UVIS Rings Spectroscopy Atlas

The UVIS FUV and EUV channels have 64 X 1024 pixels spatial and spectral pixels each, respectively. For this document a “pixel” refers to the projection of a single pixel onto the ring plane. Due to the motion of the spacecraft during an integration period the projection of the pixel onto the ring plane may vary in location both radially and azimuthally, resulting in a “smeared” projected pixel. An observation typically consists of multiple integration periods, where each set of 64 X 1024 pixels of data constitute a single data record. For example an observation with 10 data records consists of 64 X 1024 X 10 pixels of data. Some observations were designed where the spectra were binned. For example spectral binning equal to 2 with 10 data records results in 64 X 512 X 10 separate pixels of data. The figures containing an axis or axes in units of Rs are in units of the dynamical radius of Saturn, which is 60330 km.

Incidence, emission, and phase angles range from 0°-180°, with 0° normal to the ring plane in the Saturn North Pole direction.

Top left: Projection of each smeared pixel for all data records in ring plane looking down on Saturn North pole with Sun to the left. The color code is rainbow from IDL color palette 13 and is normalized with violet and red corresponding to the lowest and highest count rates, respectively.

Top center: Example of the movement of a single projected pixel from start to finish of the integration period.

Middle left: Distance of the spacecraft from the ring plane for each projected pixel for all data records plotted against the radial location of the center of the projected pixel at the middle of the integration period.

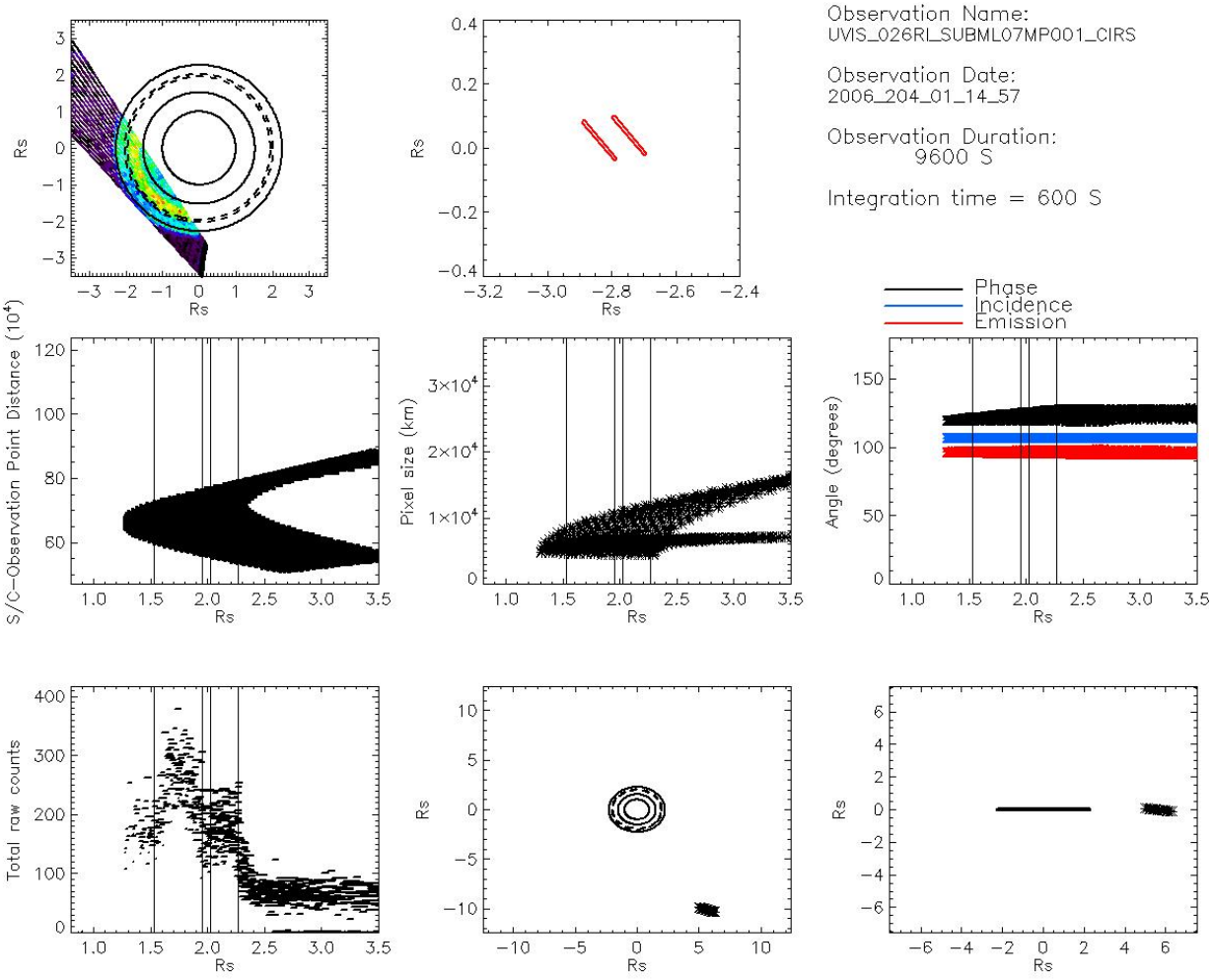
Middle center: Maximum projected smeared pixel size for all data records plotted against the radial location of the projected pixel at the middle of the integration period.

