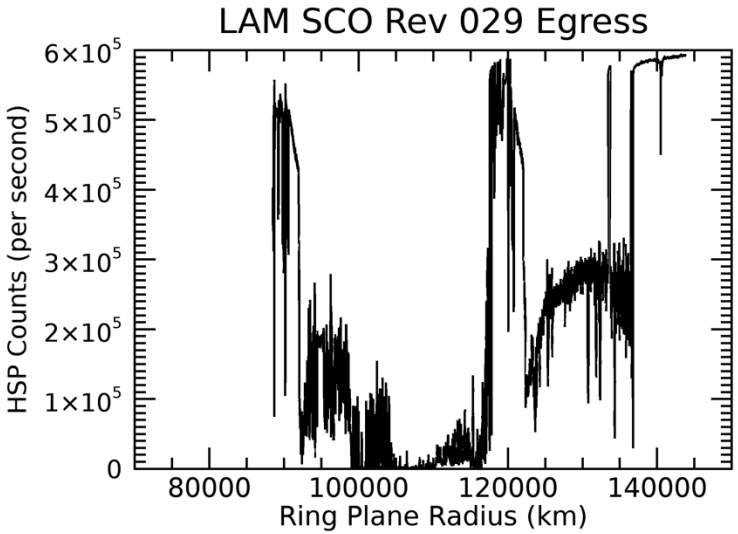


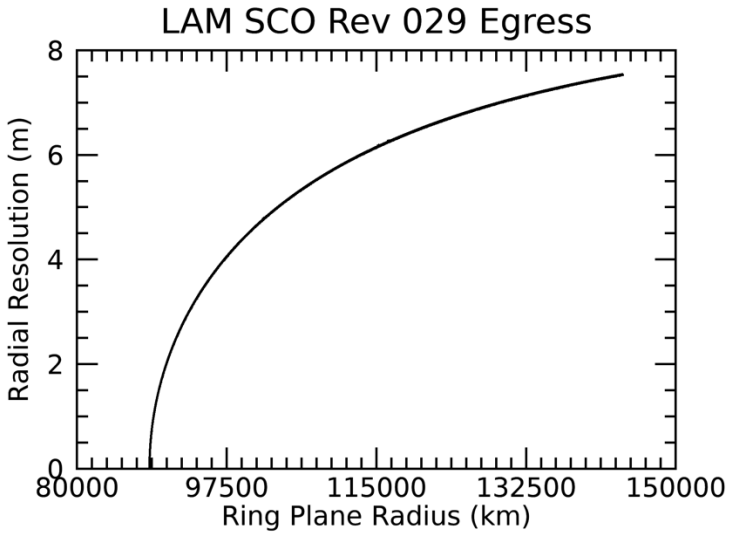
2006-269T08:20:00.000 511788.31 km

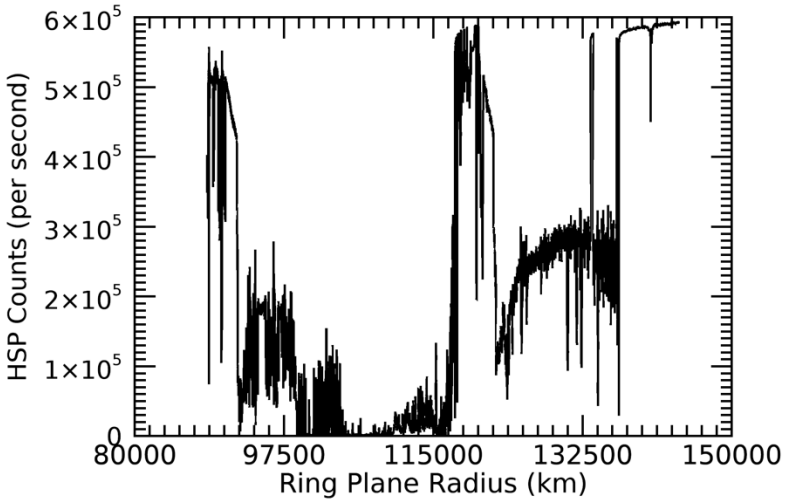
Target RA/dec: 234.40, -27.41

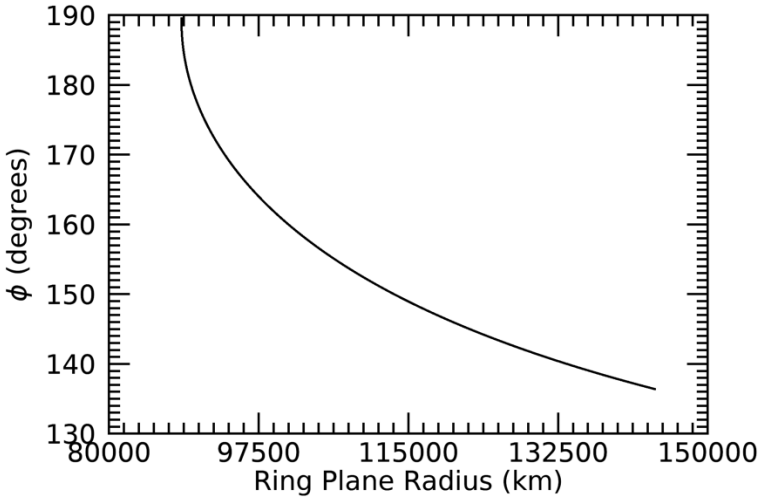
Subsolar lat/lon: -12.89, 121.99

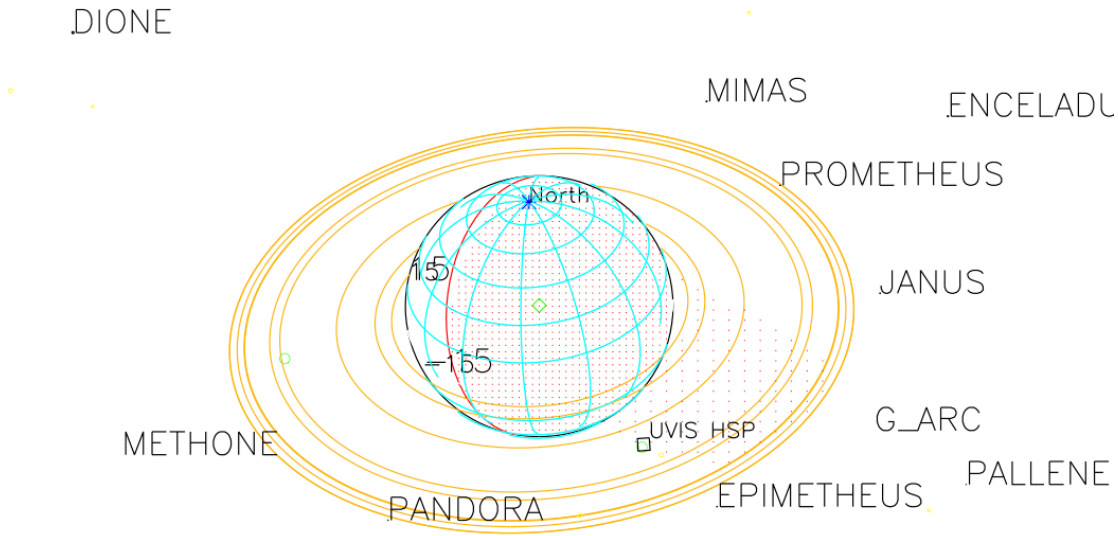
Sub-s/c lat/lon: 29.01, -143.87


LAM SCO Rev 029 Egress
HSP Counts (per second)
6×10^5
5×10^5
4×10^5
3×10^5
2×10^5
1×10^5
0
80000
100000
120000
140000
Ring Plane Radius (km)


LAM SCO Rev 029 Egress
Radial Resolution (m)
8
6
4
2
0
80000
97500
115000
132500
150000
Ring Plane Radius (km)


HSP Counts (per second)
6×10^5
5×10^5
4×10^5
3×10^5
2×10^5
1×10^5
0
80000
97500
115000
132500
150000
Ring Plane Radius (km)


ϕ (degrees)
190
180
170
160
150
140
130
80000
97500
115000
132500
150000
Ring Plane Radius (km)



