

UVIS TETHYS BOOK.

The intent of this Tethys icy satellite book is to give readers an idea of the observational geometry for each UVIS observation, along with a sense of the data quality.

The reflectance of Tethys and the other icy satellites generally becomes very low at wavelengths shortward of the water ice absorption edge (~ 165 nm). At these short wavelengths, water ice is very dark; any apparent spectral structure at these short wavelengths is not necessarily real.

For many observations, we include a calibrated average spectrum to demonstrate the brightness of any reflected solar emission lines (especially at $\lambda < 165$ nm) which are likely the most appropriate demonstration of moon reflectance at these short wavelengths.

We also include an off-body background spectrum (to save space, we show this as a calibrated spectrum overplotted on the average moon spectrum though technically the background is subtracted off before calibration)

This book covers FUV data only; EUV data are also available.

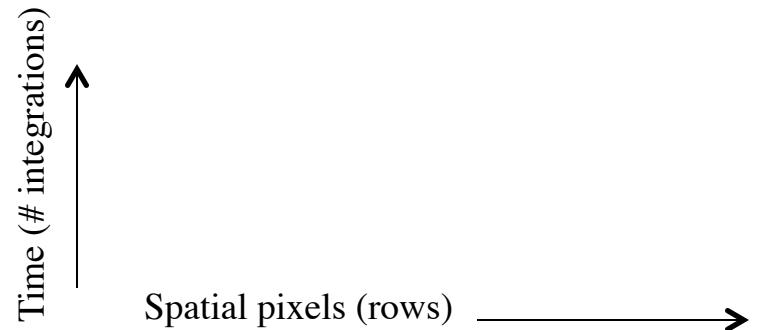
Name of observation

ISS image

Planning/geometer graphic

Note: The geometry given is usually the average over the observing time; if an observation has multiple parts, the geometry is usually the average from the first part

Long wavelength (170-180nm) image
(scaled to max value)



For many observations we also include:

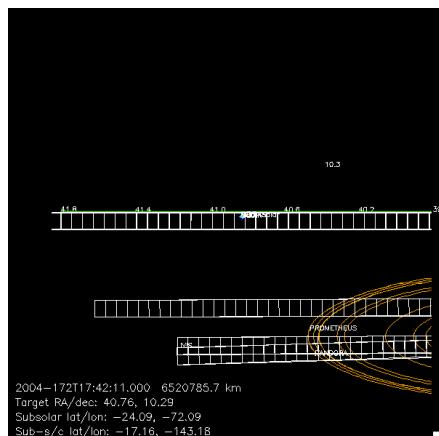
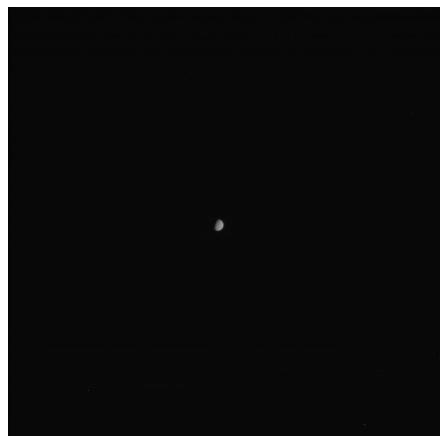
Plot of signal vs. background

Plot of reflectance

Note: most ICYTHON observations using the low-res slit and 120 sec integration periods. Most ICYMAP observations use the high-res slit and 30-sec integration periods.

UVIS observation name
Date
Altitude (average)
Sub s/c longitude (avg)
Sub s/c latitude (avg)
Phase angle (avg)

ISS_000TE_PRESOIC001_PRIME



000TE_ICYTHON003_ISS

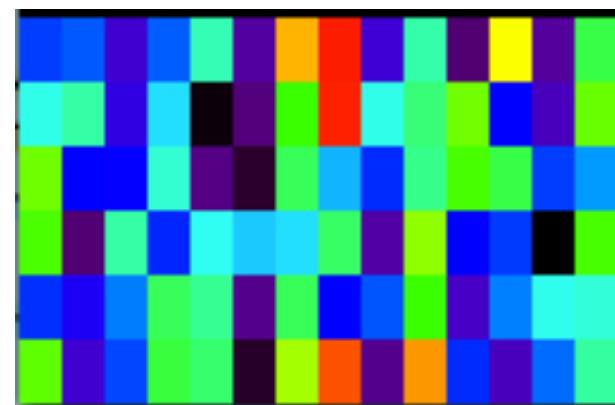
2004-172T17:43

Alt= 6,514,115 km

Longitude= 144°W

Latitude= 17°S

Phase= 64.6°



Low SNR

5-part mosaic

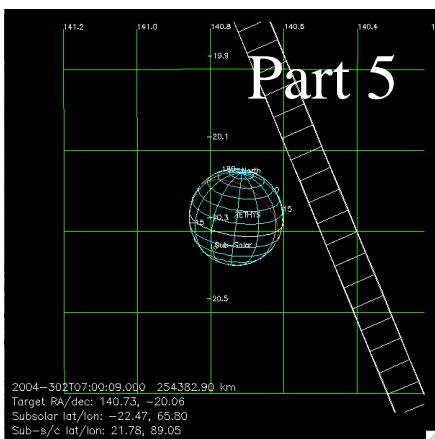
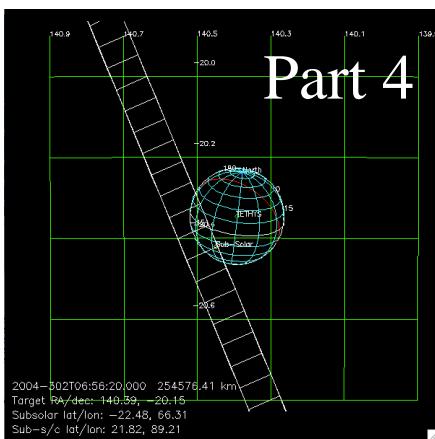
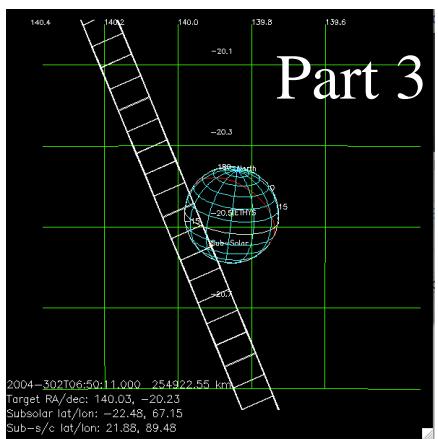
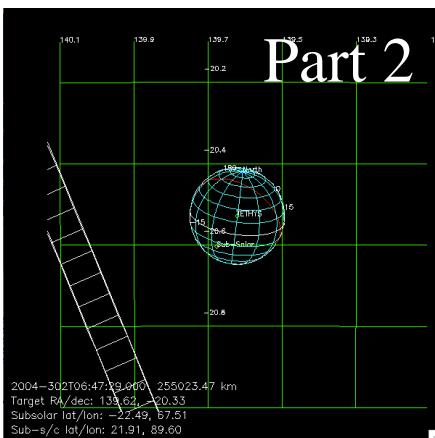
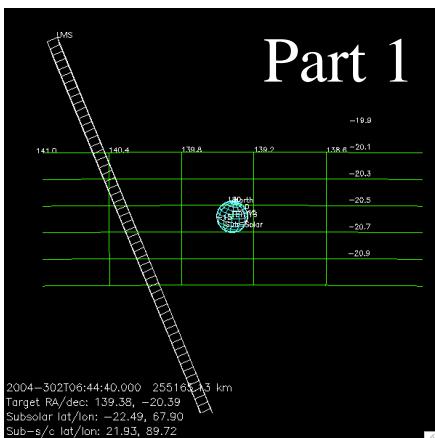
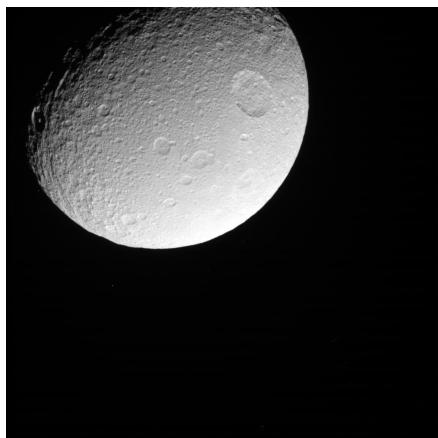
00ATE_ICYLON030_ISS

2004-302T06:45

Alt= 254,706 km

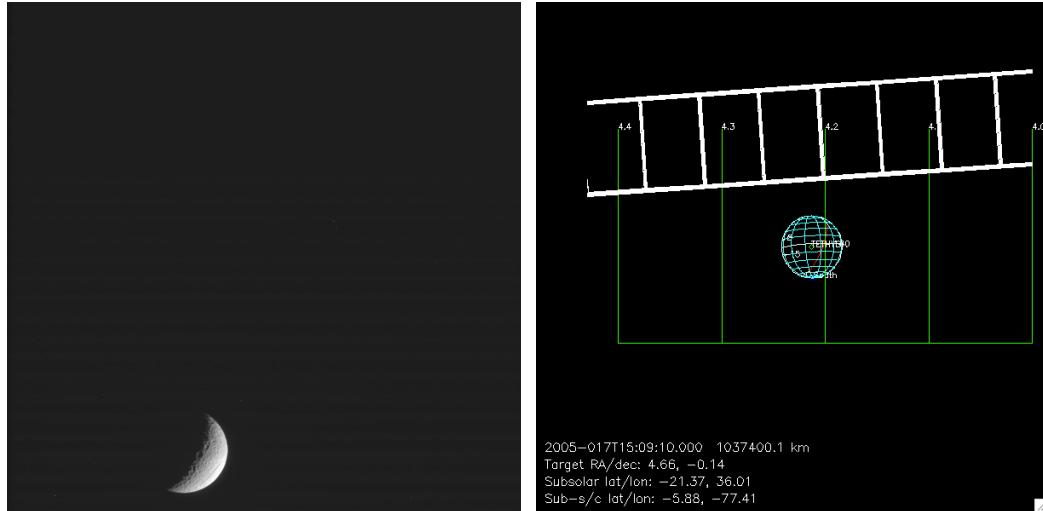
Longitude= 272°W

Phase= 50.1°



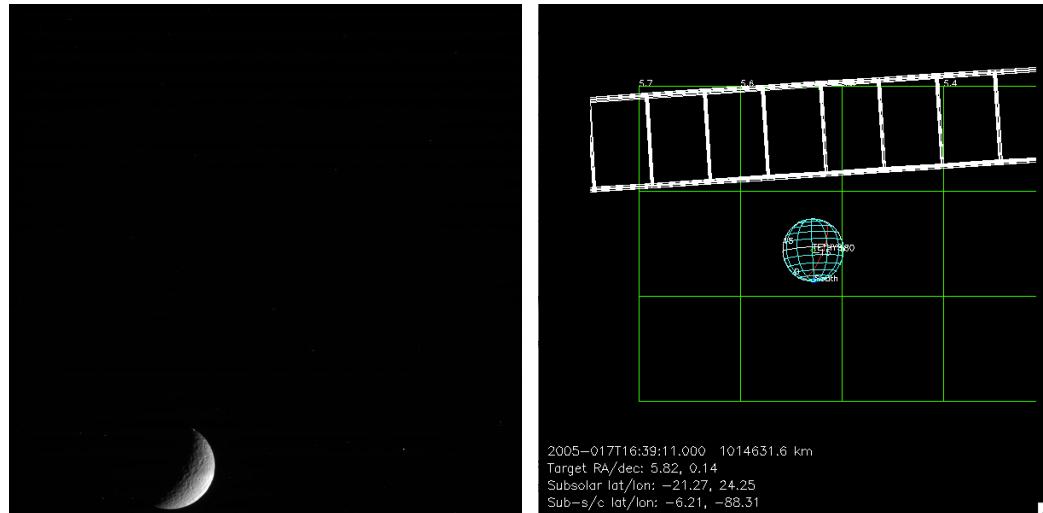
Rows only partly on Tethys ...

00CTE_ICYLON012_ISS
2005-017T15:10



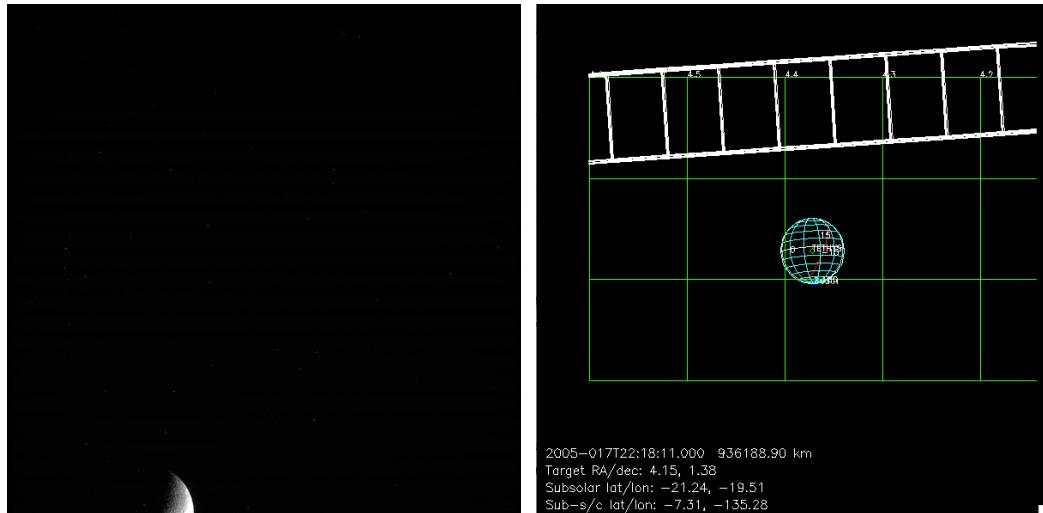
Pointing off... Tethys not in UVIS slit

00CTE_ICYLON014_ISS
2005-017T16:40



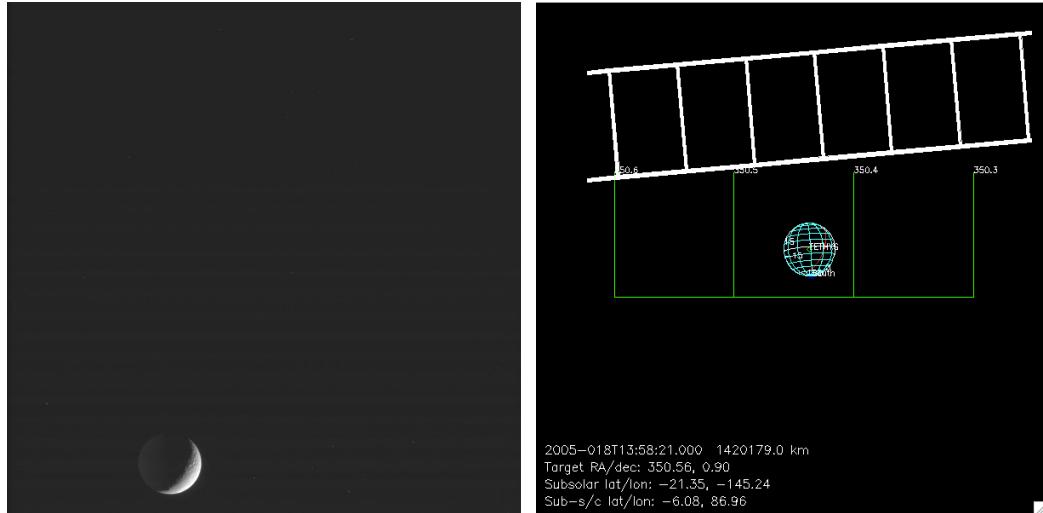
Pointing off... Tethys not in UVIS slit

00CTE_ICYLON016_ISS
2005-017T22:19



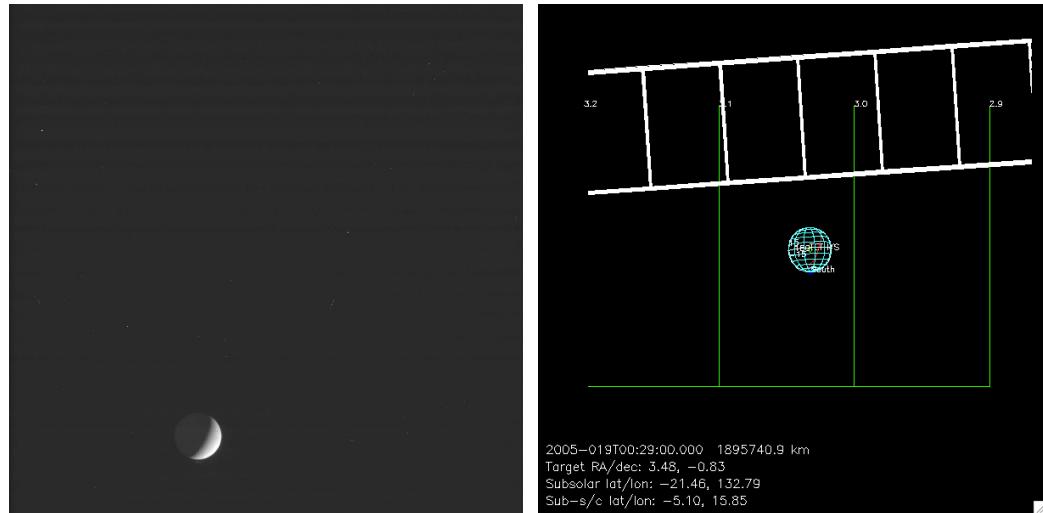
Pointing off... Tethys not in UVIS slit

00CTE_ICYLON017_ISS
2005-018T13:59



Pointing off... Tethys not in UVIS slit

00CTE_ICYLON018_ISS
2005-019T00:30



Pointing off... Tethys not in UVIS slit

ISS_003TE_022W098PH001



003TE_ICYLON006_ISS

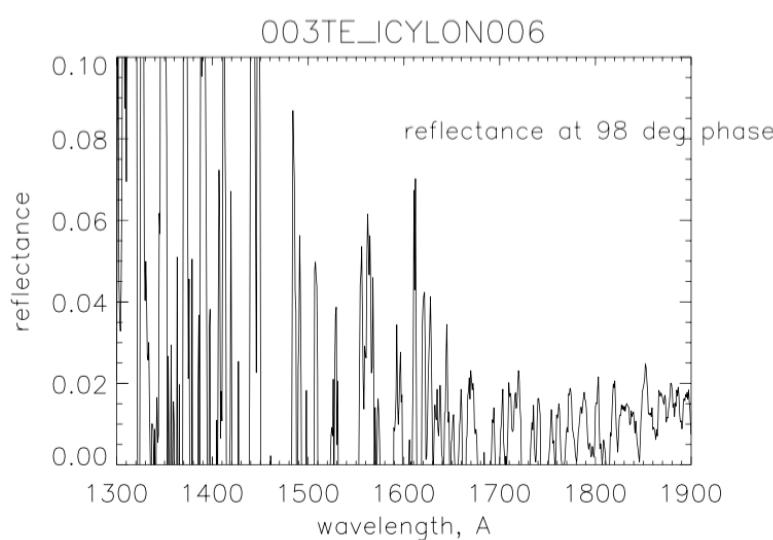
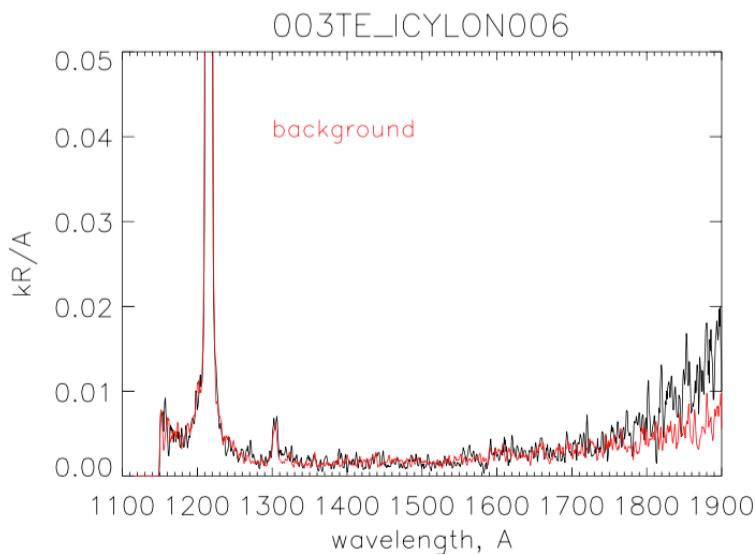
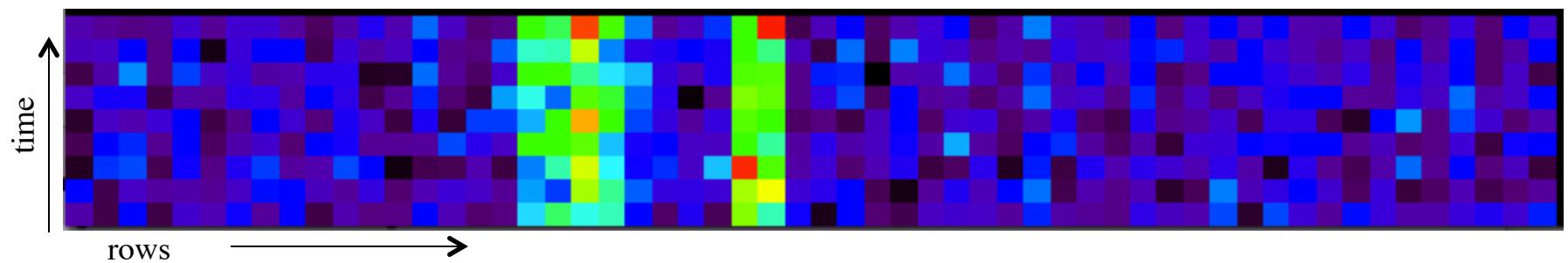
2005-049T12:29

Alt= 1,349,992 km

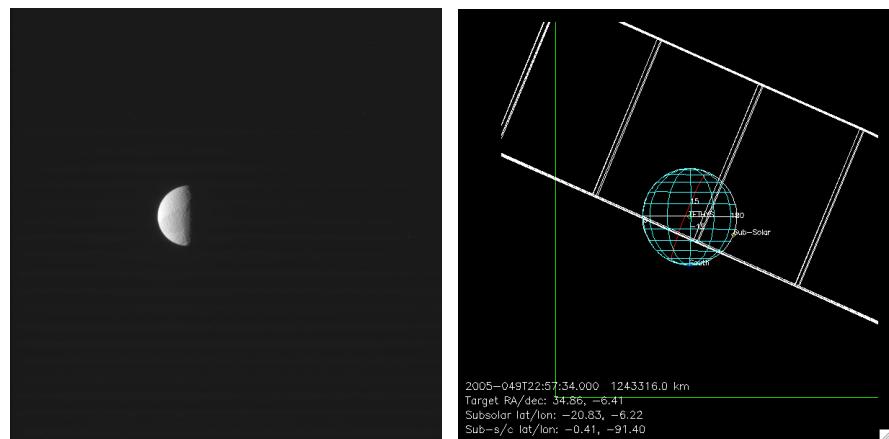
Longitude= 23°W

Latitude= 0.5°S

Phase= 97.7°



ISS_003TE_094W085PH001



003TE_ICYLON008_ISS

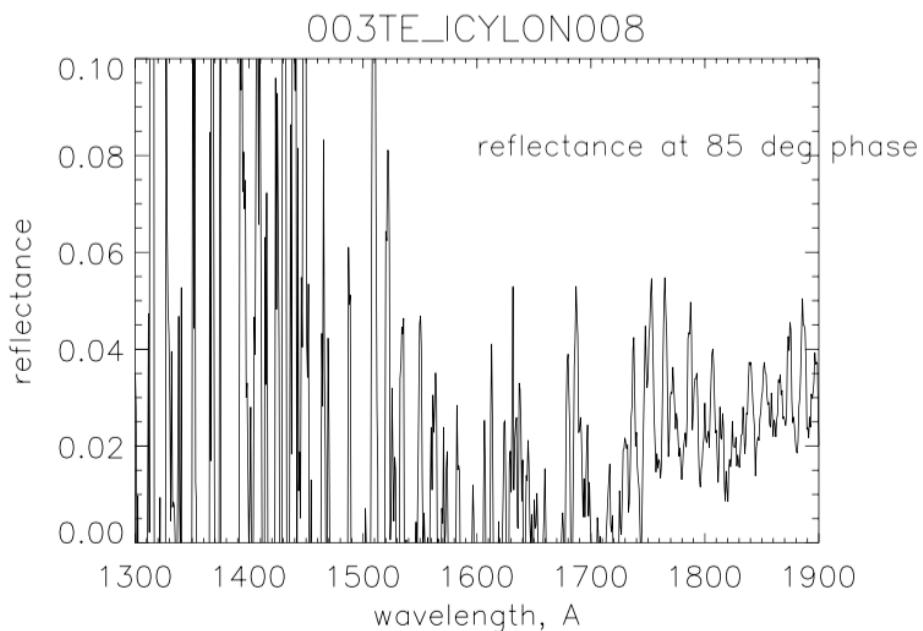
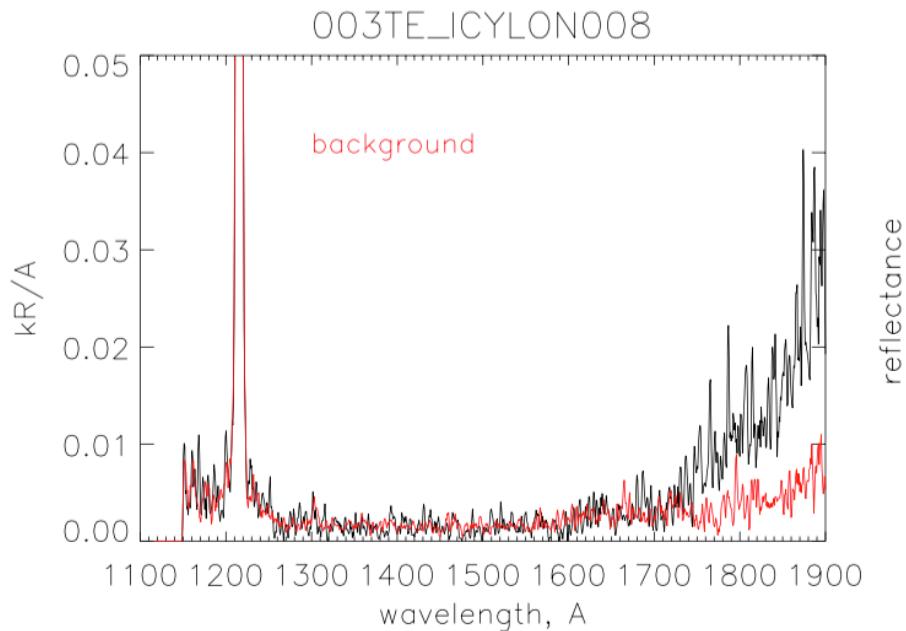
2005-049T22:58

Alt= 1,242,009 km

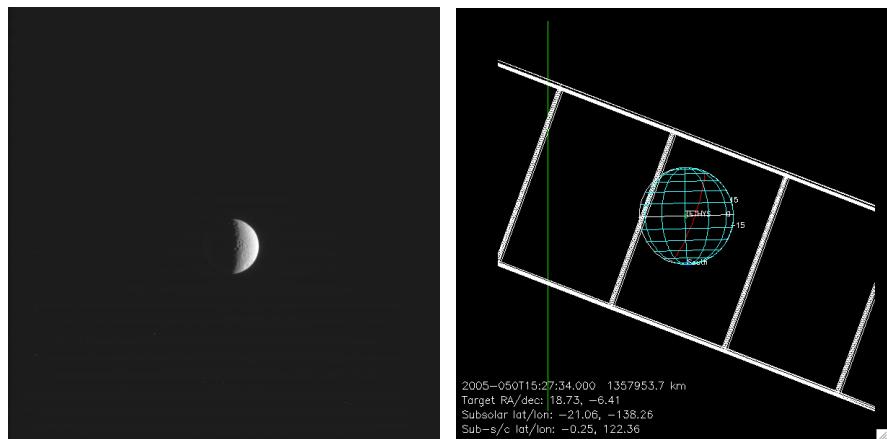
Longitude= 92°W

Latitude= 0.4°S

Phase= 85.1°



ISS_003TE_238W100PH001



003TE_ICYLON010_ISS

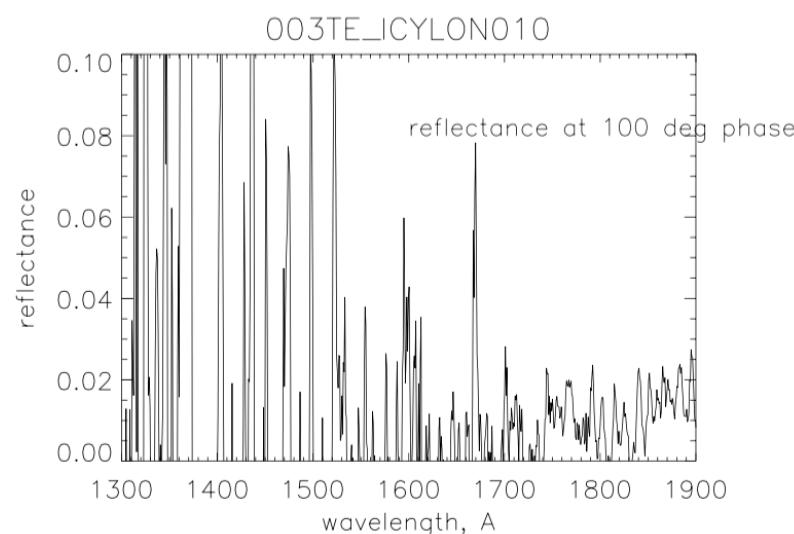
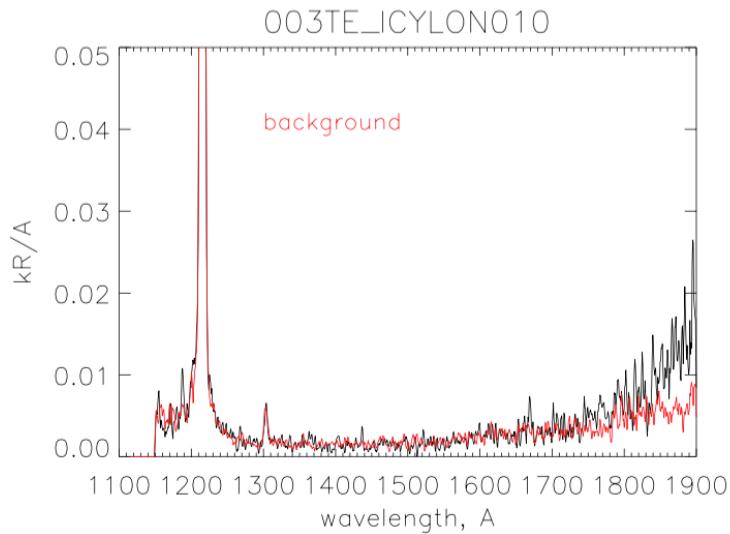
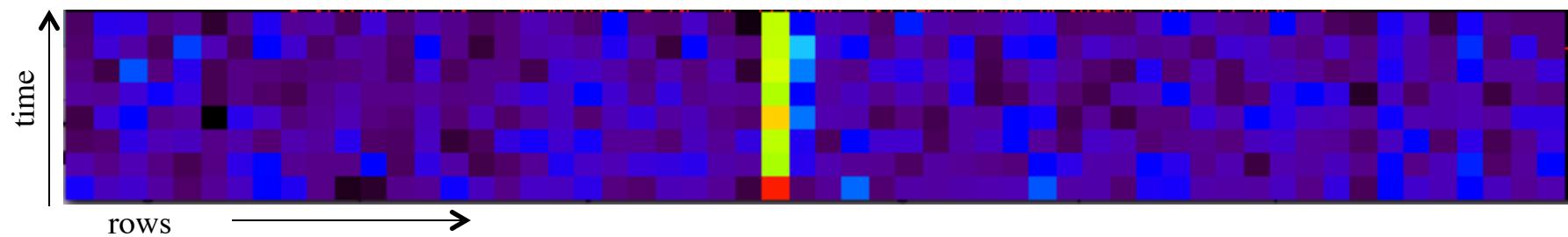
2005-050T15:28

Alt= 1,367,177 km

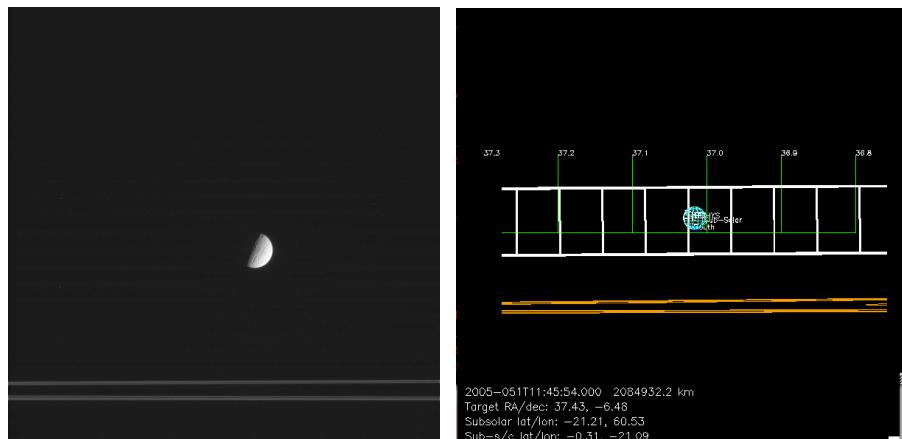
Longitude= 240°W

Latitude= 0.25°S

Phase= 100.1°



ISS_003TE_022W083PH001



003TE_ICYTHON011_ISS

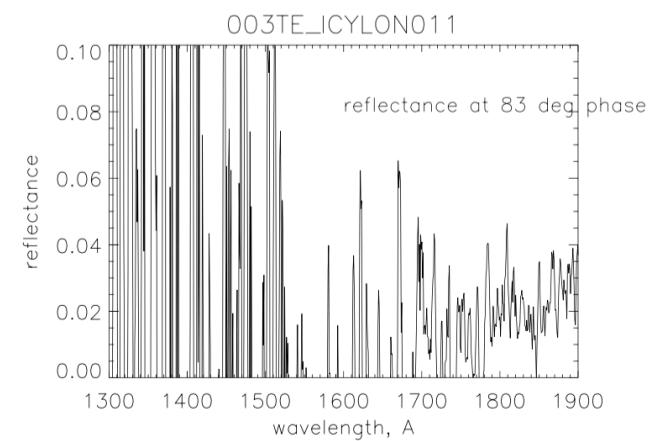
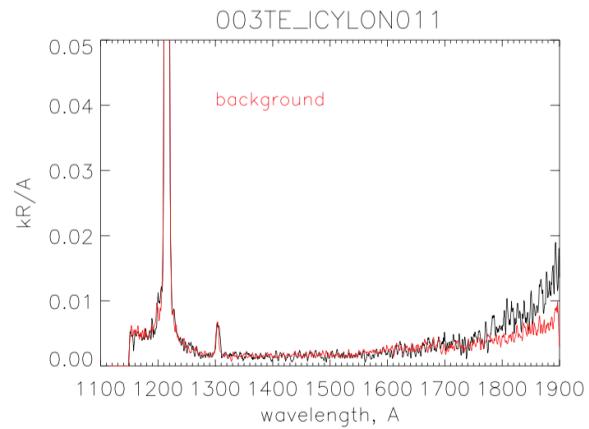
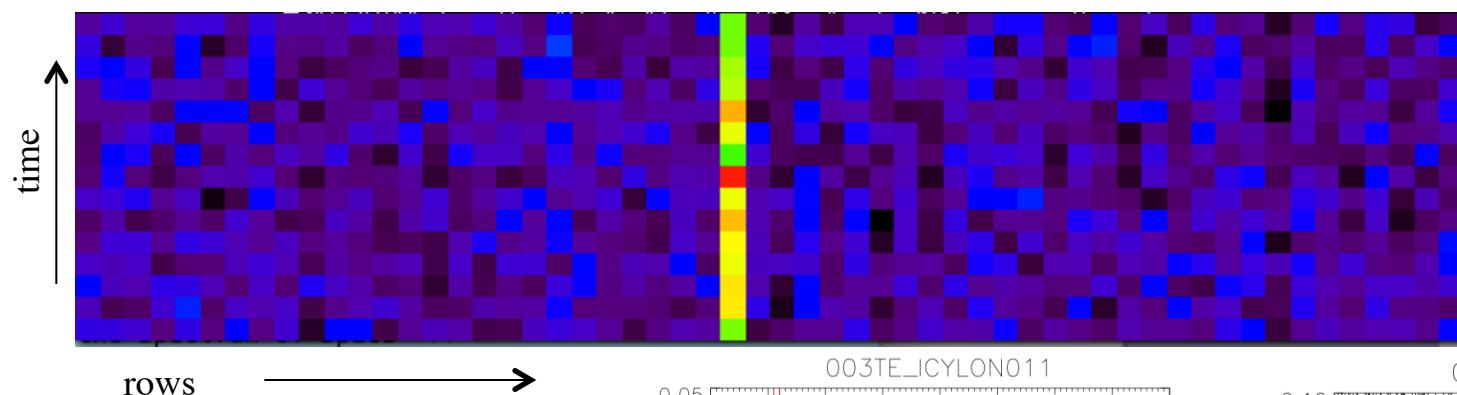
2005-051T11:46

Alt= 2,083,954 km

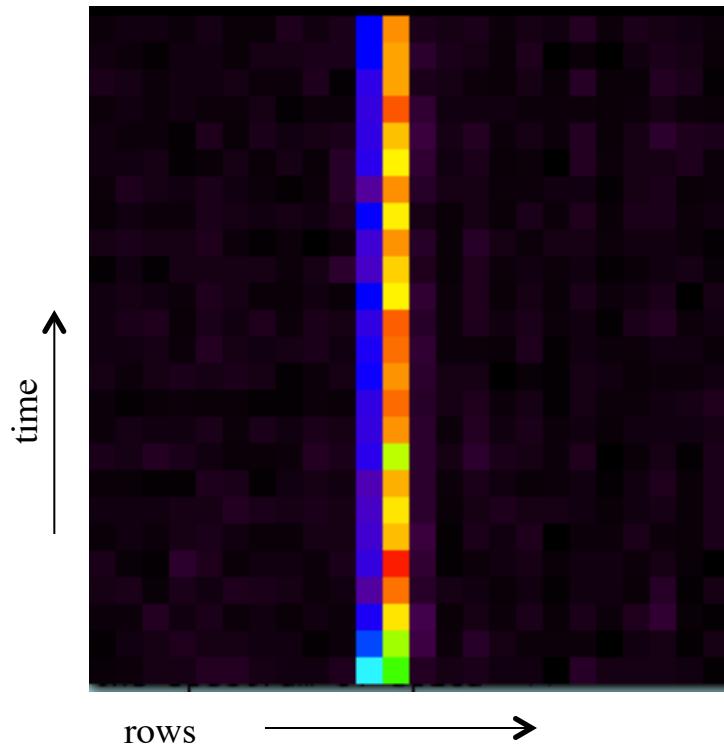
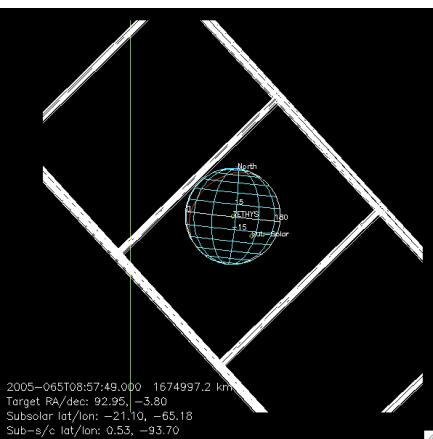
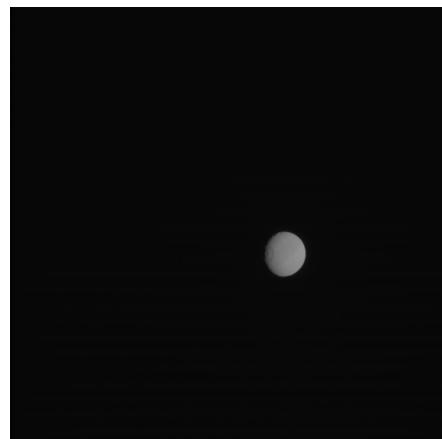
Longitude= 23°W

Latitude= 0.3°S

Phase= 82.9°



ISS_004TE_094W035PH001



004TE_ICYLON001_ISS

2005-065T08:50

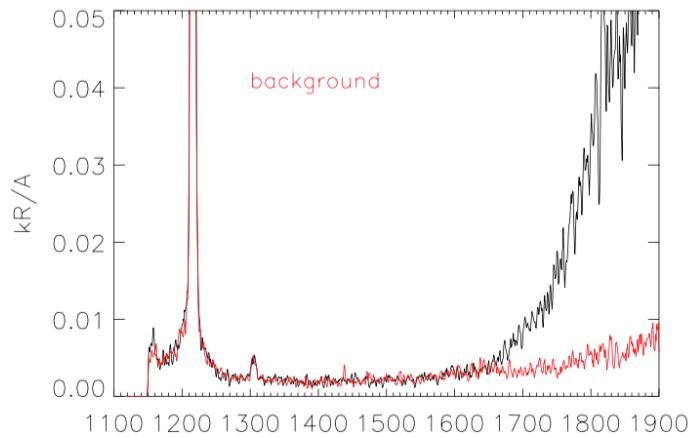
Alt= 1,646,535 km

Longitude= 98°W

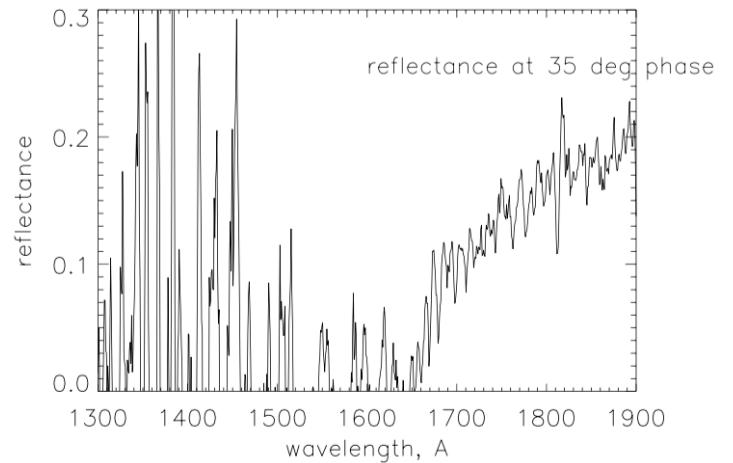
Latitude= 0.54°N

Phase= 34.8°

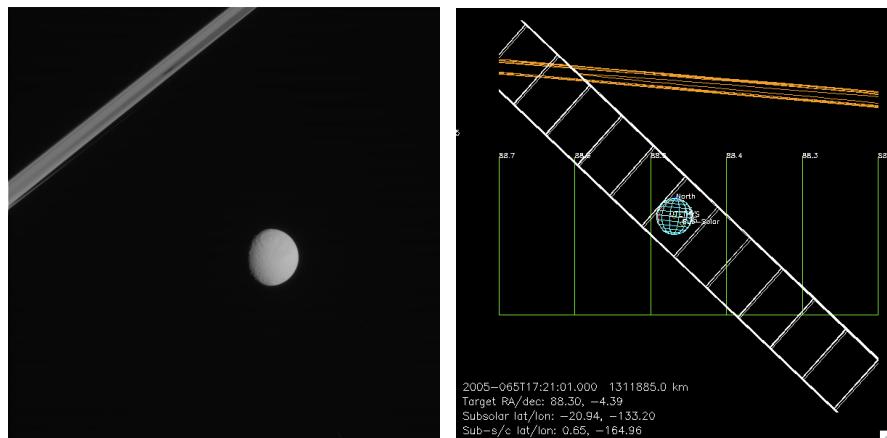
004TE_ICYLON001



004TE_ICYLON001



ISS_004TE_166W039PH001



004TE_ICYTHON002_ISS

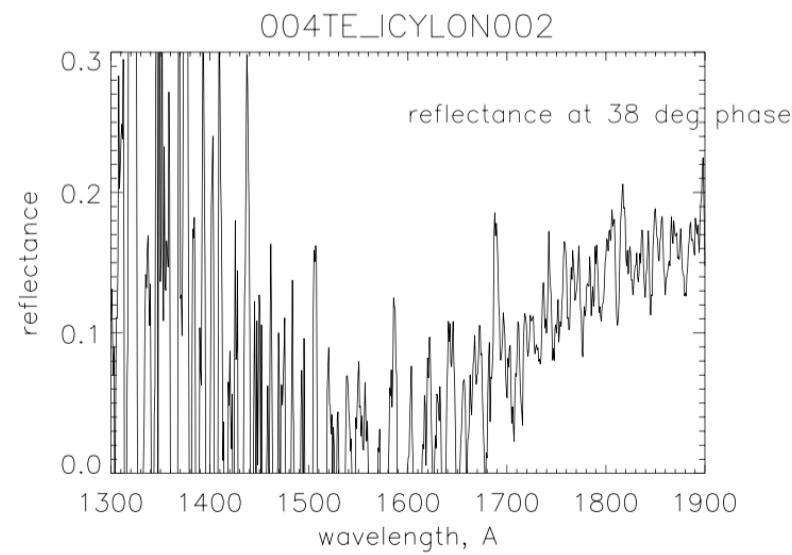
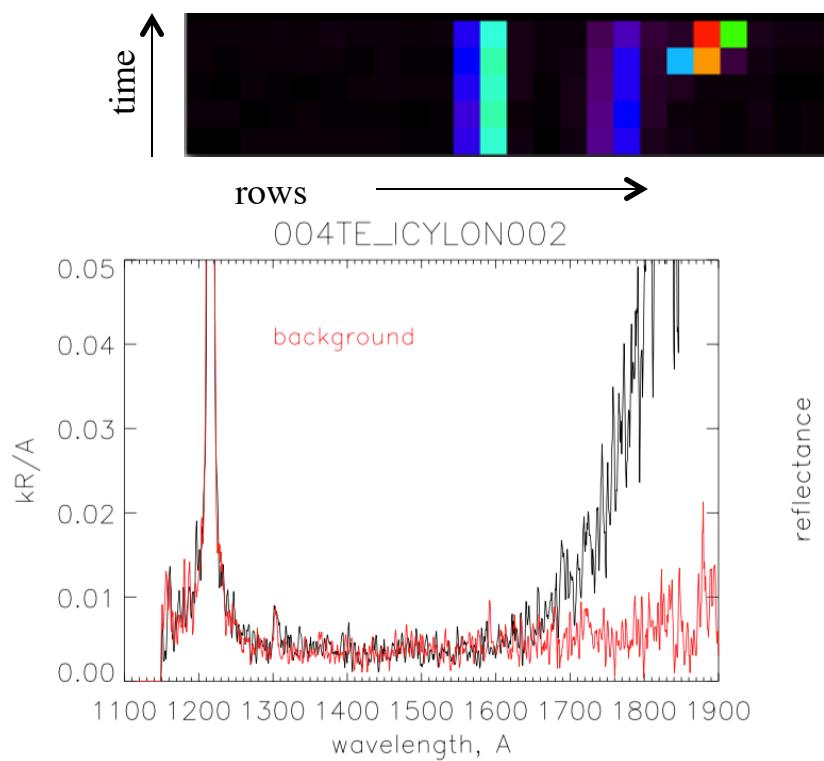
2005-065T17:22

Alt= 1,309,698 km

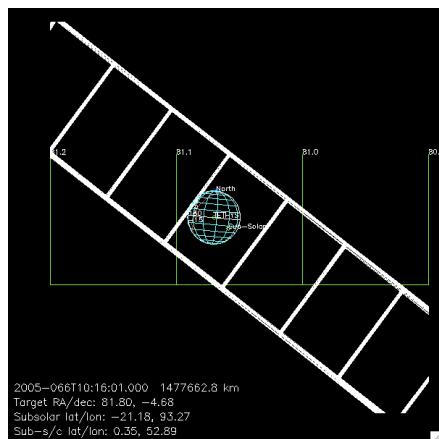
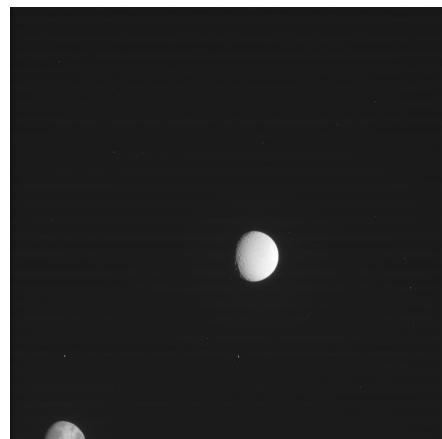
Longitude= 165°W

Latitude= 0.65°N

Phase= 38.4°



004TE_310W044PH001



004TE_ICYLON003_ISS

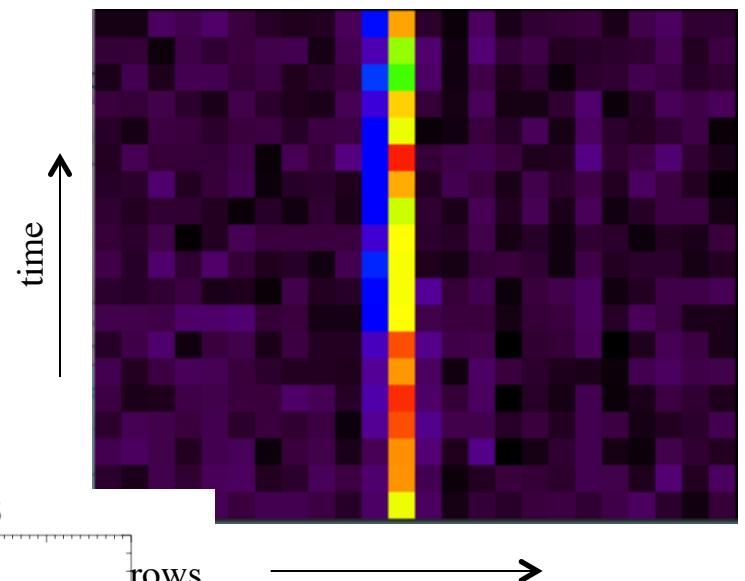
2005-066T10:17

Alt= 1,477,571 km

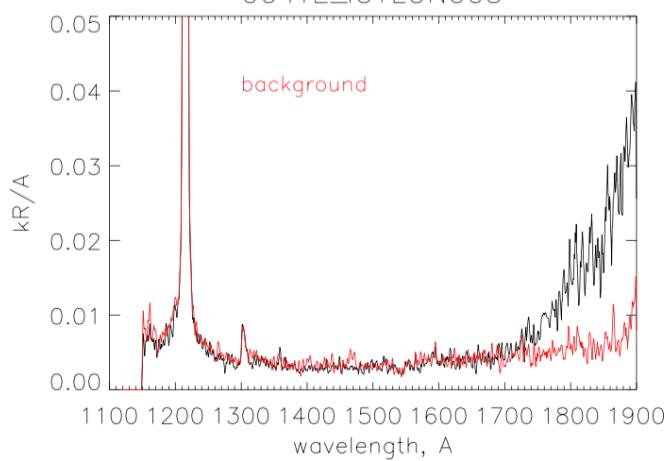
Longitude= 307°W

Latitude= 0.35°N

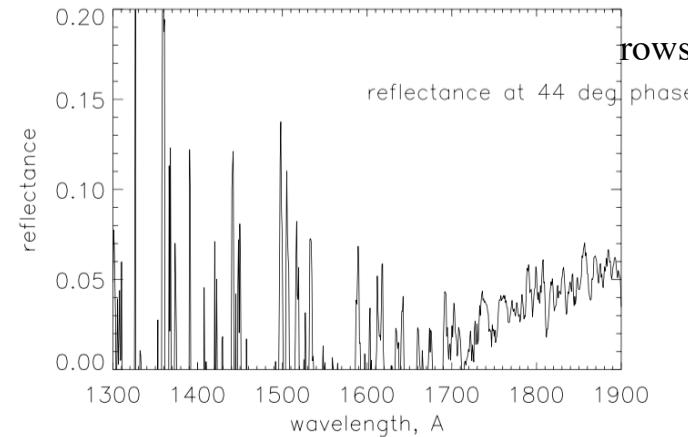
Phase= 44.2°



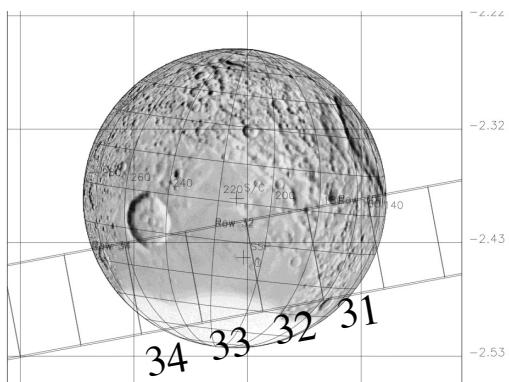
004TE_ICYLON003



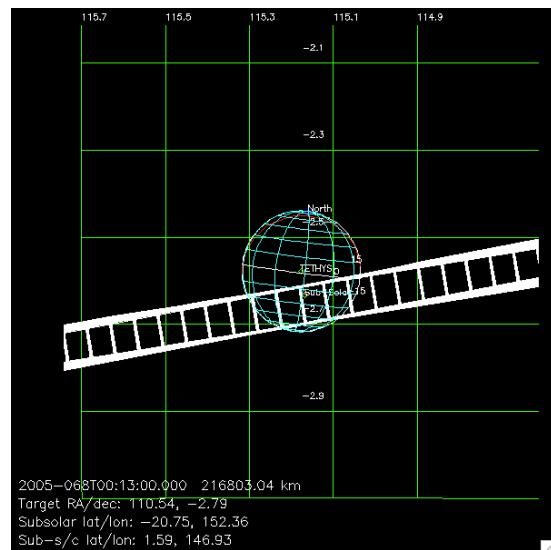
004TE_ICYLON003



004TE_TETHYS001_VIMS



No ISS rider



004TE_ICYTHON006_VIMS

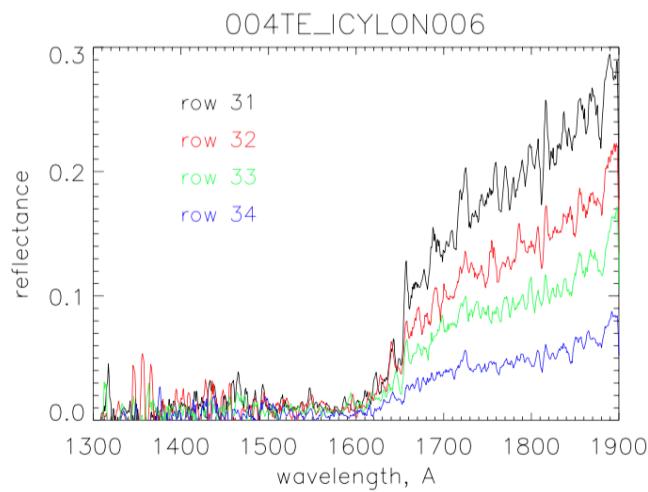
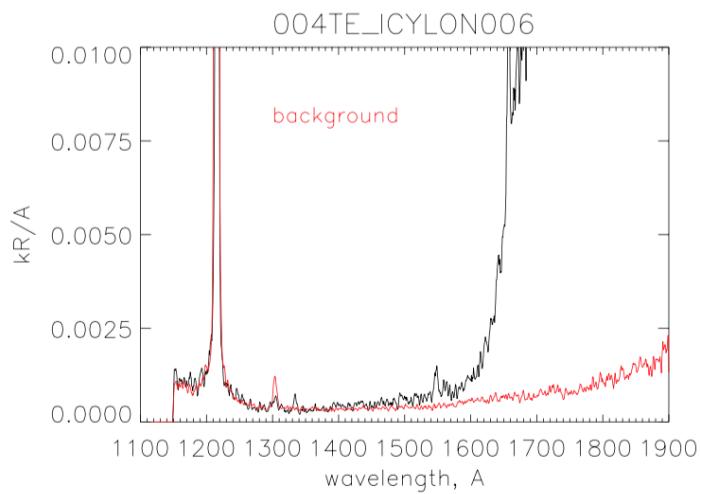
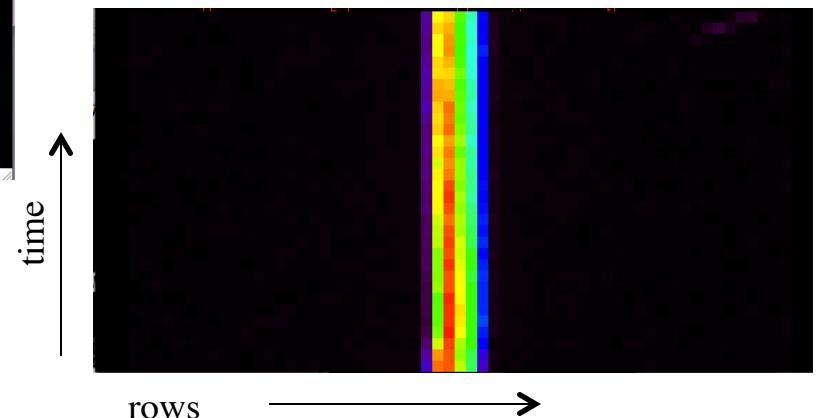
2005-068T00:14

Alt= 209,137 km

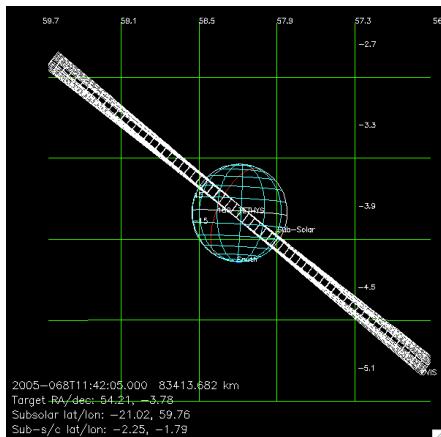
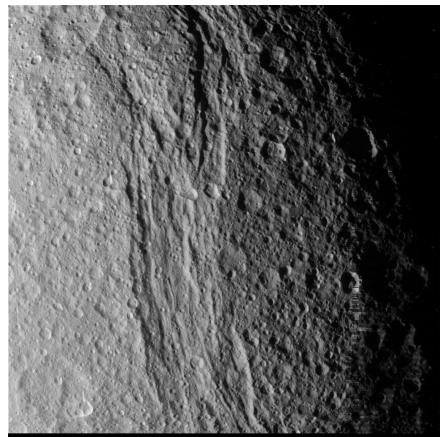
Longitude= 219°W

Latitude= 1.5°N

Phase= 24.2°



004TE_TETHYS004_VIMS



004TE_ICYTHON007_VIMS

2005-068T11:43

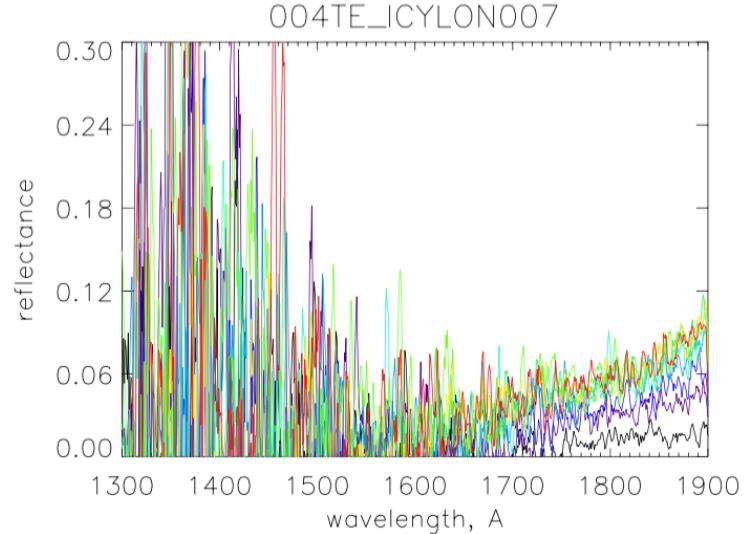
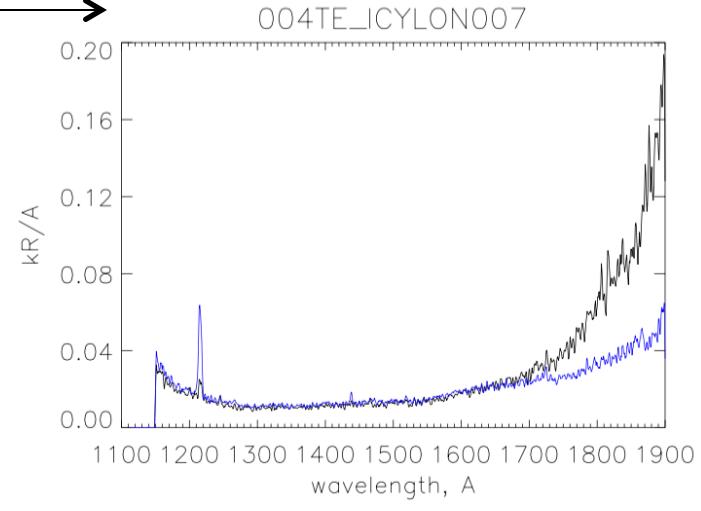
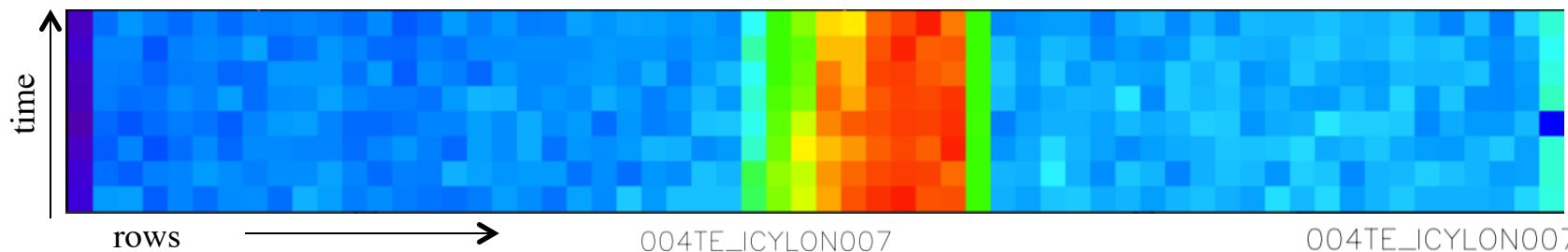
Alt= 82,950 km

Longitude= 5°W

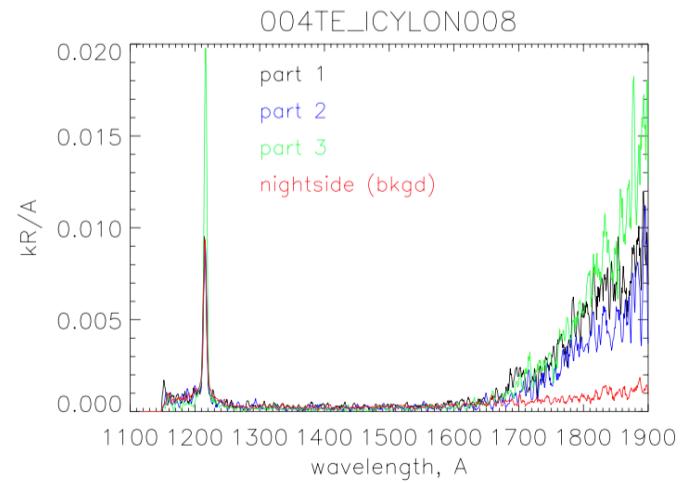
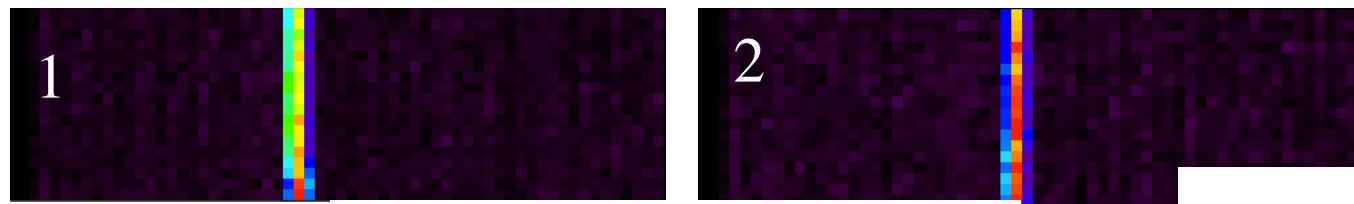
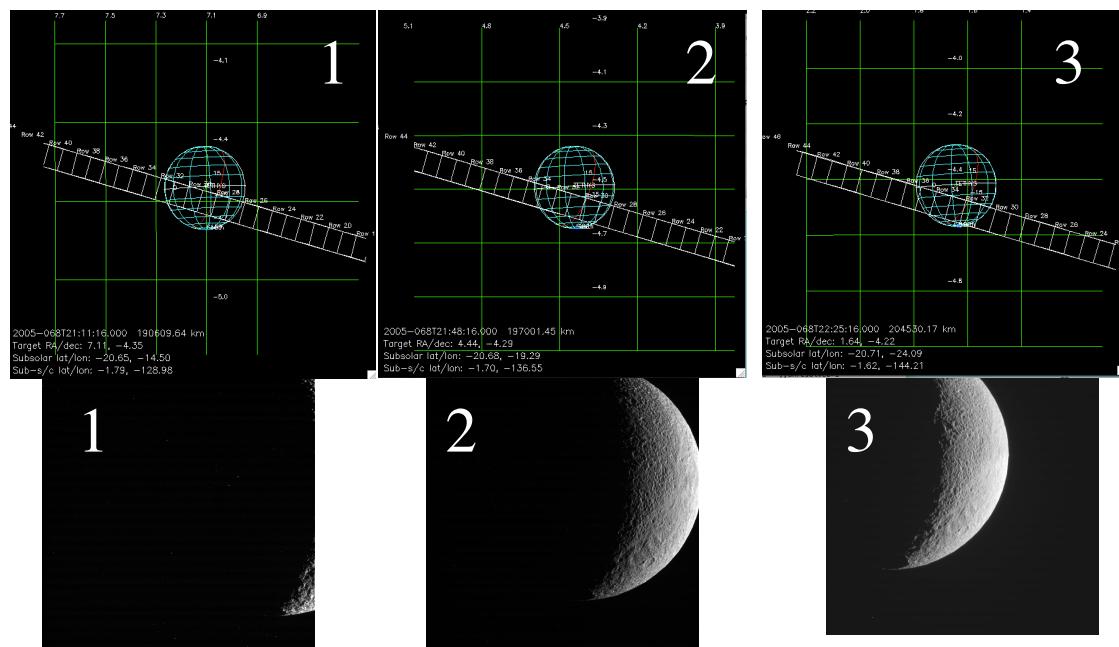
Latitude= 2.3°S

Phase= 65°

(High background)



004TE_OBSERV002_ISS



004TE_ICYTHON008_ISS

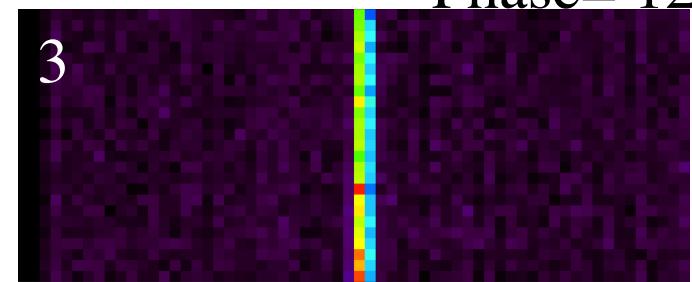
2005-068T21:12

Alt= 217,194 km

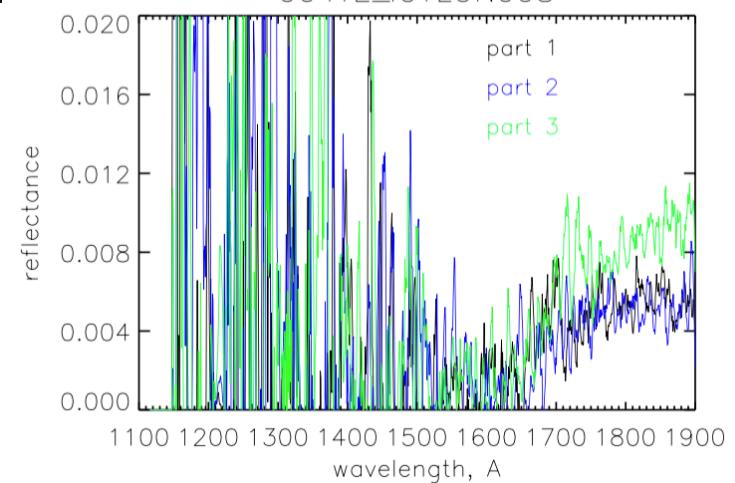
Longitude= 152°W

Latitude= 1.75°S

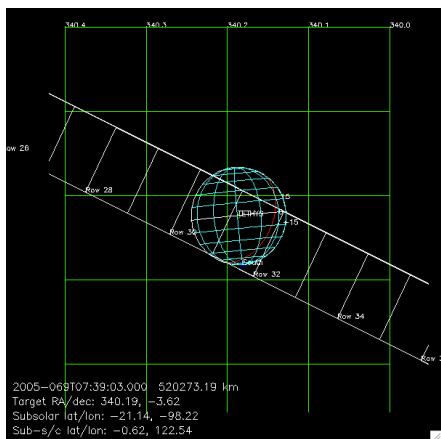
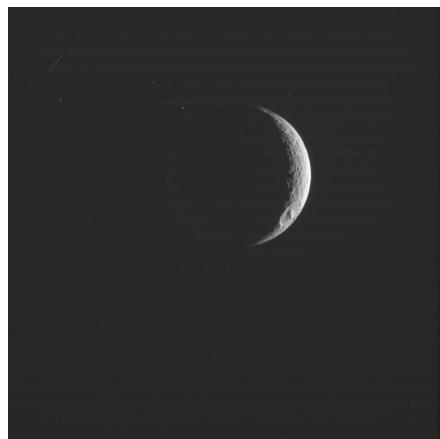
Phase= 124°



004TE_ICYTHON008



004TE_238w136ph001_ISS



004TE_ICYLON005_ISS

2005-069T07:40

Alt= 524,834 km

Longitude= 239°W

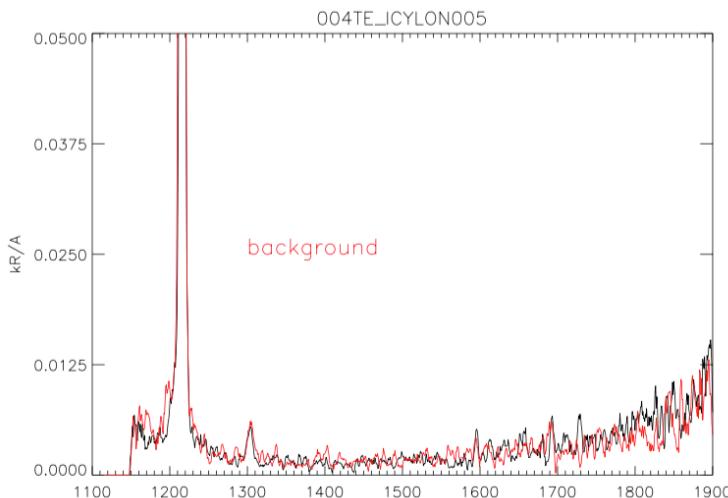
Latitude= 0.6°S

Phase= 135.3°



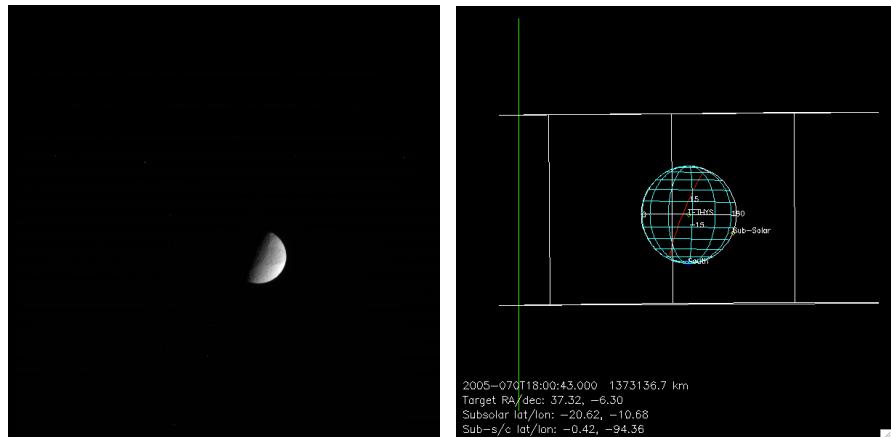
star

Tethys



Low SNR

004TE_094W084PH001_ISS



004TE_ICYTHON009_ISS

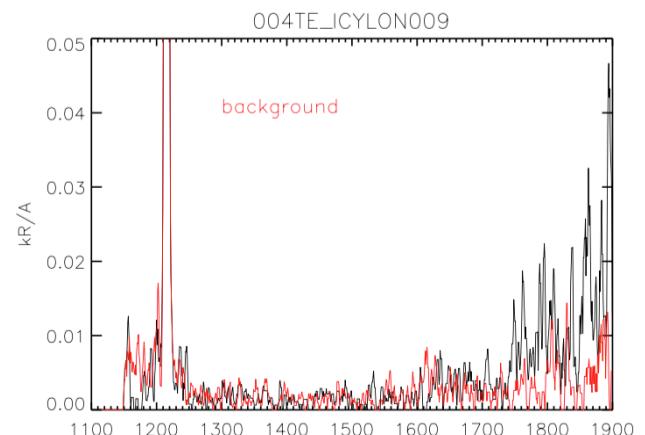
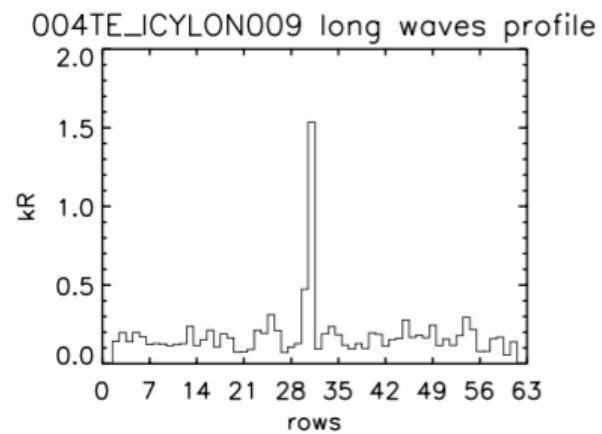
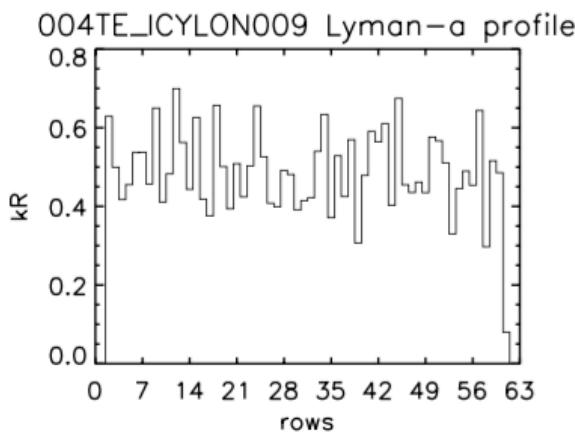
2005-070T18:01

Alt= 1,372,284 km

Longitude= 94°W

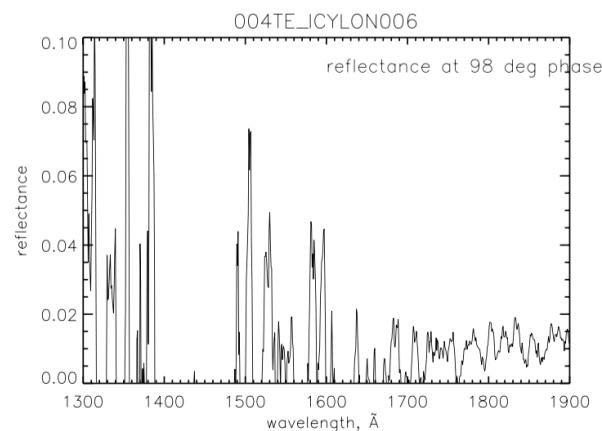
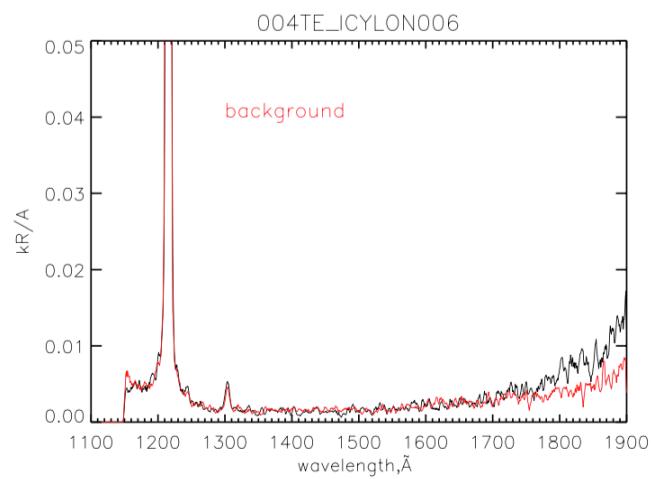
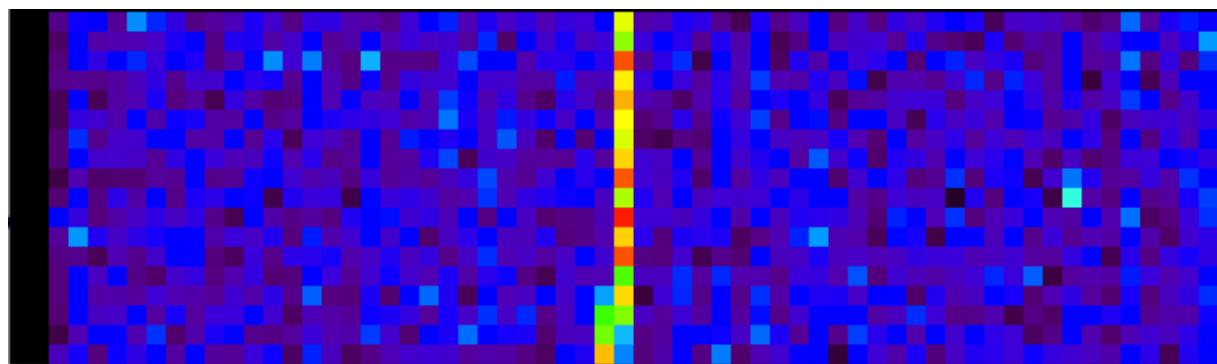
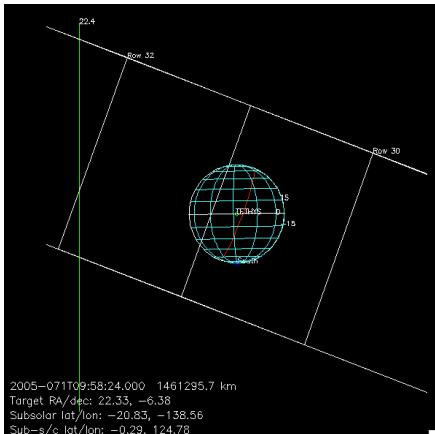
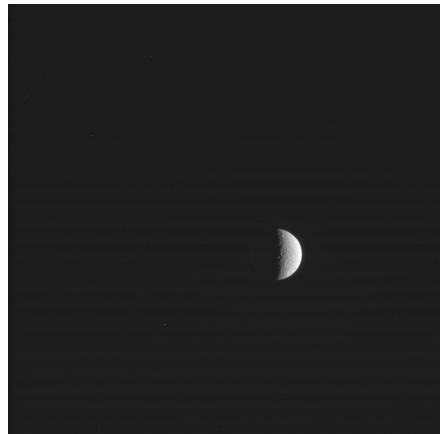
Latitude= 0.4°S

Phase= 83.6°



(Just one 120-sec integration period; low SNR)

004TE_238W098PH001_ISS



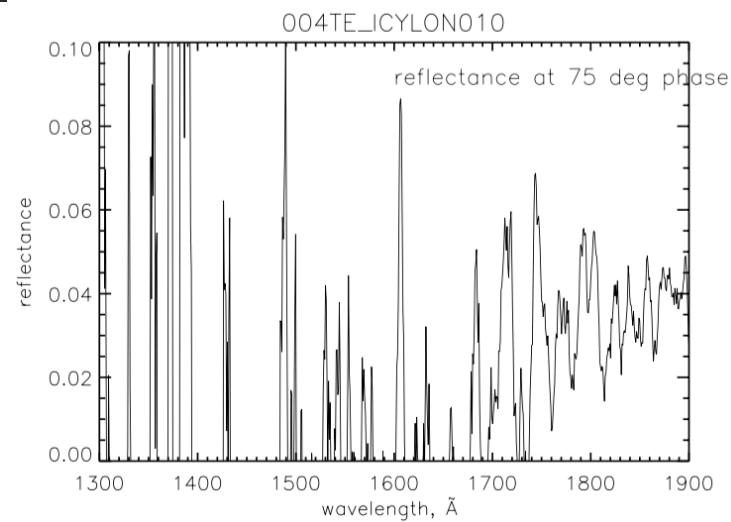
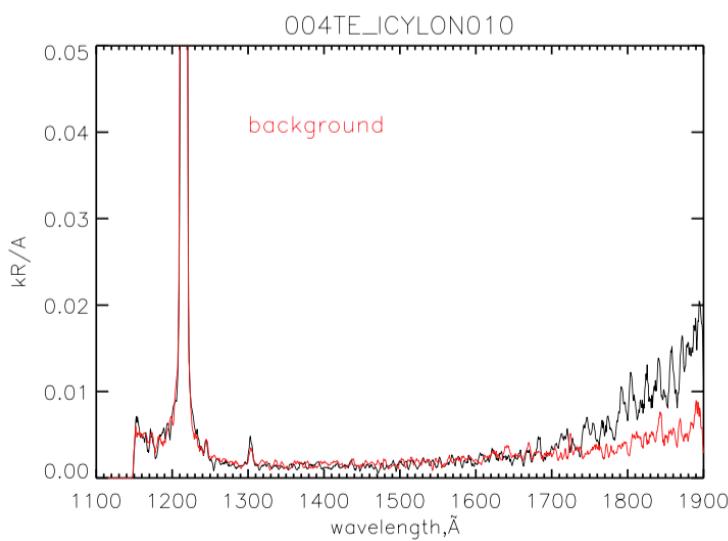
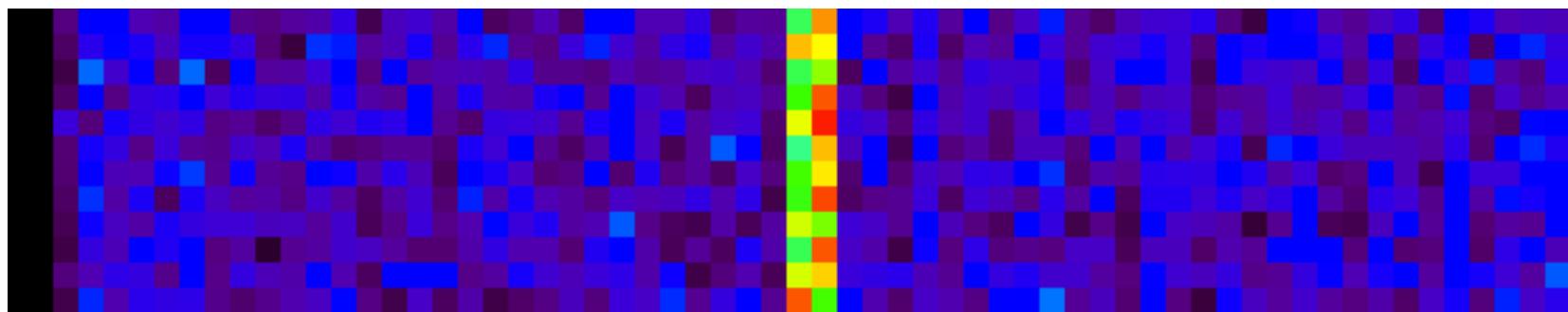
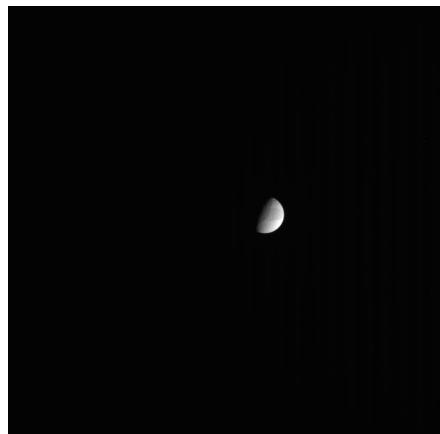
004TE_ICYTHON006_ISS

2005-071T09:58

Alt= 1,467,126 km
Longitude= 237°W

Latitude= 0.29°S
Phase= 97.6°

004TE_094W075PH001_ISS



004TE_ICYLON010_ISS

2005-072T16:12

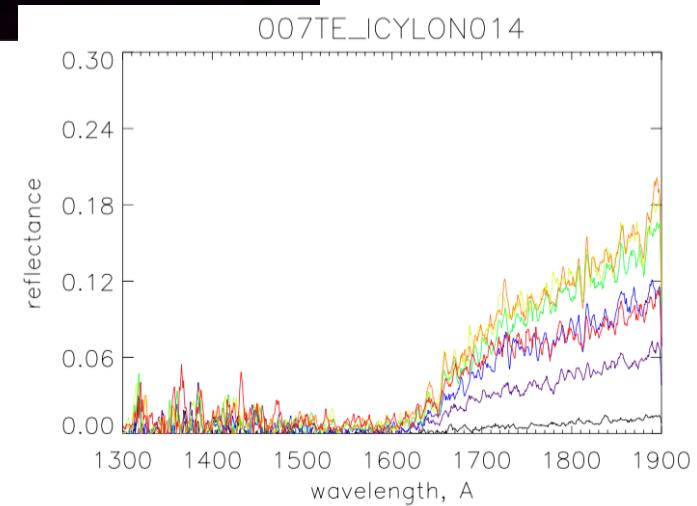
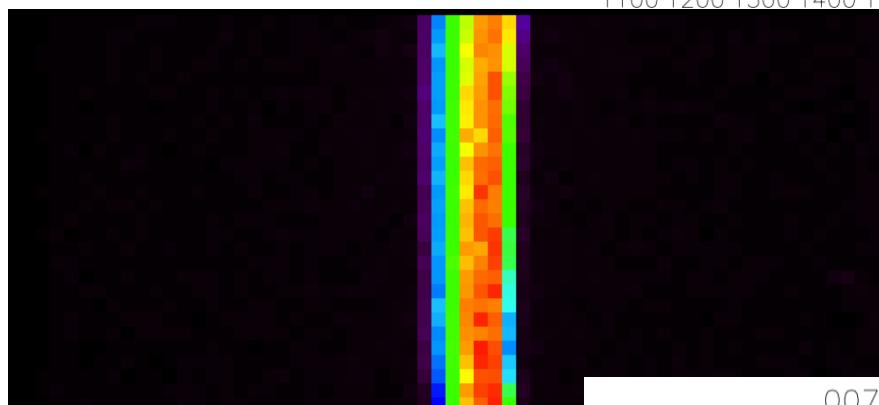
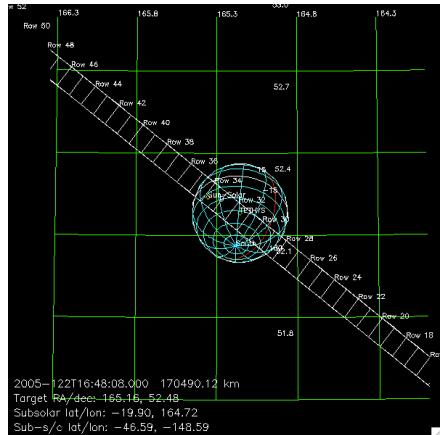
Alt= 1,978,000 km

Longitude= 93°W

Latitude= 0.21°S

Phase= 75.3°

007TE_TETHYS001_VIMS



007TE_ICYTHON014_VIM

S

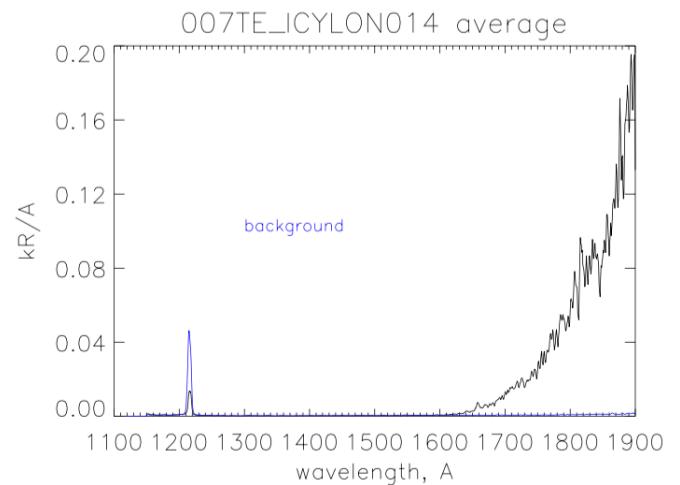
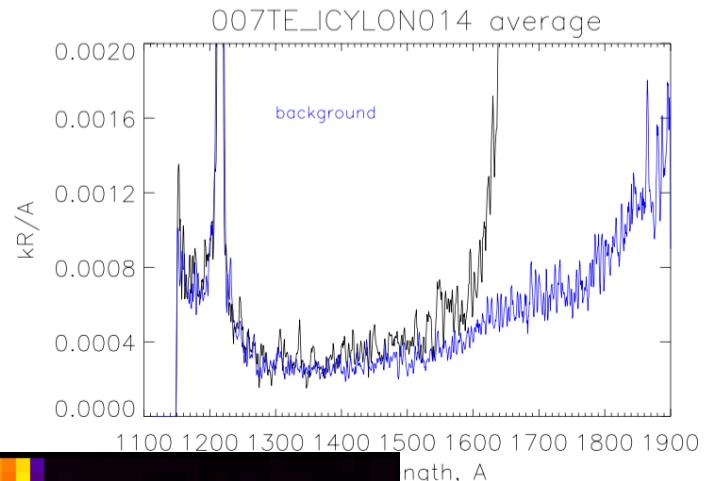
2005-122T16:49

Alt= 155,431 km

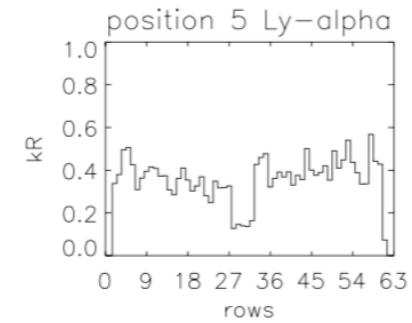
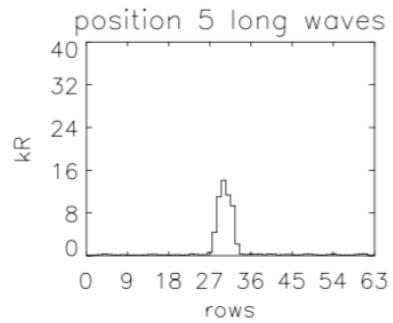
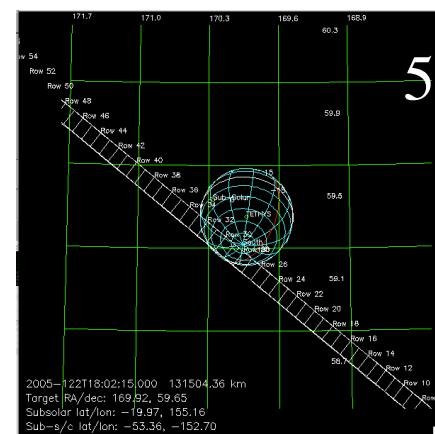
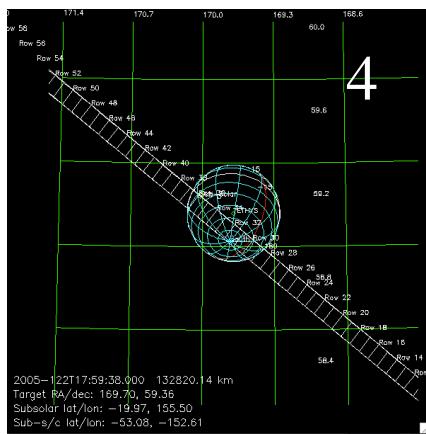
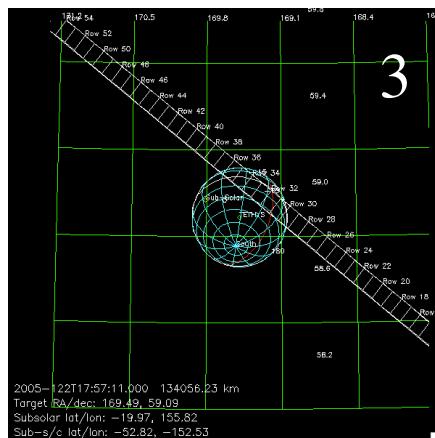
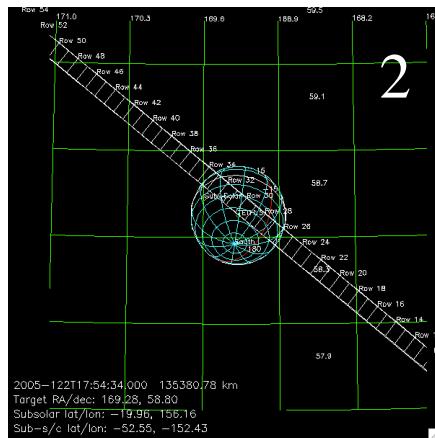
Longitude= 150°W

Latitude= 48.9°S

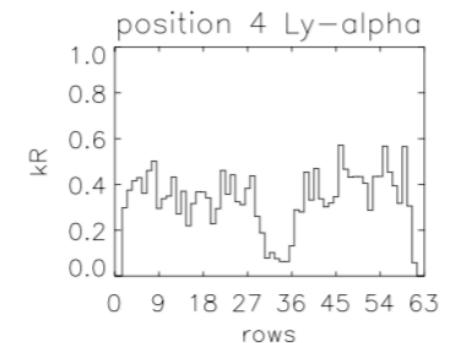
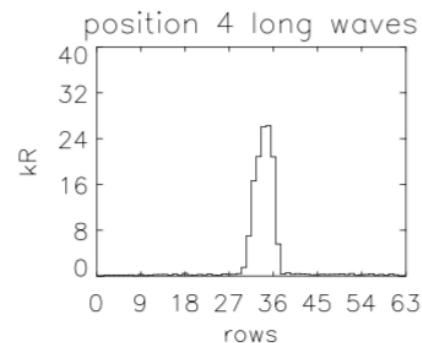
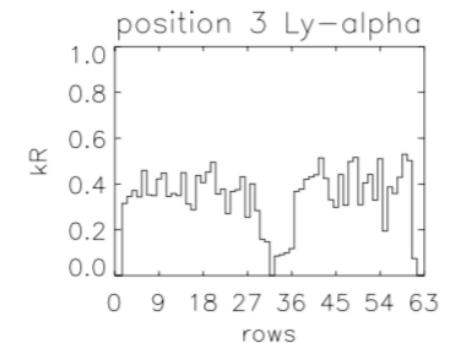
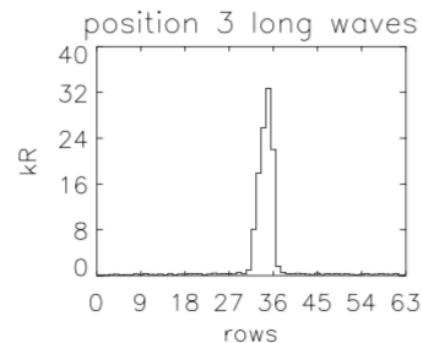
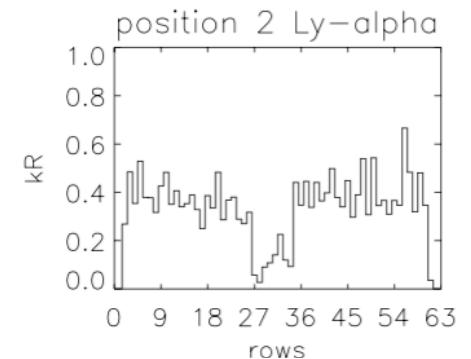
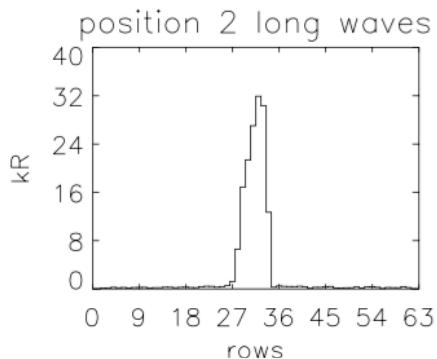
Phase= 49°



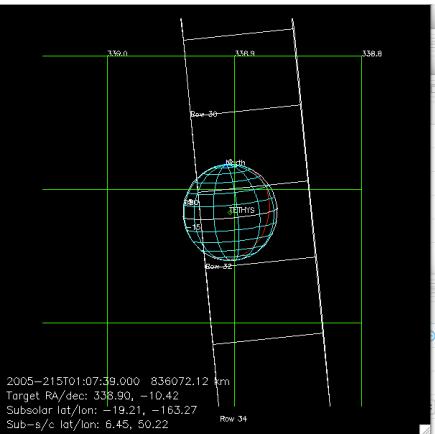
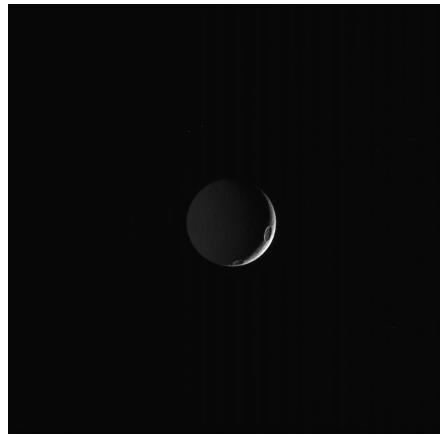
007TE_TETHYS001_VIMS (cont'd)