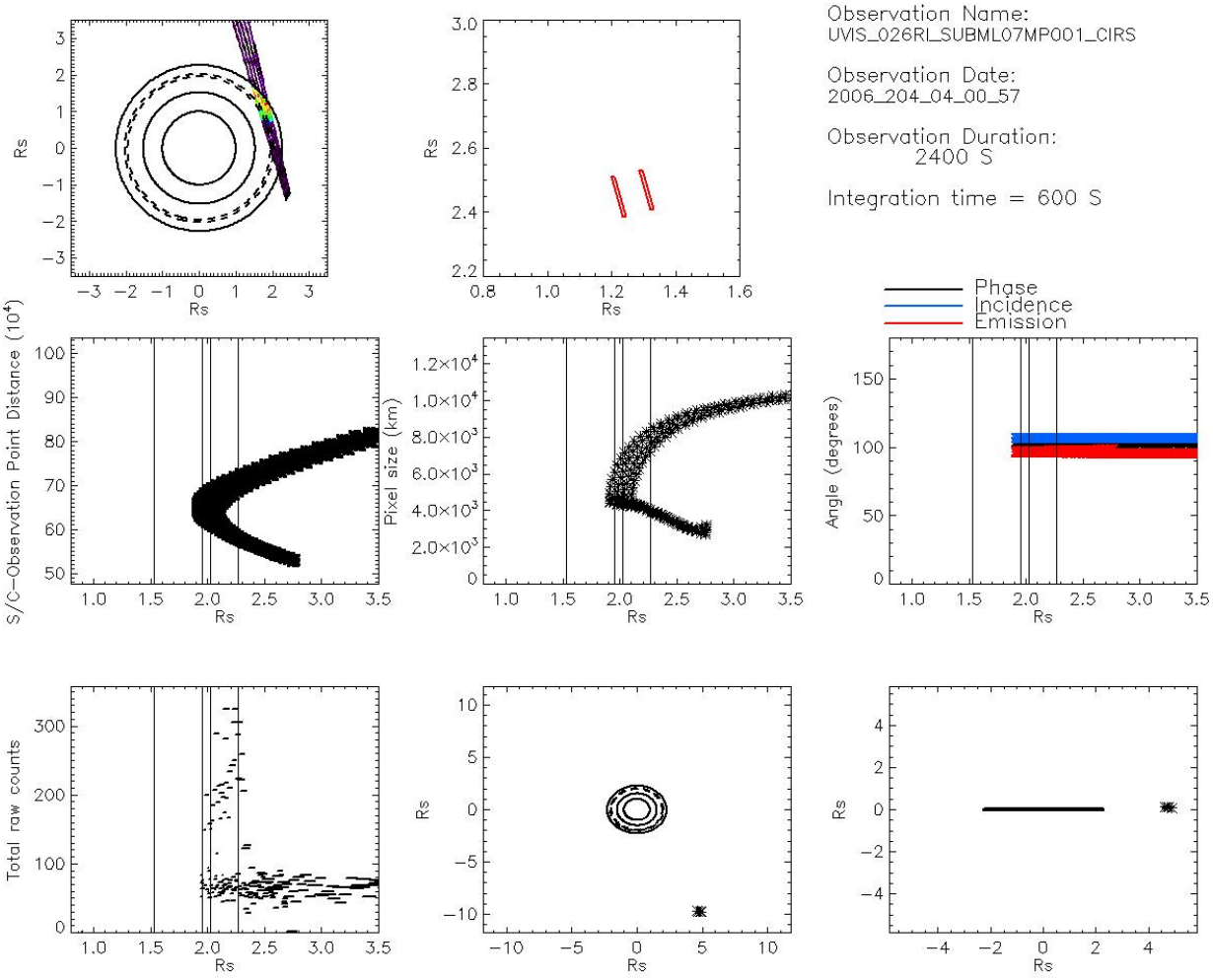
Middle right: Phase, incidence, and emission angles for each pixel for all data records at the middle of the integration period.