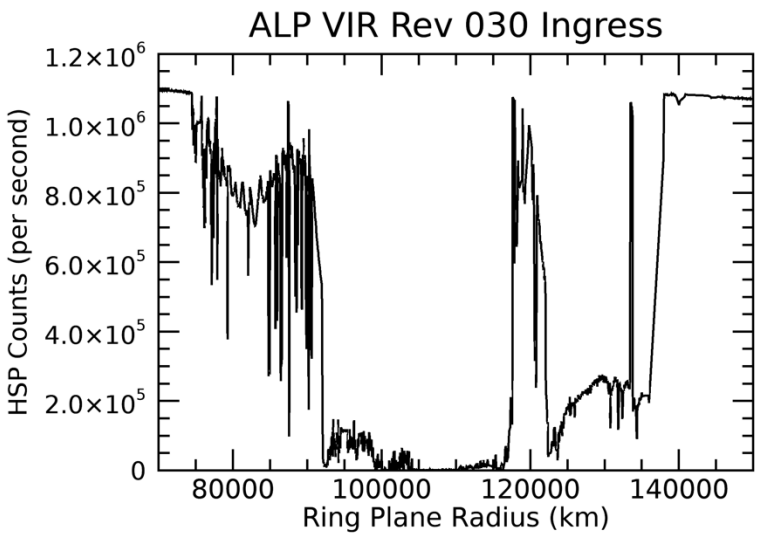
2006−270T00:21:00.000 890554.94 km

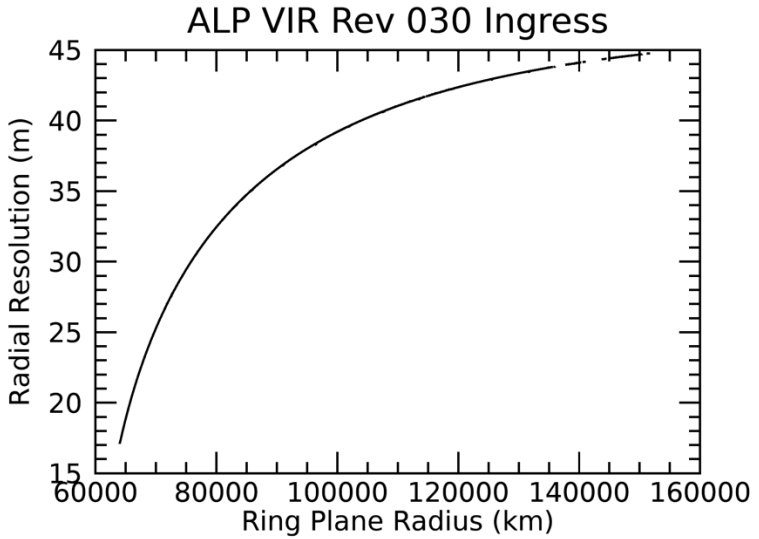
Target RA/dec: 267.13, −33.23

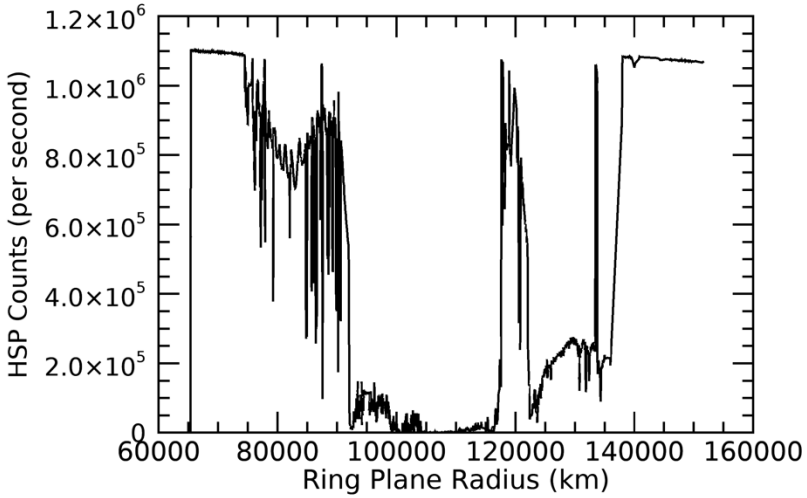
Subsolar lat/lon: −12.88, −59.07

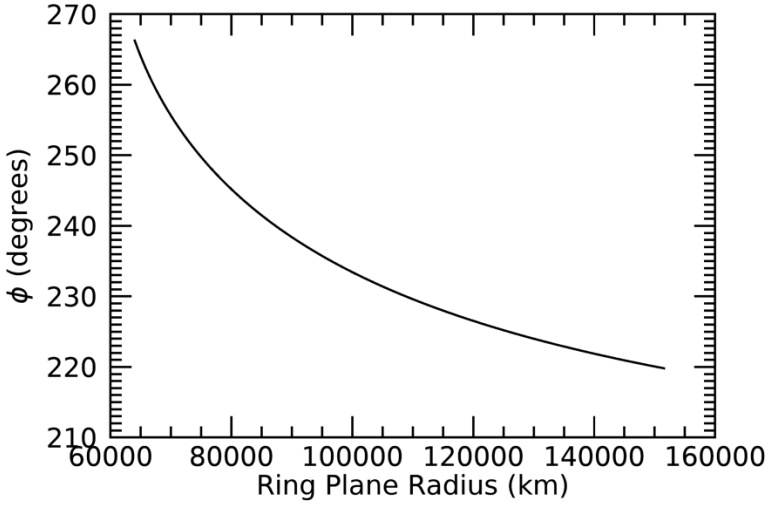
Sub−s/c lat/lon: 32.35, 70.27

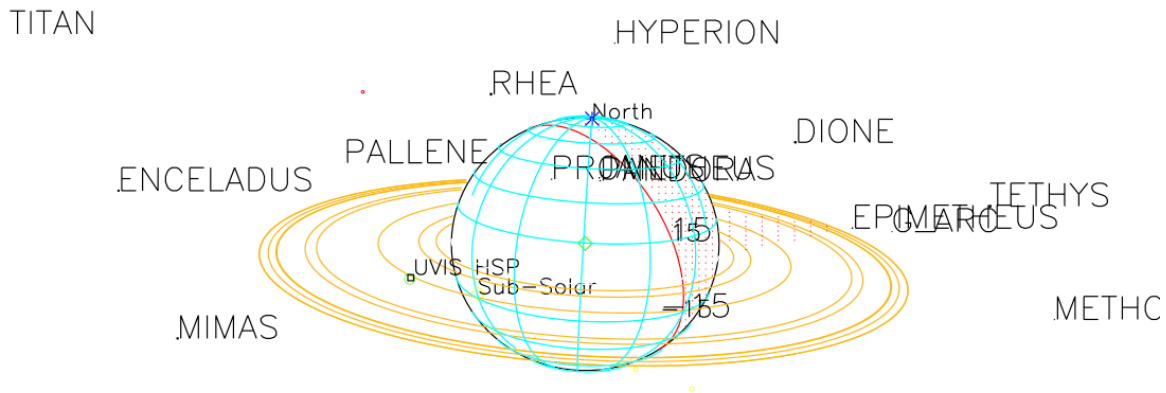
TETHYS


ALP VIR Rev 030 Ingress
HSP Counts (per second)
1.2×10^6
1.0×10^6
8.0×10^5
6.0×10^5
4.0×10^5
2.0×10^5
0
80000
100000
120000
140000
Ring Plane Radius (km)


ALP VIR Rev 030 Ingress
Radial Resolution (m)
45
40
35
30
25
20
15
60000
80000
100000
120000
140000
160000
Ring Plane Radius (km)