007TE_ICYLON014_VIMS Cont'd 1-2 60-sec integrations



012TE_310W144PH_ISS



012TE_ICYTHON015_ISS

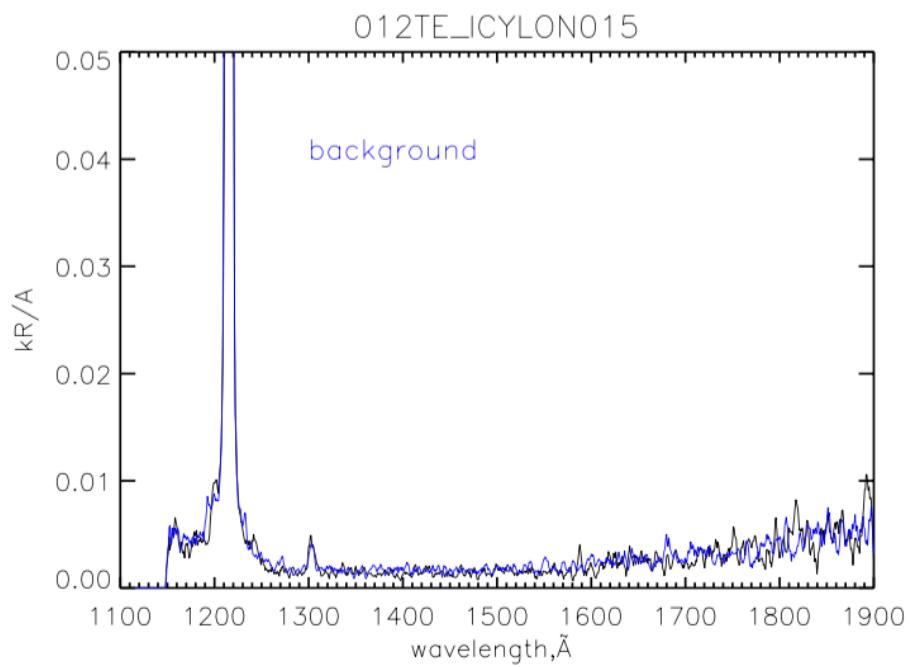
2005-215T01:15

Alt= 841,341 km

Longitude= 310°W

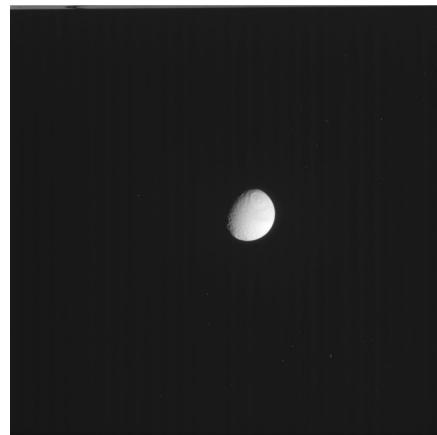
Latitude= 6.4°N

Phase= 144°



Low SNR

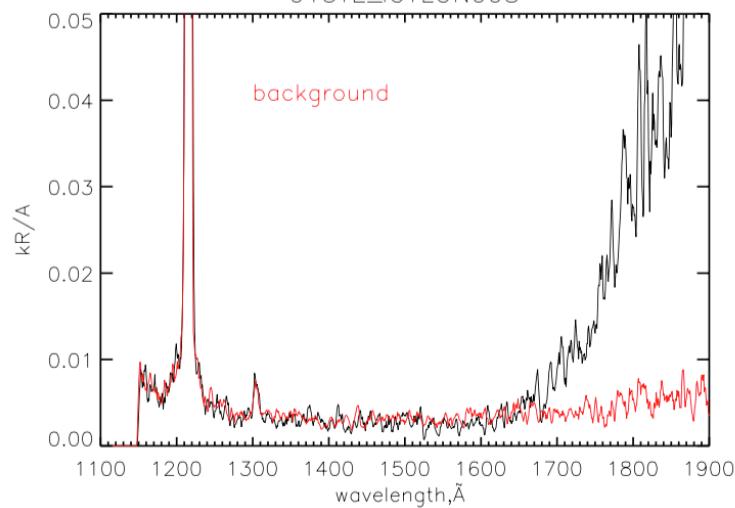
015TE_166W049PH_ISS



rings ↘ Tethys ↗



015TE_ICYLON008



015TE_ICYLON008_ISS

2005-263T21:40

Alt= 1,379,029 km

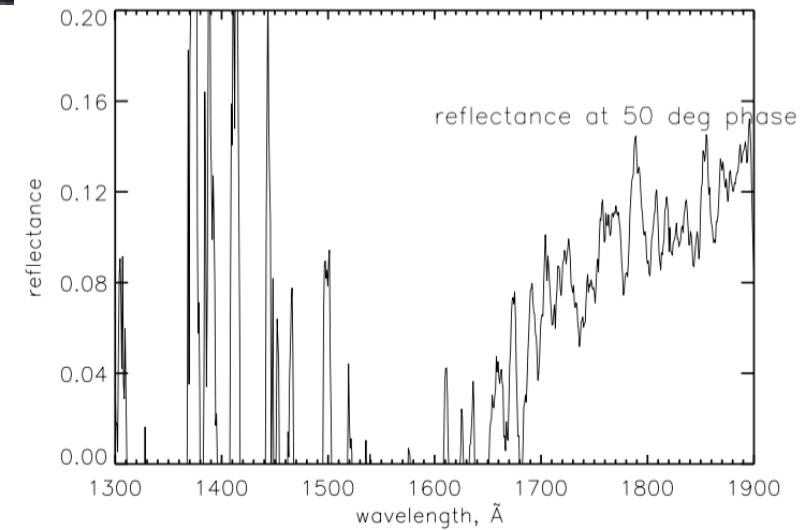
Longitude= 166°W

Latitude= 0.8°N

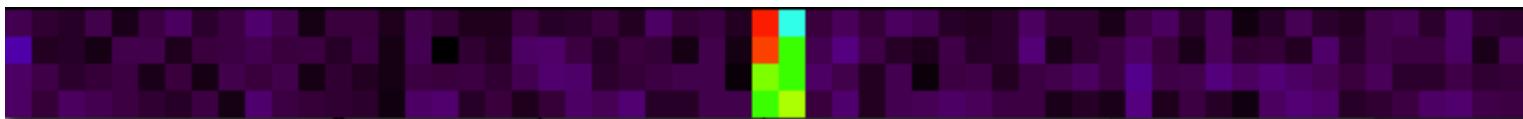
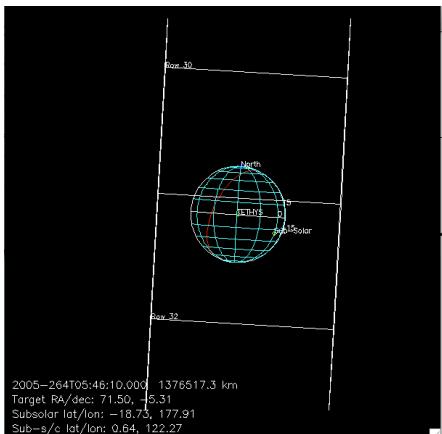
Phase= 50.0°



015TE_ICYLON008



015TE_238W058PH_ISS



015TE_ICYLON012_ISS

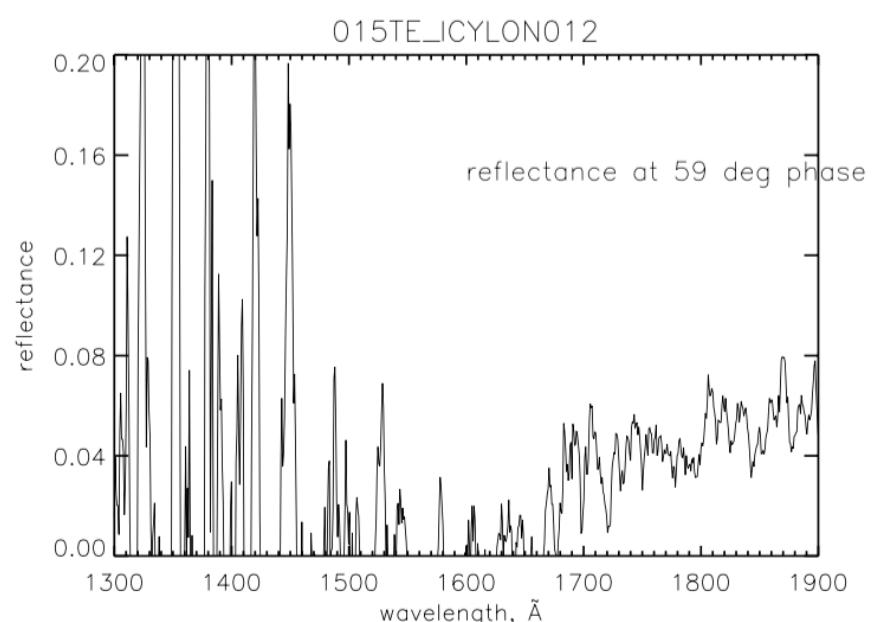
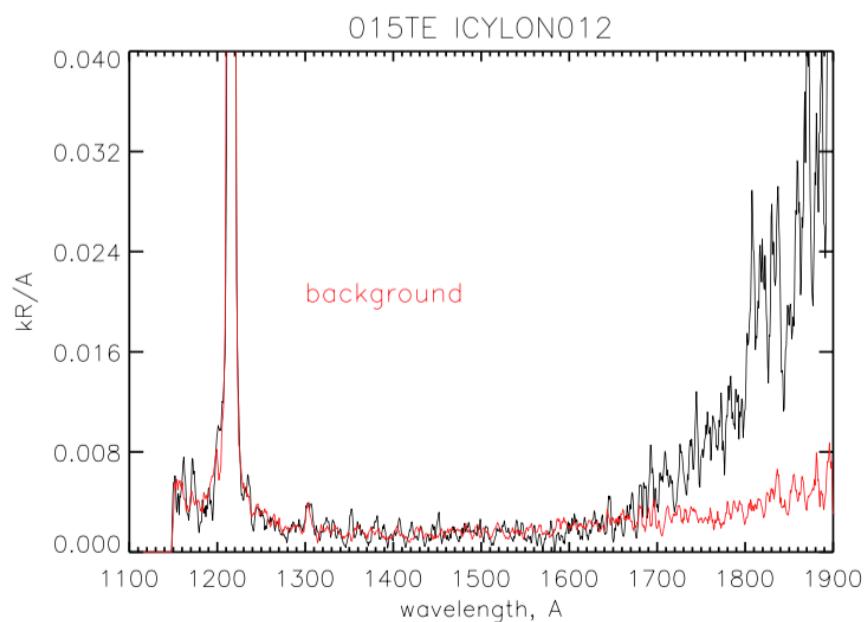
2005-264T05:40

Alt= 1,376,943 km

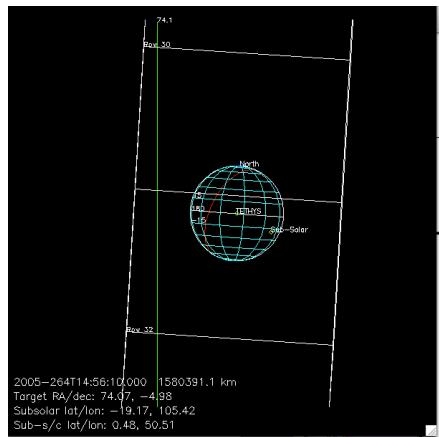
Longitude= 238°W

Latitude= 0.64°N

Phase= 58.7°



015TE_310W056PH_ISS



015TE_ICYLON013_ISS

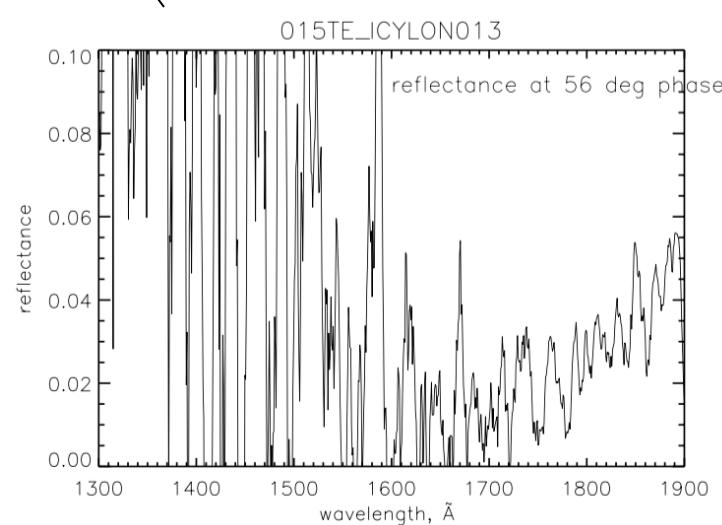
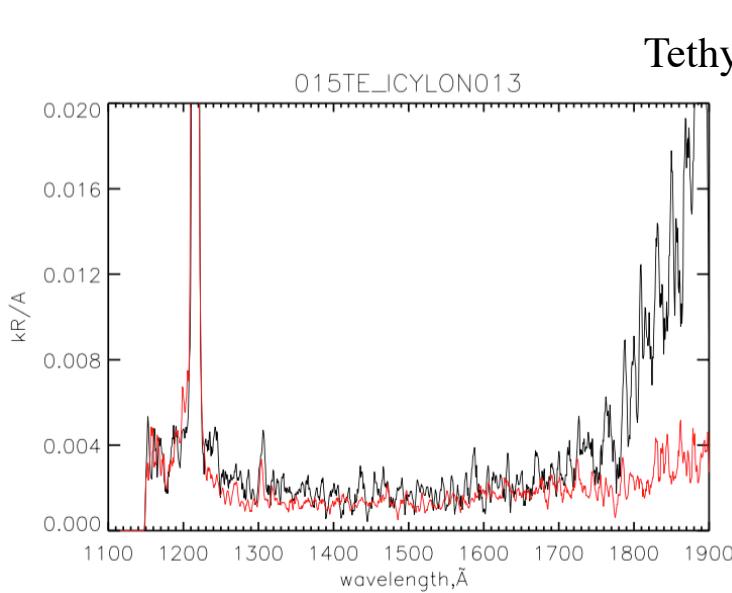
2005-264T14:57

Alt= 1,581,431 km

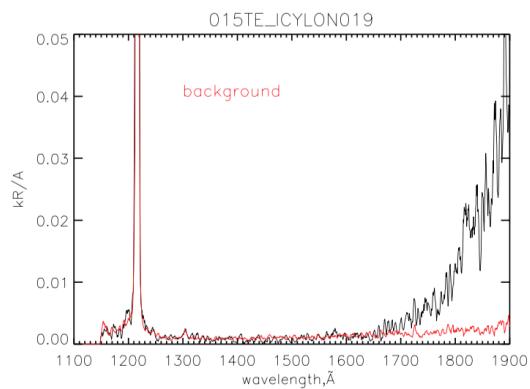
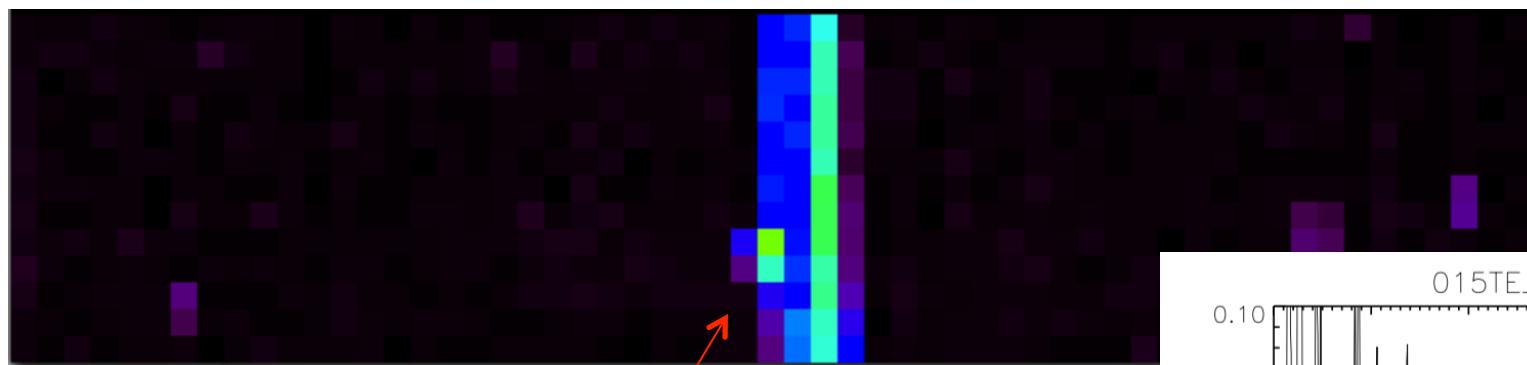
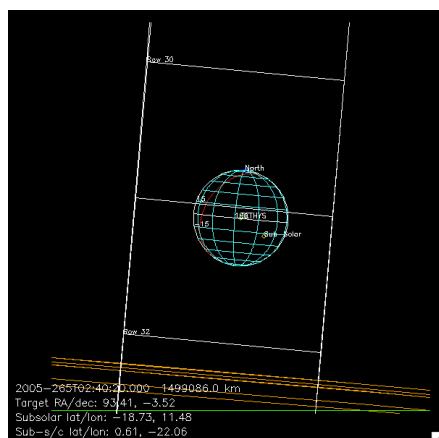
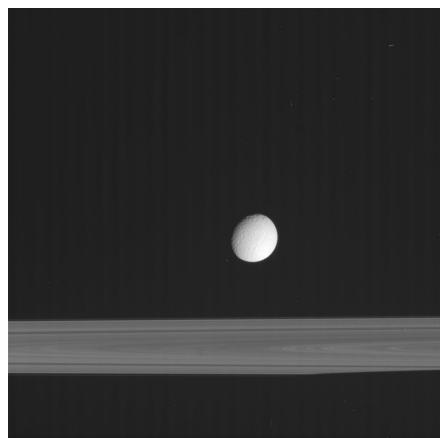
Longitude= 310°W

Latitude= 0.48°N

Phase= 56.2°



015TE_022W038PH_ISS



015TE_ICYLON019_ISS

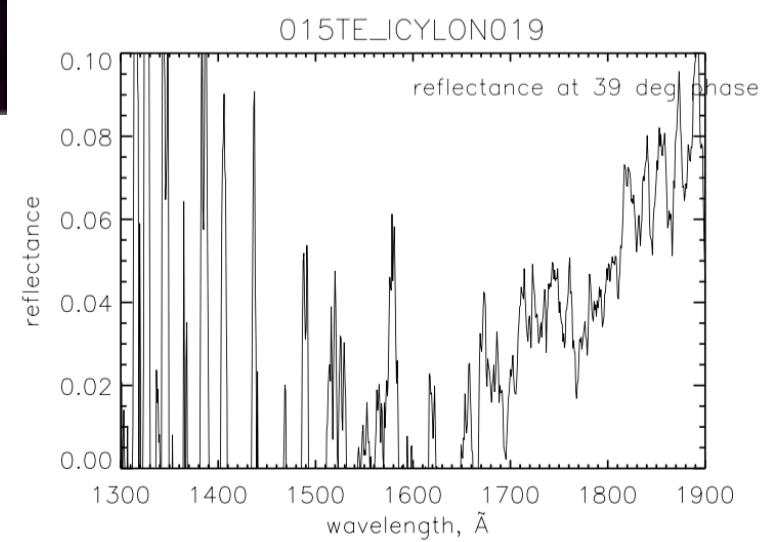
2005-265T02:41

Alt= 1,492,153 km

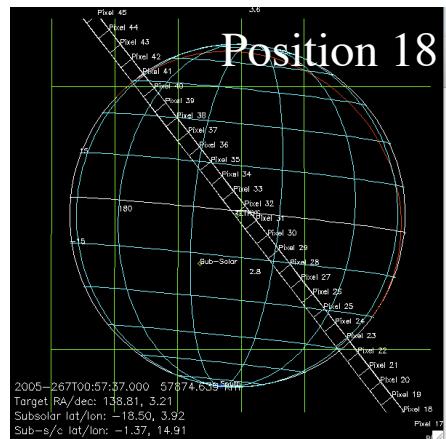
Longitude= 23°W

Latitude= 0.62°N

Phase= 38.9°



015TE_STEREO001_ISS



18 panel mosaic

015TE_ICYMAP006_ISS

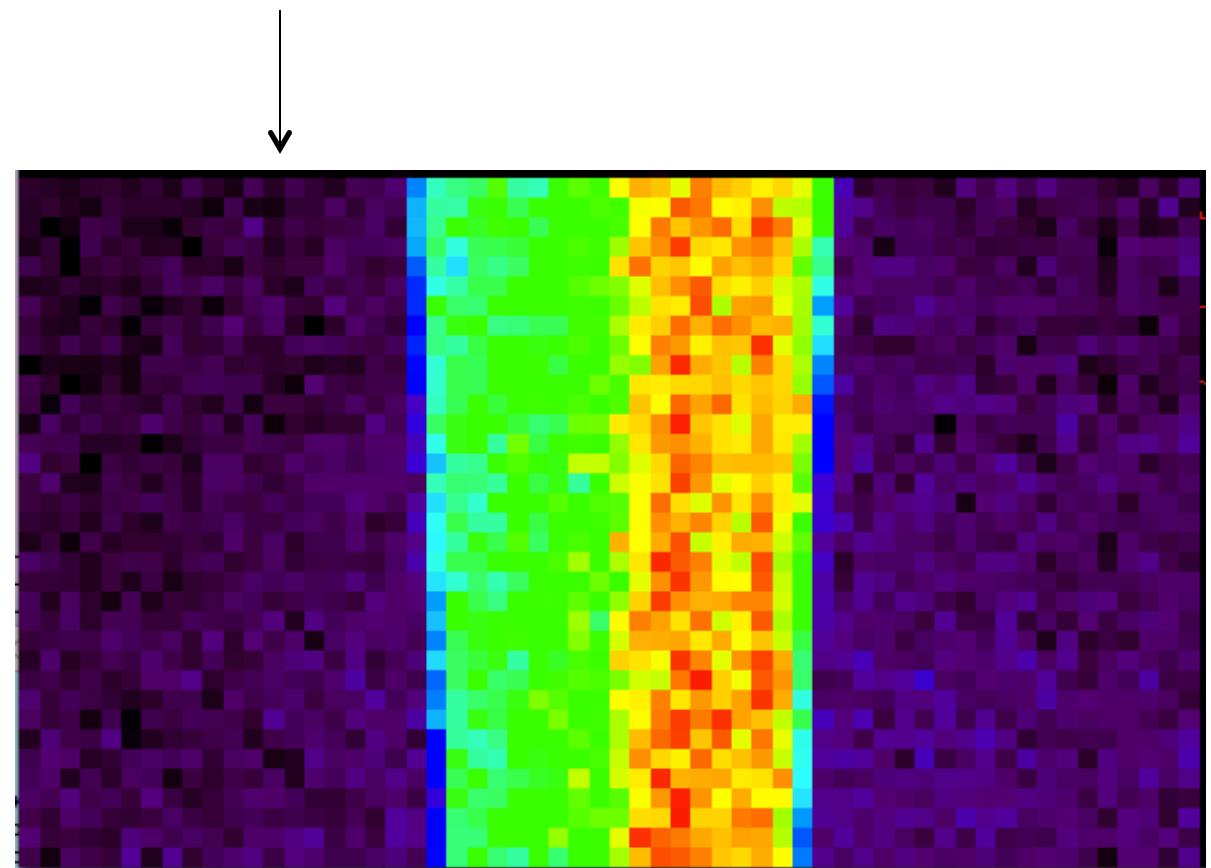
2005-267T00:18

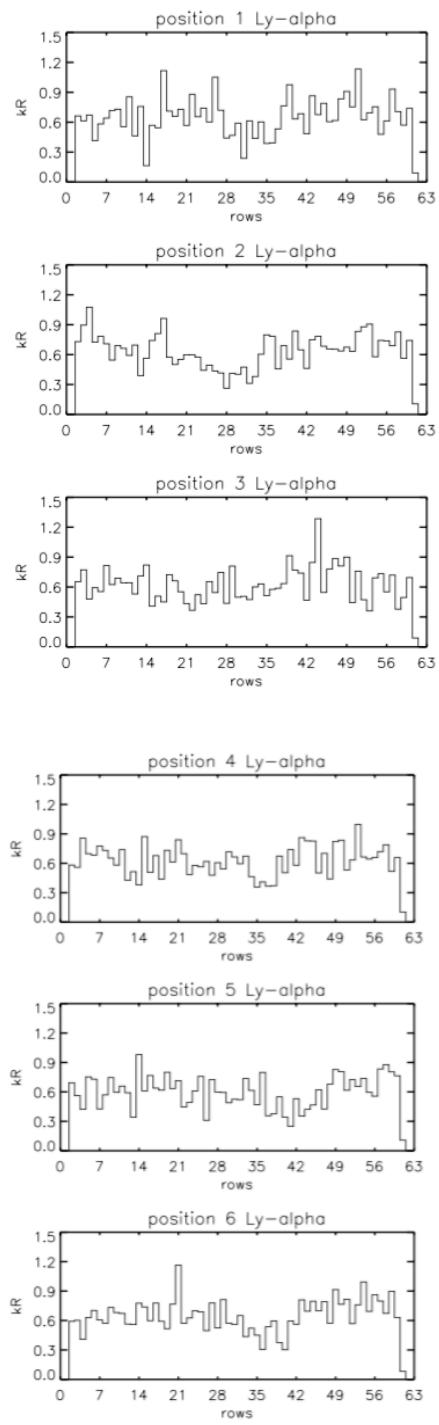
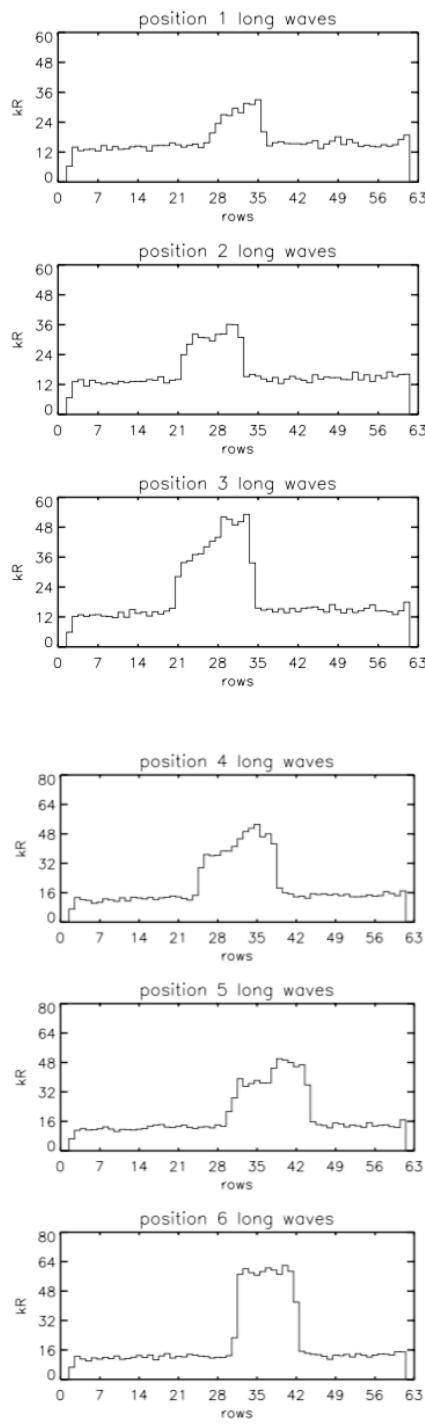
Alt= 80,302-55,331 km

Longitude= 340°W

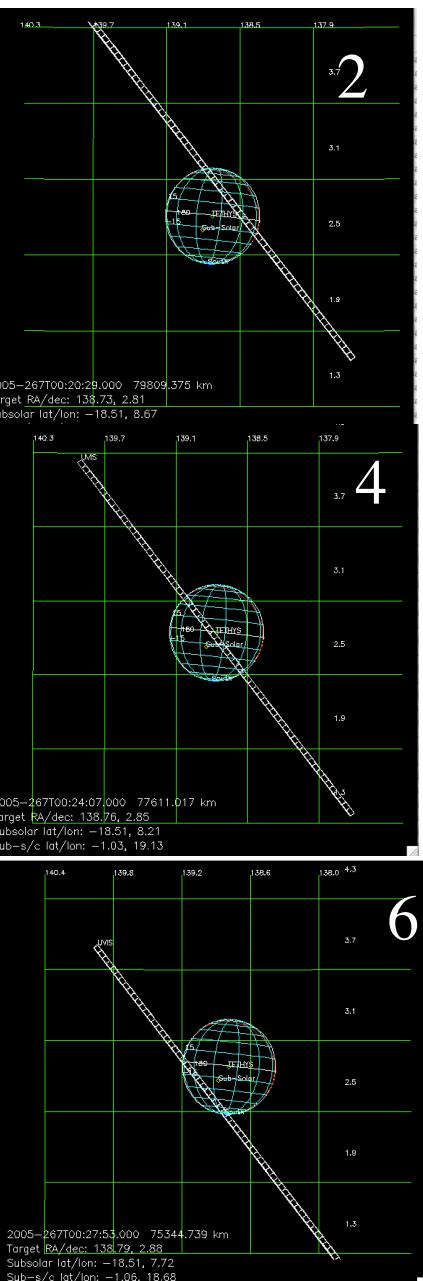
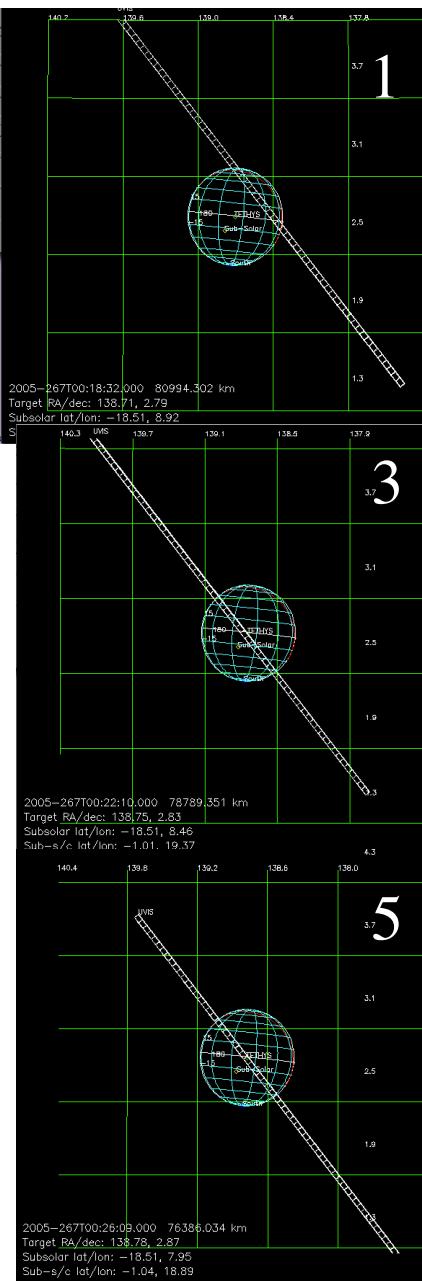
Phase= 21°

final position, with 35 30-sec integration periods
(following pages show other positions)

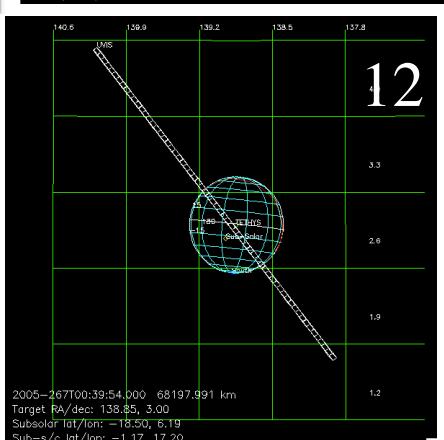
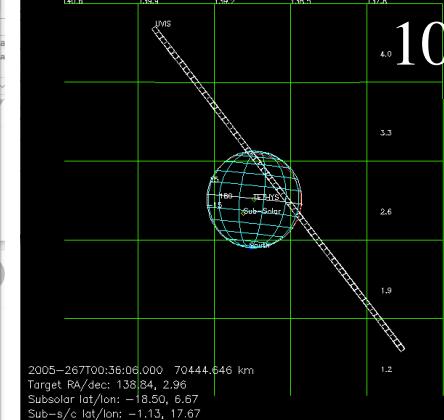
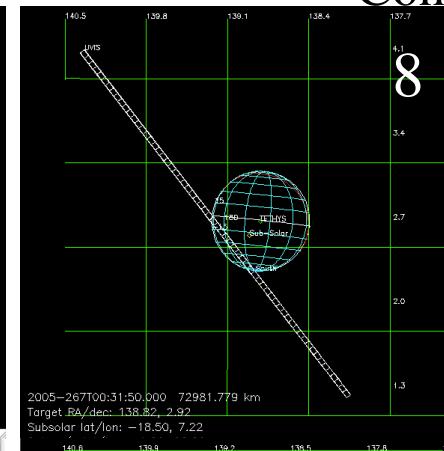
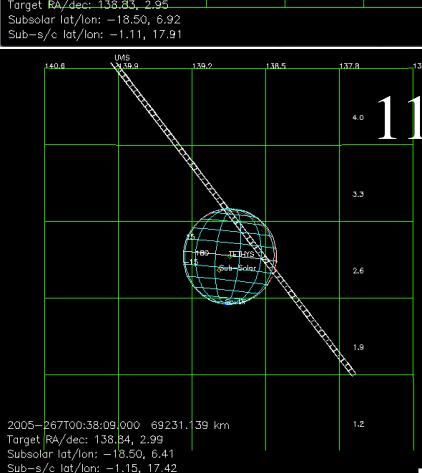
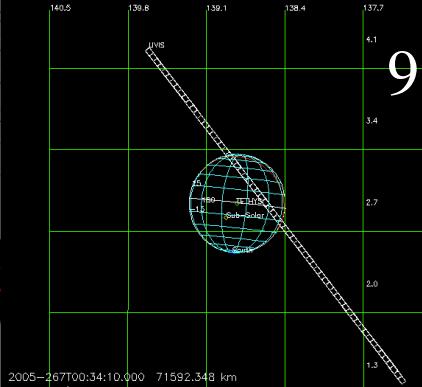
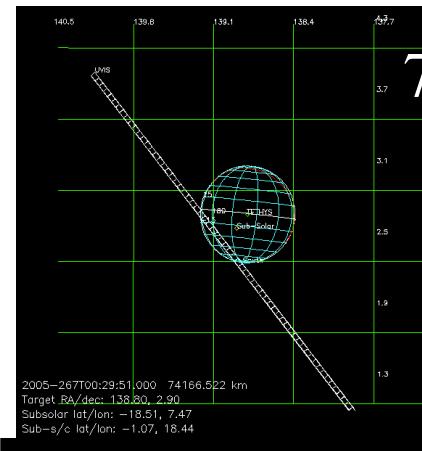
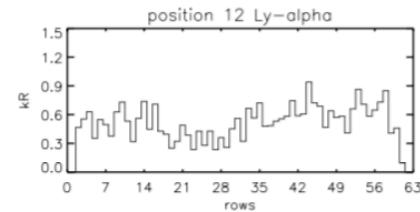
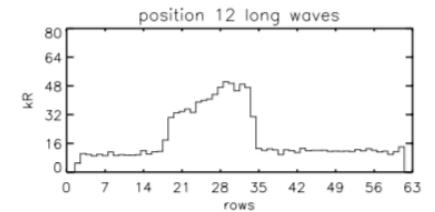
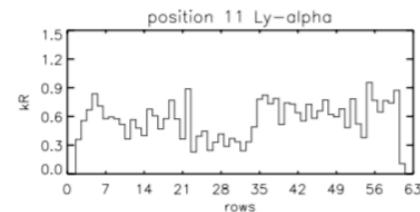
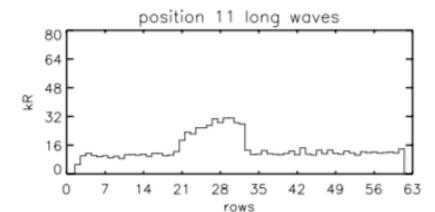
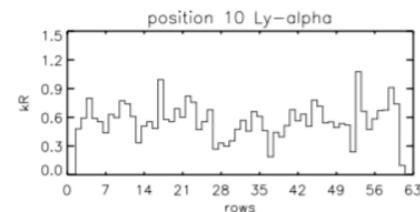
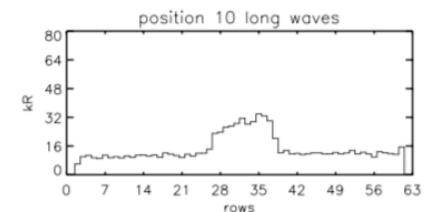
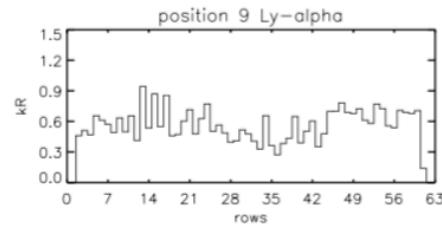
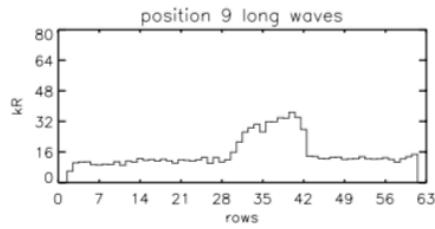
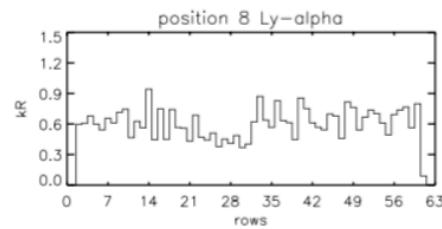
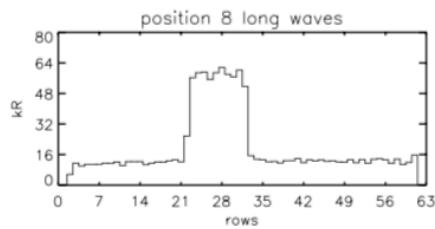
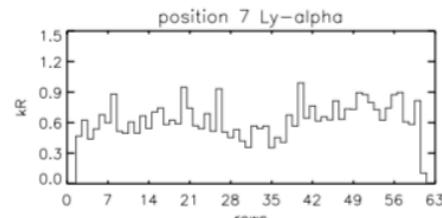
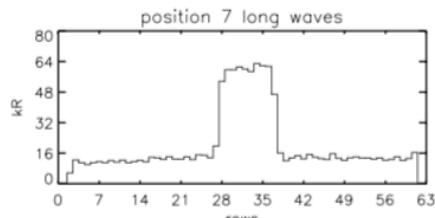


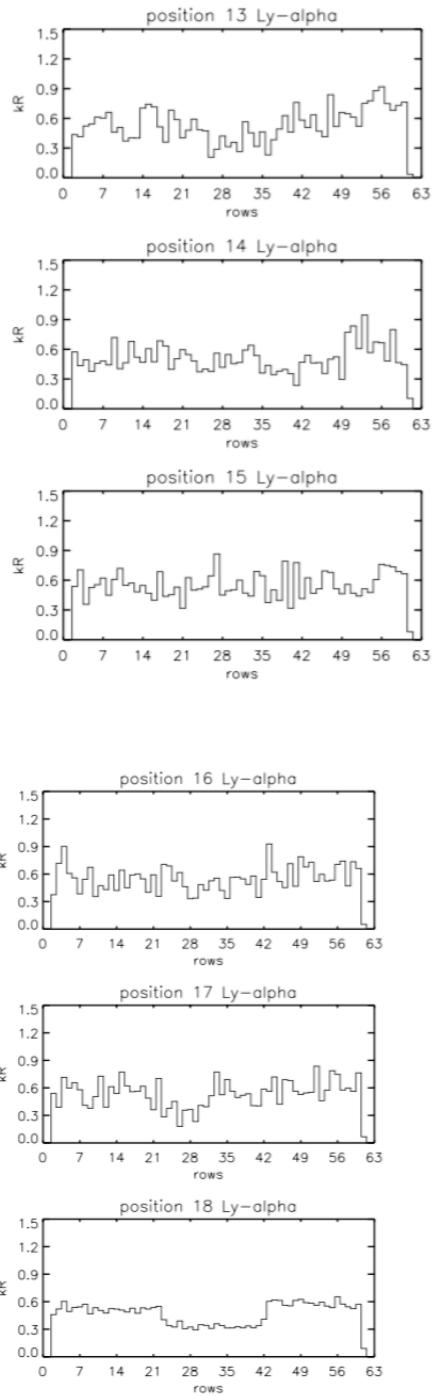
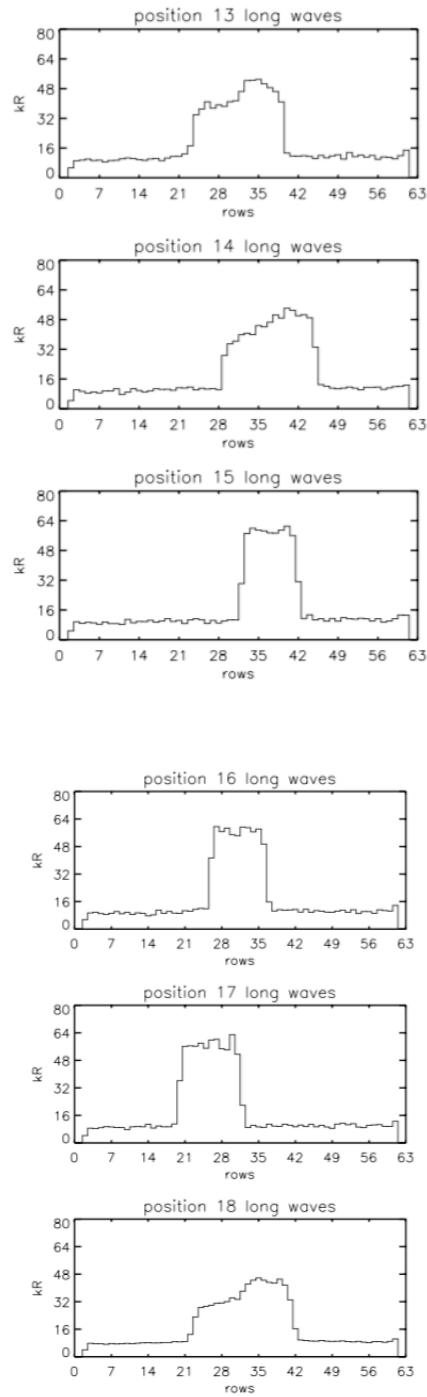


2 30-sec integ per in each position -> low SNR) 015TE_ICYMAP006_ISS Cont'd

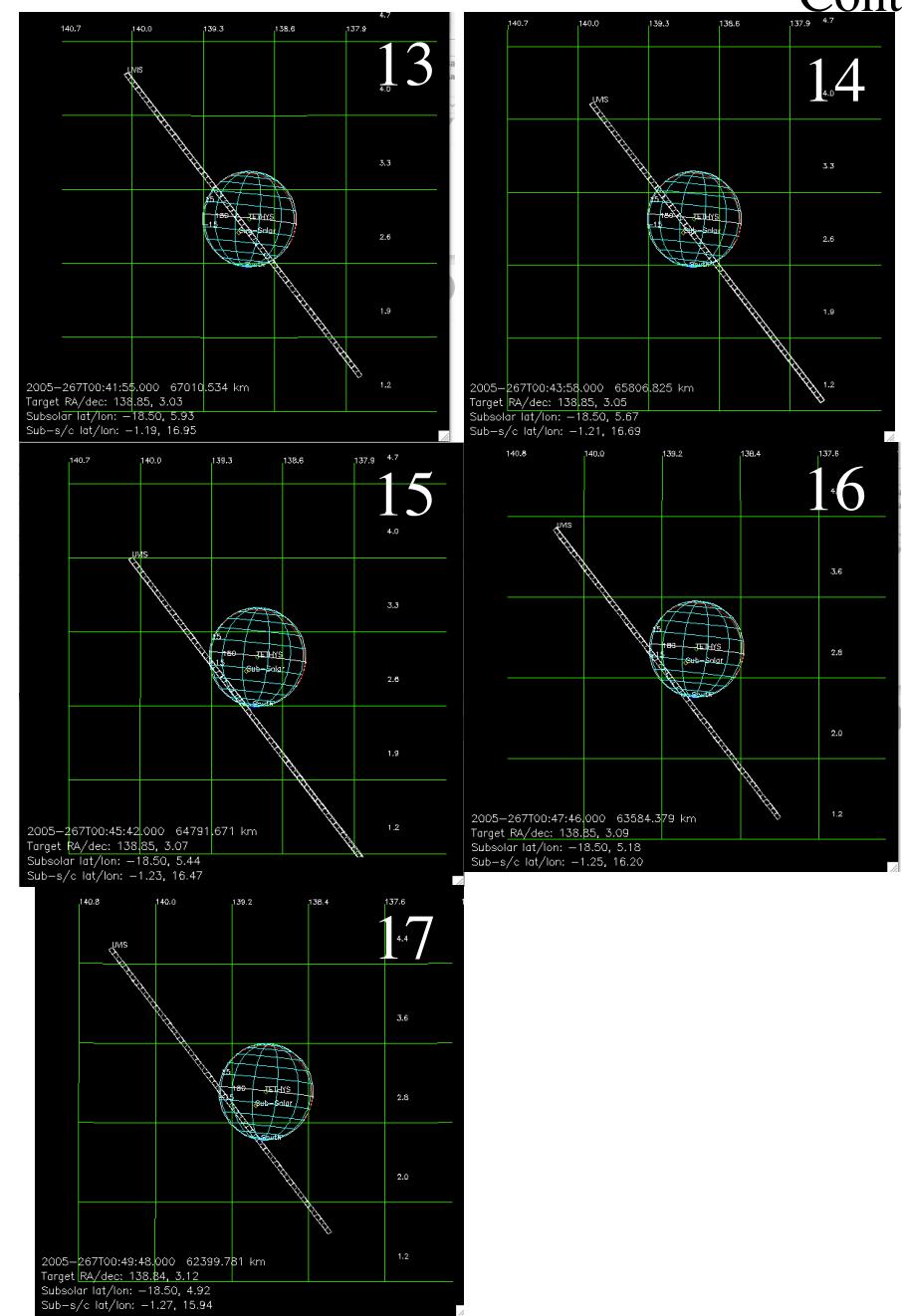


2 30-sec integ per in each position -> low SNR)
015TE_ICYMAP006_ISS
Cont'd

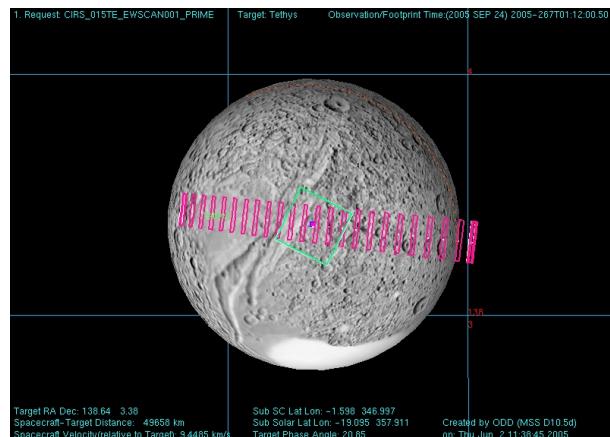




2 30-sec integ per in each 015TE_ICYMAP006_ISS
position -> low SNR)



015TE_EWSCAN001_CIRS



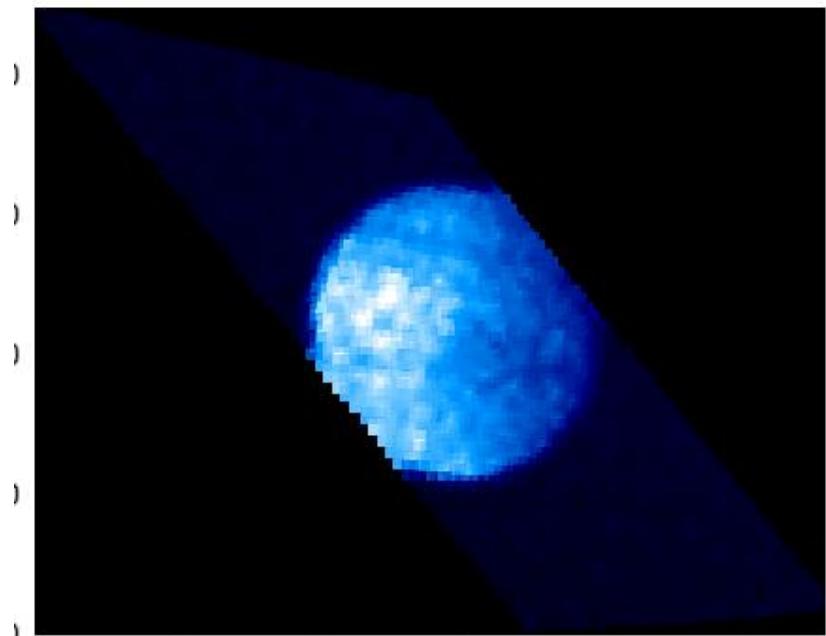
015TE_ICYLON019_CIRS

2005-267T01:12

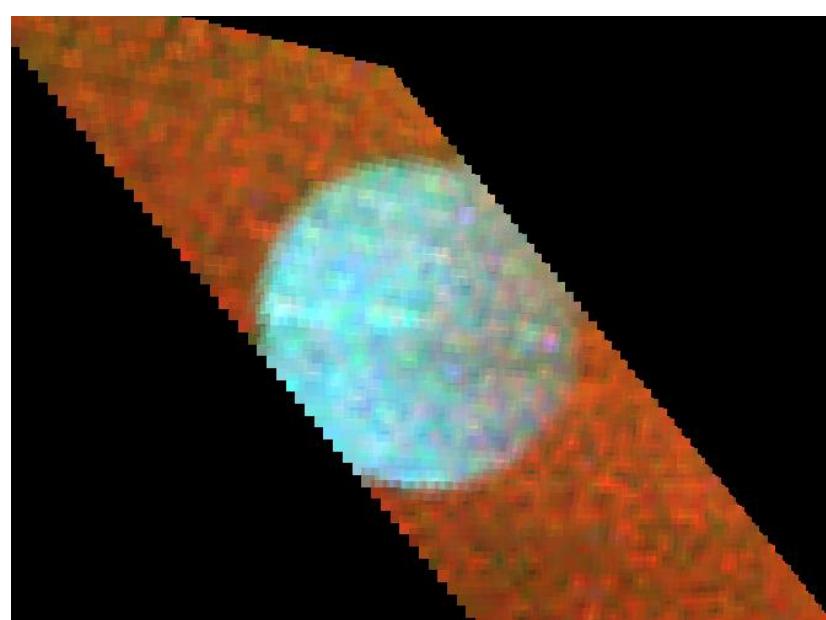
Alt= 49,658 km

Longitude= 347°W

Phase= 21°

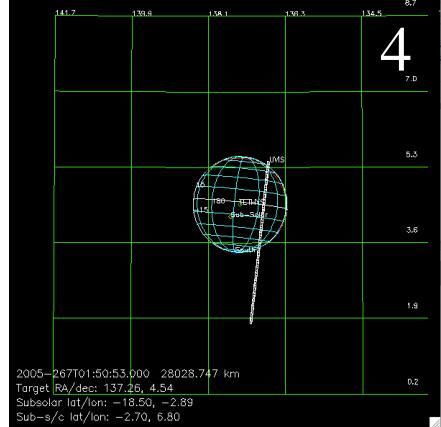
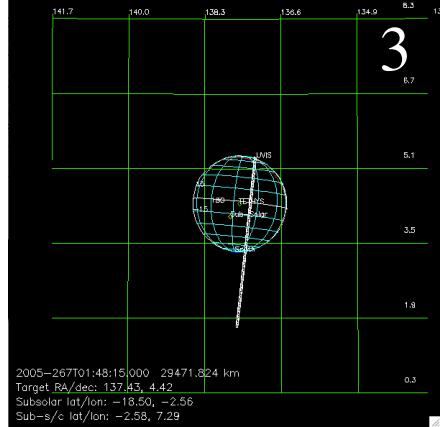
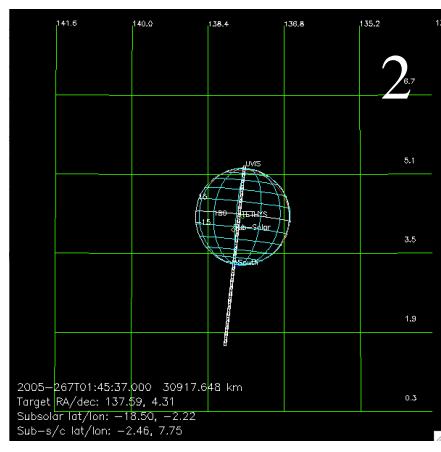
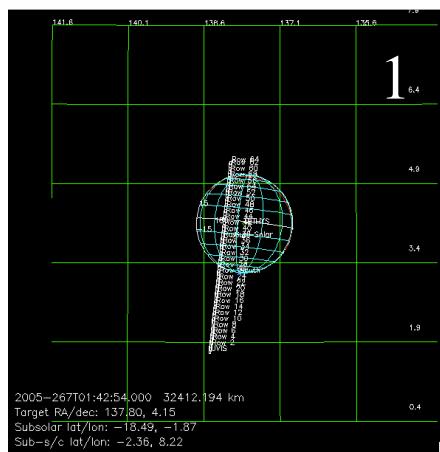


Long waves

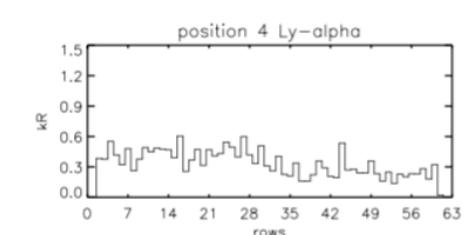
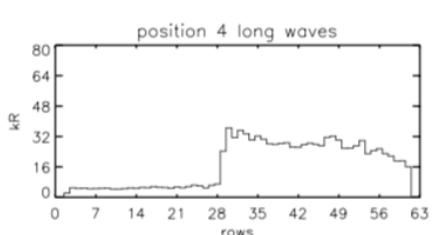
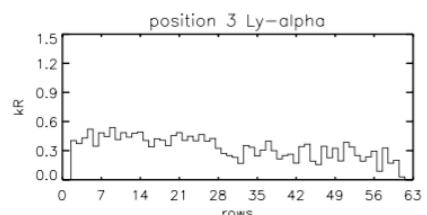
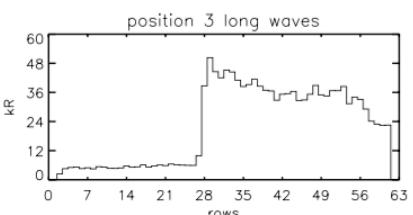
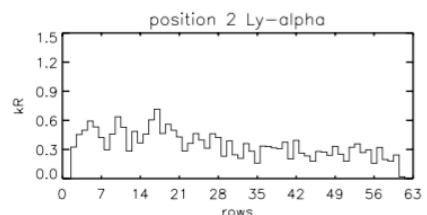
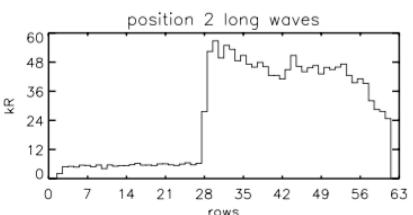
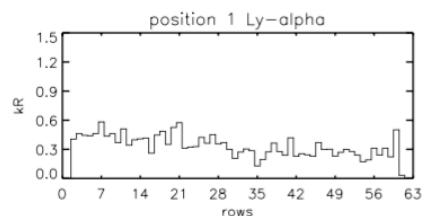
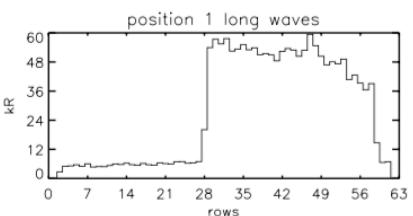


3-color

015TE_REGMAP001_ISS 10 panel mosaic

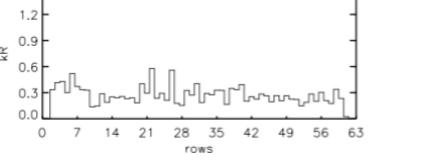
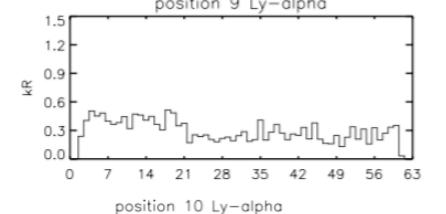
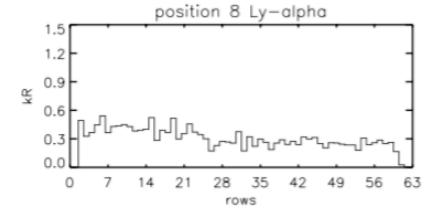
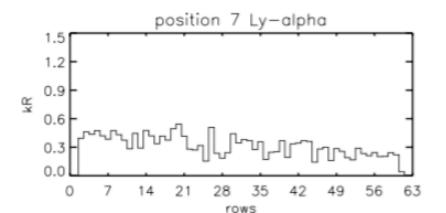
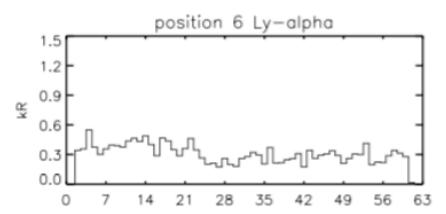
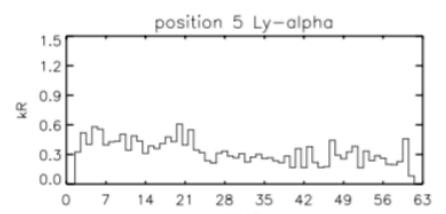
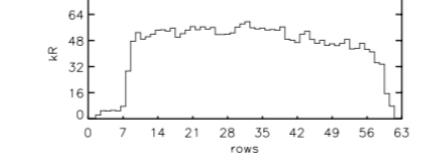
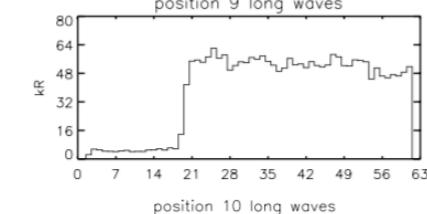
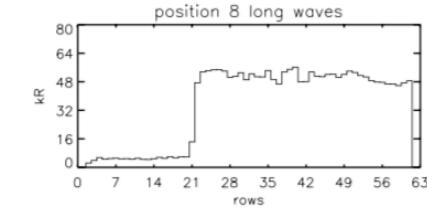
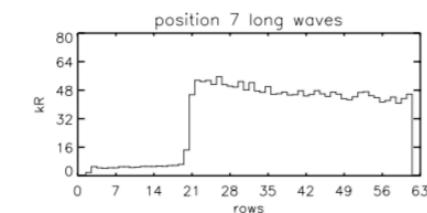
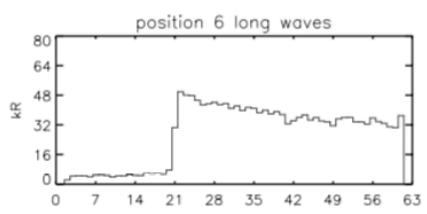
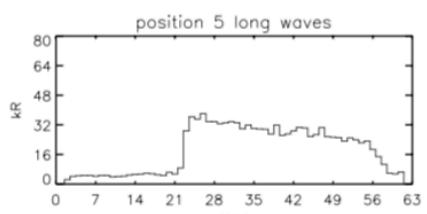
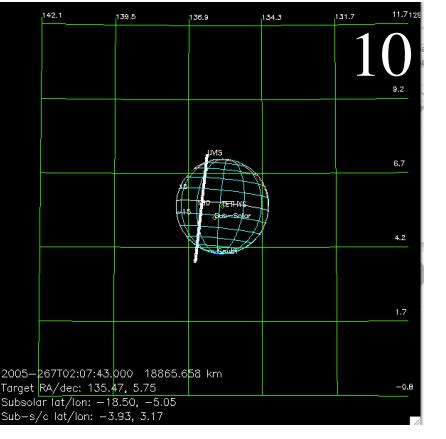
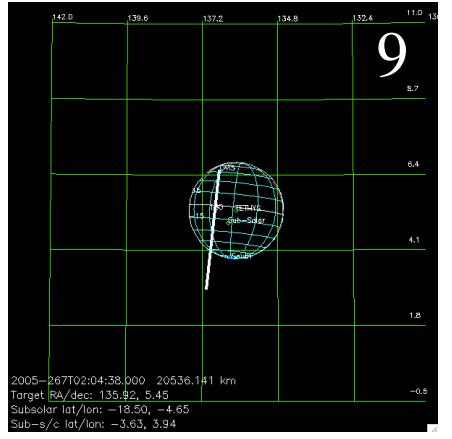
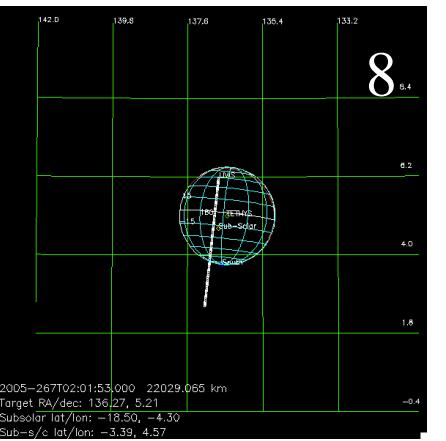
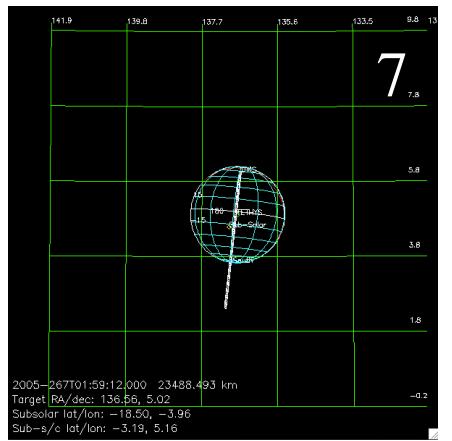
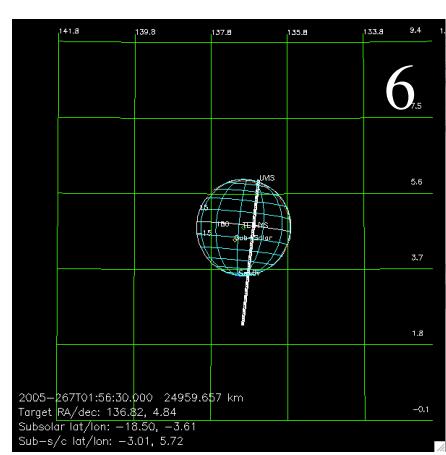
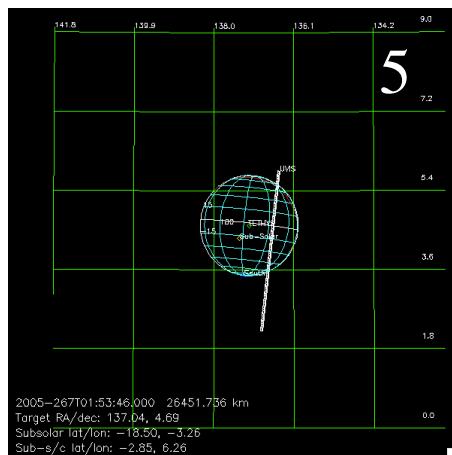


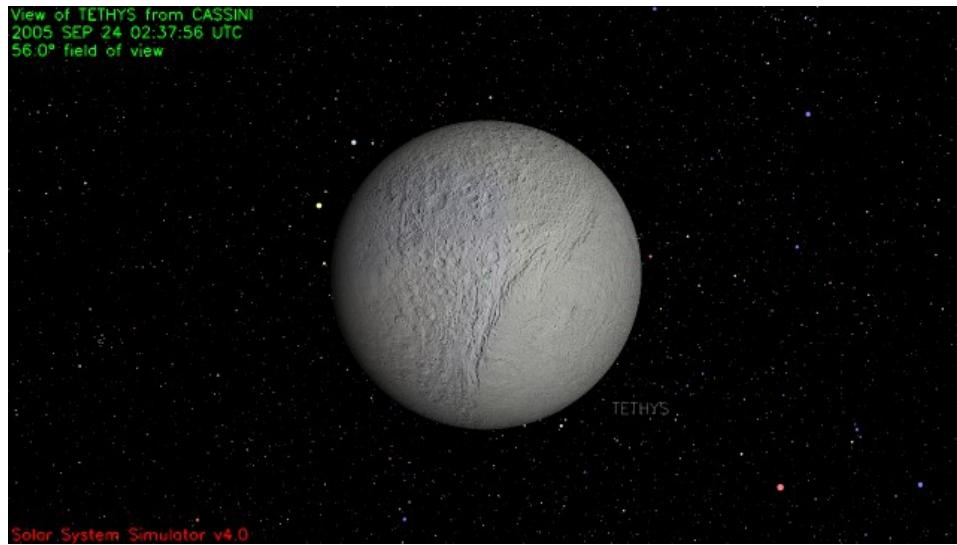
015TE_ICYMAP007_ISS
2005-267T01:43
Alt= 31,459 km -18,055 km
Longitude= 352°W
Phase= 19.7°



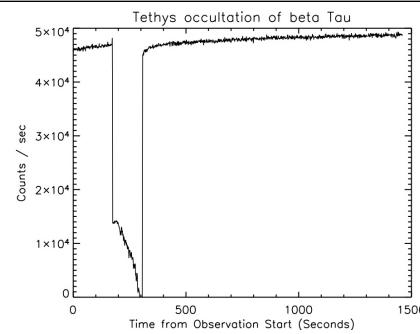
015TE_ICYMAP007_ISS

Cont'd





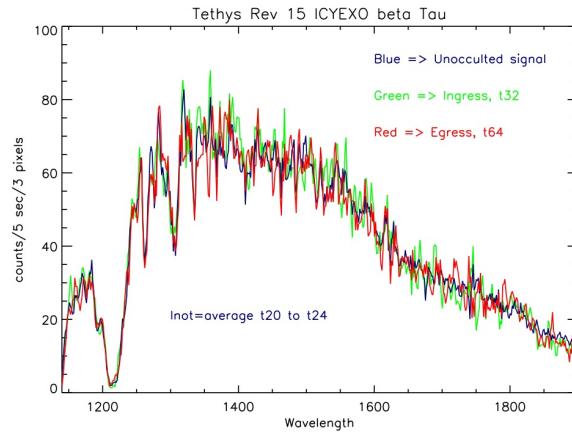
UVIS_015TE_ICYMAP007_ISS
2005-267T02:36
Ingress: 8.6 / 328.5
Egress: -23.1 / 159.3
Star occulted: Beta Tau



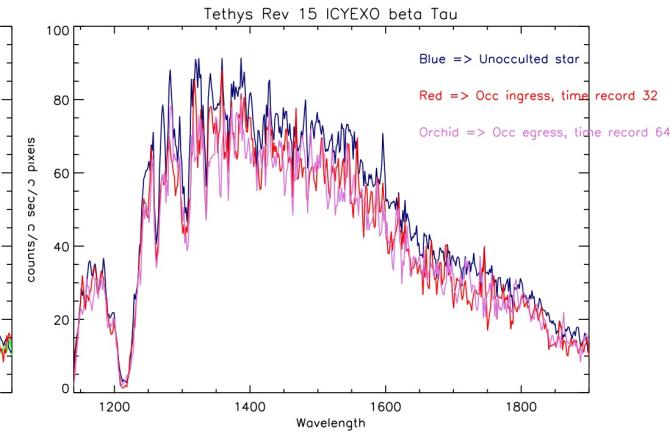
HSP profile

Note that although the star was occulted the HSP signal was still relatively high due to reflected light from the day side of Tethys

Spectra of I, I_0 (counts per integration period vs wavelength)

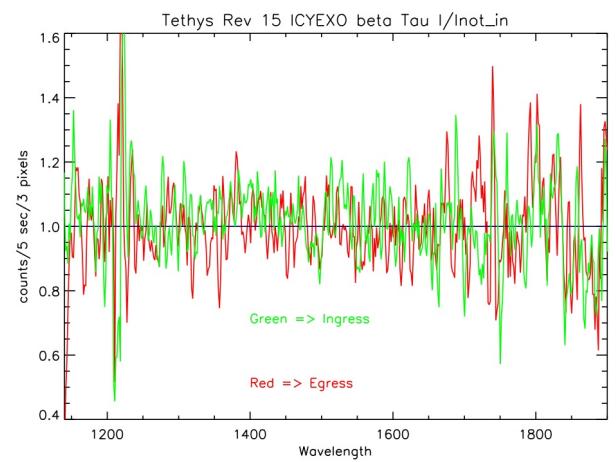


Star spectrum before occultation

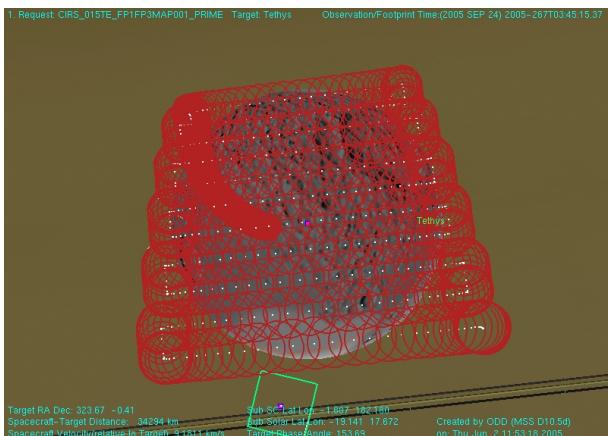
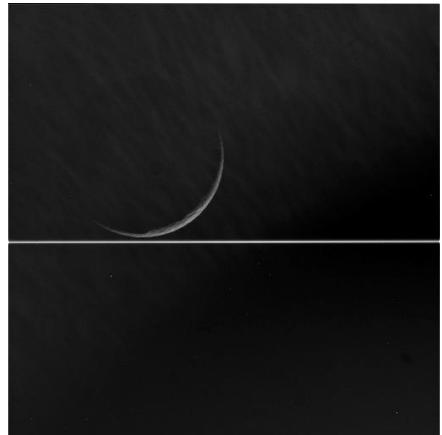


Star spectrum after occultation (star brightened ~20%)

Spectra of I/I_0 (counts per integration period vs wavelength)



015TE_FP1FP3MAP001_CIRS



015TE_ICYMAP008_CIRS

2005-267T03:45

Alt= 34294 km

Longitude= 182°W

Phase= 154°

In front of the night side of Saturn; fast CIRS scan, not useful to UVIS

016TE_094W101PH001_ISS



016TE_ICYLON002_ISS

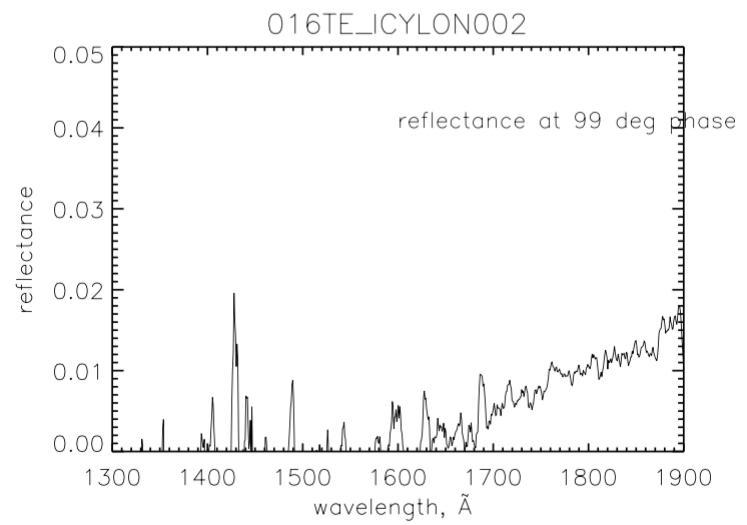
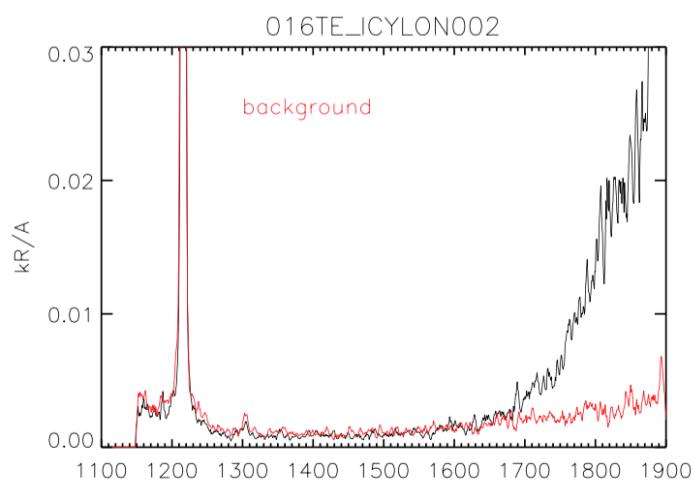
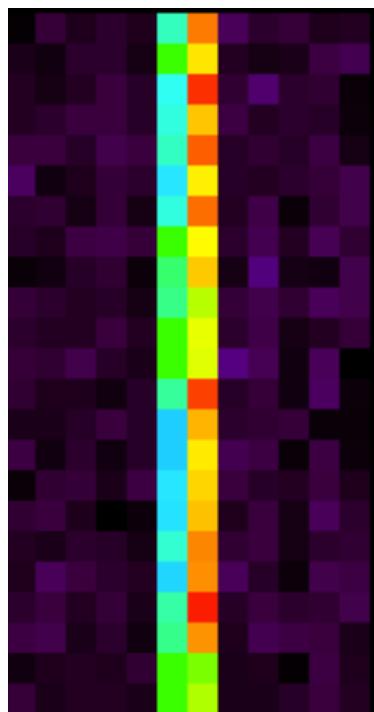
2005-285T21:36

Alt= 673,631 km

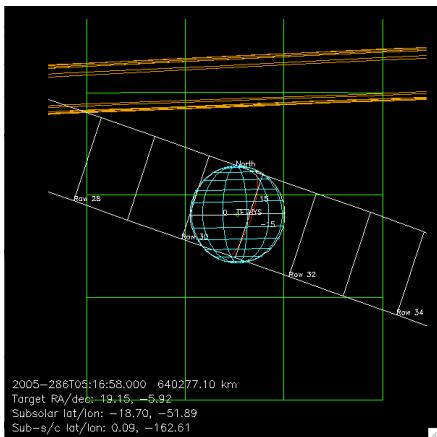
Longitude= 94.8°W

Latitude= 0.1°S

Phase= 99.5°



016TE_166W110PH001_ISS



016TE_ICYLON003_ISS

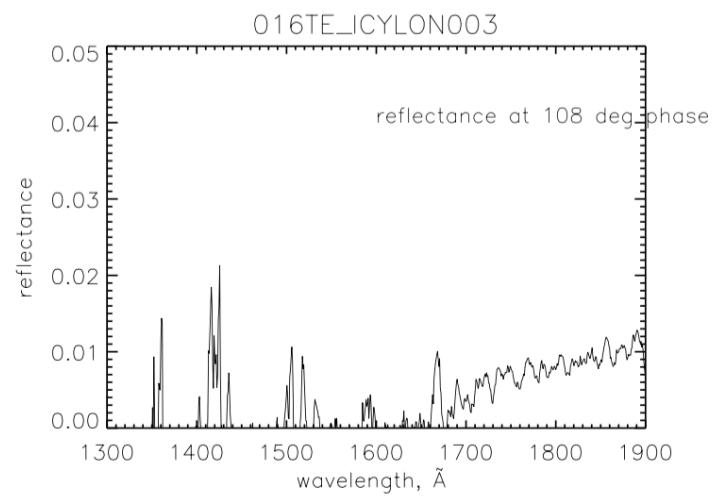
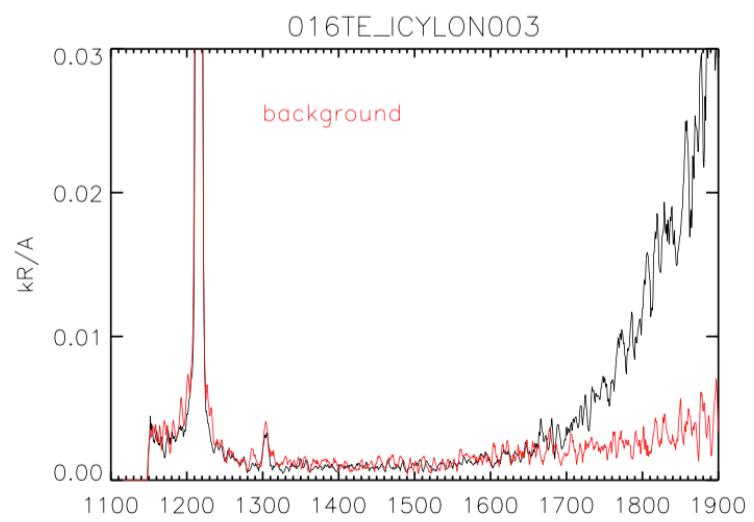
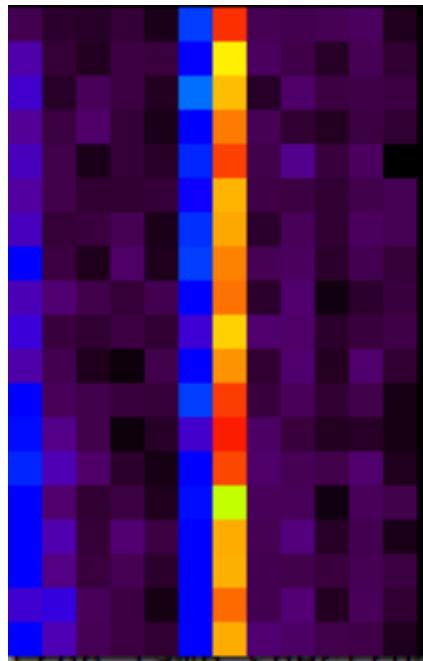
2005-286T05:17

Alt= 643,040 km

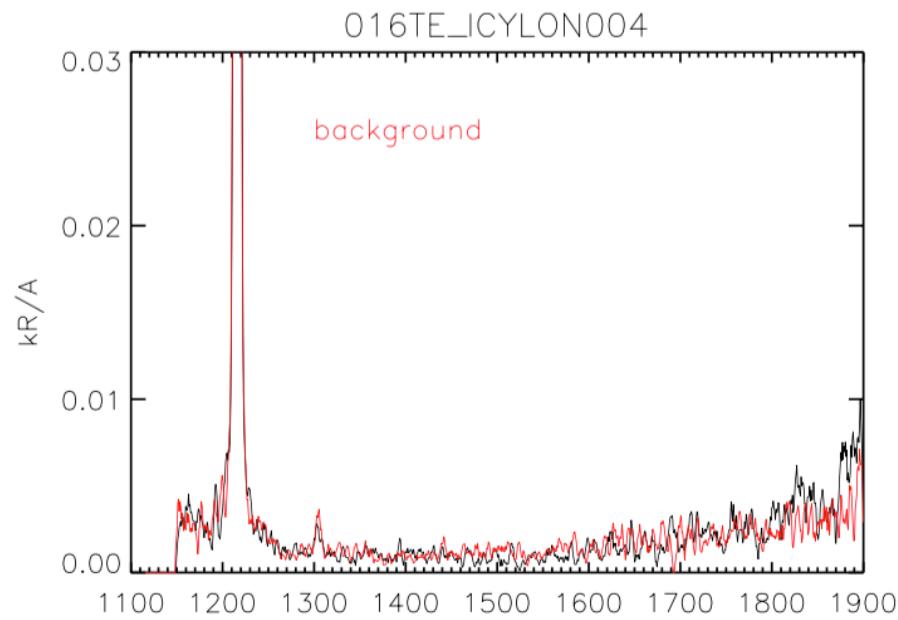
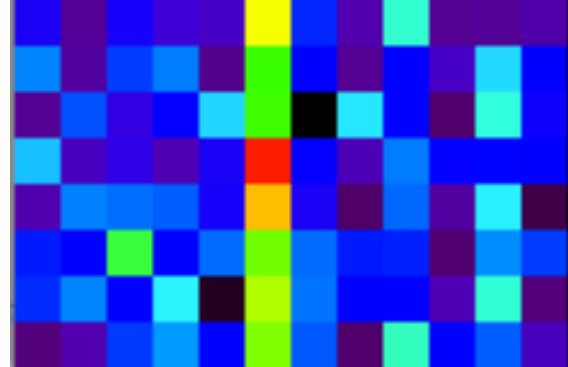
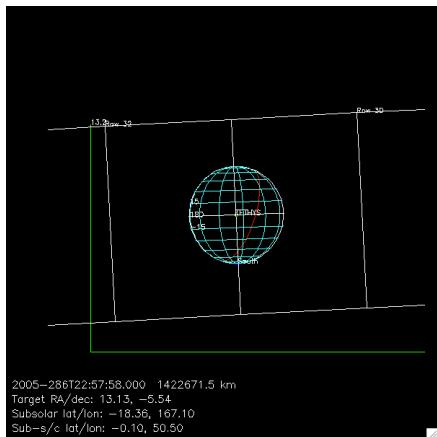
Longitude= 165°W

Latitude= 0.1°N

Phase= 108°



016TE_310W114PH001_ISS



Low SNR

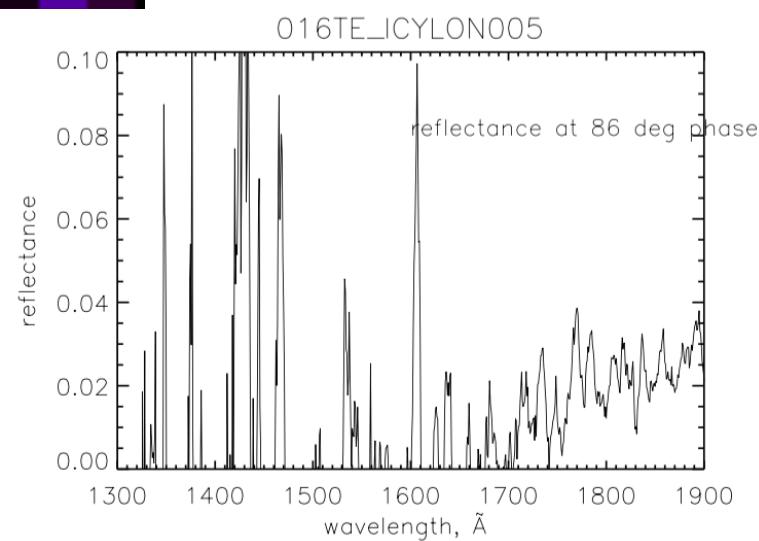
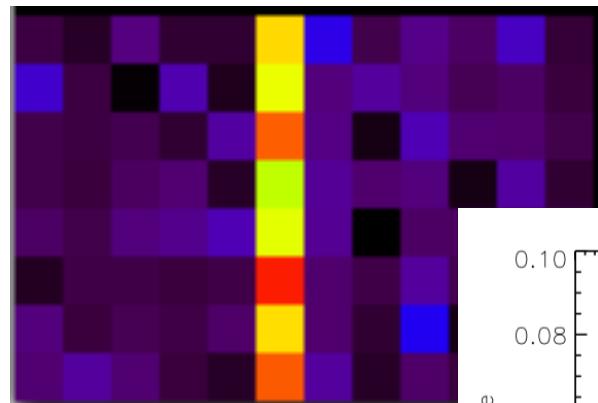
016TE_ICYTHON004_ISS

2005-286T22:58

Alt= 1,427,698 km
Longitude= 310°W

Latitude=0.1°S
Phase= 113.5°

016TE_094W087PH001_ISS

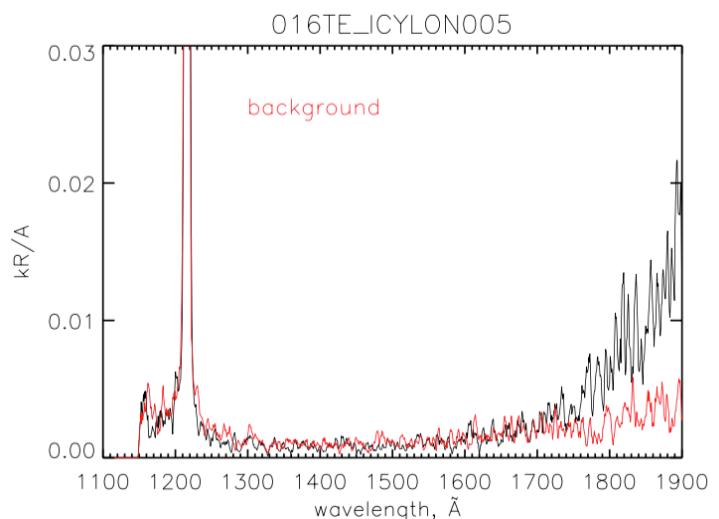


016TE_ICYTHON005_ISS

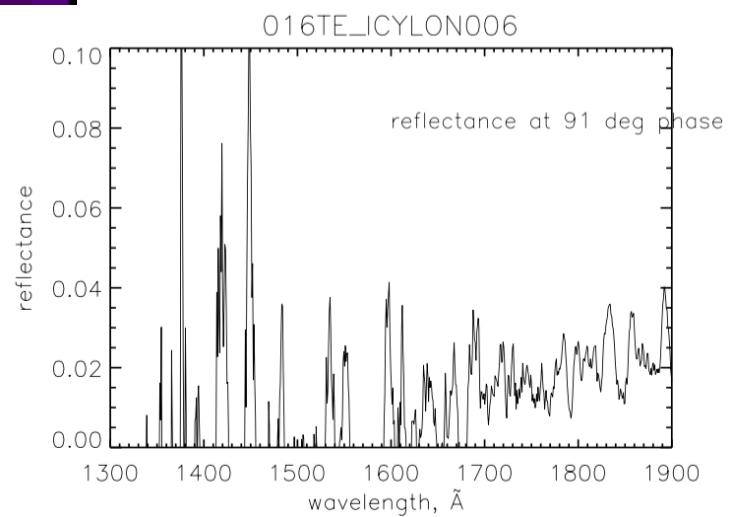
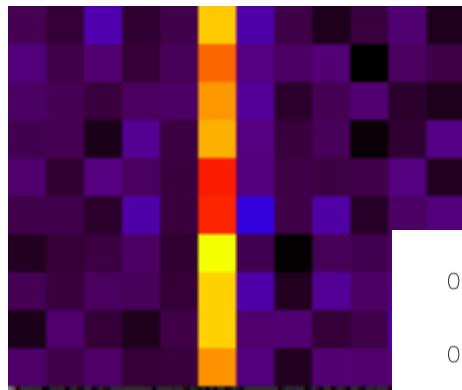
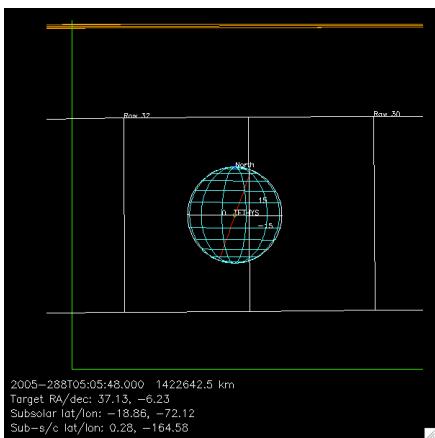
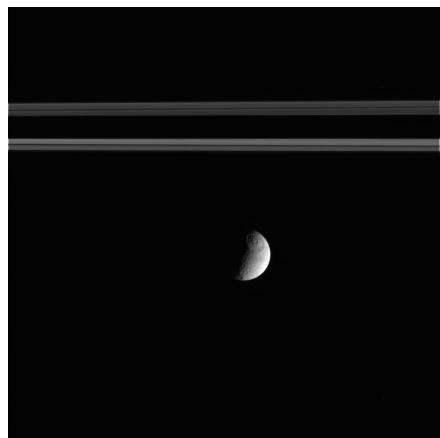
2005-287T20:48

Alt= 1,564,793 km
Longitude= 93.8°W

Latitude= 0.2°N
Phase= 86.3°



016TE_166W092PH001_ISS



016TE_ICYTHON006_ISS

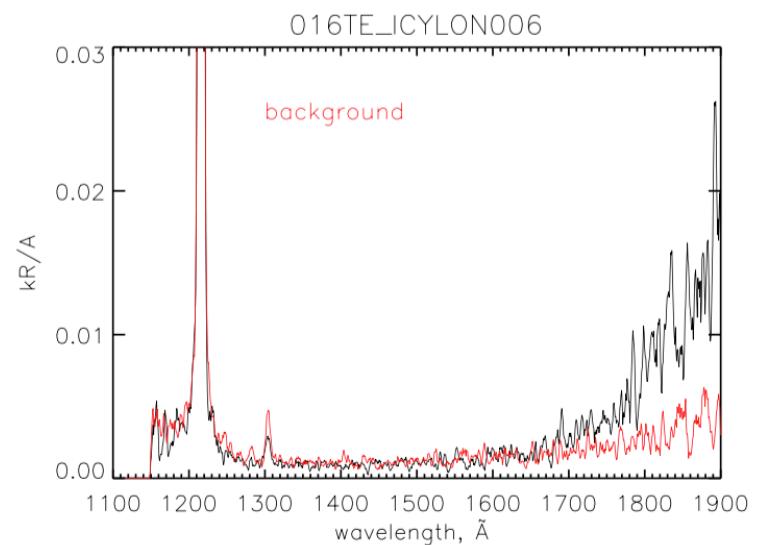
2005-288T05:06

Alt= 1,422,190 km

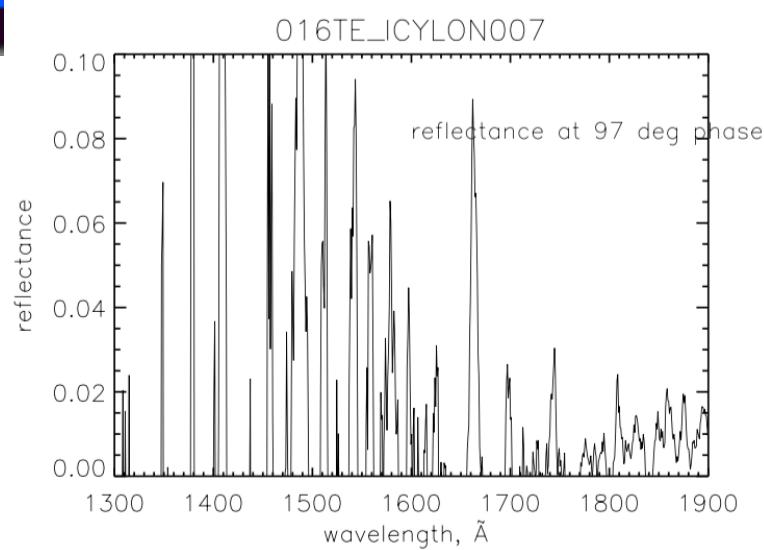
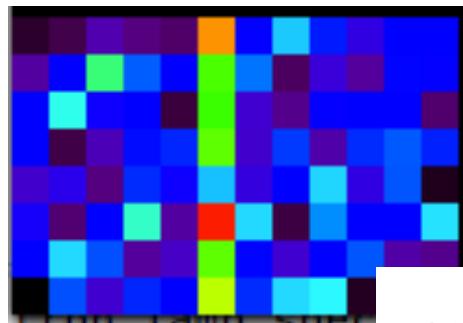
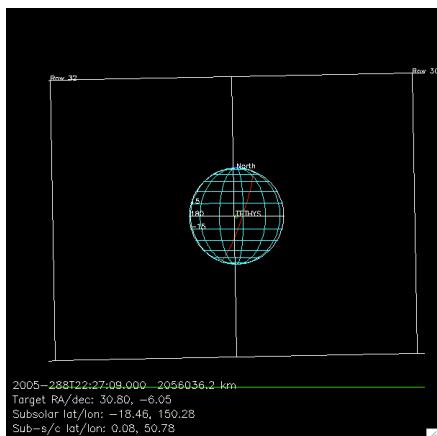
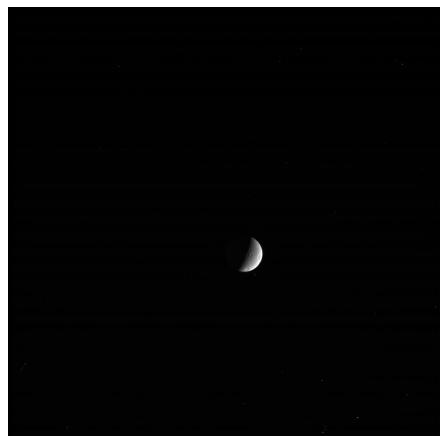
Longitude= 166°W

Latitude= 0.28°N

Phase= 91.6°



016TE_310W098PH001_ISS



016TE_ICYTHON007_ISS

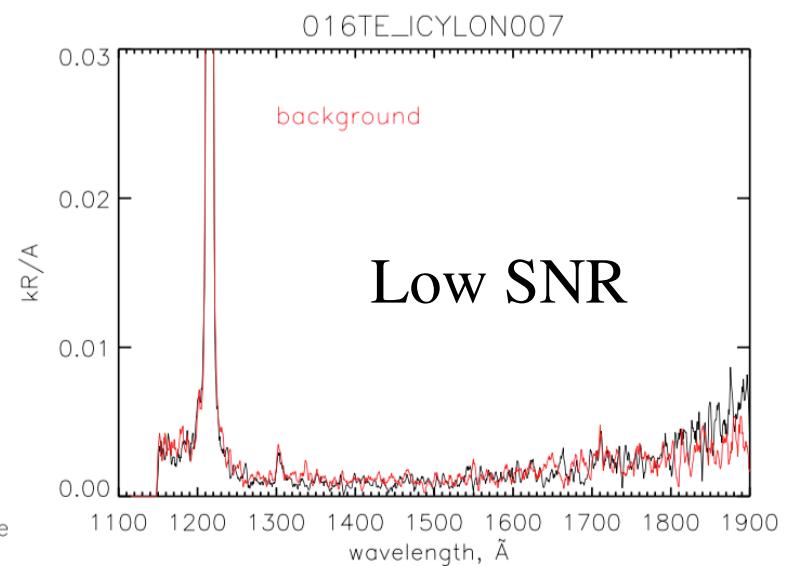
2005-288T22:28

Alt= 2,060,367 km

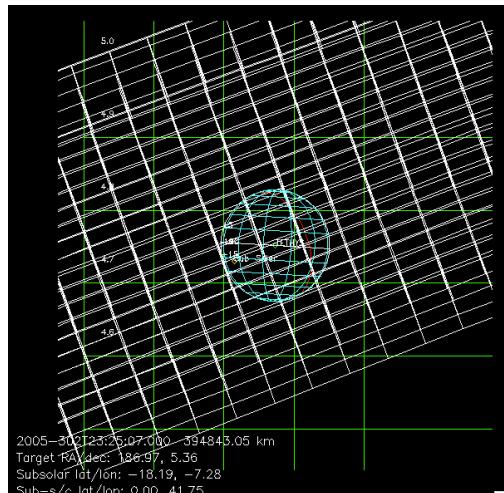
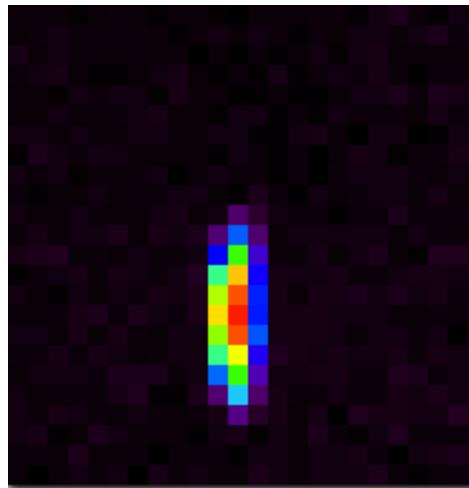
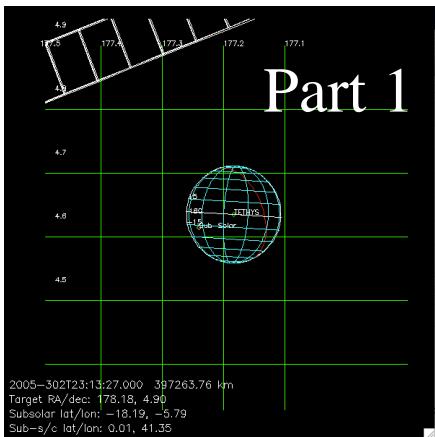
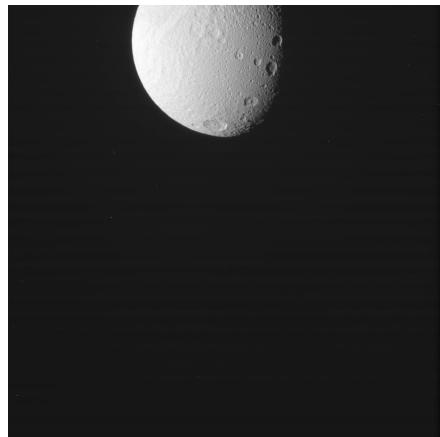
Longitude= 310°W

Latitude= 0.1°N

Phase= 97.2°



017TE_FP1FAZ0P5366_CIRS



017TE_ICYLON001_CIRS

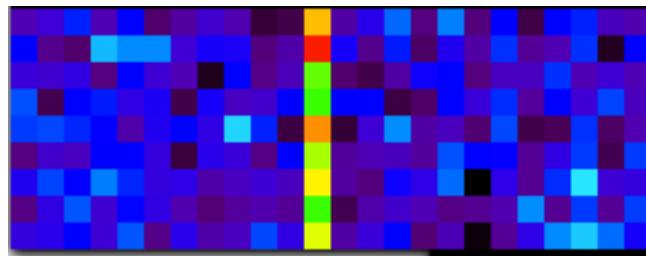
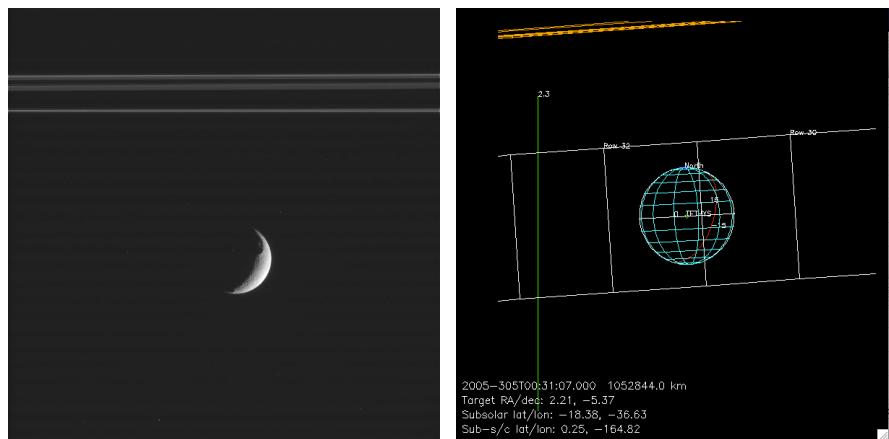
2005-302T23:00

Alt= 390,078 km

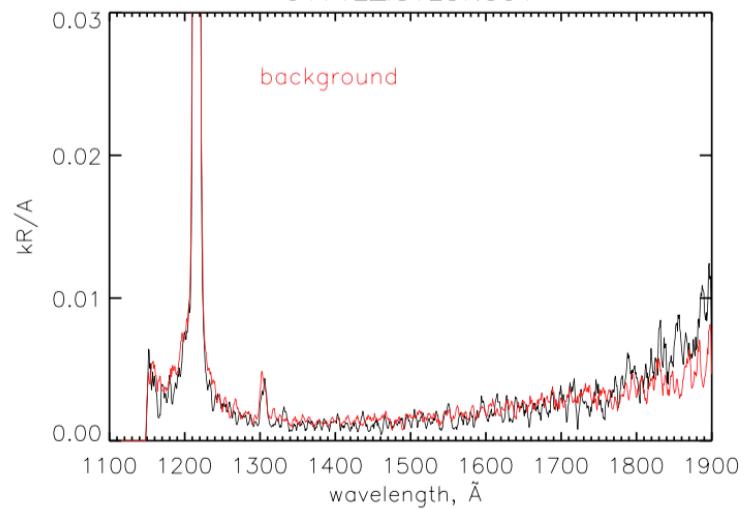
Longitude= 317.4°W

Phase= 56.4°

017TE_166W125PH001_ISS

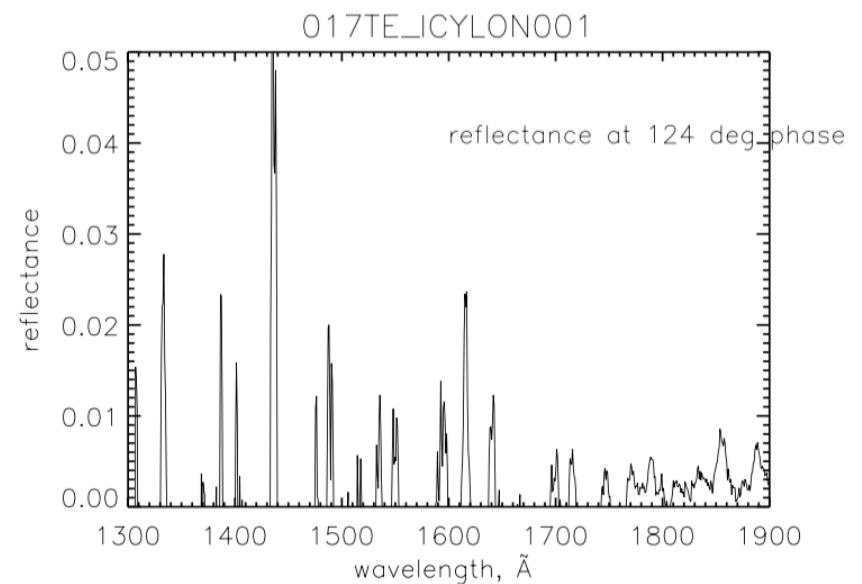


017TE_ICYLON001

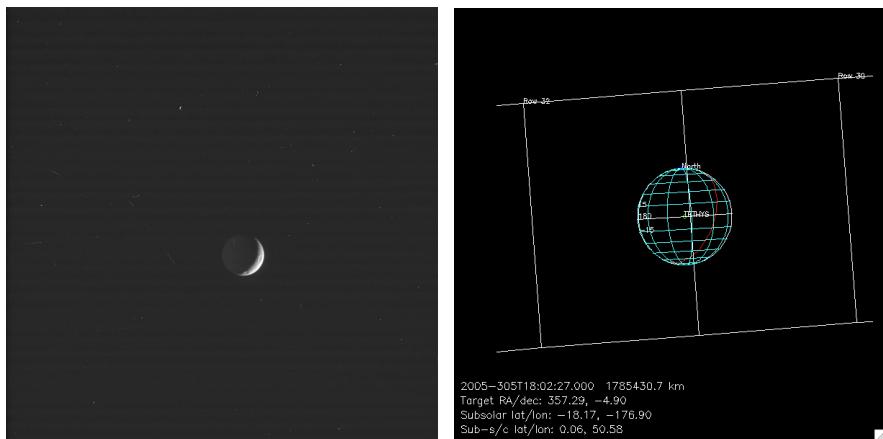


017TE_ICYLON001_ISS

2005-305T00:25
Alt= 1,053,221 km
Longitude= 166°W
Latitude= 0.25°N
Phase= 124.7°



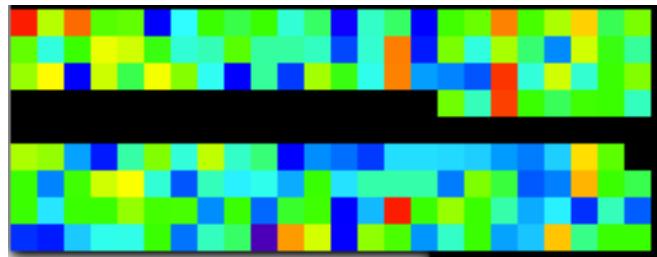
017TE_ICYTHON002_ISS
2005-305T18:03
Alt= 1,787,221 km
Longitude= 310°W
Latitude= 0.62°N
Phase= 128°