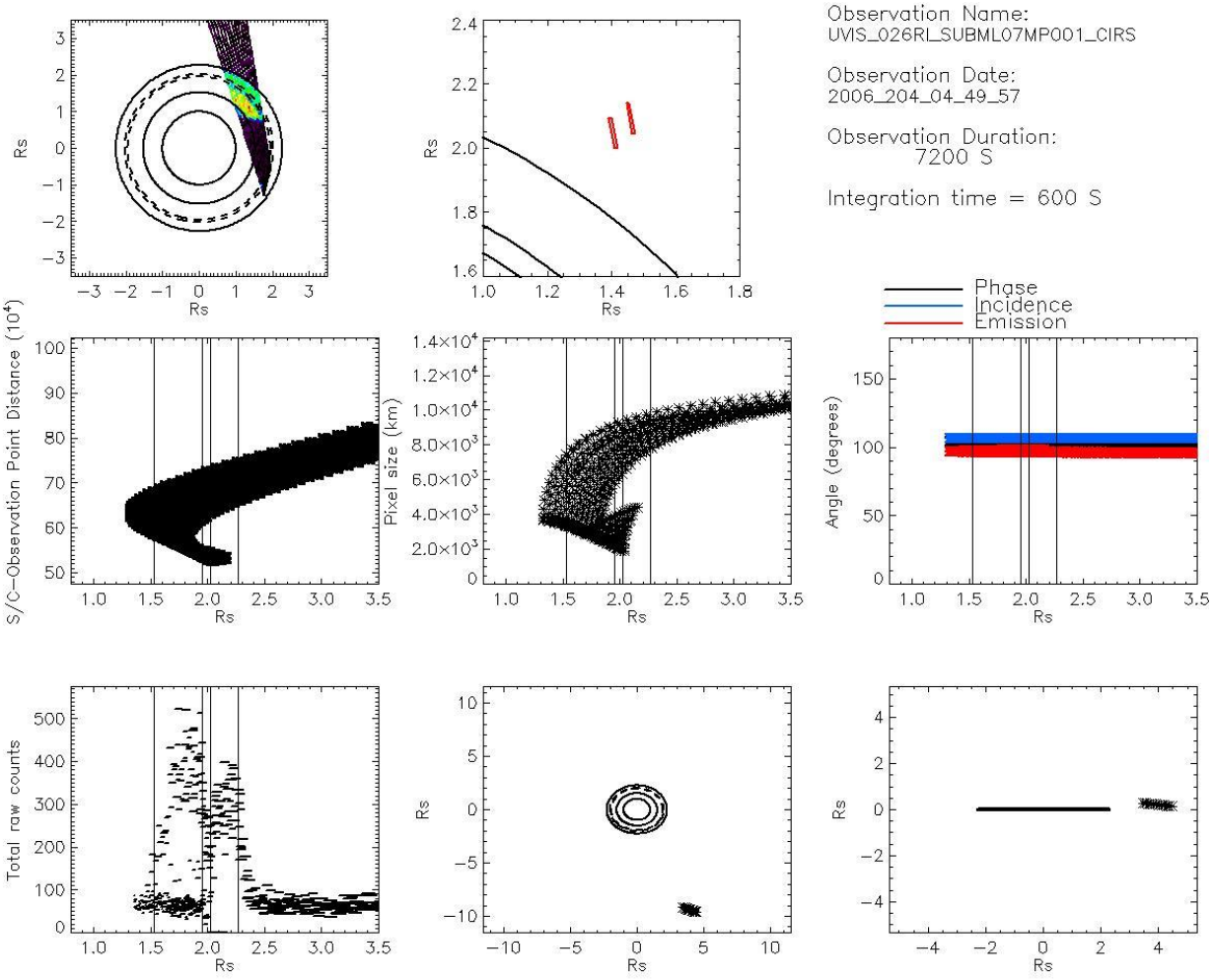
Bottom left: Total raw counts from 175.2 – 189.8 nm for each pixel for all data records.