HSP Counts (per second)
1.2×10^6
1.0×10^6
8.0×10^5
6.0×10^5
4.0×10^5
2.0×10^5
0
60000
80000
100000
120000
140000
160000
Ring Plane Radius (km)


ϕ (degrees)
270
260
250
240
230
220
210
60000
80000
100000
120000
140000
160000
Ring Plane Radius (km)

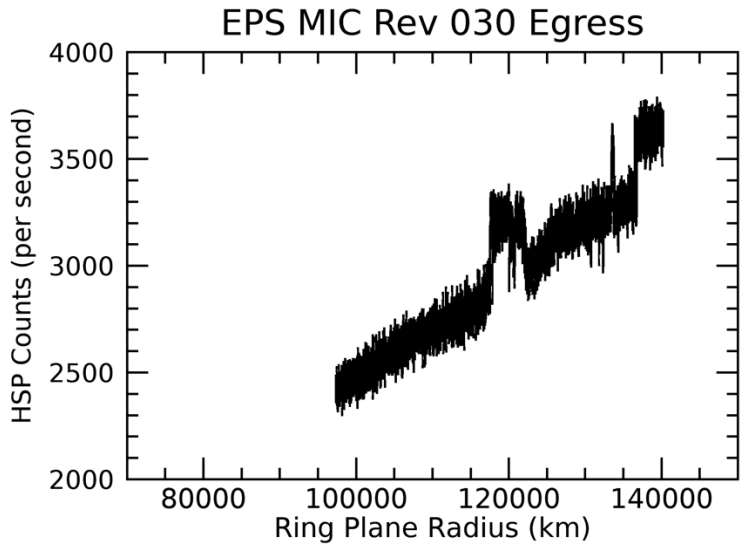


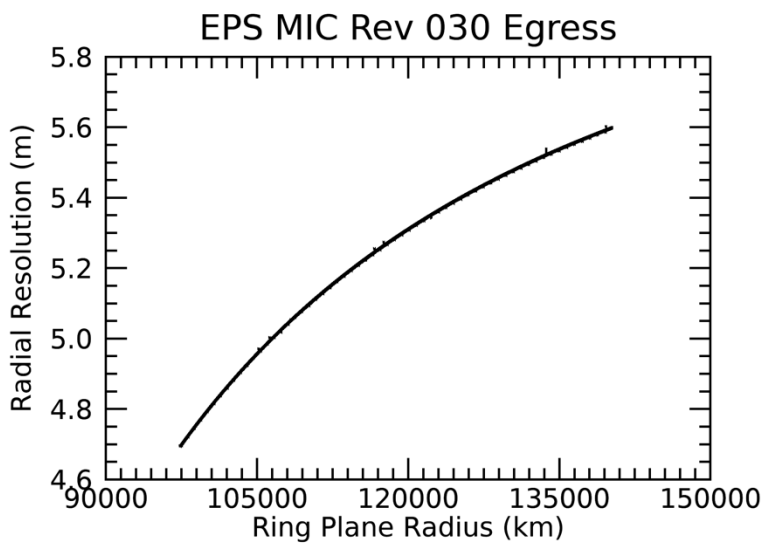
2006-285T07:39:33.000 431190.98 km

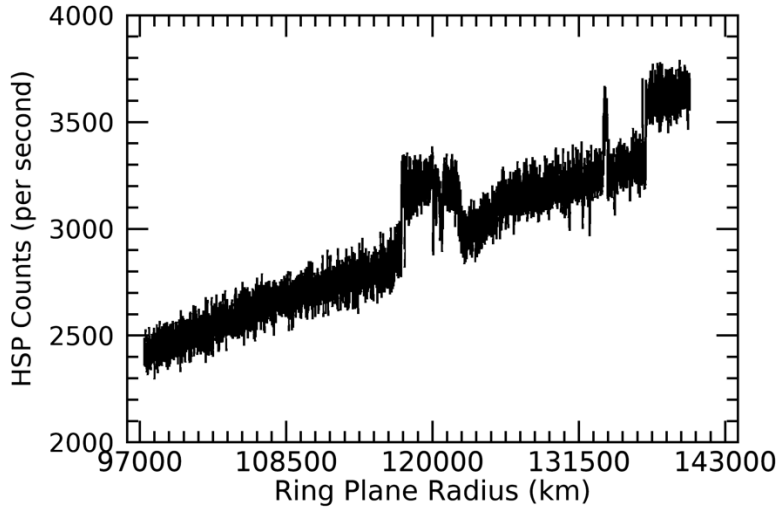
Target RA/dec: 190.61, -9.29

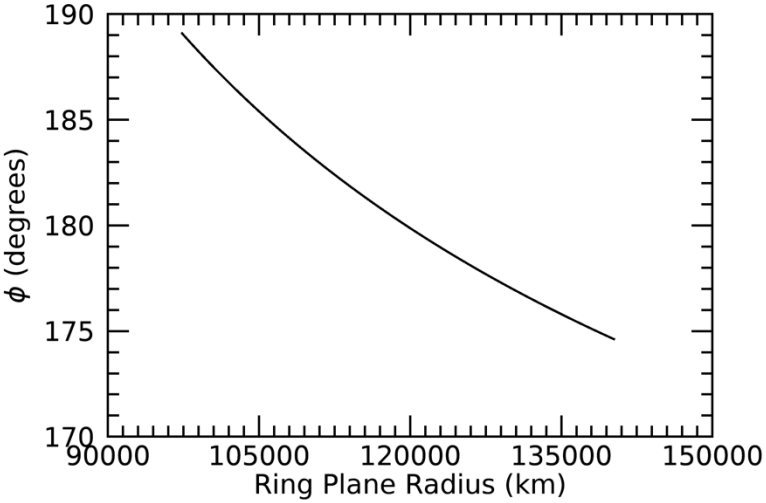
Subsolar lat/lon: -12.71, 132.61

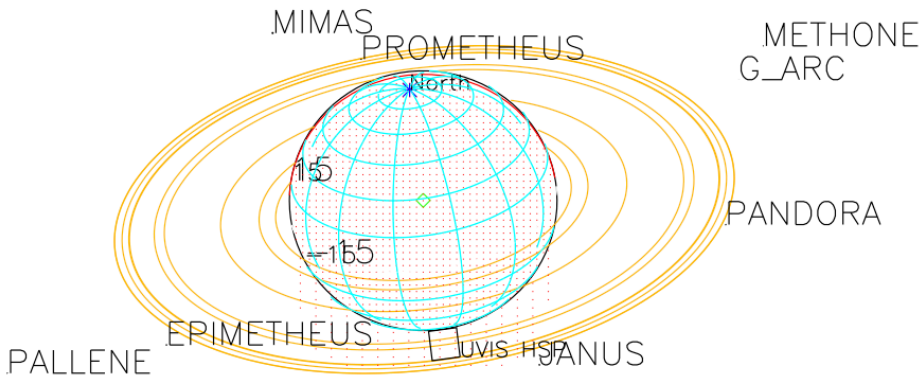
Sub-s/c lat/lon: 12.51, -179.22


EPS MIC Rev 030 Egress
HSP Counts (per second)
Ring Plane Radius (km)
4000
3500
3000
2500
2000
80000
100000
120000
140000


EPS MIC Rev 030 Egress
Radial Resolution (m)
Ring Plane Radius (km)
5.8
5.6
5.4
5.2
5.0
4.8
4.6
90000
105000
120000
135000
150000


HSP Counts (per second)
Ring Plane Radius (km)
4000
3500
3000
2500
2000
97000
108500
120000
131500
143000


ϕ (degrees)
Ring Plane Radius (km)
190
185
180
175
170
90000
105000
120000
135000
150000