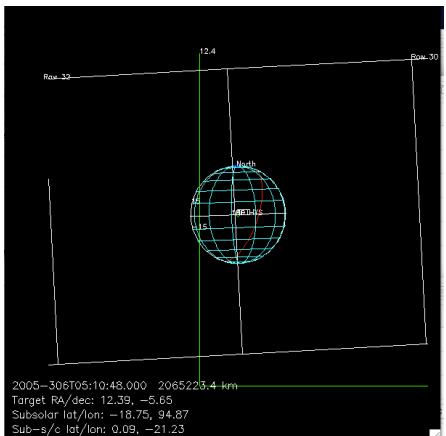
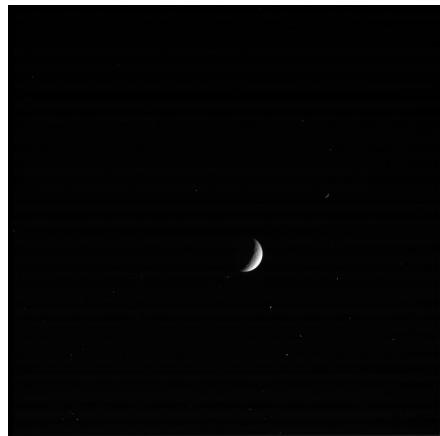
Low SNR

Part 2

Part 1



017TE_022W115PH001_ISS



017TE_ICYTHON003_ISS

2005-306T05:05

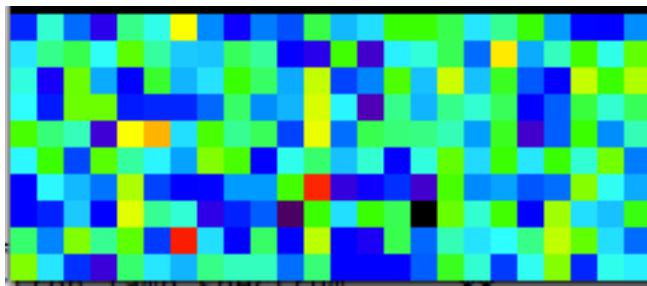
Alt= 2,064,701 km

Longitude= 22°W

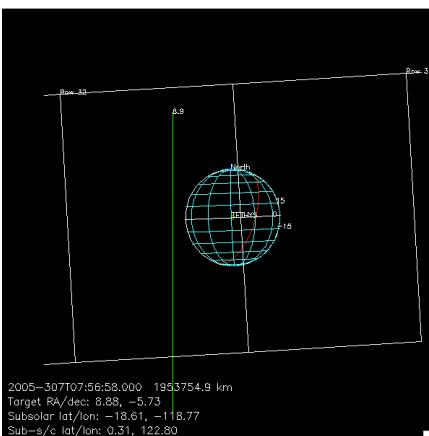
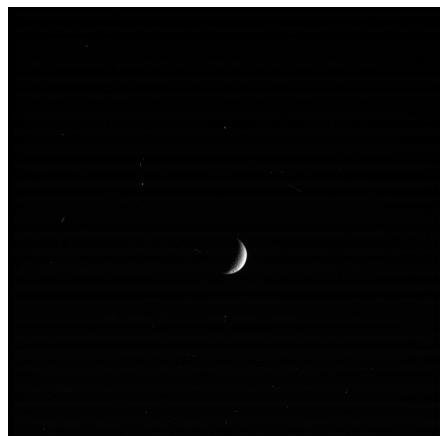
Latitude= 0.1°N

Phase= 115°

Low SNR



017TE_238W119PH001_ISS



017TE_ICYTHON004_ISS

2005-307T07:50

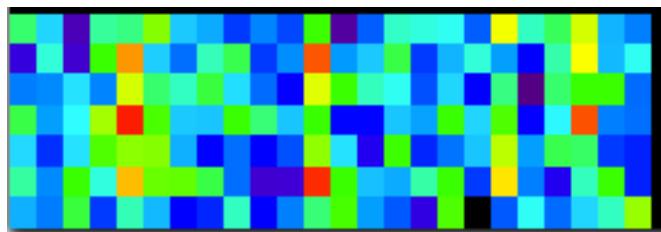
Alt= 1,958,447 km

Longitude= 238°W

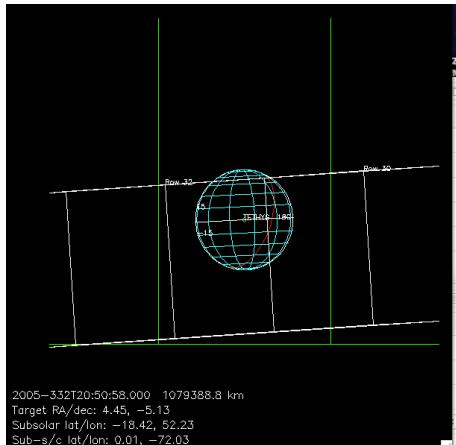
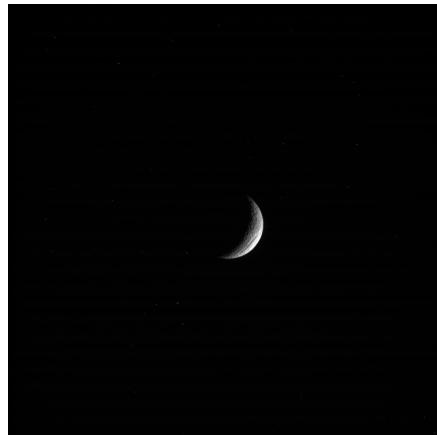
Latitude=0.3°N

Phase= 118.5°

Low SNR



018TE_TETH001_VIMS



018TE_ICYTHON001_VIMS

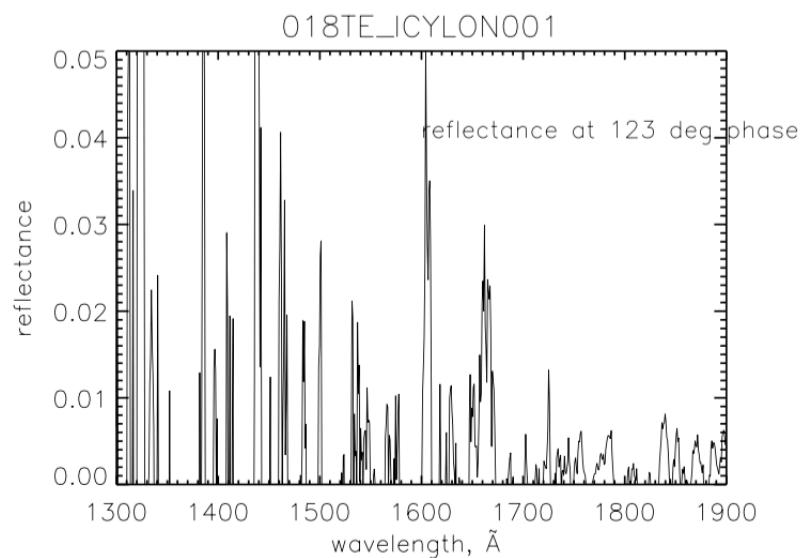
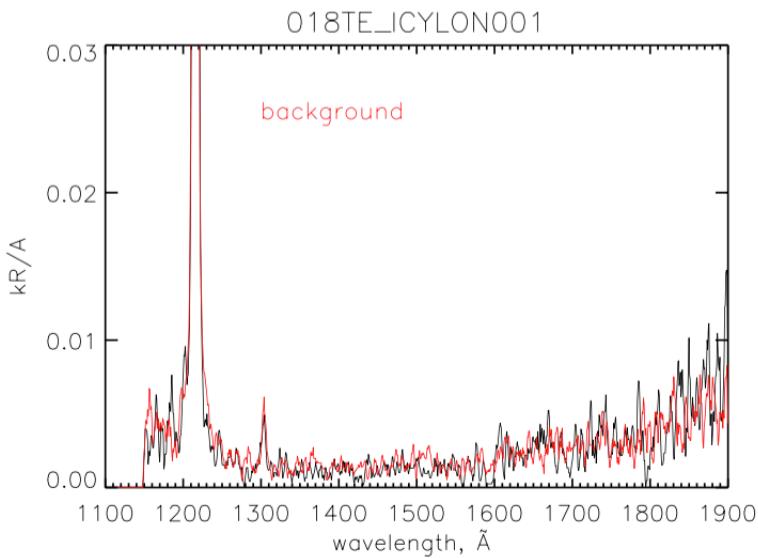
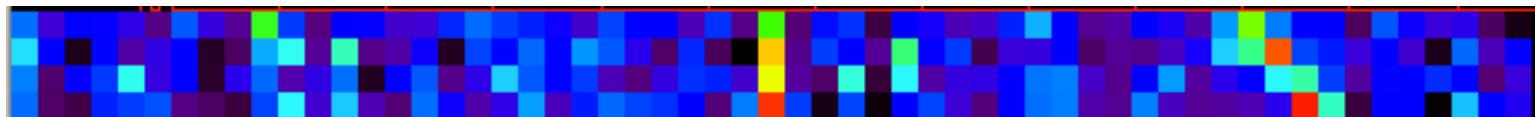
2005-332T20:51

Alt= 1,078,053 km

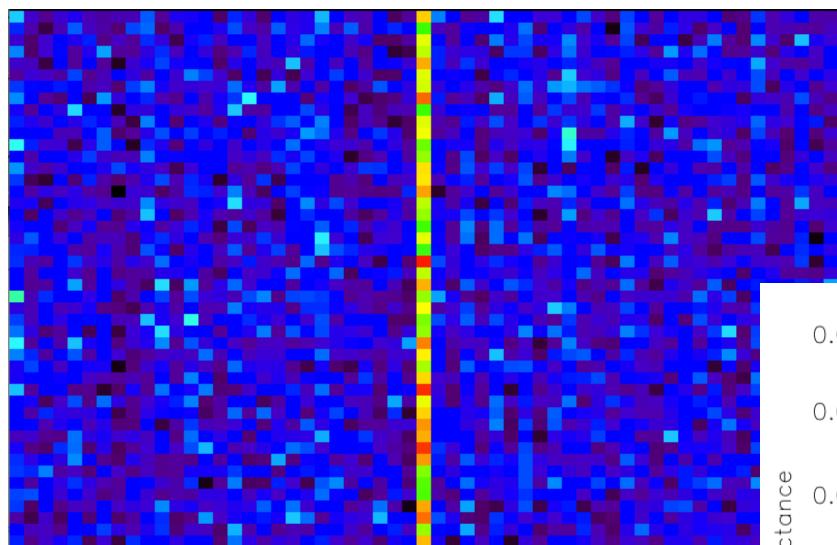
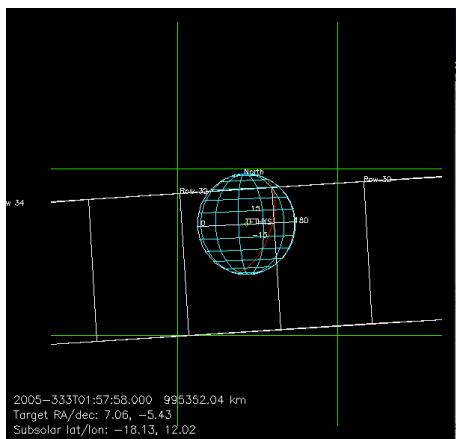
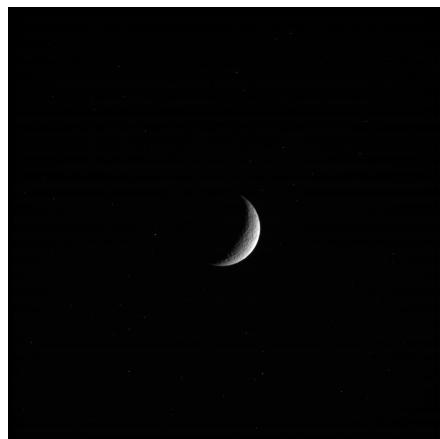
Longitude= 72°W

Latitude= 0°N

Phase= 123.3°



018TE_TETH002_VIMS



018TE_ICYTHON002_VIMS

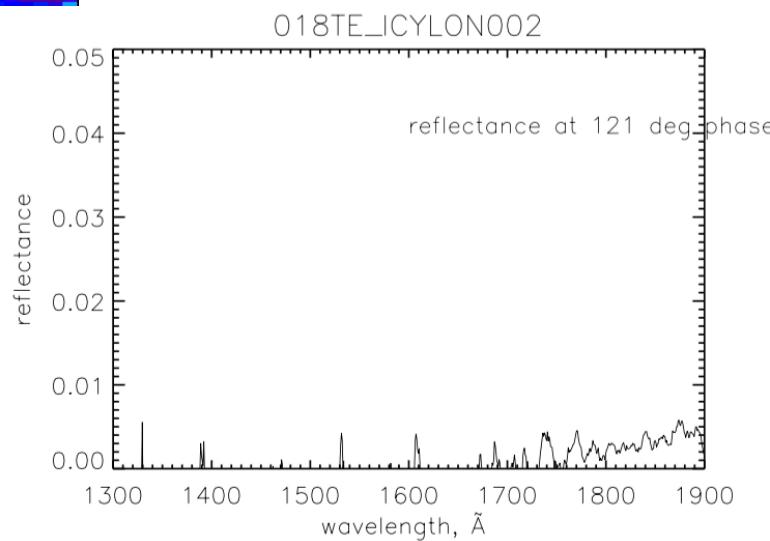
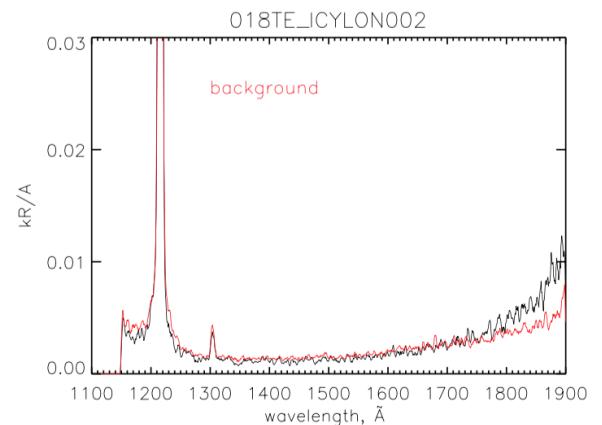
2005-333T01:58

Alt= 983,523 km

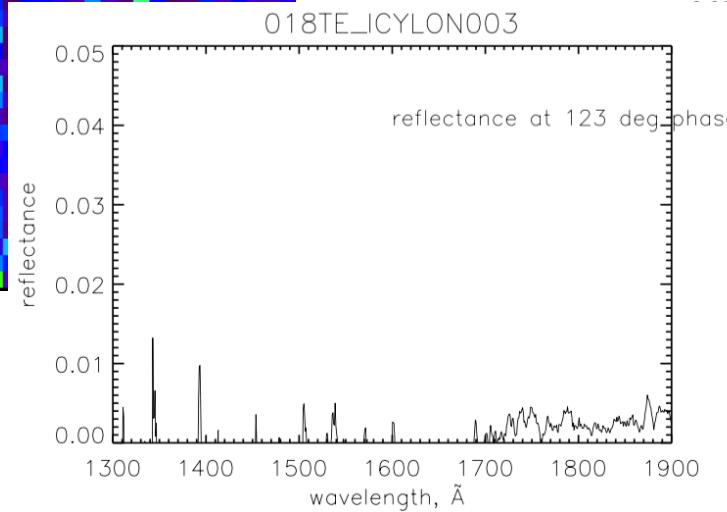
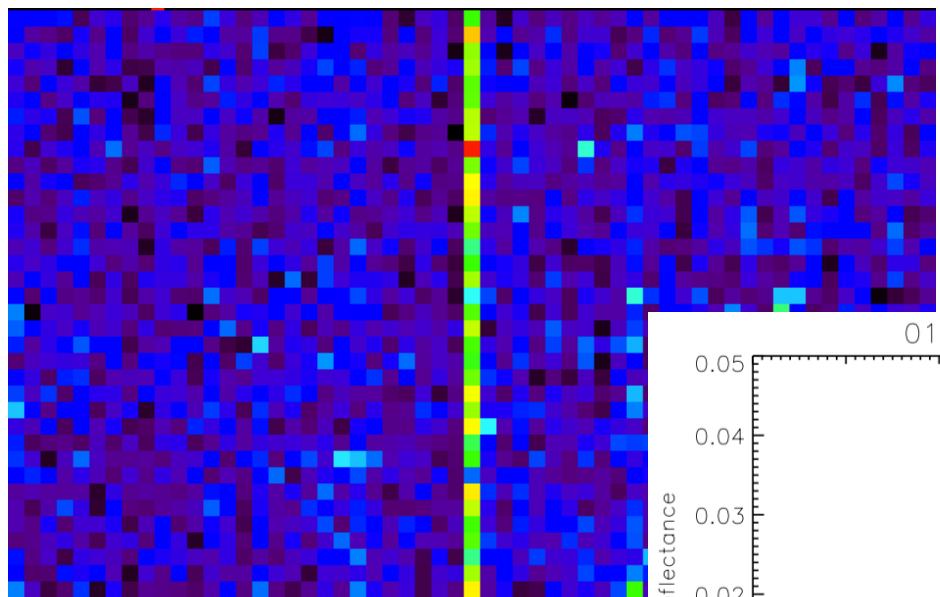
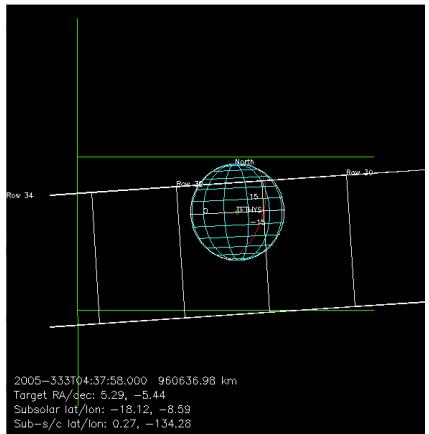
Longitude= 117°W

Latitude= 0.2°N

Phase= 121.3°



018TE_TETH003_VIMS



018TE_ICYTHON003_VIMS

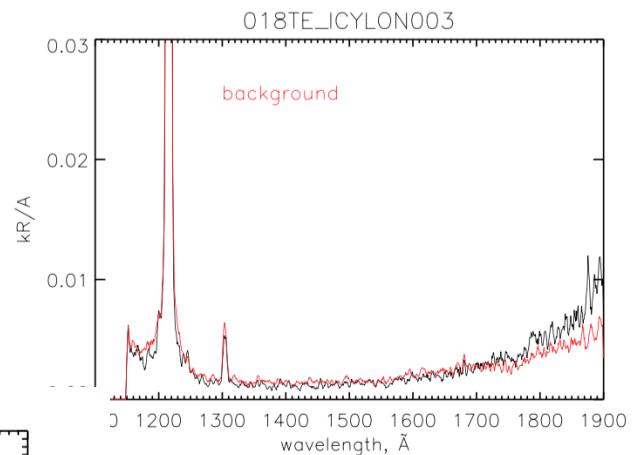
2005-333T04:38

Alt= 955,736 km

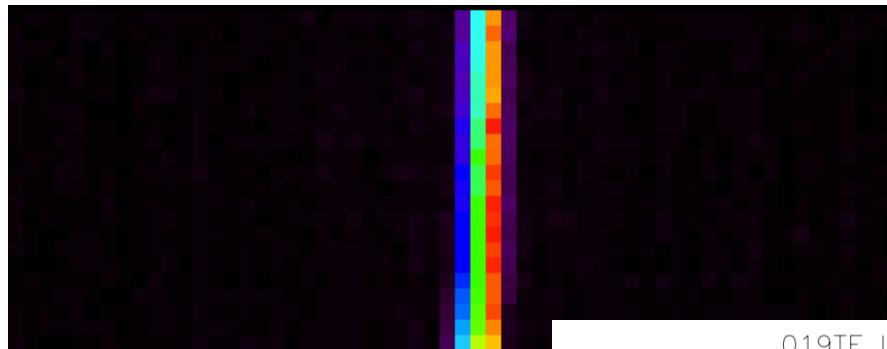
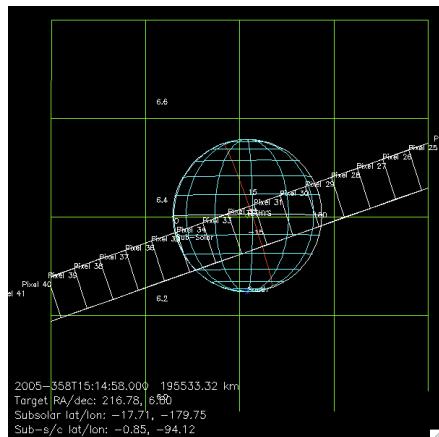
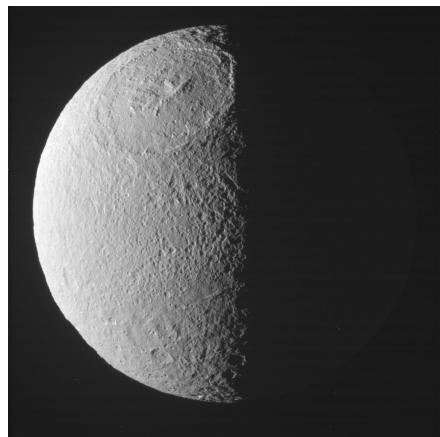
Longitude= 139°W

Latitude= 0.28°N

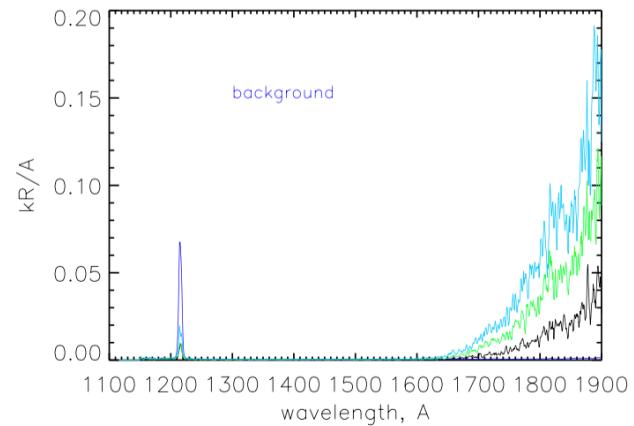
Phase= 123.3°



019TE_TETHYS001_VIMS



019TE_ICYLON001



019TE_ICYLON001_VIMS

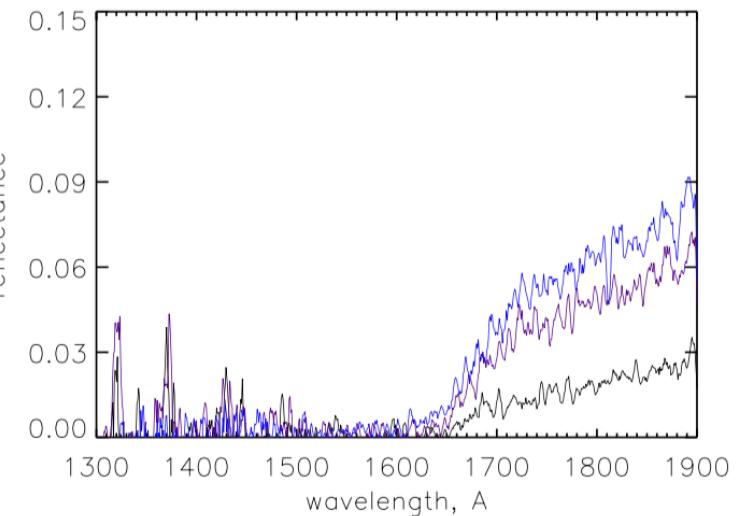
2005-358T15:11

Alt= 190,400 km

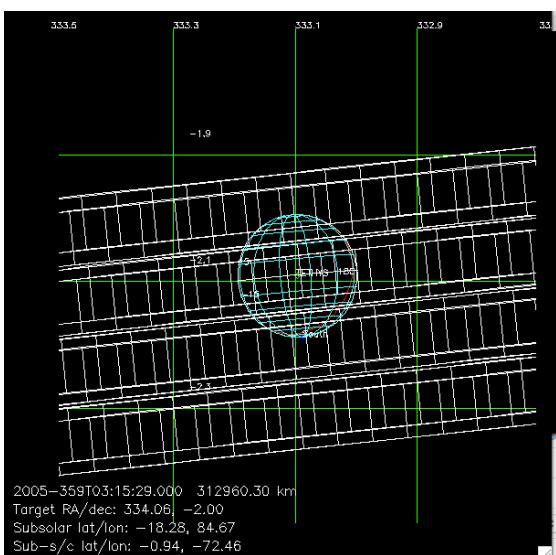
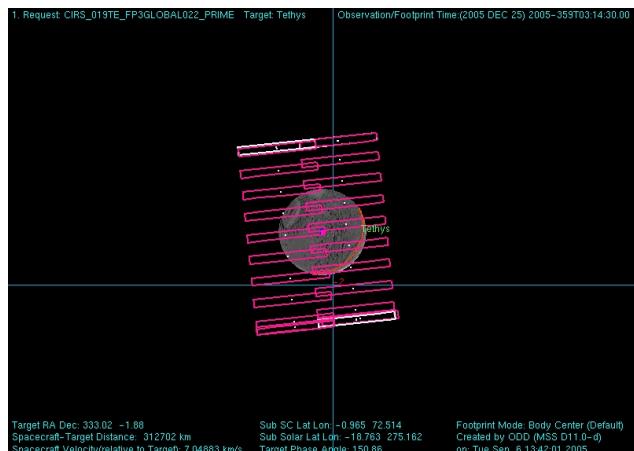
Longitude=92°W

Phase= 89°

019TE_ICYLON001



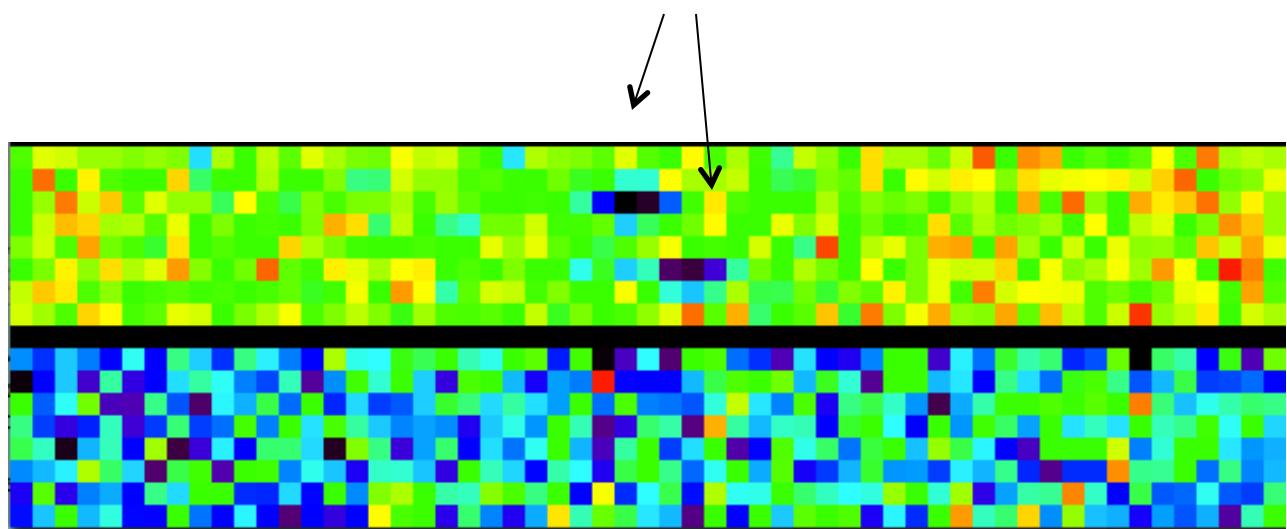
019TE_FP3GLOBAL022_CIRS



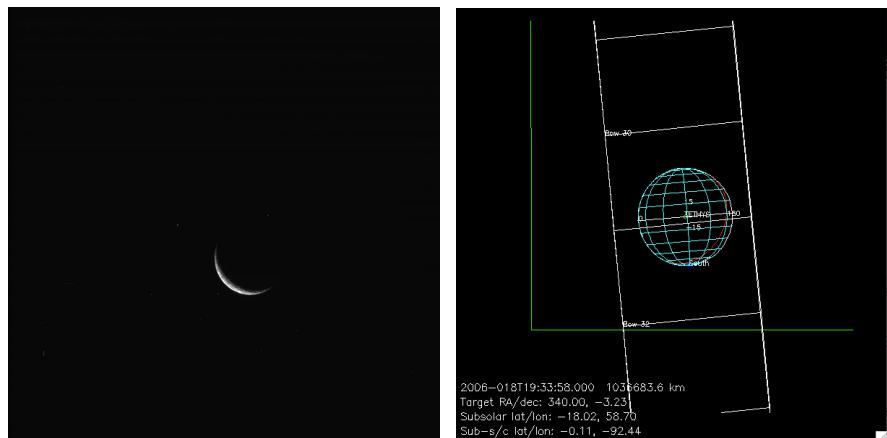
019TE_ICYLON003_CIRS

2005-359T03:16
Alt= 313,613 km
Longitude= 73°W
Phase= 150.5°

Tethys appears in Ly-a



020TE_094W147PH001_ISS



020TE_ICYLON005_ISS

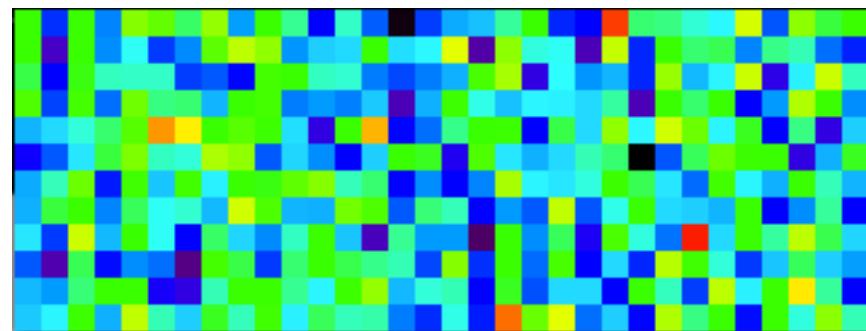
2006-018T19:34

Alt= 1,033,113 km

Longitude= 94°W

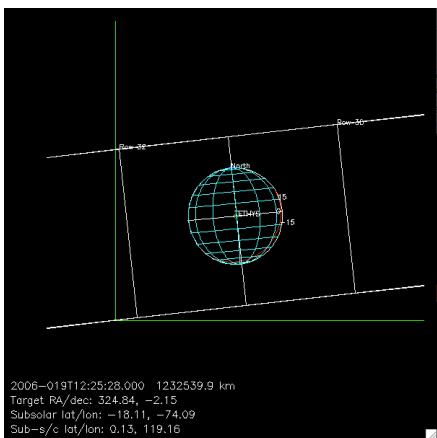
Latitude=0.1°S

Phase= 147°



Low SNR

020TE_238W158PH001_ISS

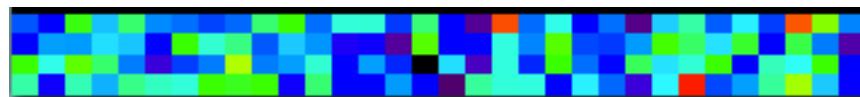


020TE_ICYTHON009_ISS

2006-019T12:26

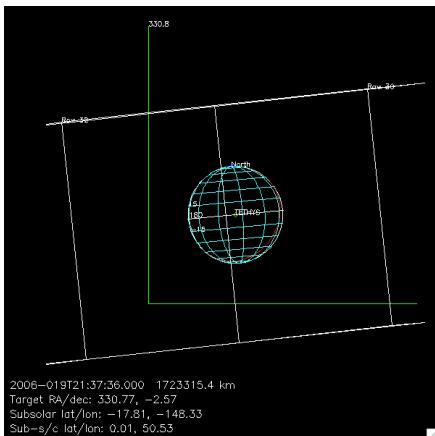
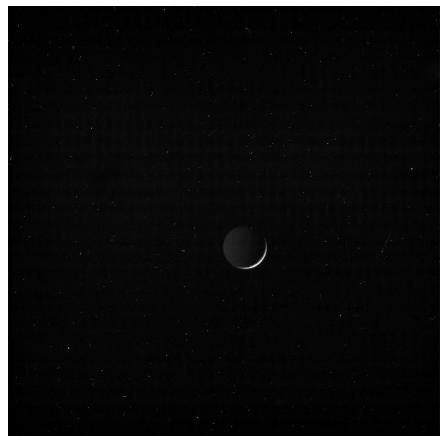
Alt= 1,234,549 km
Longitude= 241°W

Latitude=0.13°N
Phase= 157.8°



Low SNR

020TE_310W154PH001_ISS



020TE_ICYLON015_ISS

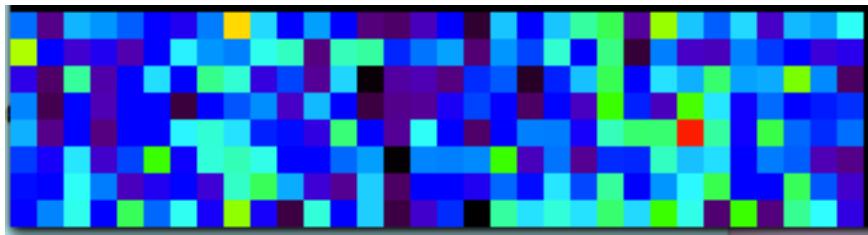
2006-019T21:38

Alt= 1,728,316 km

Longitude= 310°W

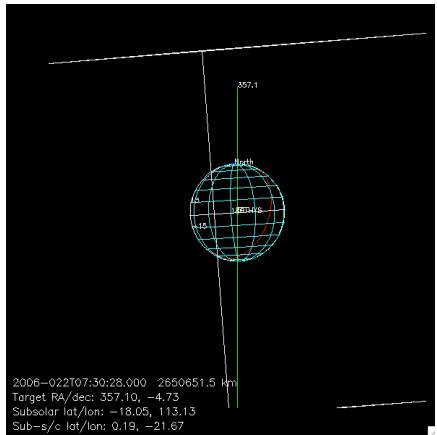
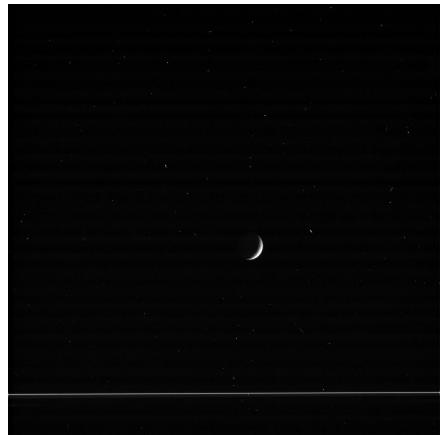
Latitude=0.01°N

Phase= 153.8°



Low SNR

020TE_022W132PH001_ISS



020TE_ICYTHON020_ISS

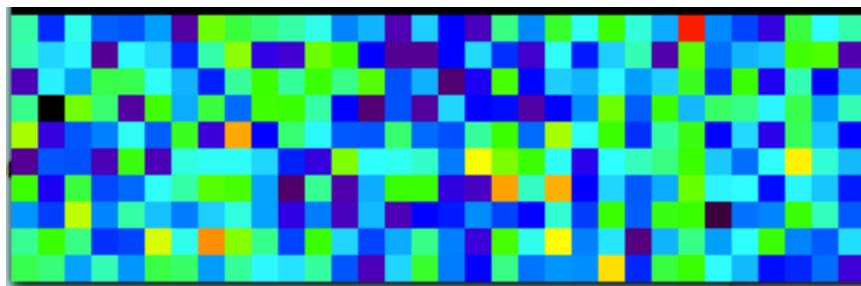
2006-022T07:25

Alt= 2,649,729 km

Longitude= 23°W

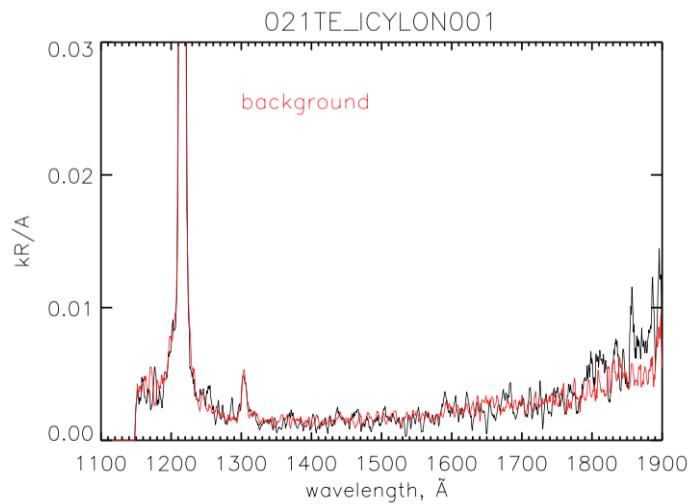
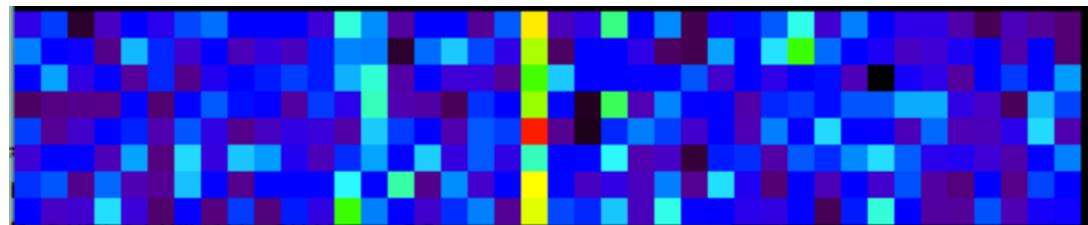
Latitude= 0.19°N

Phase= 132.0°



Low SNR

021TE_310W081PH001_ISS



021TE_ICYTHON001_ISS

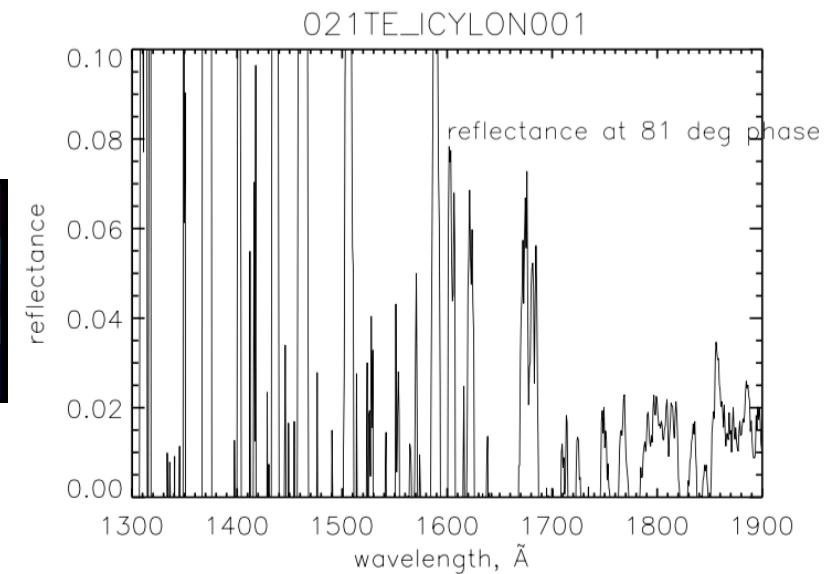
2006-052T10:00

Alt= 2,243,399 km

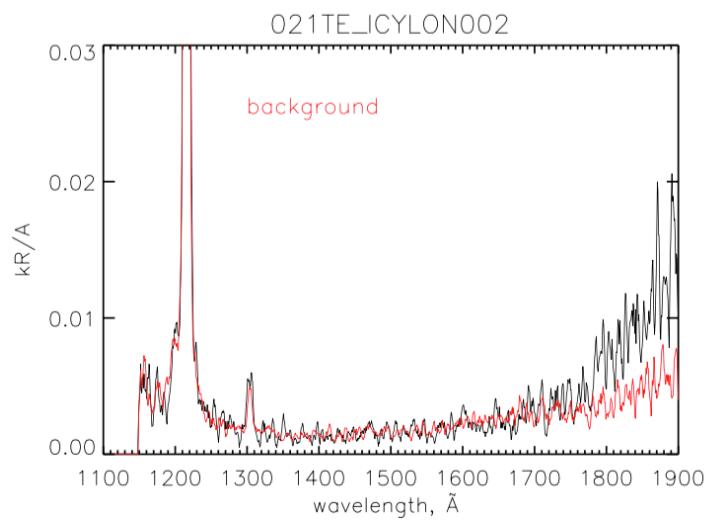
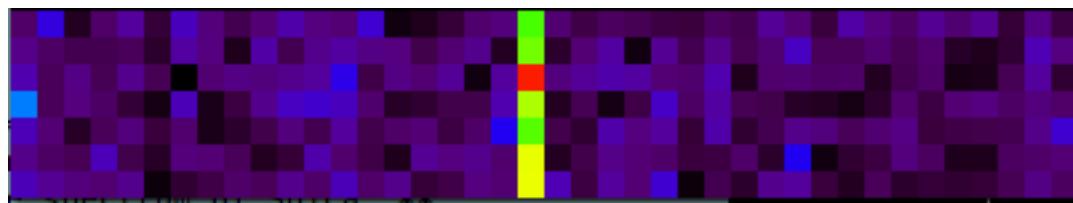
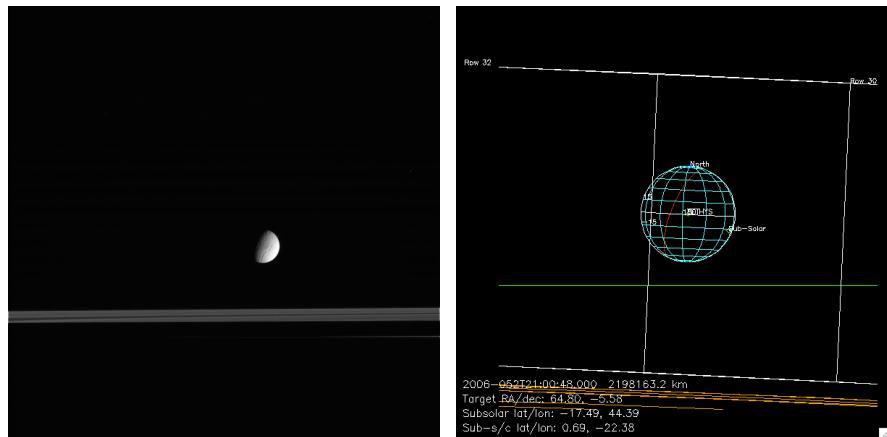
Longitude= 310°W

Latitude= 0.63°N

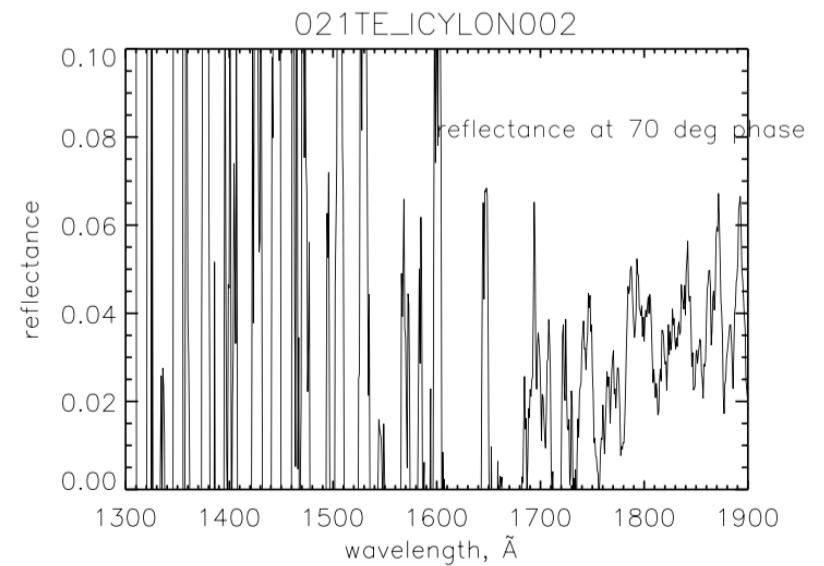
Phase= 81.4°



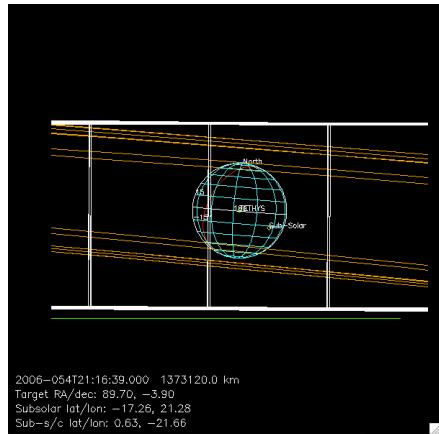
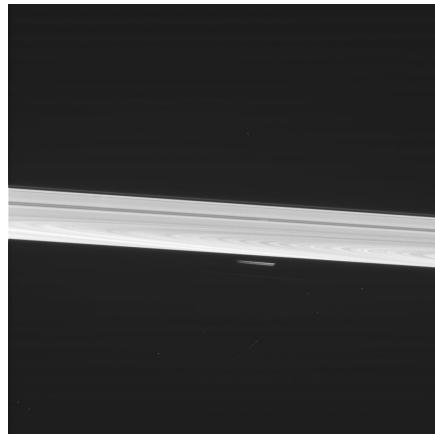
021TE_022W070PH001_ISS



021TE_ICYTHON002_ISS
2006-052T20:55
Alt= 2,194,731 km
Longitude= 23°W
Latitude= 0.69°N
Phase= 69.7°



021TE_022W047PH001_ISS



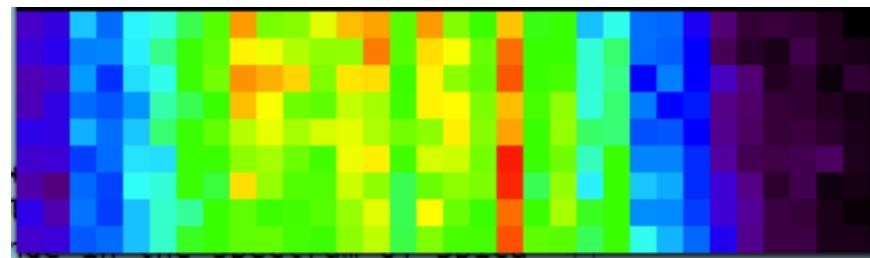
021TE_ICYTHON003_ISS

2006-054T21:17

Alt= 1,373,106 km

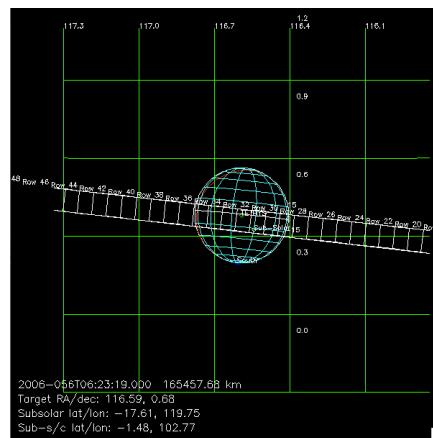
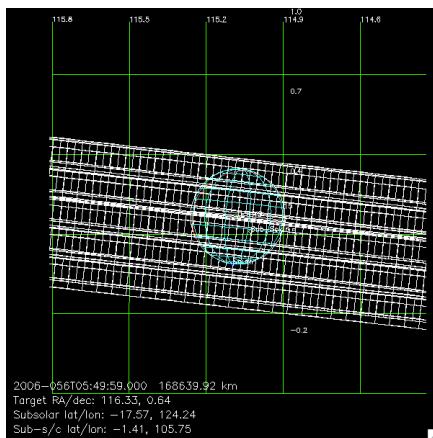
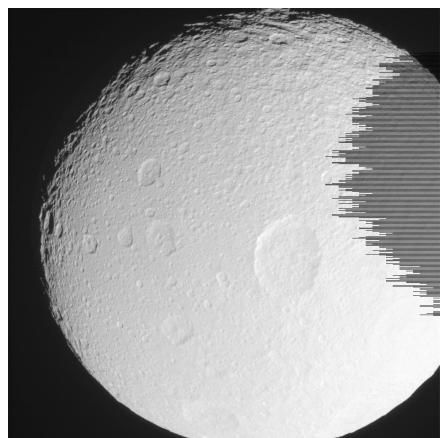
Longitude= 22°W

Phase= 47.4°



Tethys blocked by rings

021TE_FP3REGION001_CIRS



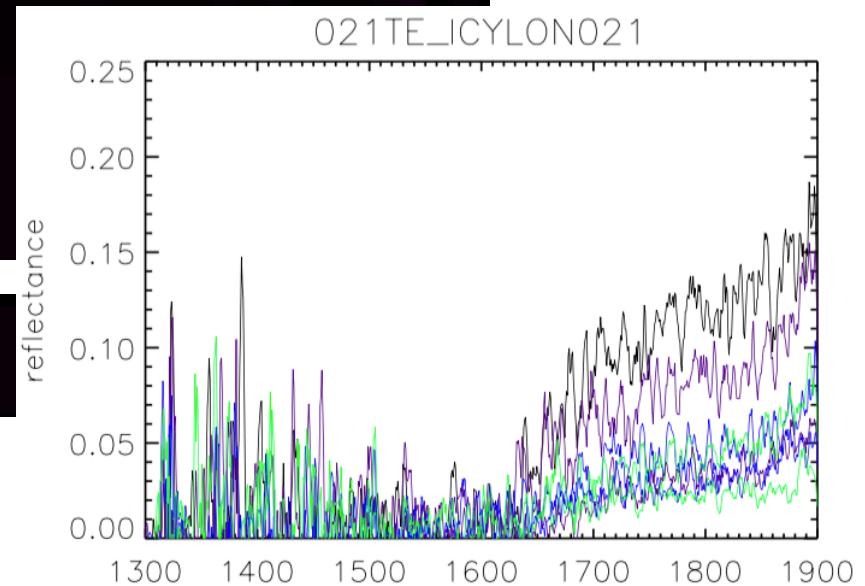
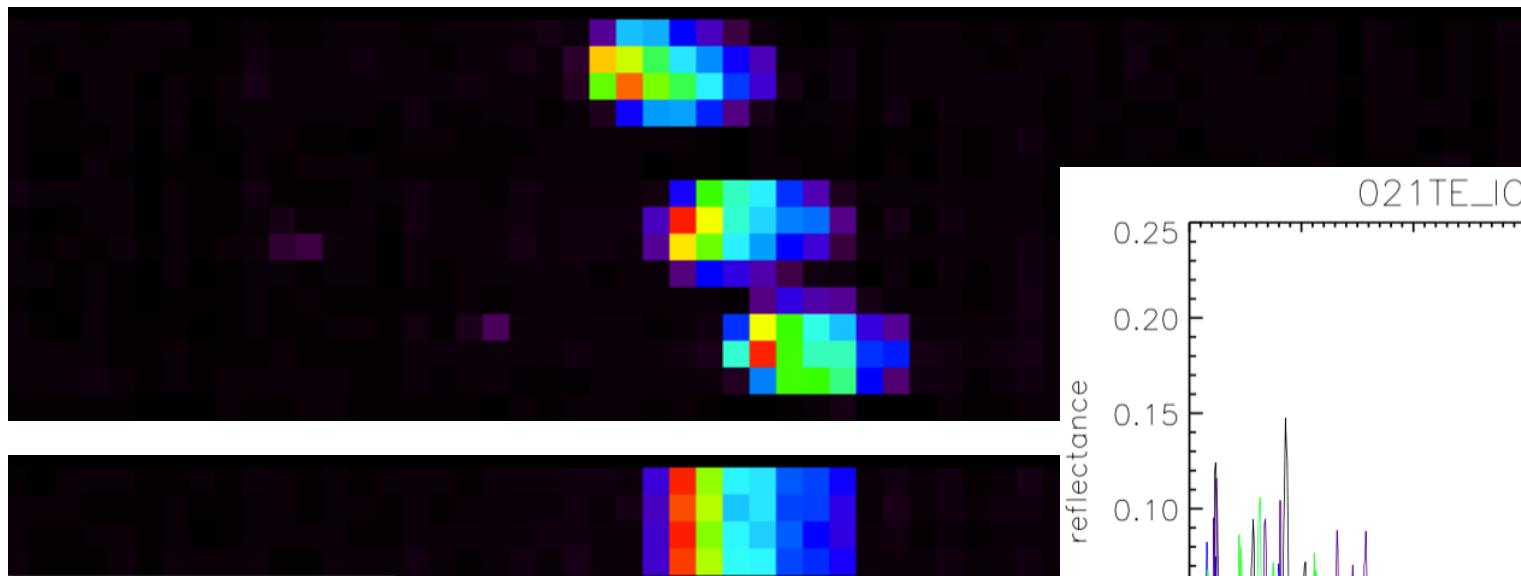
021TE_ICYLON021_CIRS

2006-056T05:35

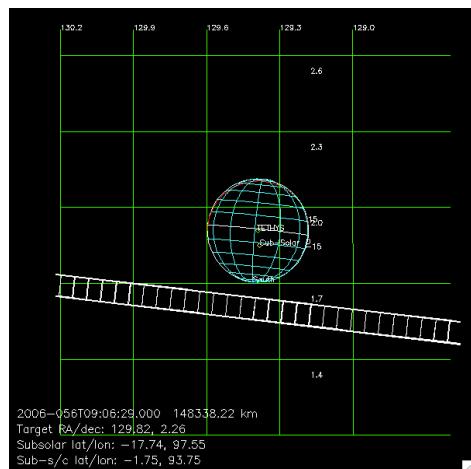
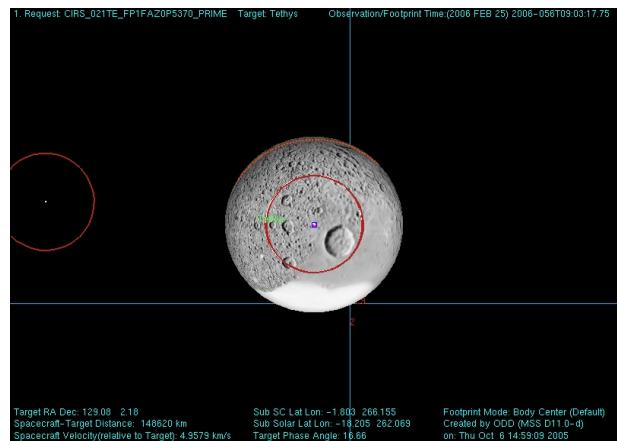
Alt= 164,633 km

Longitude= 257°W

Phase= 23°



021TE_FP1FAZ0P5370_CIRS



021TE_ICYLON022_CIRS

2006-056T08:50

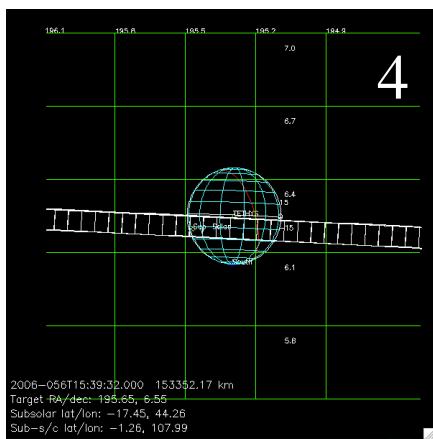
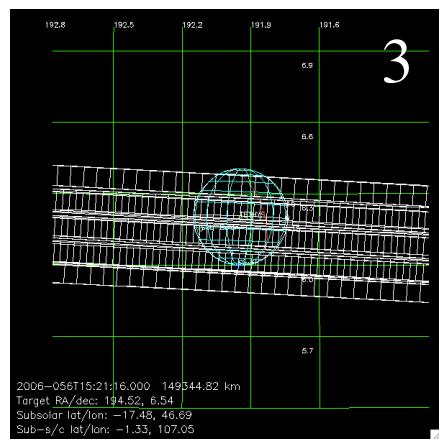
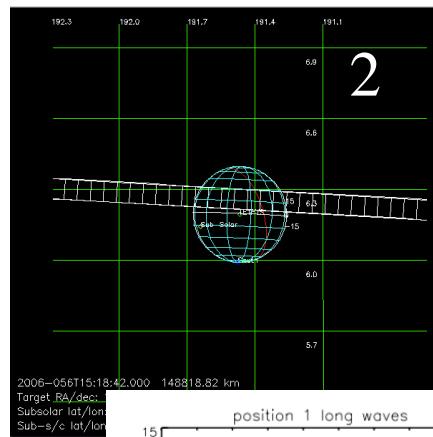
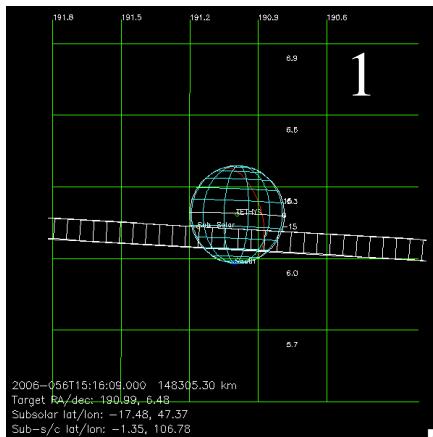
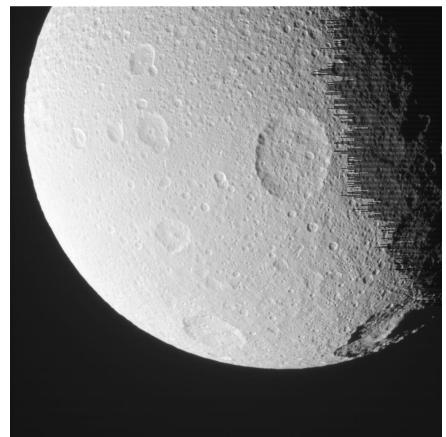
Alt= 148,936 km

Longitude= 266°W

Phase= 16.9°

No UVIS data of Tethys

021TE_FP1FAZ0P5371_CIRS



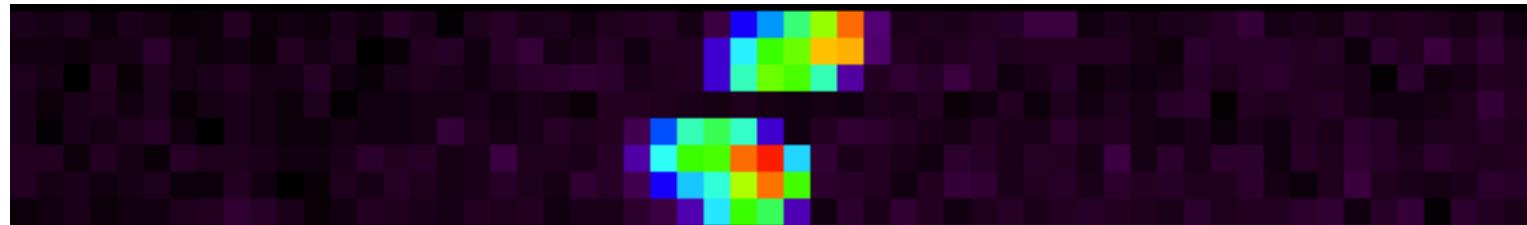
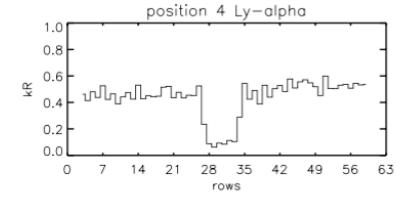
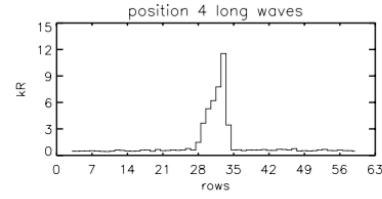
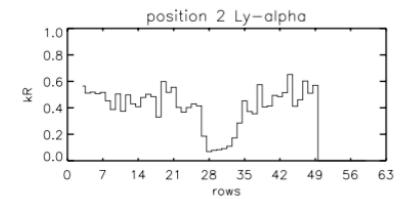
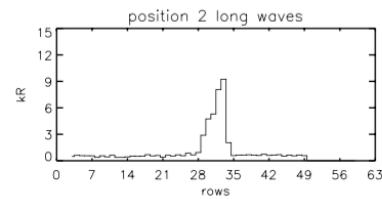
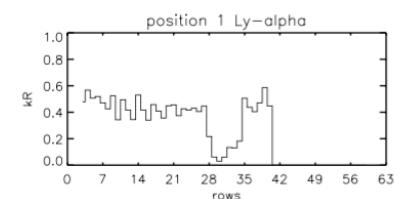
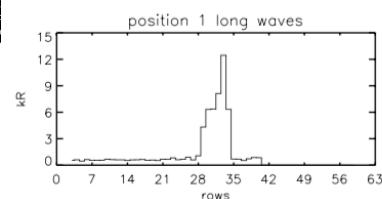
021TE_ICYLON025_CIRS

2006-056T15:00

Alt= 147,773 km

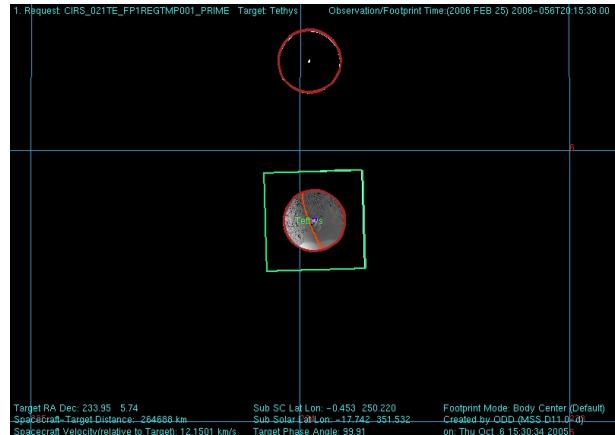
Longitude= 253°W

Phase= 59.1°



3

021TE_FP1REGTMP001_CIRS



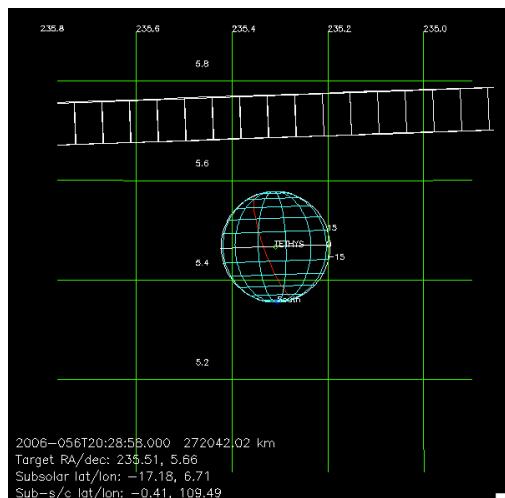
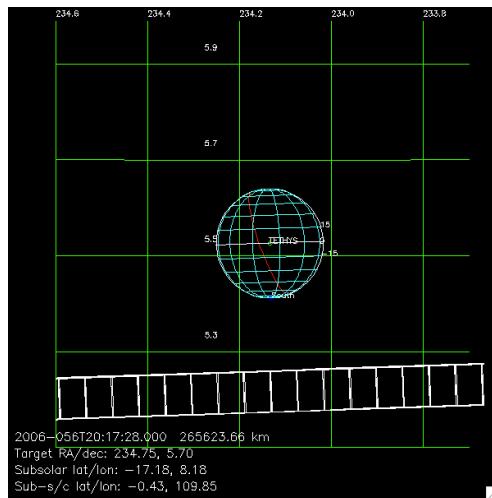
021TE_ICYLON026_CIRS

2006-056T20:15

Alt= 269,668 km

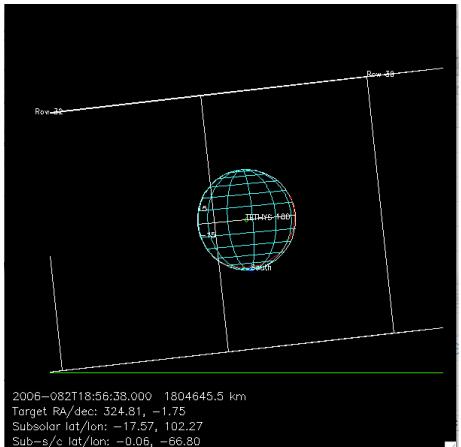
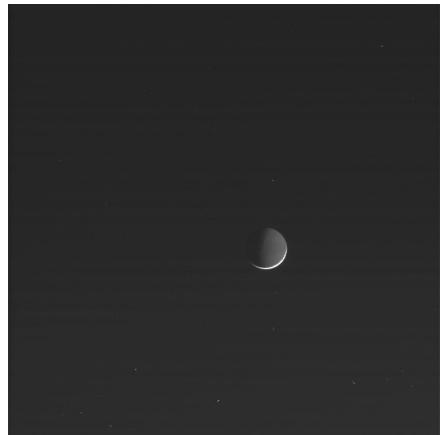
Longitude= 251°W

Phase= 100.9°



No UVIS data

022TE_094W158PH001_ISS



022TE_ICYTHON001_ISS

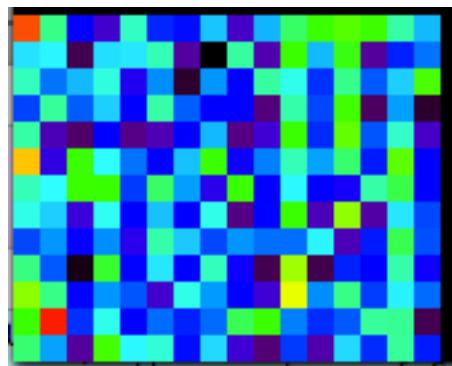
2006-082T18:49

Alt= 1,800,083 km

Longitude= 68°W

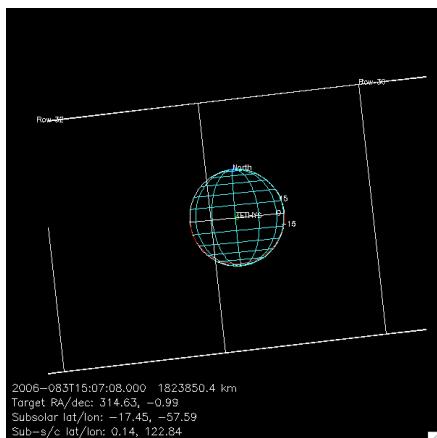
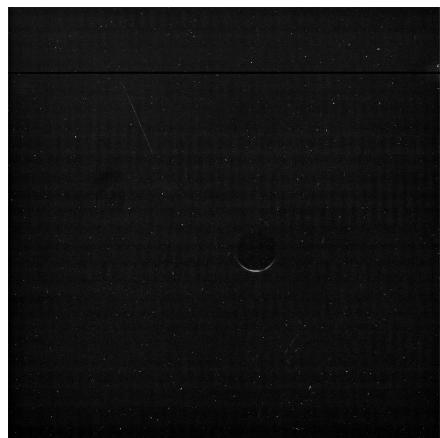
Latitude= 0.06°S

Phase= 159.3°



Low SNR

022TE_238W162PH001_ISS



022TE_ICYTHON002_ISS

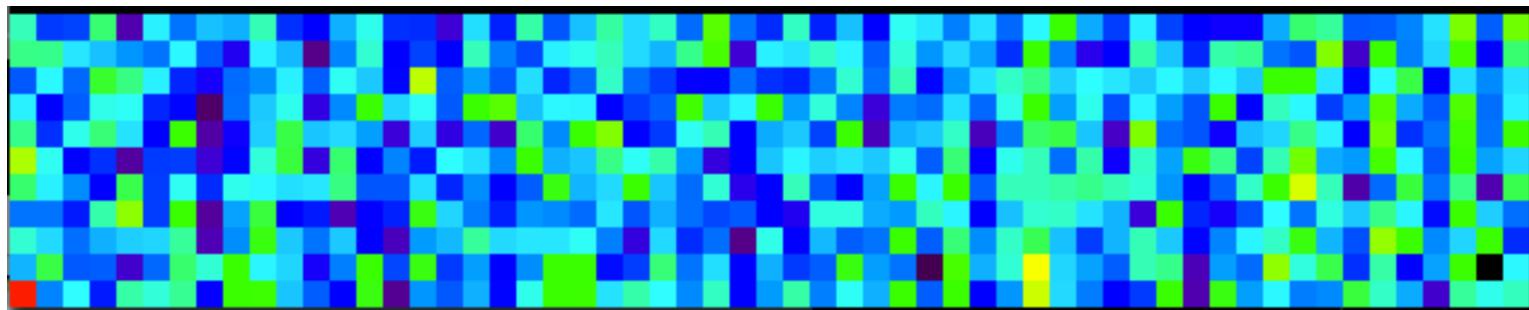
2006-083T15:00

Alt= 1,831,157 km

Longitude= 238°W

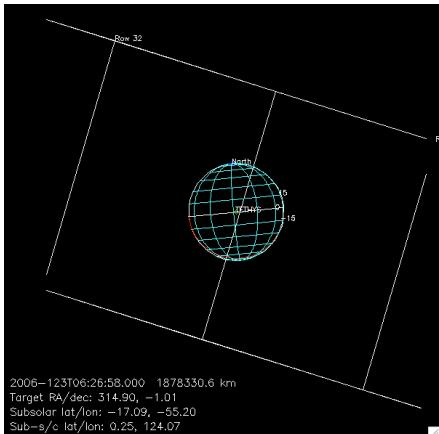
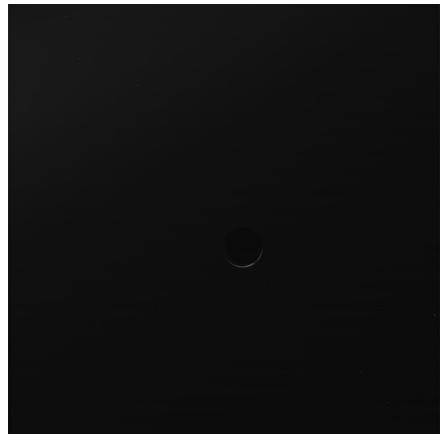
Latitude= 0.14°N

Phase= 162.4°



Low SNR

023TE_238W163PH001_ISS



023TE_ICYLON069_ISS

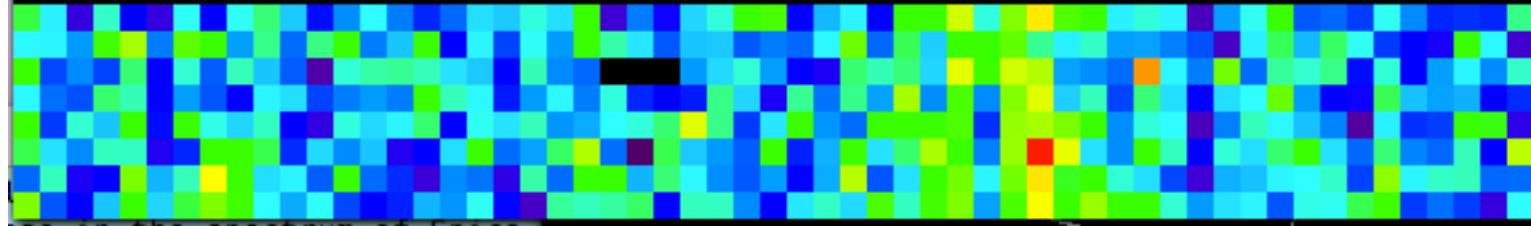
2006-123T06:27

Alt= 1,882,875 km

Longitude= 237°W

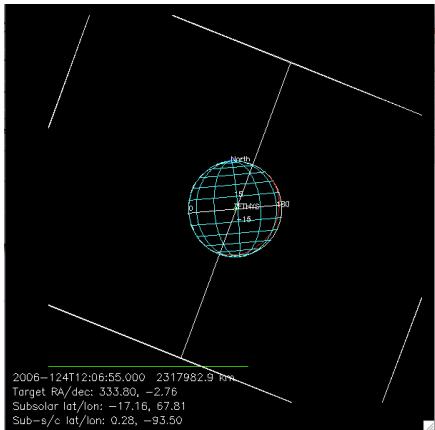
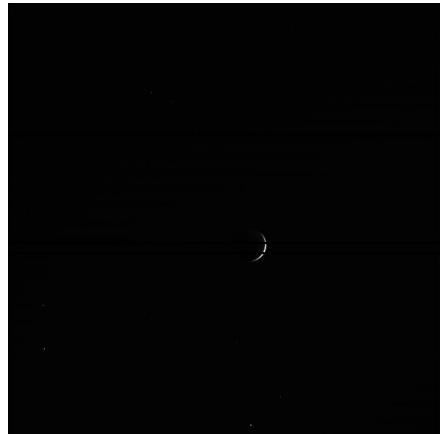
Latitude= 0.24°N

Phase= 162.9°



Low SNR

023TE_094W155PH001_ISS



023TE_ICYLON073_ISS

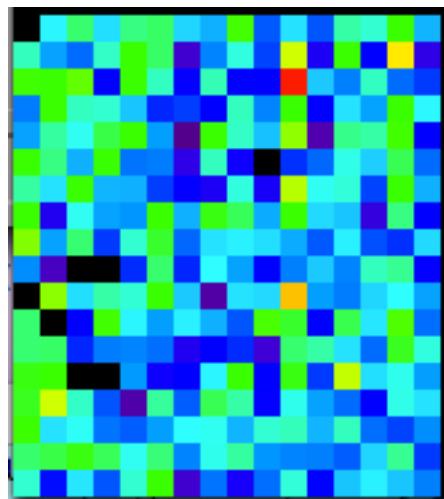
2006-124T12:07

Alt= 2,308,450 km

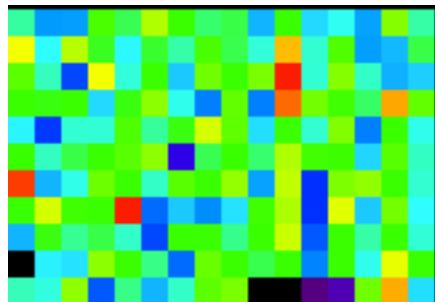
Longitude= 96°W

Latitude= 0.29°N

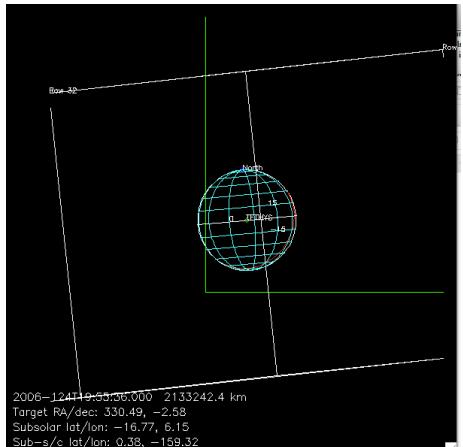
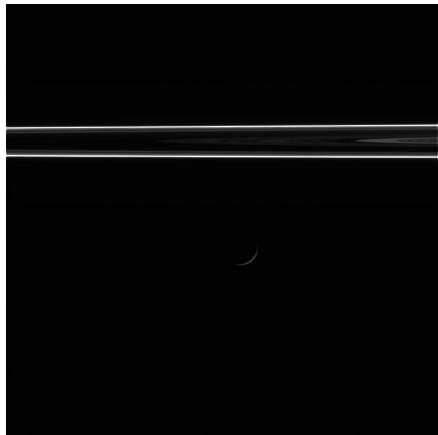
Phase= 155.2°



Low SNR



023TE_166W158PH001_ISS



023TE_ICYLON074_ISS

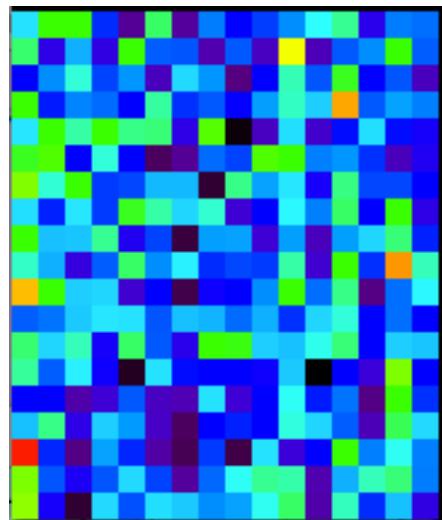
2006-124T19:56

Alt= 2,130,652 km

Longitude= 162°W

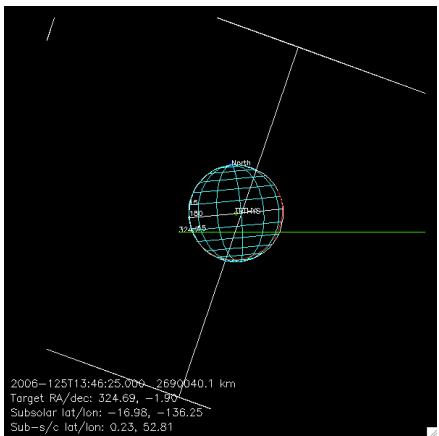
Latitude=0.39°N

Phase= 158°



Low SNR

023TE_310W161PH001_ISS



023TE_ICYTHON075_ISS

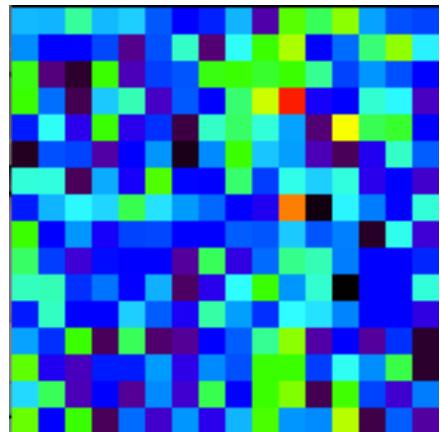
2006-125T13:47

Alt= 2,699,296 km

Longitude= 309°W

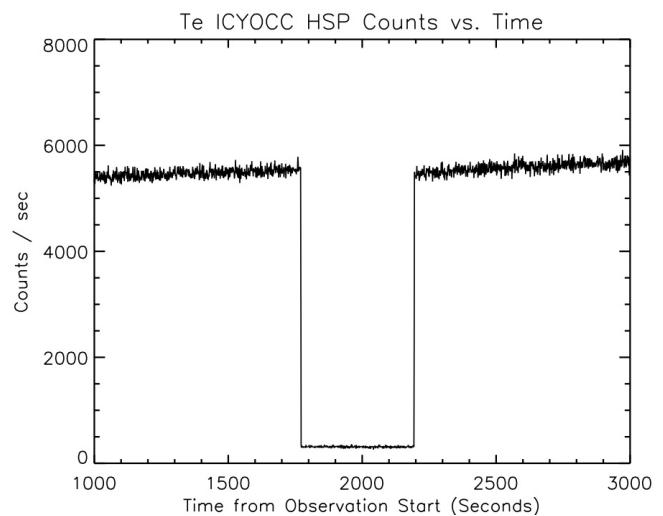
Latitude=0.23°N

Phase= 160.6°

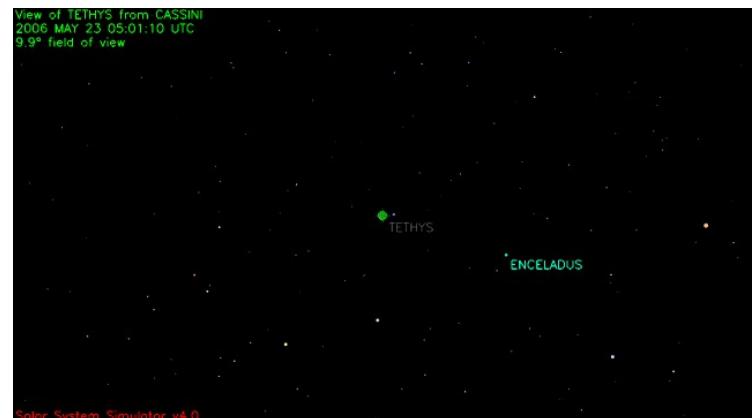


Low SNR

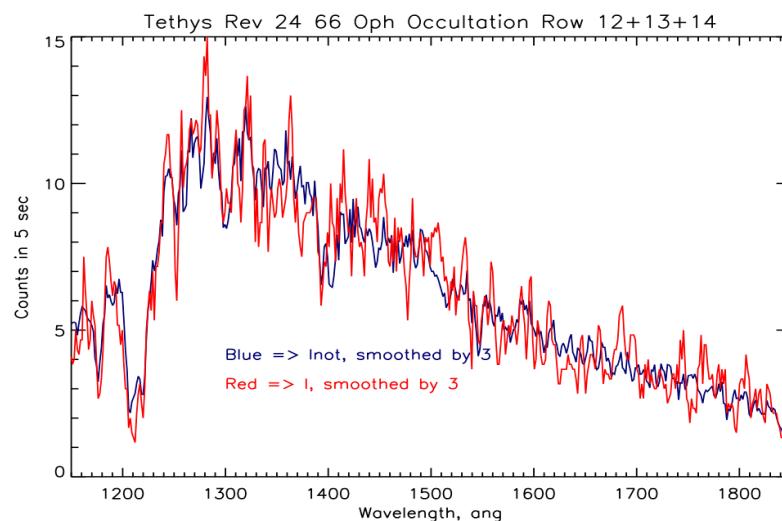
HSP profile



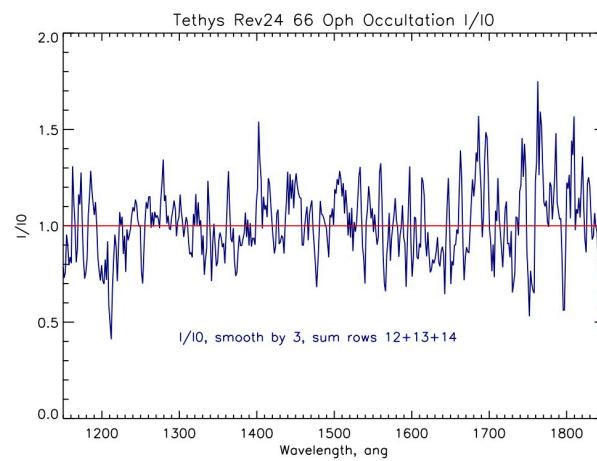
UVIS_024TE_ICYOCC041_PRIME
2006-143T04:32
Ingress lat/lon: 22.8 / 33.8
Egress lat/lon: 28.0 / 213.7
Star: 66 Ophiuchus

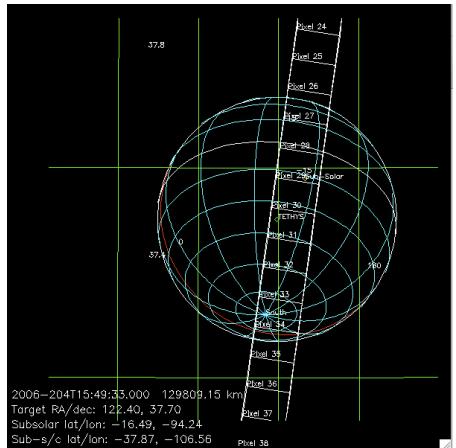
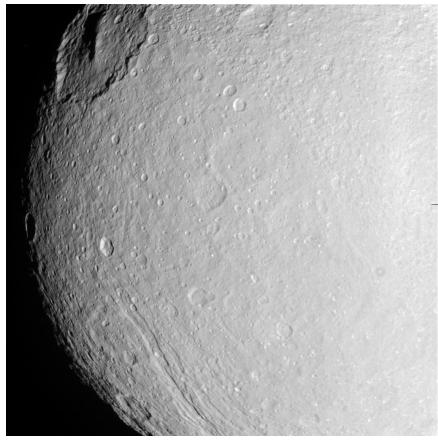


Spectra of I , I_0 (counts per integration period vs wavelength)

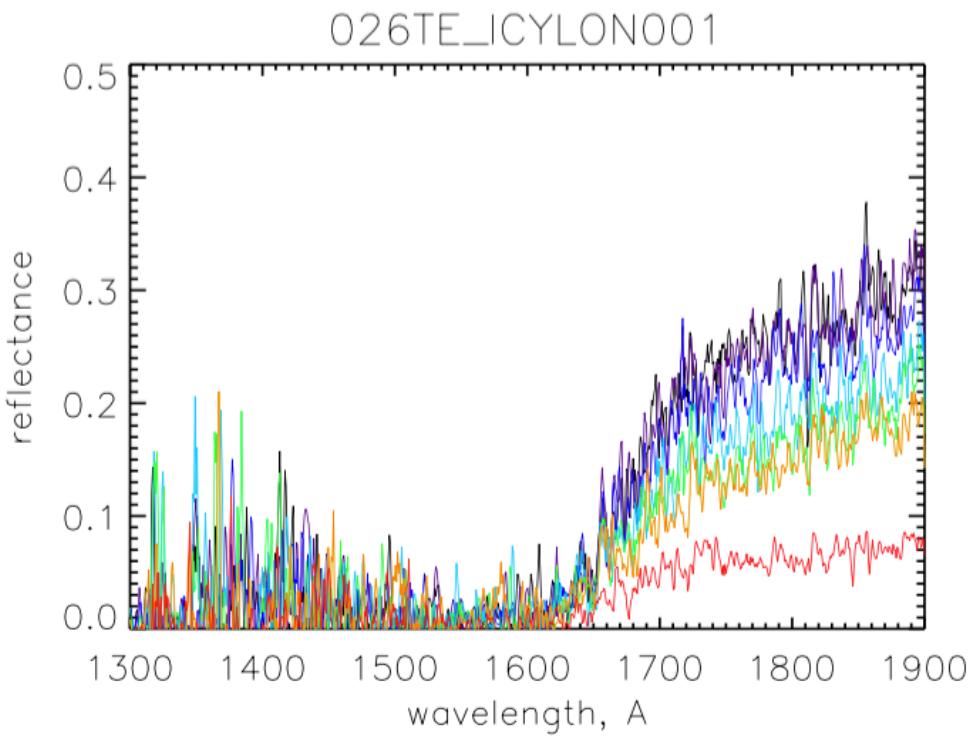


Spectrum of I/I_0





026TE_TETHYS001_VIMS
2006-204T15:48
Alt=128,664 km
Longitude= 106°W
Phase= 24.0°



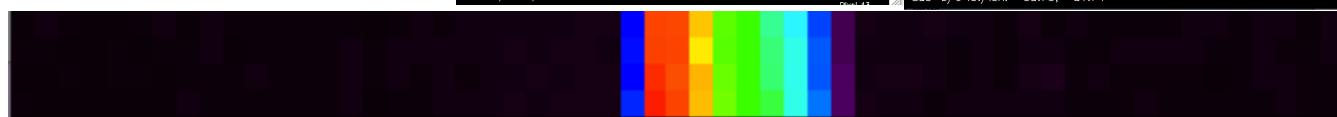
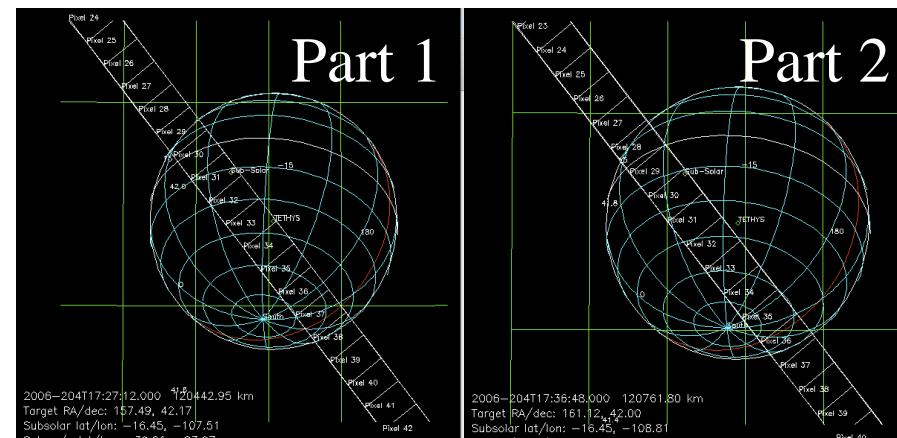
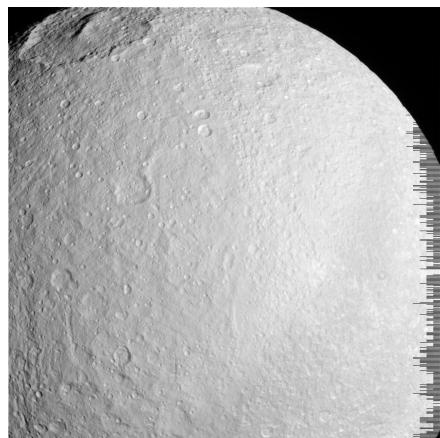
026TE_TETHYS002_VIMS

2006-204T17:26

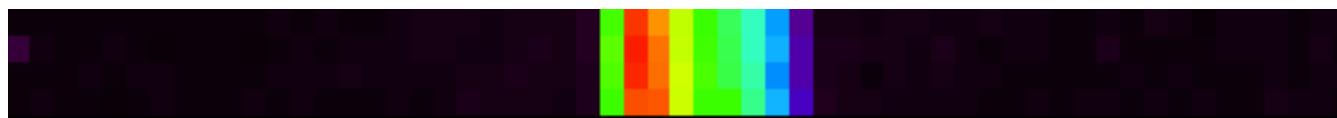
Alt= 119,944 km

Longitude= 84°W

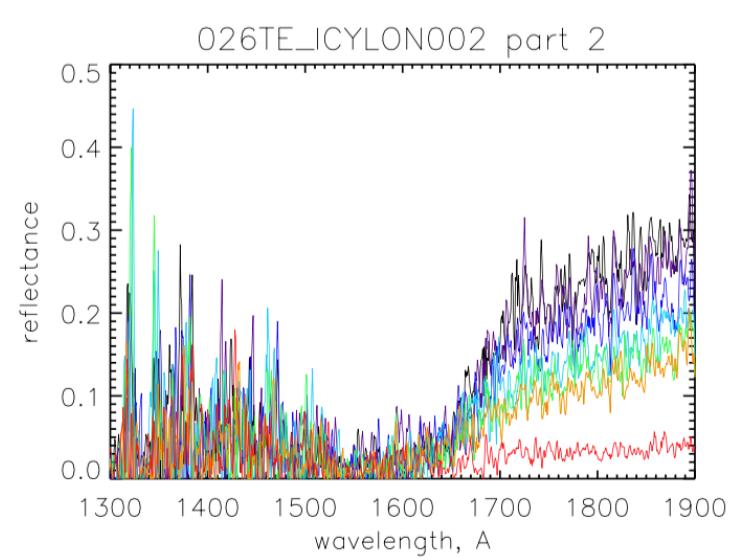
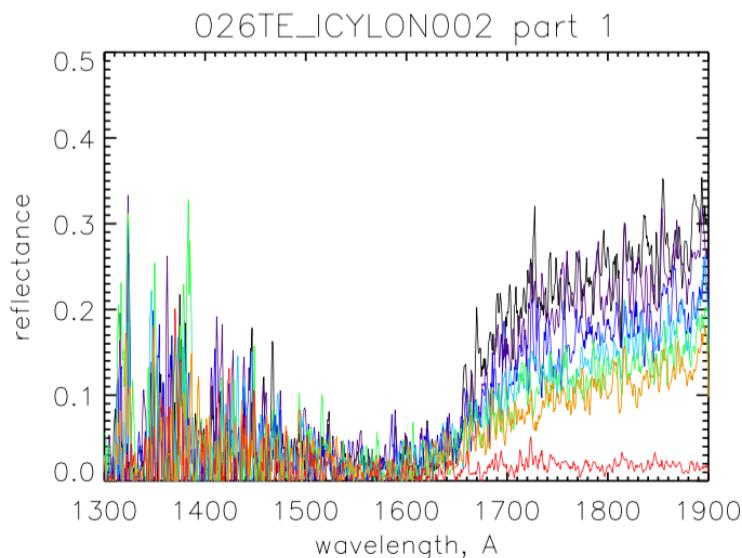
Phase= 30.5°



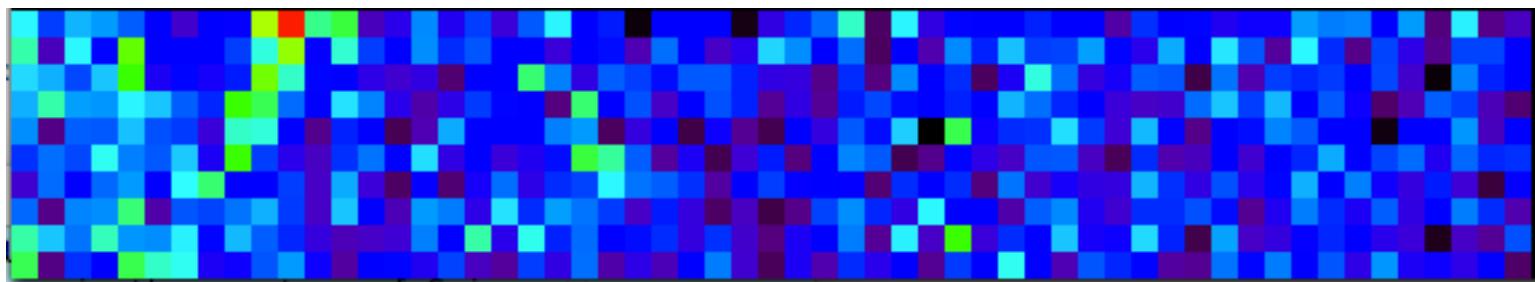
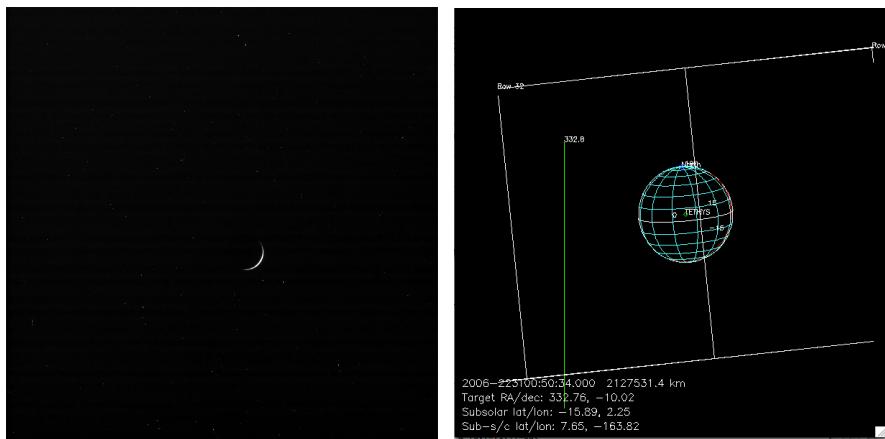
Part 1



Part 2



027TE_ICYTHON001_ISS
2006-223T00:51
Alt= 2,123,999km
Longitude= 165°W
Latitude= 7.65°N
Phase= 163.7°



↑
Saturn

Low SNR

UVIS_027TE_ICYOCC006_PRIME
2006-235T23:21
Ingress lat/lon: n/a
Egress lat/lon: n/a
Star: 8Nu Cap

A change to the planned trajectory meant that the path of the star as seen from UVIS did not go behind Tethys.