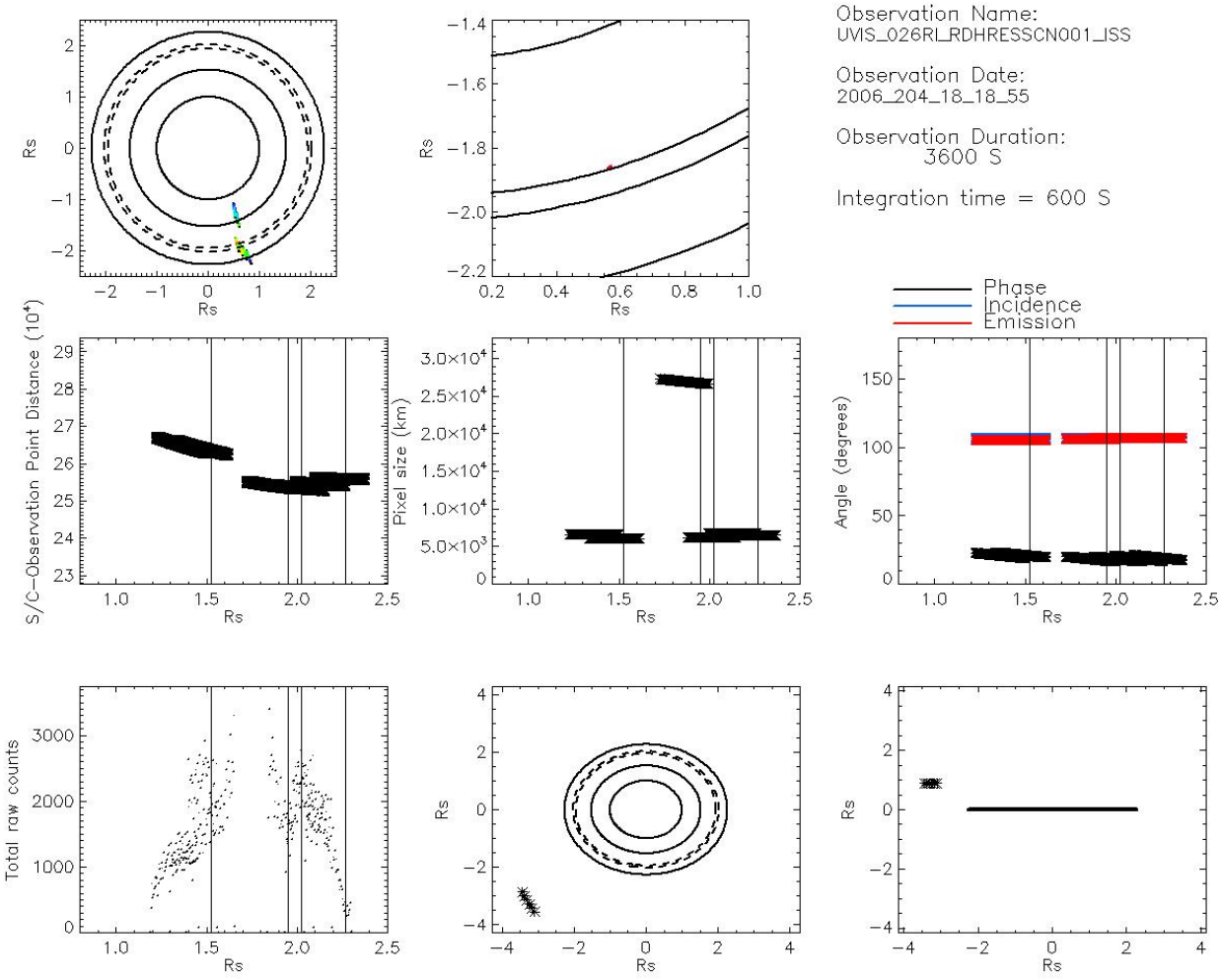
Bottom center: Location of spacecraft throughout an observation looking down on Saturn North Pole with the Sun to the left.