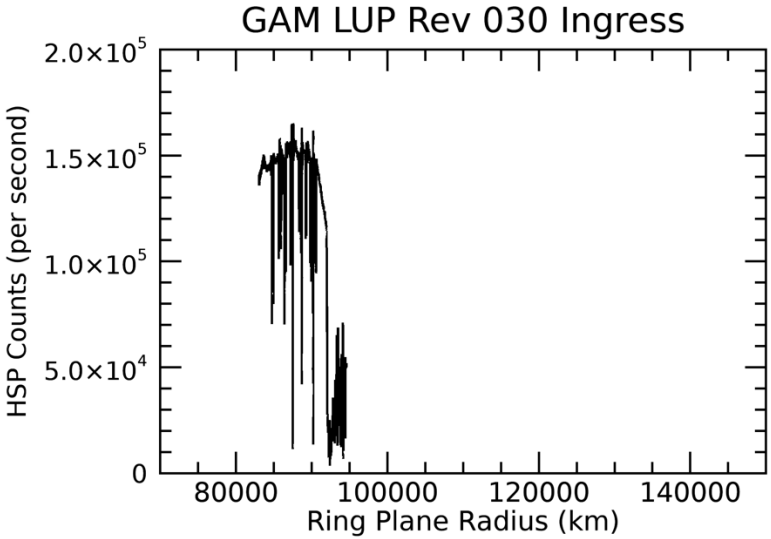


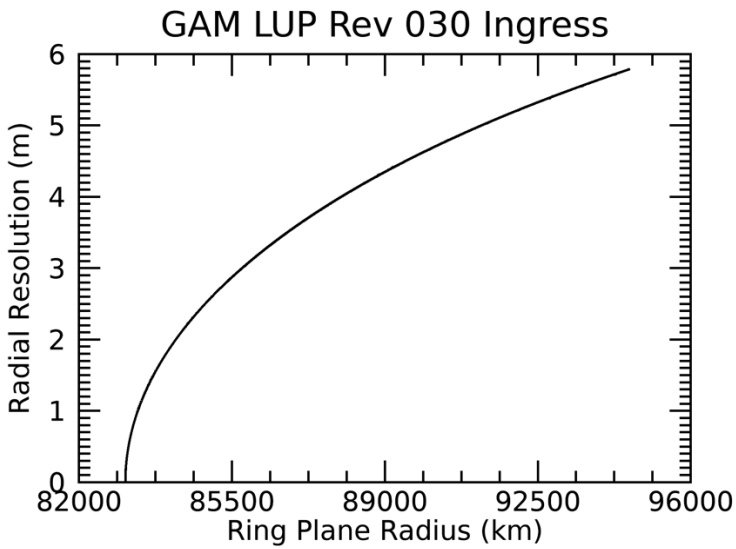
2006-292T21:39:00.000 2110328.1 km

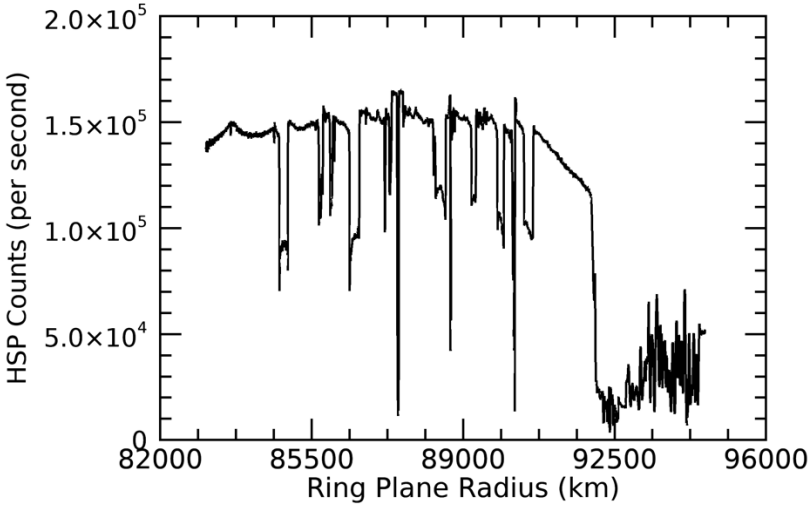
Target RA/dec: 319.69, -30.54

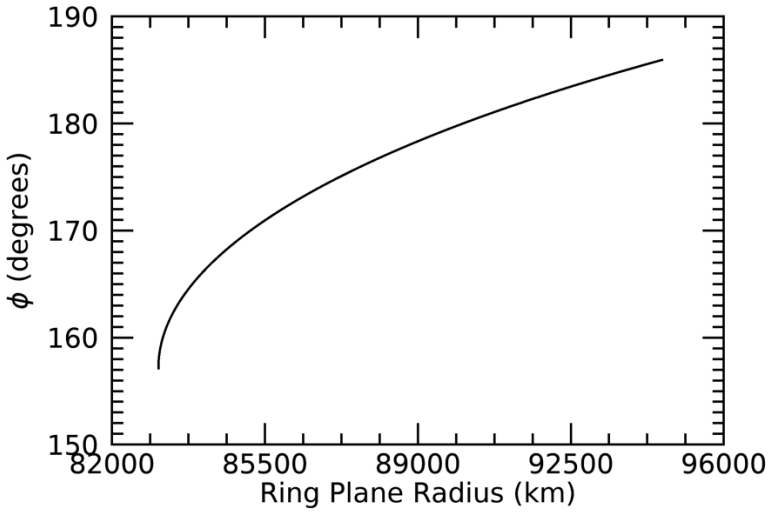