028TE_TETHYSORS001_CIRS

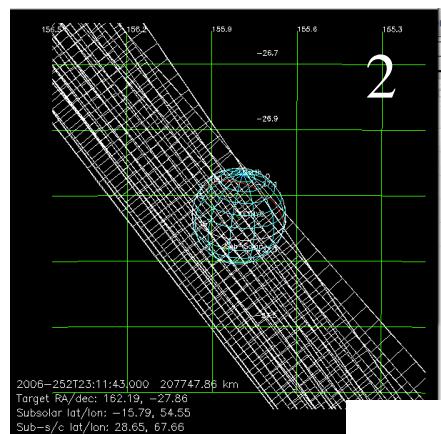
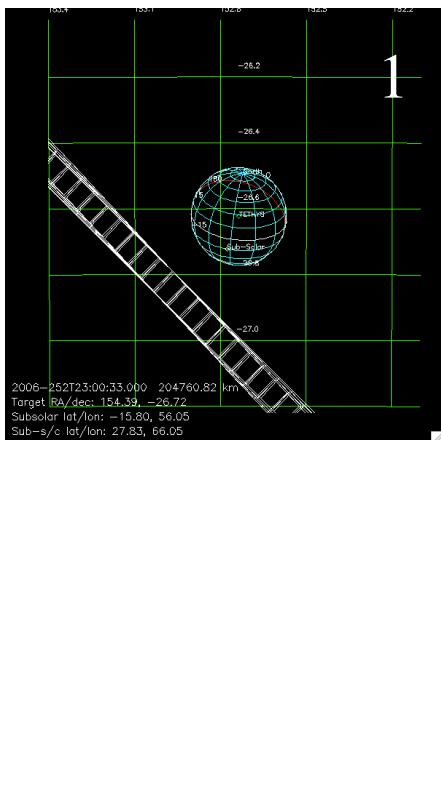
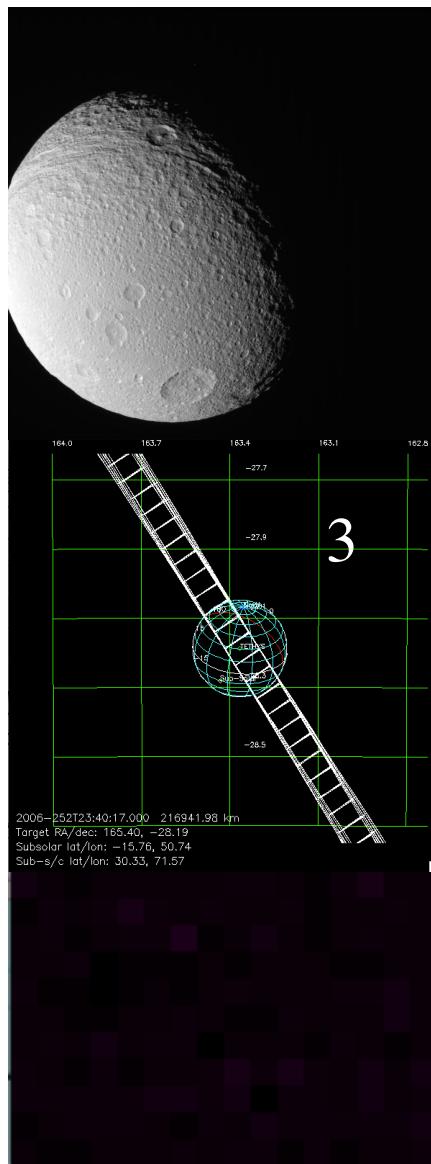
2006-252T23:01

Alt= 210,891 km

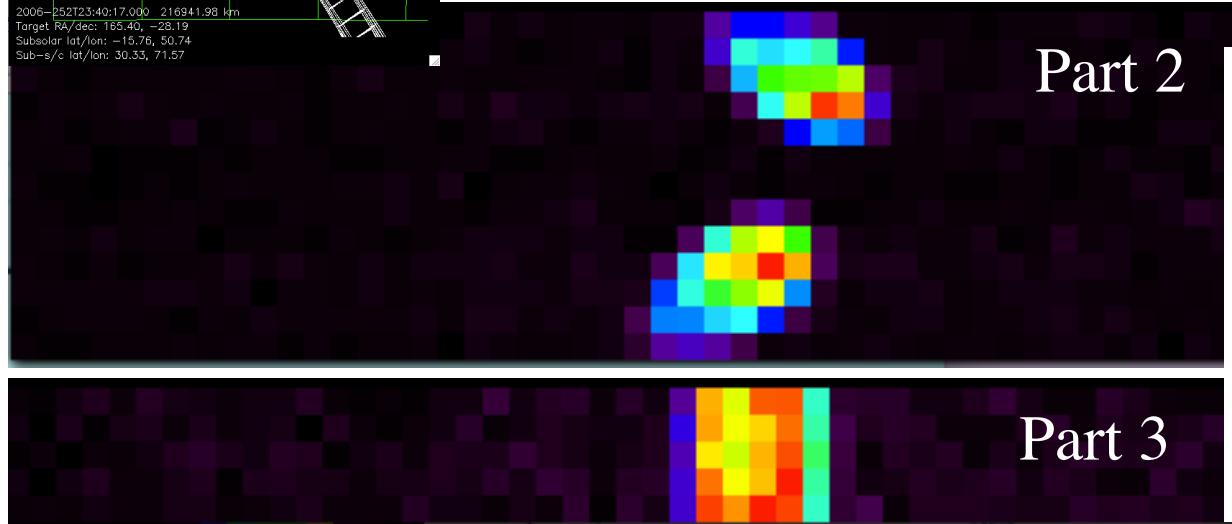
Longitude= 290.7°W

Latitude= 29.4°N

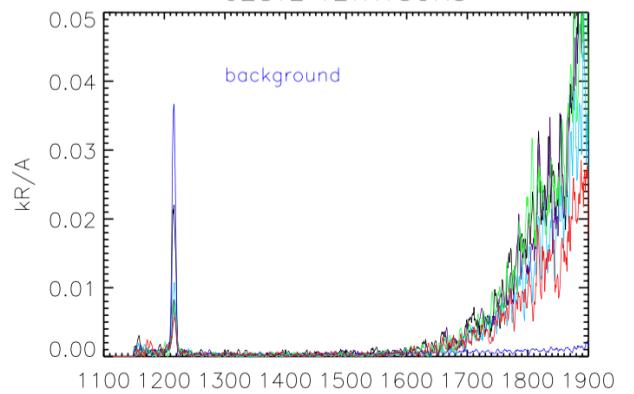
Phase= 48.6°



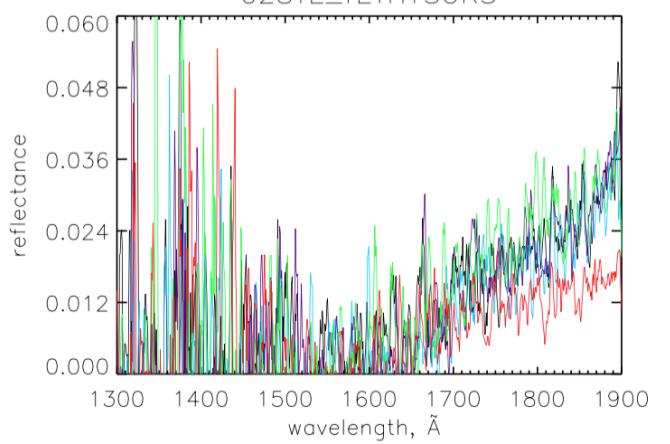
Part 3



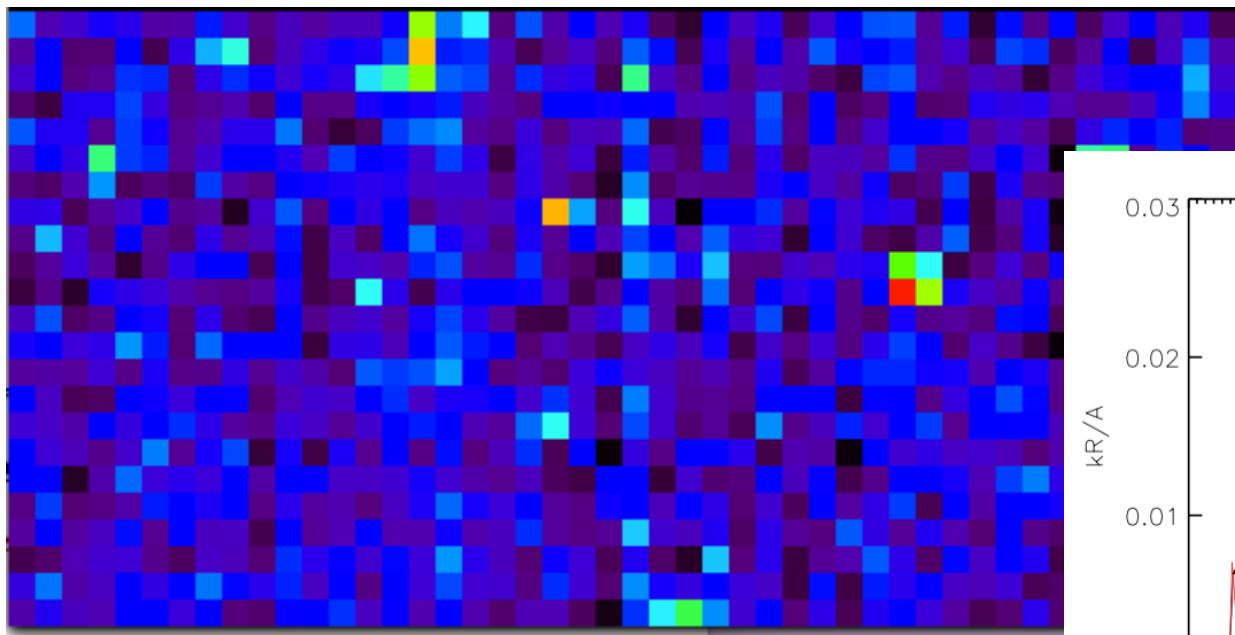
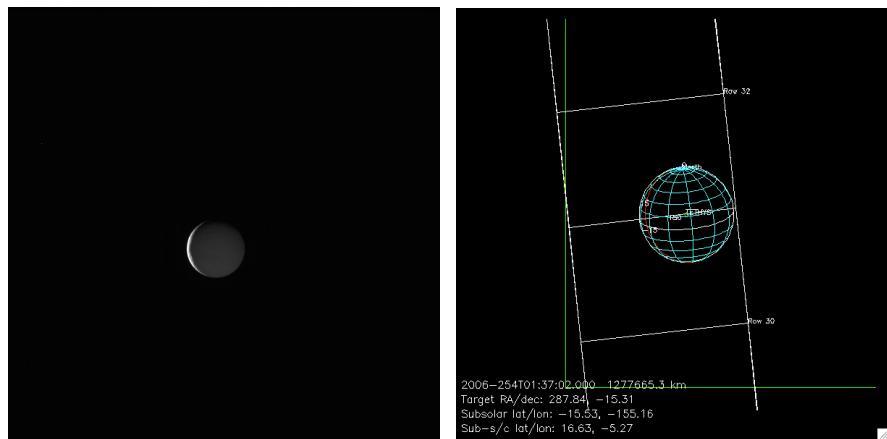
028TE TETHYSORS



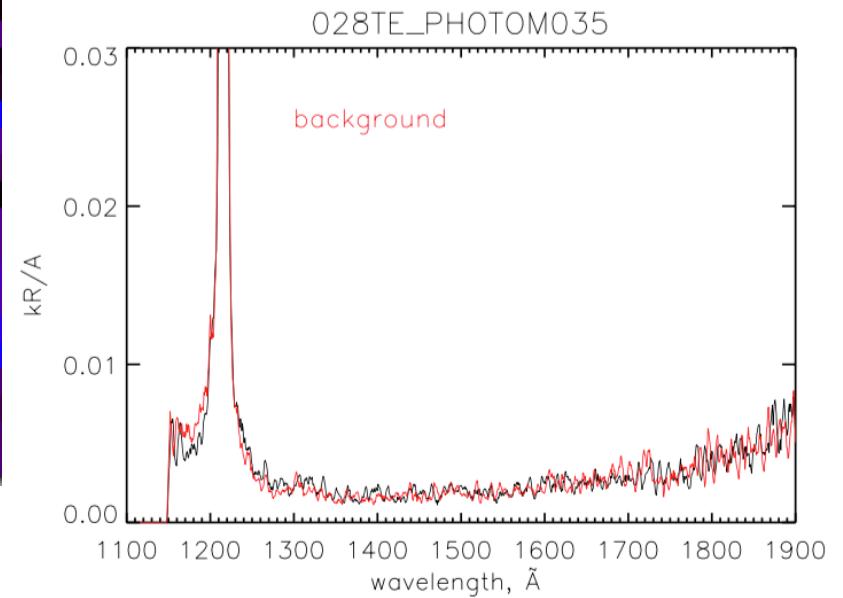
028TE_TETHYSORS



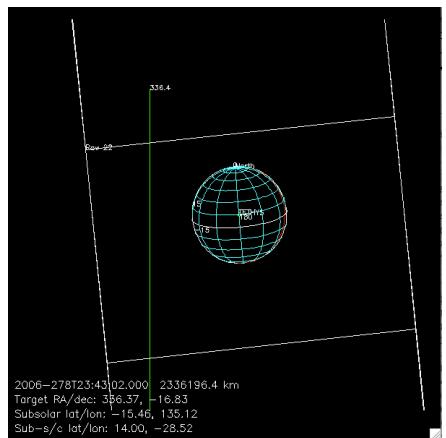
028TE_PHOTOM035_ISS
2006-254T01:38
Alt= 1,283,513 km
Longitude= 7° W
Latitude= 16.6° N
Phase= 151.1°



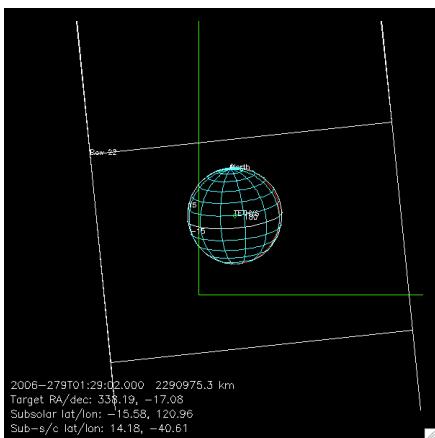
Low SNR



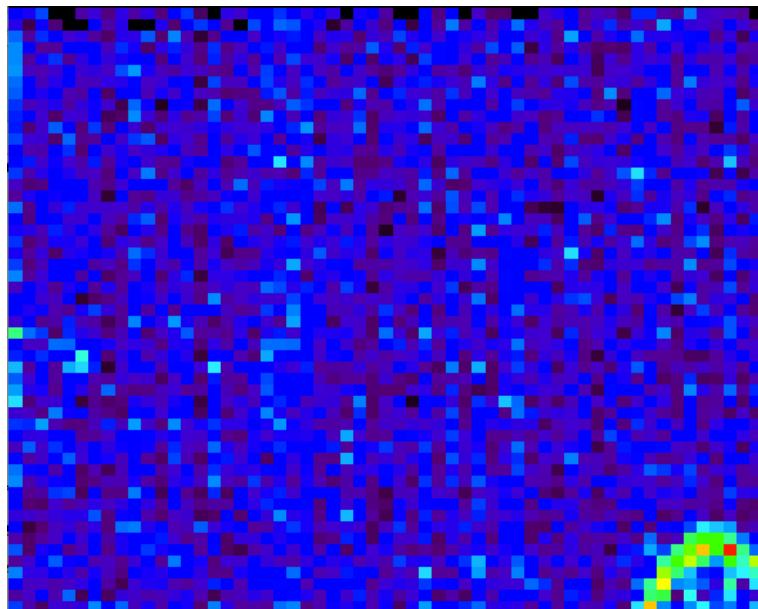
030TE_STARE001_PRIME
2006-278T23:44
Alt= 2,314,510 km
Longitude= 34°W
Latitude= 14°N
Phase= 163°



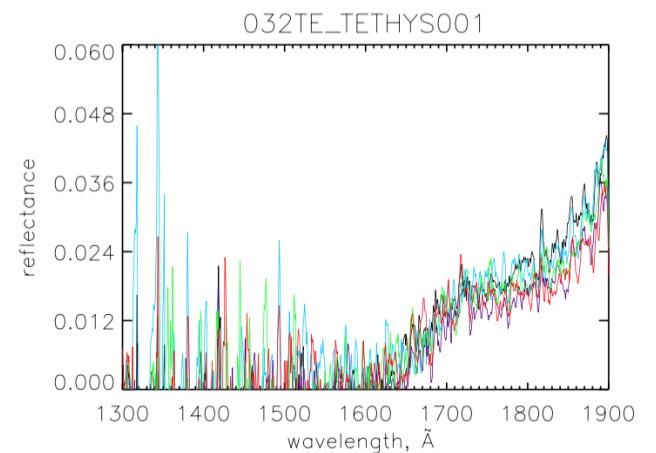
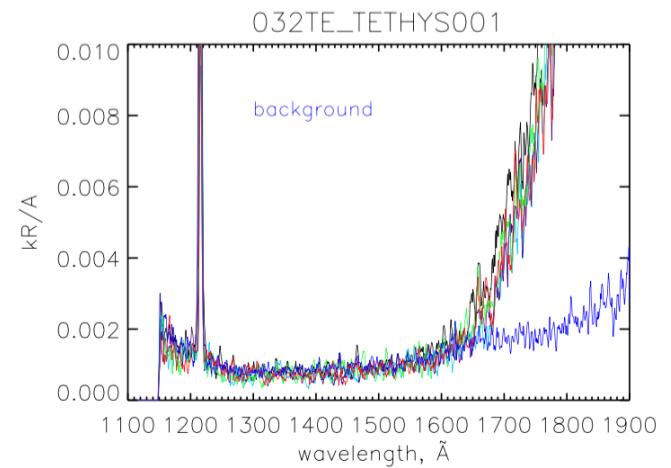
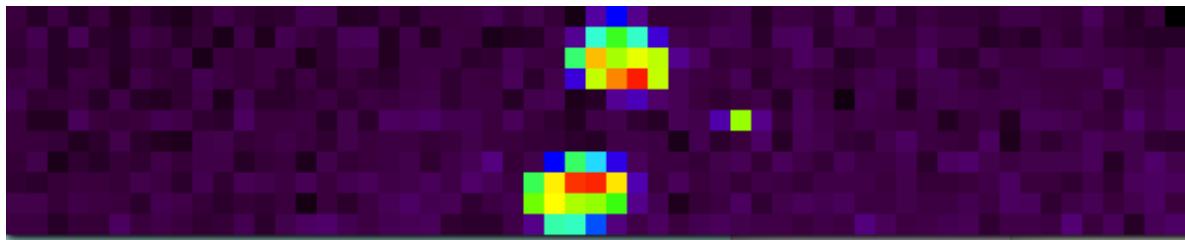
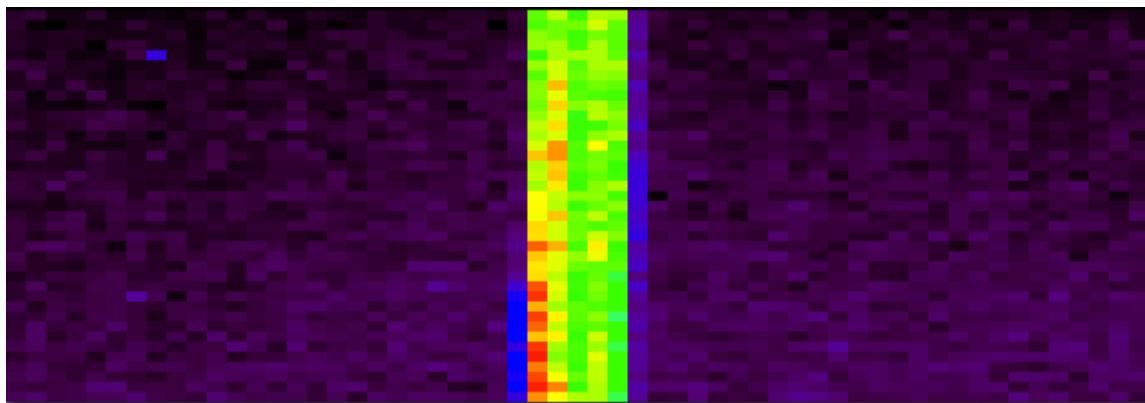
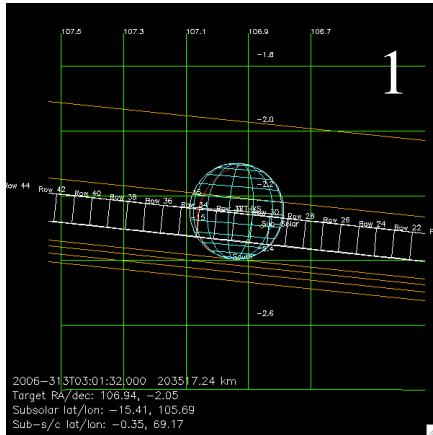
Part 1
TE in row 22



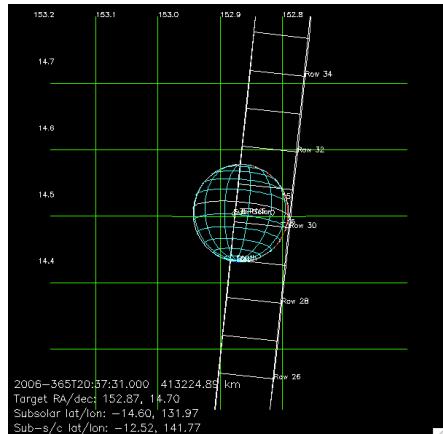
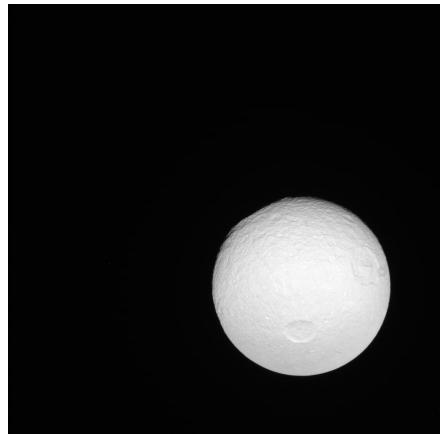
Part 2
TE in row 22



032TE_TETHYS001_VIMS
 2006-313T03:02
 Alt= 215,476 km
 Longitude= 290°W
 Latitude= 6.5°N
 Phase= 37.1°



VIMS_036TE_TETHYS001_PRIME



036TE_ICYLON001_VIMS

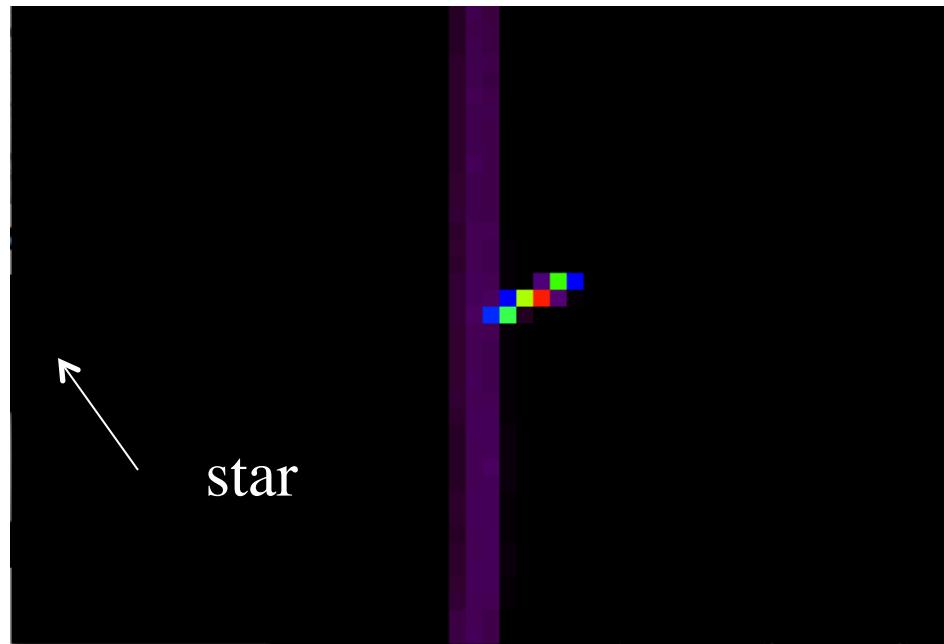
2006-365T20:38

Alt= 429,998 km

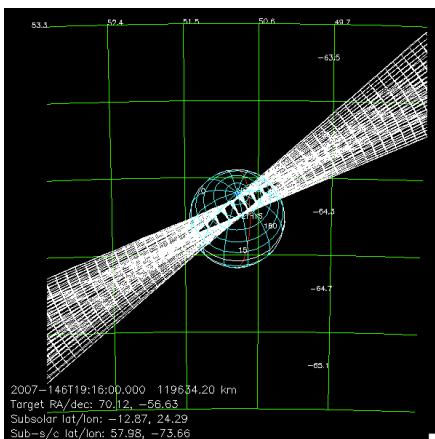
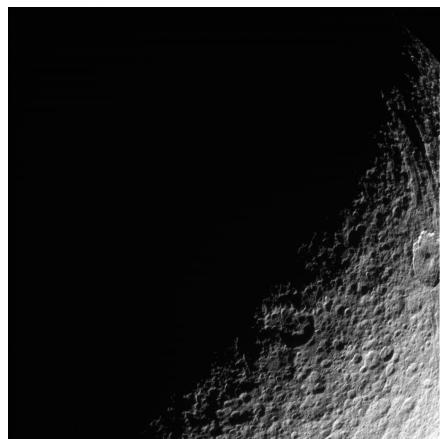
Longitude= 224°W

Latitude= 10°S

Phase= 10°



VIMS_045TE_TETHYS001_PRIME



045TE_ICYTHON001_VIMS

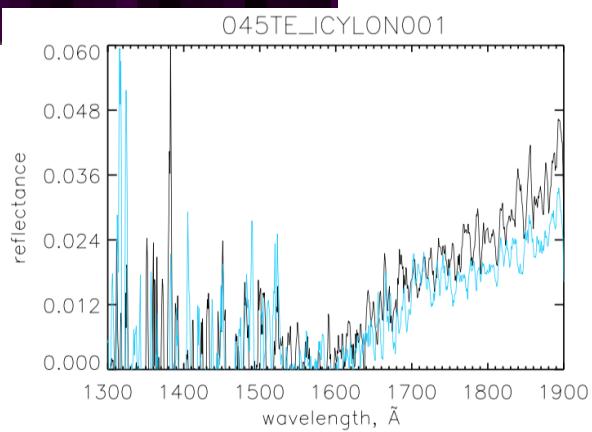
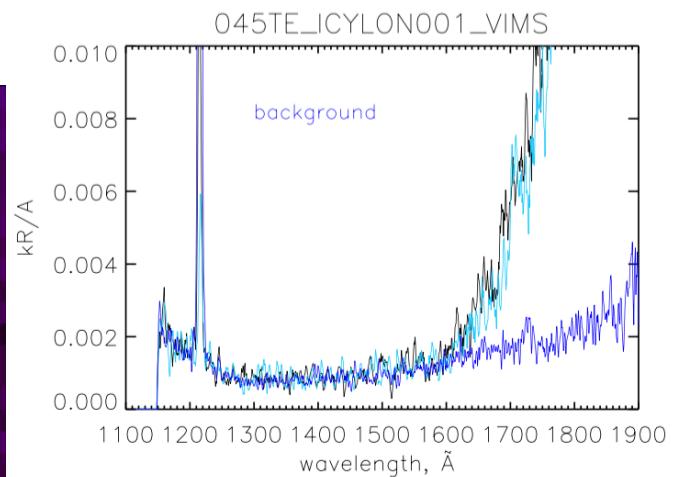
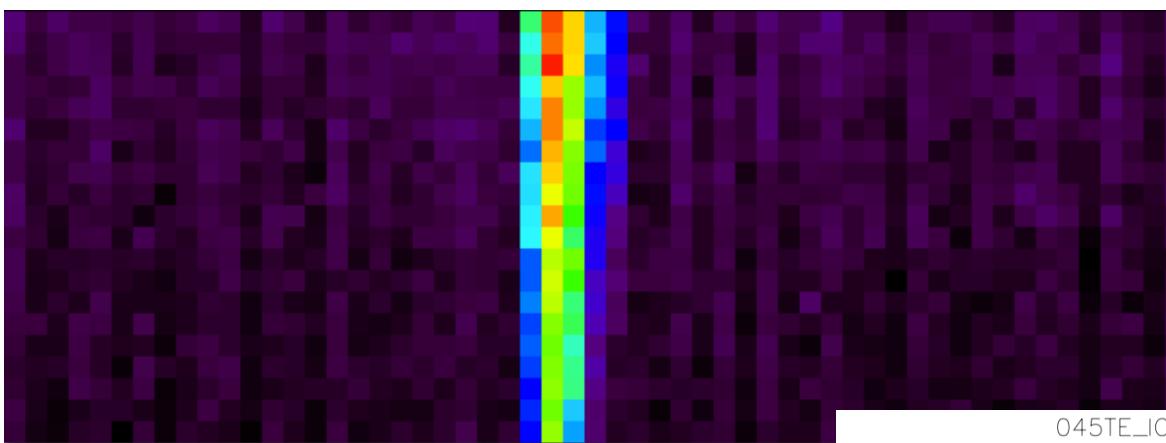
2007-146T19:17

Alt= 113,607 km

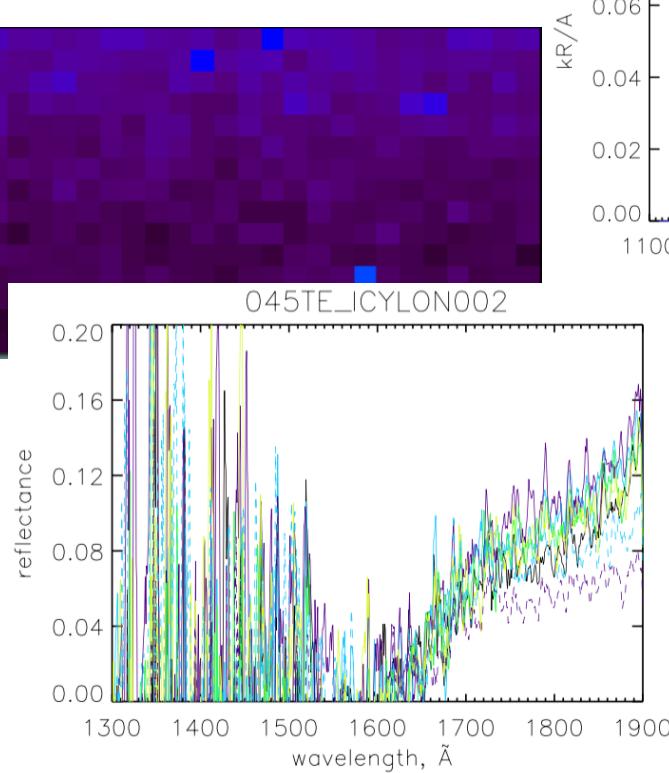
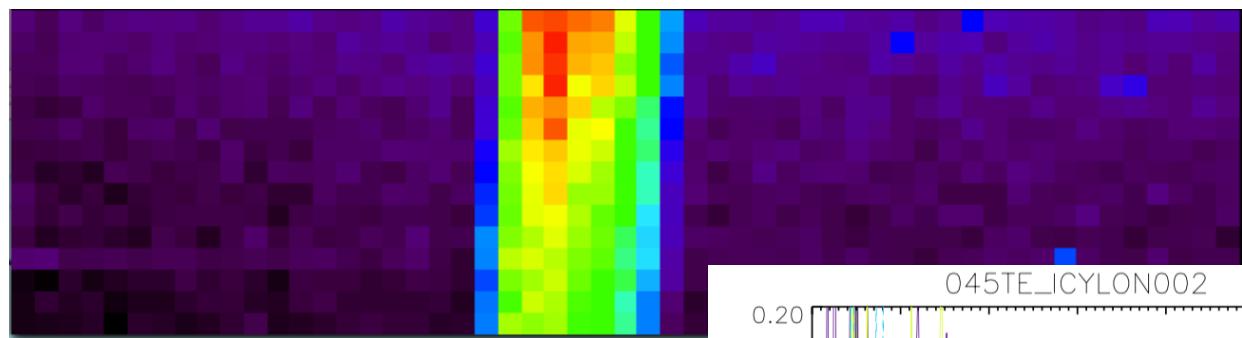
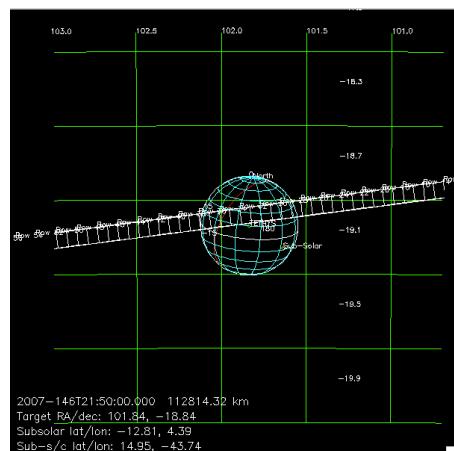
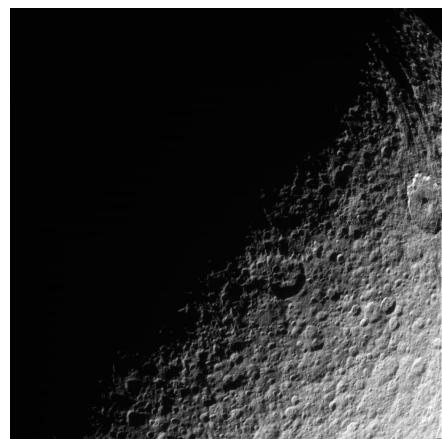
Longitude= 67°W

Latitude= 54°N

Phase= 100.9°



VIMS_045TE_TETHYS002_PRIME



045TE_ICYTHON002_VIMS

2007-146T21:51

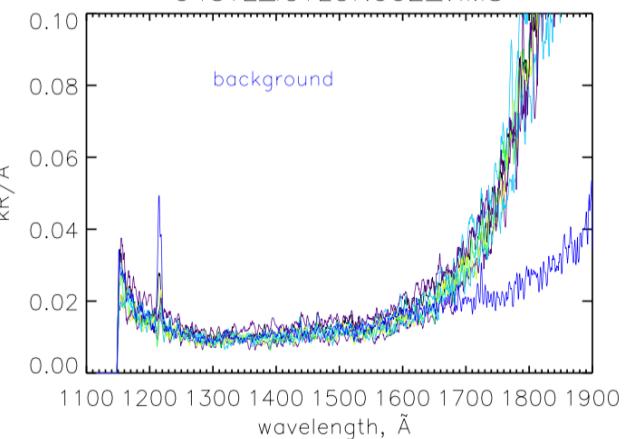
Alt=117.035 km

Longitude= 43°W

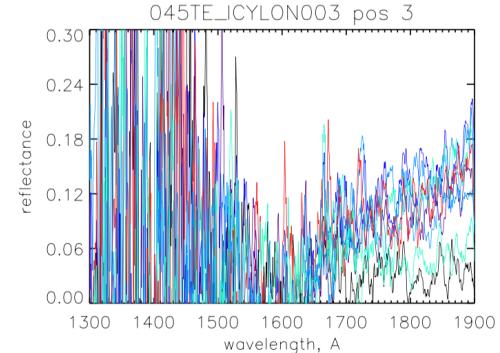
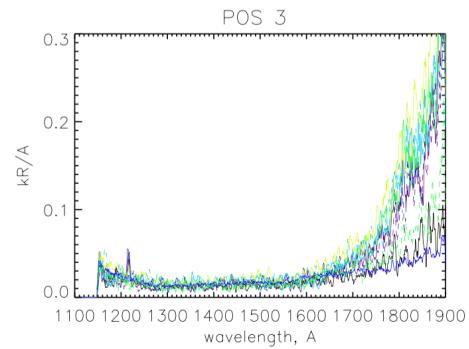
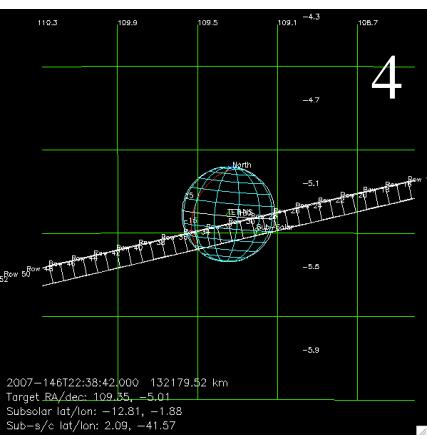
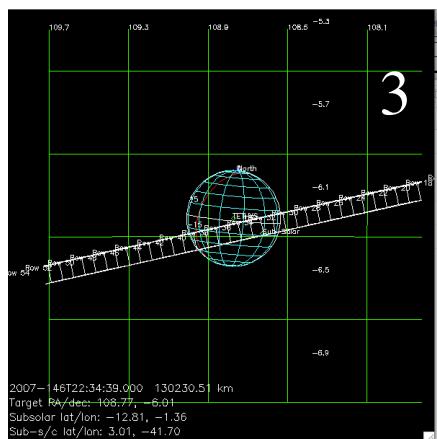
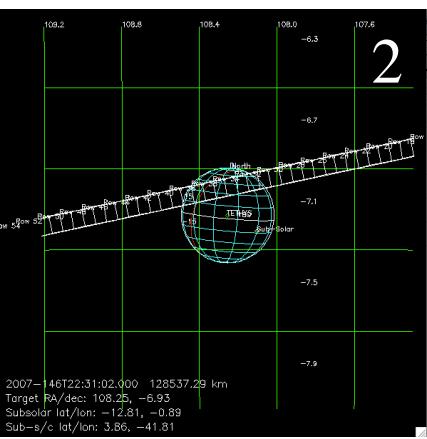
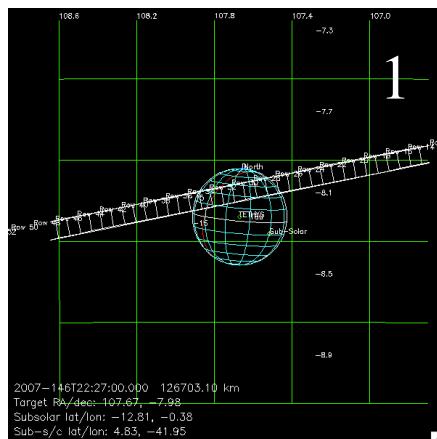
Latitude=11°N

Phase= 52°

045TE_ICYTHON002_VIMS

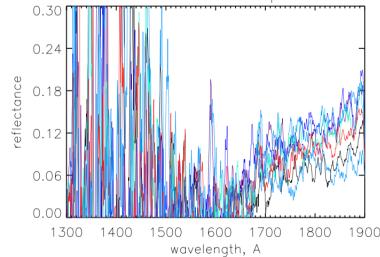
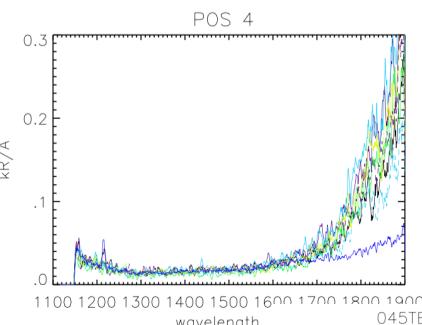
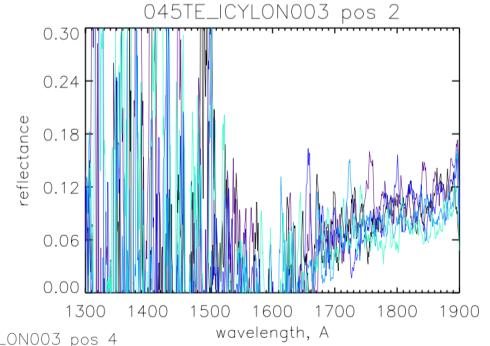
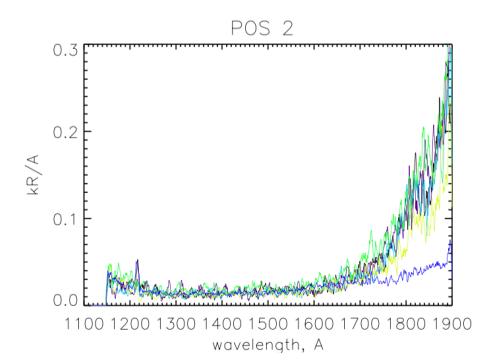
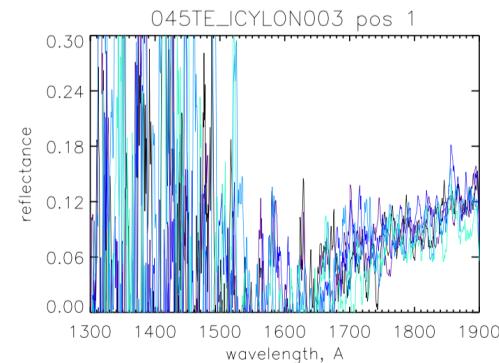
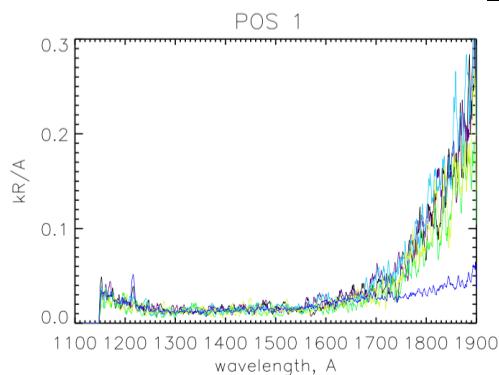


ISS_045TE_COLORF003_PRIME

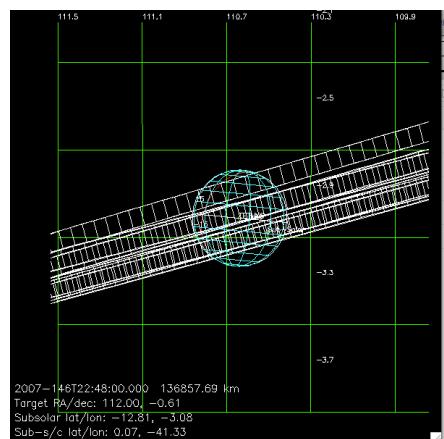


045TE_ICYLON003_ISS

2007-146T22:28
Alt= 126,171 km
Longitude= 42°W
Latitude= 4.8°N
Phase= 45.8°



CIRS_045TE_TEFP3MAP001_PRIME



045TE_ICYLON001_CIRS

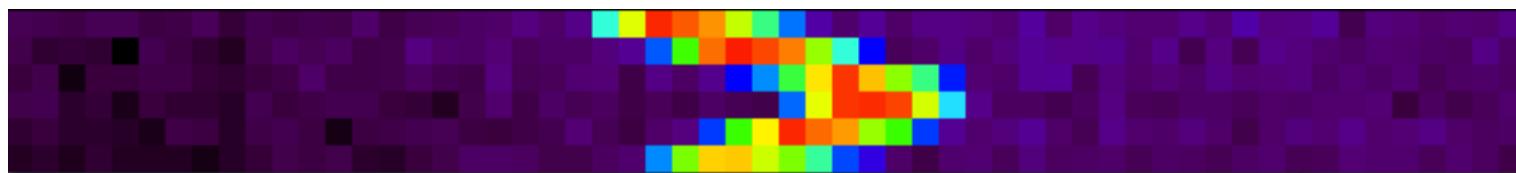
2007-146T22:48

Alt= 138,969 km

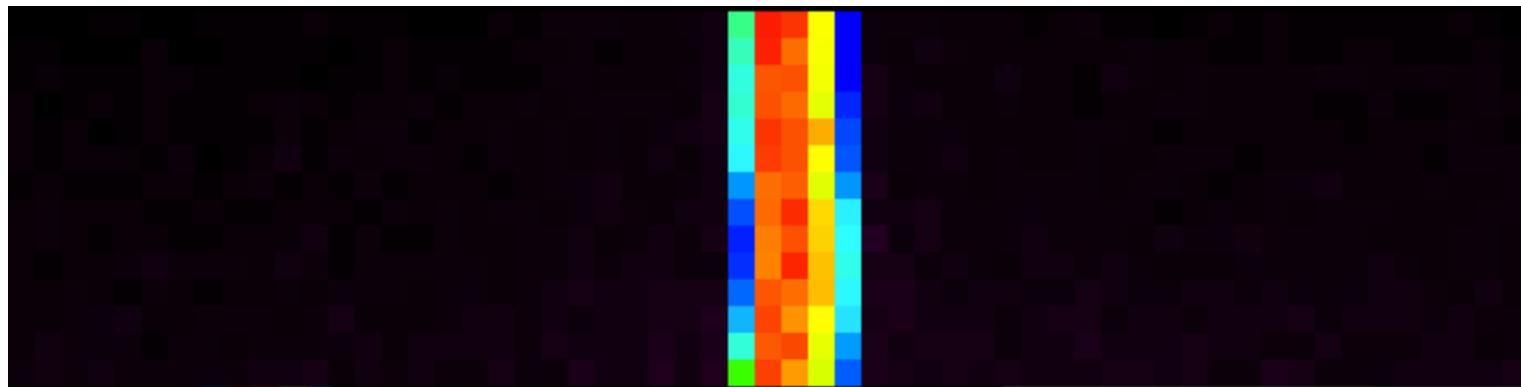
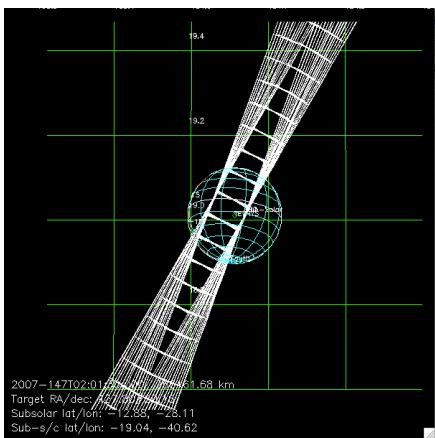
Longitude= 41°W

Latitude= 1°S

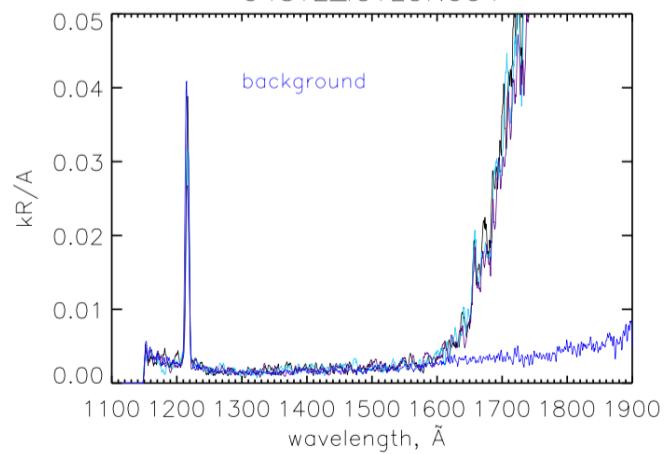
Phase= 39.7°



ISS_045TE_GLOCOL001_PRIME



045TE_ICYLON004



045TE_ICYLON004_ISS

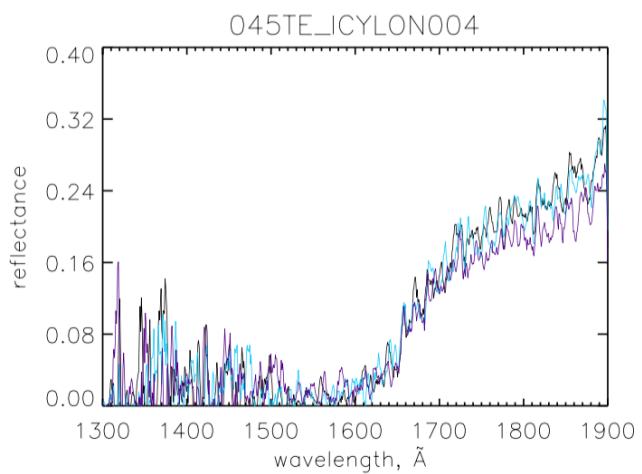
2007-147T02:02

Alt= 274,517 km

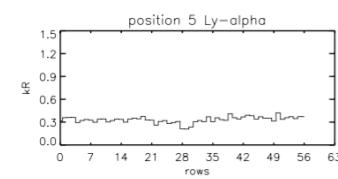
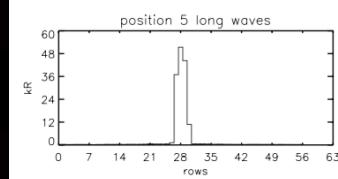
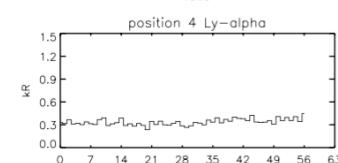
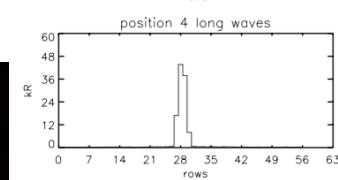
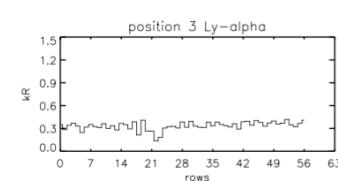
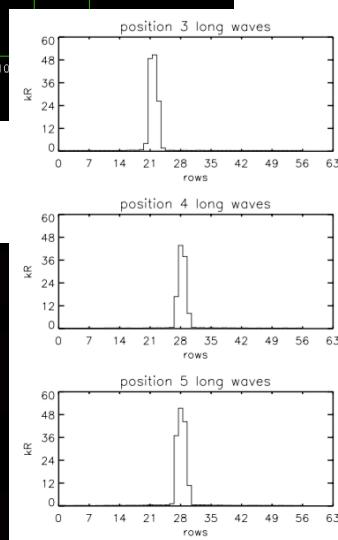
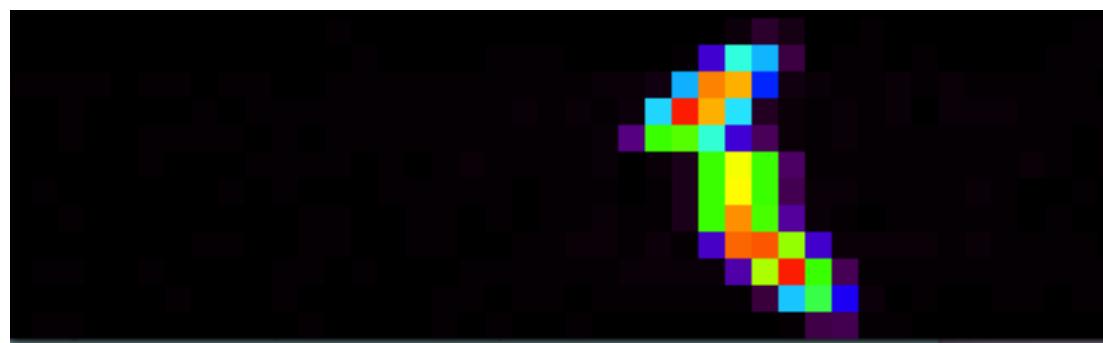
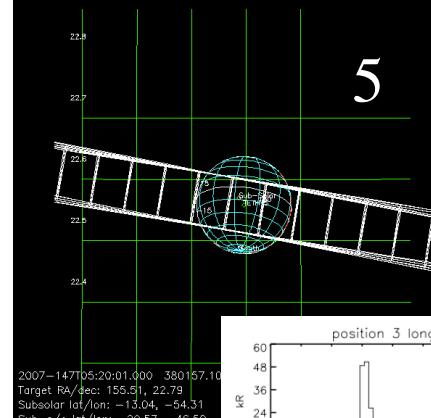
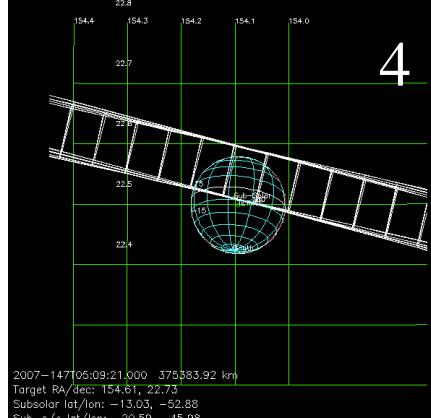
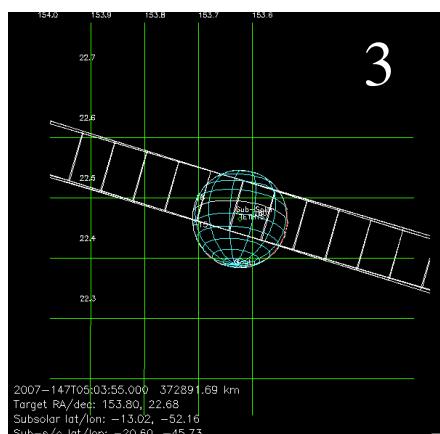
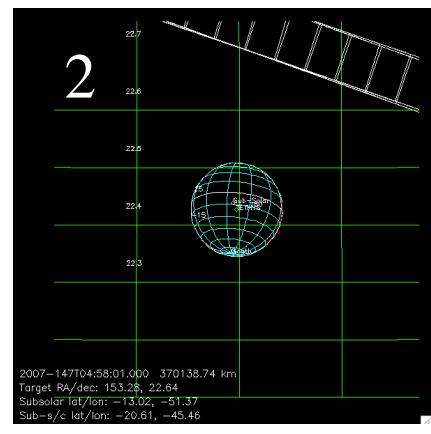
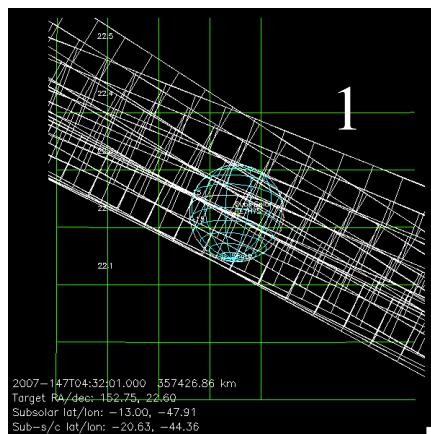
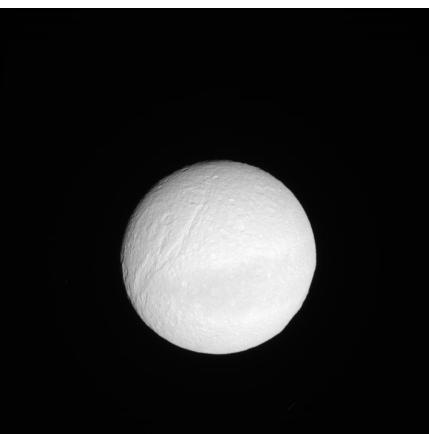
Longitude= 41°W

Latitude= 19°S

Phase= 12.5°

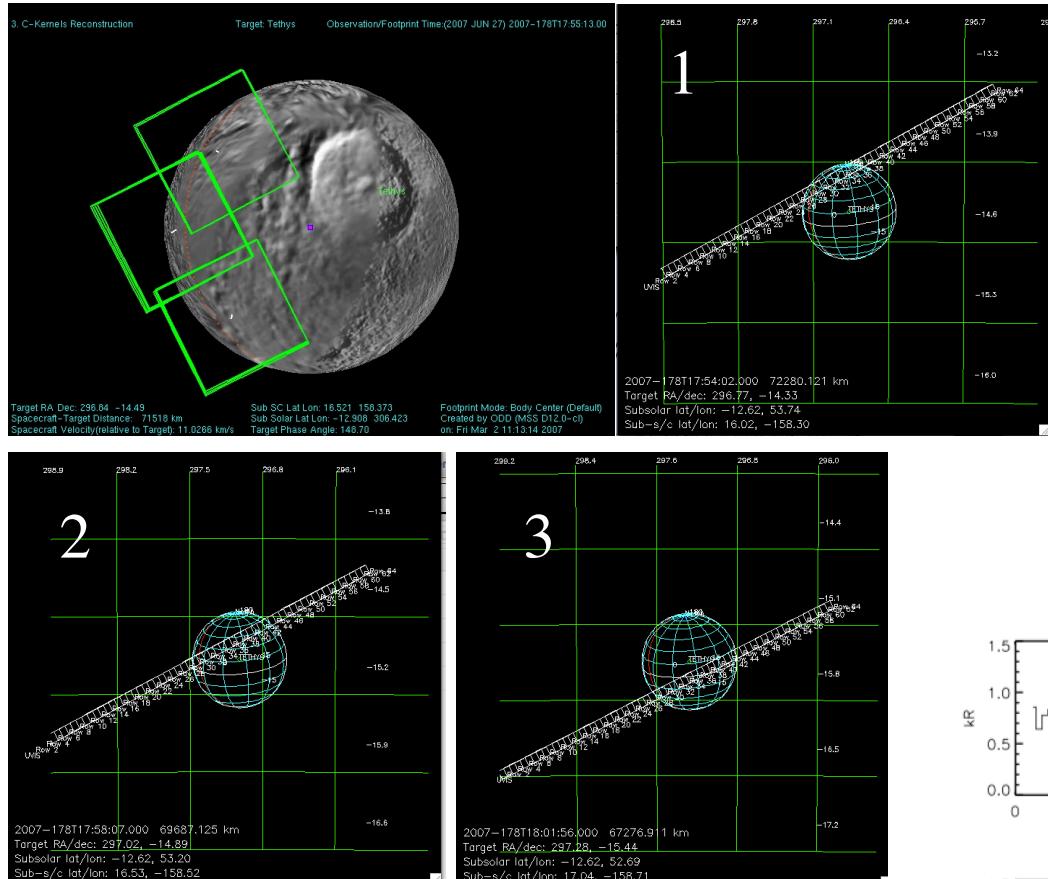


CIRS_045TE_FP3GLOBAL383_PRIME



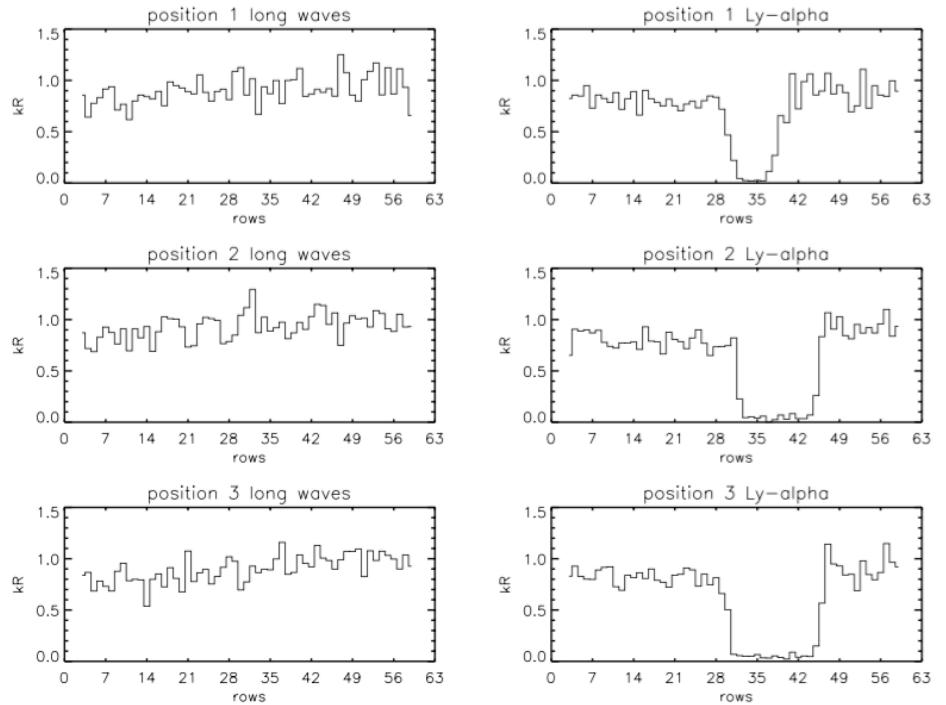
045TE_ICYLON005_CIRS
2007-147T04:33
Alt= 362,356 km
Longitude= 45°W
Latitude= 20°S
Phase= 8.5°

ISS_047TE_PHOTOM001_PRIME

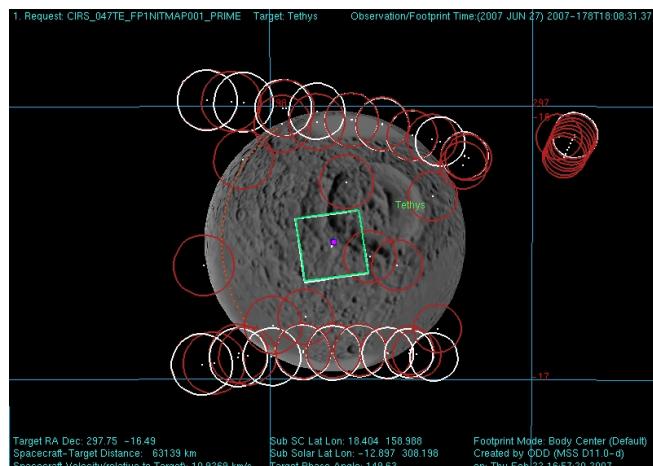


047TE_ICYLON001_ISS
2007-178T17:55
Alt= 71,746 km
Longitude= 158°W
Latitude= 16°N
Phase= 148.6°

Most rows are
on night side



CIRS_047TE_FP1NITMAP001_PRIME



Fast scan; low SNR

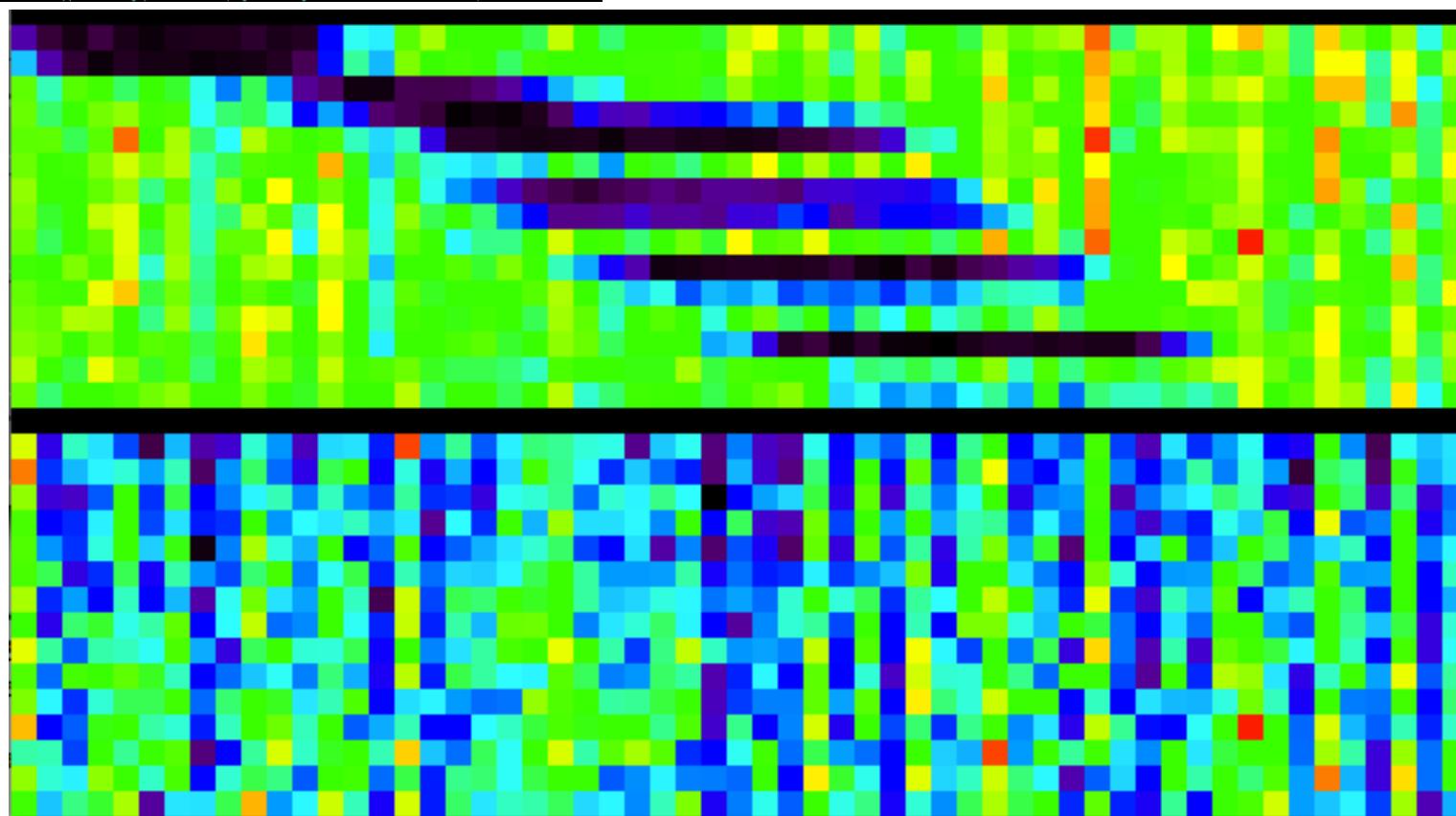
047TE_ICYLON002_CIRS

2007-178T18:10

Alt= 63,305 km

Longitude= 170°W

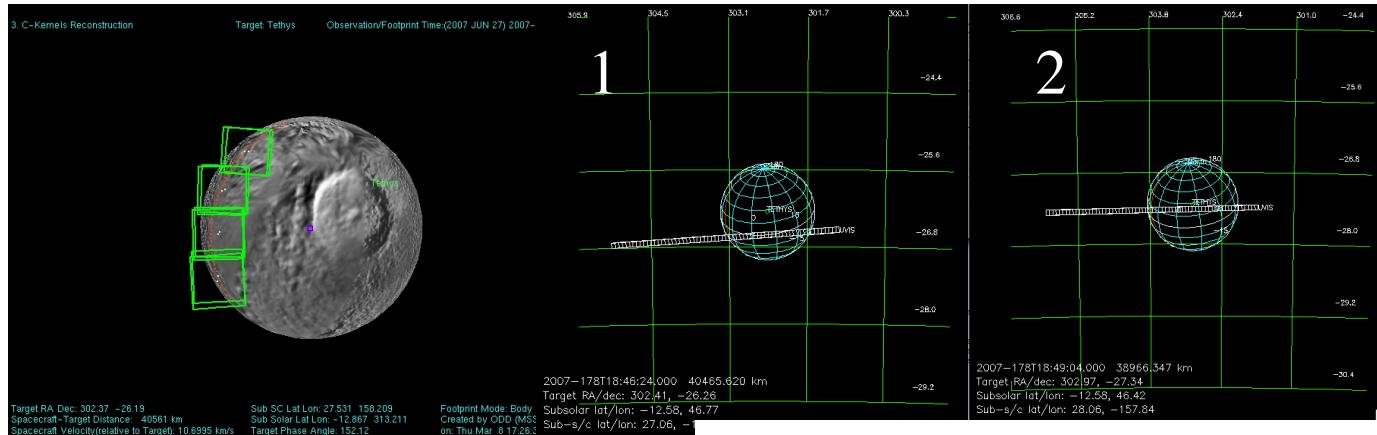
Phase= 139.4°



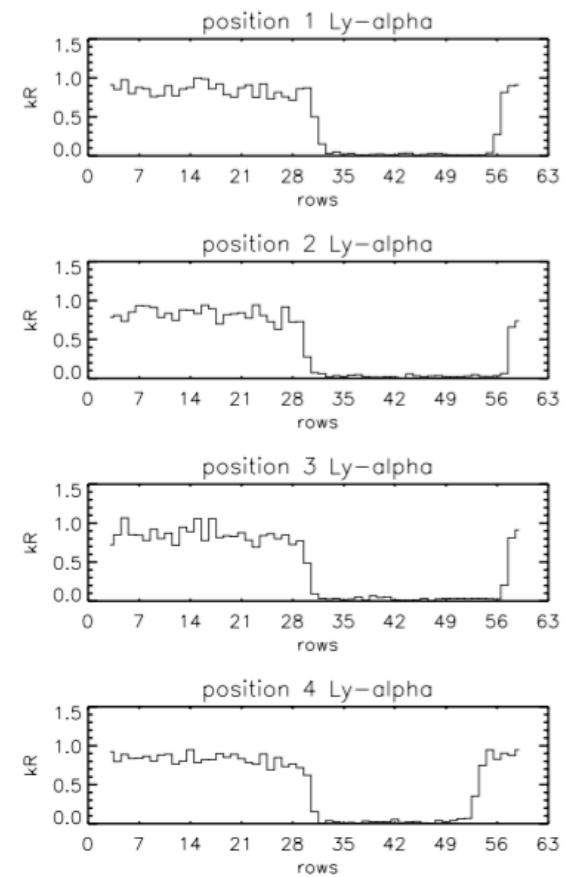
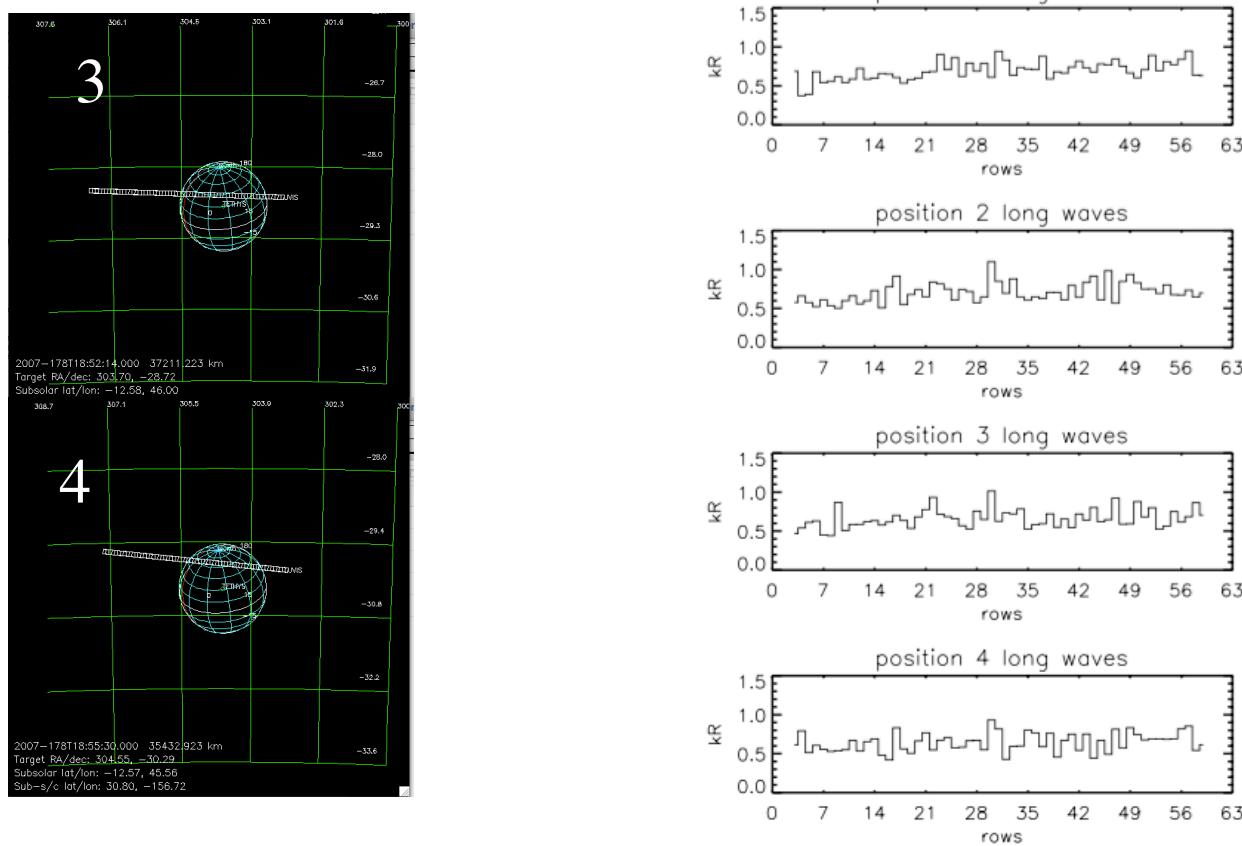
Ly-a

Long waves

ISS_047TE_GEOLOG001_PRIME



047TE_ICYTHON003_ISS
2007-178T18:47
Alt= 41,802 km
Longitude= 176°W
Latitude= 27°N
Phase= 137.5°



CIRS_047TE_FP1WINPOL001_PRIME

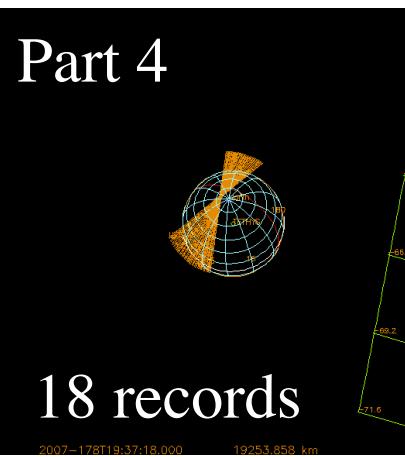
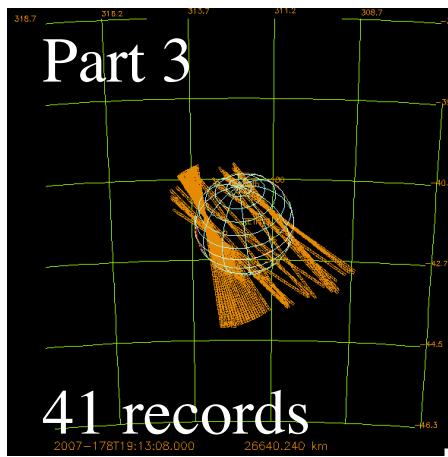
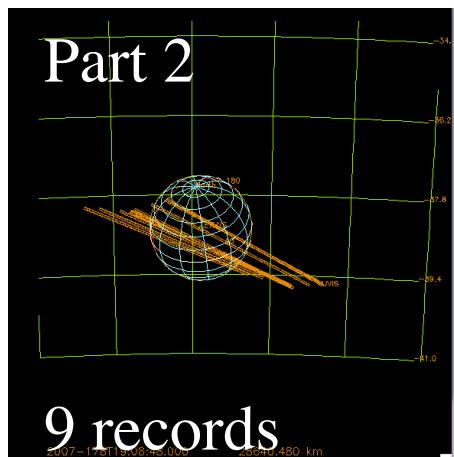
047TE_ICYMAP001_CIRS

2007-178T19:00

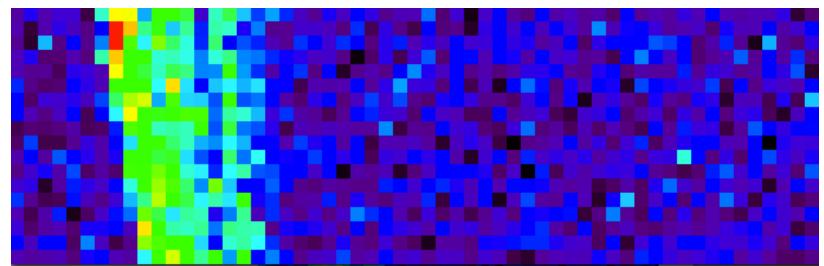
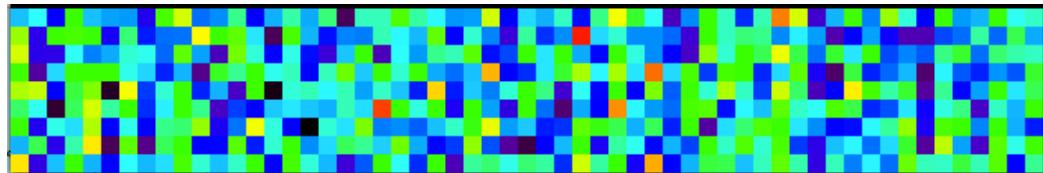
R= 34,501 km

Longitude= 179°W

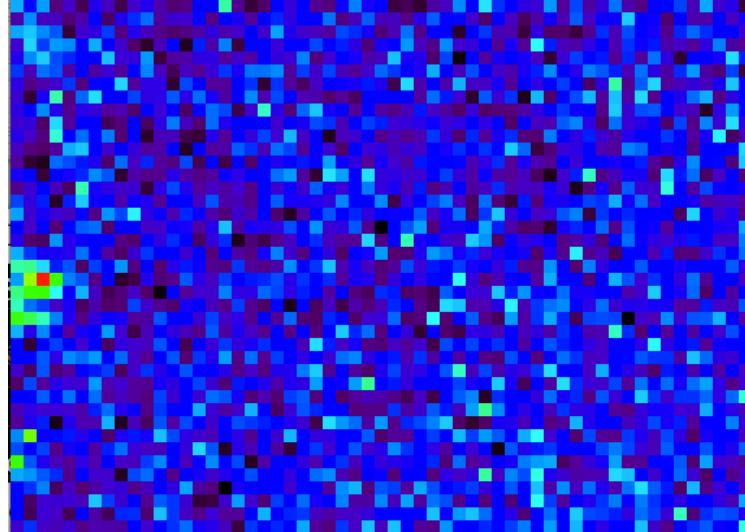
Phase= 135.6°



Part 1: FUV off body (9 records)



Part 2 (fast scan)



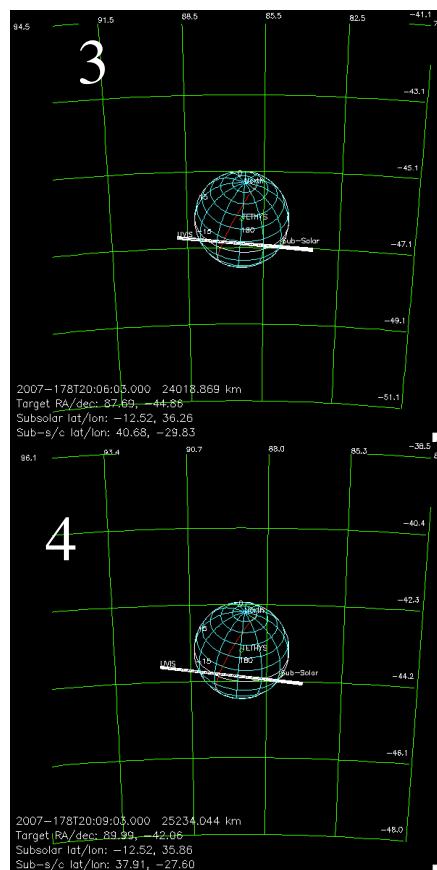
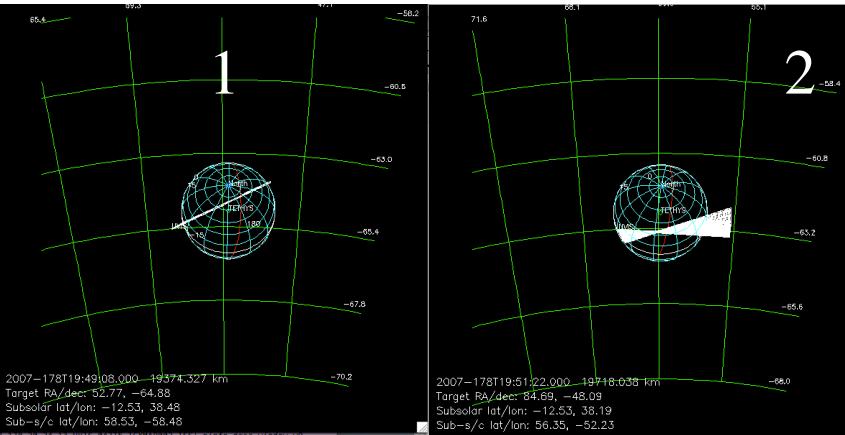
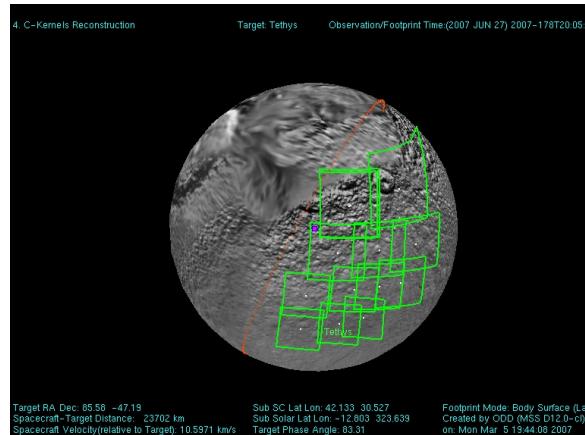
Part 4

Tethys bright crescent

Tethys bright crescent

Part 3

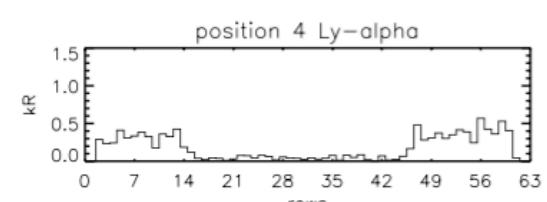
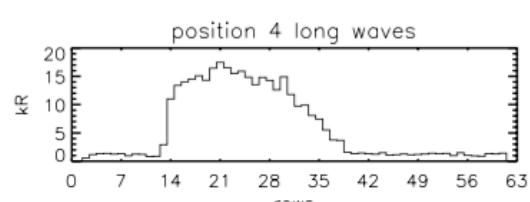
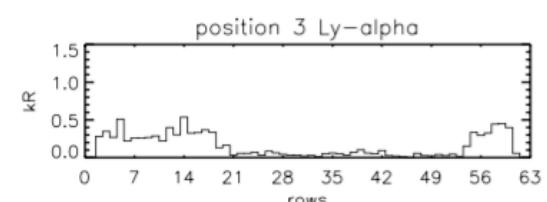
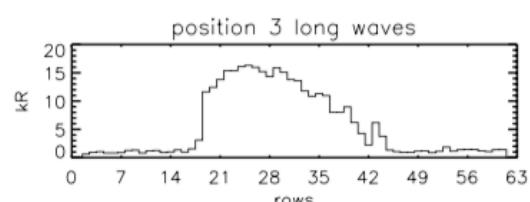
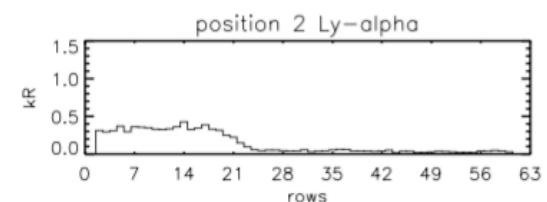
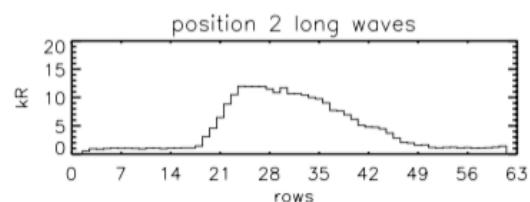
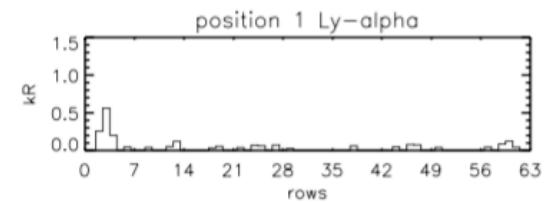
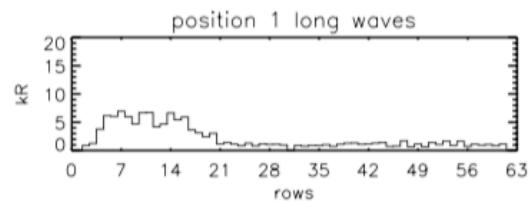
ISS_047TE_GEOLOG002_PRIME



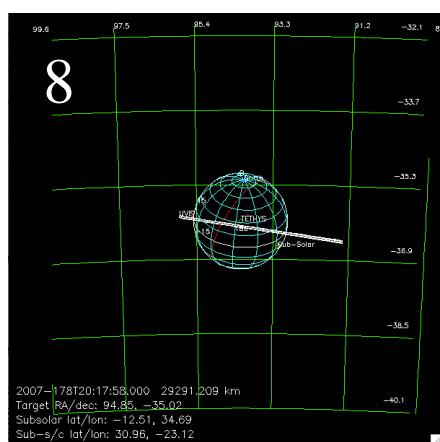
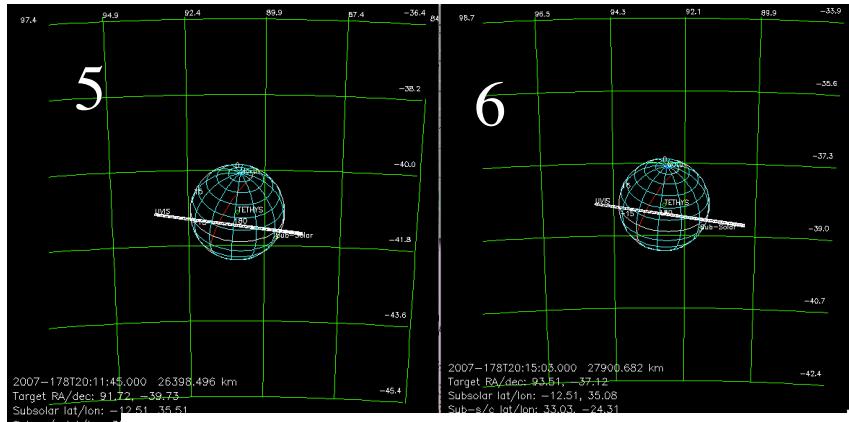
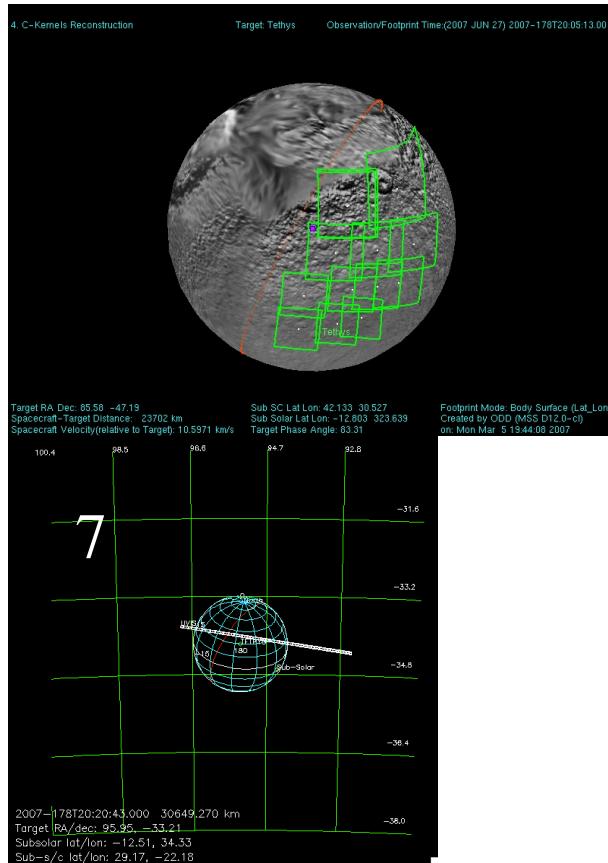
2007-178T20:09:05.000 25234.044 km
Target RA/dec: 89.99, -42.06
Subsolar lat./lon.: -12.52, 35.86
Sub-s/c lat./lon: 37.91, -27.60

047TE_ICYMAP002_ISS

2007-178T19:49
Alt=18,847 km
Longitude= 58°W
Latitude=58°N
Phase= 105°

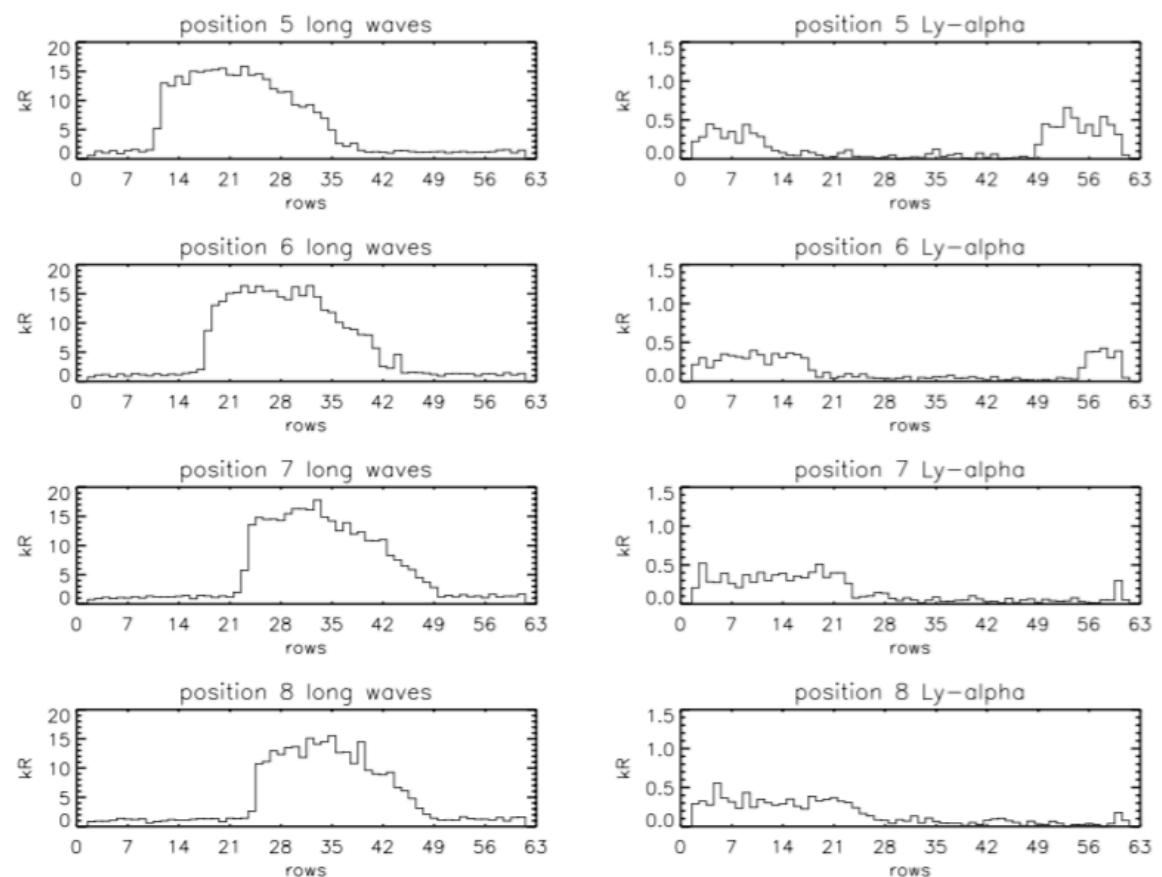


ISS_047TE_GEOLOG002_PRIME

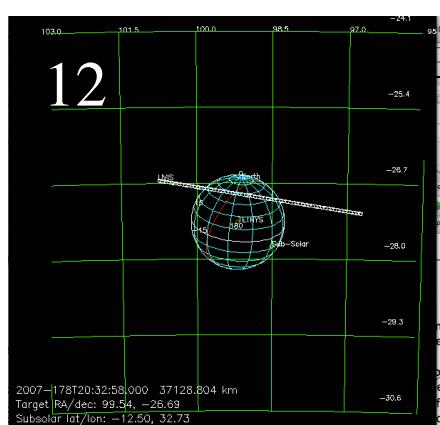
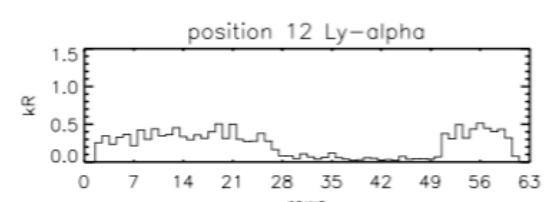
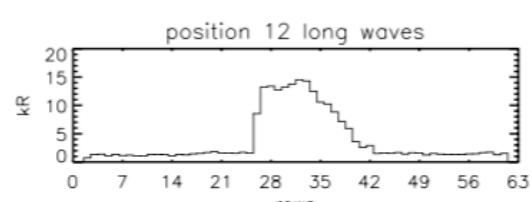
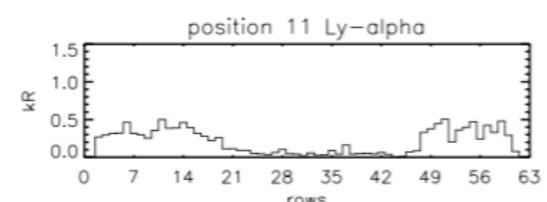
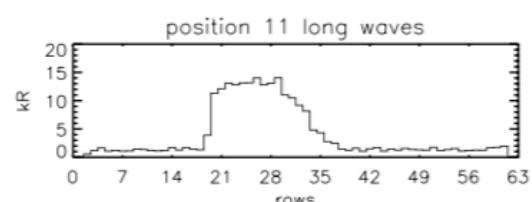
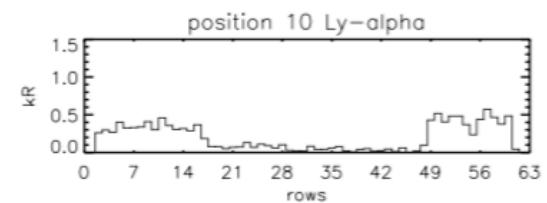
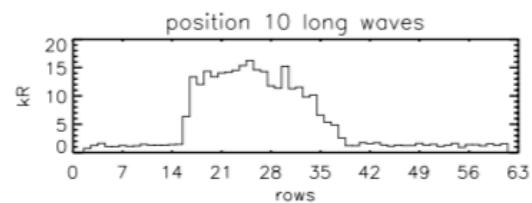
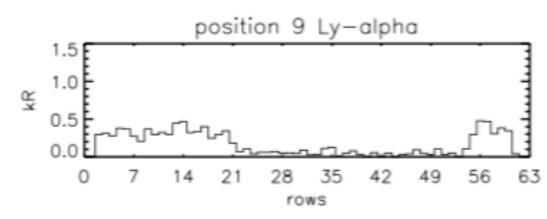
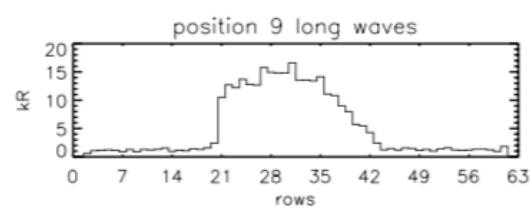
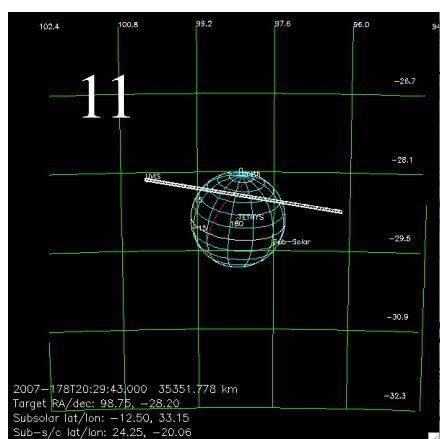
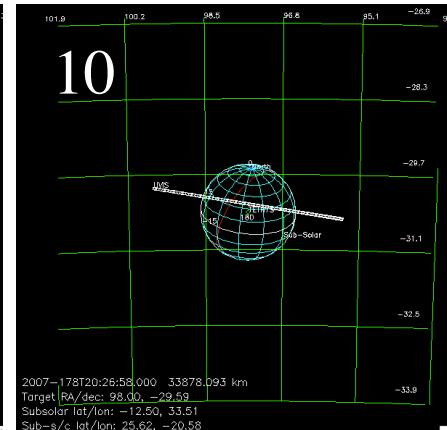
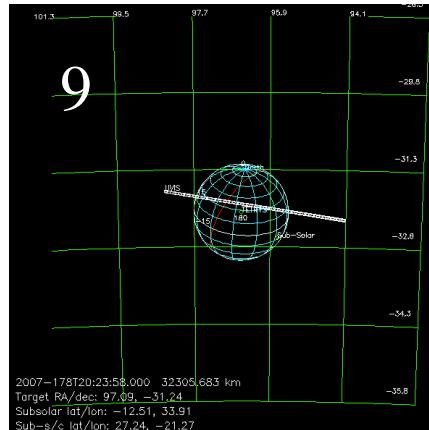
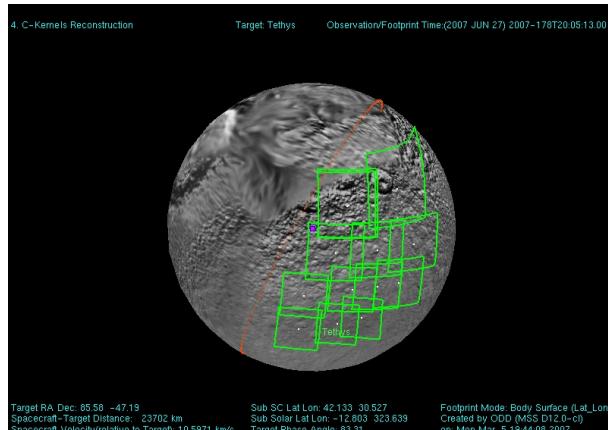


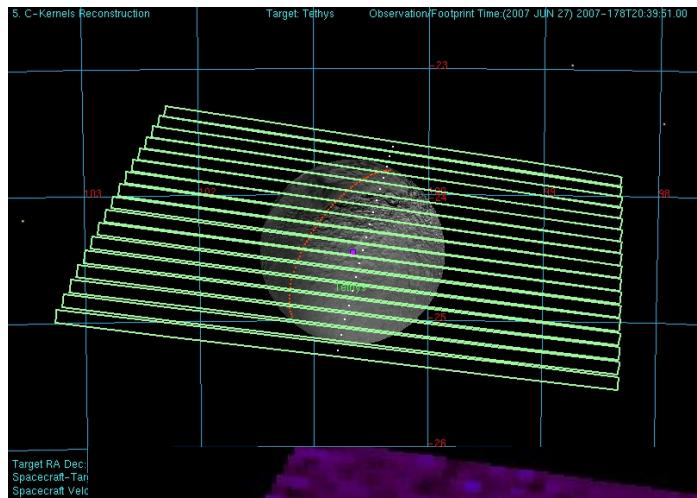
047TE_ICYMAP002_ISS

Cont'd

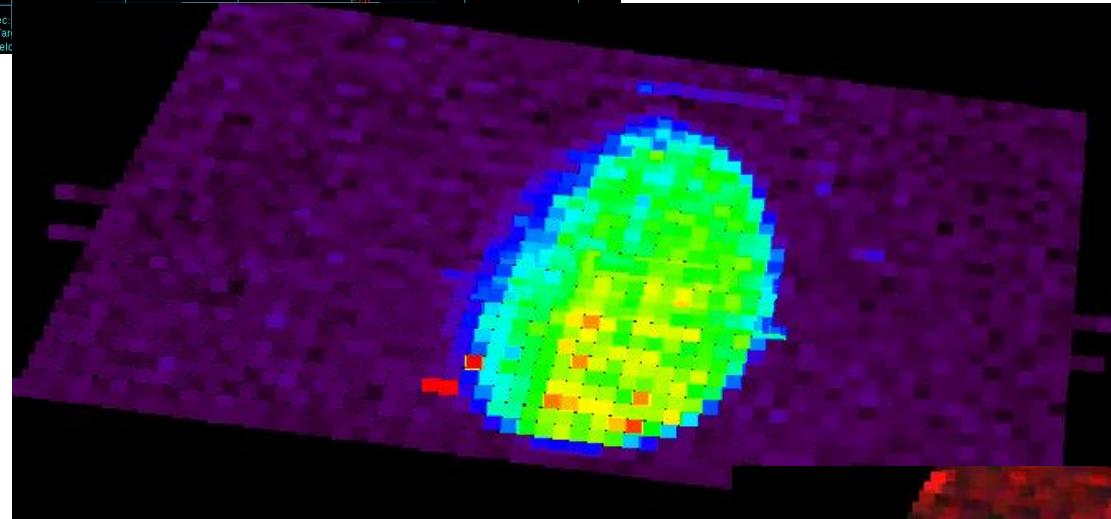


ISS_047TE_GEOLOG002_PRIME

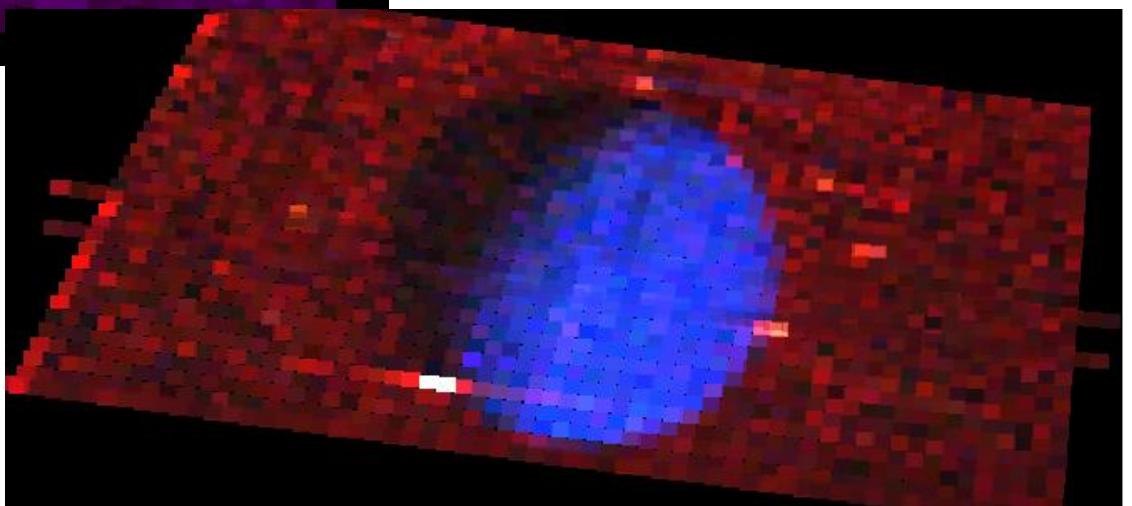




047TE_ICYMAP003_PRIME
2007-178T20:39
 $R = 33,511 \text{ km}$
Longitude= 2°W
Phase= 50.7°