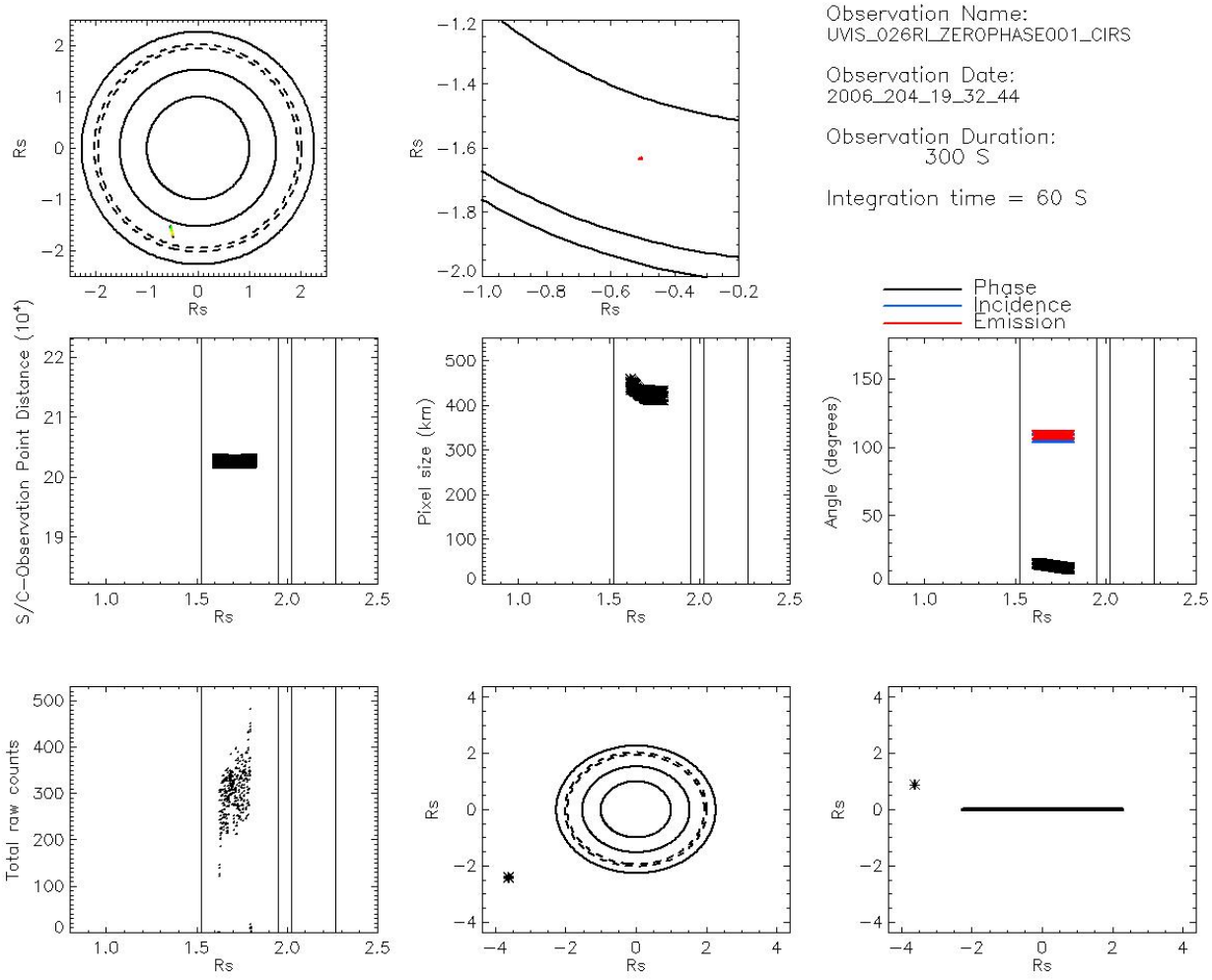
Bottom right: Location of spacecraft throughout an observation looking in the equatorial plane with the Sun to the left.