Subsolar lat/lon: -12.62, 104.72

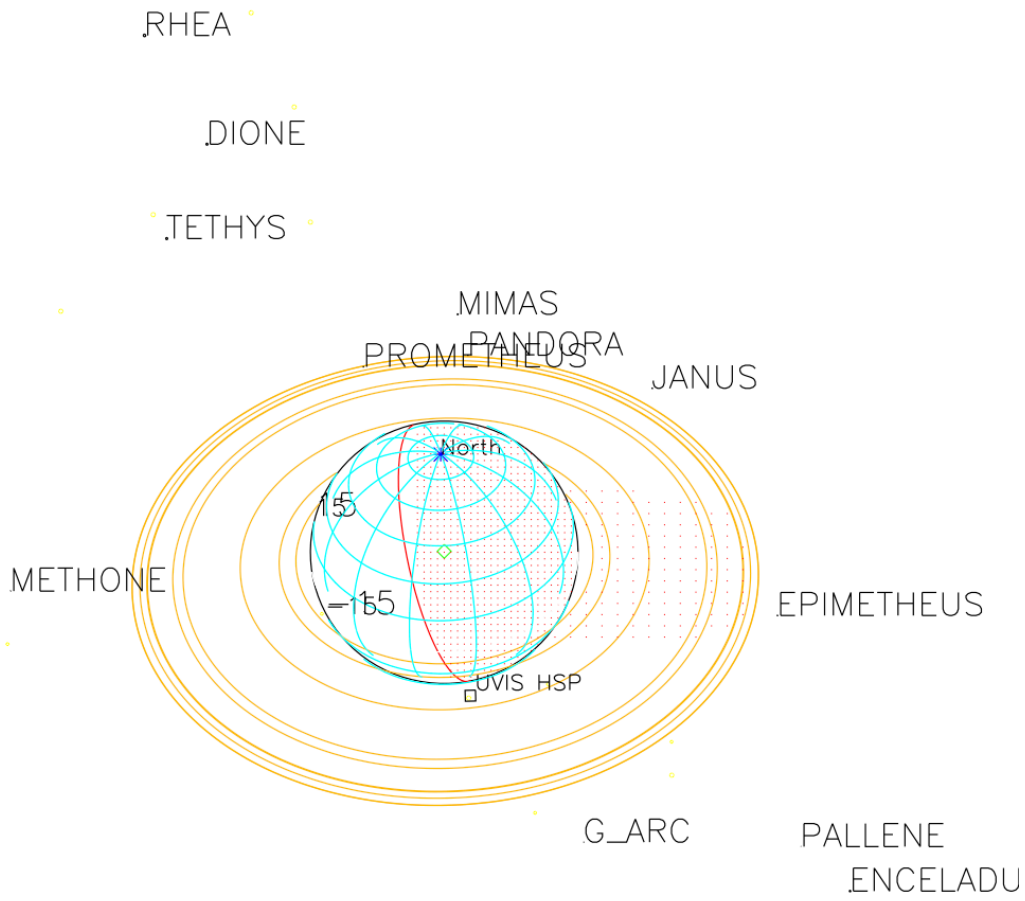
Sub-s/c lat/lon: 24.67, -73.94


GAM LUP Rev 030 Ingress
HSP Counts (per second)
2.0×10^5
1.5×10^5
1.0×10^5
5.0×10^4
0
80000
100000
120000
140000
Ring Plane Radius (km)