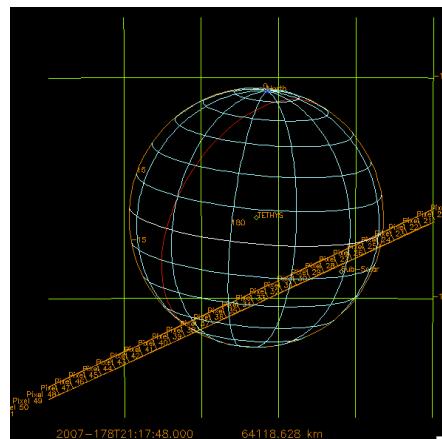


Long wavelengths



3-color

VIMS_047TE_TETHYS001_PRIME



047TE_ICYMAP003_VIMS

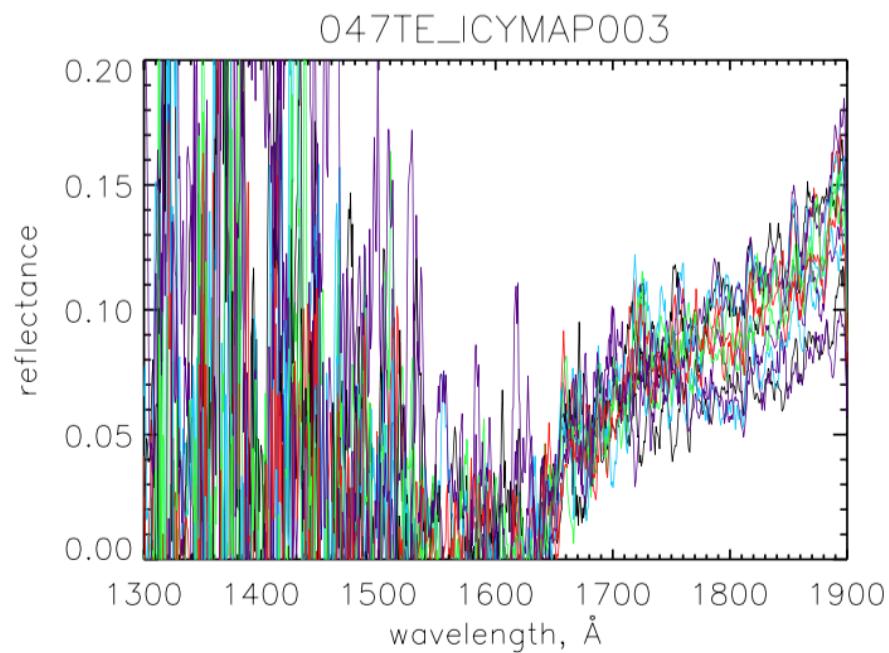
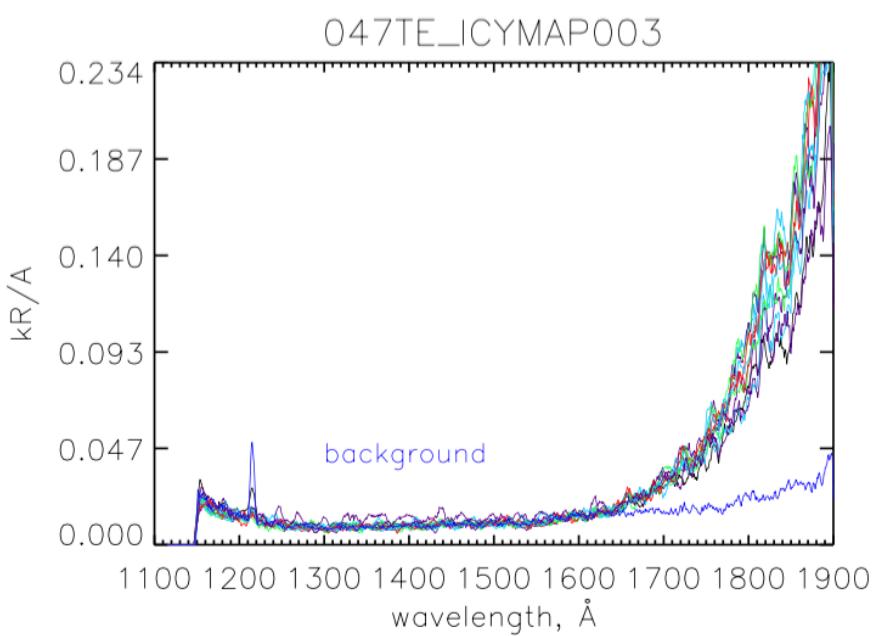
2007-178T21:18

Alt= 70,700 km

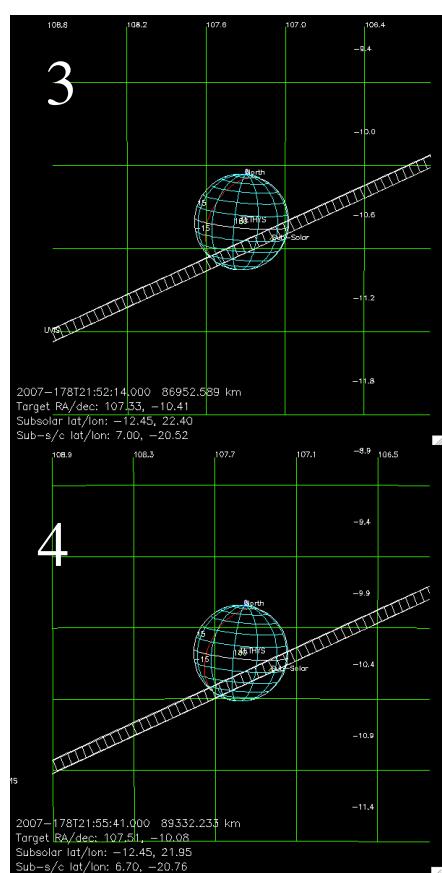
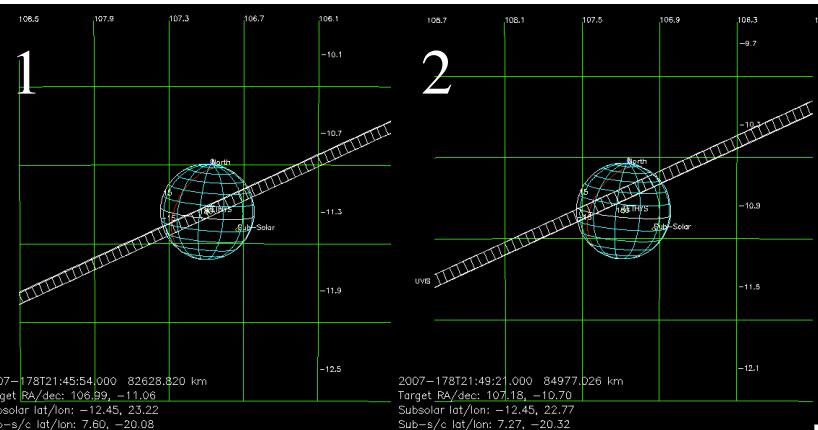
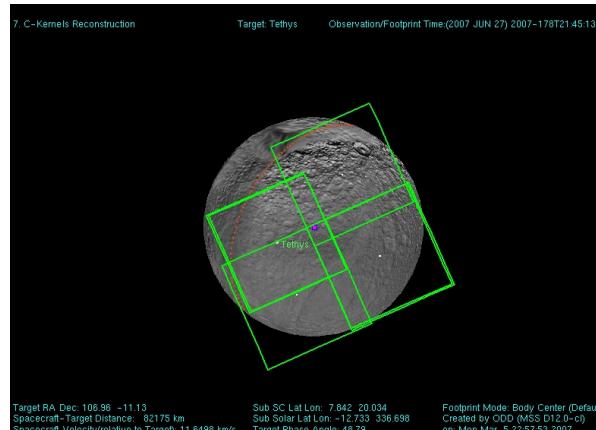
Longitude= 9°W

Latitude~40°N

Phase= 50°

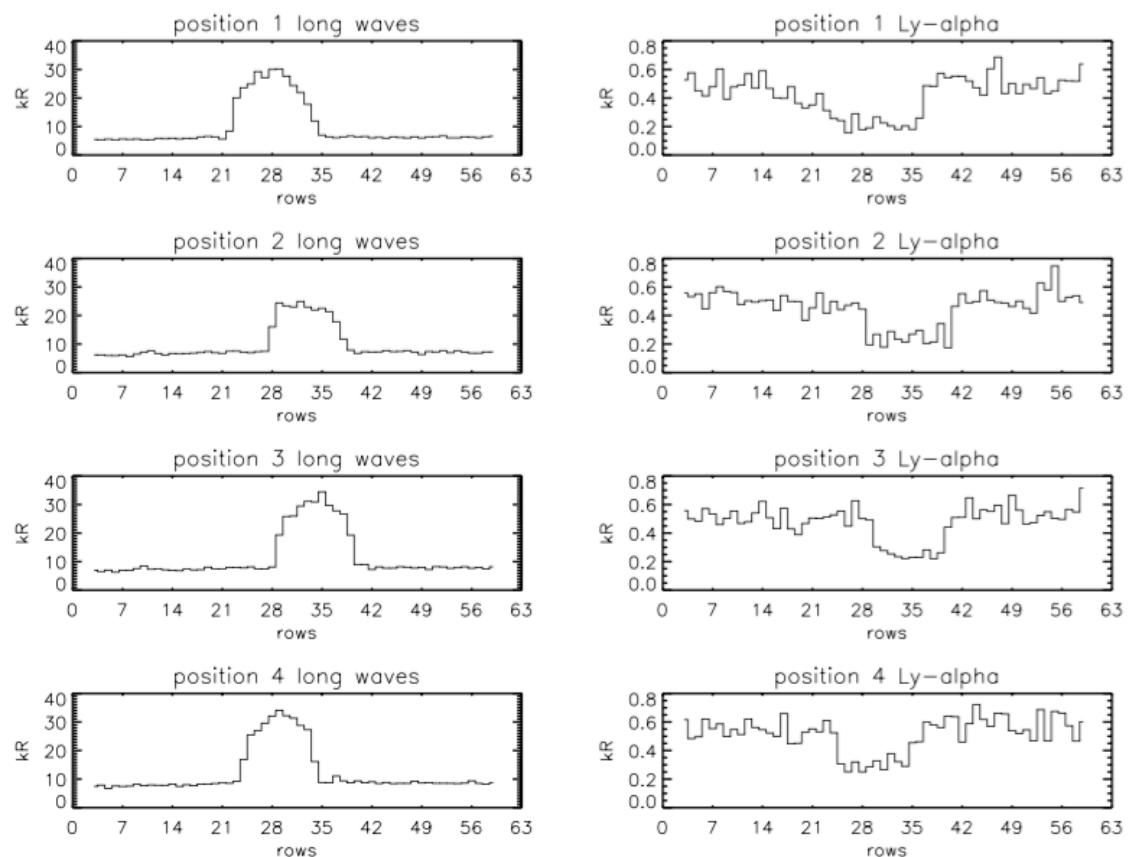


ISS_047TE_GEOLOG003_PRIME

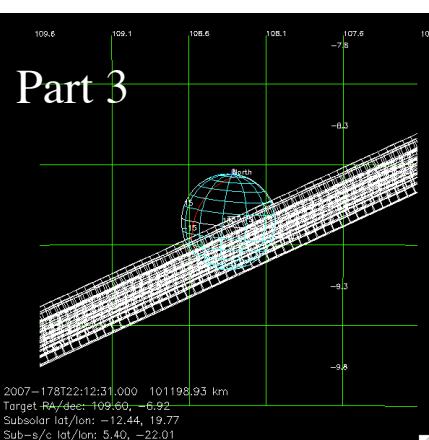
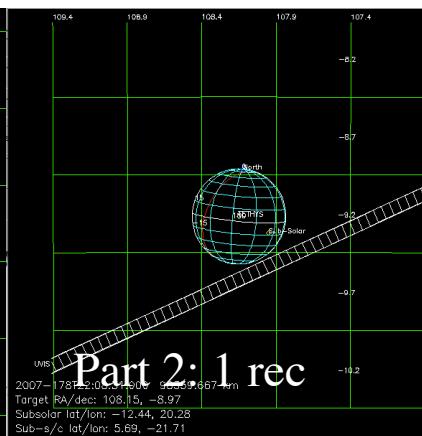
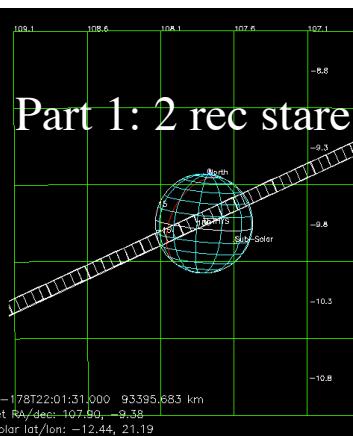
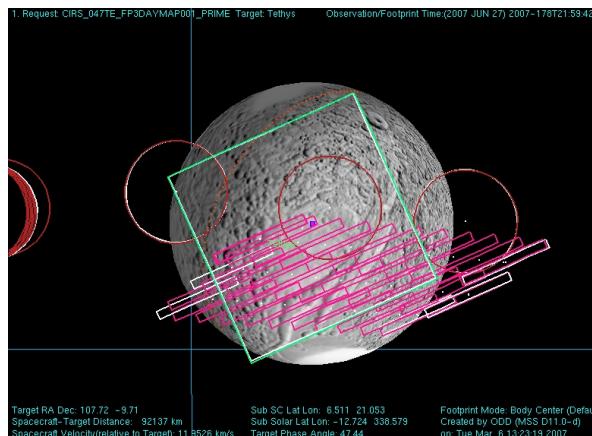


047TE_ICYTHON004_ISS

2007-178T21:46
Alt= 74,111 km
Longitude= 14°W
Latitude= 7.6°N
Phase= 42.9°



CIRS_047TE_FP3DAYMAP001_PRIME



047TE_ICYLON005_CIRS

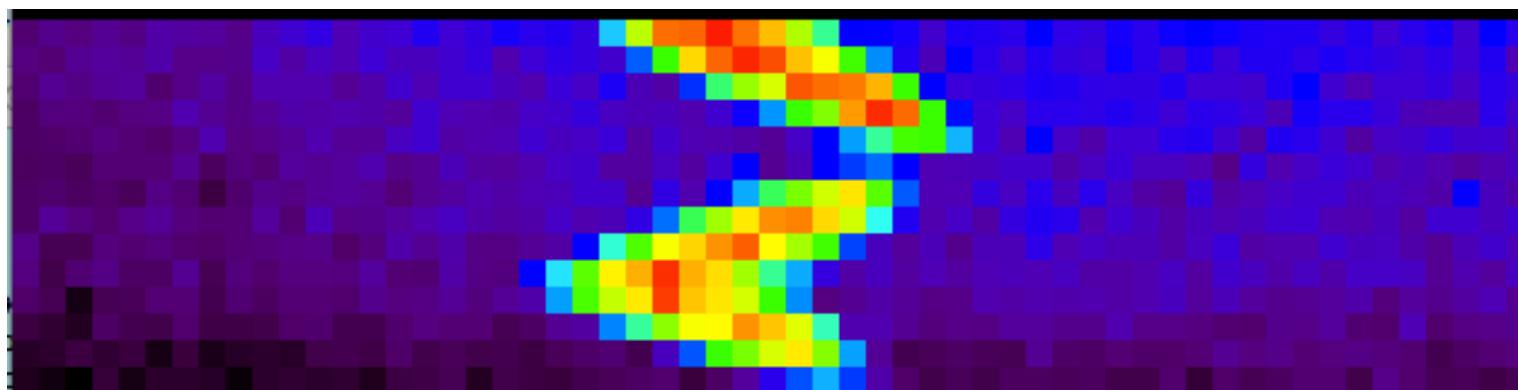
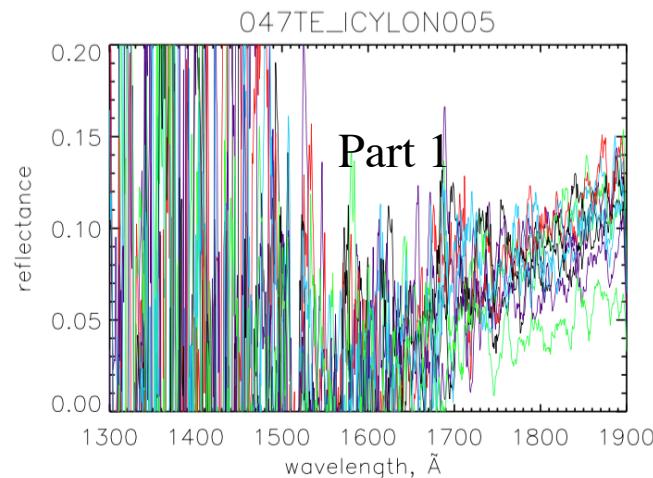
2007-178T22:02

Alt= 93,564 km

Longitude= 21°W

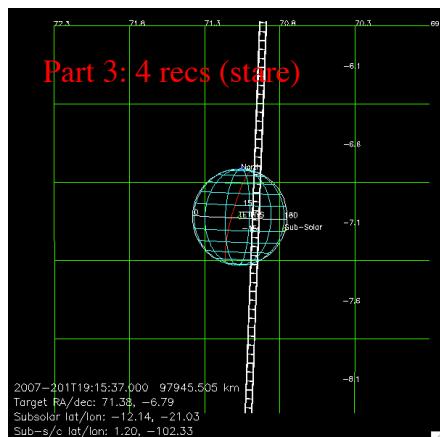
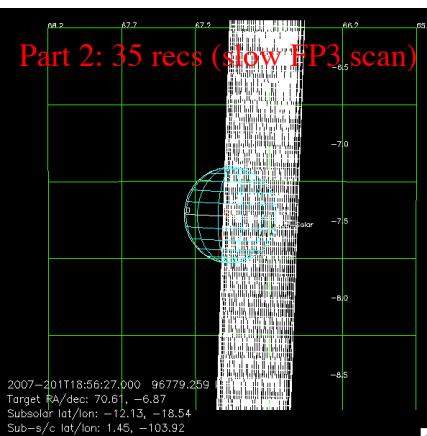
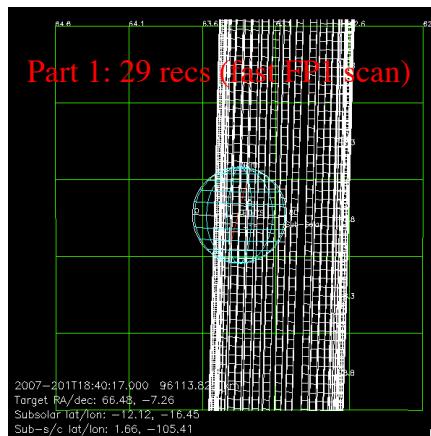
Latitude= 6°N

Phase= 47.2°

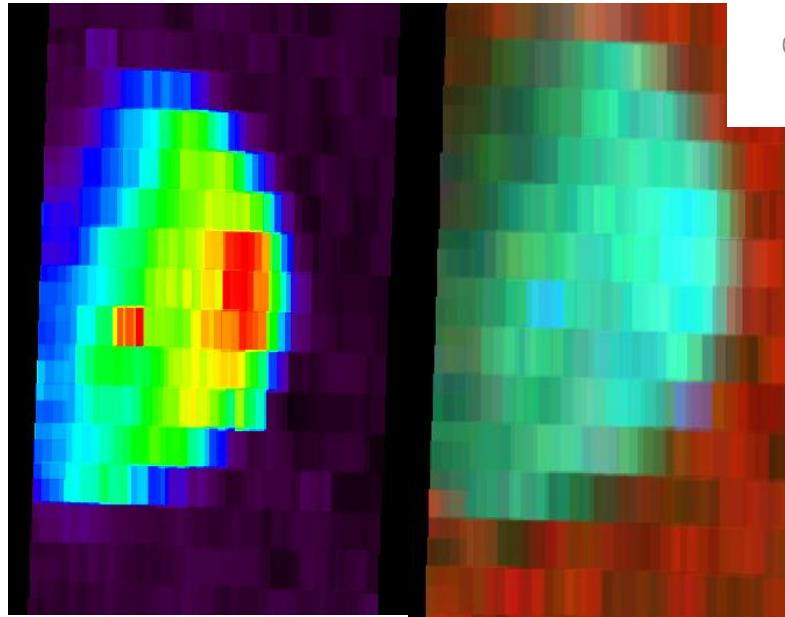


Part 3 long waves

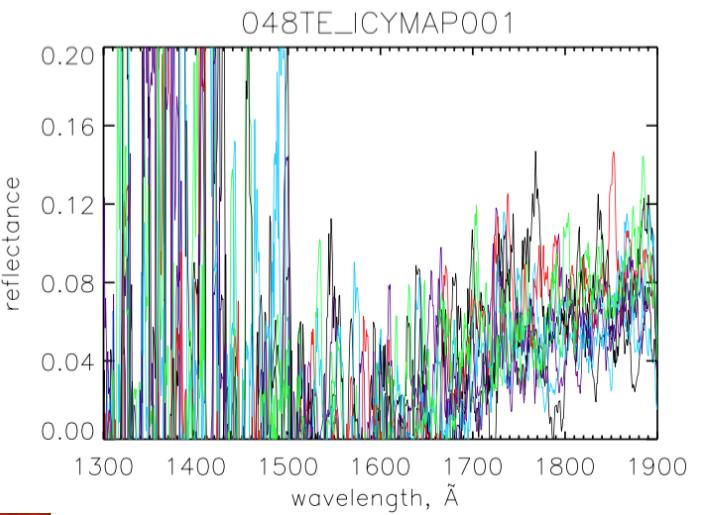
CIRS_048TE_FP1FAZ0P5388_PRIME



Part 2 images

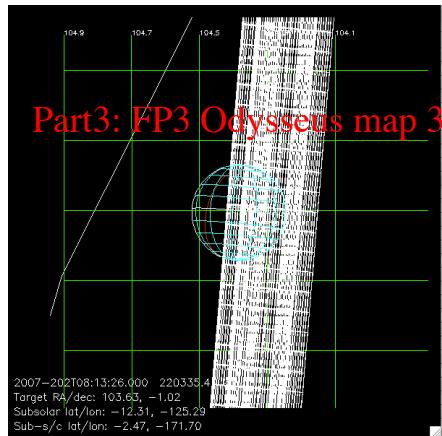
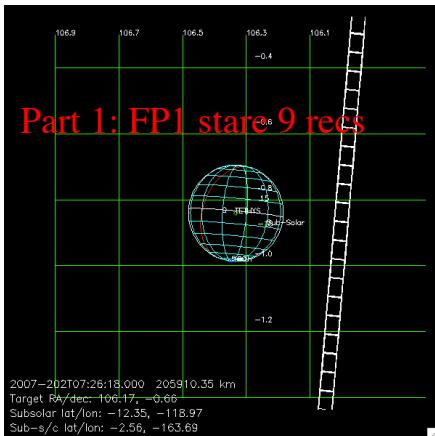
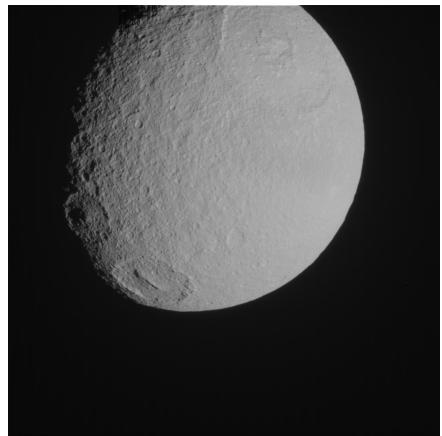


048TE_ICYMAP001_CIRS
2007-2011T18:40
 $R = 95,578 \text{ km}$
Longitude= 105°W
Phase= 88.5°



Part 3 spectra

CIRS_048TE_FP1FAZ0P5390_PRIME



048TE_ICYMAP002_CIRS

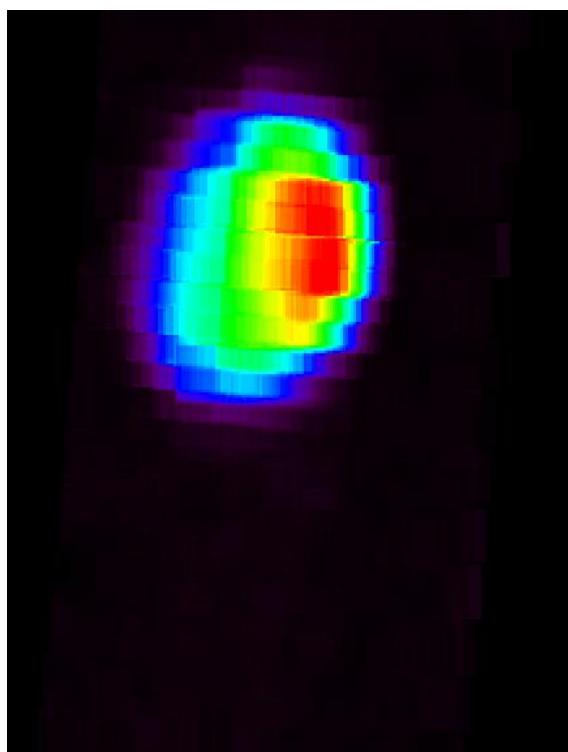
2007-202T07:26

R= 223,026 km

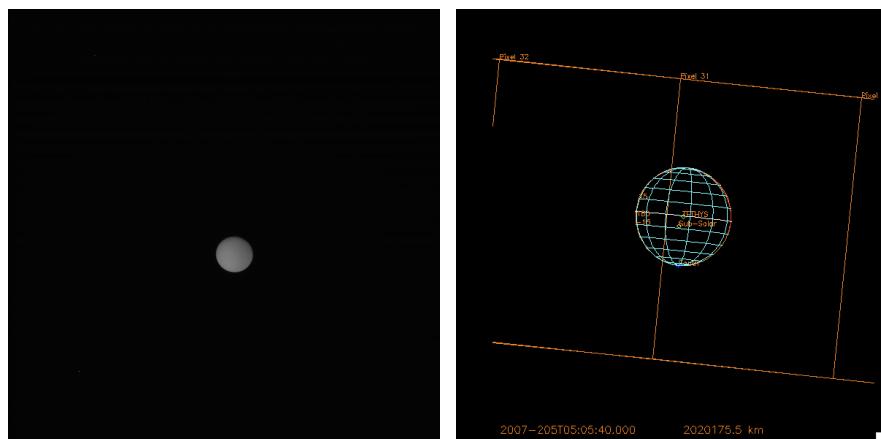
Longitude= 173°W

Latitude= 2.5°S

Phase= 47.9°



ISS_048TE_310W012PH001_PRIME



048TE_ICYTHON002_ISS

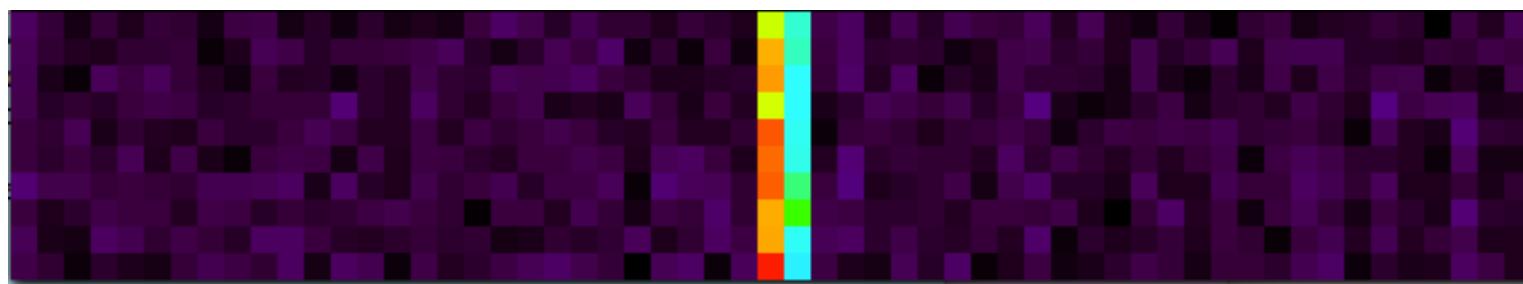
2007-205T05:06

R= 2,026,591 km

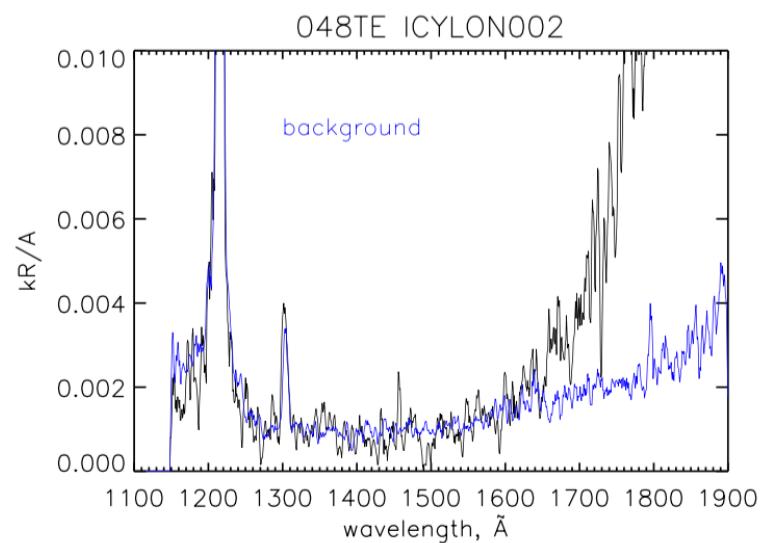
Longitude= 310°W

Latitude=0.84°S

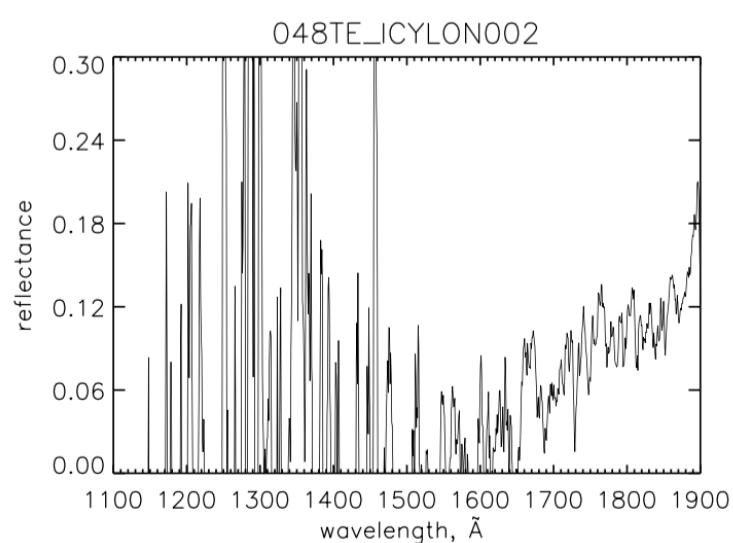
Phase= 12.2°



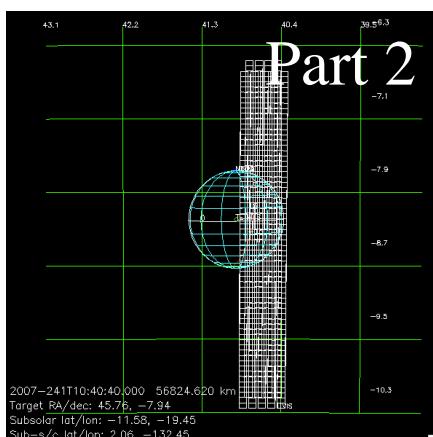
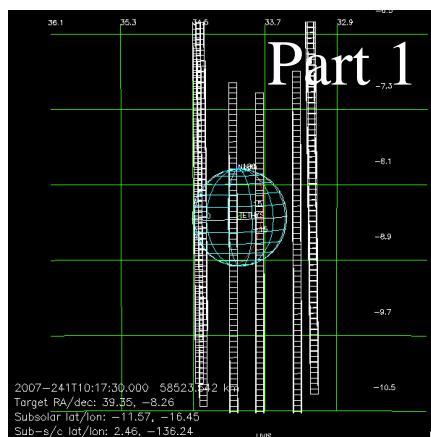
048TE ICYTHON002



048TE_ICYTHON002



CIRS_049TE_FP1DSKIN001_PRIME



049TE_ICYLON001_CIRS

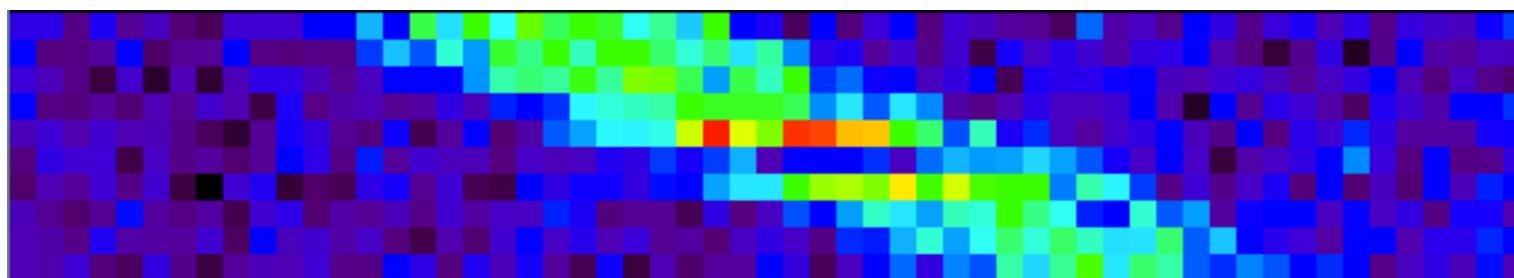
2007-241T10:18

R = 57,253 km

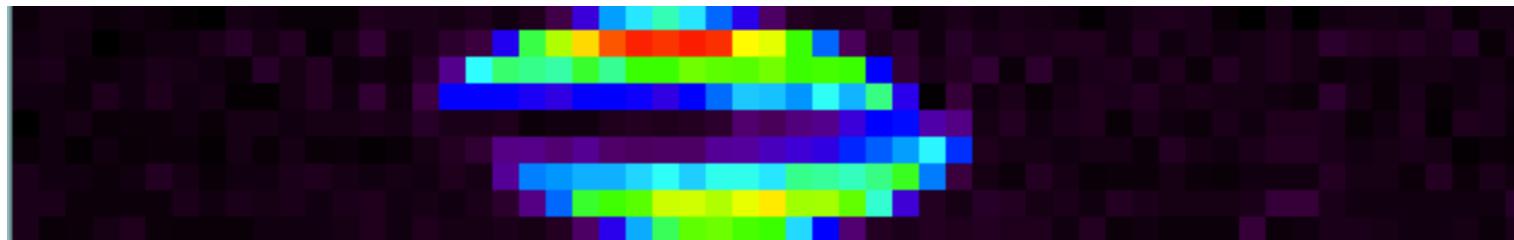
Longitude = 135°W

Latitude = 2.3°N

Phase = 115.8°



Part 1



Part 2

ISS_049TE_MORPHO001_PRIME 9-panel mosaic 049TE_ICYLON002_ISS

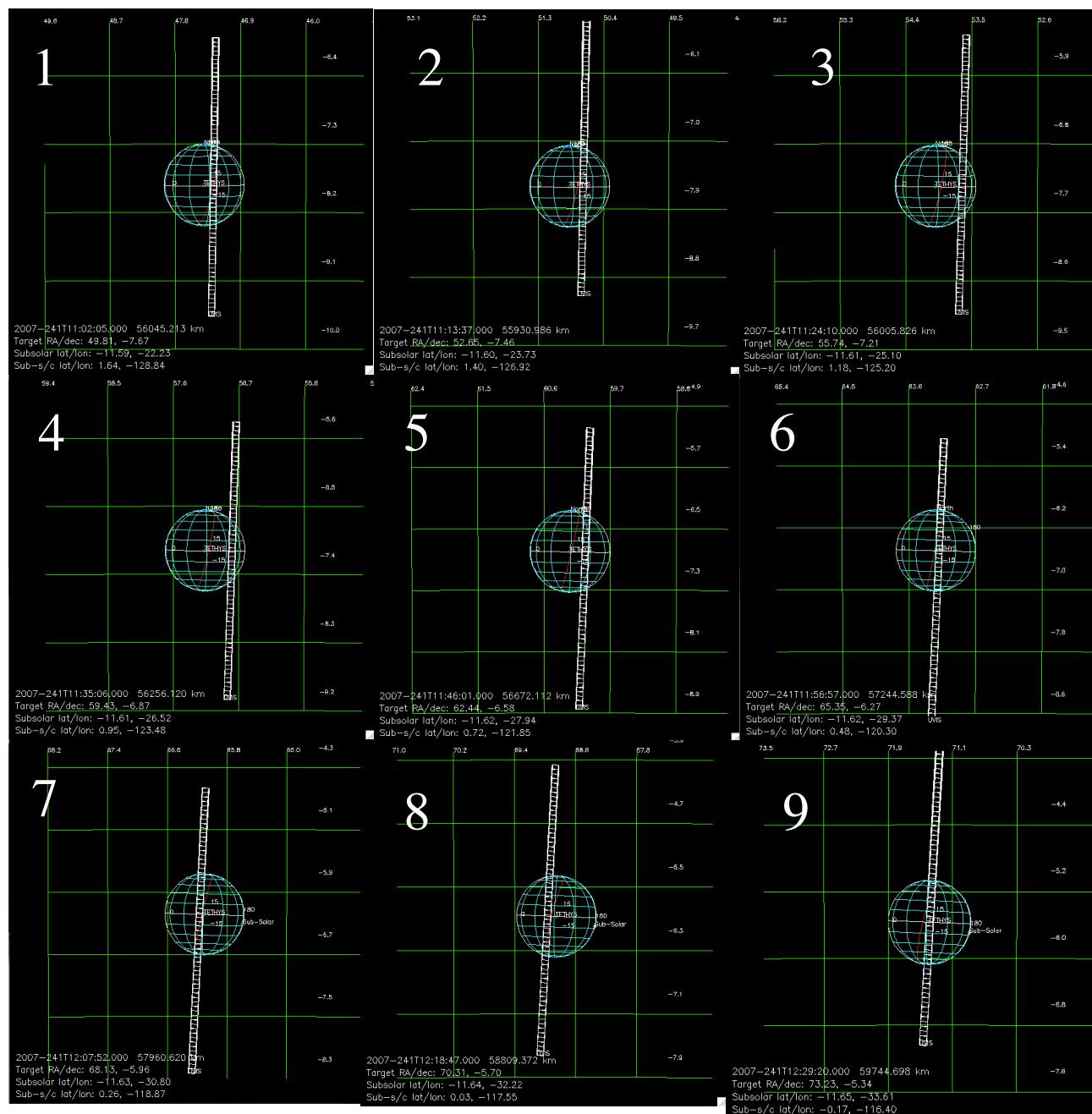
2007-241T11:00

R= 55,457 km

Longitude= 128°W

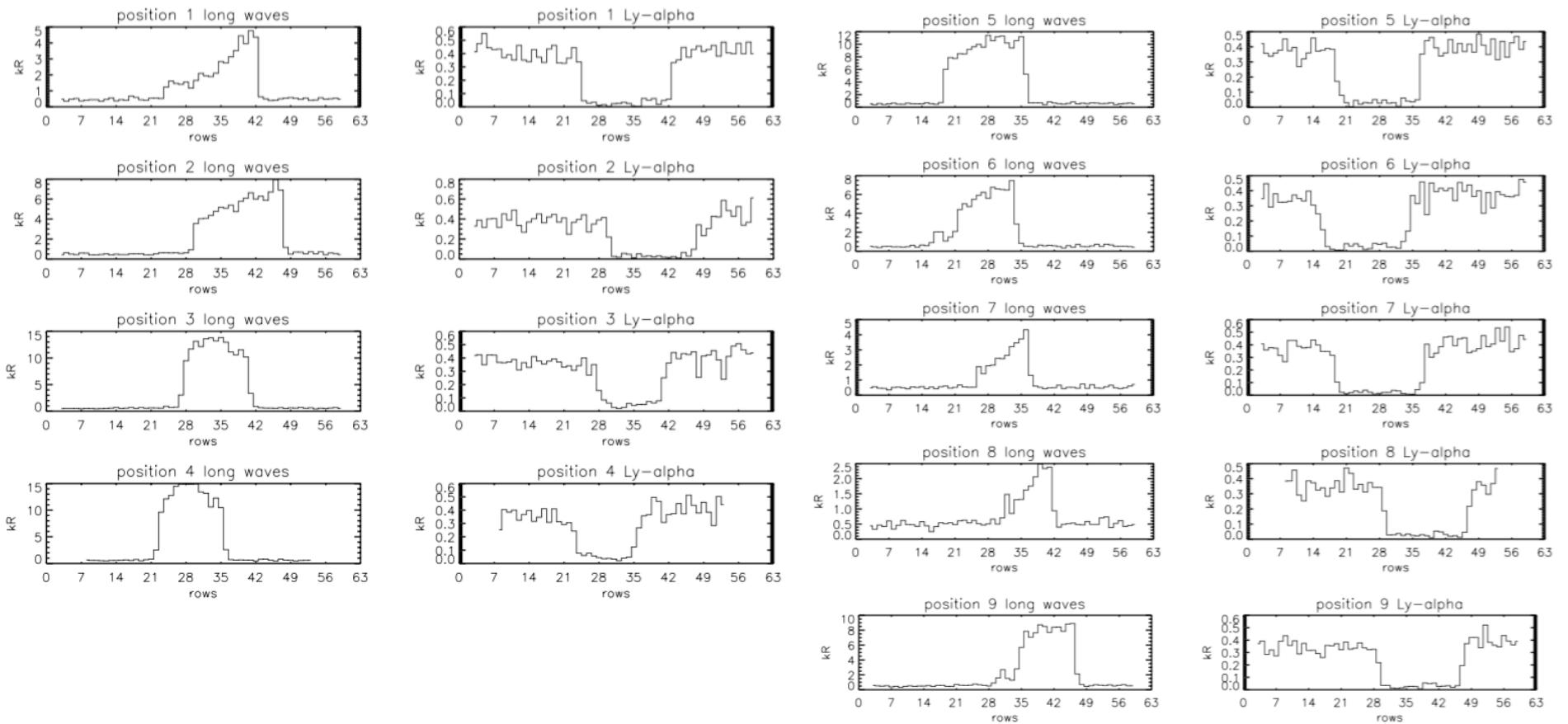
Latitude= 1.5°N

Phase= 104.9°

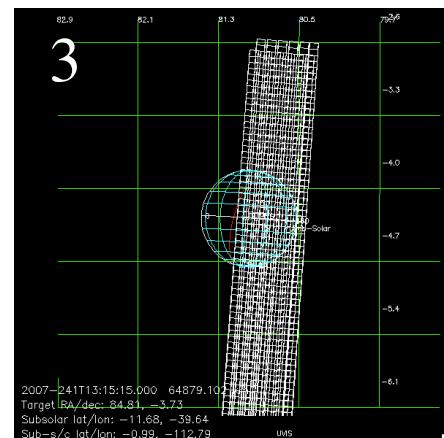
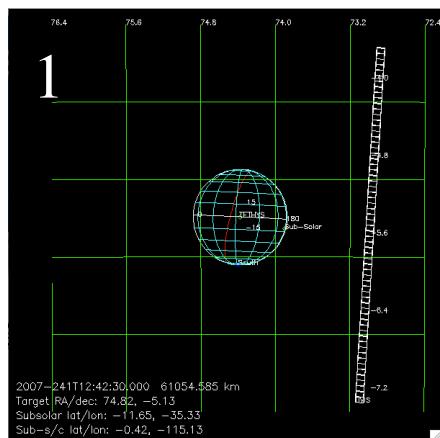


049TE_ICYLON002_ISS

Cont'd



CIRS_049TE_FP1DSKOUT001_PRIME



049TE_ICYLON003_CIRS

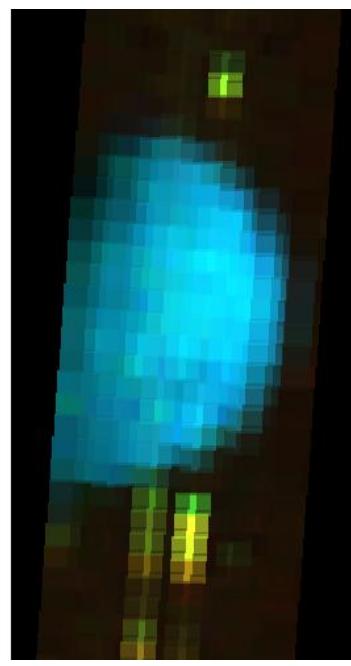
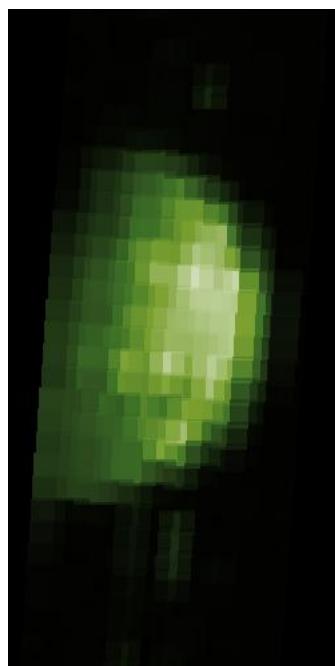
2007-241T12:40

Alt= 65,791 km

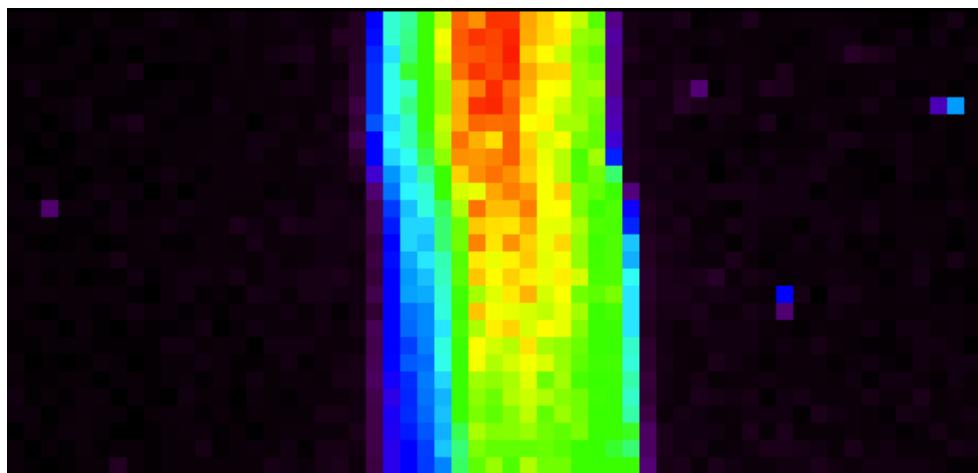
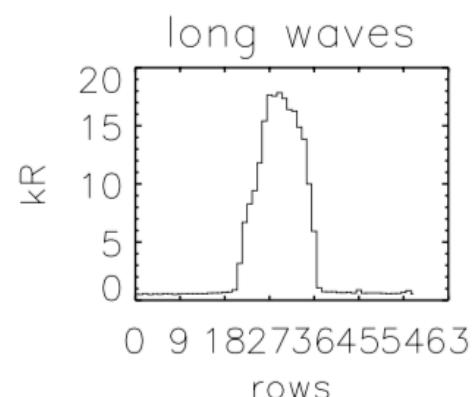
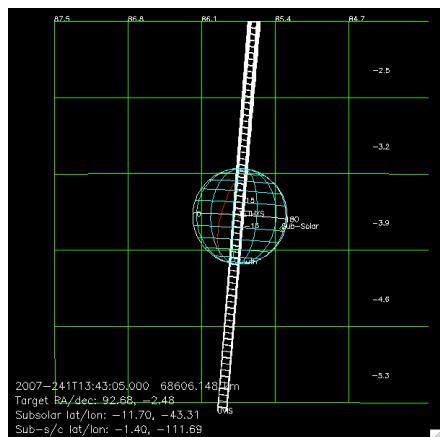
Longitude= 112°W

Latitude= 1°S

Phase= 70°



VIMS_049TE_TETHYS001_PRIME



049TE_ICYLON004_VIMS

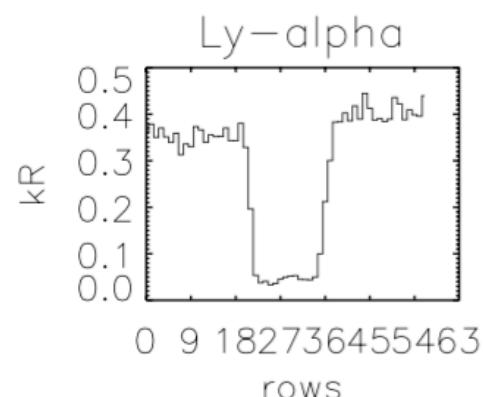
2007-241T13:40

Alt= 71,854 km

Longitude= 111°W

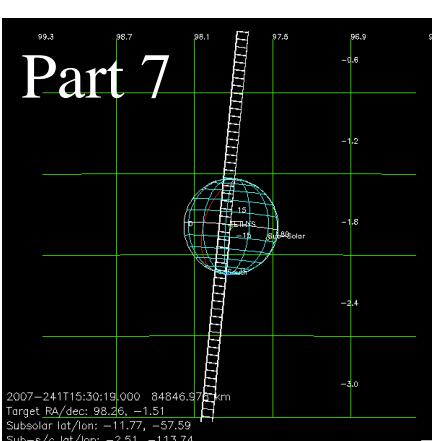
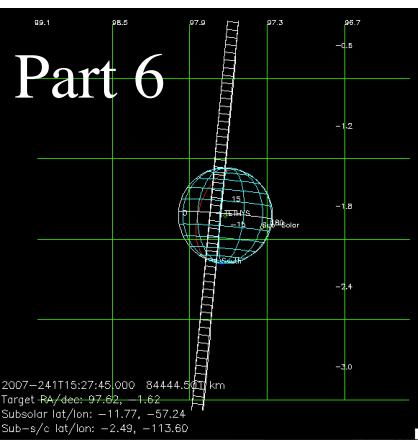
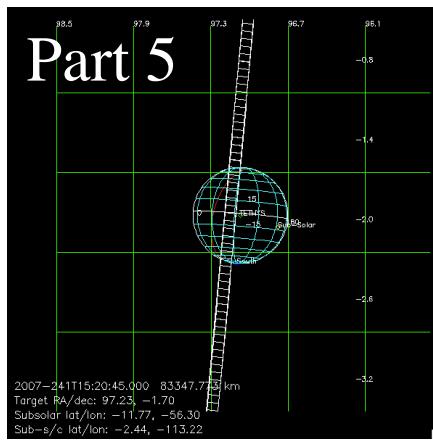
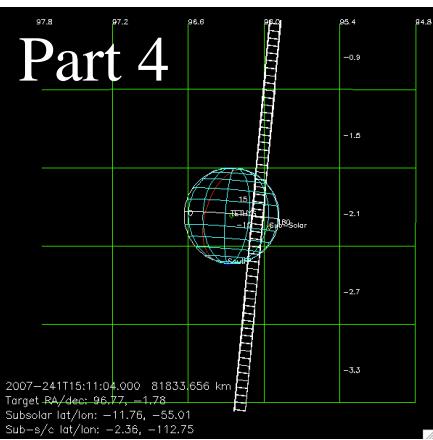
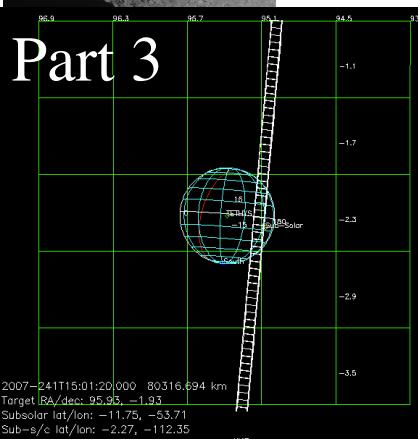
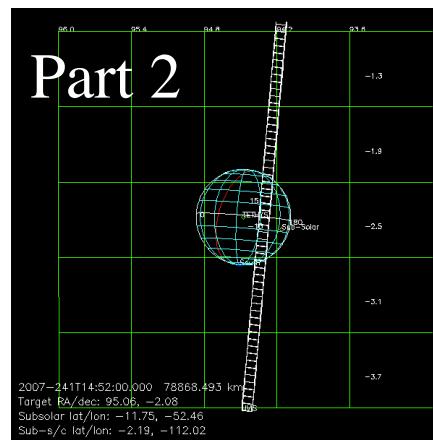
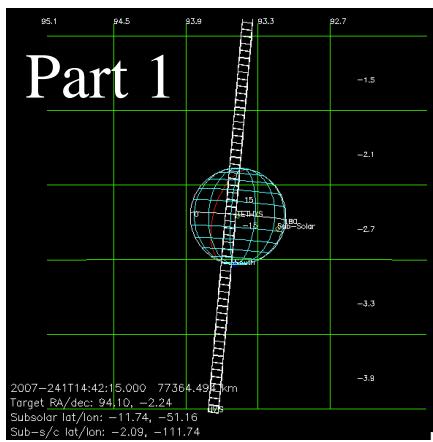
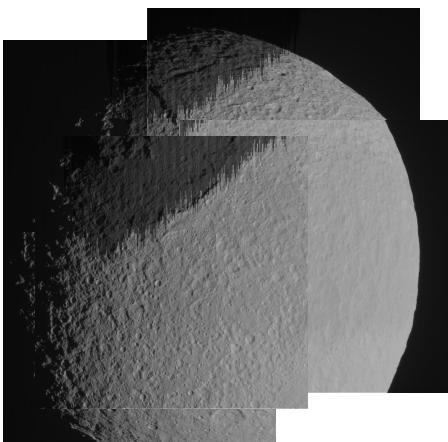
Latitude= 1.7°S

Phase= 63.6°



ISS_049TE_COLORF001_PRIME

7-panel mosaic



049TE_ICYLON005_ISS

2007-241T14:40

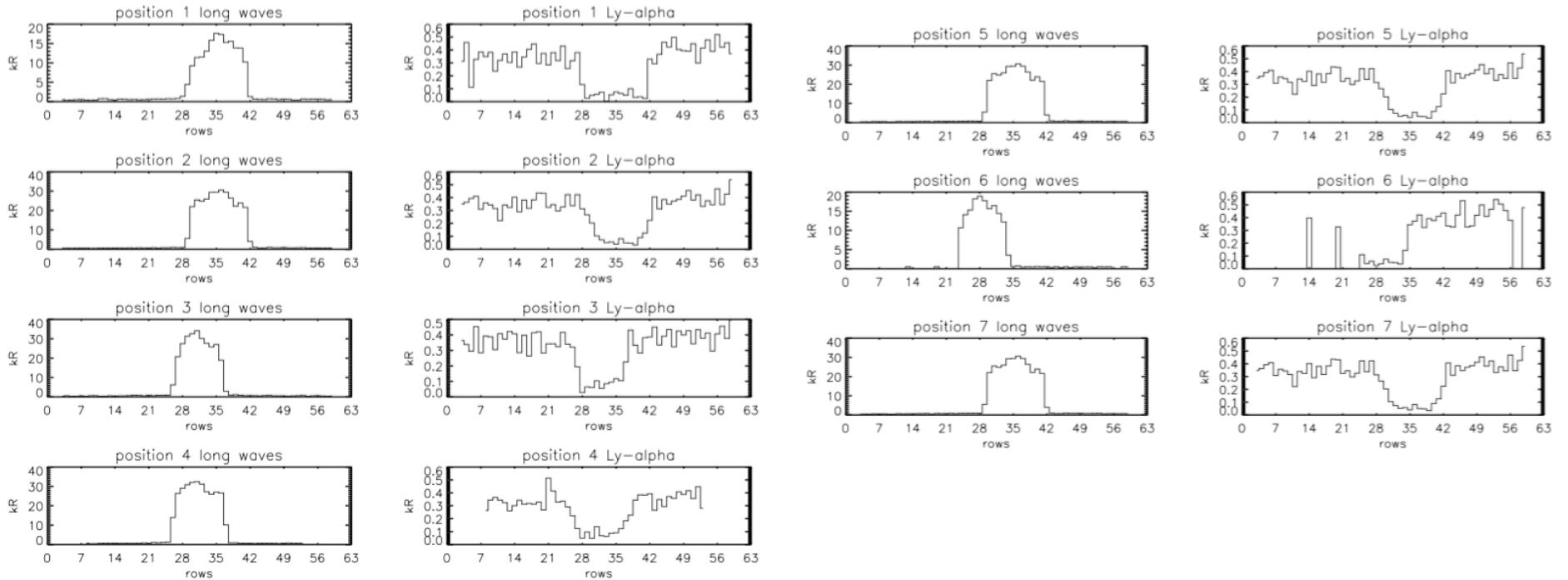
Alt= 76,623 km

Longitude= 111°W

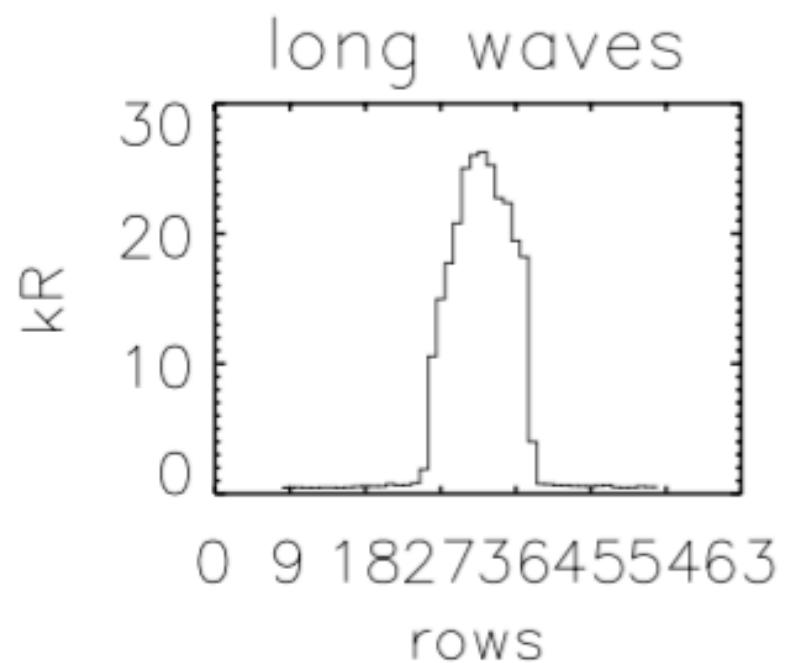
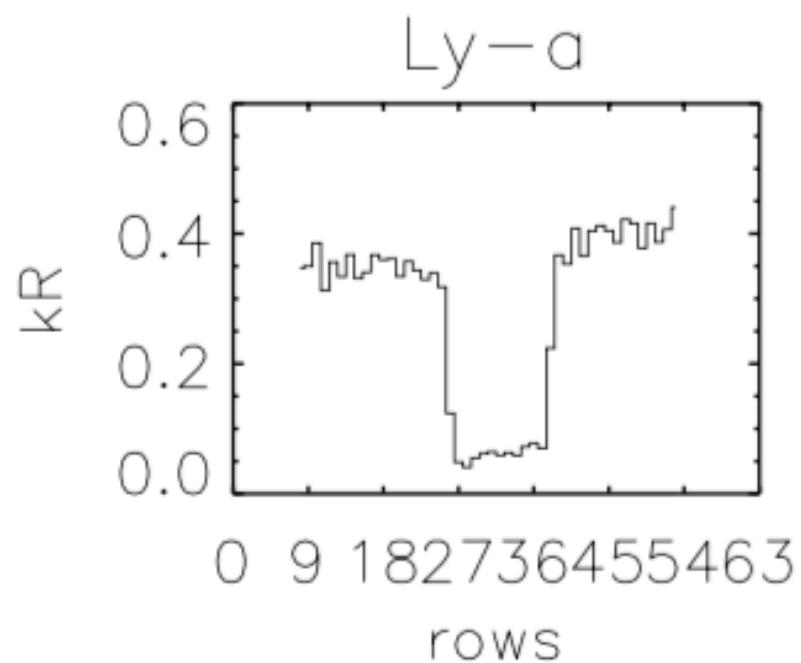
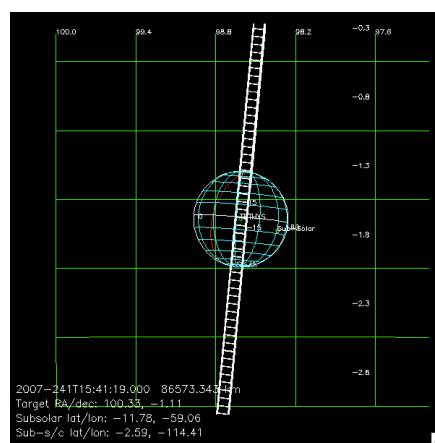
Phase= 59.7°

049TE_ICYLON005_ISS

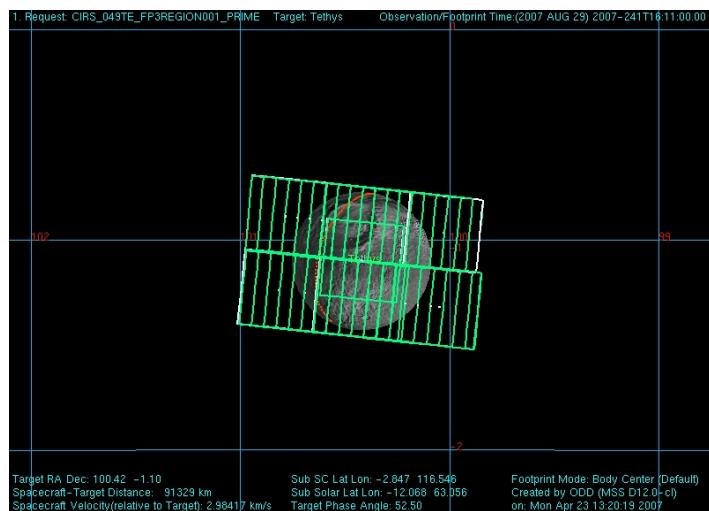
Cont'd



UVIS_049TE_ICYLON006_PRIME
2007-241T15:40
 $R = 85,965 \text{ km}$
Longitude= 114°W
Latitude
Phase= 54.4°



CIRS_049TE_FP3REGION001_PRIME



UVIS_049TE_ICYLON007_CIRS

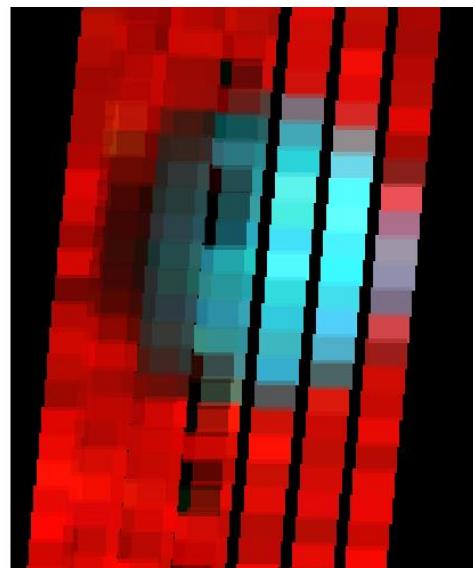
2007-241T16:10

$R = 90,674 \text{ km}$

Longitude= 116°W

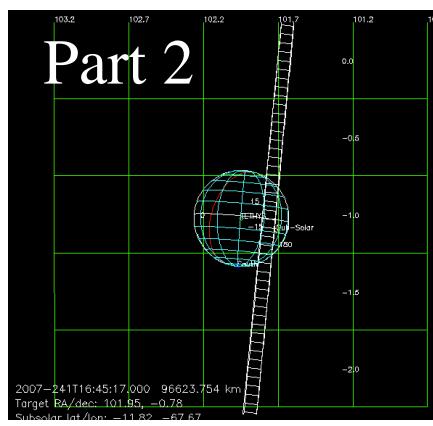
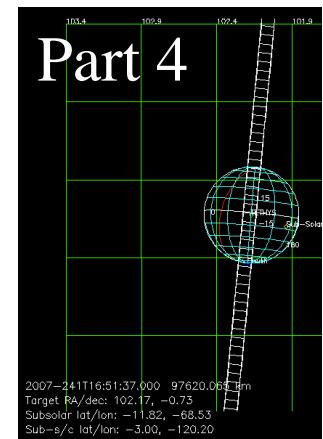
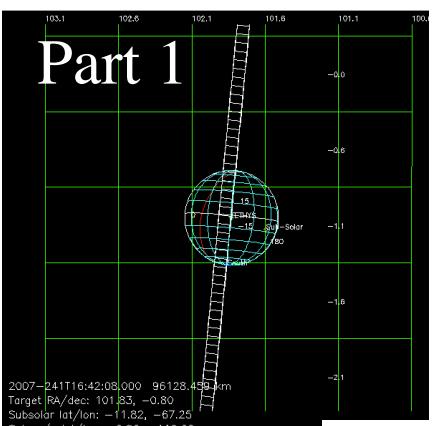
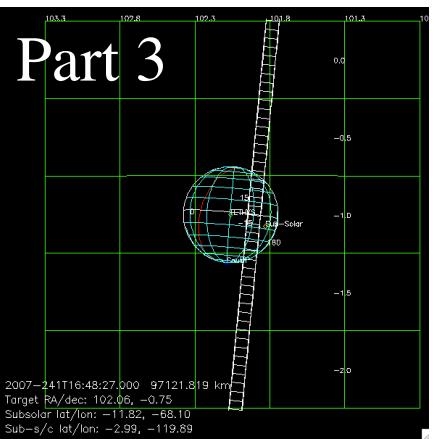
Latitude

Phase= 52.5°



ISS_049TE_MORPHO007_PRIME

4-panel mosaic



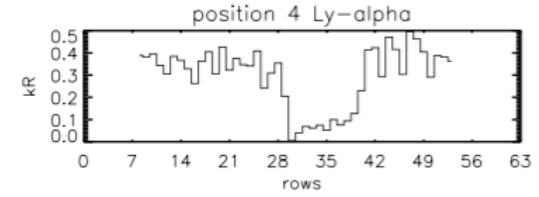
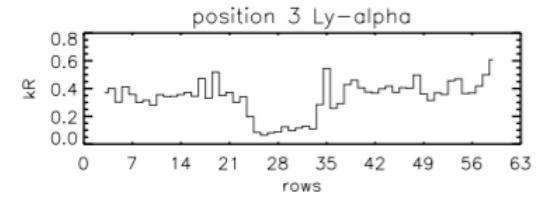
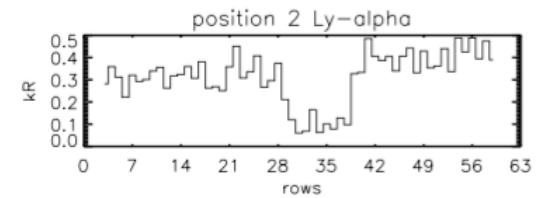
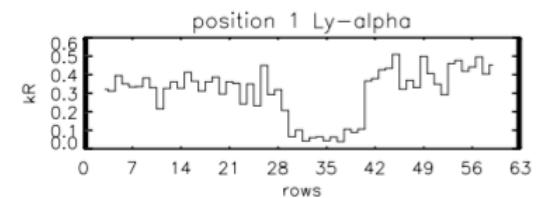
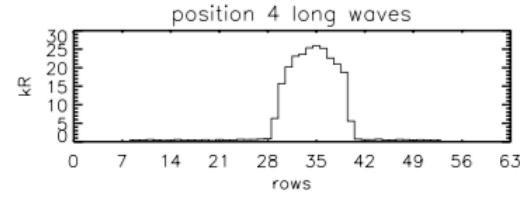
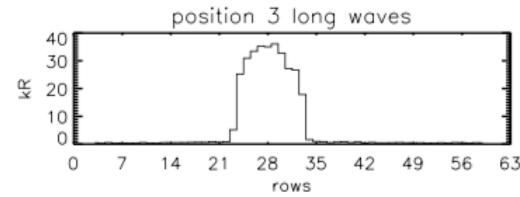
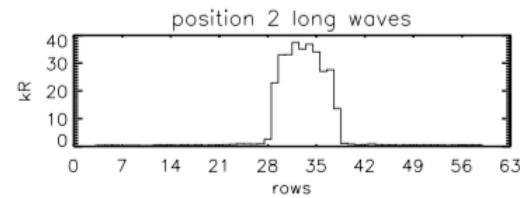
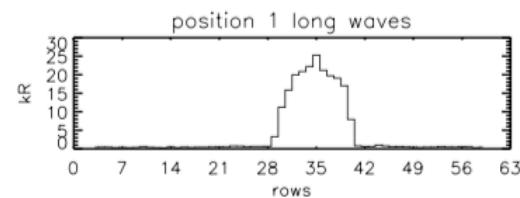
UVIS_049TE_ICYLON008_ISS

2007-241T16:40

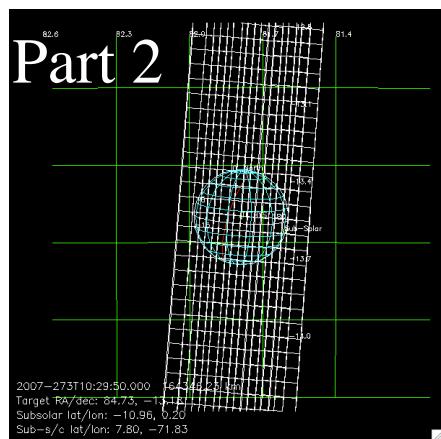
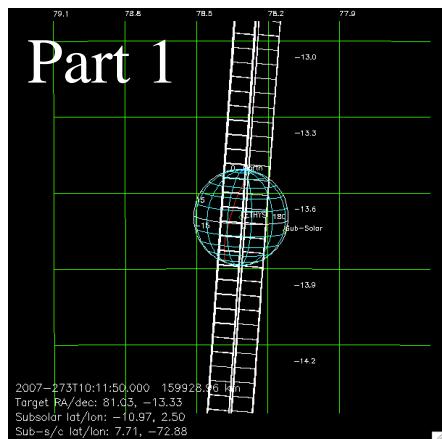
R= 95,384 km

Longitude= 118°W

Phase= 51.1°



CIRS_050TE_FP1SECLN001_PRIME



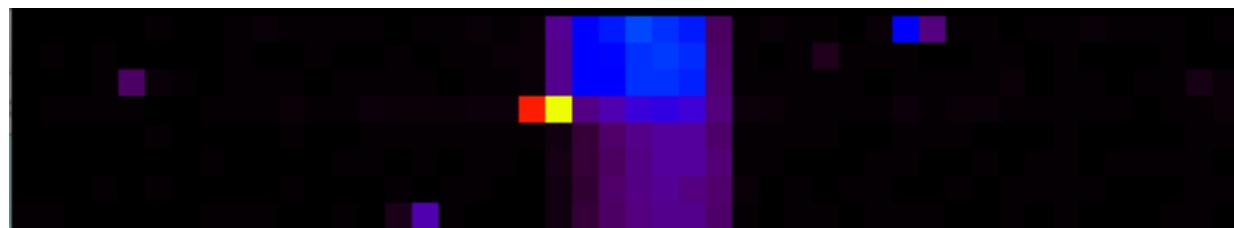
UVIS_050TE_ICYLON001_CIRS

2007-273T10:12

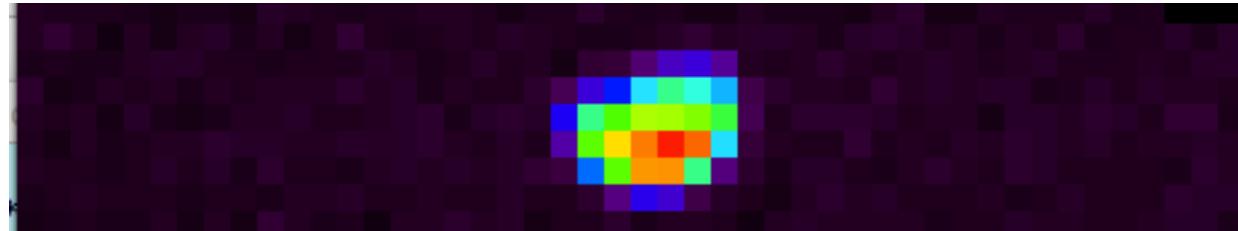
R= 159,488 km

Longitude= 73°W

Phase= 78.0°

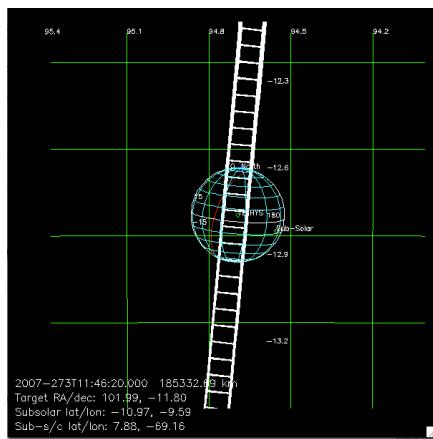
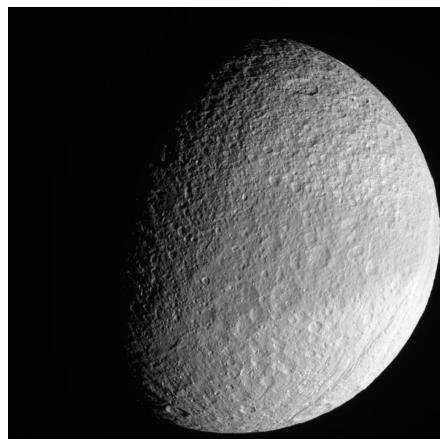


Part 1



Part 2

ISS_050TE_COLORF002_PRIME



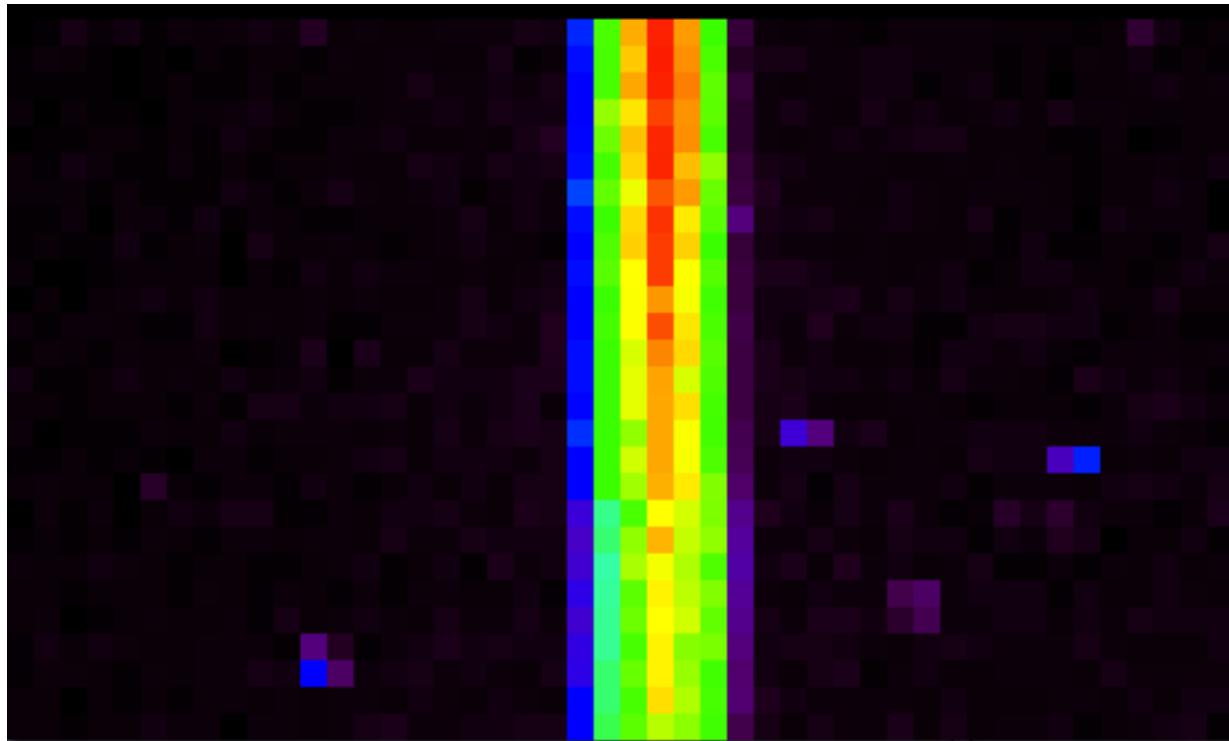
UVIS_050TE_ICYLON002_ISS

2007-273T11:47

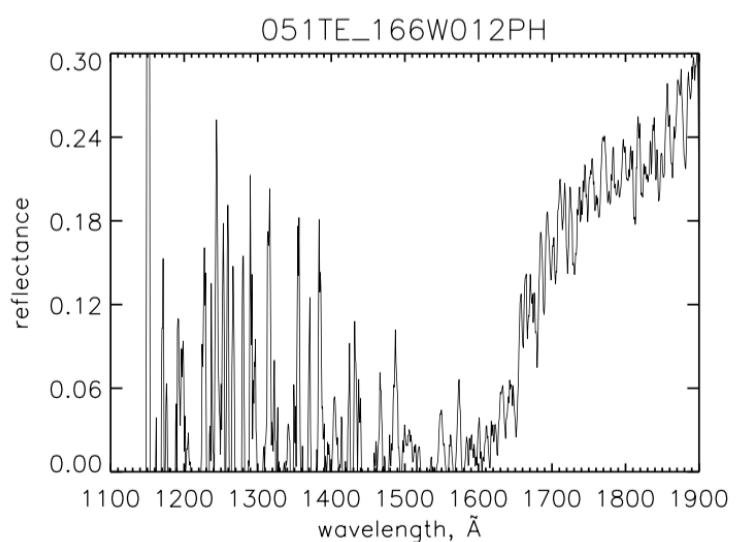
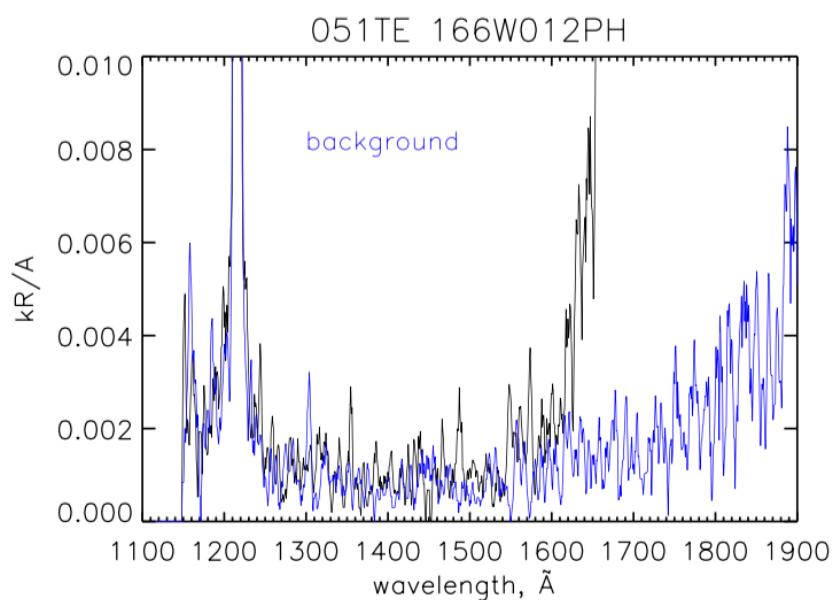
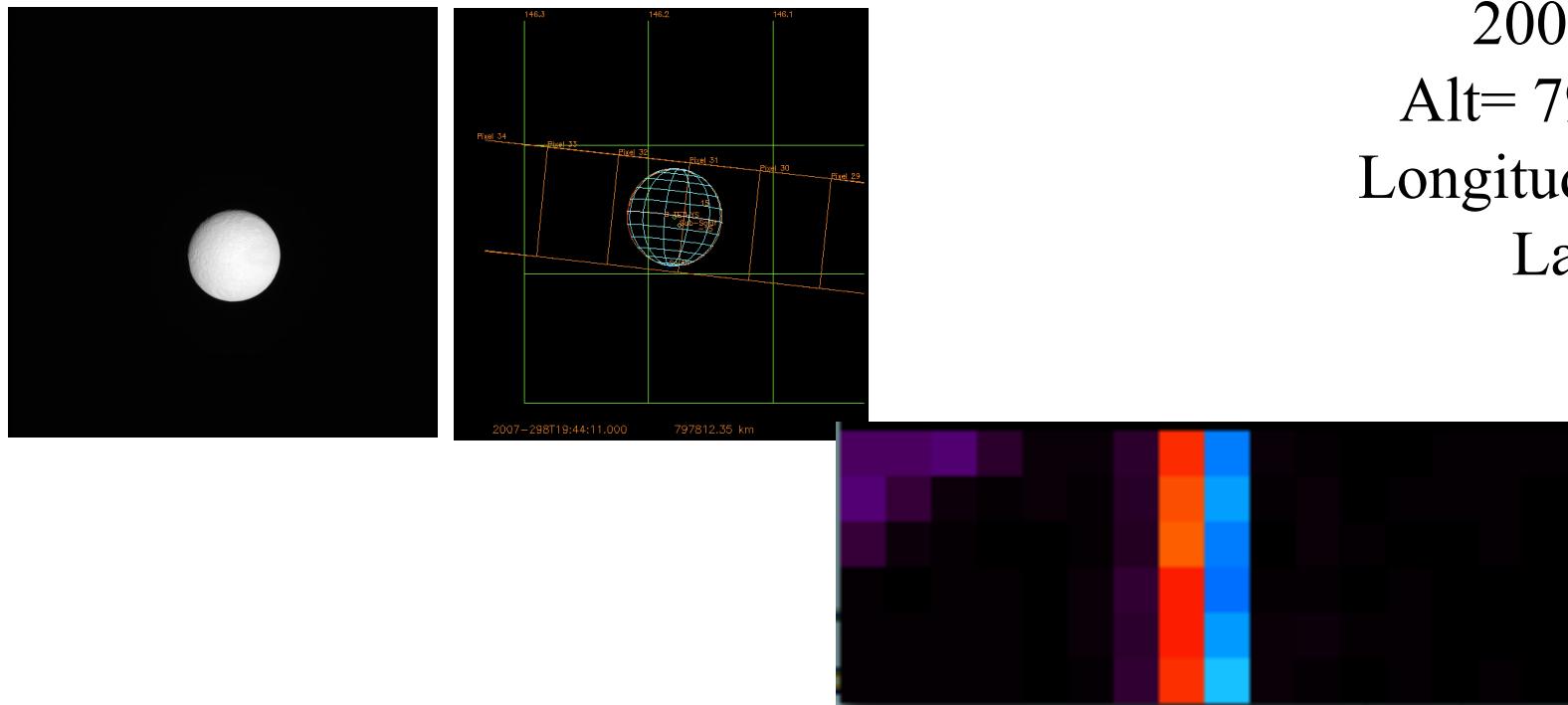
R = 185,057 km

Longitude= 70°W

Phase= 62.5°



UVIS_051TE_166W012PH001_ISS
2007-298T19:45
Alt= 798262.95 km
Longitude= 169.1°W
Latitude= 2.3°S
Phase= 12.°



UVIS_051TE_238W021PH001_ISS

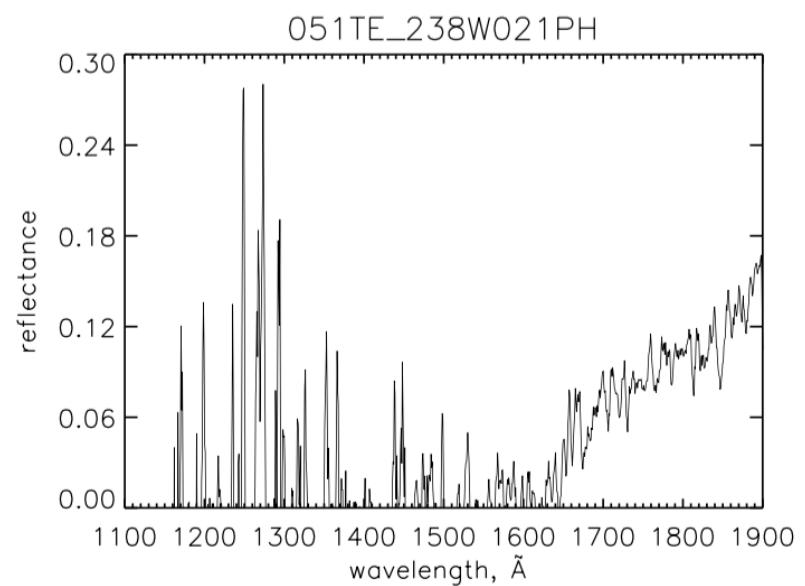
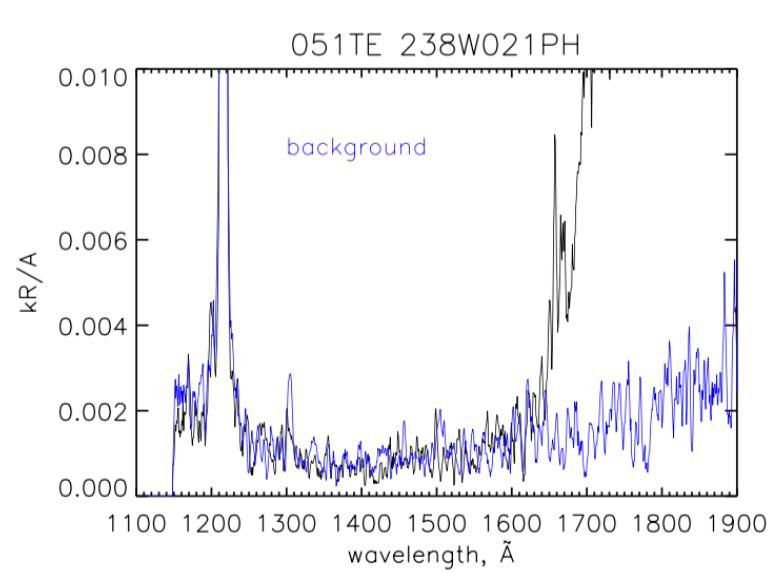
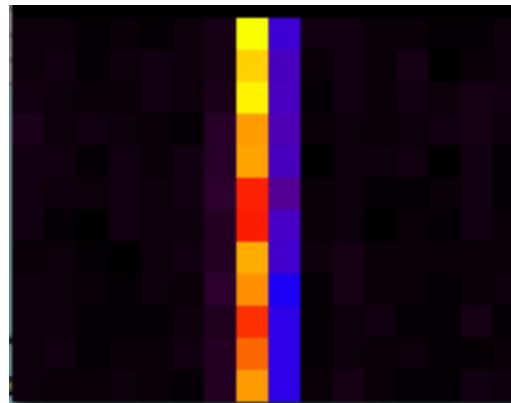
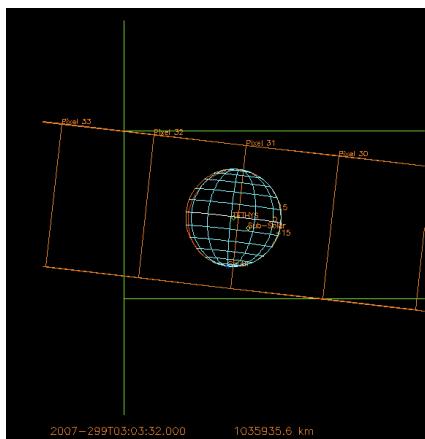
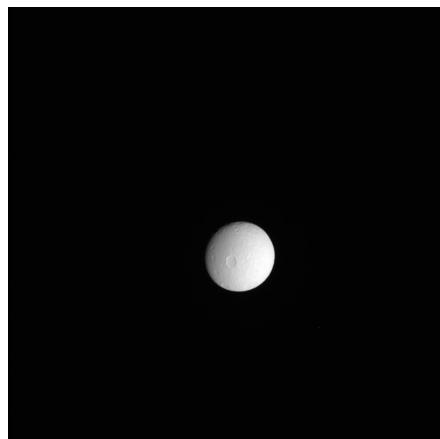
2007-299T03:04

Alt= 1,044,553.3 km

Longitude= 237°W

Latitude= 1.4°S

Phase= 21°



UVIS_051TE_310W016PH001_ISS

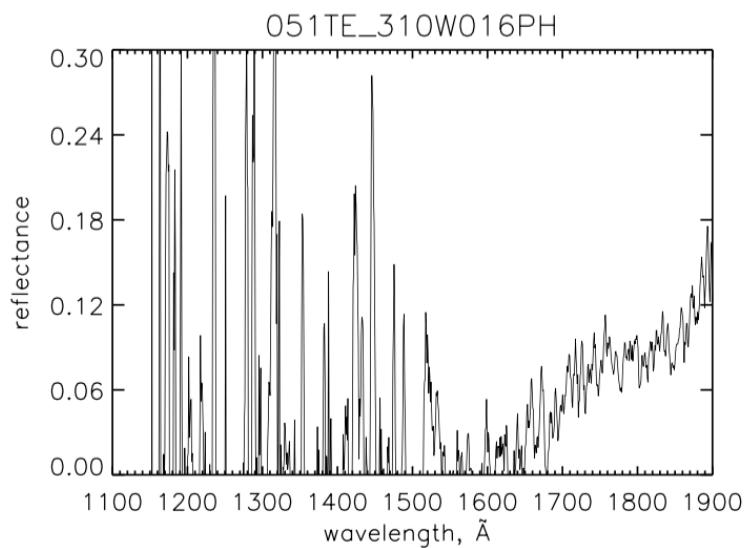
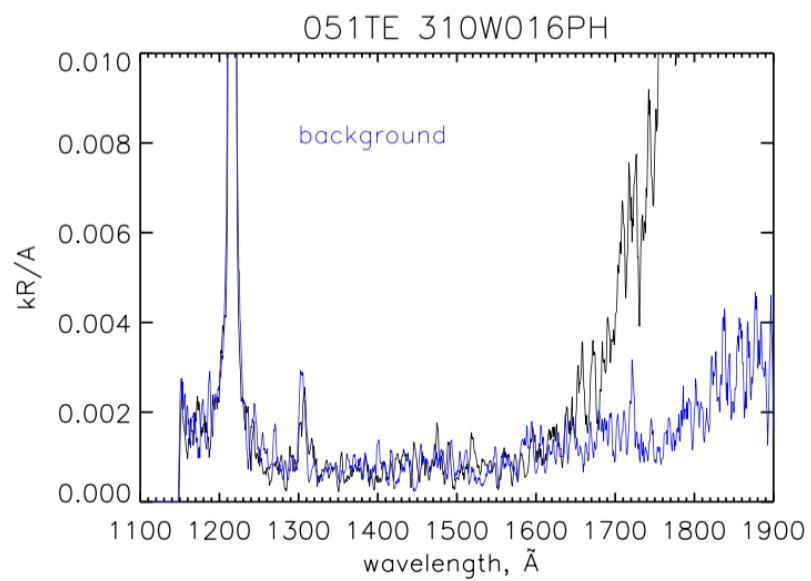
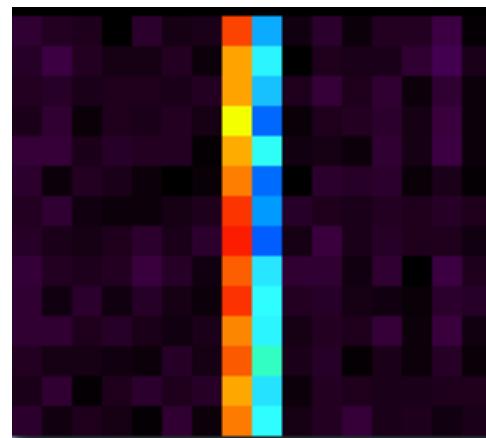
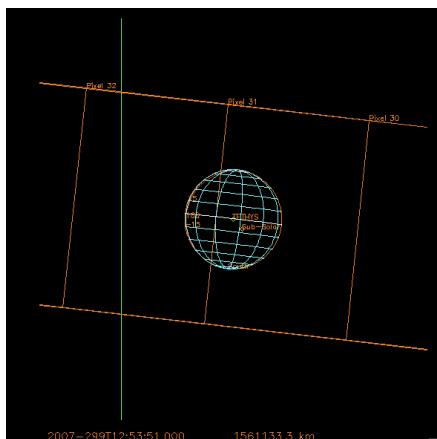
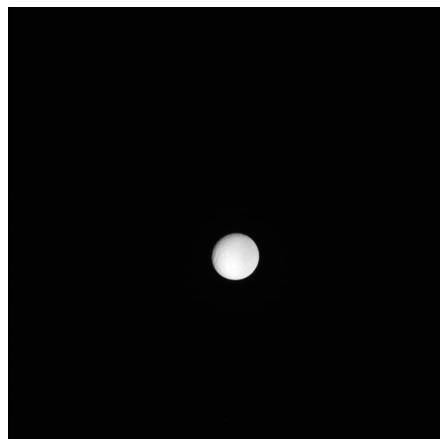
2007-299T12:54

Alt= 1,570,861.3 km

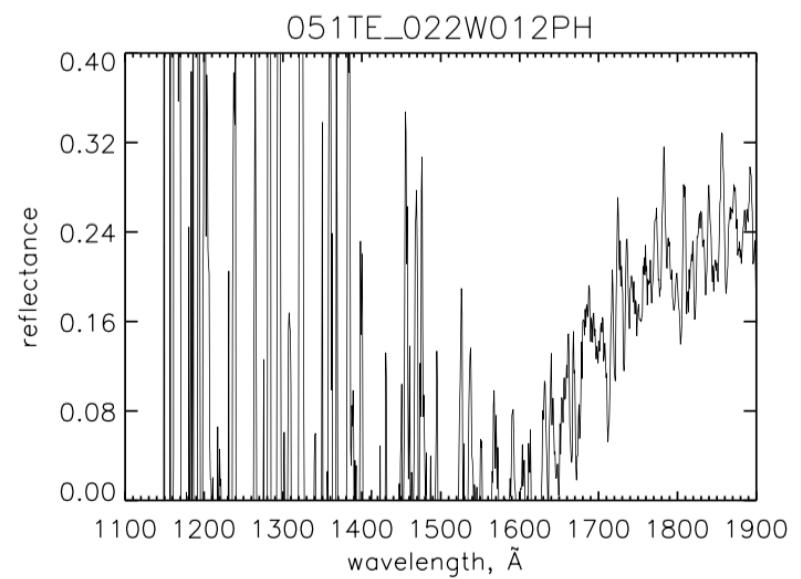
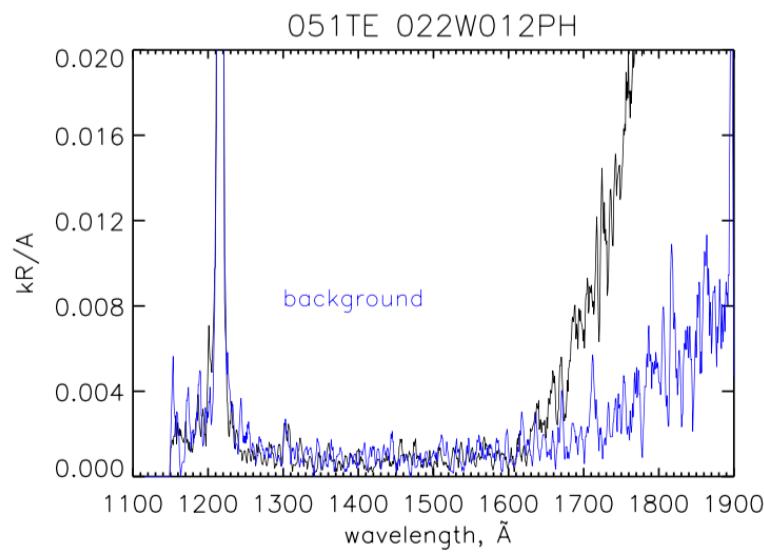
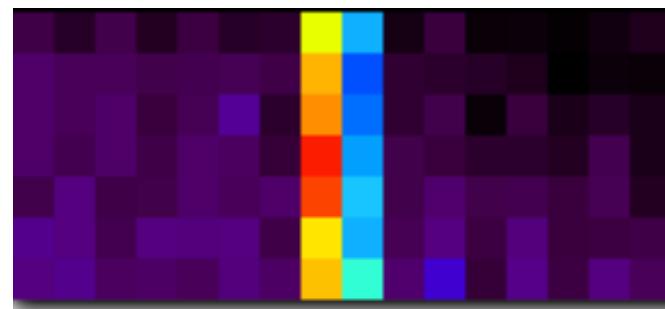
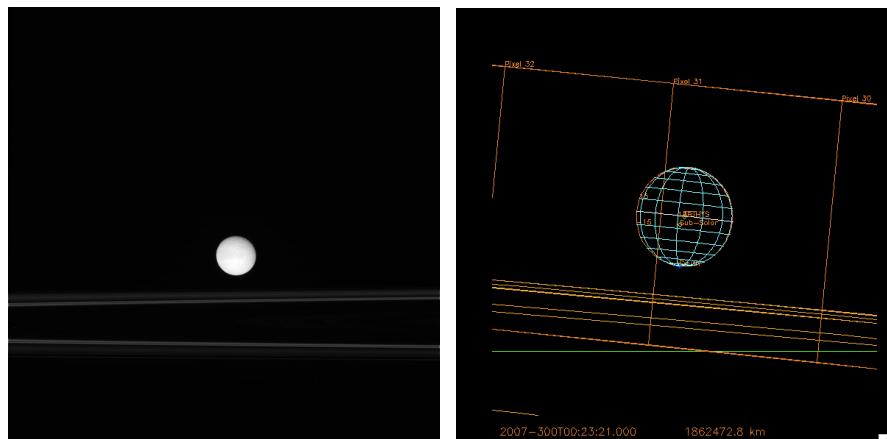
Longitude= 310.8°W

Latitude=0.78°S

Phase= 15.8°



UVIS_051TE_022W012PH001_ISS
2007-300T00:24
Alt= 1,862,058 km
Longitude= 22.3°W
Latitude=0.59°S
Phase= 11.7°



UVIS_051TE_238W011PH001_ISS

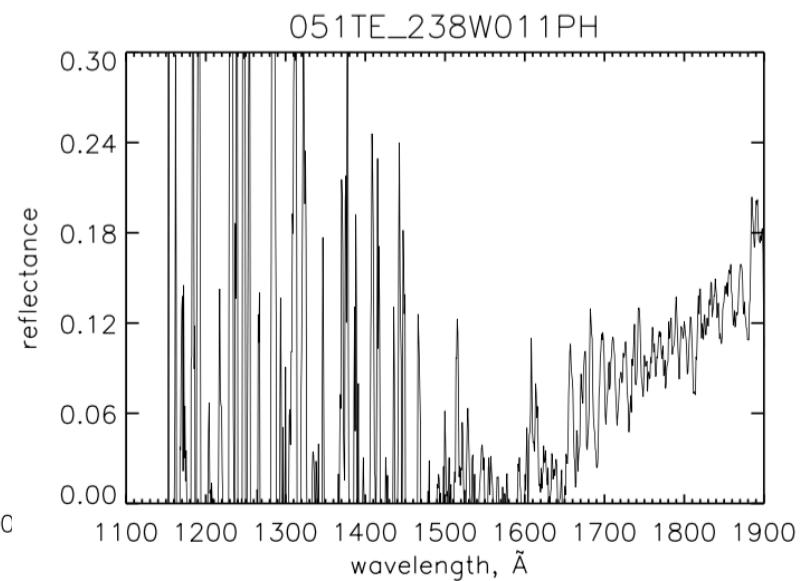
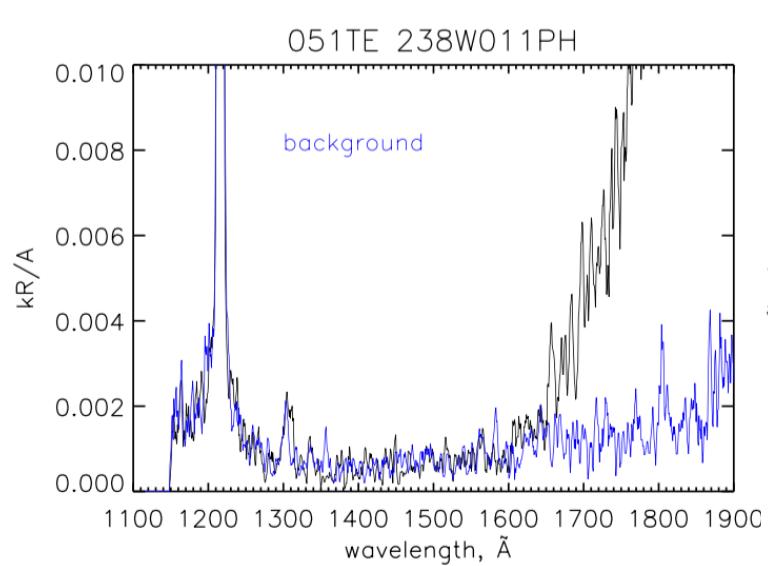
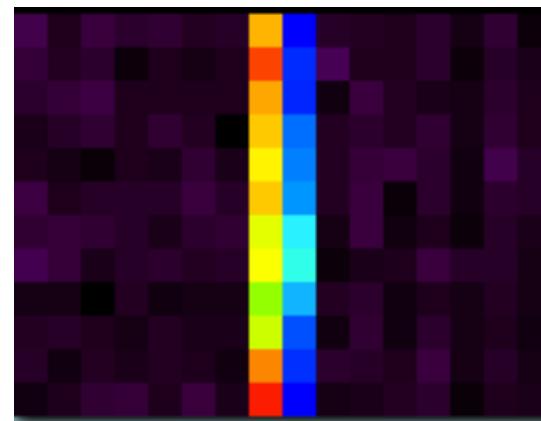
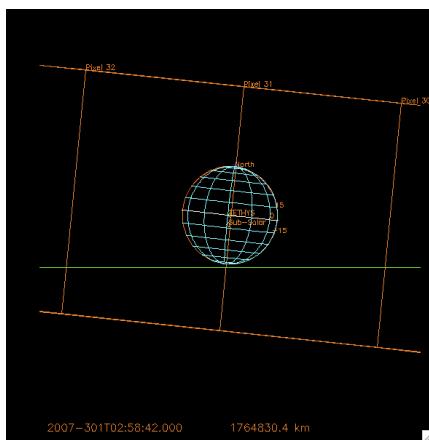
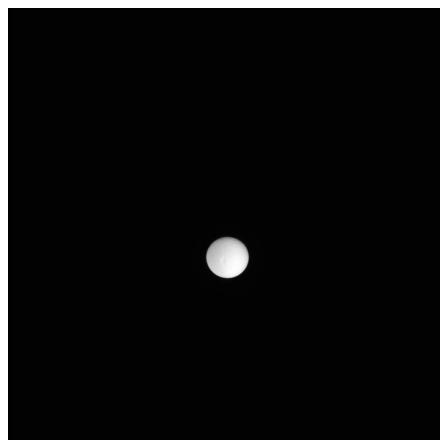
2007-301T02:59