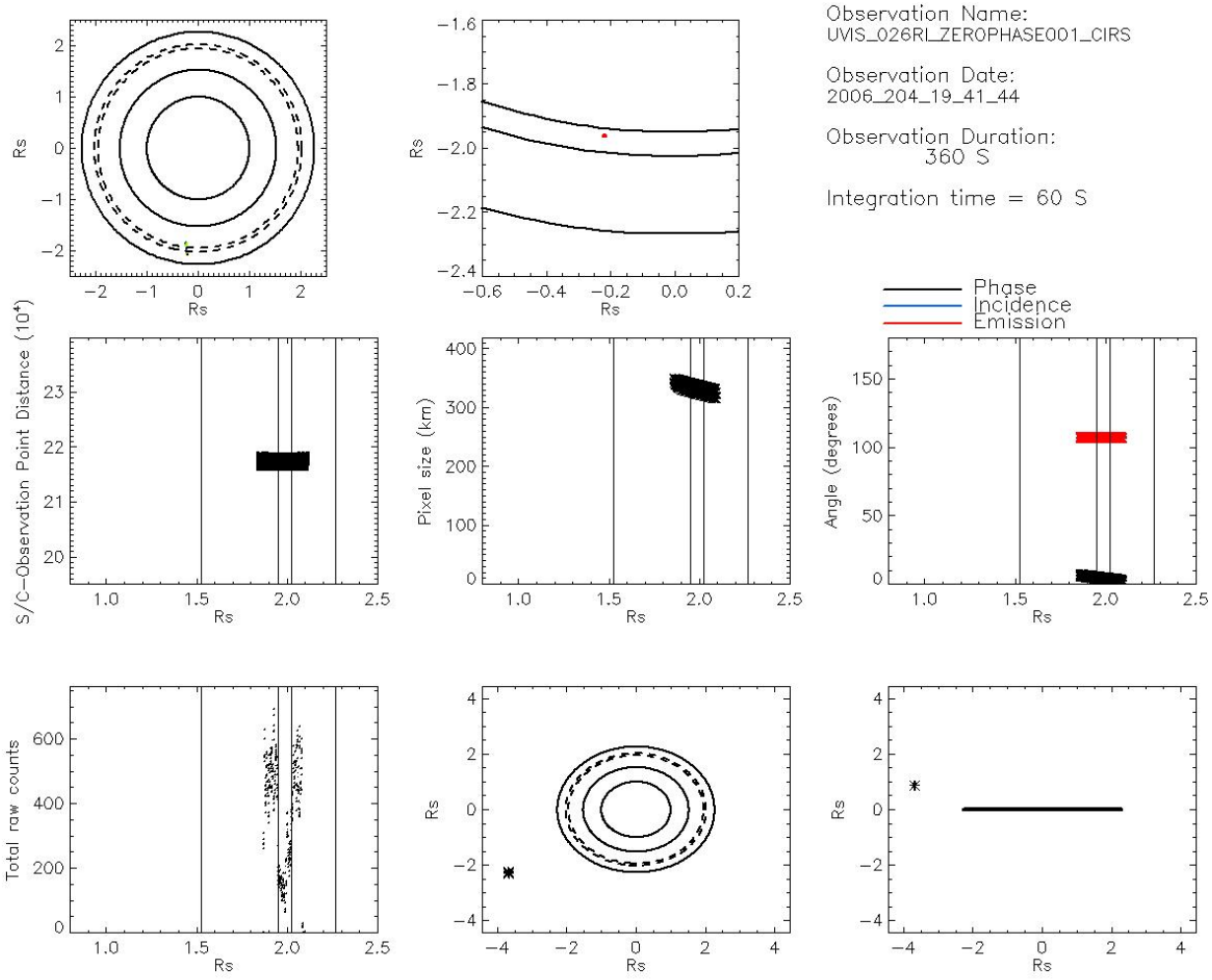

Observation Name:
UVIS_026RI_SUBML07MP001_CIRS
Observation Date:
2006_204_01_14_57
Observation Duration:
9600 S
Integration time = 600 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts

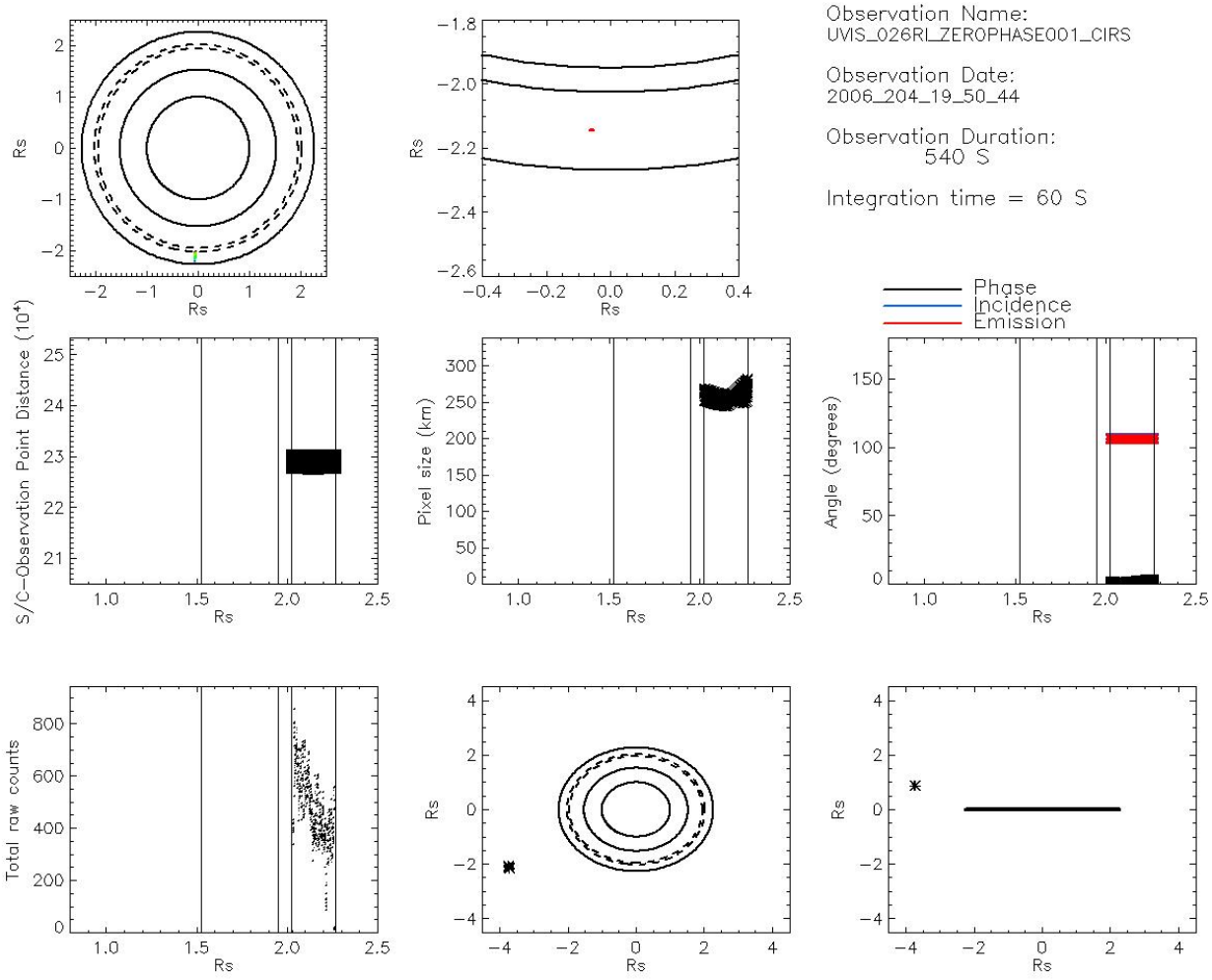

Observation Name:
UVIS_026RI_SUBML07MP001_CIRS
Observation Date:
2006_204_04_00_57
Observation Duration:
2400 S
Integration time = 600 S
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Phase
Incidence
Emission
Angle (degrees)
Total raw counts