GAM LUP Rev 030 Ingress
Radial Resolution (m)
6
5
4
3
2
1
0
82000
85500
89000
92500
96000
Ring Plane Radius (km)


HSP Counts (per second)
2.0×10^5
1.5×10^5
1.0×10^5
5.0×10^4
0
82000
85500
89000
92500
96000
Ring Plane Radius (km)


ϕ (degrees)
190
180
170
160
150
82000
85500
89000
92500
96000
Ring Plane Radius (km)

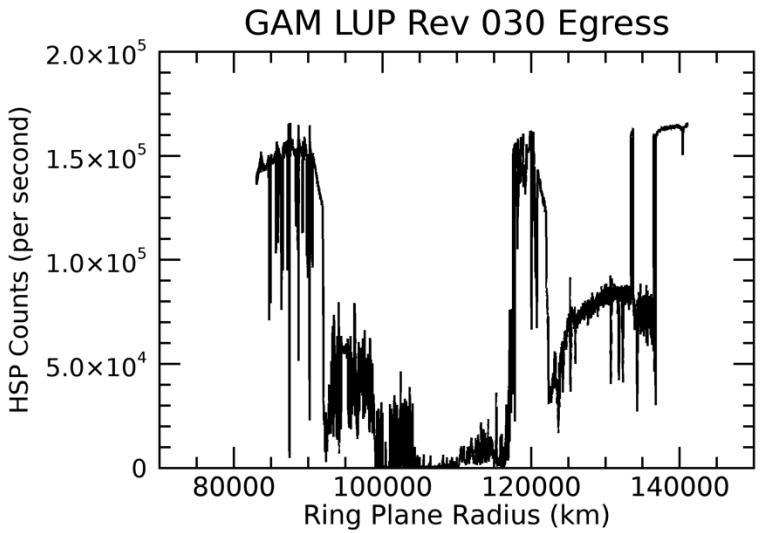


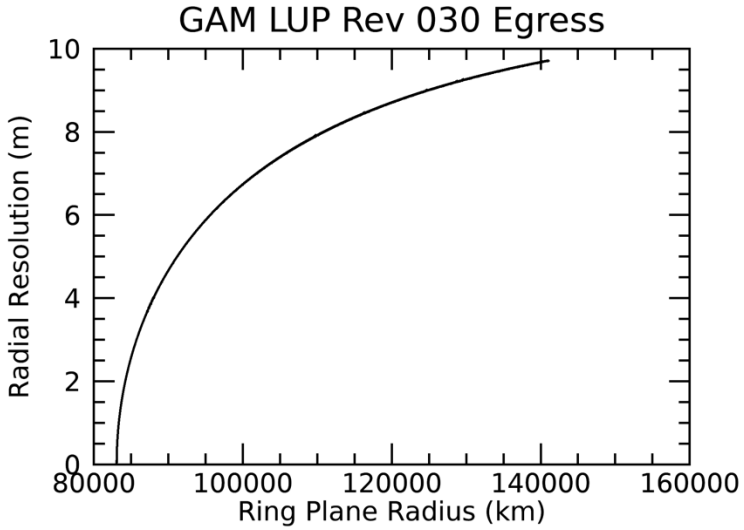
2006-286T00:32:00.000 780274.58 km

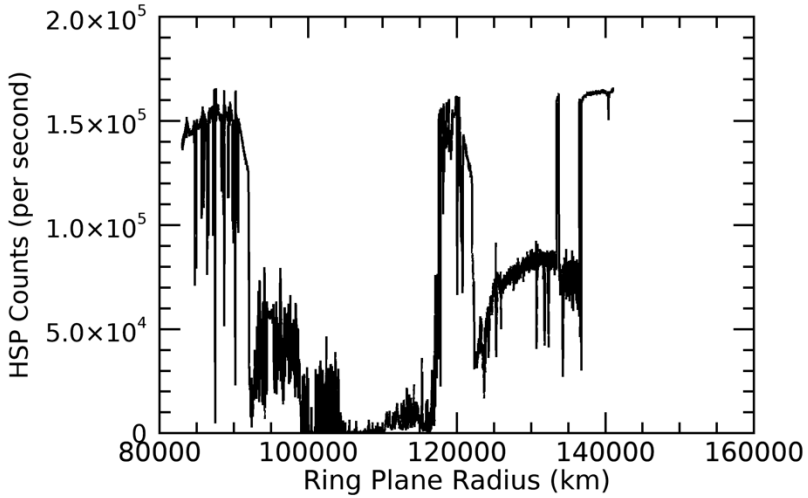
Target RA/dec: 234.86, -36.53

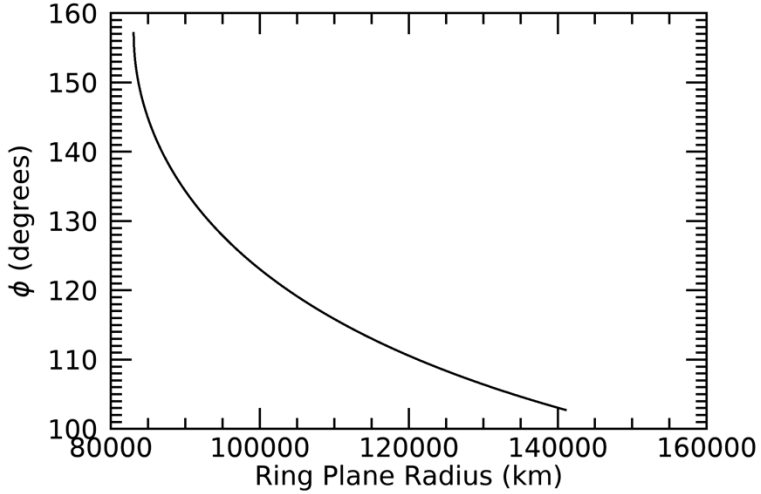
Subsolar lat/lon: -12.70, -77.41

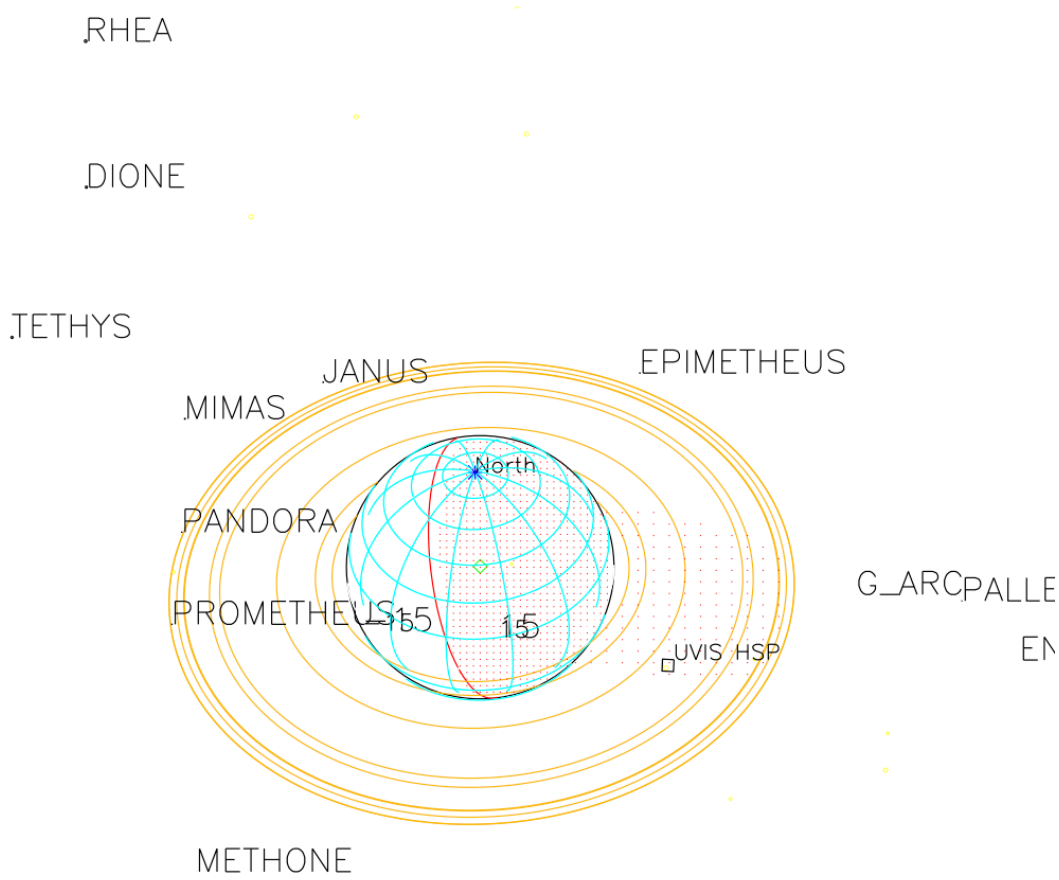
Sub-s/c lat/lon: 37.39, 17.06


GAM LUP Rev 030 Egress
HSP Counts (per second)
2.0×10^5
1.5×10^5
1.0×10^5
5.0×10^4
0
80000
100000
120000
140000
Ring Plane Radius (km)


GAM LUP Rev 030 Egress
Radial Resolution (m)
10
8
6
4
2
0
80000
100000
120000
140000
160000
Ring Plane Radius (km)


HSP Counts (per second)
2.0×10^5
1.5×10^5
1.0×10^5
5.0×10^4
0
80000
100000
120000
140000
160000
Ring Plane Radius (km)


ϕ (degrees)
160
150
140
130
120
110
100
80000
100000
120000
140000
160000
Ring Plane Radius (km)



2006-286T04:17:00.000 853165.10 km

Target RA/dec: 241.24, -38.47

Subsolar lat/lon: -12.70, 155.91

Sub-s/c lat/lon: 39.01, -102.51