Alt= 1,772,547 km

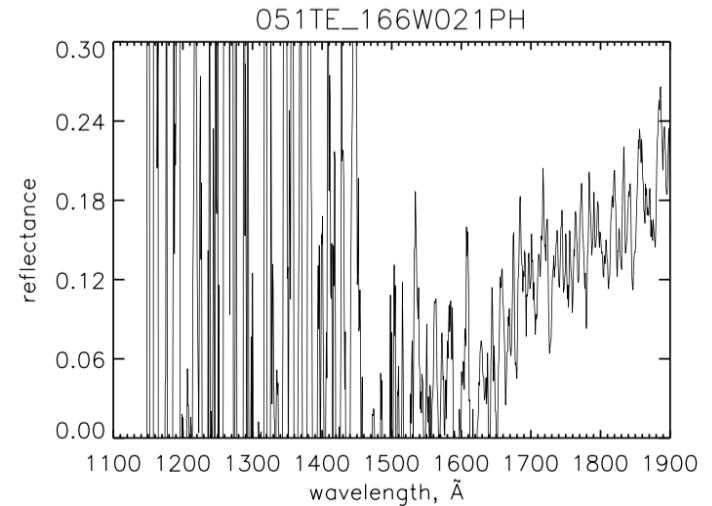
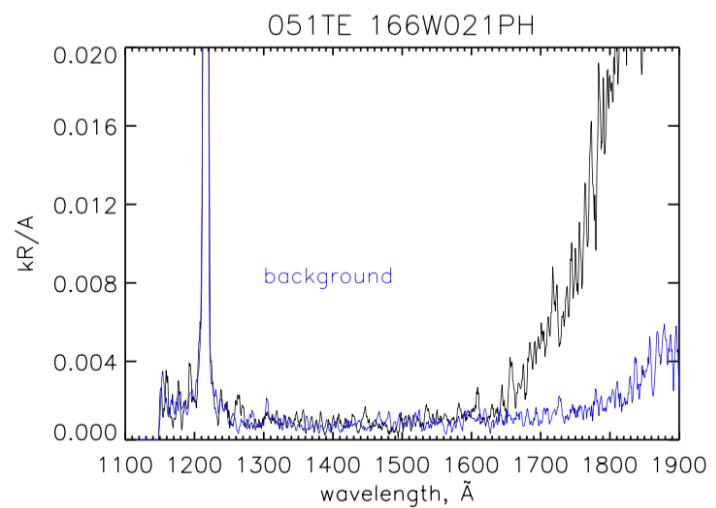
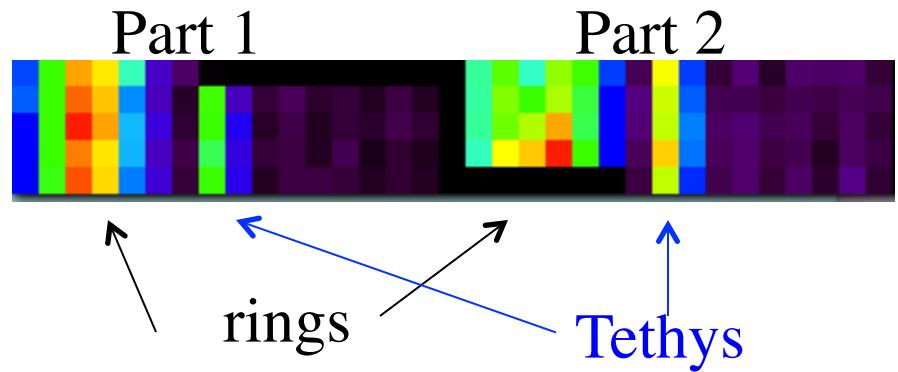
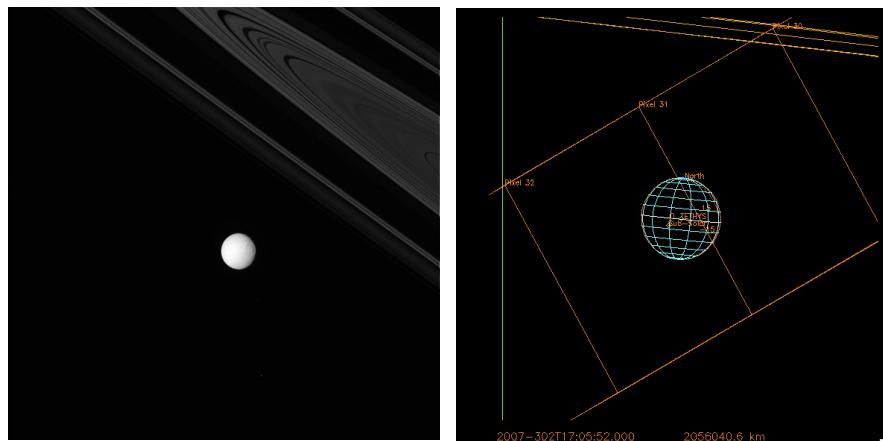
Longitude= 238°W

Latitude= 0.22°N

Phase= 11.4°



UVIS_051TE_166W021PH001_ISS
 2007-302T17:06
 Alt= 2,055,281 km
 Longitude= 165°W
 Latitude= 0.85°N
 Phase= 21.1°



UVIS_051TE_022W024PH001_ISS

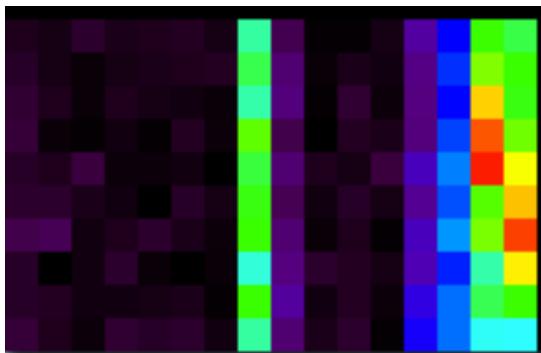
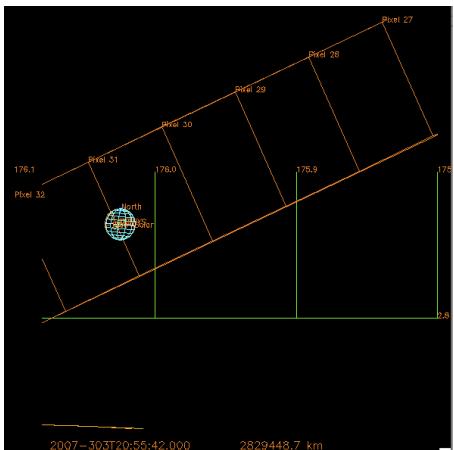
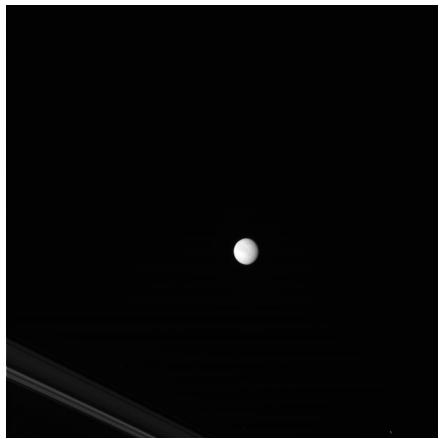
2007-303T20:56

Alt= 2,827,863 km

Longitude= 21°W

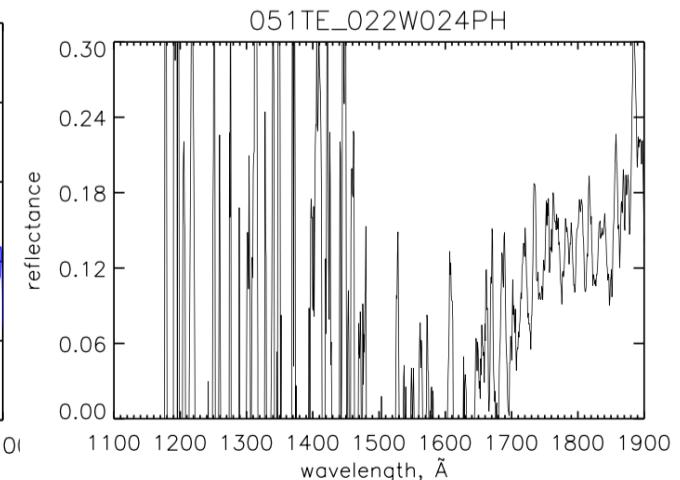
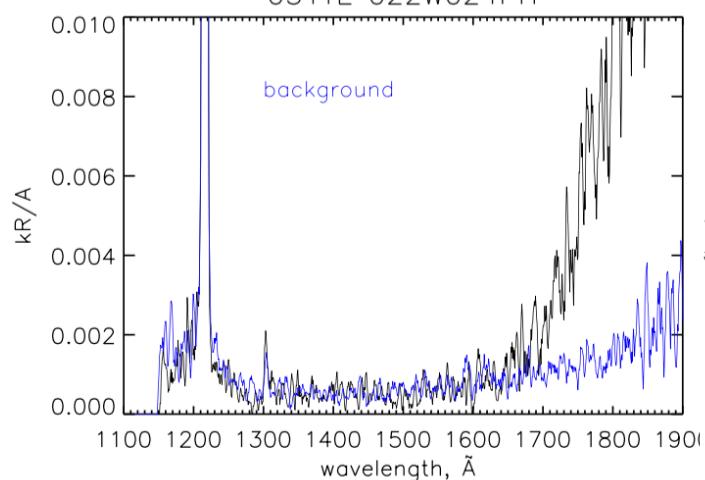
Latitude= 0.85°N

Phase= 24.4°

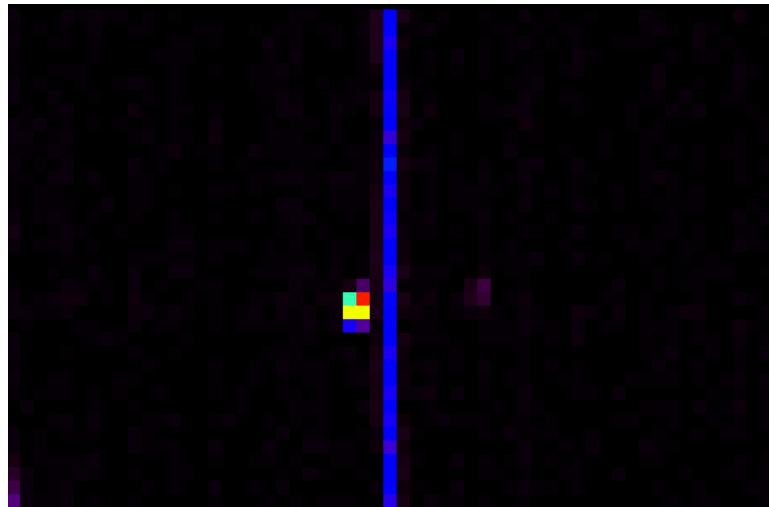
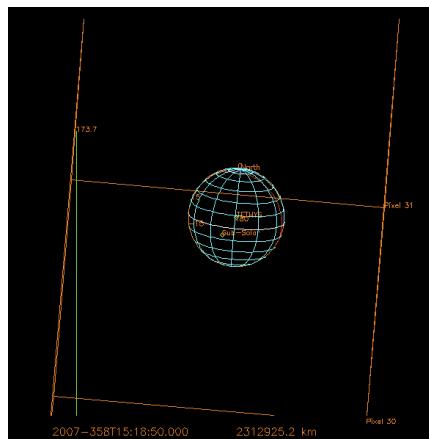


Tethys rings

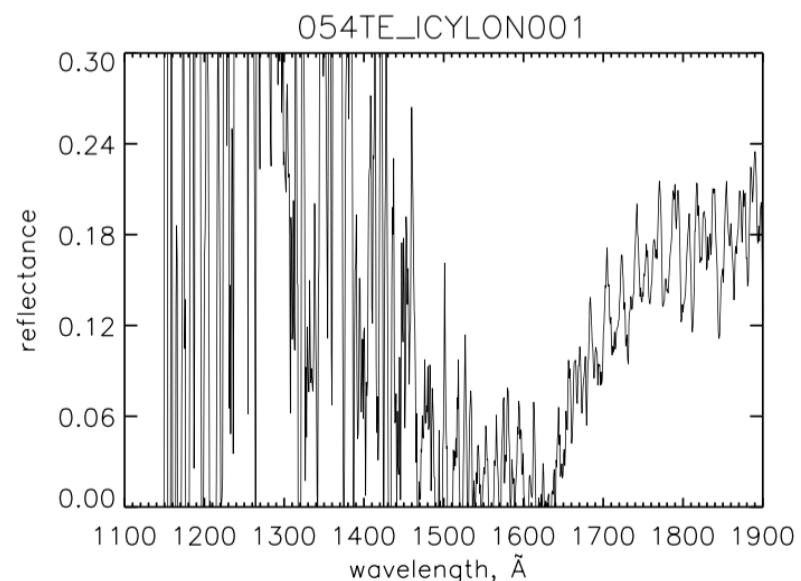
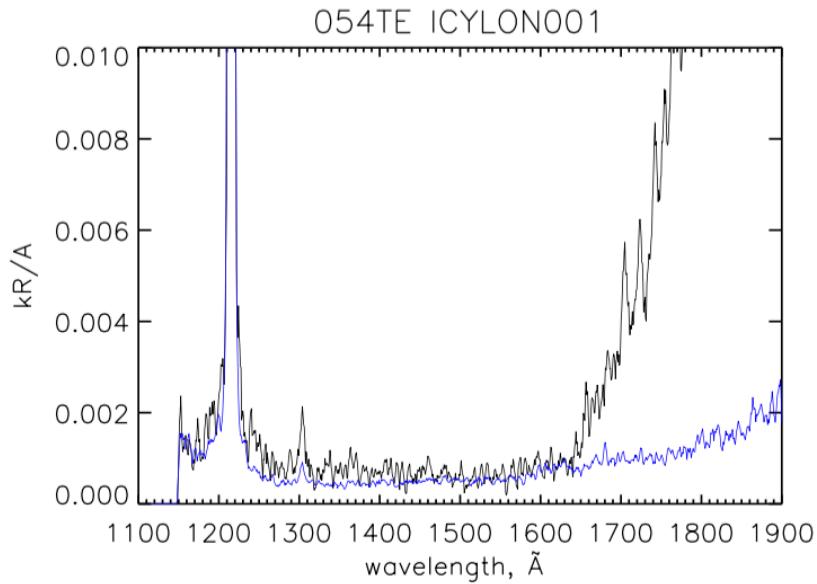
051TE_022W024PH



UVIS_054TE_ICYLON001_PRIME
2007-358T15:19
Alt= 2,303,737 km
Longitude= 29°W
Latitude= 13°N
Phase= 28.6°



a star passes through slit, right below TE



UVIS_055TE_STARE001_PRIME

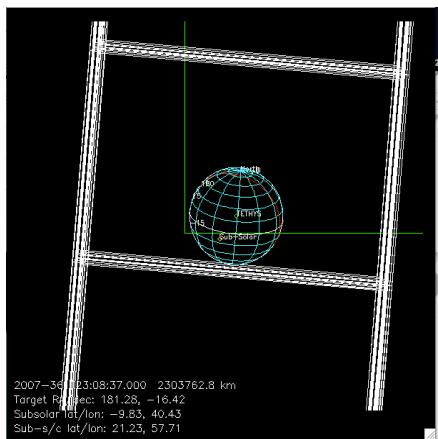
2007-361T23:10

Alt=2,376,082 km

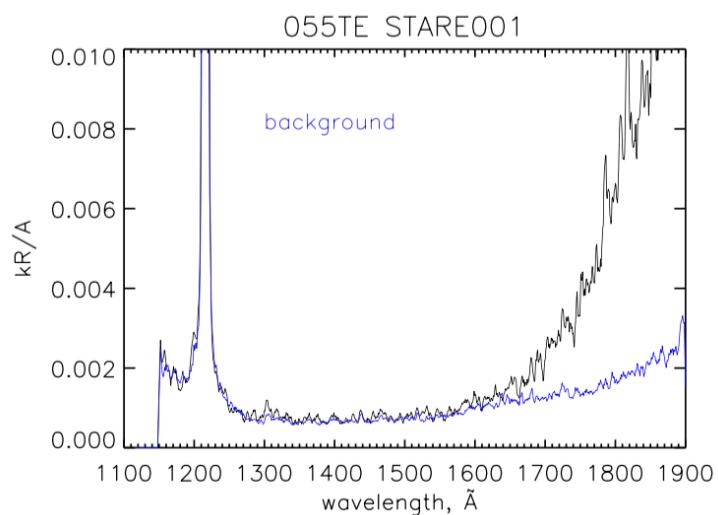
Longitude= 323.6°W

Latitude=20.5°

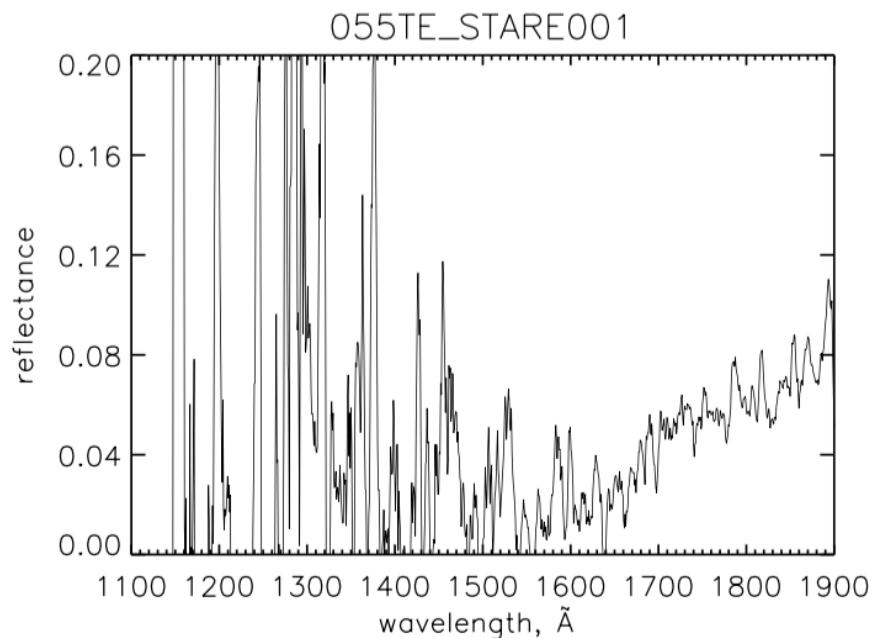
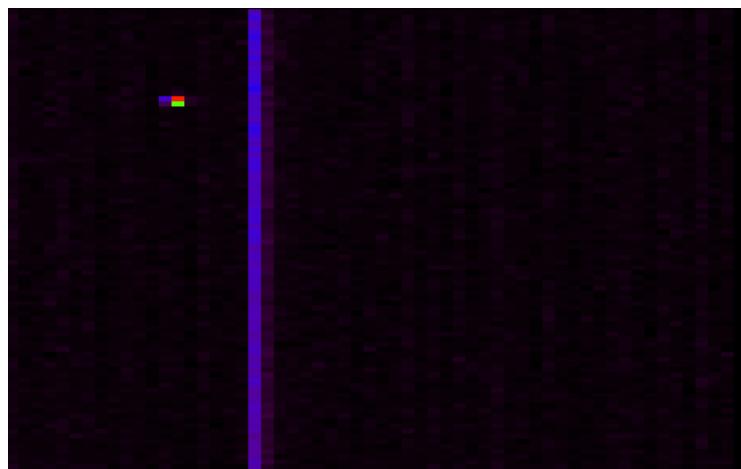
Phase= 36.7°



115 190-sec integrations=6 hr stare



Tethys offset from central rows



VIMS_056TE_TETHYS001_PRIME

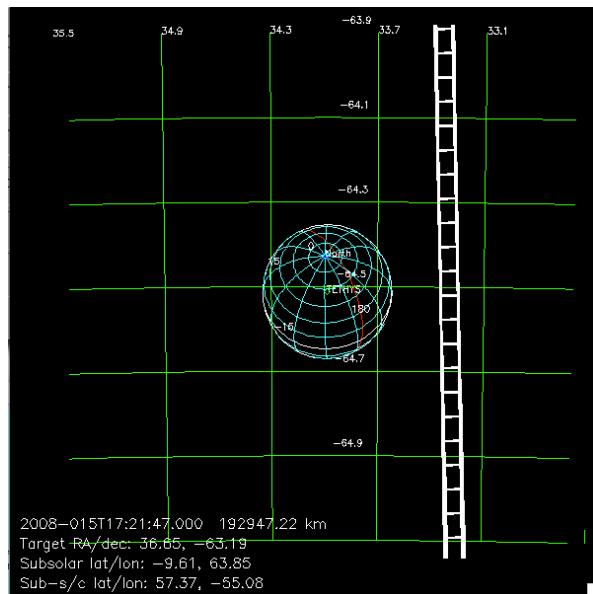
UVIS_056TE_ICYLON001_VIMS

2008-015T17:22

Alt= 192,245 km

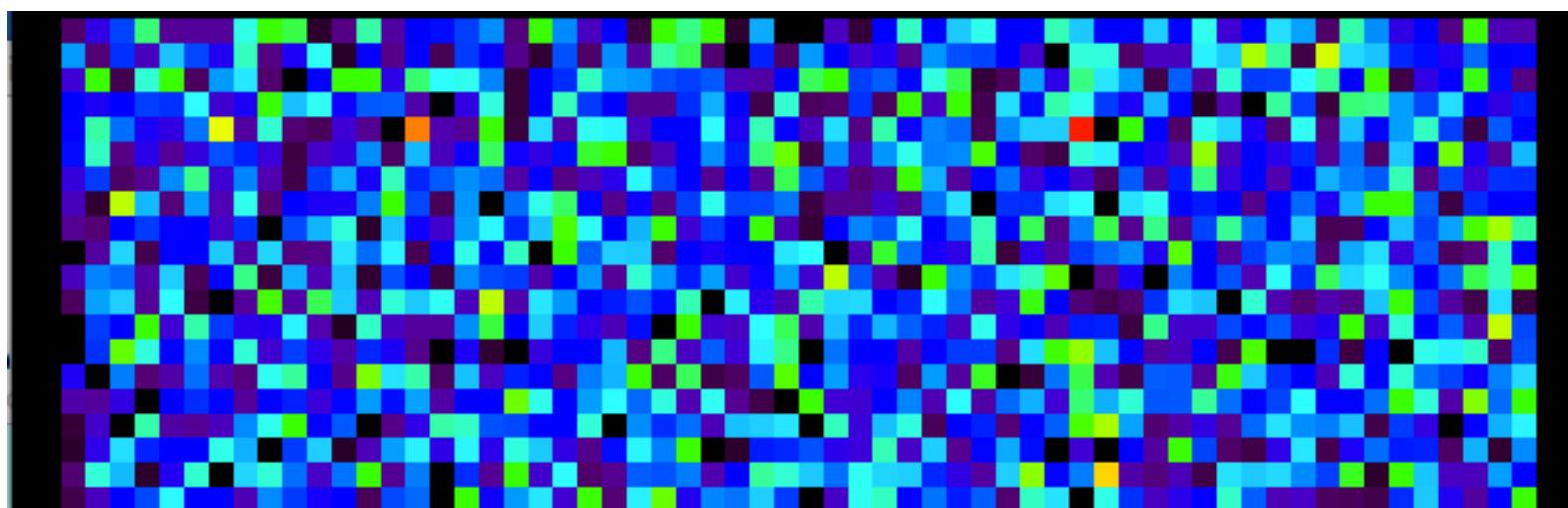
Longitude= 56°W

Phase= 114°

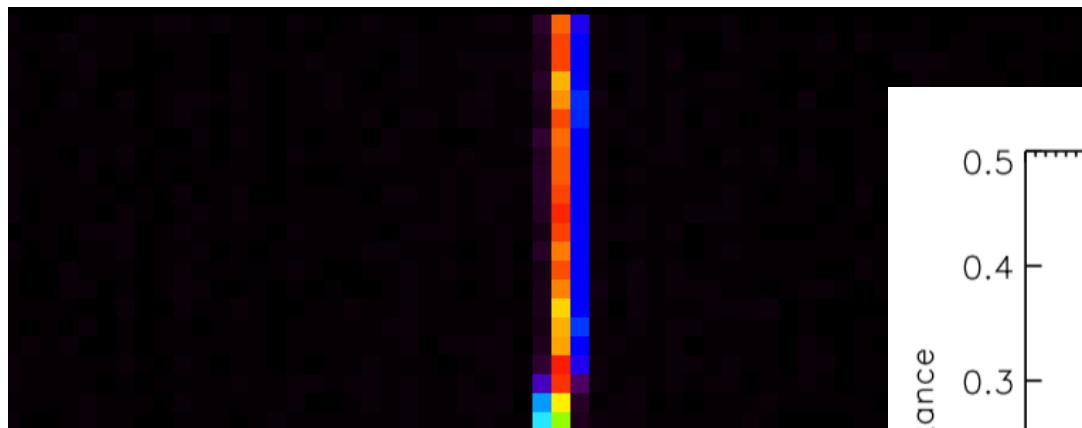
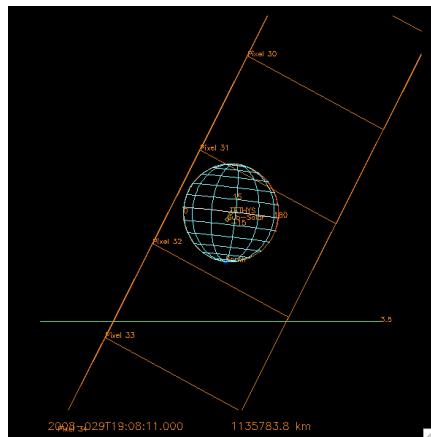
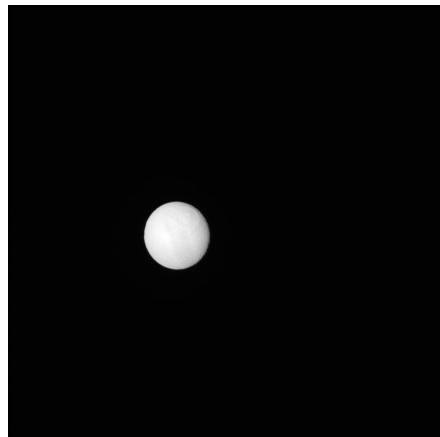


Tethys not in UVIS slit

Uses ICYMAP setup: 30-sec
integ. per., high-res slit



ISS_057TE_TETHYS001_PRIME



Here we subtracted the average signal around 1140Å, then calibrated, then averaged over time and summed Tethys rows

UVIS_057TE_ICYTHON001_ISS

2008-029T19:09

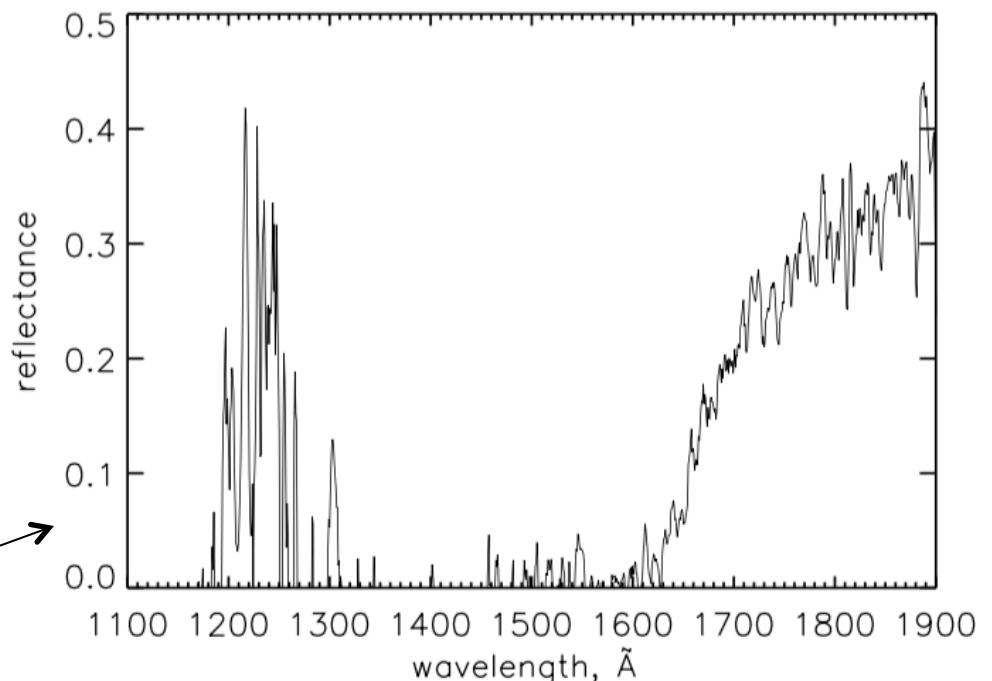
Alt= 1,126,610 km

Longitude= 98.7°W

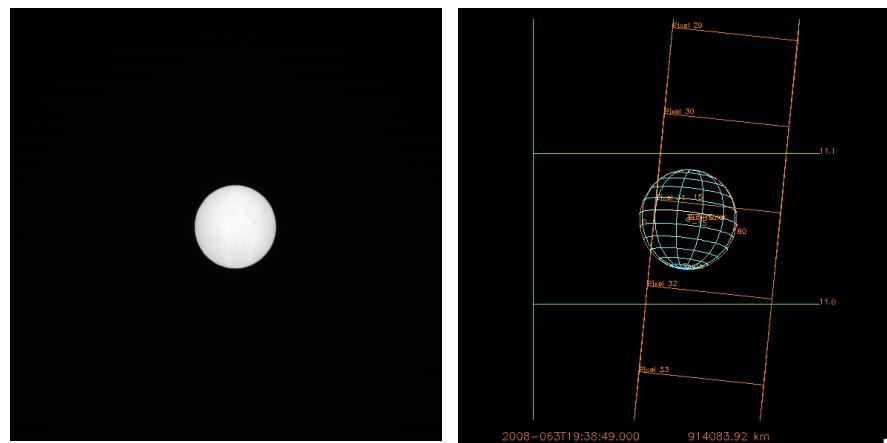
Latitude= 1°S

Phase= 9.07°

057TE_ICYTHON001



ISS_060TE_OPPSGA001_PRIME



UVIS_060TE_ICYTHON001_ISS

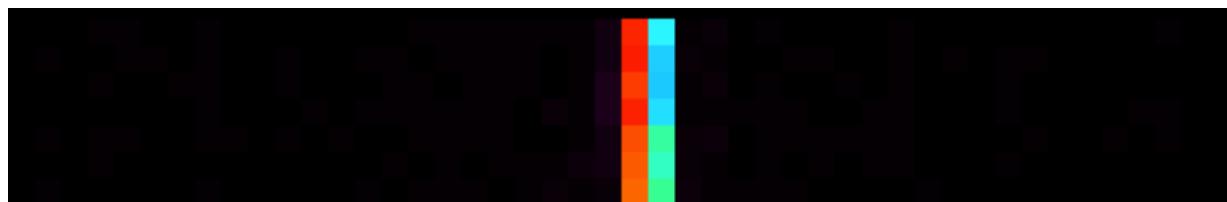
2008-063T19:39

Alt= 911,328 km

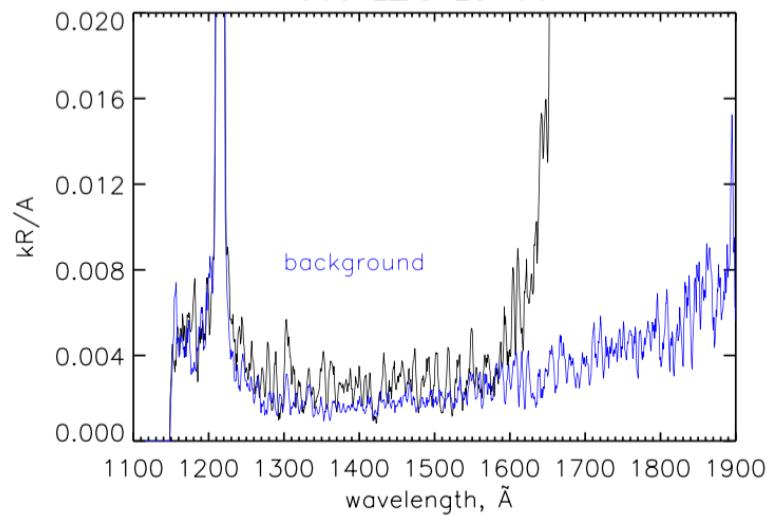
Longitude= 107°W

Latitude= 8.75°S

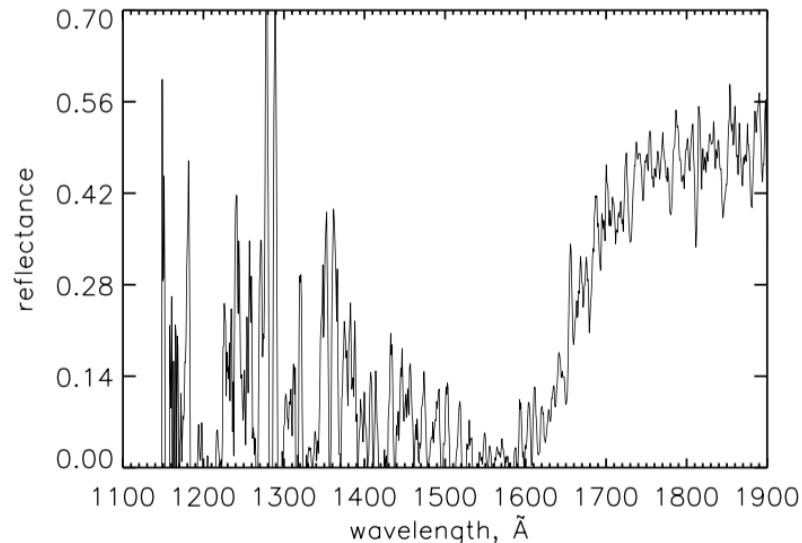
Phase= 0.344°



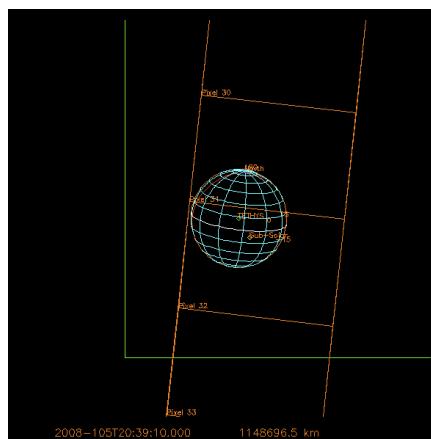
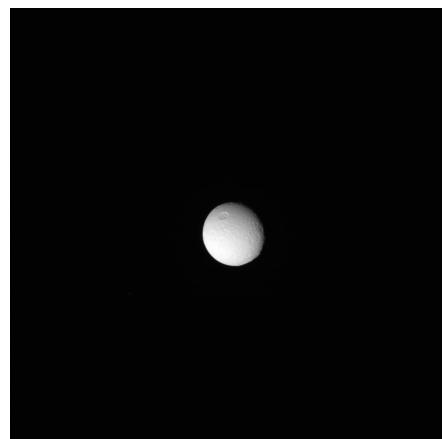
060TE_ICYTHON001



060TE_ICYTHON001



ISS_064TE_PHOTOM001_PRIME



UVIS_064TE_ICYTHON001_ISS

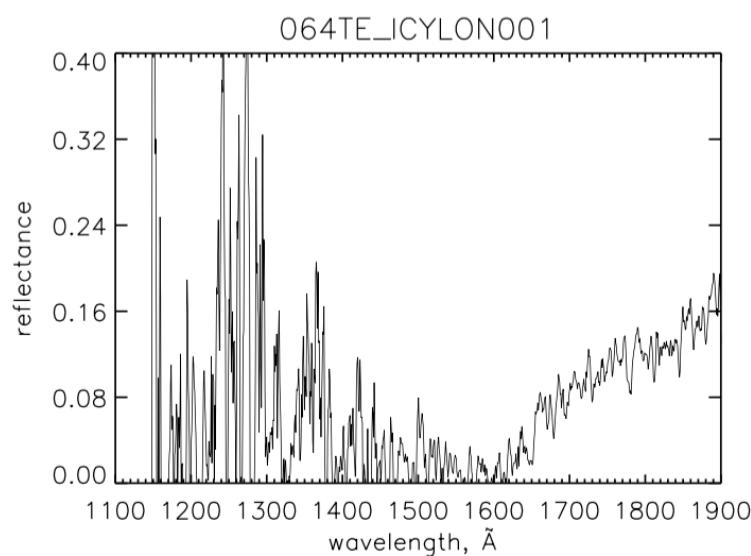
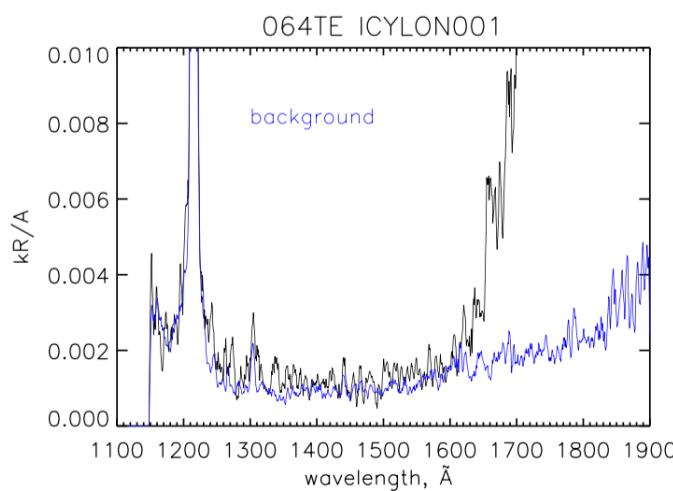
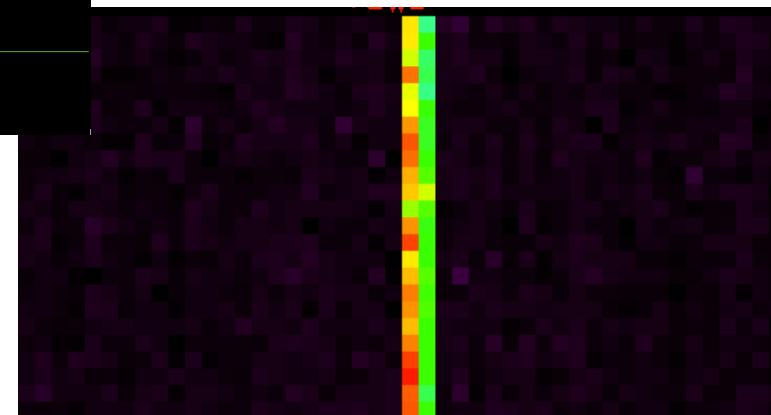
2008-105T20:40

Alt= 1,159,324 km

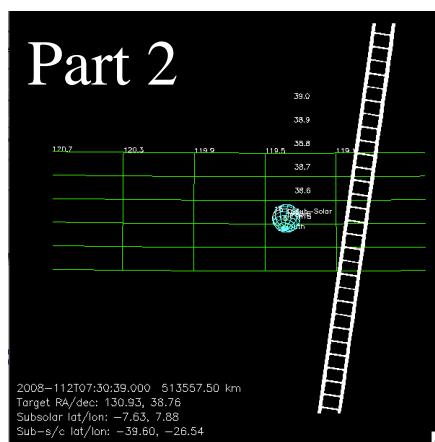
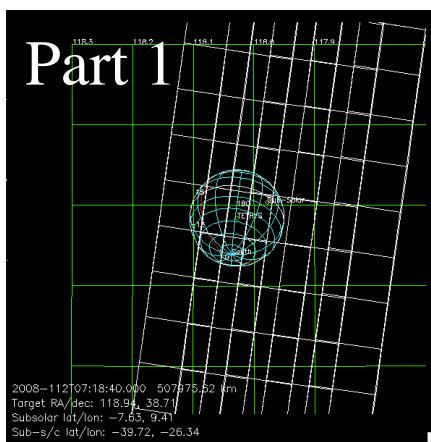
Longitude= 219°W

Latitude= 13°N

Phase= 26.6°

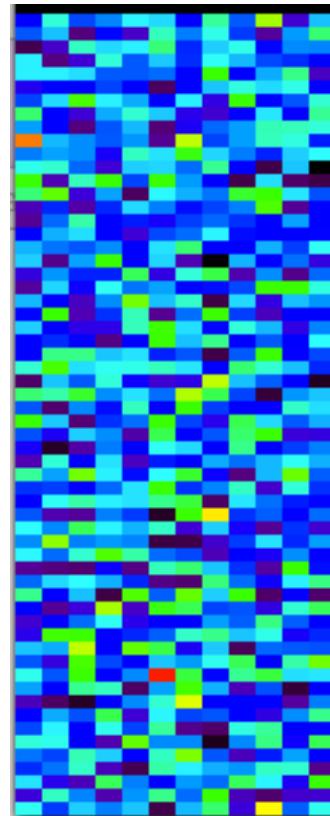
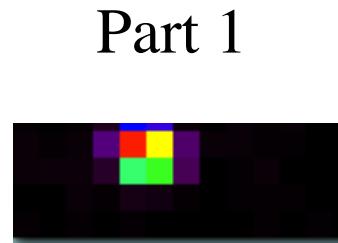


065TE_FP1ECLX001_CIRS
2008-112T07:19
Alt= 509,313 km
Longitude= 26°W
Latitude=39°S
Phase= 46°



Part 2

Eclipse 07:41:43-09:54:53



065TE_FP1ECLX002_CIRS

2008-112T09:33

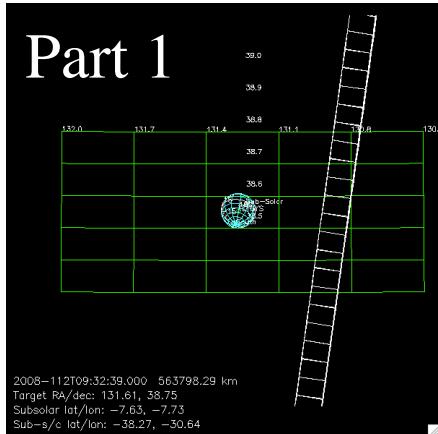
Alt= 584,884 km

Longitude= 34°W

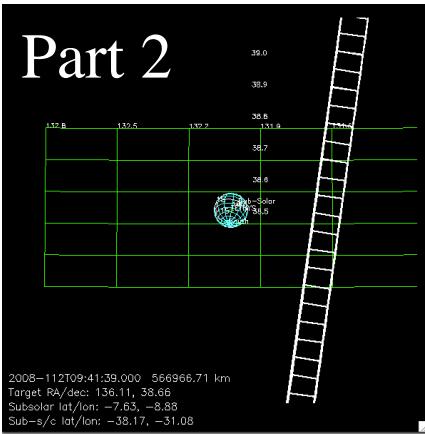
Latitude= 37.6°W

Phase= 34.8°

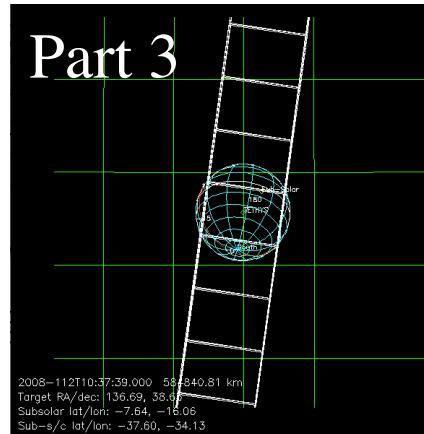
Part 1



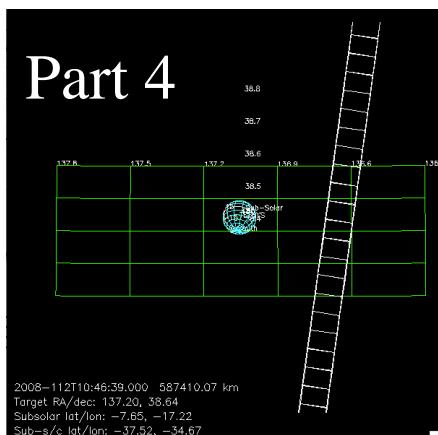
Part 2



Part 3



Part 4

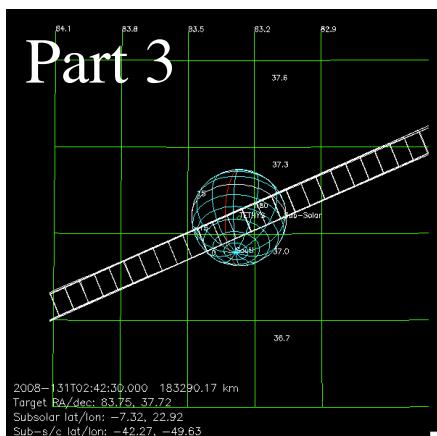
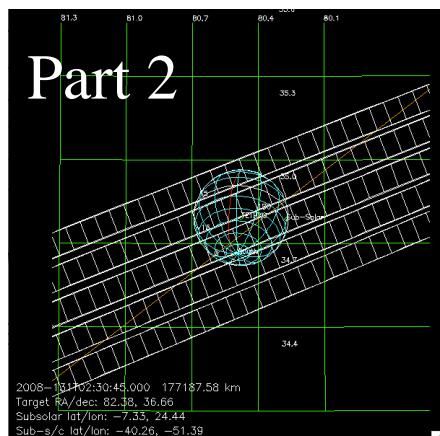
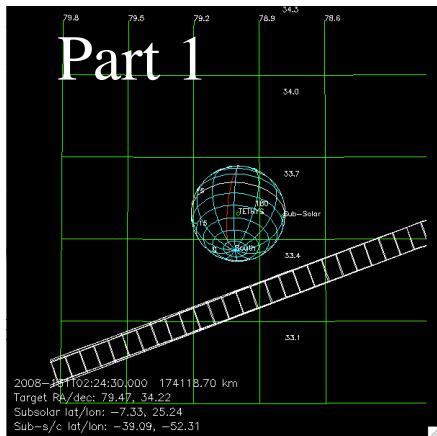


Part 3 (post-eclipse)



Eclipse 07:41:43-09:54:53

ISS_067TE_TETHYS001_PRIME



067TE_ICYLON001_CIRS

2008-131T02:25

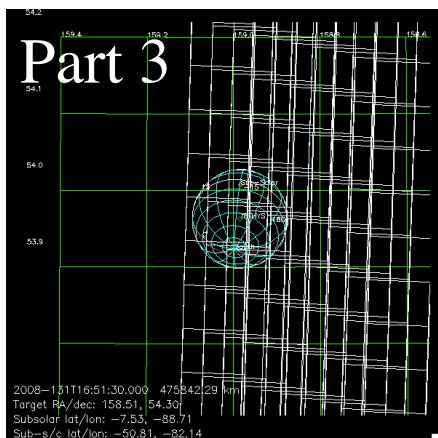
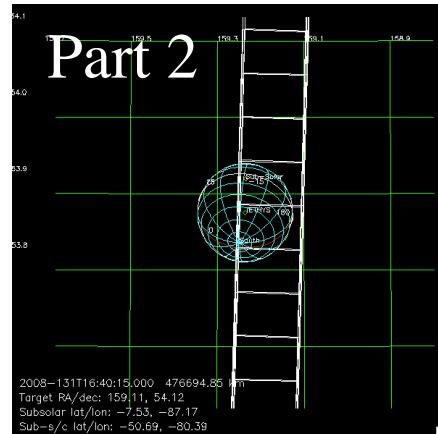
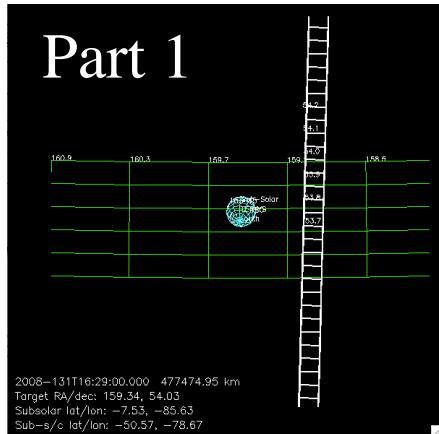
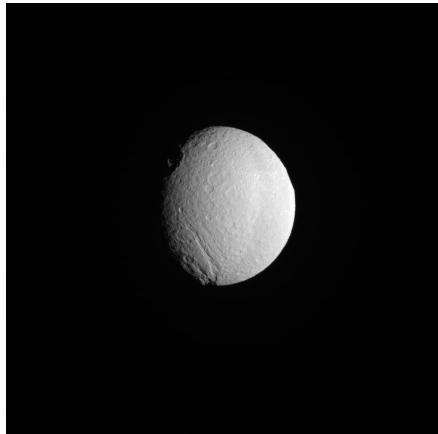
Alt= 174,033 km

Longitude= 53°W

Phase= 76.7°



ISS_067TE_TETHYS002_PRIME



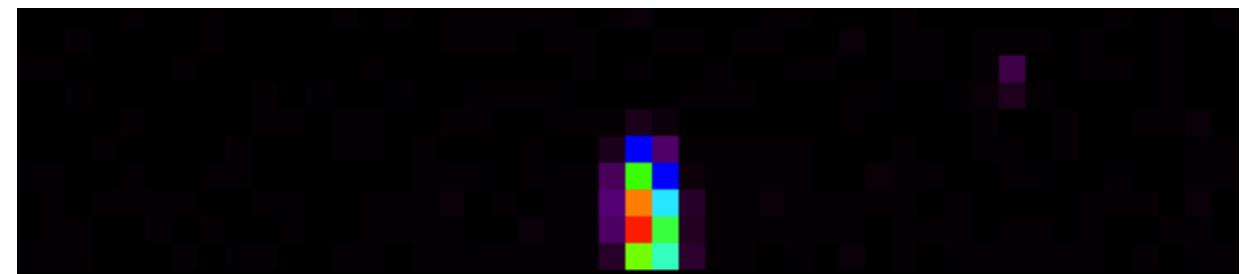
067TE_ICYLON002_CIRS

2008-131T16:30

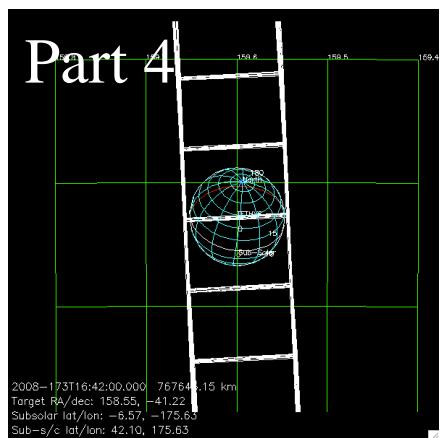
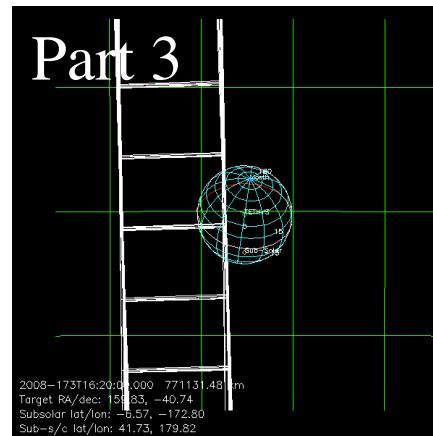
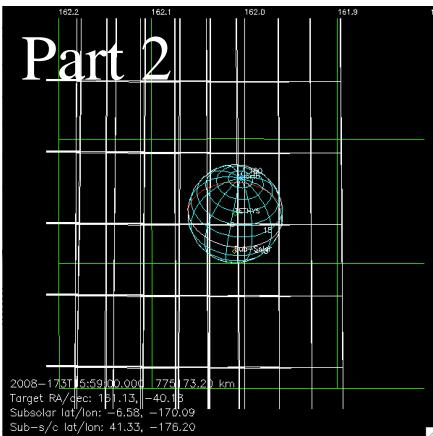
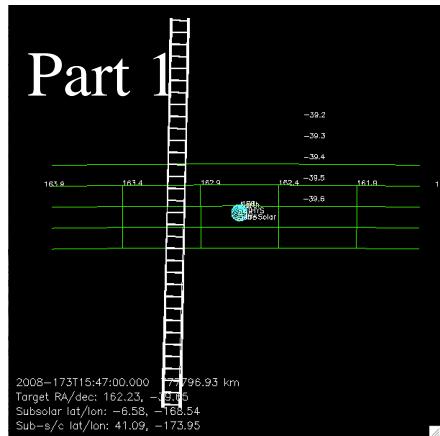
Alt= 476,806 km

Longitude= 79°W

Phase= 43.7°



ISS_073TE_FP13STARE001_PRIME



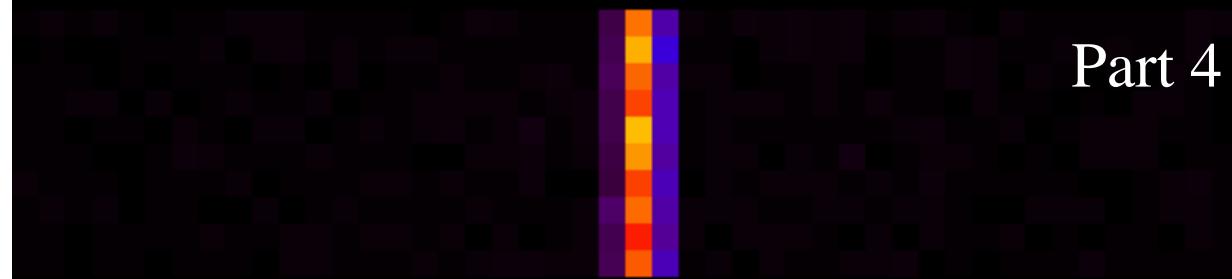
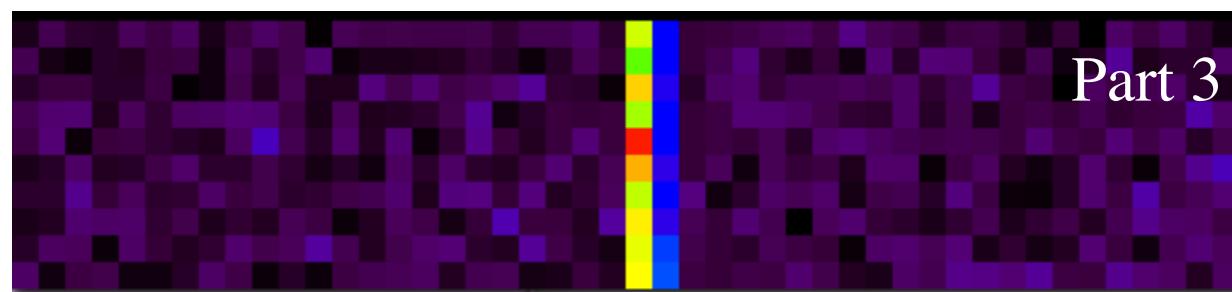
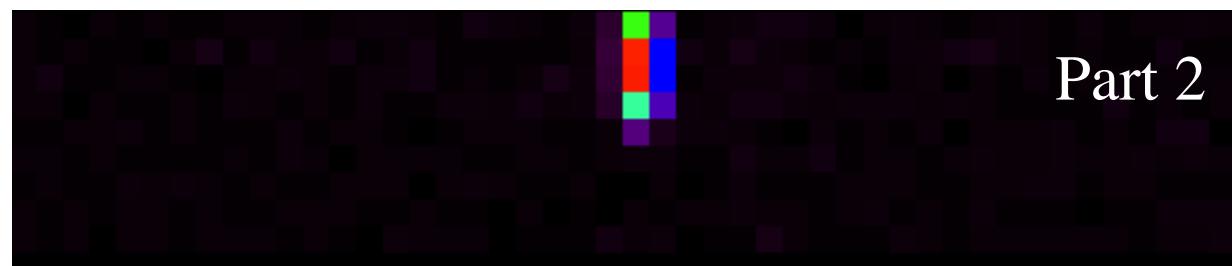
073TE_ICYLON001_CIRS

2008-173T15:48

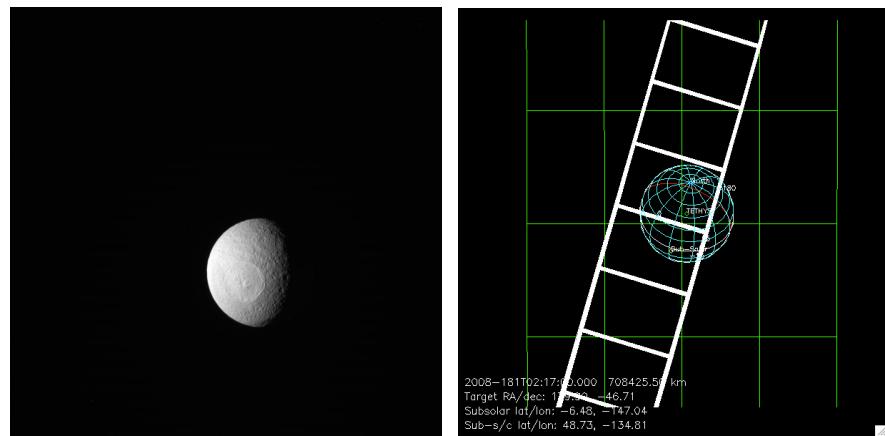
Alt= 776,605 km

Longitude= 174°W

Phase= 49.3°



ISS_074DI_RHTEHILAT001_PRIME



074DI_ICYTHON001_ISS

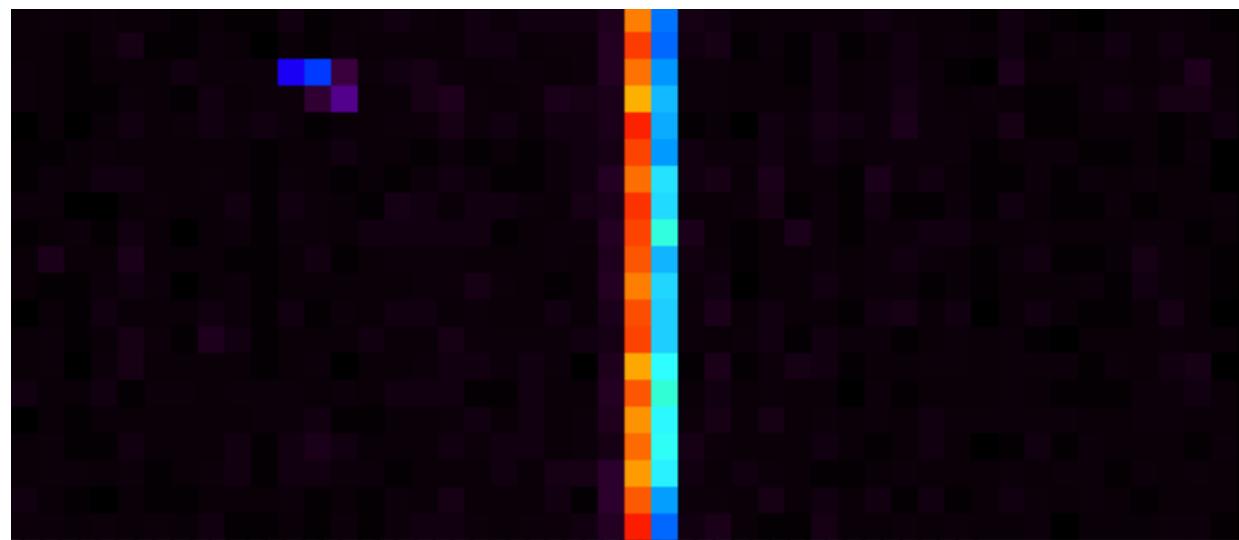
2008-181T02:18

Alt= 707,001 km

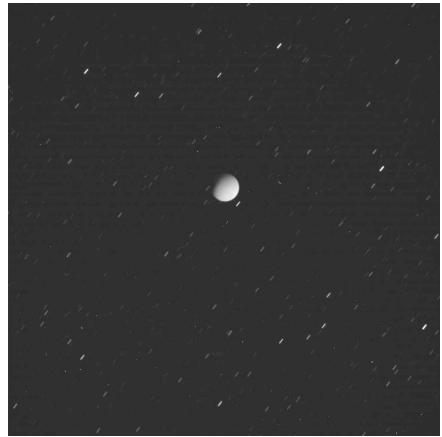
Longitude= 134°W

Phase= 57.2°

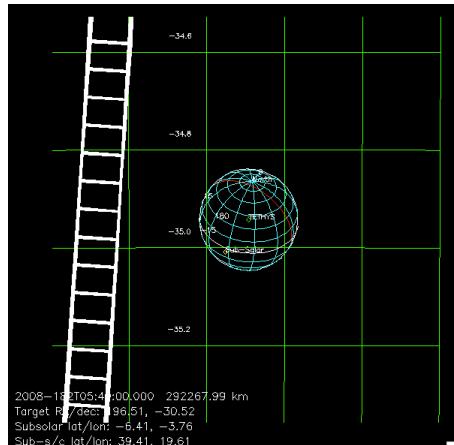
First part is Tethys



ISS_074TE_TETHYSRK001_PRIME



WAC image



Tethys is in eclipse the
whole time

074TE_TETHYS001_CIRS

2008-182T05:41

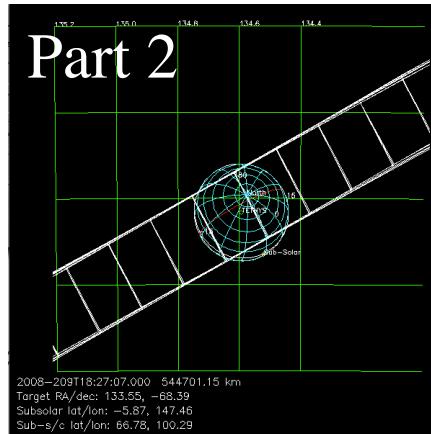
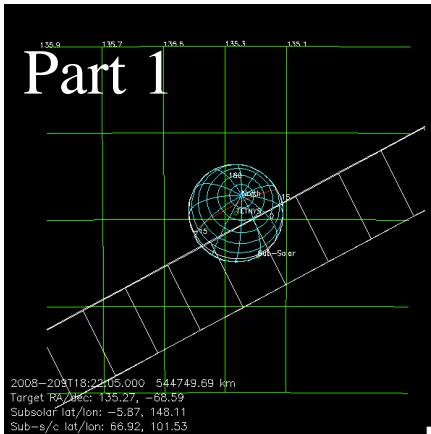
R= 289,204 km

Longitude= 340°W

Phase= 51.9°

Eclipse 04:11:10-06:41:38

ISS_078TE_GEOLOG001_PRIME



078TE_ICYTHON003_ISS

2008-209T18:24

R = 544,140 km

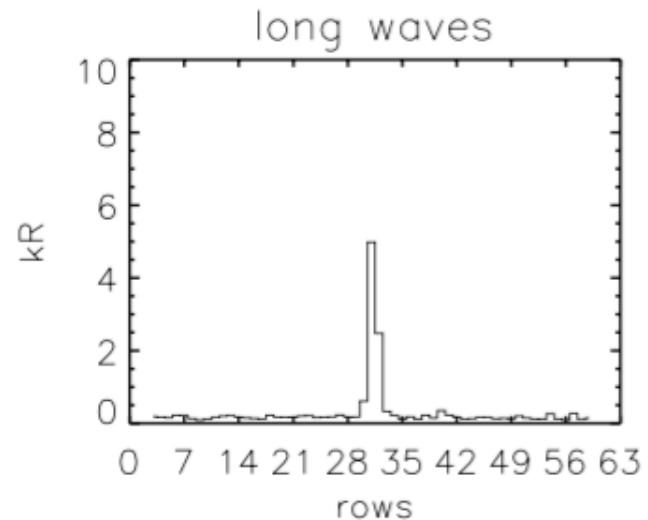
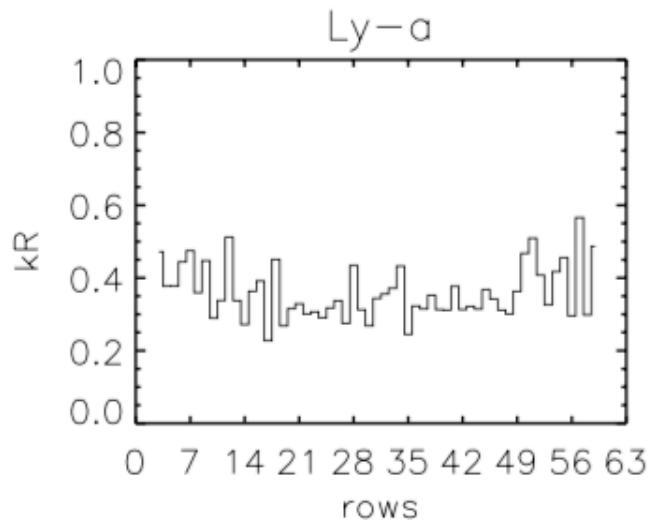
Longitude= 260°W

Latitude=66.6°N

Phase= 80.3°

240-sec int per

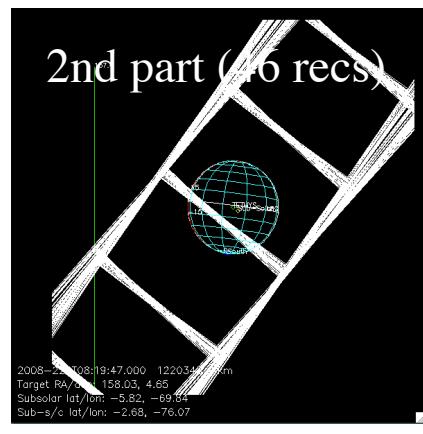
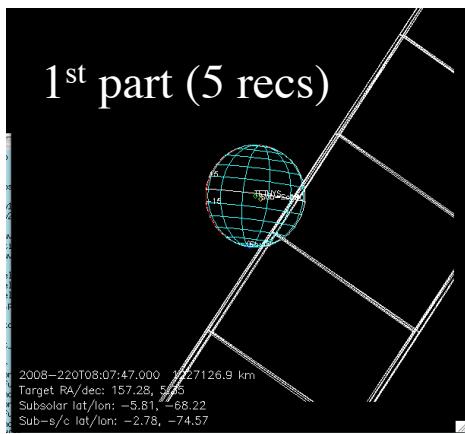
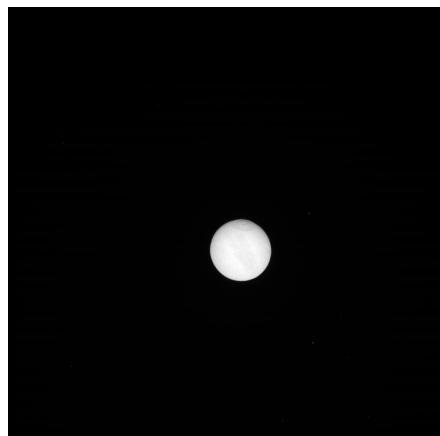
Part 1



Part 2



ISS_079TE_083W006PH001_PRIME



079TE_ICYTHON001_ISS

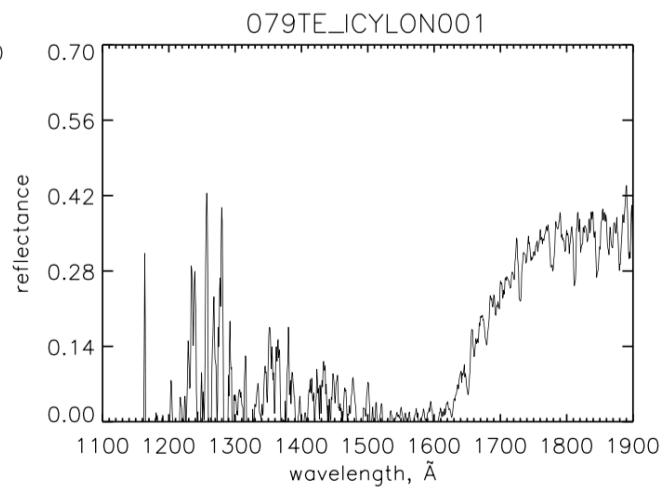
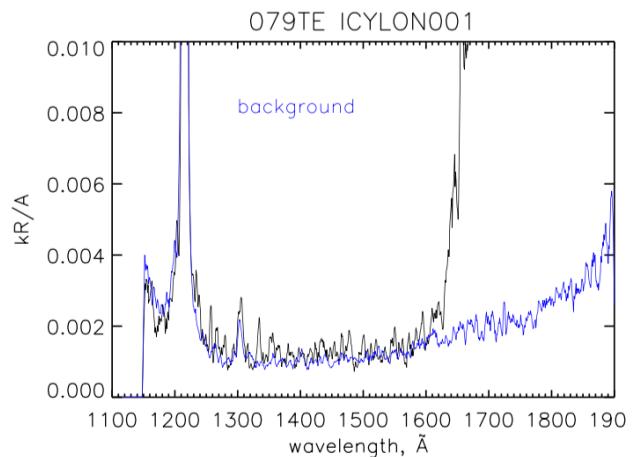
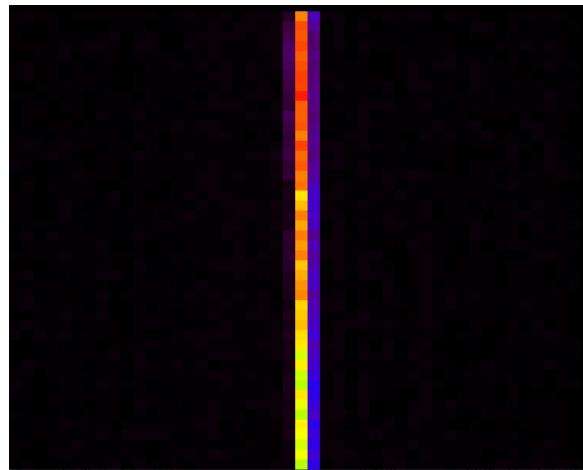
2008-220T08:08

Alt= 1,193719 km

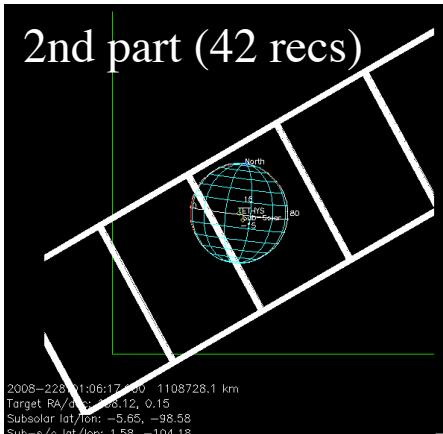
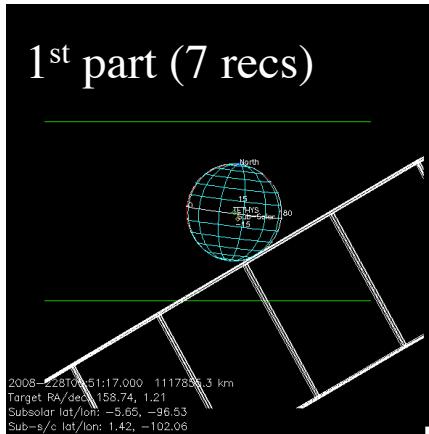
Longitude= 82°W

Latitude= 2.3°S

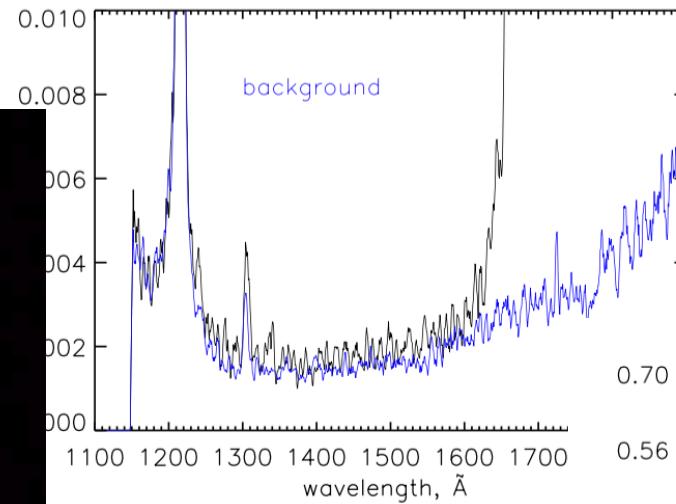
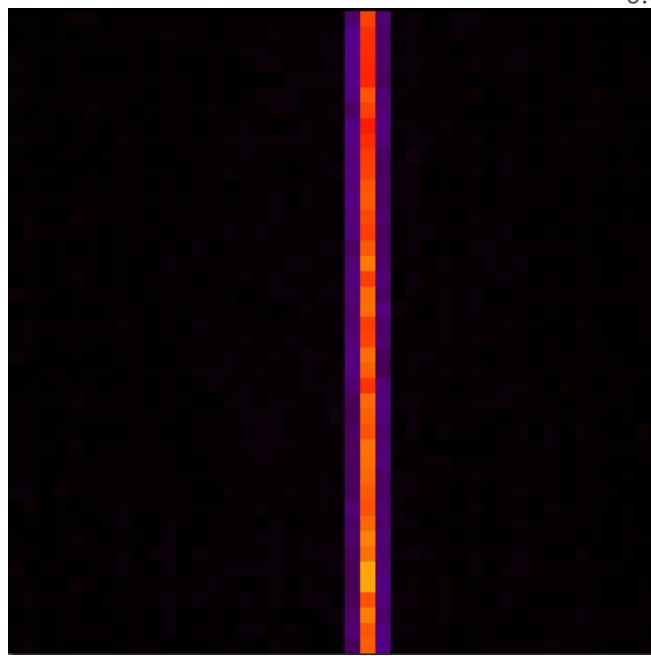
Phase= 6.7°



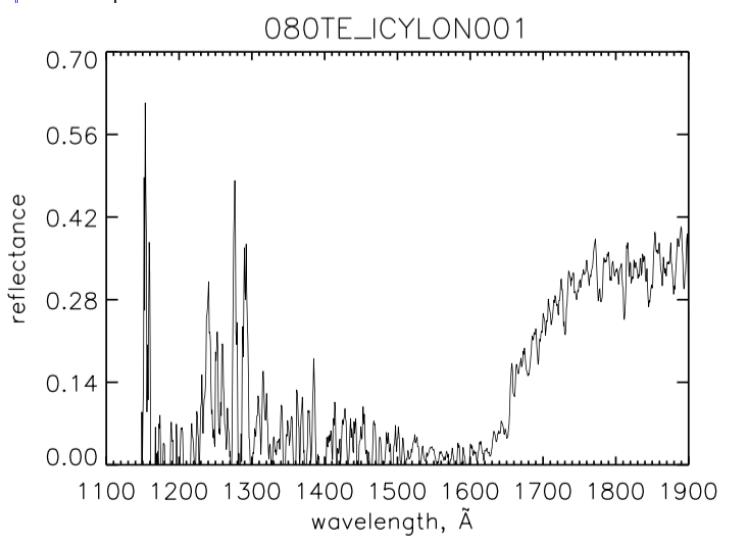
ISS_080TE_ICYTHON001_PRIME



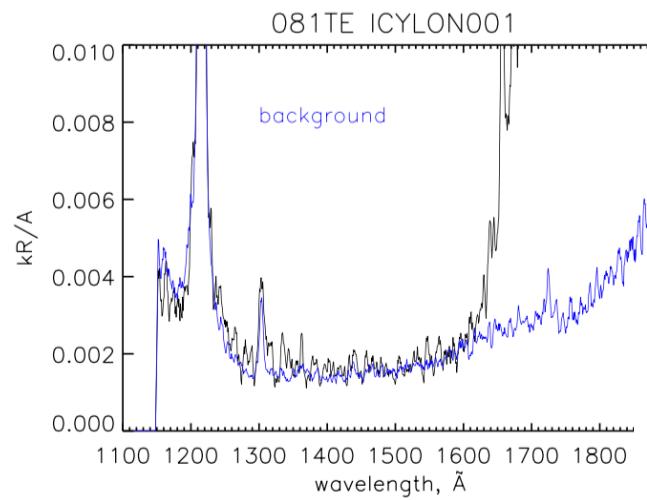
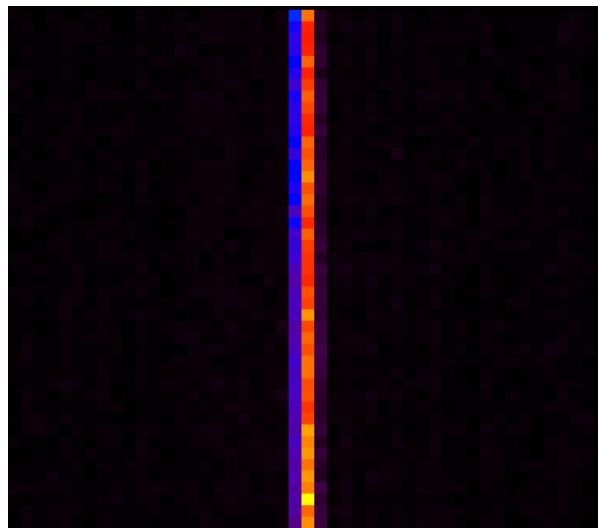
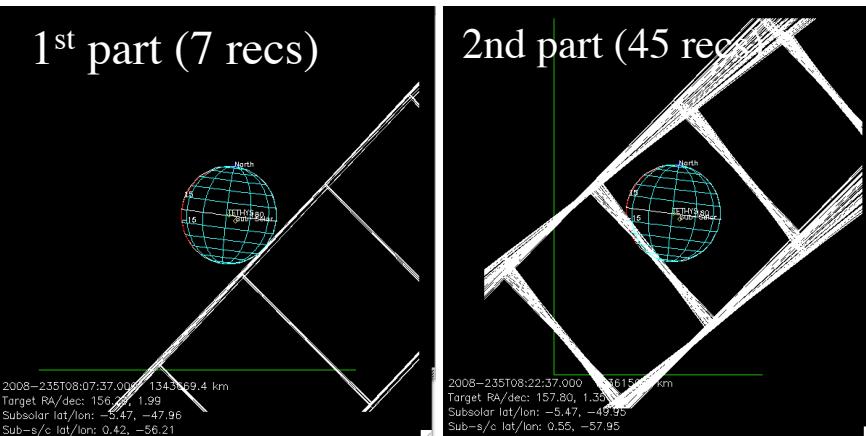
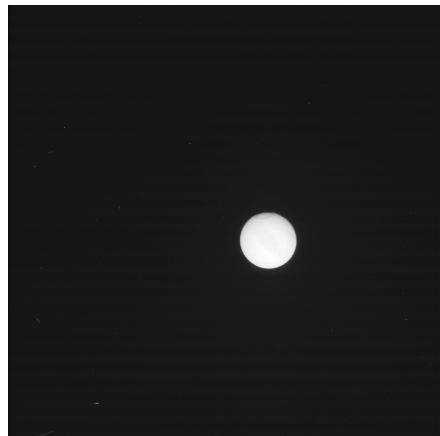
080TE ICYTHON001



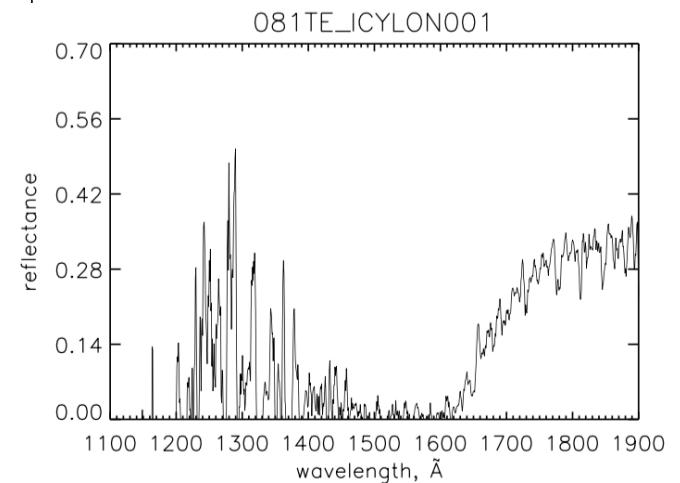
080TE_ICYTHON001_ISS
2008-228T00:52
Alt= 1,083,744 km
Longitude= 110°W
Latitude= 2°N
Phase= 9.7°



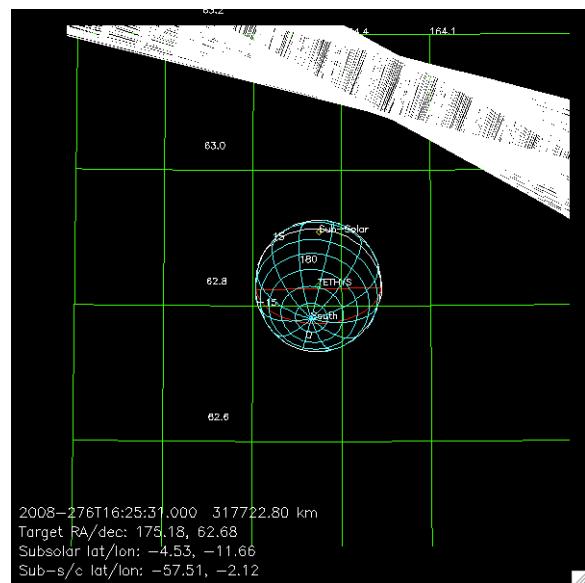
ISS_081TE_071W010PH001_PRIME



081TE_ICYLON001_ISS
2008-235T08:08
Alt= 1,312,318 km
Longitude= 63°W
Latitude= 0.94°N
Phase= 9.7°

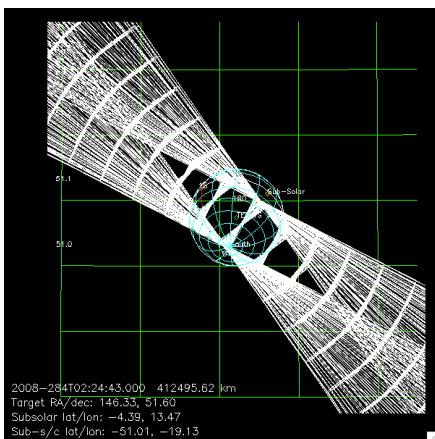
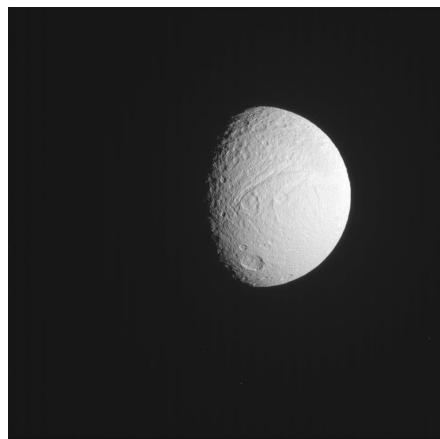


ISS_087TE_FP1SECLX001_PRIME



087TE_ICYECL001_CIRS
2008-276T16:26
Alt= 317,723 km
Eclipse: 13:47-16:32:48

Tethys not in UVIS slit



088TE_ICYLON001_PRIME

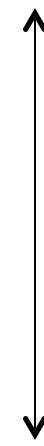
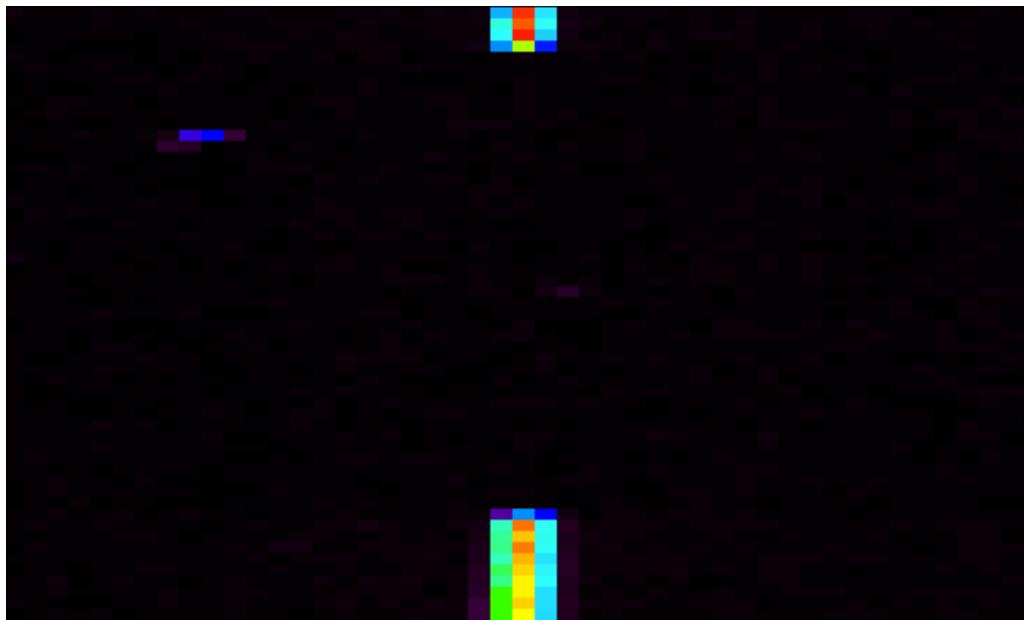
2008-284T02:26

Alt= 412,772 km

Longitude= 20°W

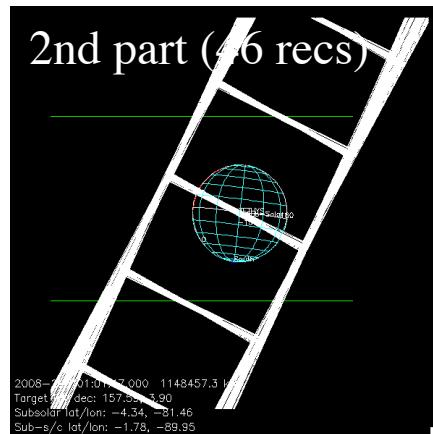
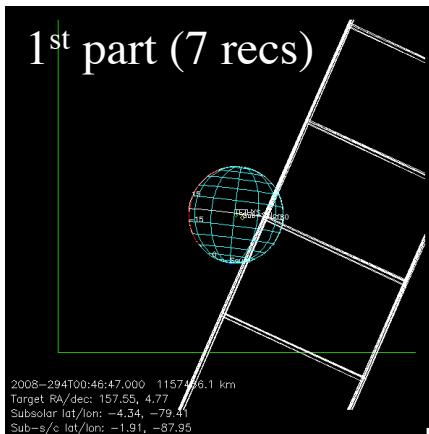
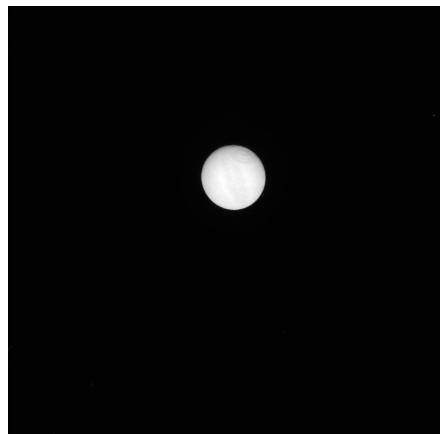
Phase= 55.1°

240-sec int per



Tethys is in eclipse 03:00-05:47

ISS_089TE_091W009PH001_PRIME



089TE_ICYLON001_ISS

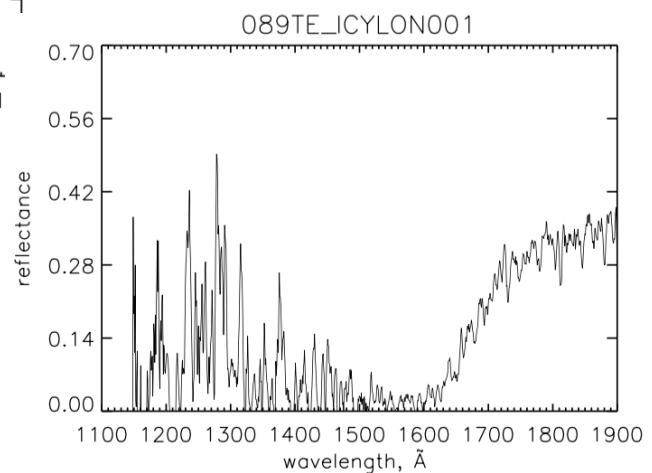
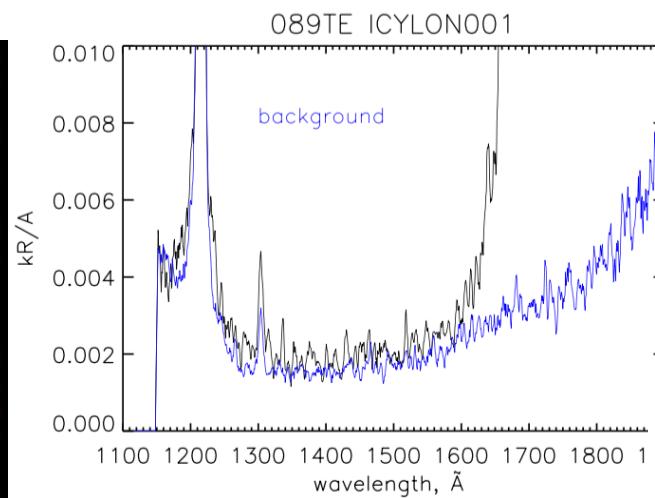
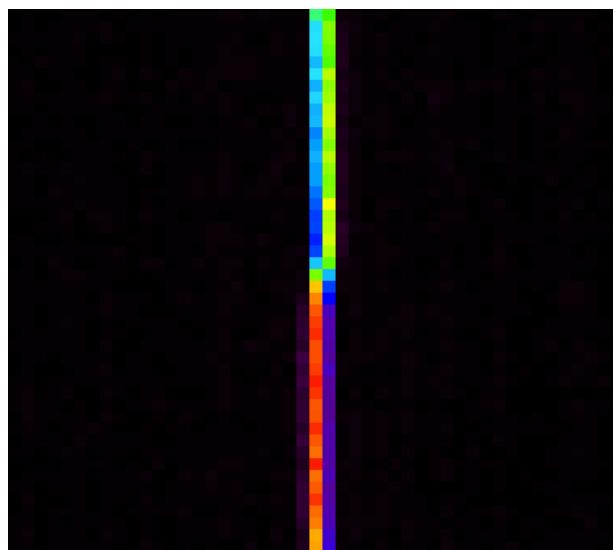
2008-294T00:47

Alt= 1,120,802 km

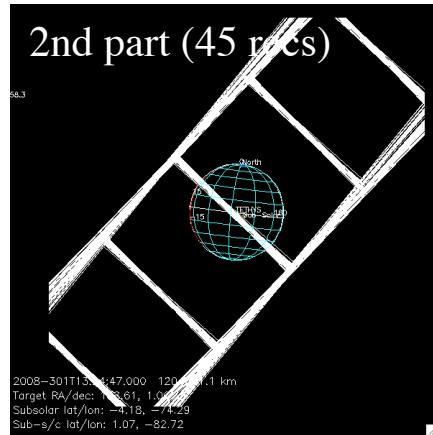
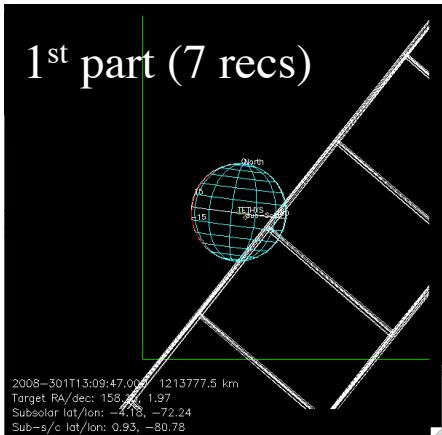
Longitude= 96°W

Latitude= 1.4°S

Phase= 8.7°



ISS_090TE_081W010PH001_PRIME



090TE_ICYTHON001_ISS

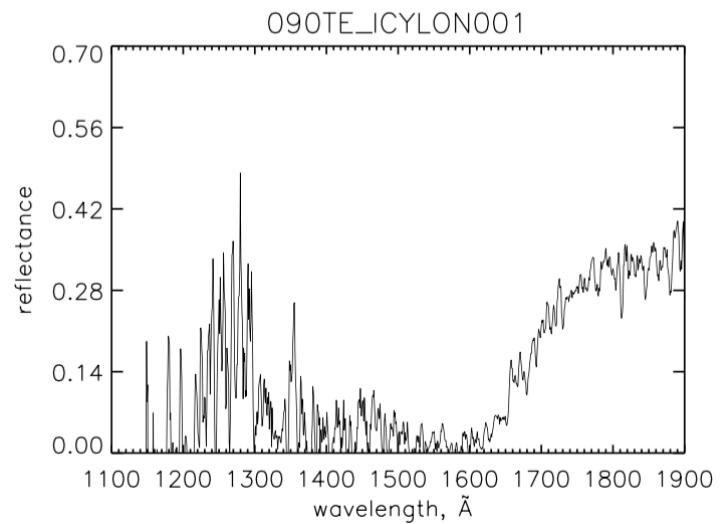
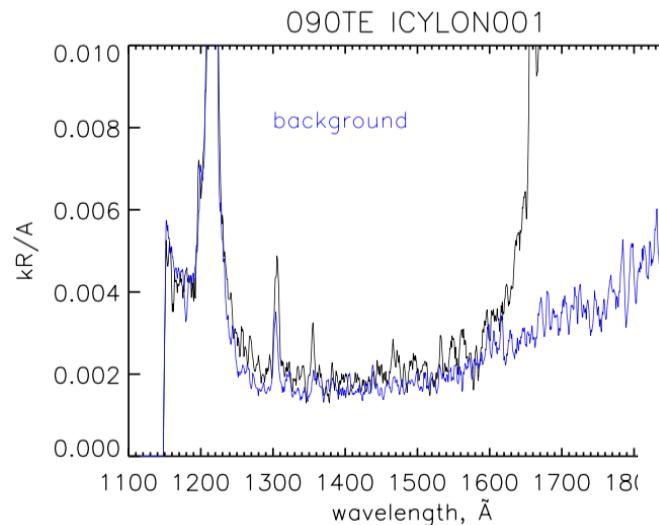
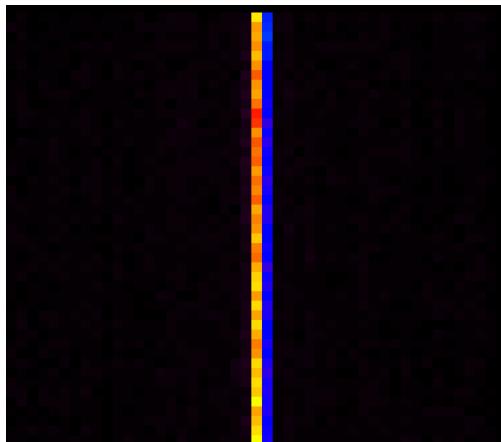
2008-301T13:10

Alt= 1,176,815 km

Longitude= 88°W

Latitude= 1.5°N

Phase= 9.85°



ISS_094TE_GEOLOG001_PRIME

14-panel mosaic

094TE_ICYMAP001_ISS

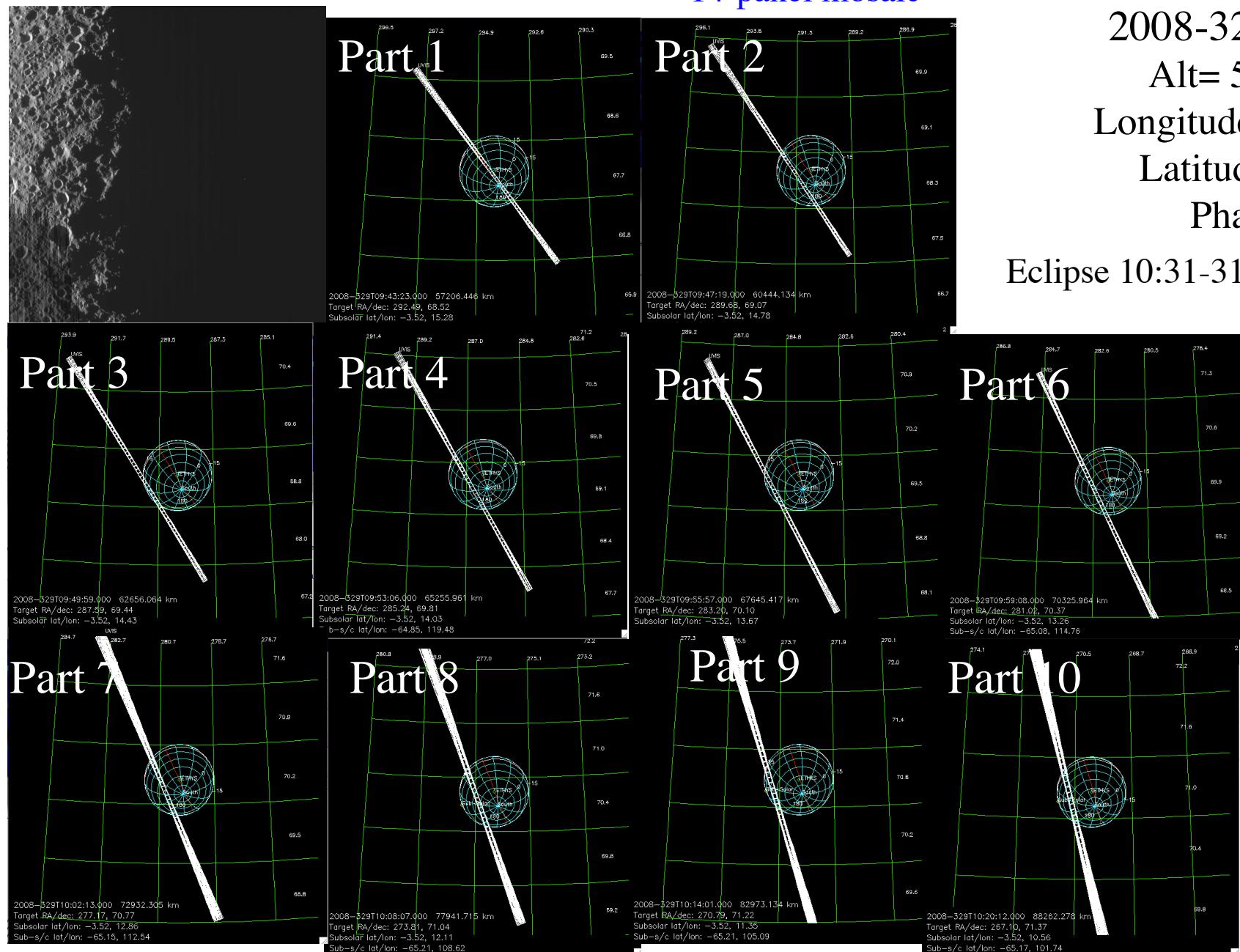
2008-329T09:43

Alt= 57,498 km

Longitude= 233°W

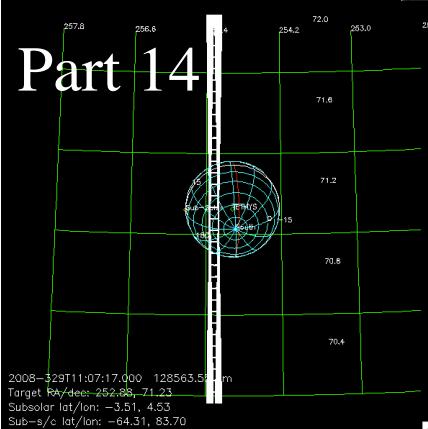
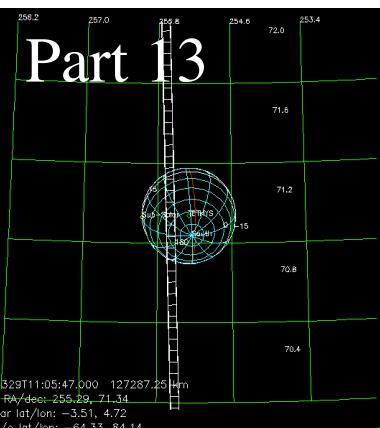
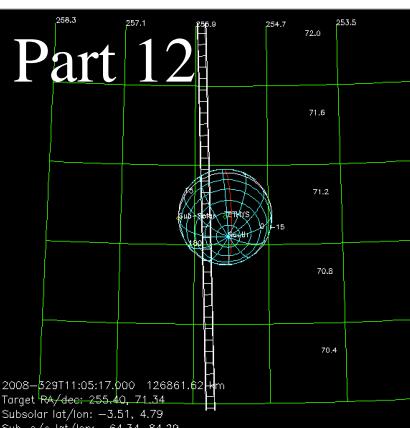
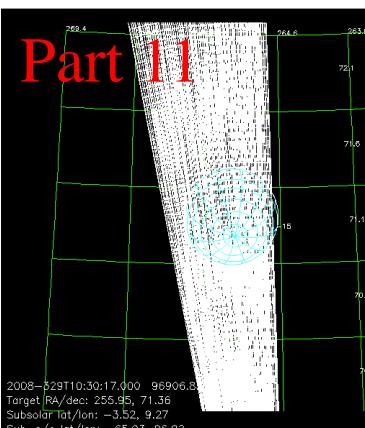
Latitude= 64.2°S

Phase= 95.3°

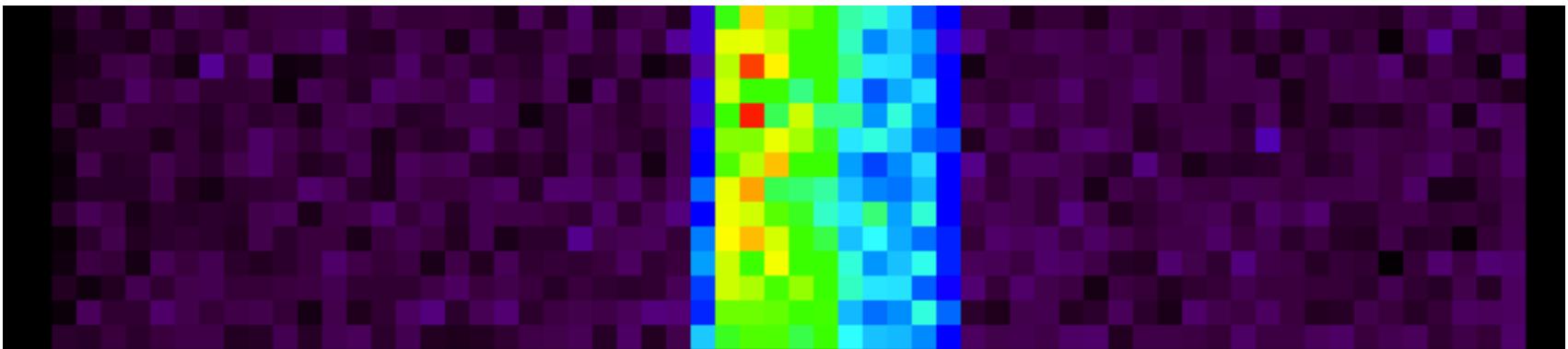


094TE_ICYMAP001_ISS Cont'd

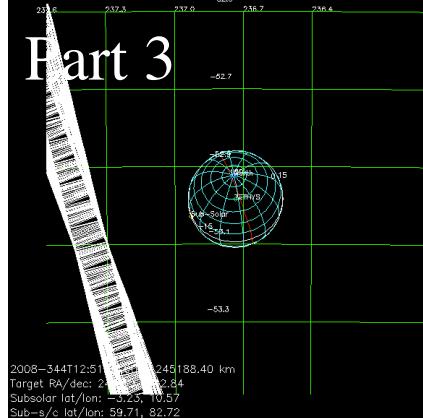
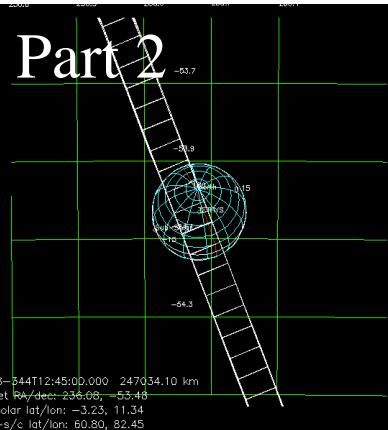
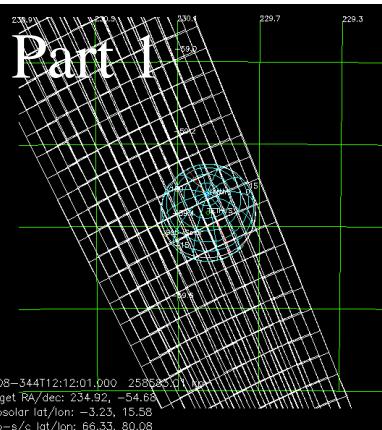
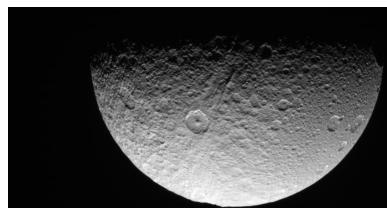
(Tethys was in eclipse
during these last 4
parts)



Part 10



ISS_096TE_SECLNX001_PRIME



096TE_ICYECL001_CIRS

2008-344T12:13

Alt= 252,954 km

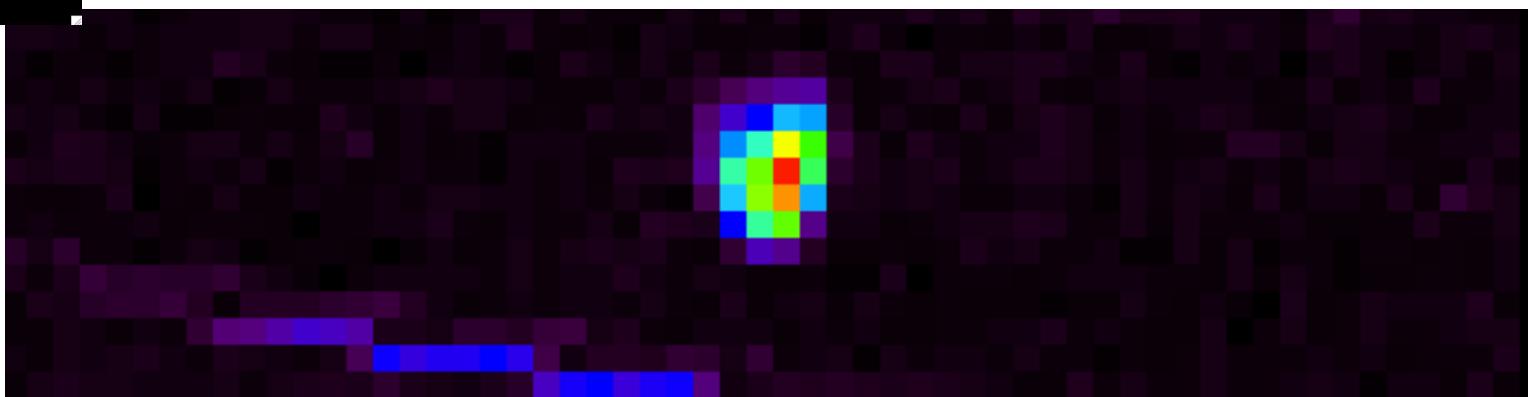
Longitude= 279°W

Latitude= 64°N

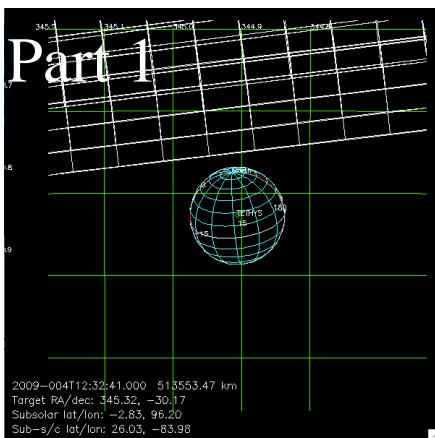
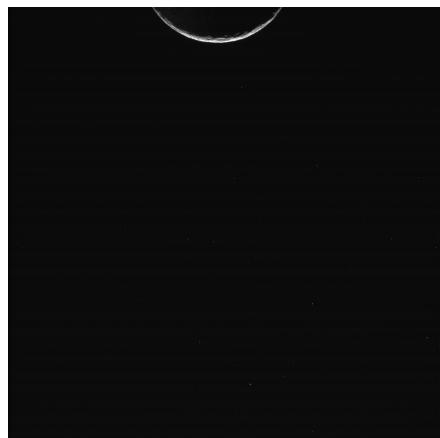
Phase= 83.5°

Eclipse 13:02:45-15:55:21
(during part 3)

Part 1



ISS_099TE_064W150PH001_PRIME



099TE_ICYTHON001_ISS

2009-004T12:54

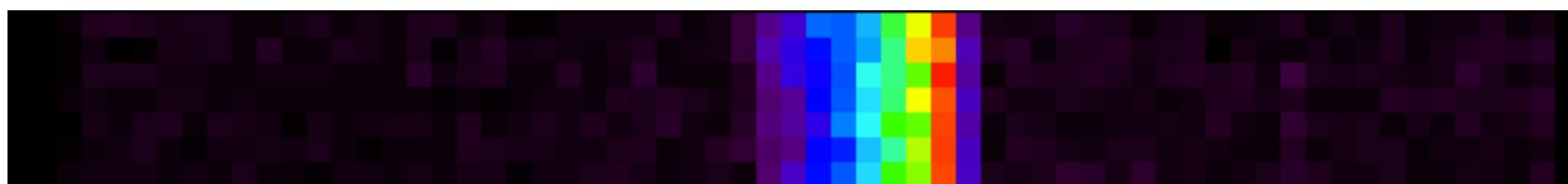
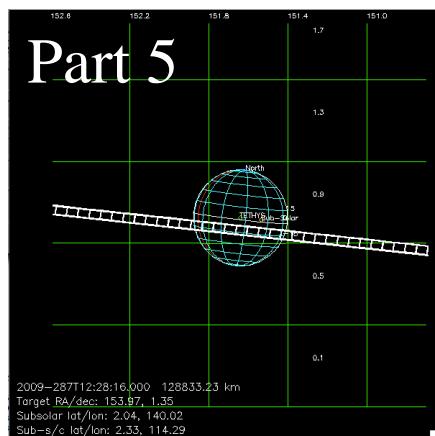
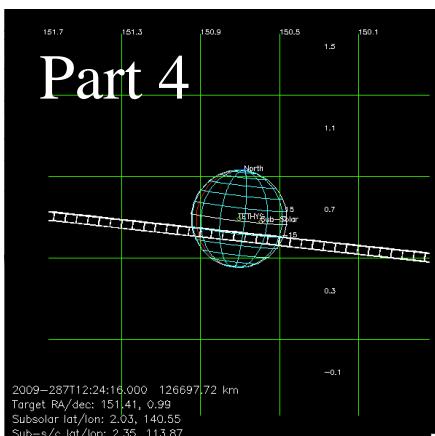
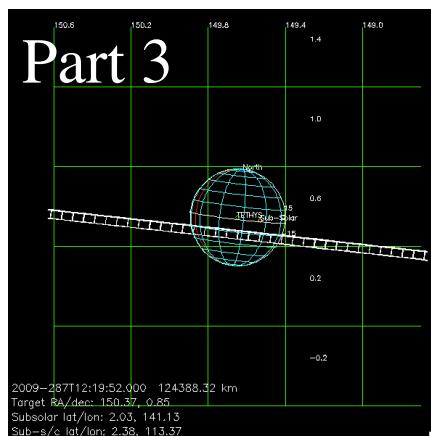
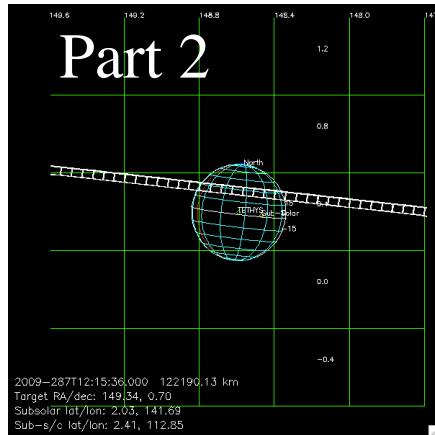
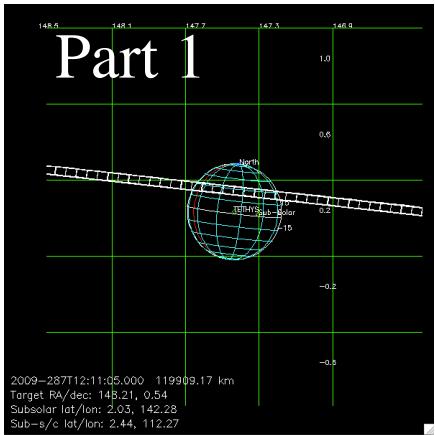
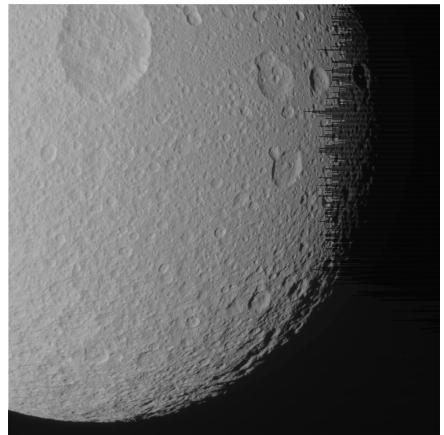
Alt= 499,273 km

Longitude= 87°W

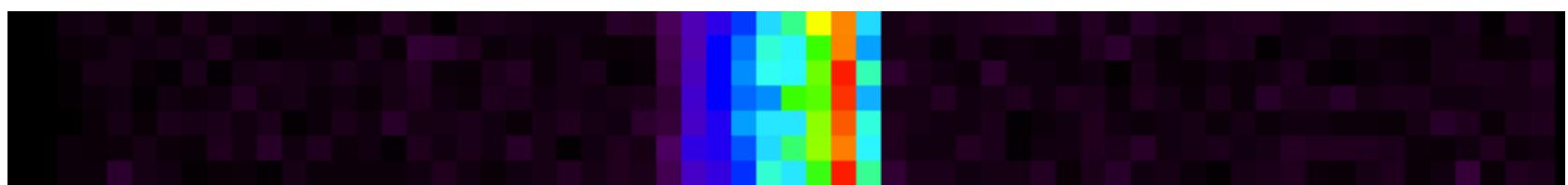
Phase= 157.4°

Tethys not in UVIS slit

ISS_119TE_GEOLOG001_PRIME

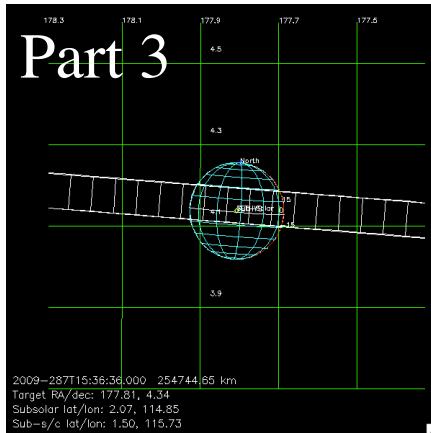
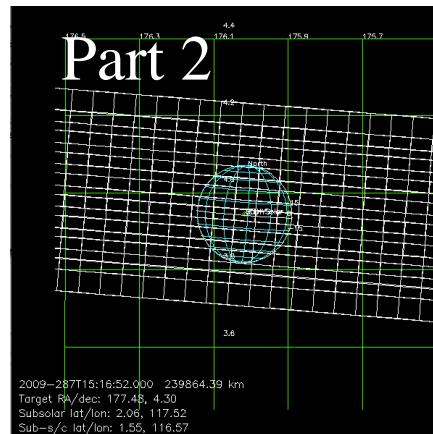
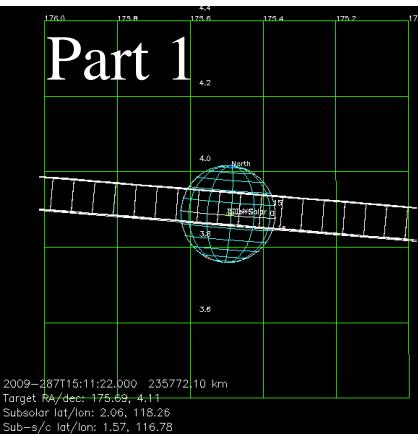
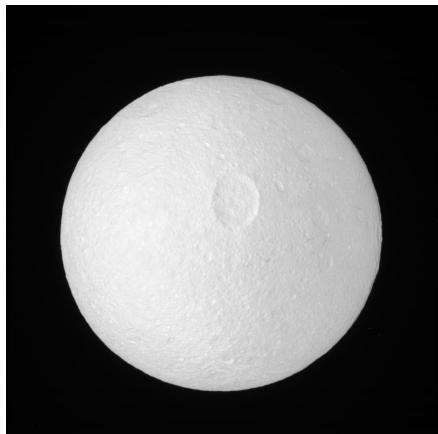


119TE_ICYMAP001_ISS
2009-287T12:11
Alt= 120,130 km
Longitude=247 °W
Latitude=2.4°N
Phase= 29.3°



Part 1
Part 2

ISS_119TE_LOWPHASE001_PRIME



119TE_ICYLON001_ISS

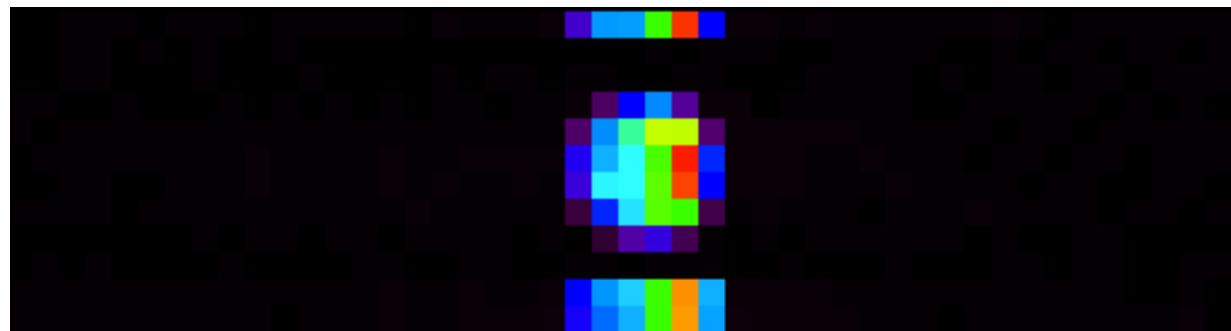
2009-287T15:12

Alt= 235,982km

Longitude= 243°W

Latitude= 1.6°N

Phase= 1.45°

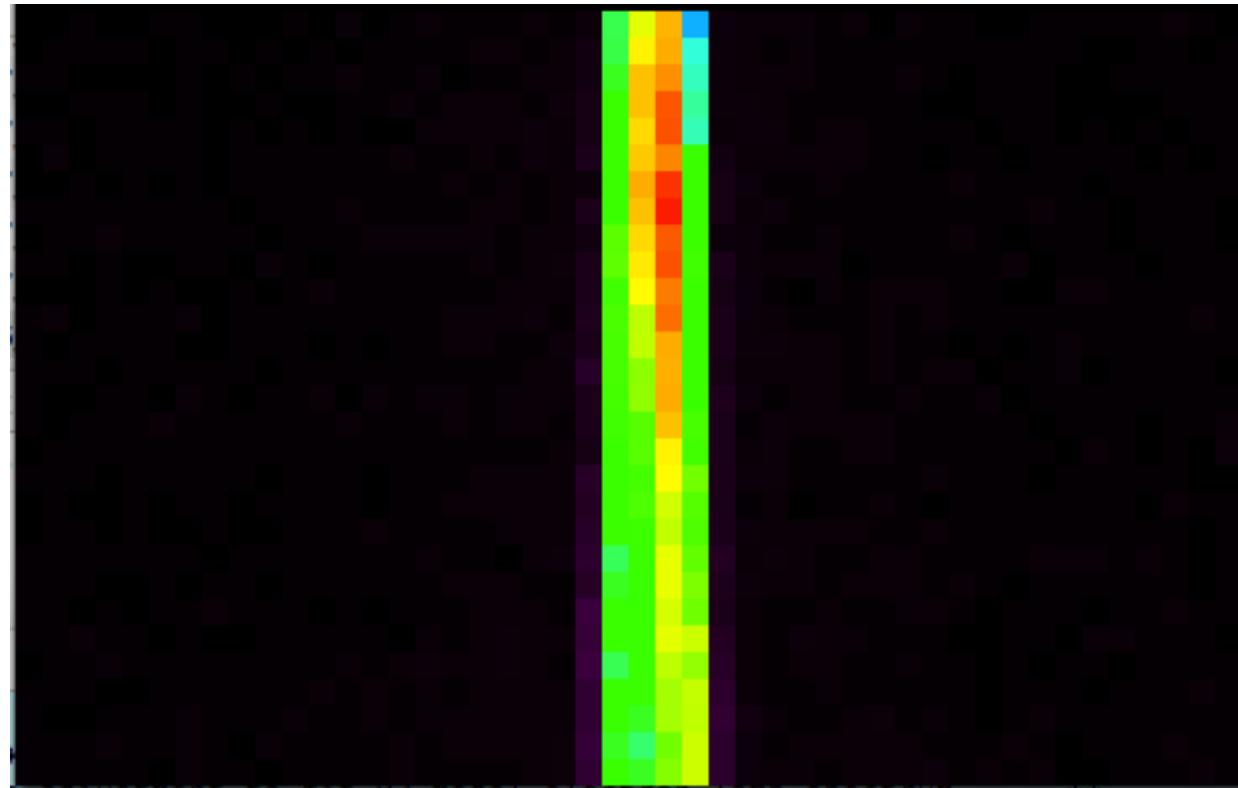
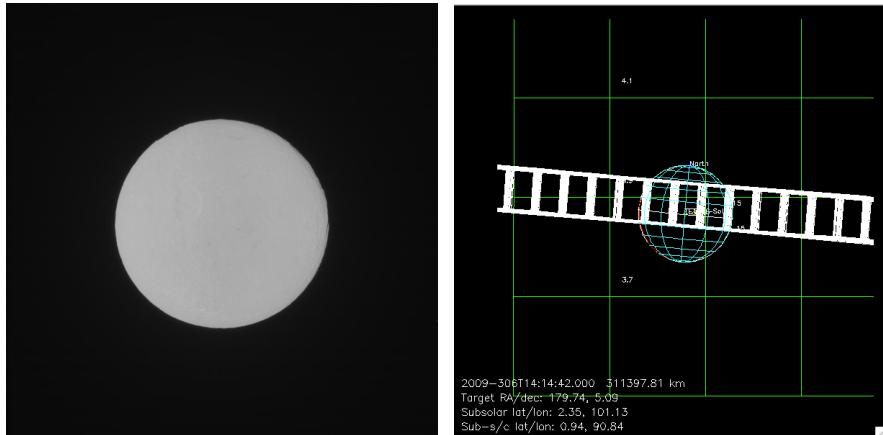


Part 3

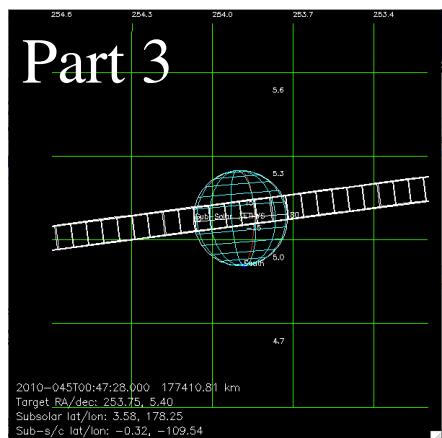
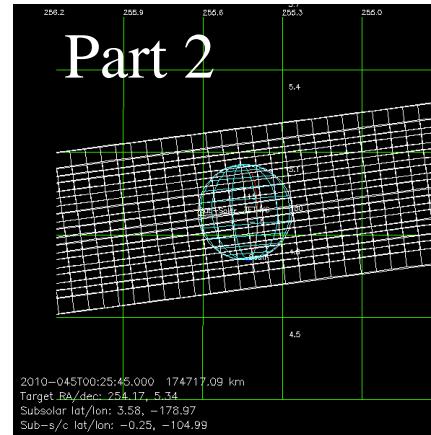
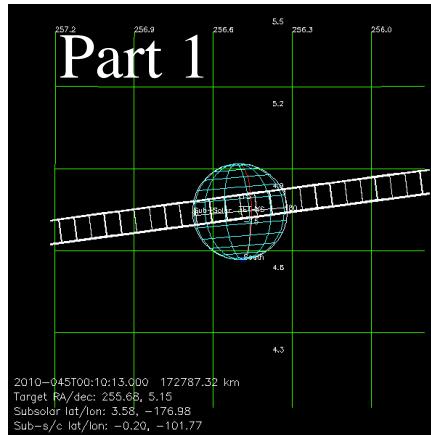
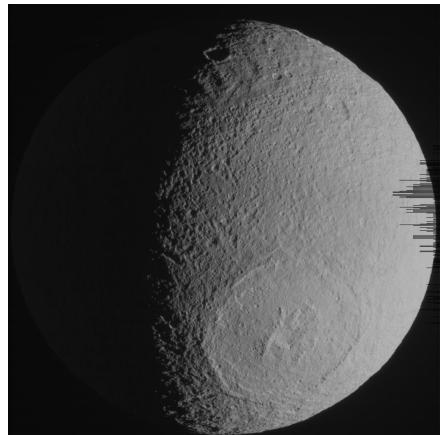
Part 2

Part 1

120TE_ICYTHON001_PRIME
2009-306T14:16
Alt= 353,527km
Longitude= 270°W
Latitude=0.9°N
Phase= 4.5°



ISS_126TE_GEOLOG002_PRIME



126TE_ICYLON001_ISS

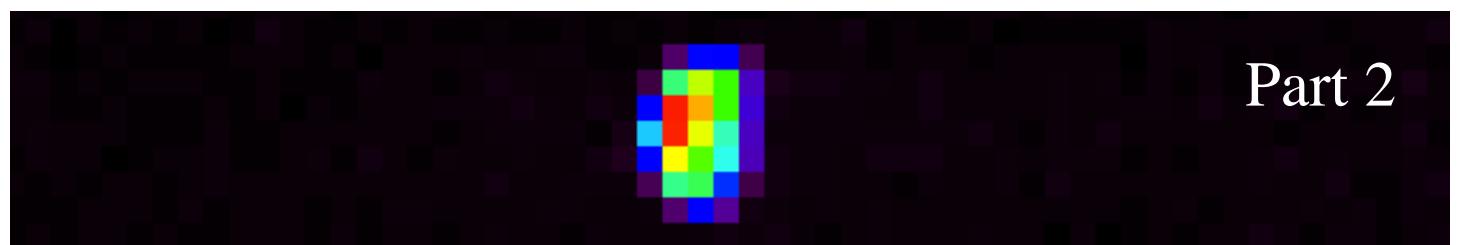
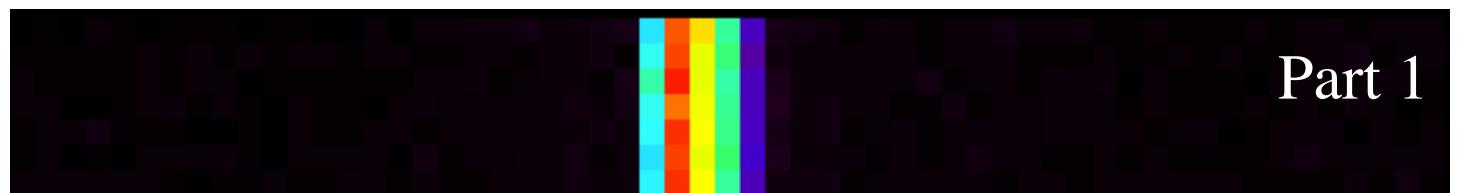
2010-045T00:11

Alt= 173,003km

Longitude= 103°W

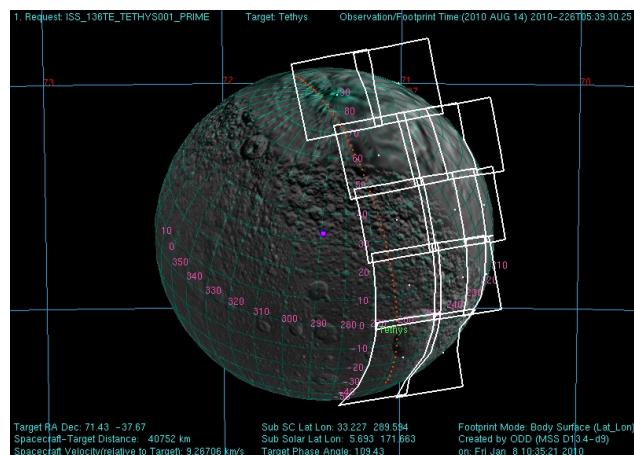
Latitude= 0.2°S

Phase= 75°



ISS_136TE_TETHYS001_PRIME

17-panel mosaic



136TE_ICYTHON001_ISS

2010-226T05:43

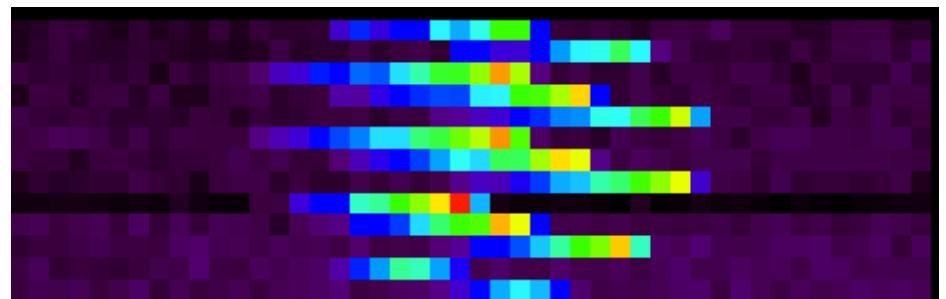
Alt= 39,682 km

Longitude= 287°W

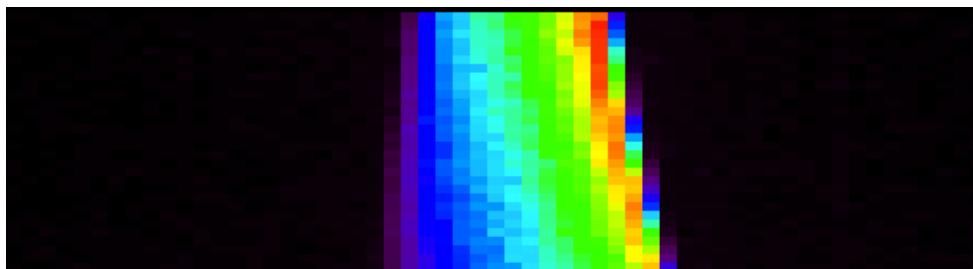
Latitude= 33°N

Phase= 107°

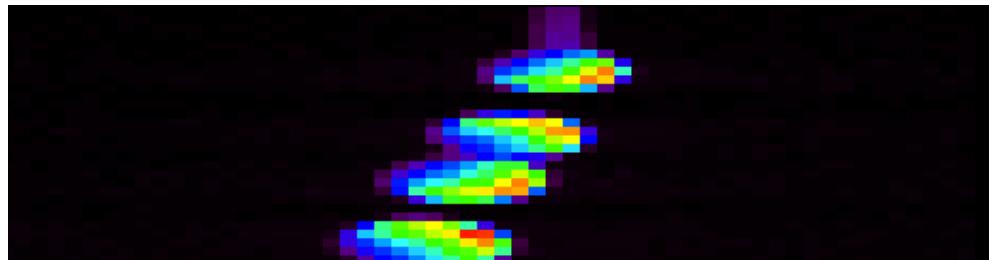
Parts 1-13



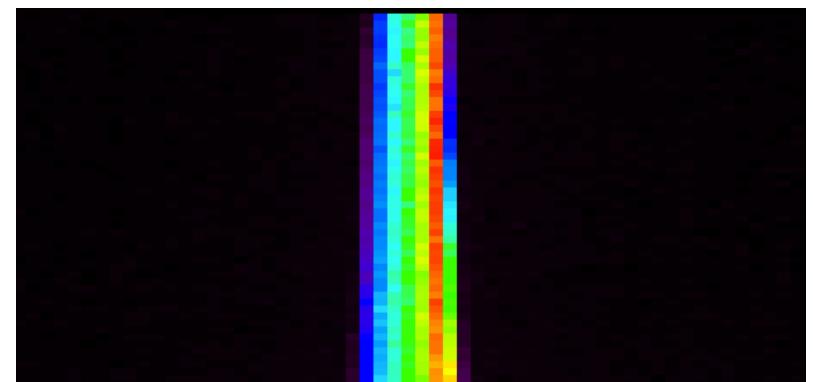
Part 14



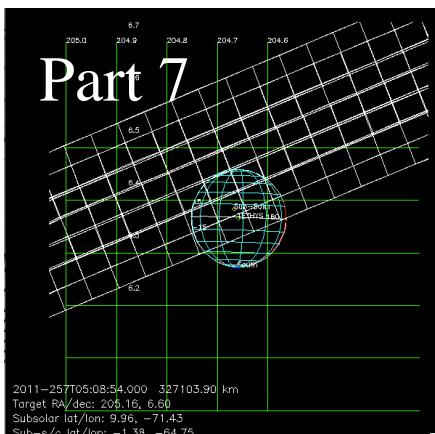
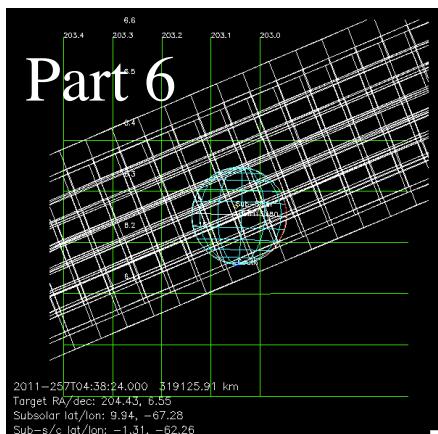
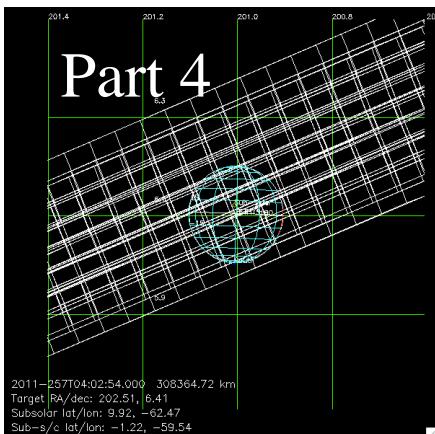
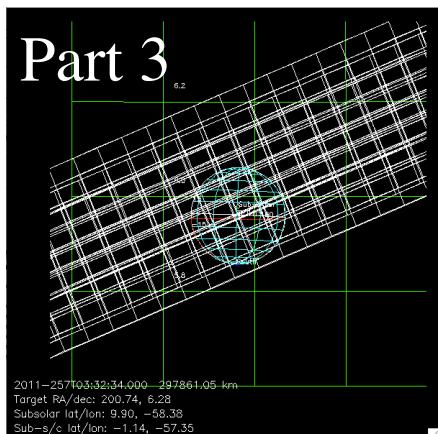
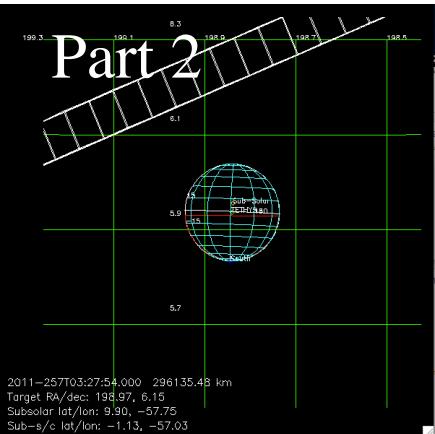
Part 15



Part 16



ISS_153TE_PACMAN001_PRIME



7-part

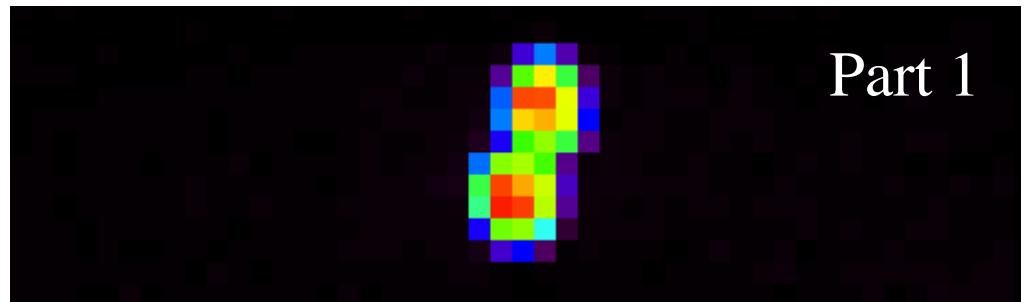
153TE_ICYLON001_CIRS

2011-257T02:58

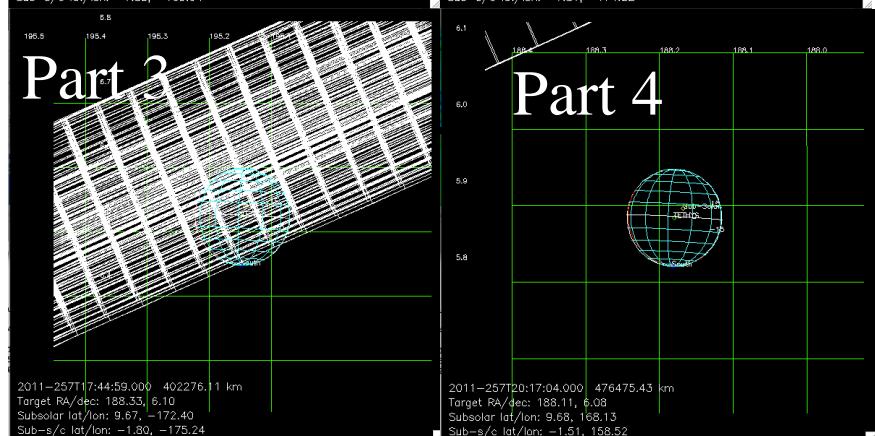
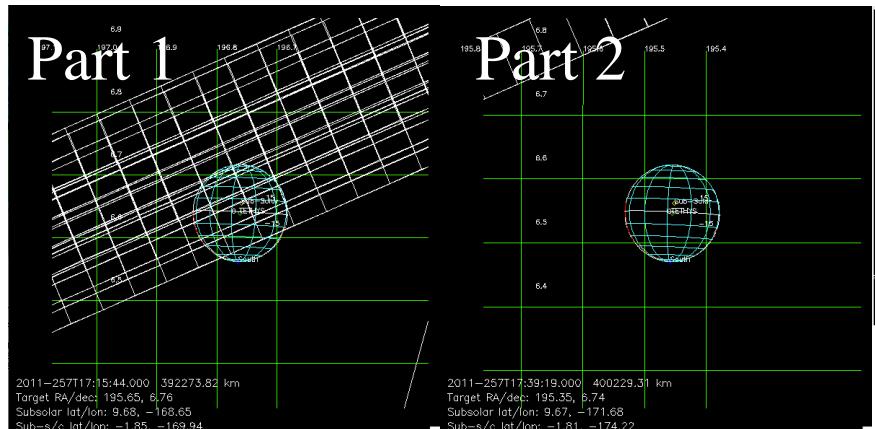
Alt= 284,787 km

Longitude= 56°W

Phase= 11.3°



ISS_153TE_PACMAN002_PRIME



153TE_ICYLON002_CIRS

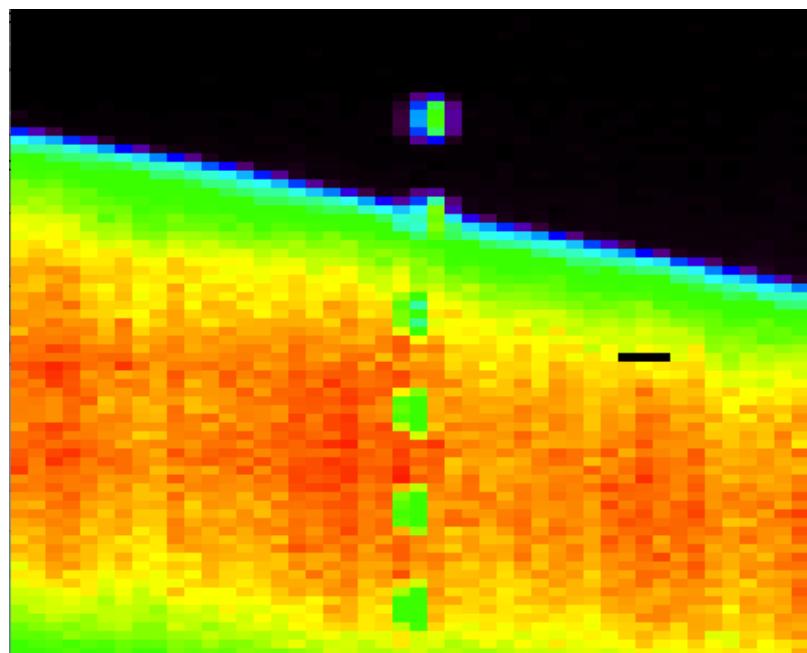
2011-257T17:15

Alt= 395,029 km

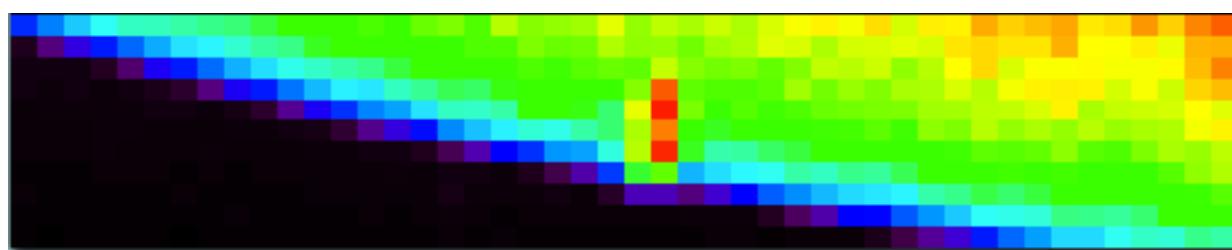
Longitude= 171°W

Latitude= 1.8°S

Phase=12.2°

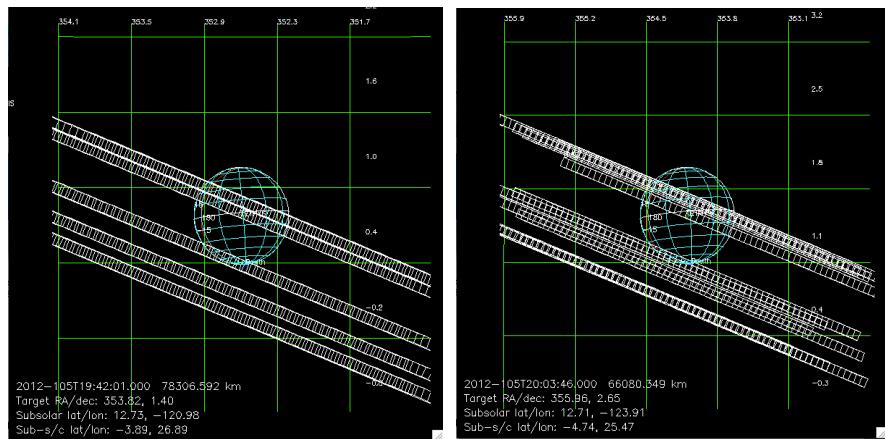


Part 1

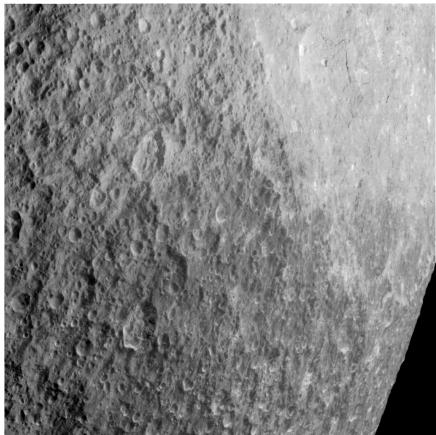


Part 3

164TE_ICYLON001_CIRS
2012-105T19:43
Alt= 76,986 km
Longitude= 332°W
Phase= 147.1°

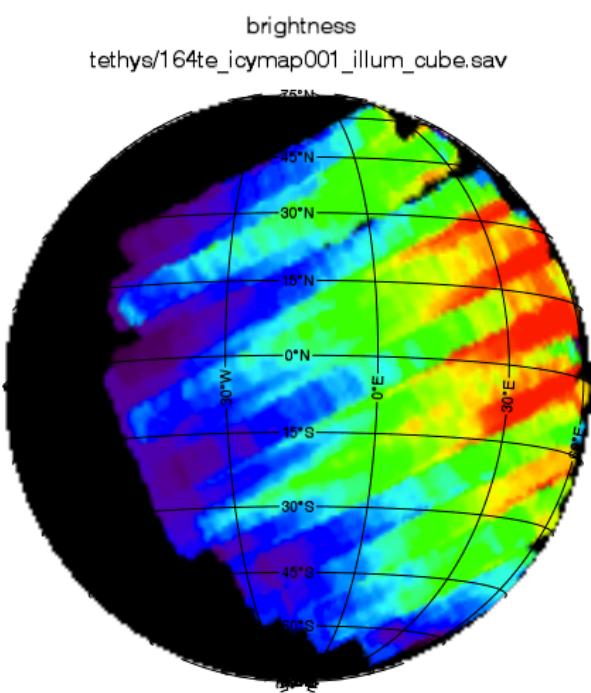


Fast scans... not so useful for UVIS

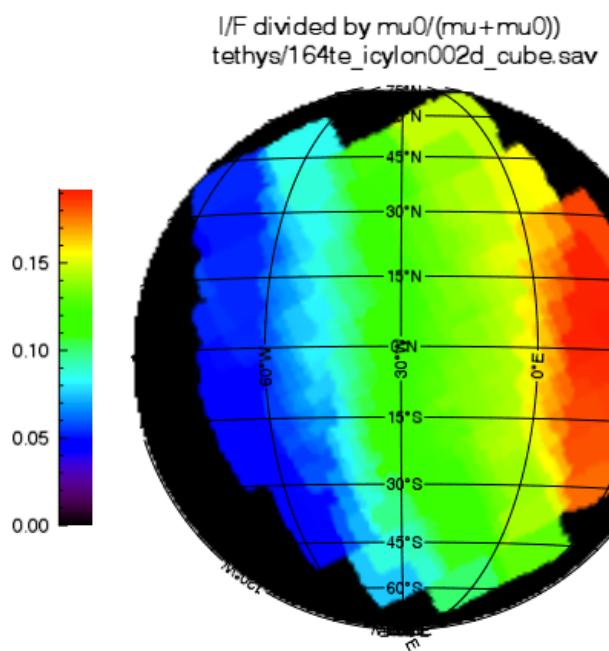
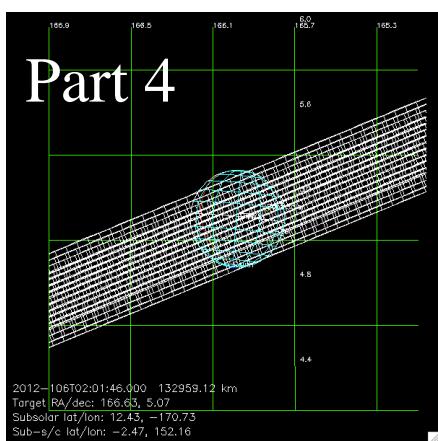
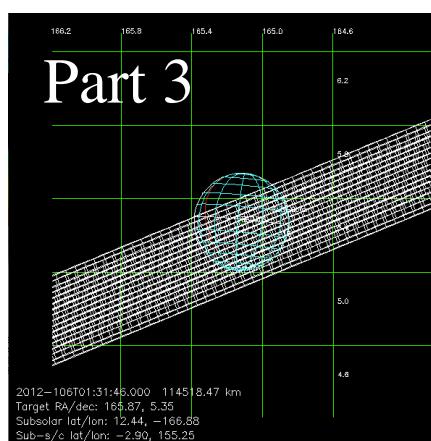
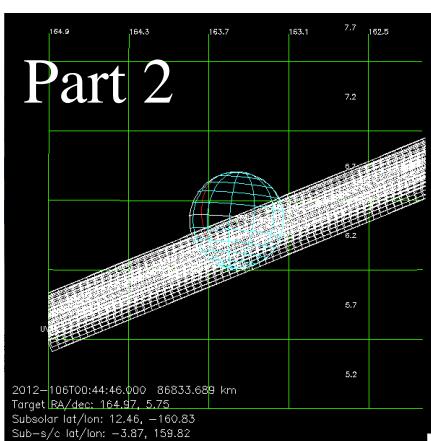
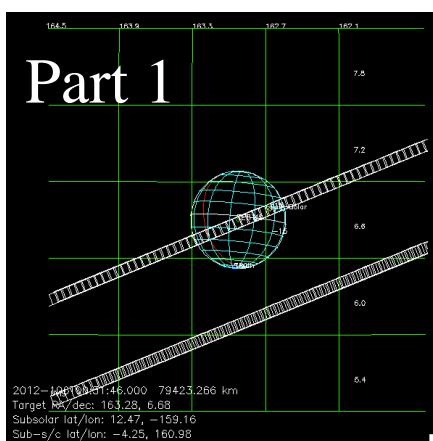


164TE_ICYMAP001_ISS
2012-105T20:32 – 106T00:15
Alt= 49,777 - 69,867 km
Longitude= 335° - 198°W
Phase= 151.4 – 45°

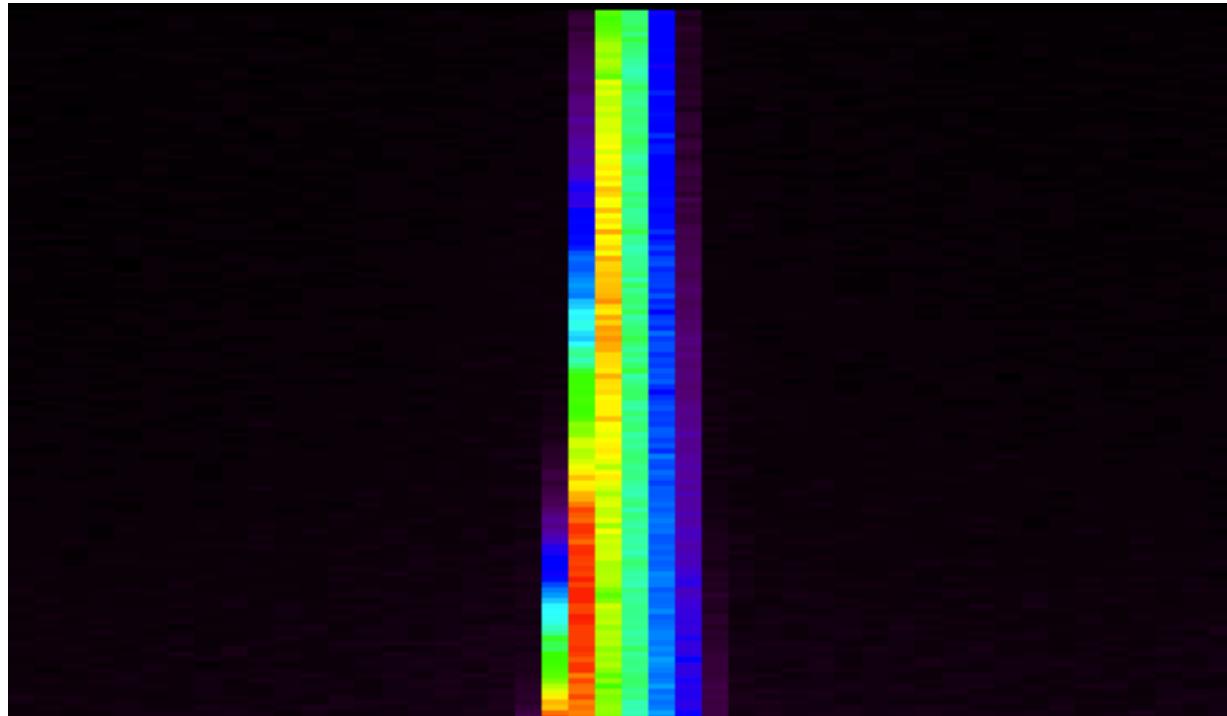
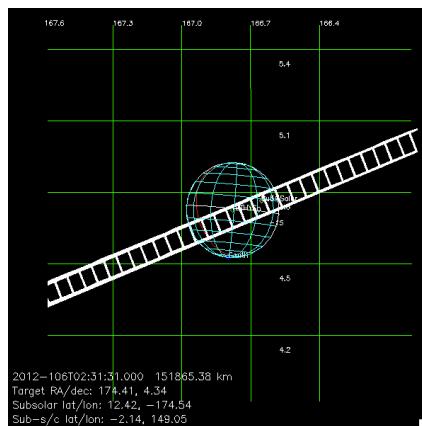
29-panel mosaic



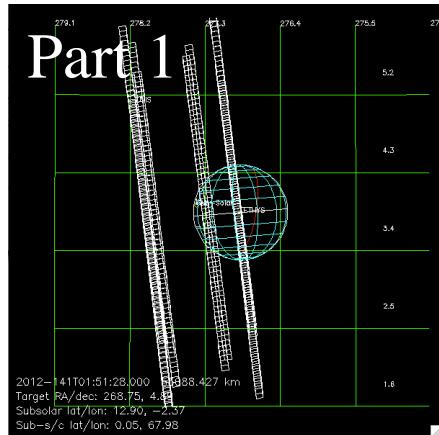
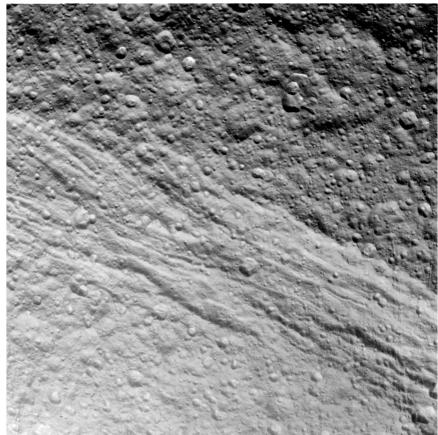
164TE_ICYLON002_CIRS
 2012-106T00:32
 Alt= 79,414 km
 Longitude= 200°W
 Latitude
 Phase= 44.2°



164TE_ICYTHON003_VIMS
2012-106T02:32
Alt= 245,661 km
Longitude= 225°W
Latitude= 1.3°S
Phase= 36.6°



20-part



166TE_ICYLON001_CIRS

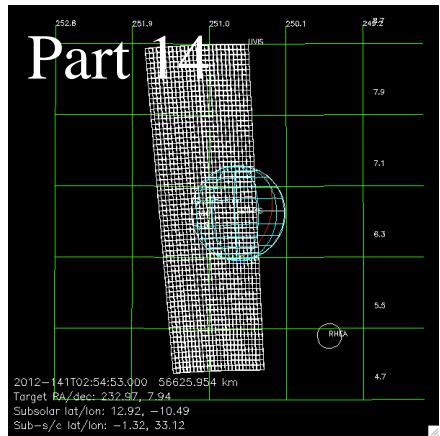
2012-141T01:52

Alt= 54,111 km

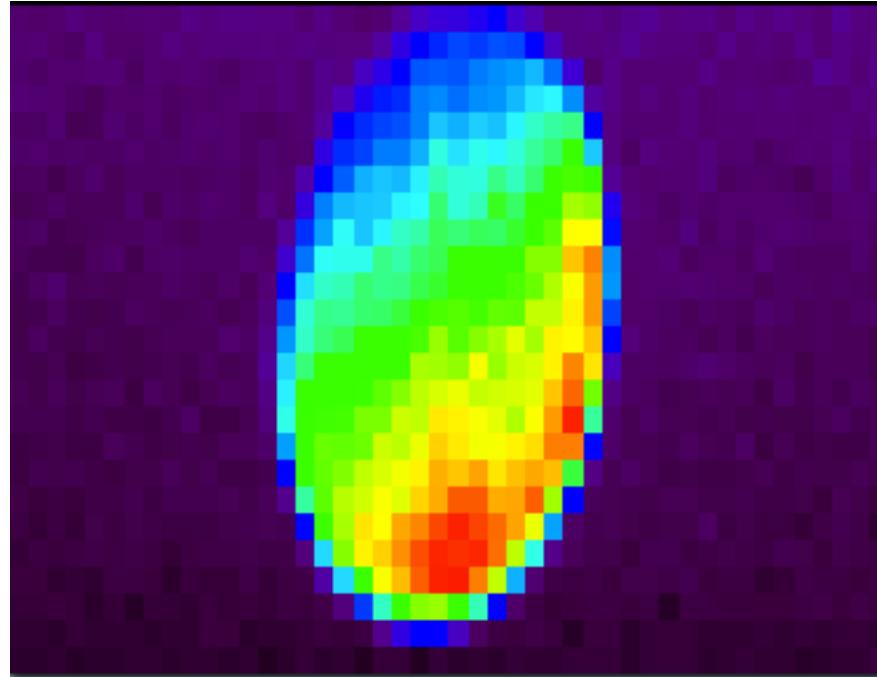
Longitude= 297°W

Latitude= 0.2°S

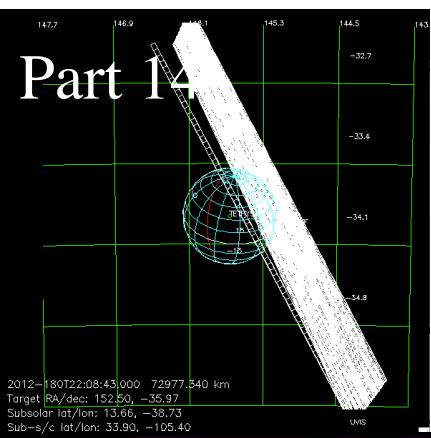
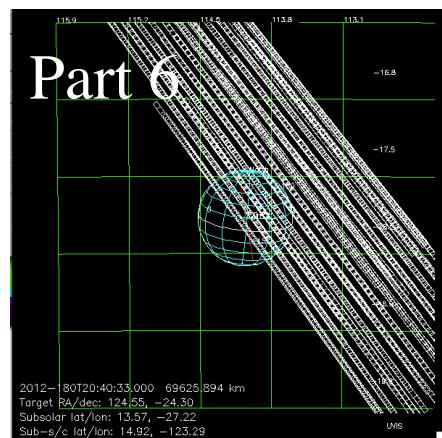
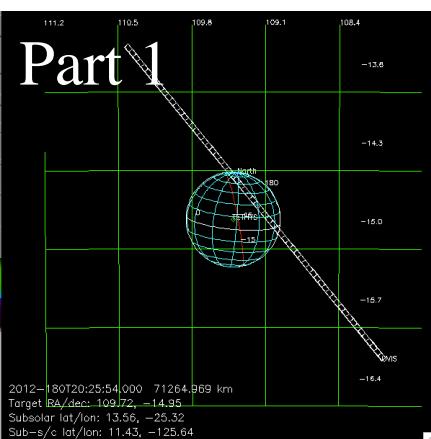
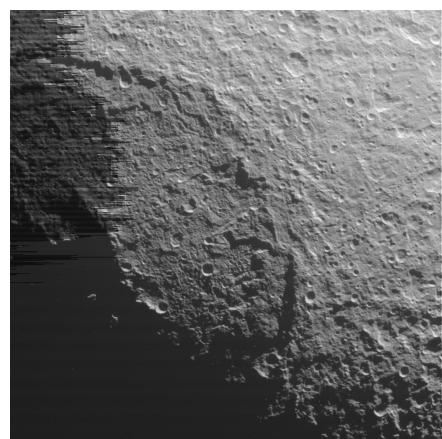
Phase= 68°



Part 14



14-panel mosaic



168TE_ICYMAP001_ISS

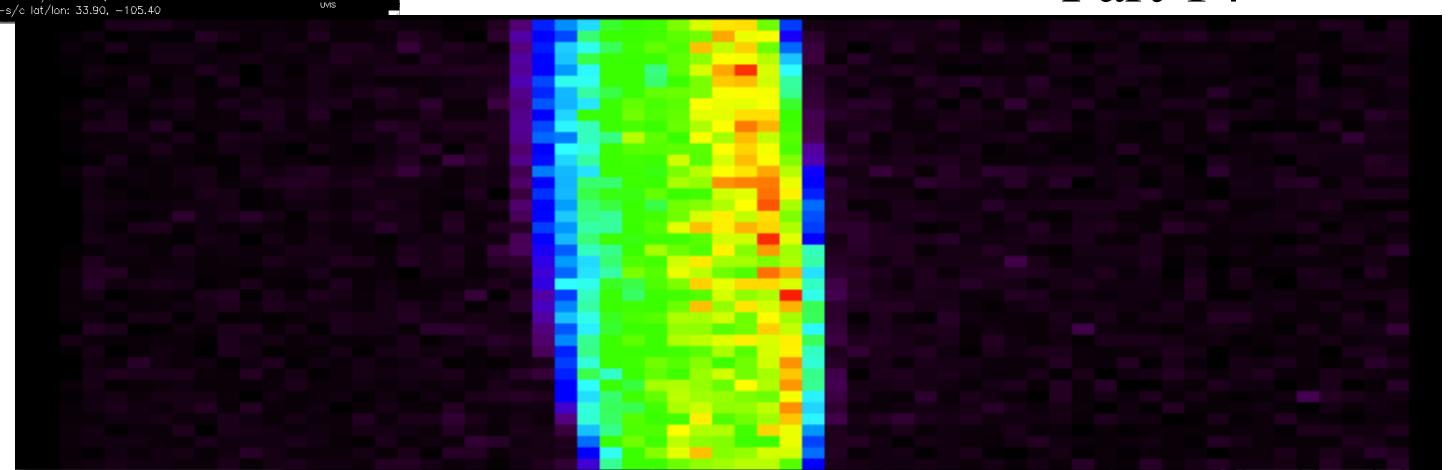
2012-180T20:26

Alt= 70,665 km

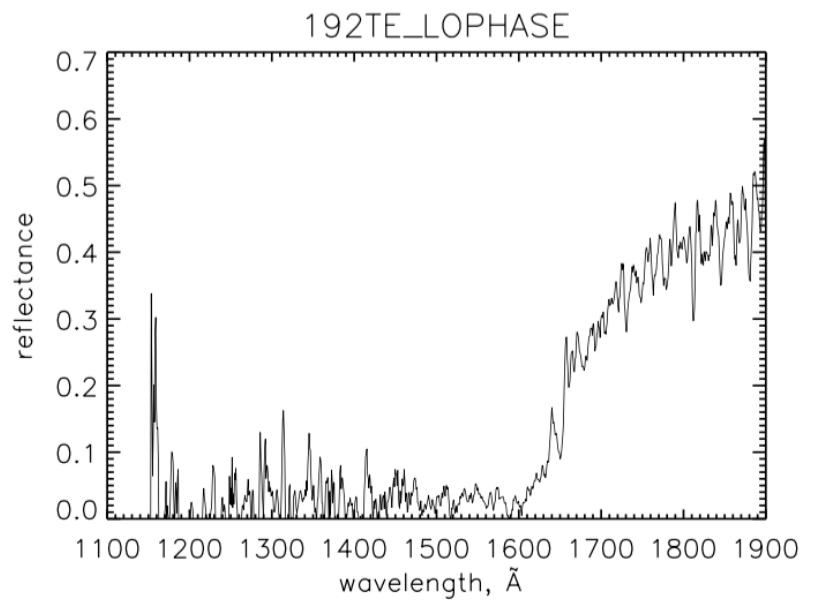
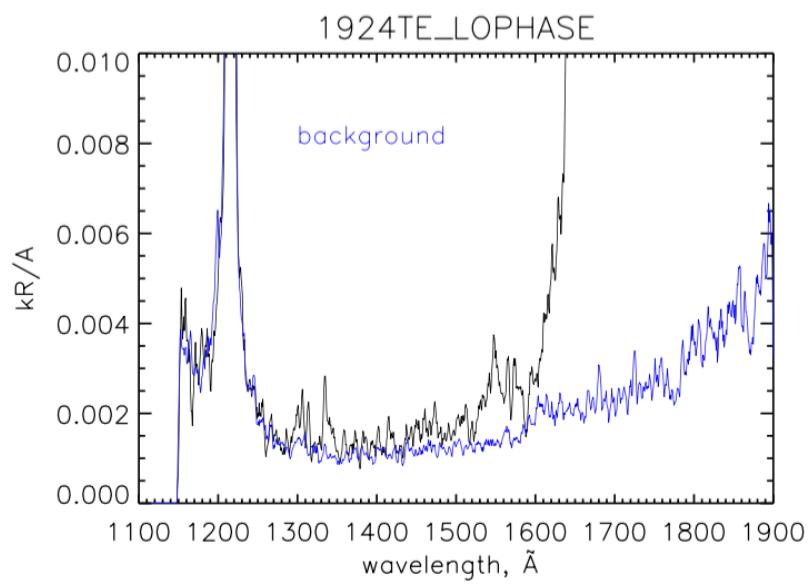
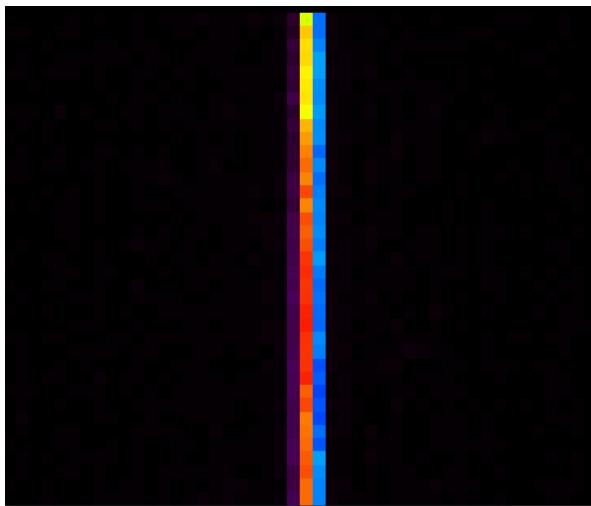
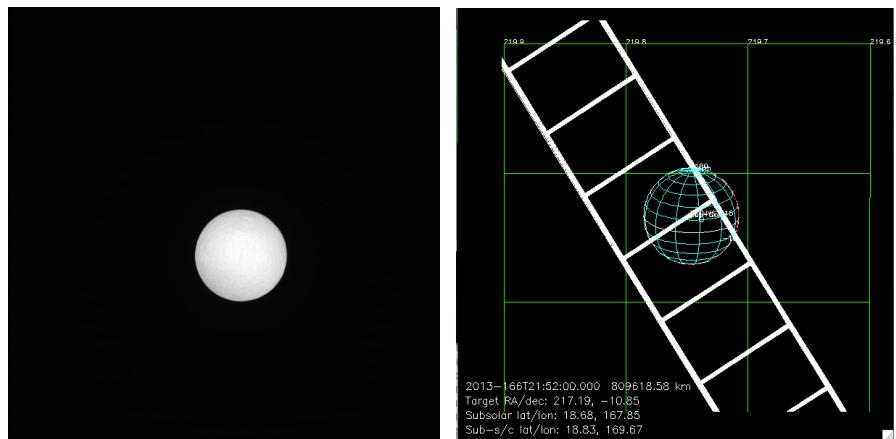
Longitude= 126°W

Latitude= 11°N

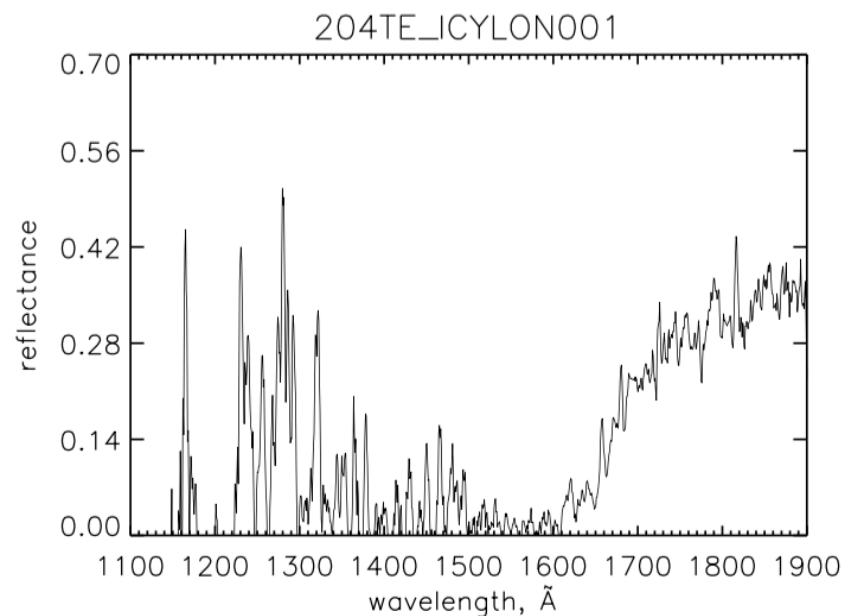
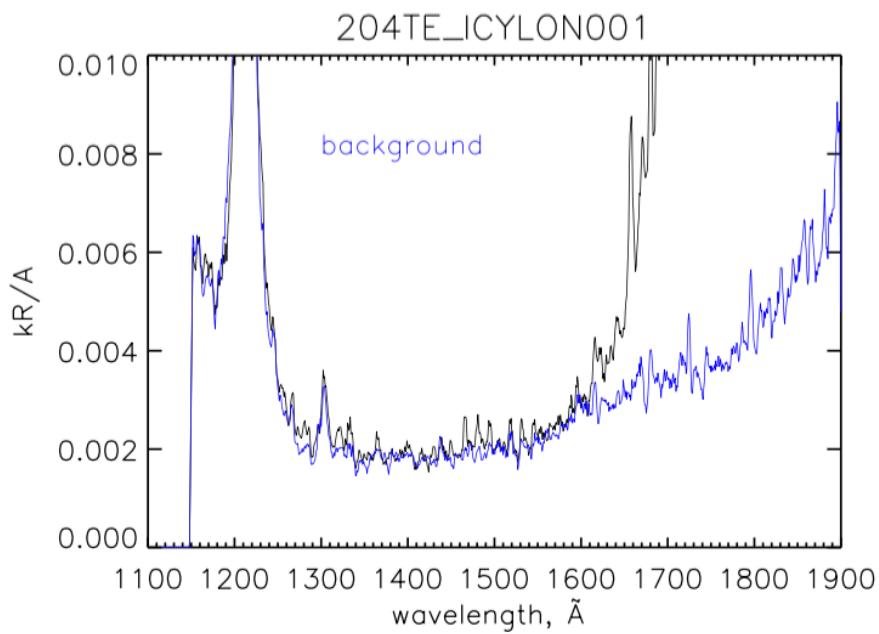
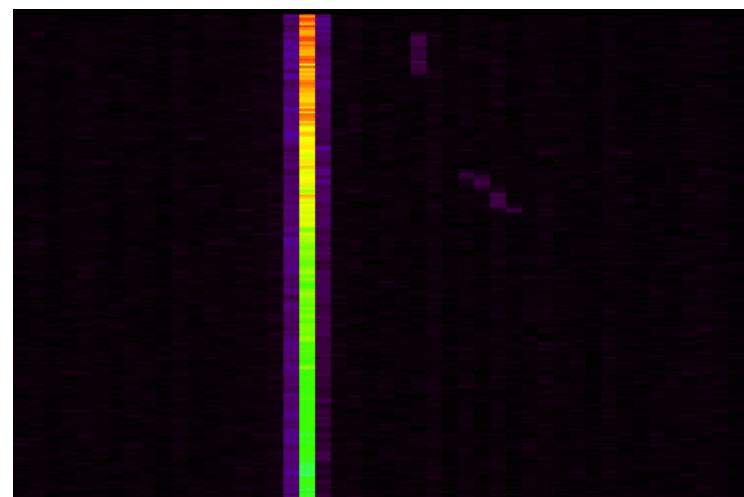
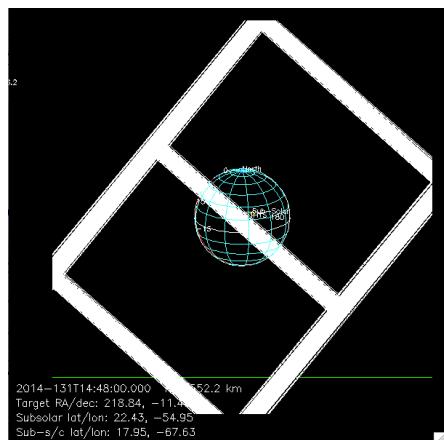
Phase= 95°



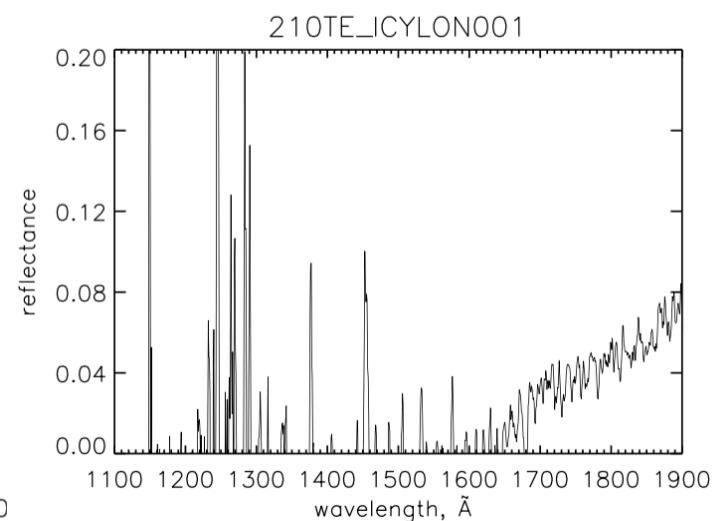
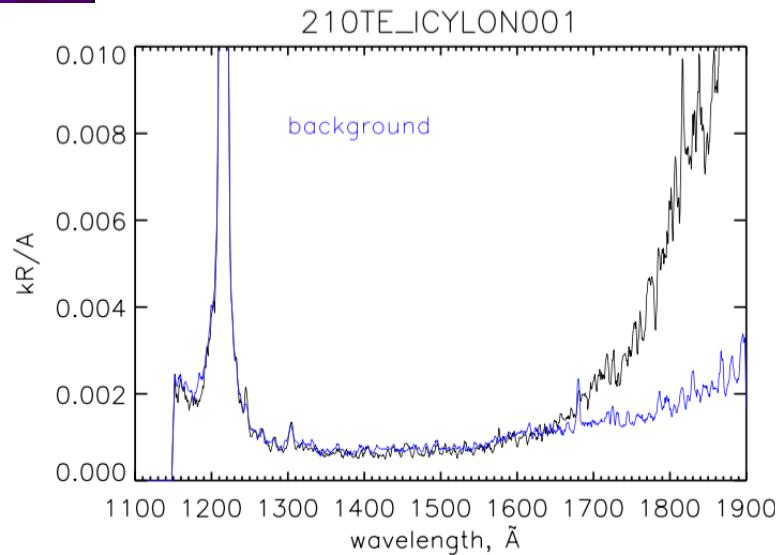
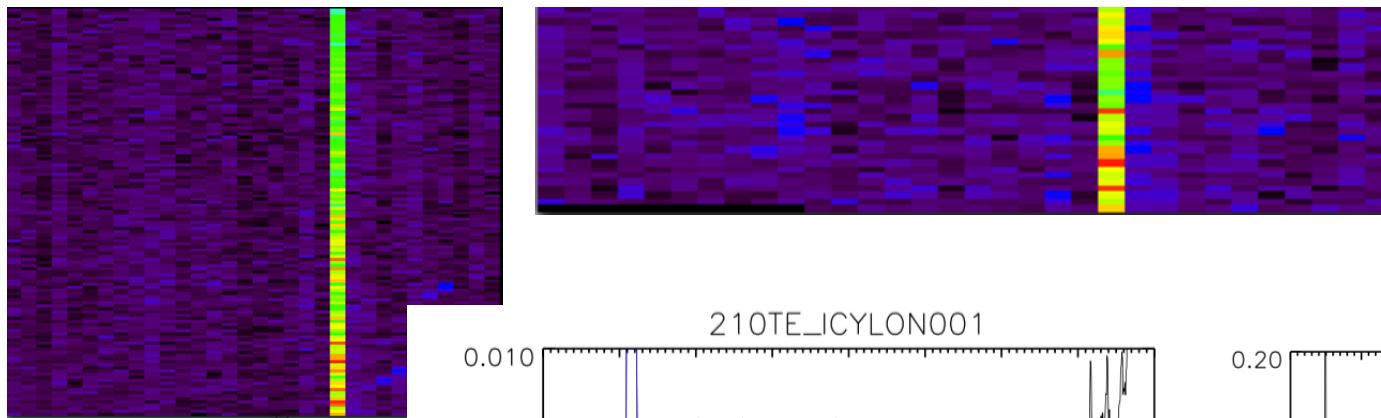
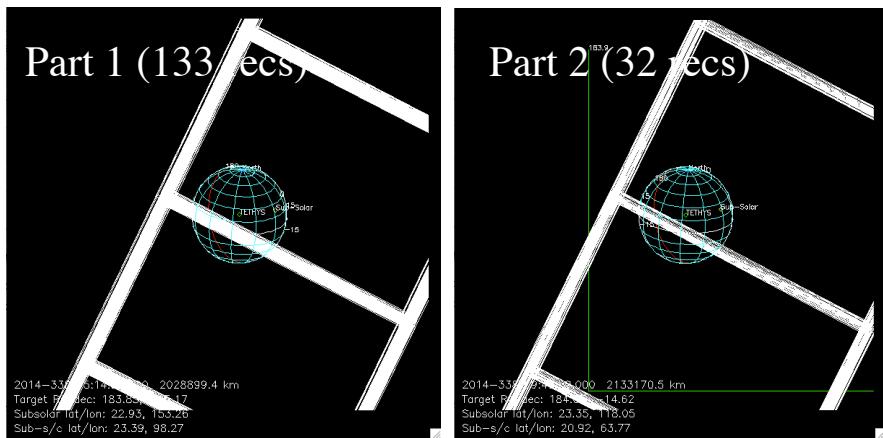
192TE_LOPHASE001_PIE
 2013-166T21:53
 Alt= 817,799 km
 Longitude=196°W
 Latitude=18°N
 Phase=1.2°



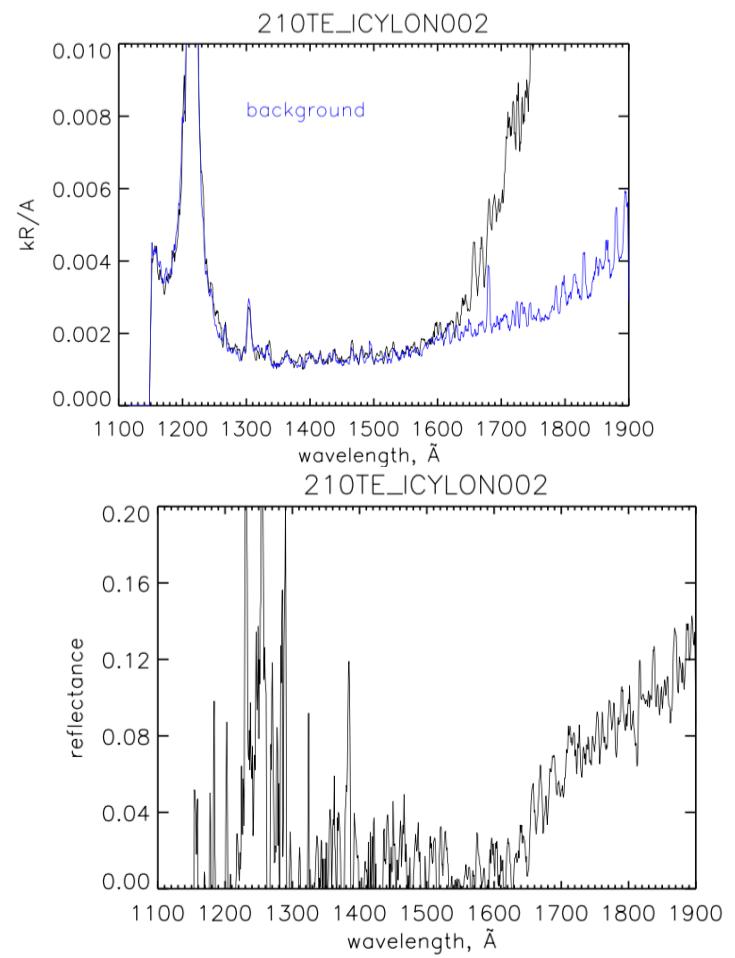
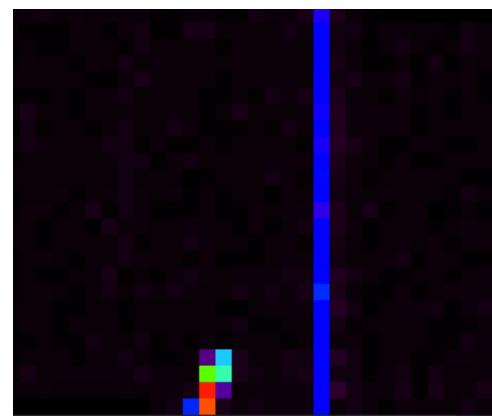
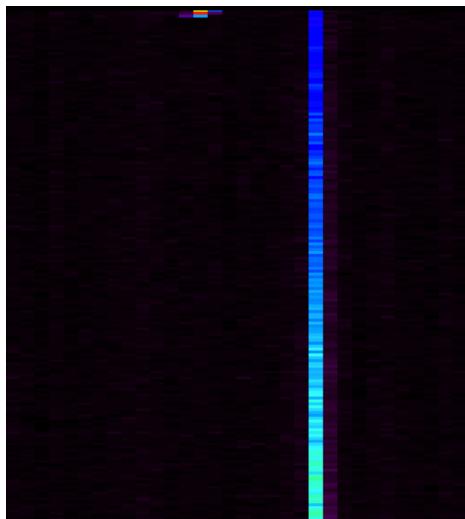
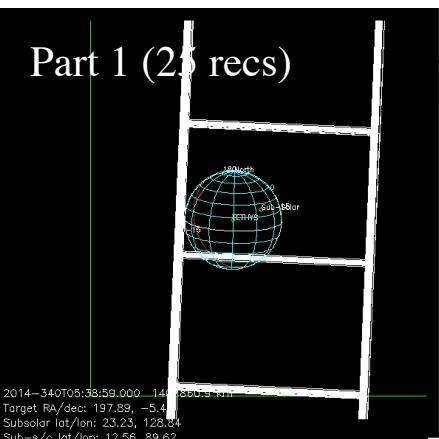
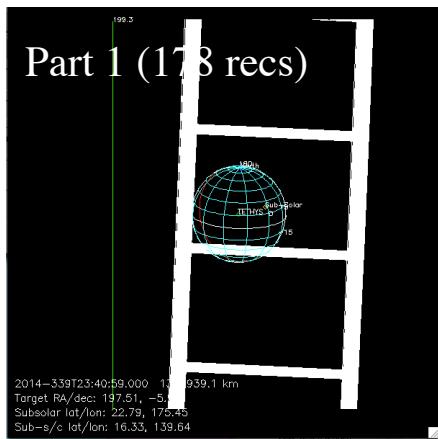
204TE_ICYTHON001_PRIME
2014-131T14:49
Alt= 1,663,875 km
Longitude=93°W
Latitude=18.3°N
Phase=10.6°

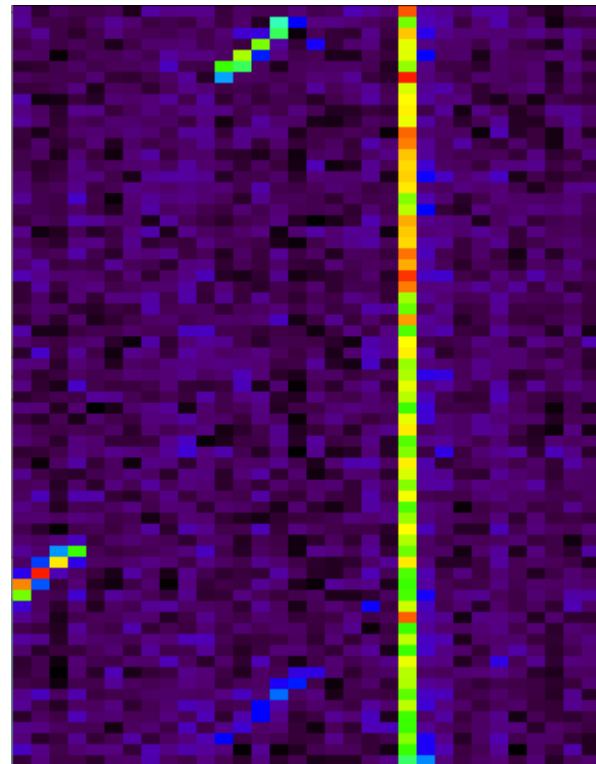
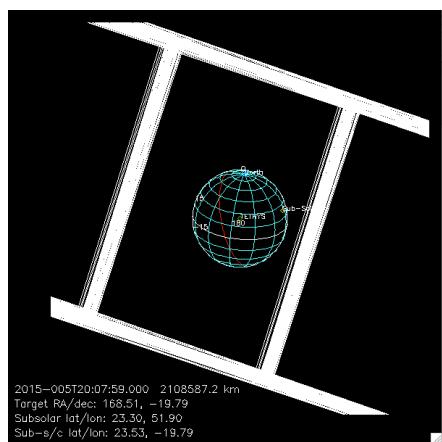


210TE_ICYTHON001_PRIME
2014-338T05:15
Alt= 2,080,851 km
Longitude=290°W
Latitude=21°N
Phase=49.°

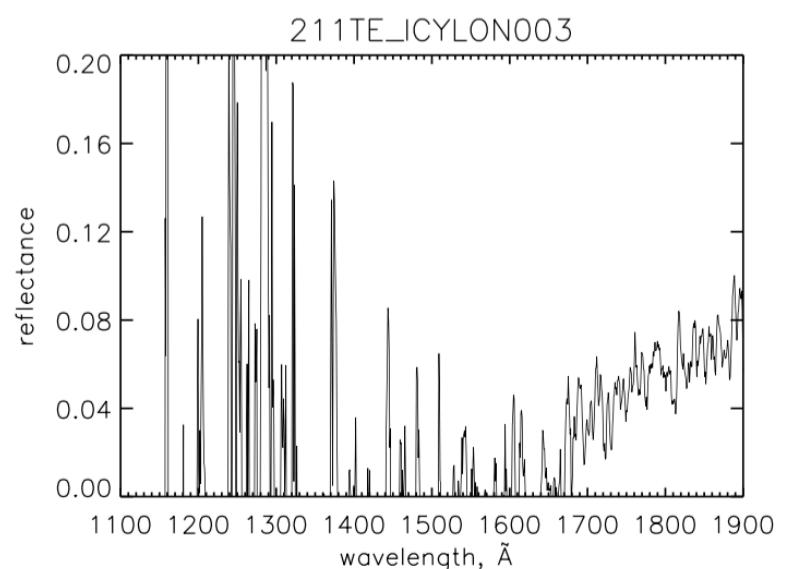
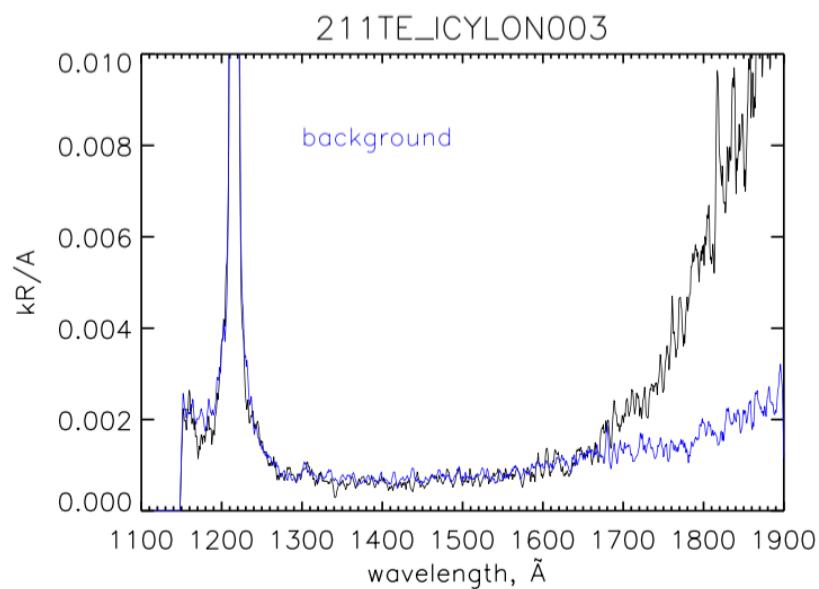


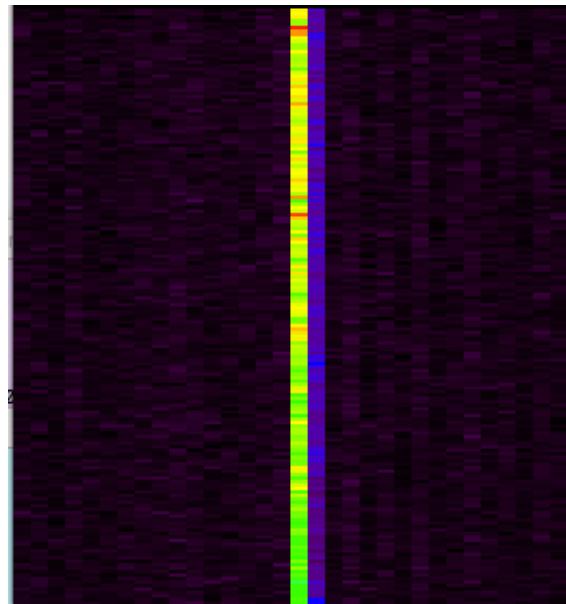
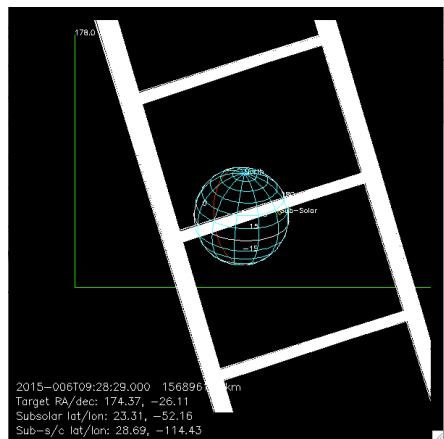
210TE_ICYTHON002_PRIME
2014-339T23:41
Alt= 1,346,747 km
Longitude=250°W
Latitude=13°N
Phase=37°



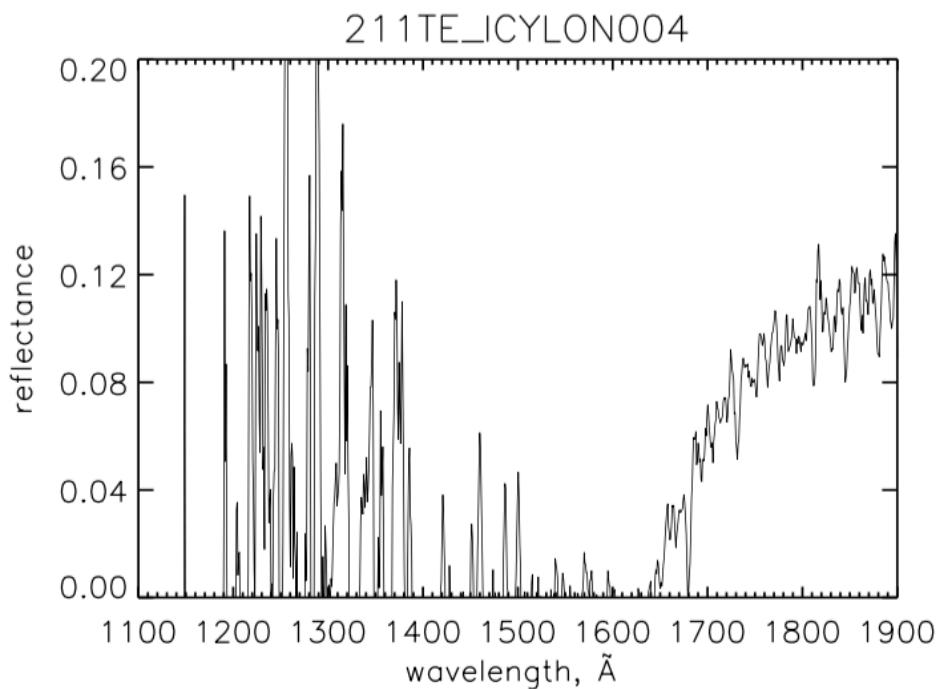
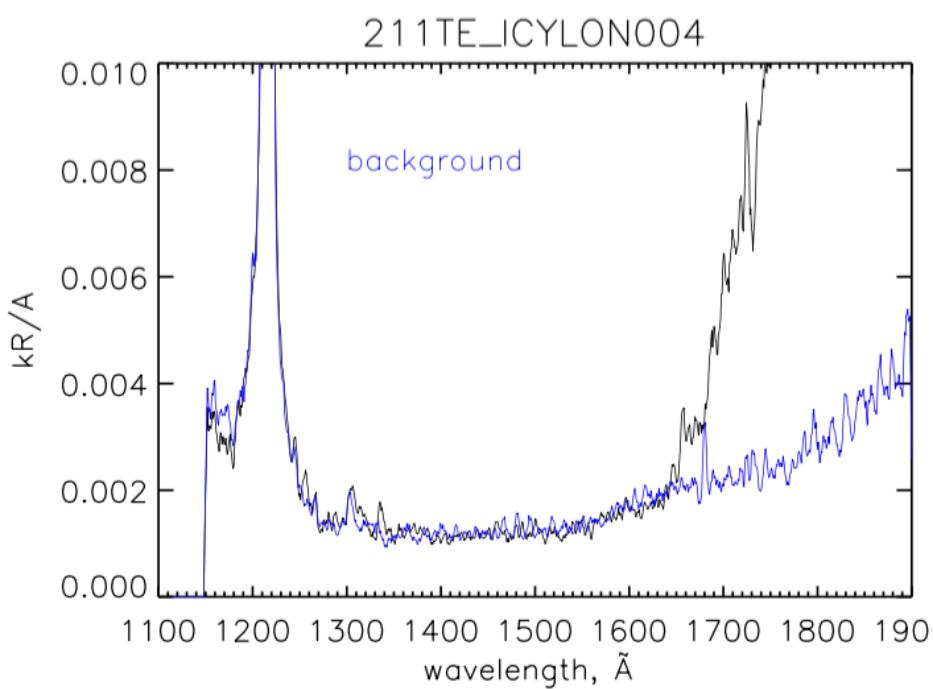


211TE_ICYTHON003_PRIME
2015-005T20:08
Alt= 2,078,407 km
Longitude=27°W
Latitude=23.7°N
Phase=64.5°

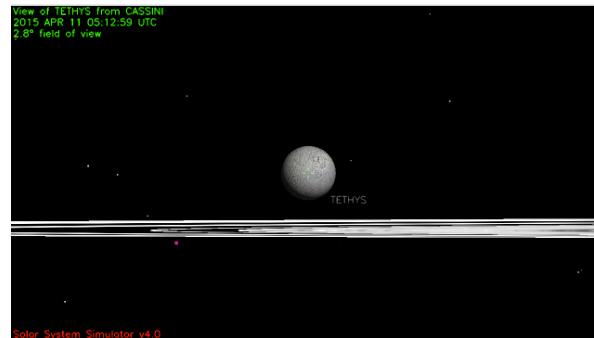
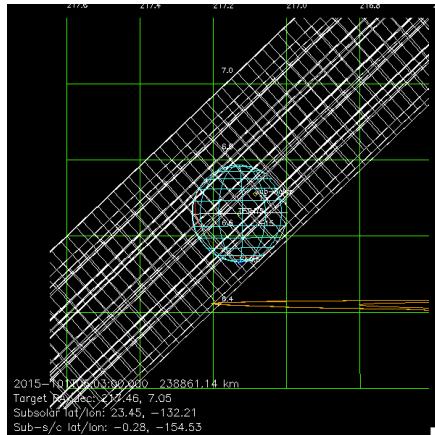
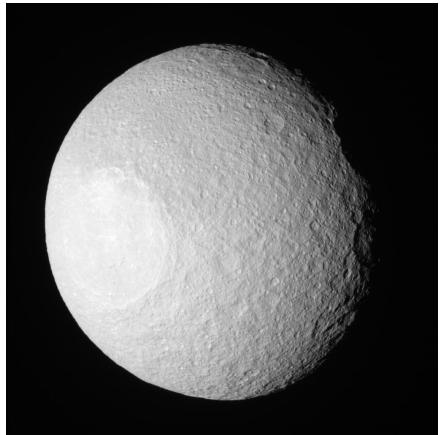




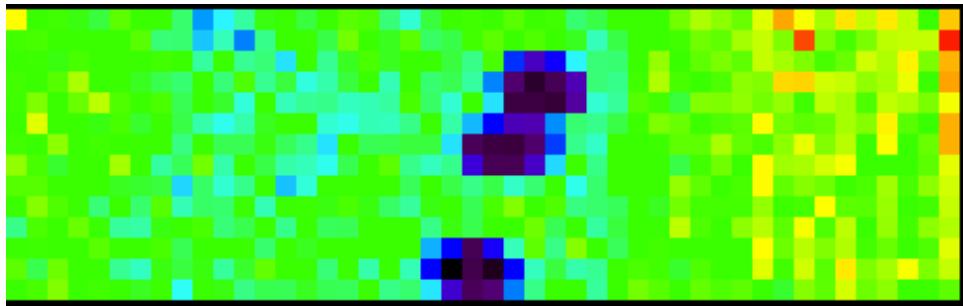
211TE_ICYTHON004_PRIME
2015-006T09:29
Alt= 1,455,011 km
Longitude=138.6° W
Latitude=29.7° N
Phase=54.9°



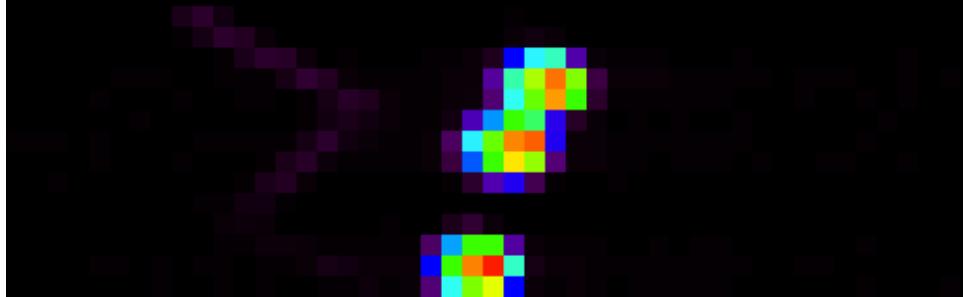
214TE_ICYLON001_CIRS
2015-101T05:05
Alt= 233,034 km
Longitude=154°W
Phase=33°



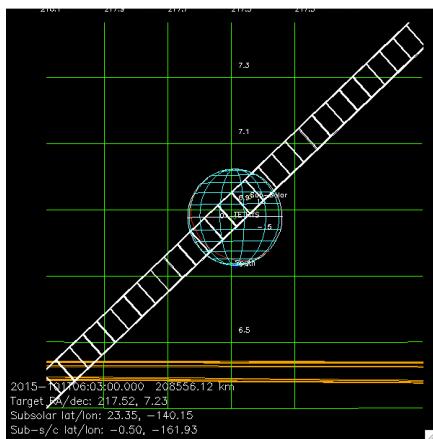
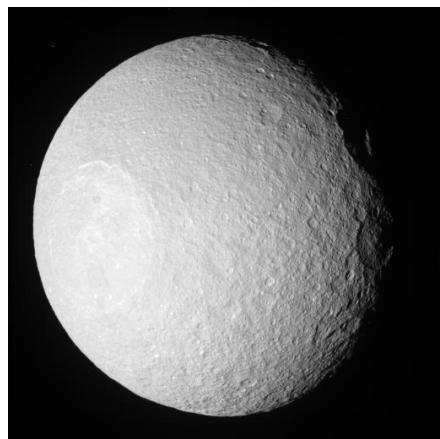
Ly-a



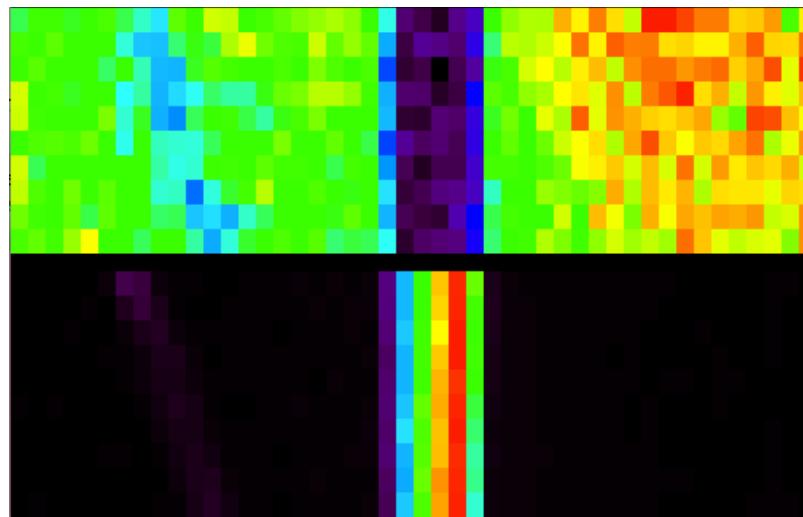
Long waves



214TE_ICYTHON002_ISS
2015-101T06:05
Alt= 203,290 km
Longitude=161°W
Phase=33°



Ly-a

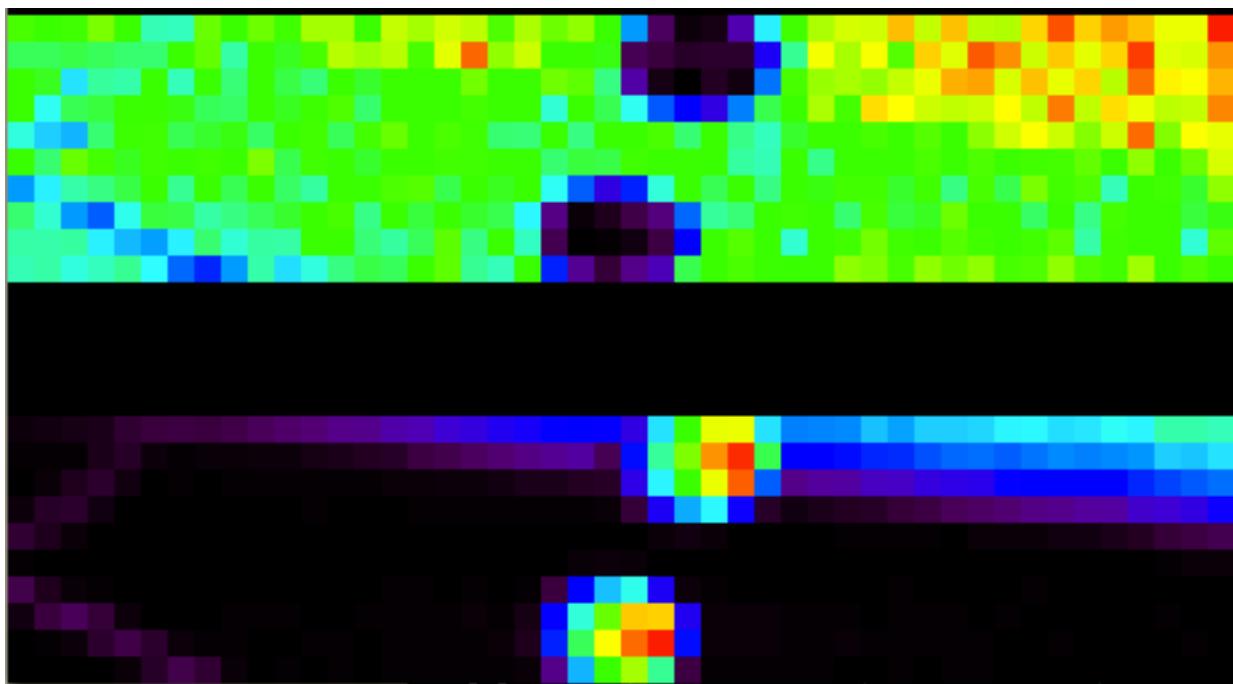


Long waves

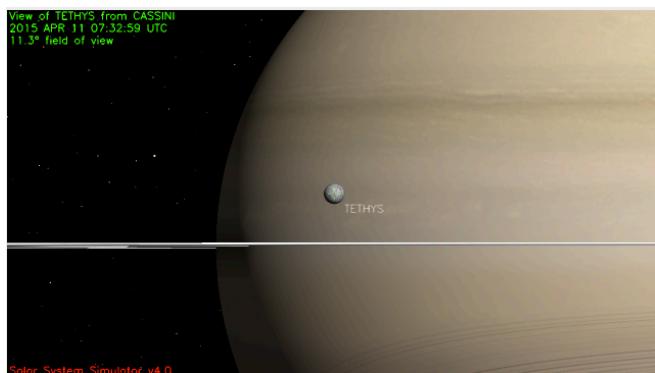
214TE_ICYLON003_CIRS
2015-101T06:50
Part 1



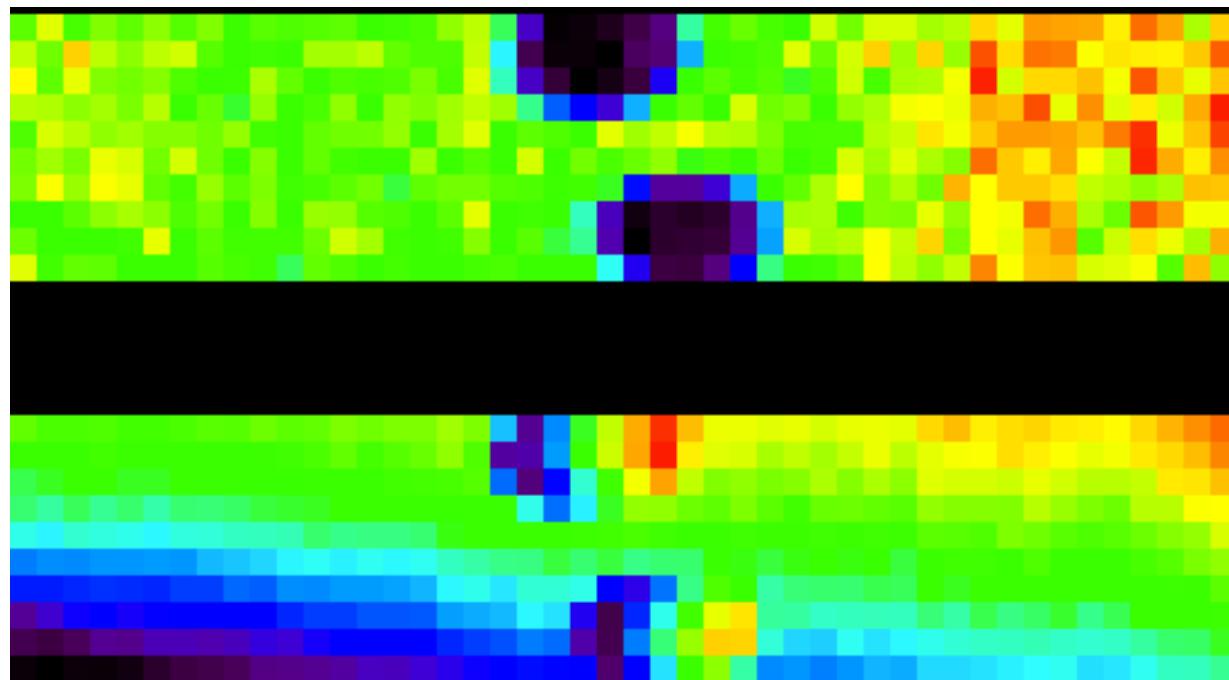
Ly-a



214TE_ICYLON003_CIRS
2015-101T07:32
Part 2



Ly-a

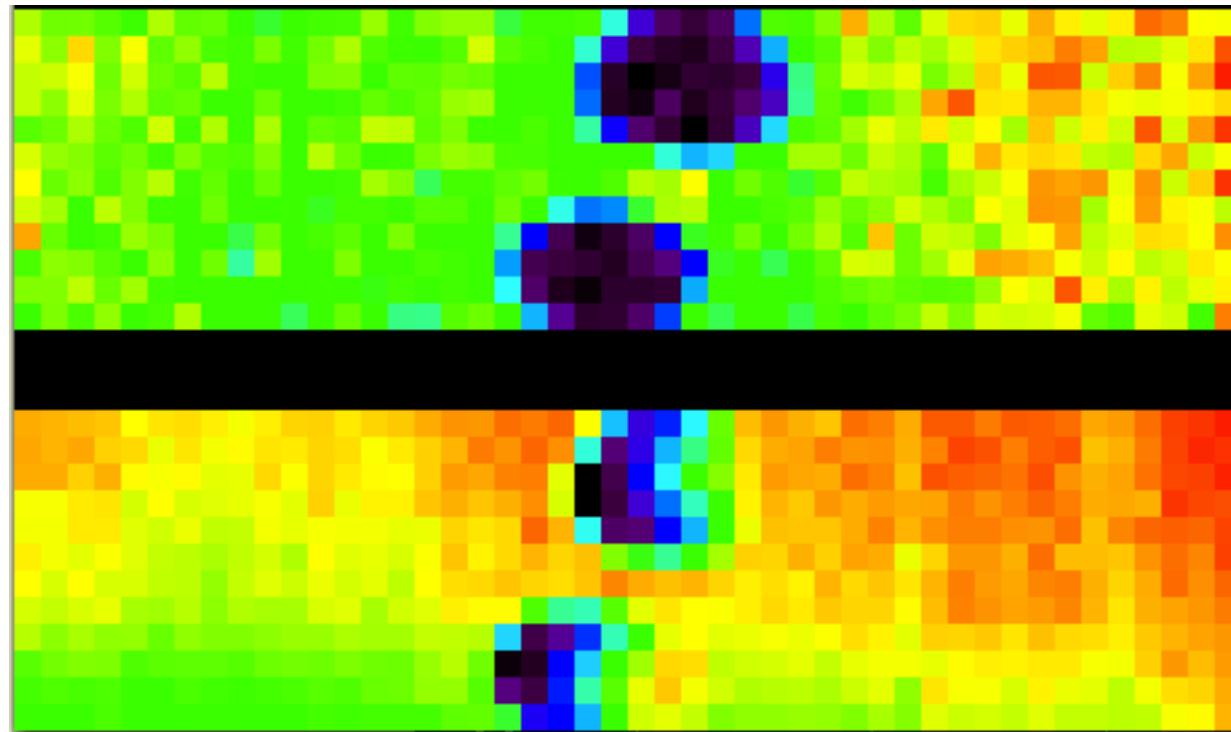


Long waves

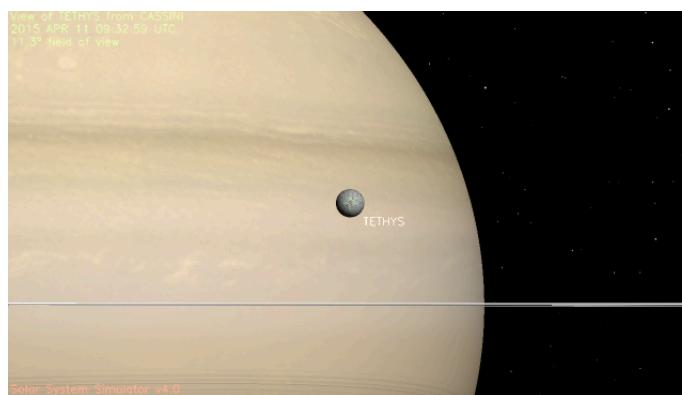
214TE_ICYLON003_CIRS
2015-101T08:15
Part 3



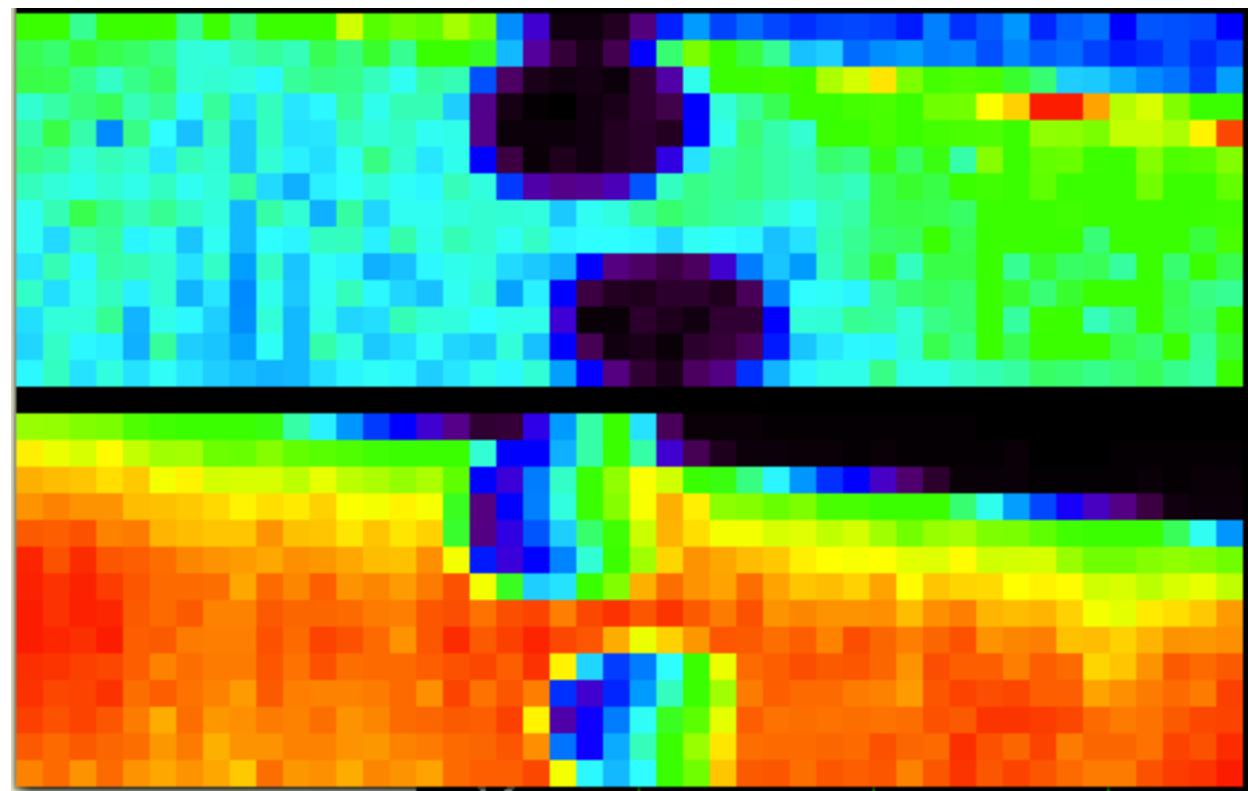
Ly-a
Long waves



214TE_ICYLON003_CIRS
2015-101T09:06
Part 4

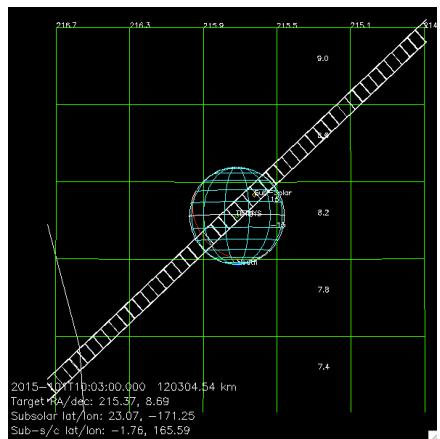


Ly-a

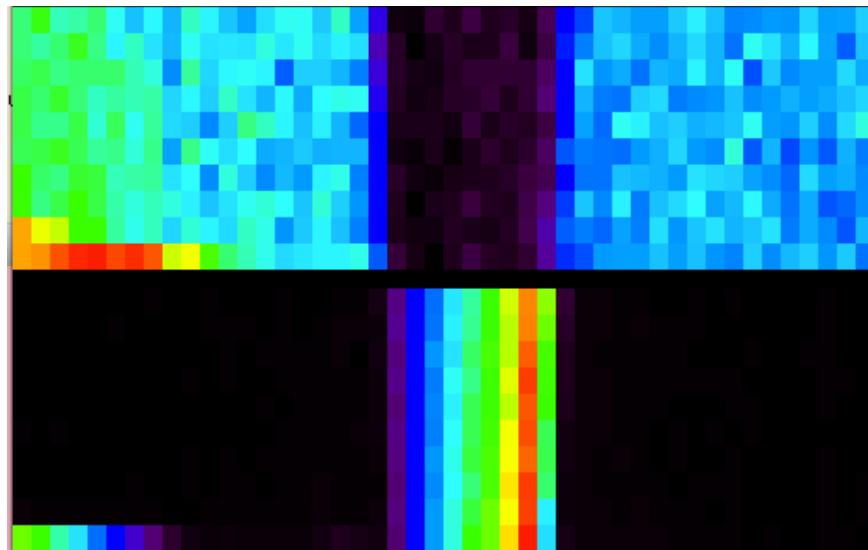


Long waves

214TE_ICYTHON004_ISS
2015-101T10:05
Alt= 118,598 km
Longitude=194°W
Phase=34.9°



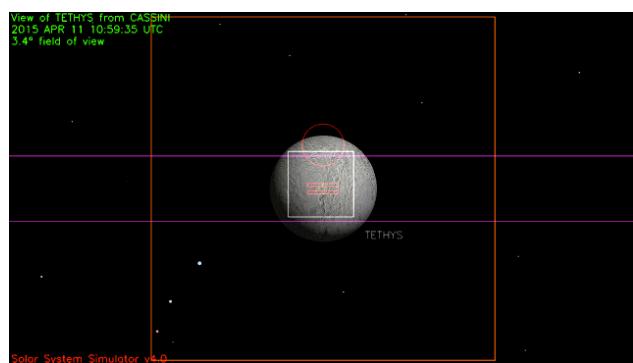
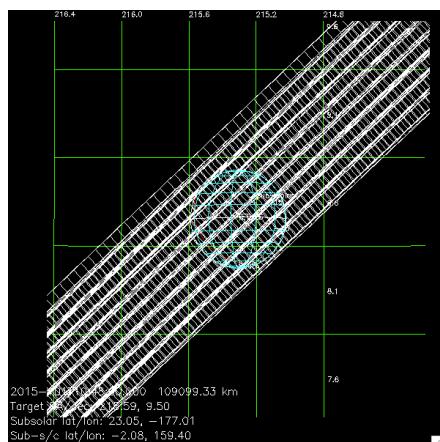
Ly-a



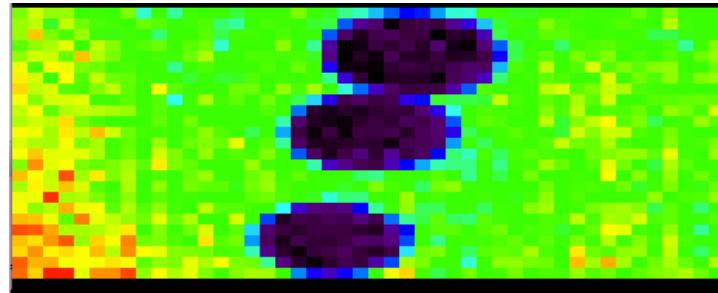
Long waves

214TE_ICYLON005_CIRS
2015-101T10:50
Alt= 104,163 km
Longitude=293°W
Phase=35.6°

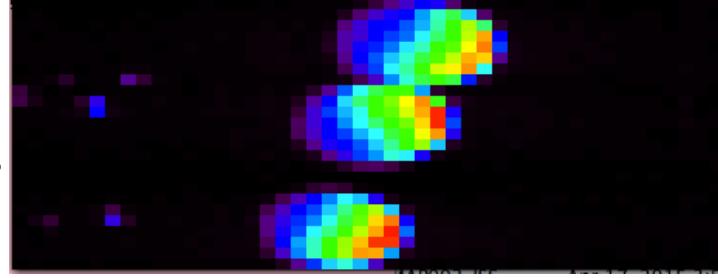
Part 1



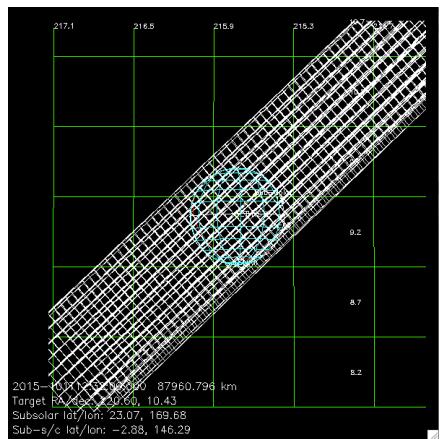
Ly-a



Long waves

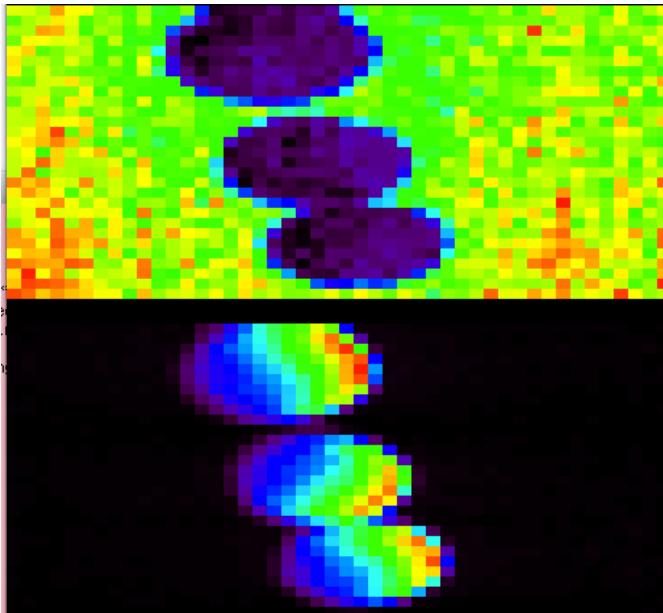


214TE_ICYLON005_CIRS
2015-101T10:50
Alt= 104,163 km
Longitude=293°W
Phase=35.6°



Part 2

Ly-a



Long waves

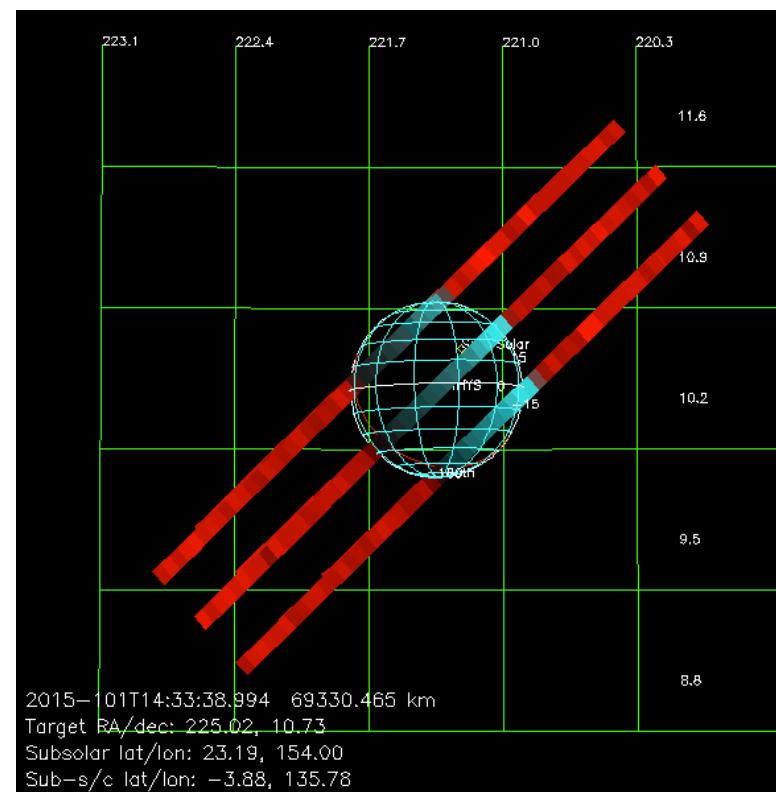
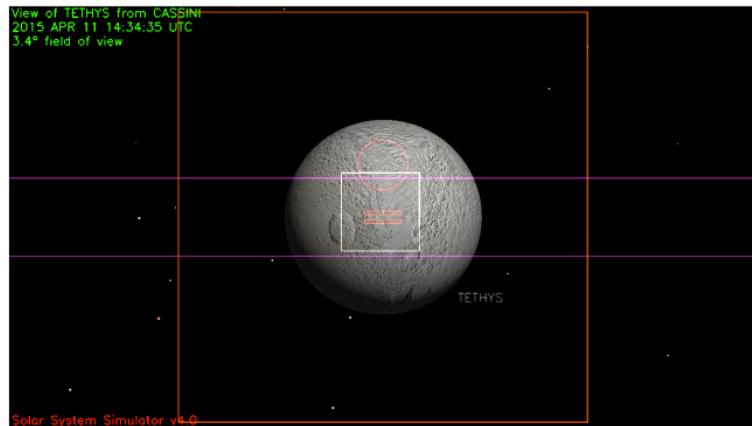
214TE_ICYLON006_ISS

2015-101T14:30

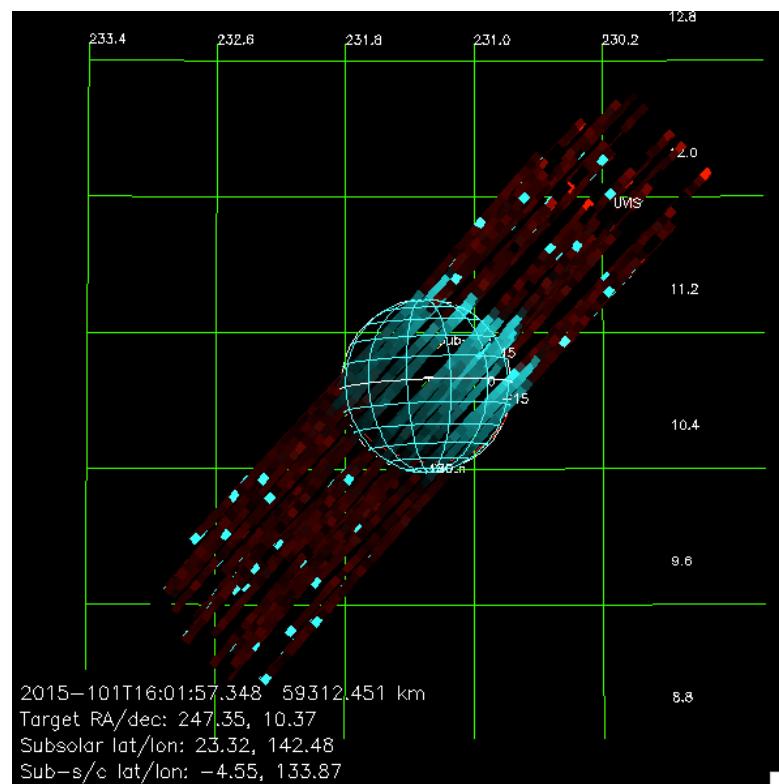
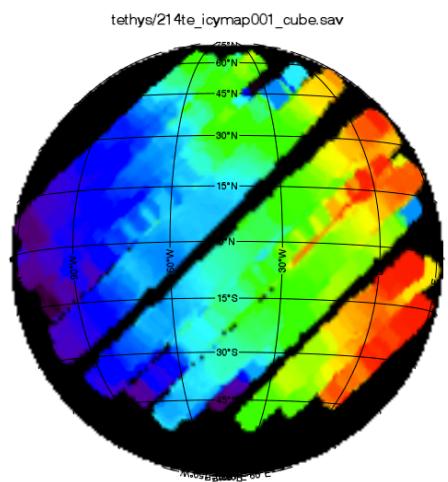
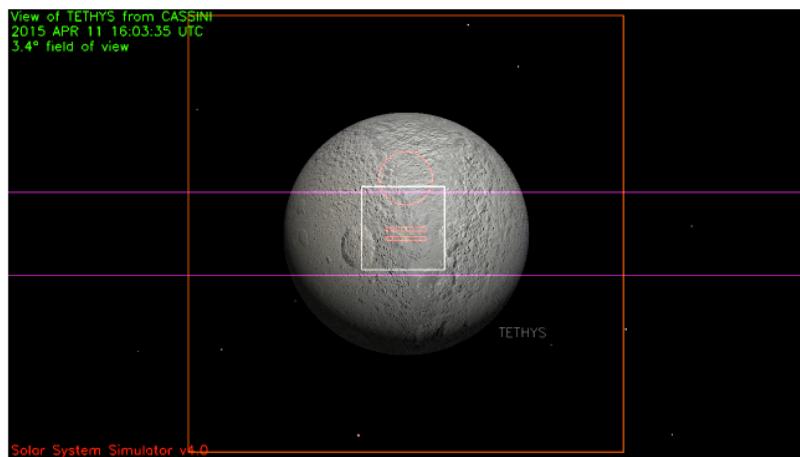
Alt= 68,747 km

Longitude=224°W

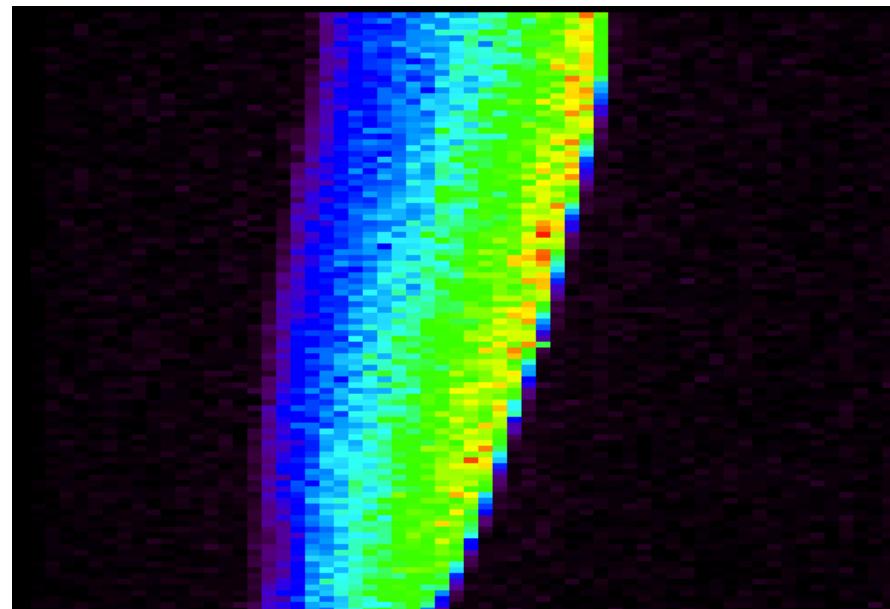
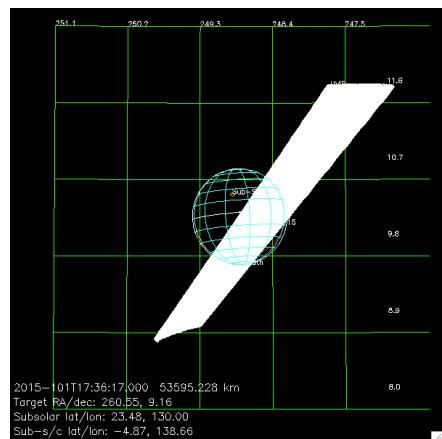
Phase=33.3°



214TE_ICYMAP001_ISS
2015-101T16:01:03
Alt= 58,697 km
Longitude=226°W
Phase=29.9°



214TE_ICYMAP002_CIRS
2015-101T17:32:02
Alt= 53,128 km
Longitude=221°W
Phase=30.2°



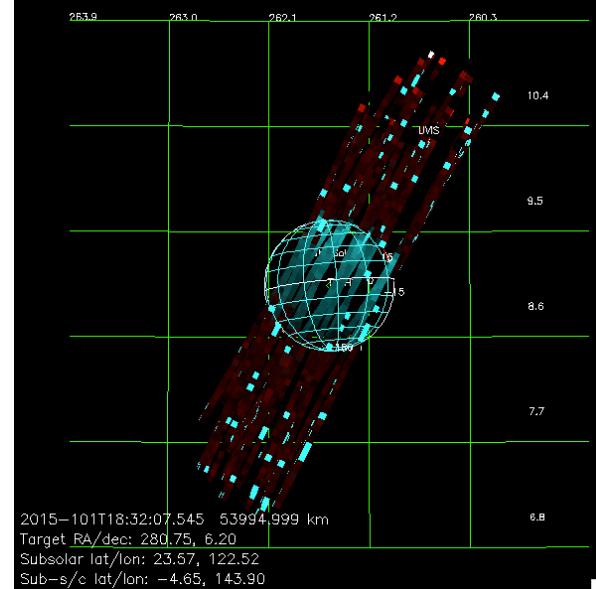
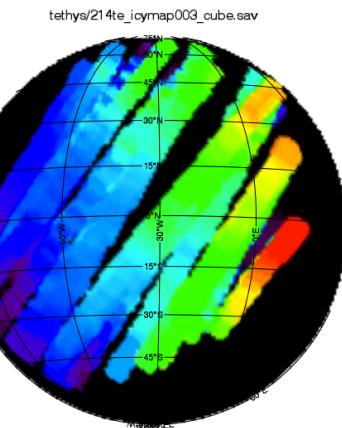
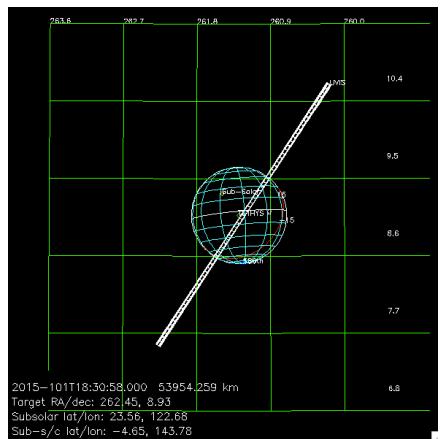
214TE_ICYMAP003_ISS

2015-101T18:31:13

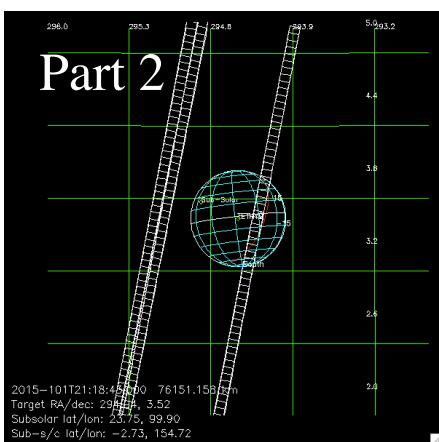
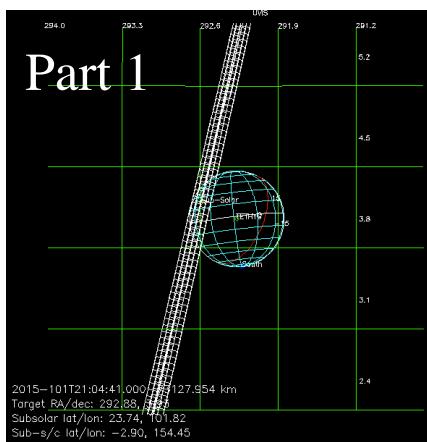
Alt= 53,633 km

Longitude=215°W

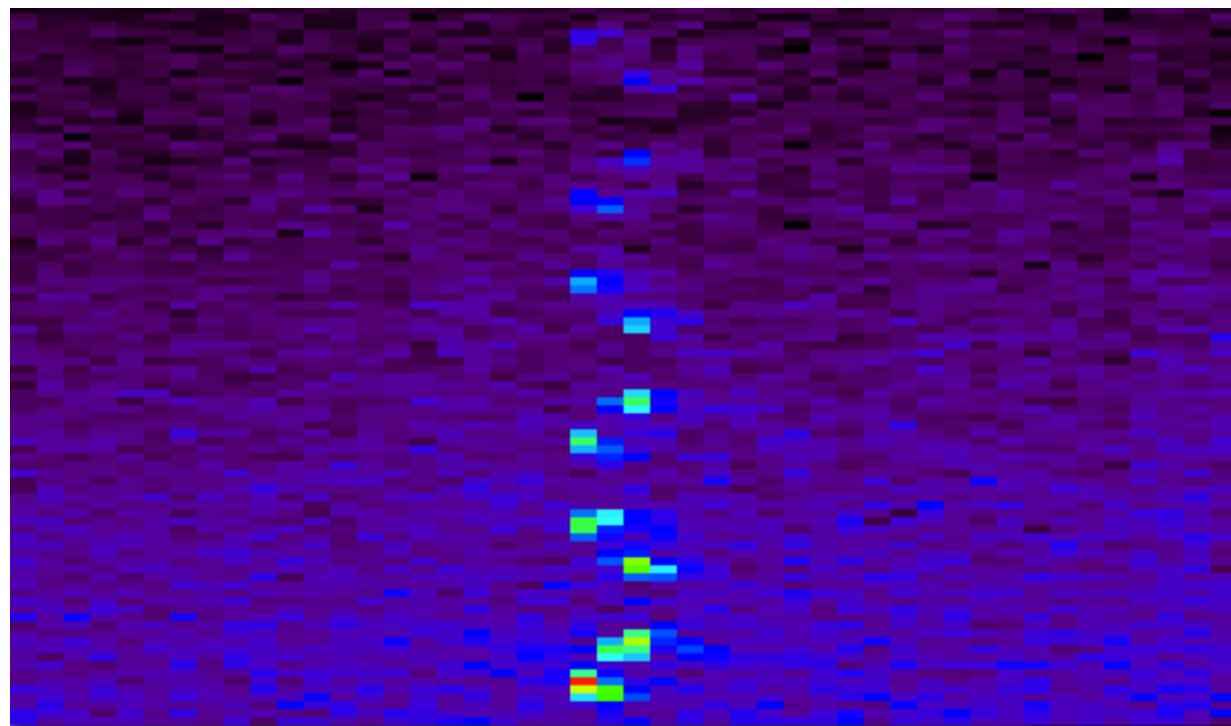
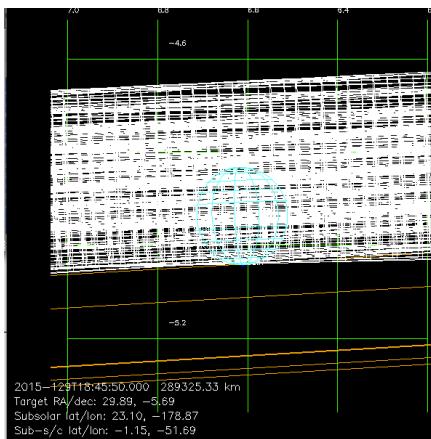
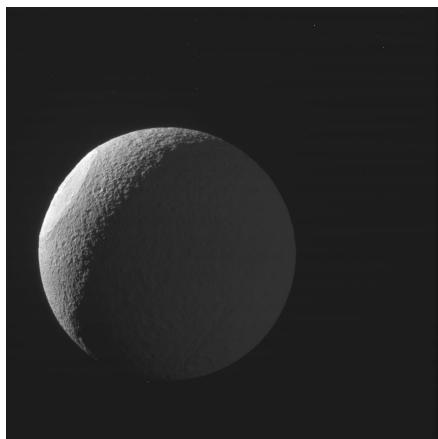
Phase=35.9°



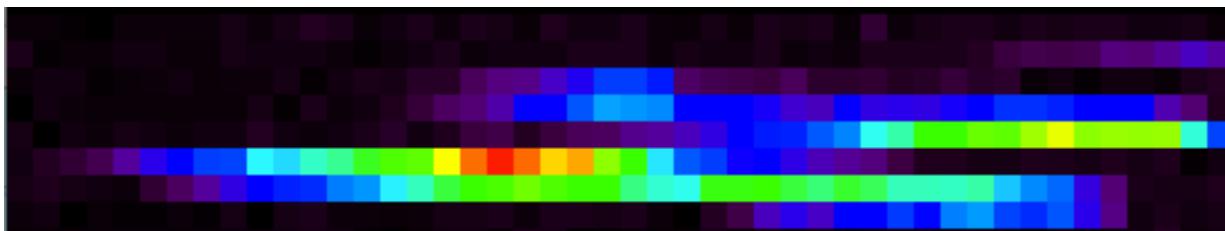
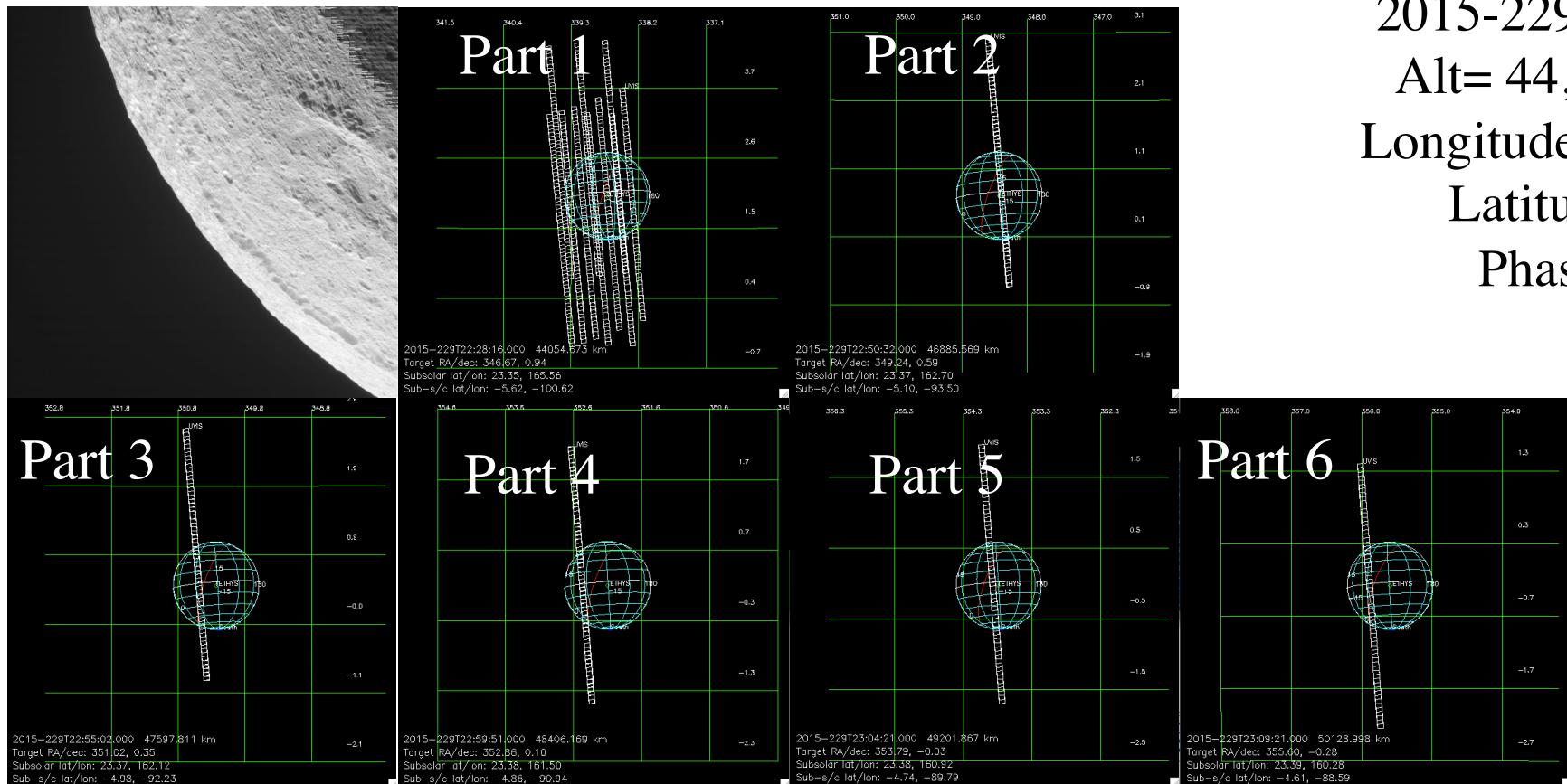
214TE_ICYLON007_CIRS
2015-101T21:05
Alt= 73,009 km
Longitude=205°W
Latitude=2.9°S
Phase=57.7°



215TE_ICYLON001_CIRS
2015-129T18:15
Alt= 324,747 km
Longitude=51°W
Latitude=1°S
Phase=133°

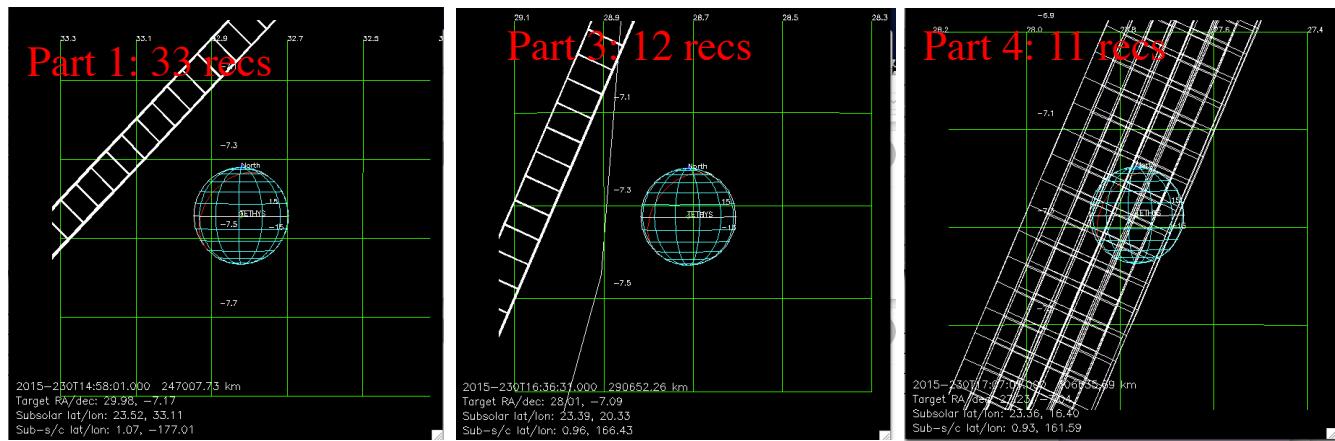


220TE_ICYLON001_CIRS
 2015-229T22:29
 Alt= 44,561 km
 Longitude=98°W
 Latitude=5°S
 Phase=100°



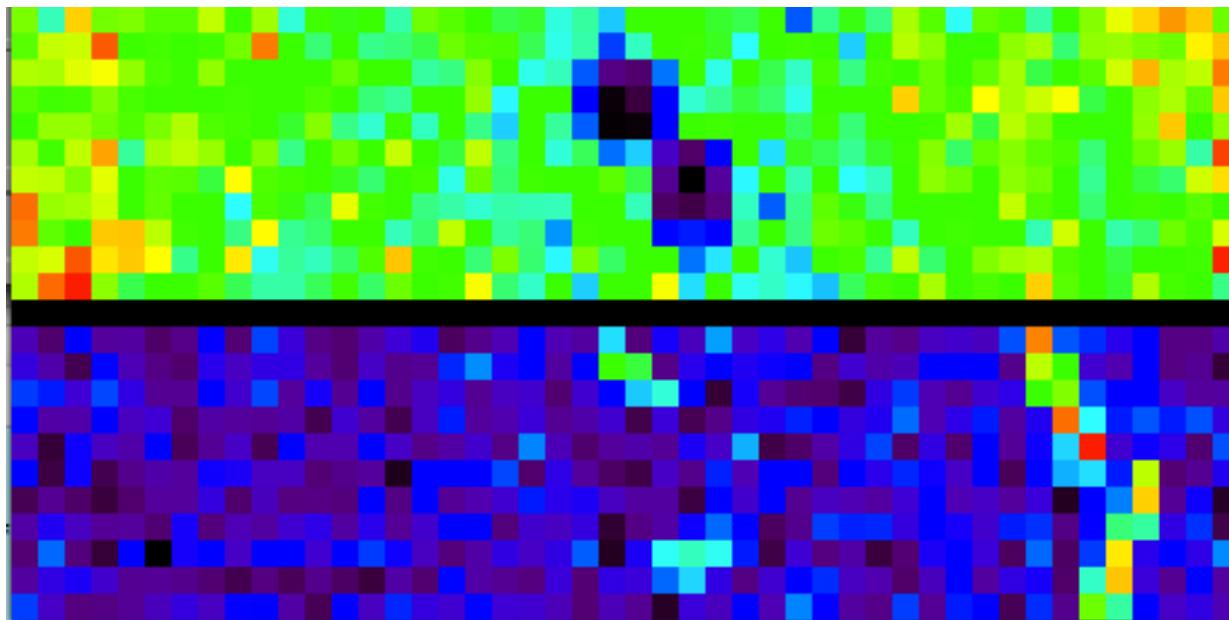
Part 1

220TE_ICYLON002_CIRS
2015-230T14:59
Alt= 311,605 km
Longitude=200°W
Latitude=1°N
Phase=137°

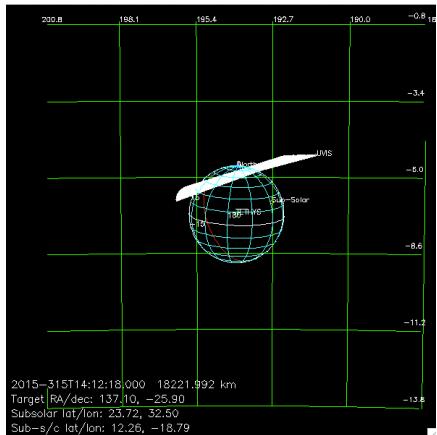
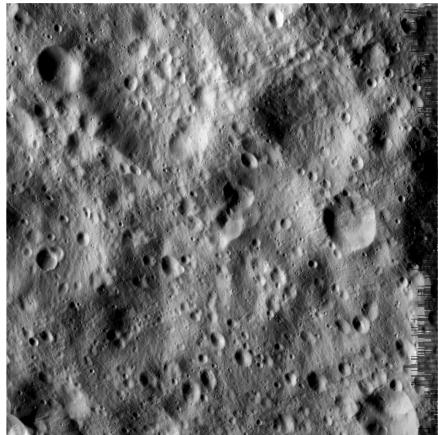


Part 2: UVIS slit way off body

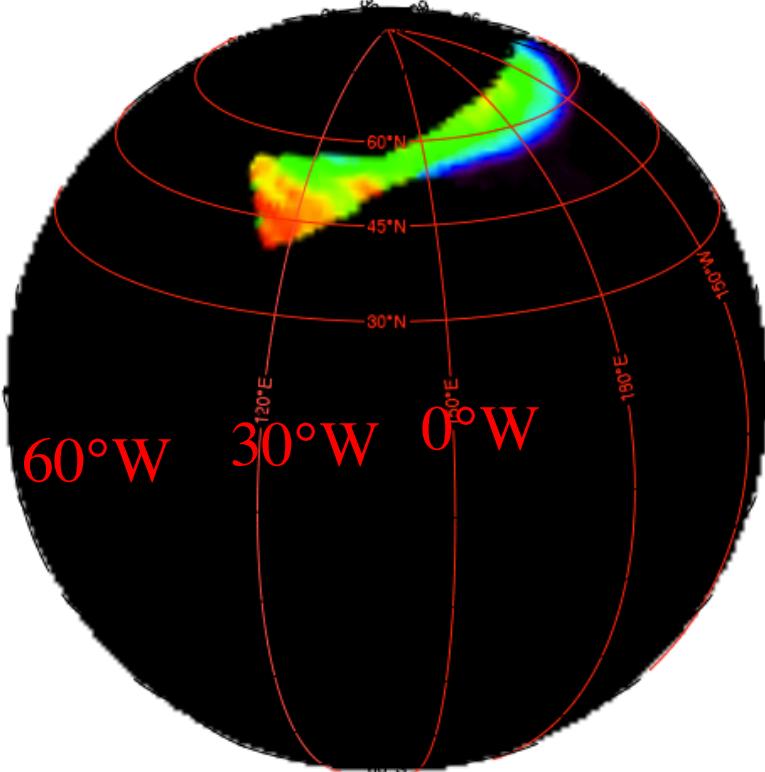
Part 4



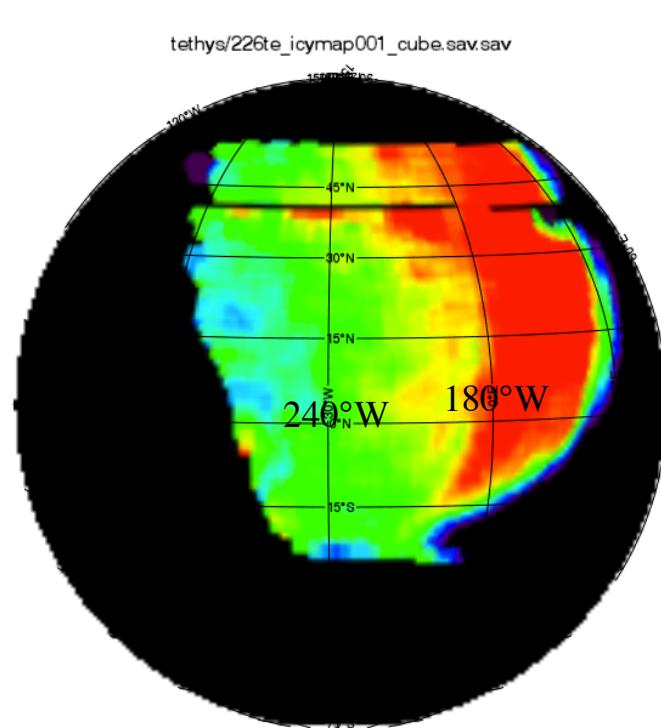
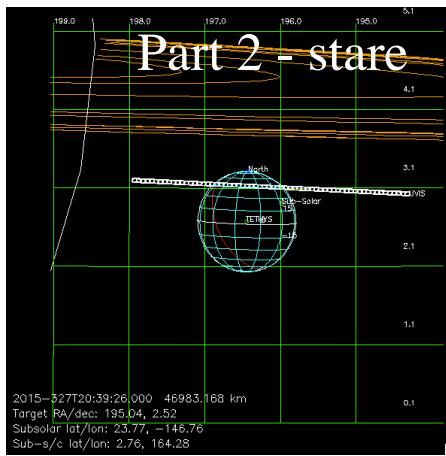
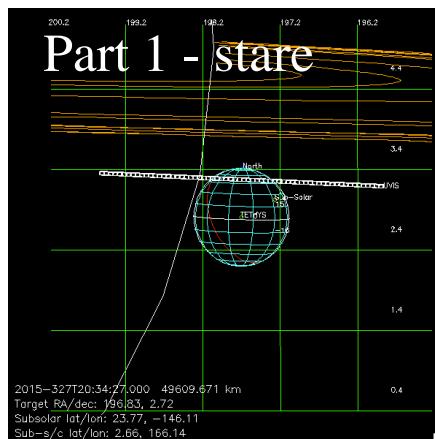
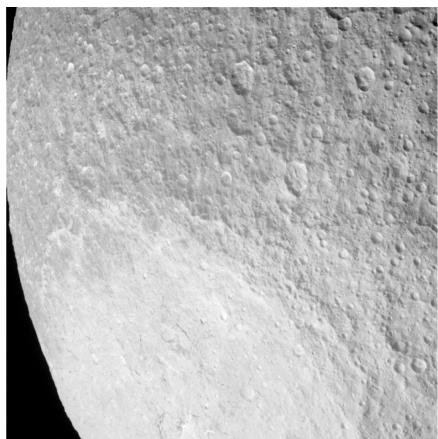
225TE_ICYMAP001_ISS
2015-315T14:12
Alt= 13,435 km
Longitude=29°W
Phase=59°



tethys/225te_icymap001_cube.sav



226TE_ICYMAP001_CIRS
2015-327T20:34
Alt= 44,931 km
Longitude=196°W
Phase=54°



Part 3

230TE_ICYLON001_CIRS

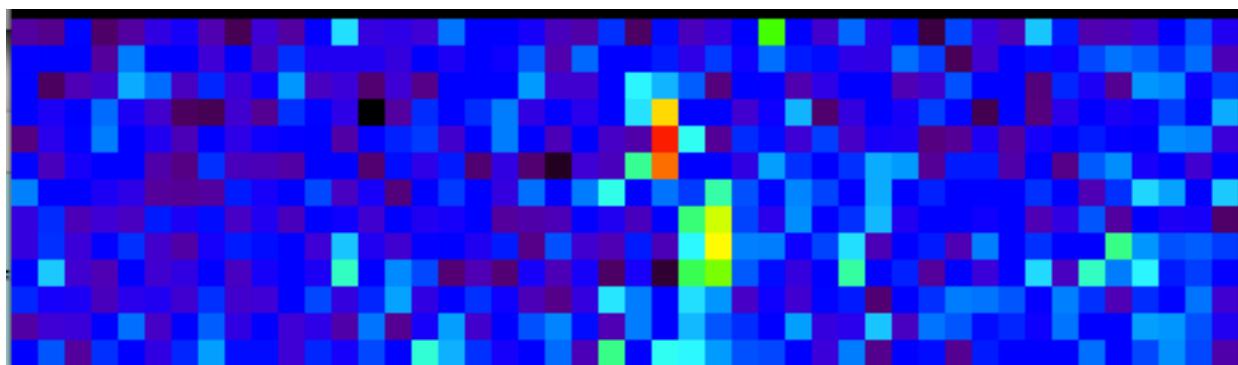
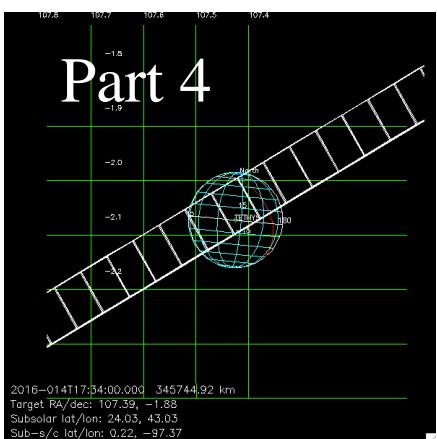
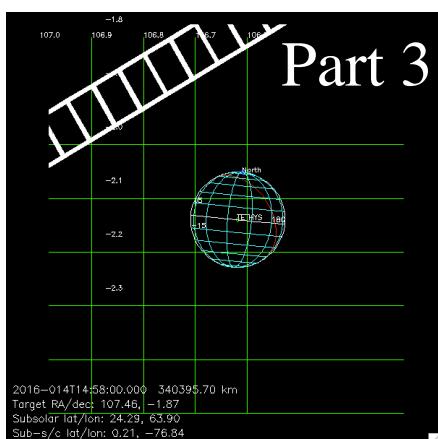
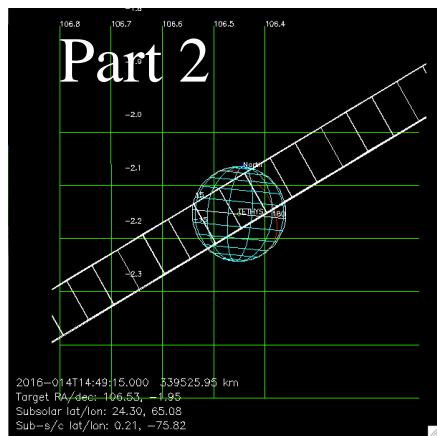
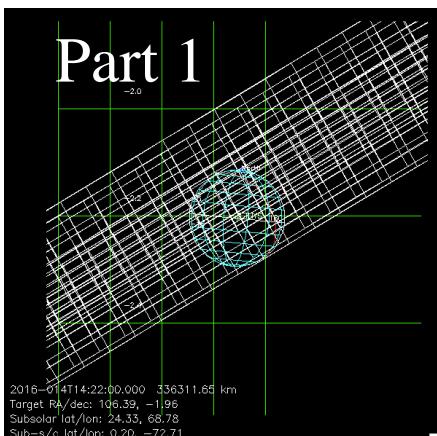
2016-014T14:23

Alt= 337,262 km

Longitude=74°W

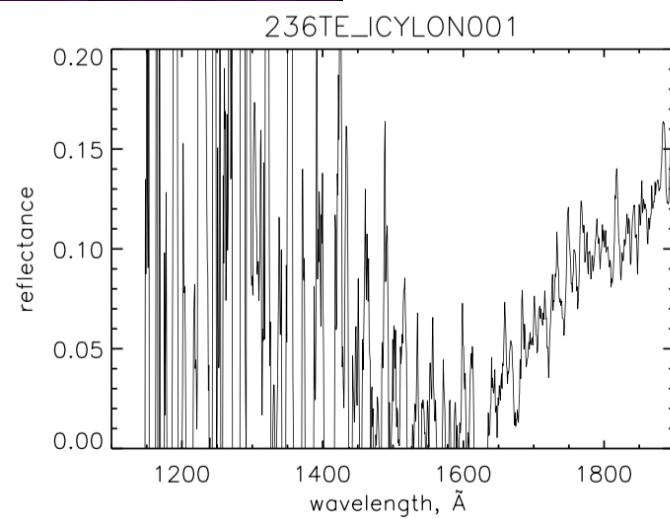
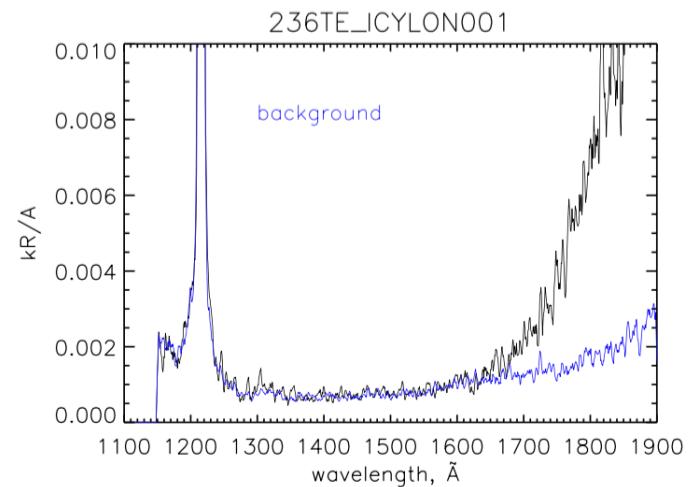
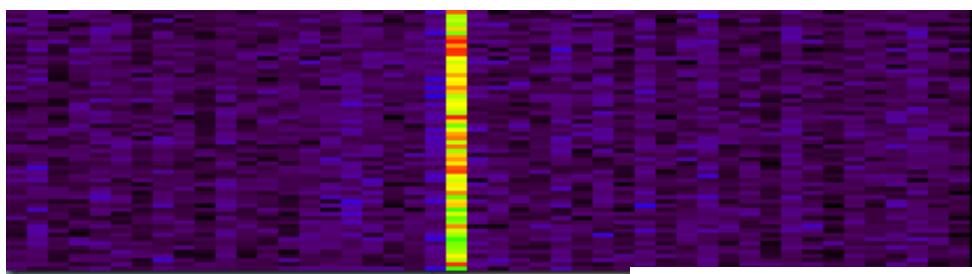
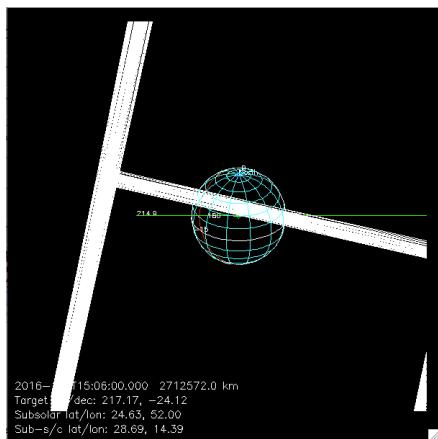
Latitude=0.2°N

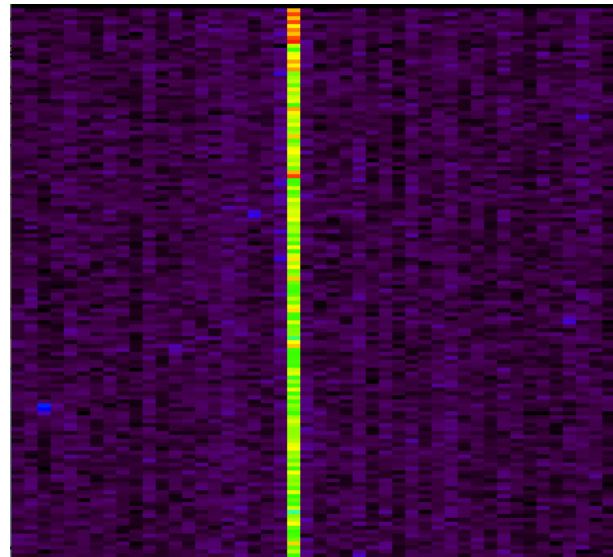
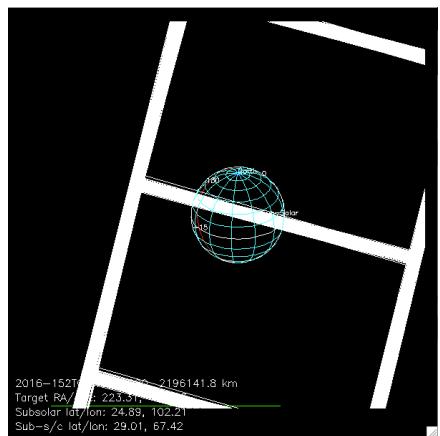
Phase=136°



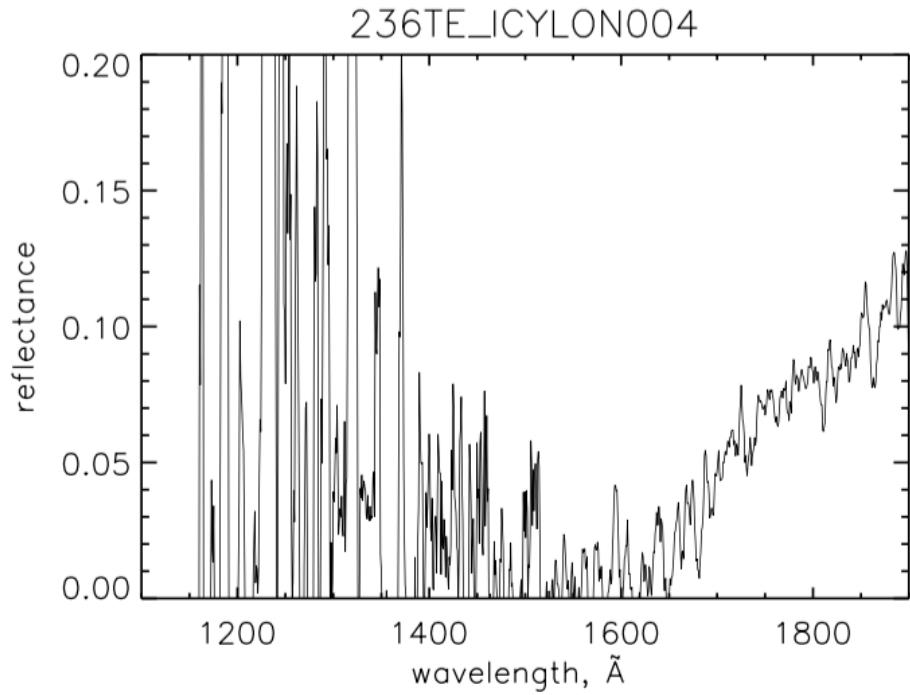
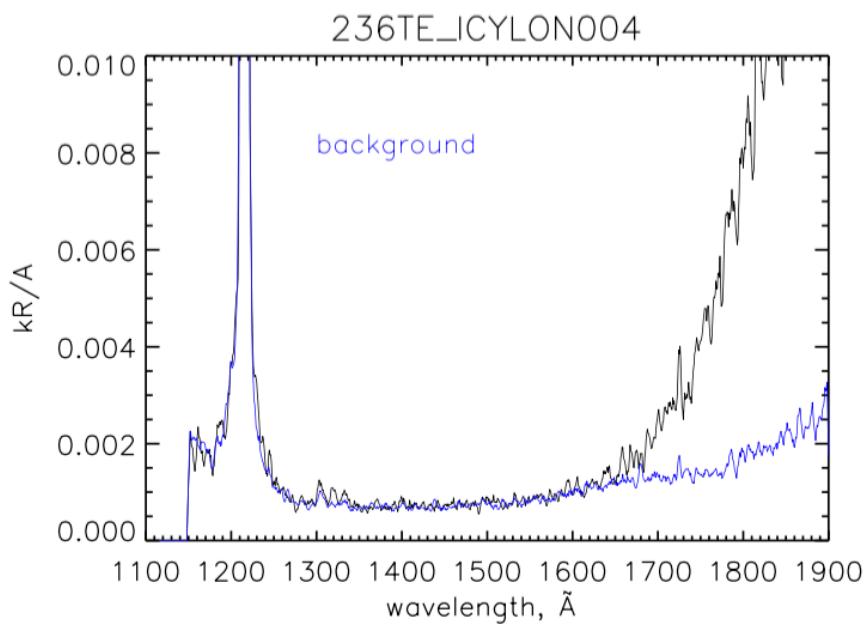
Part 1

236TE_ICYLON001_PRIME
2016-150T15:07
Alt= 2,711,313 km
Longitude=352°W
Latitude=28.5°N
Phase=32.9°

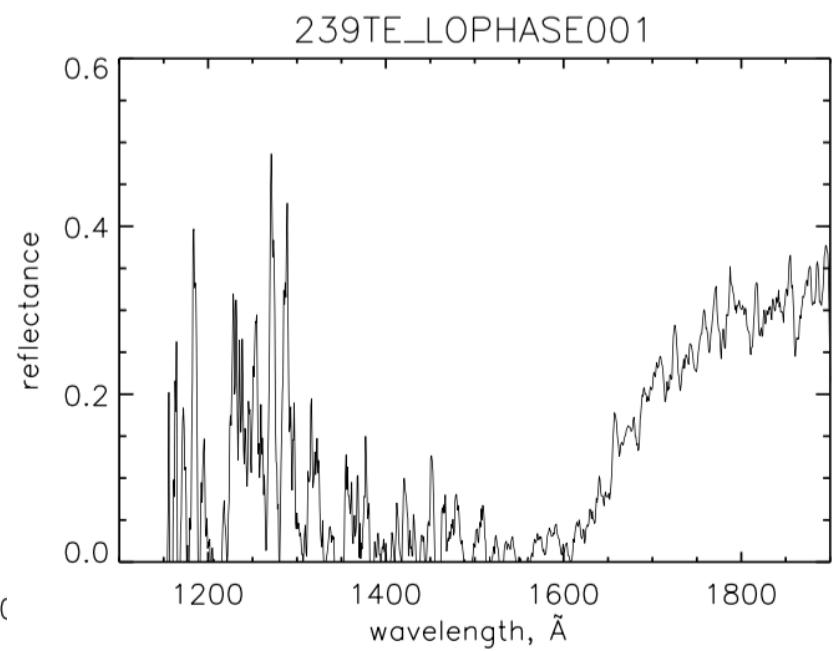
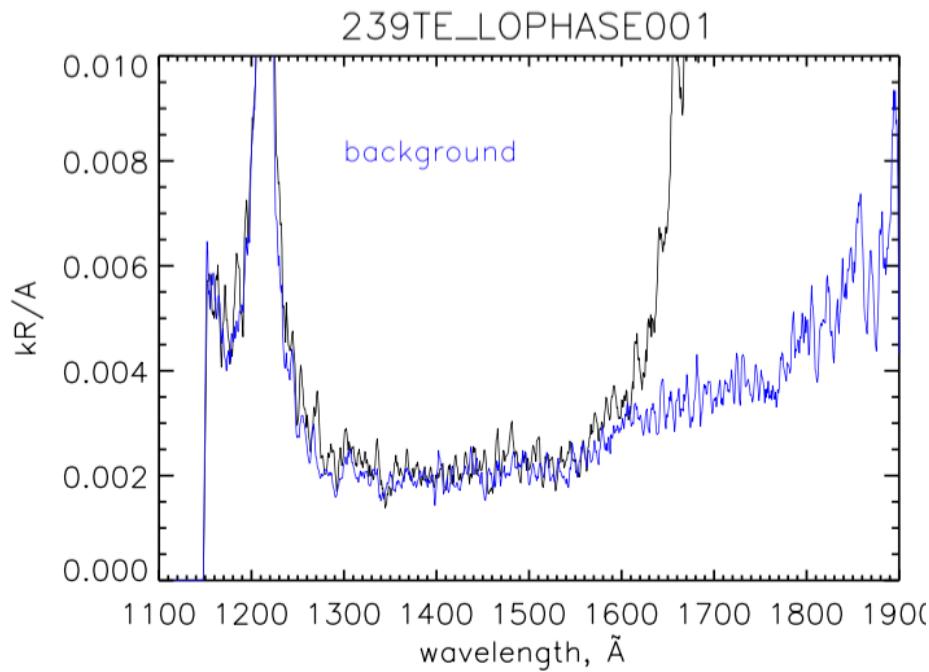
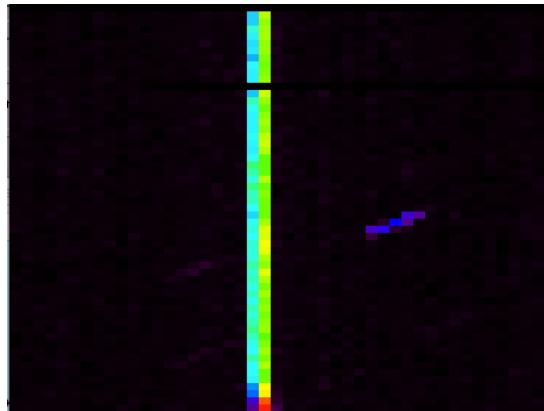
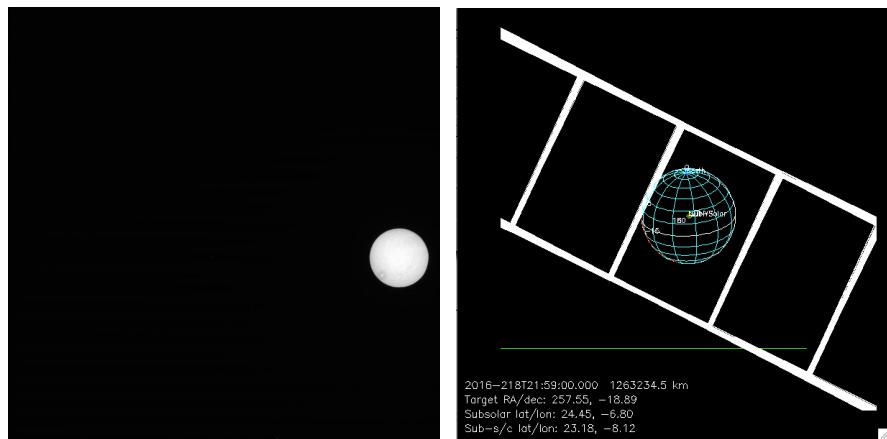




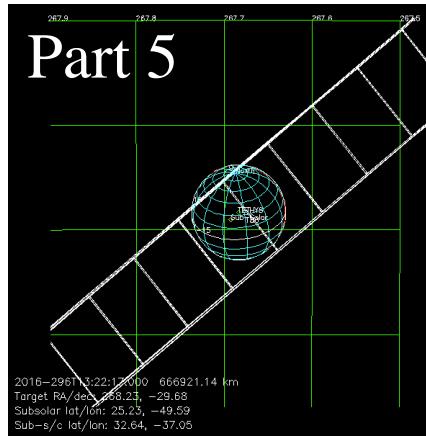
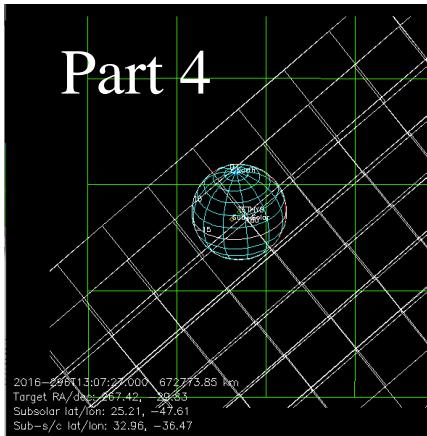
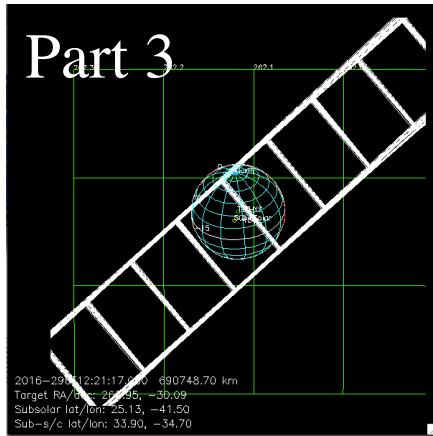
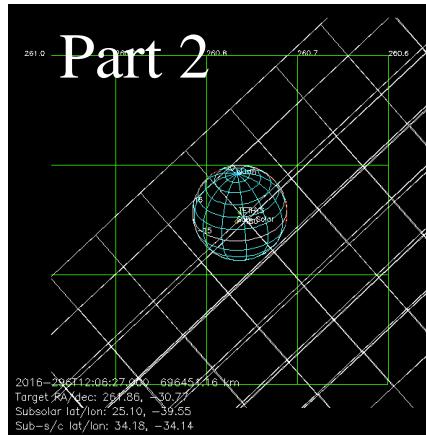
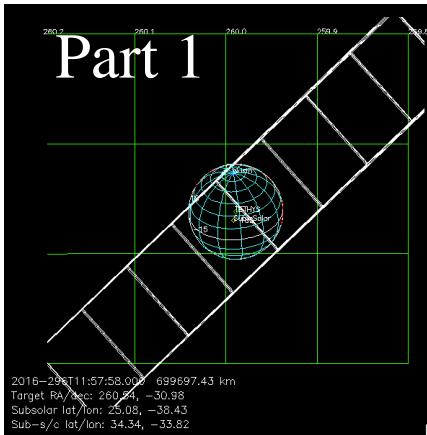
236TE_ICYTHON004_PRIME
 2016-152T06:17
 Alt= 2,240,115 km
 Longitude=309°W
 Latitude=27.6°N
 Phase=28.4°



239TE_LOPHASE001_PIE
2016-218T22:00
Alt= 1,248,107km
Longitude=12.7°W
Latitude=22.7°N
Phase=1.81-4.19°

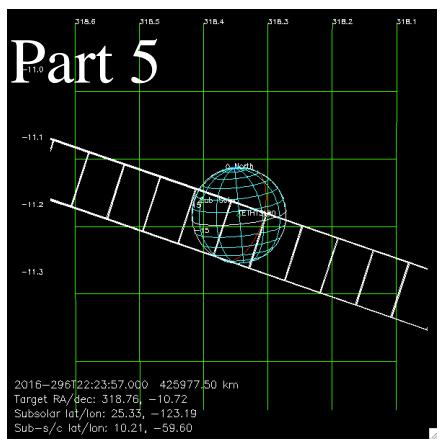
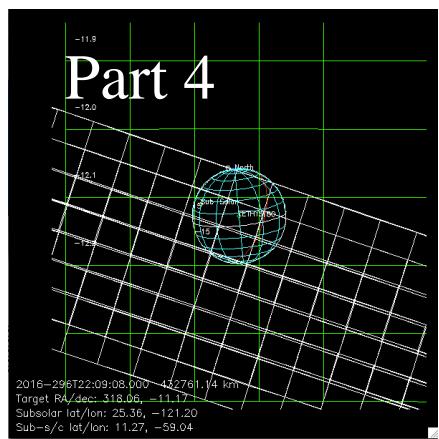
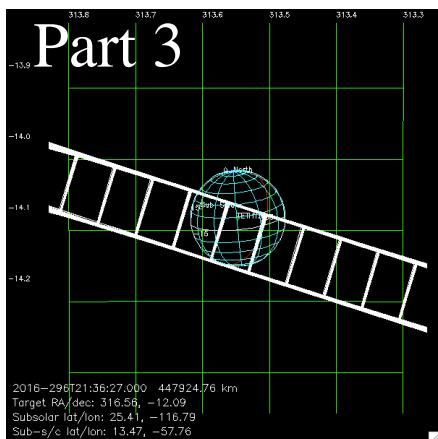
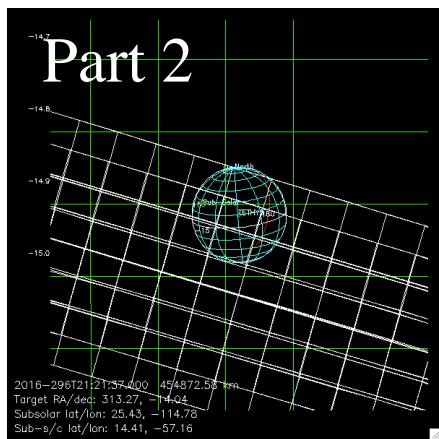
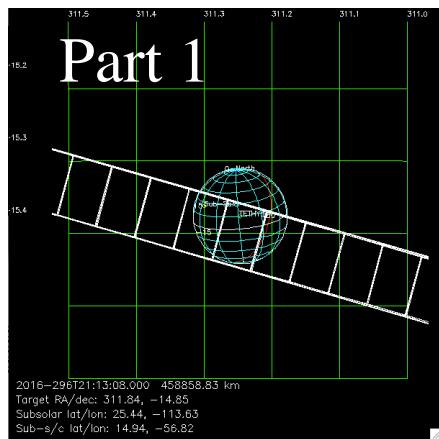
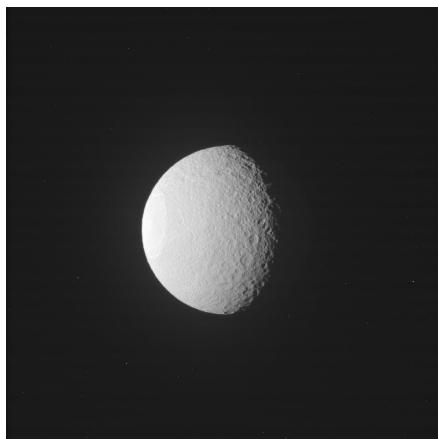


246TE_ICYTHON001_ISS
2016-296T11:58
Alt=698106 km
Longitude=34°W
Latitude=34°N
Phase=10°



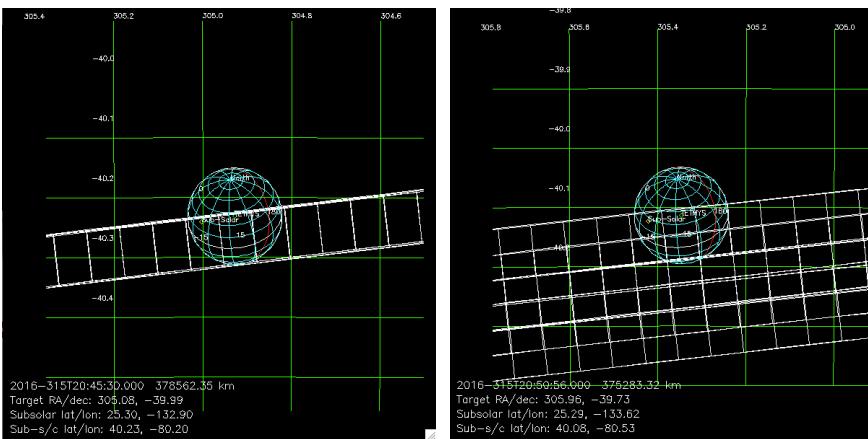
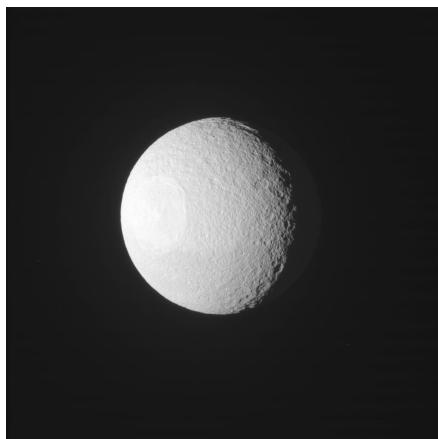
Part 1

246TE_ICYTHON002_ISS
2016-296T21:14
Alt=456,915 km
Longitude=57°W
Latitude=15°N
Phase=53°



Part 1

248TE_ICYTHON001_ISS
2016-315T20:46
Alt=377,430 km
Longitude=80°W
Latitude=40°N
Phase=45°



250TE_ICYTHON001_PRIME

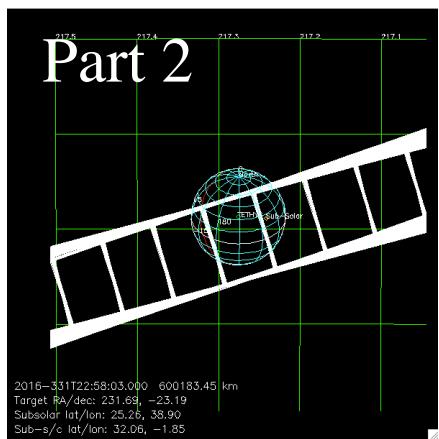
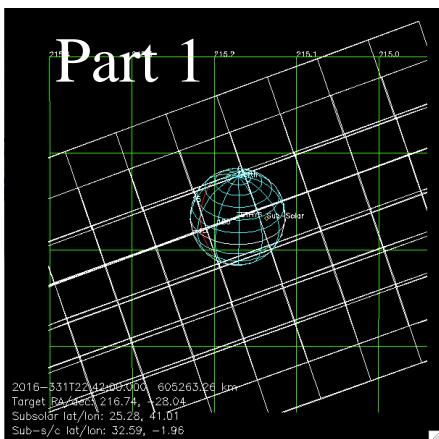
2016-331T22:43

Alt=602,805 km

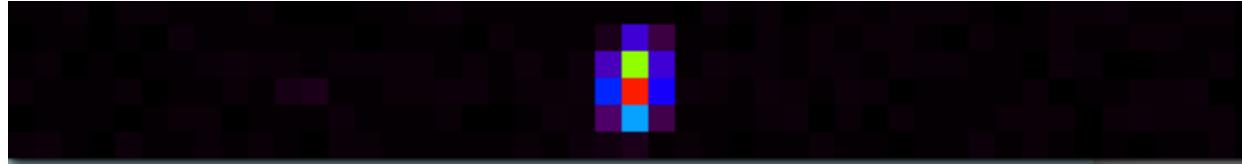
Longitude=2°W

Latitude=32°N

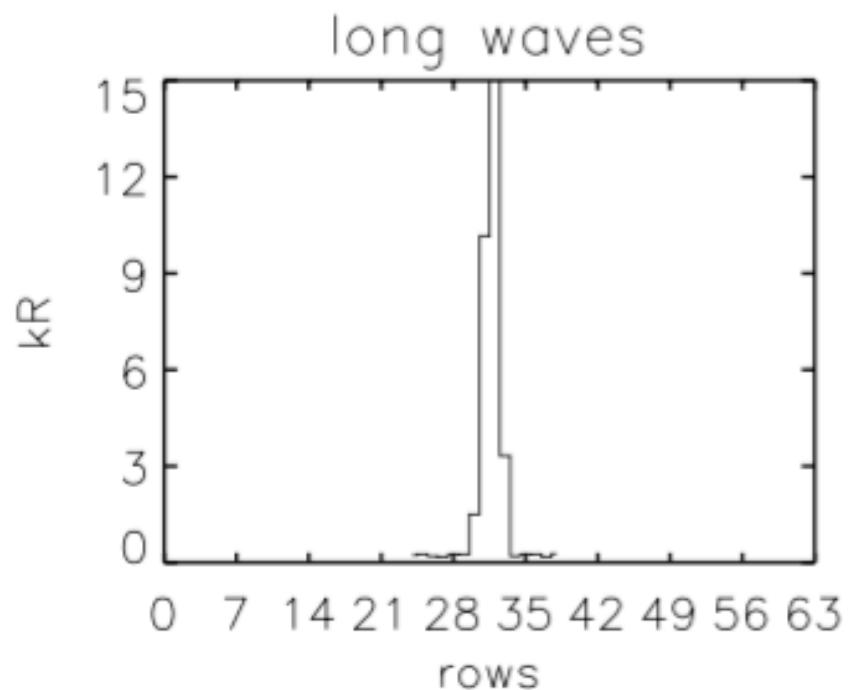
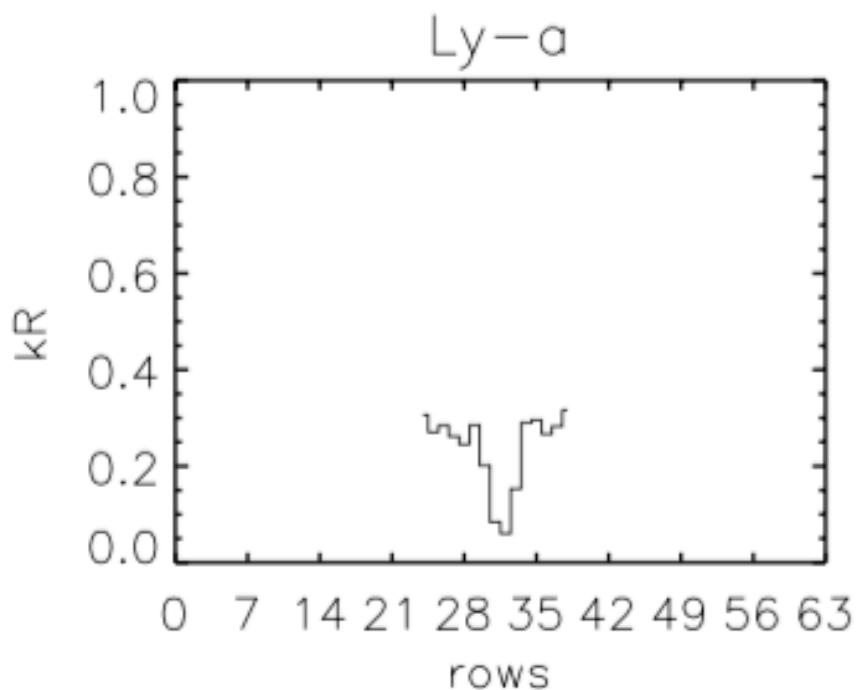
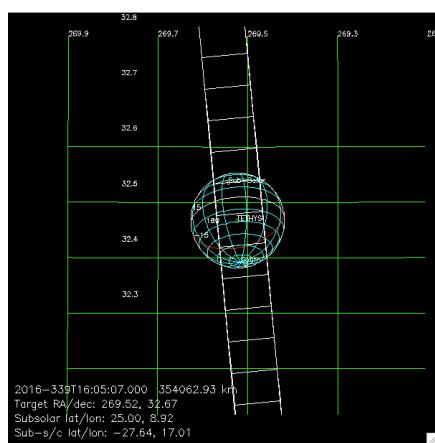
Phase=38°



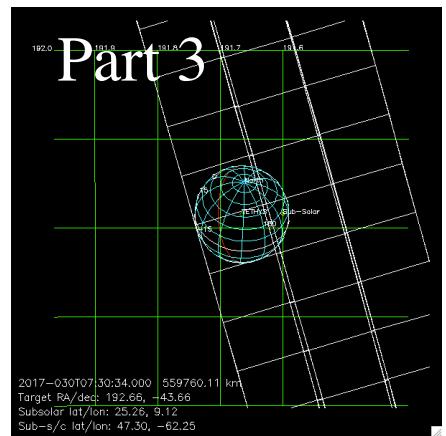
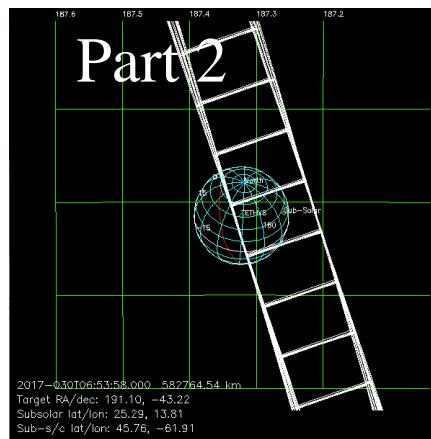
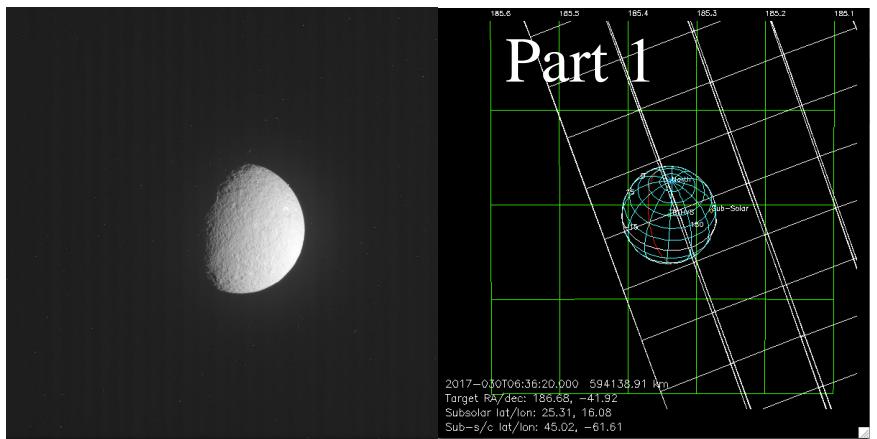
Part 1



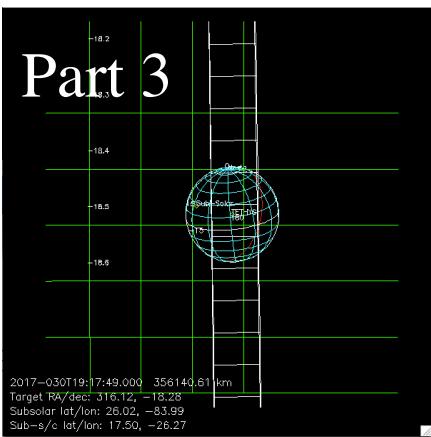
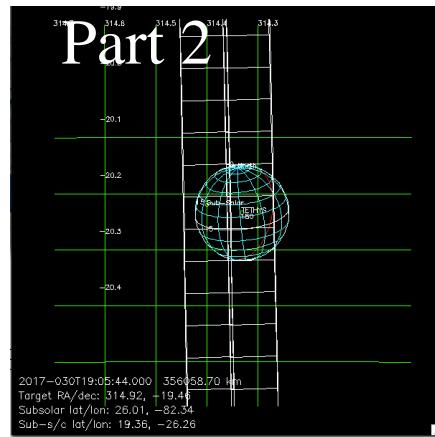
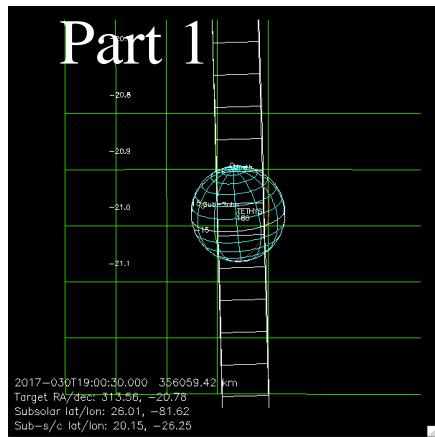
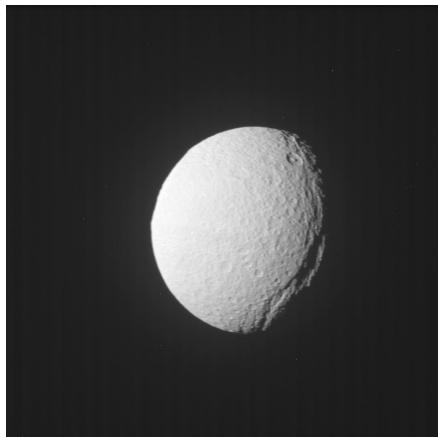
251TE_ICYSTARE001_CIRS
2016-339T16:09
Alt=353,526 km
Longitude=343°W
Latitude=28°S
Phase=55°



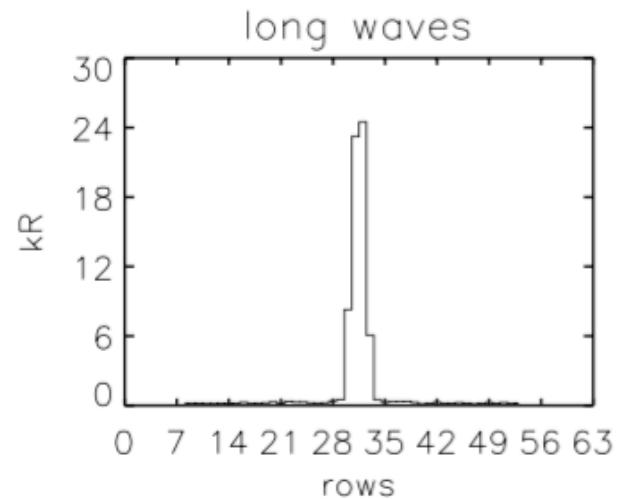
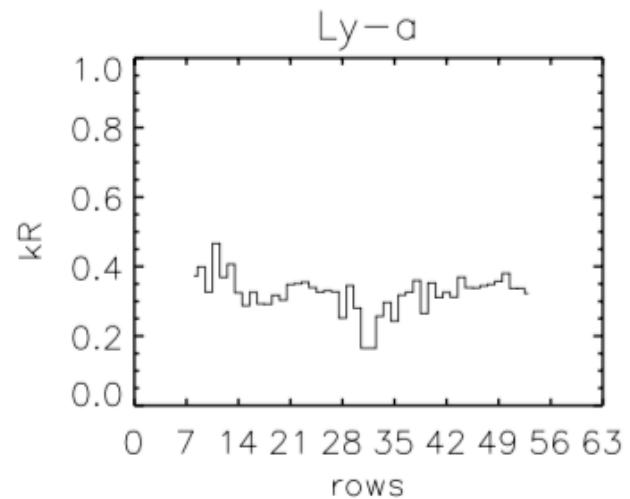
259TE_ICYTHON001_ISS
2017-030T06:38
Alt=589,724 km
Longitude=62°W
Latitude=45°N
Phase=64°



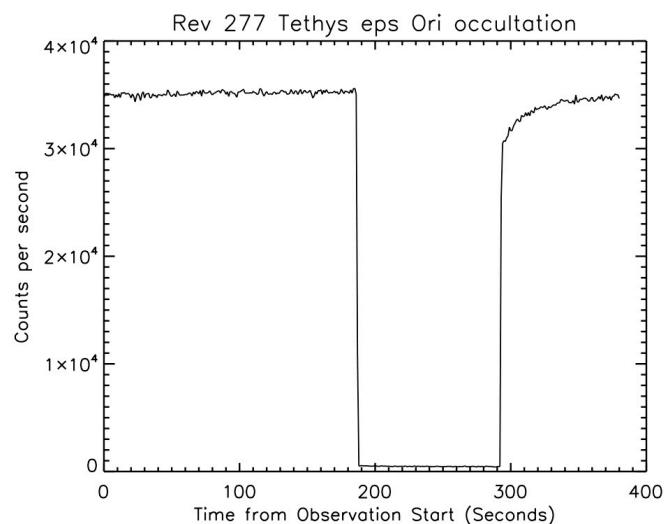
259TE_ICYTHON002_ISS
 2017-030T19:02
 Alt= 355,522km
 Longitude=26°W
 Latitude=20°N
 Phase=50°



Part 1



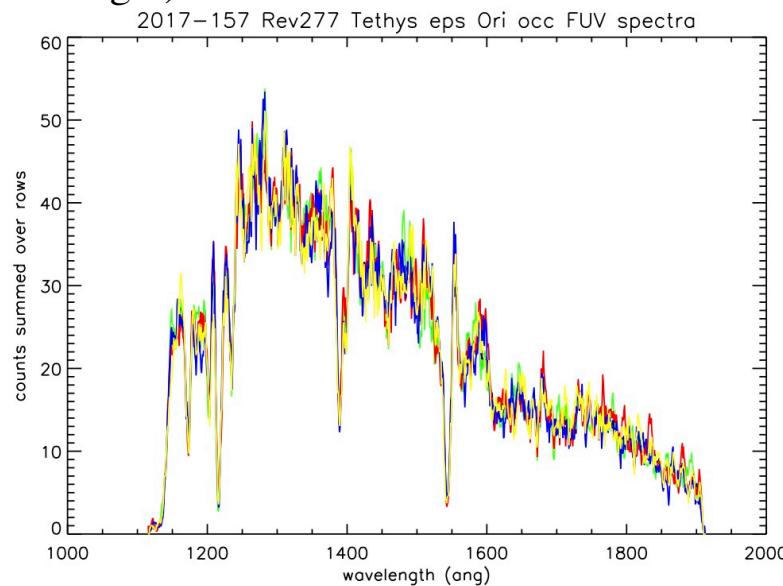
HSP profile



UVIS_277TE_ICYEX0001_PRIME
2017-157T00:04
Ingress lat/lon: 8.1 / 116.5
Egress lat/lon: 34.7 / 294.0
Epsilon Orionis



Spectra of I , I_0 (counts per integration period vs wavelength)



Spectrum of I/I_0