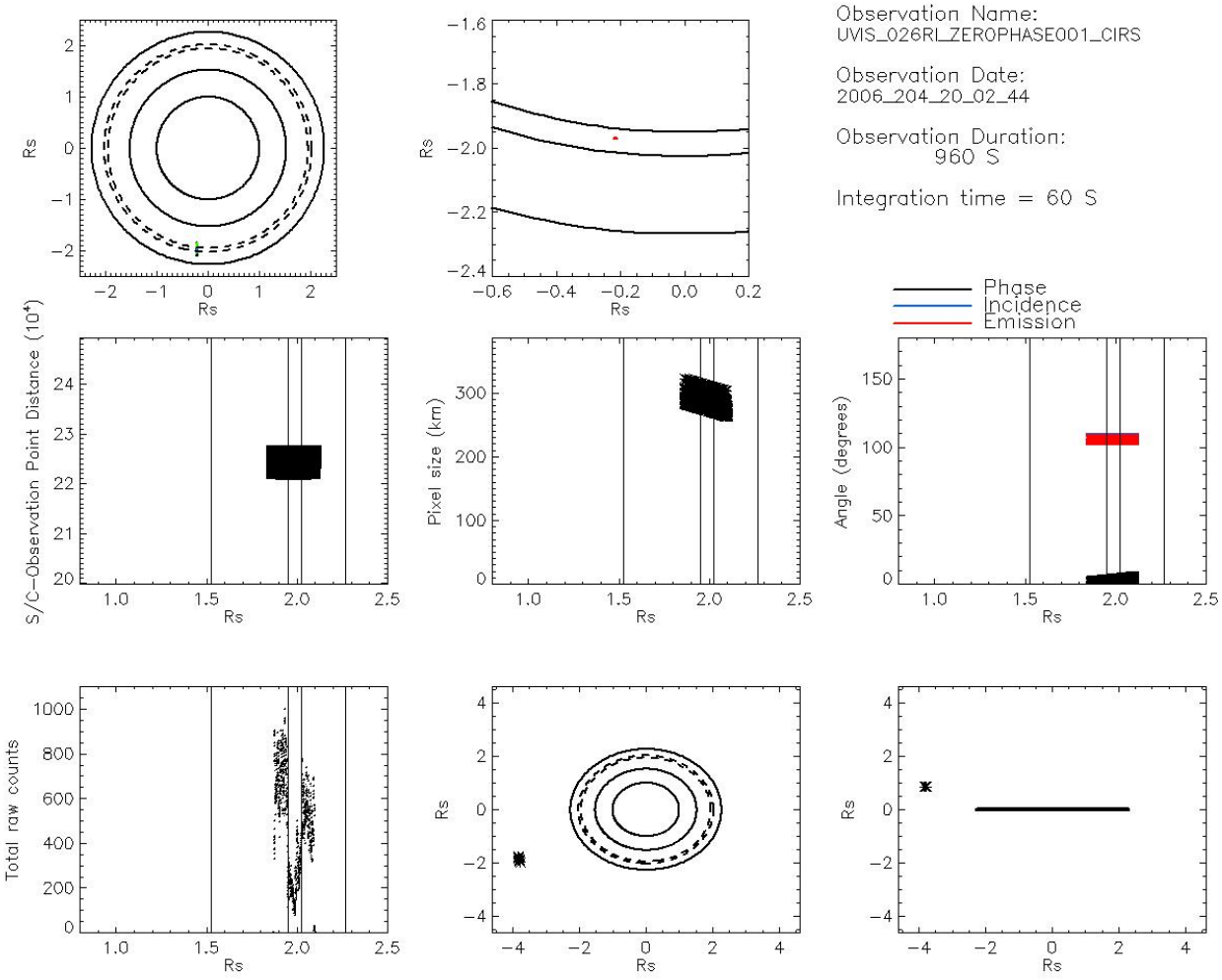

Observation Name:
UVIS_026RI_SUBML07MP001_CIRS
Observation Date:
2006_204_04_49_57
Observation Duration:
7200 S
Integration time = 600 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs

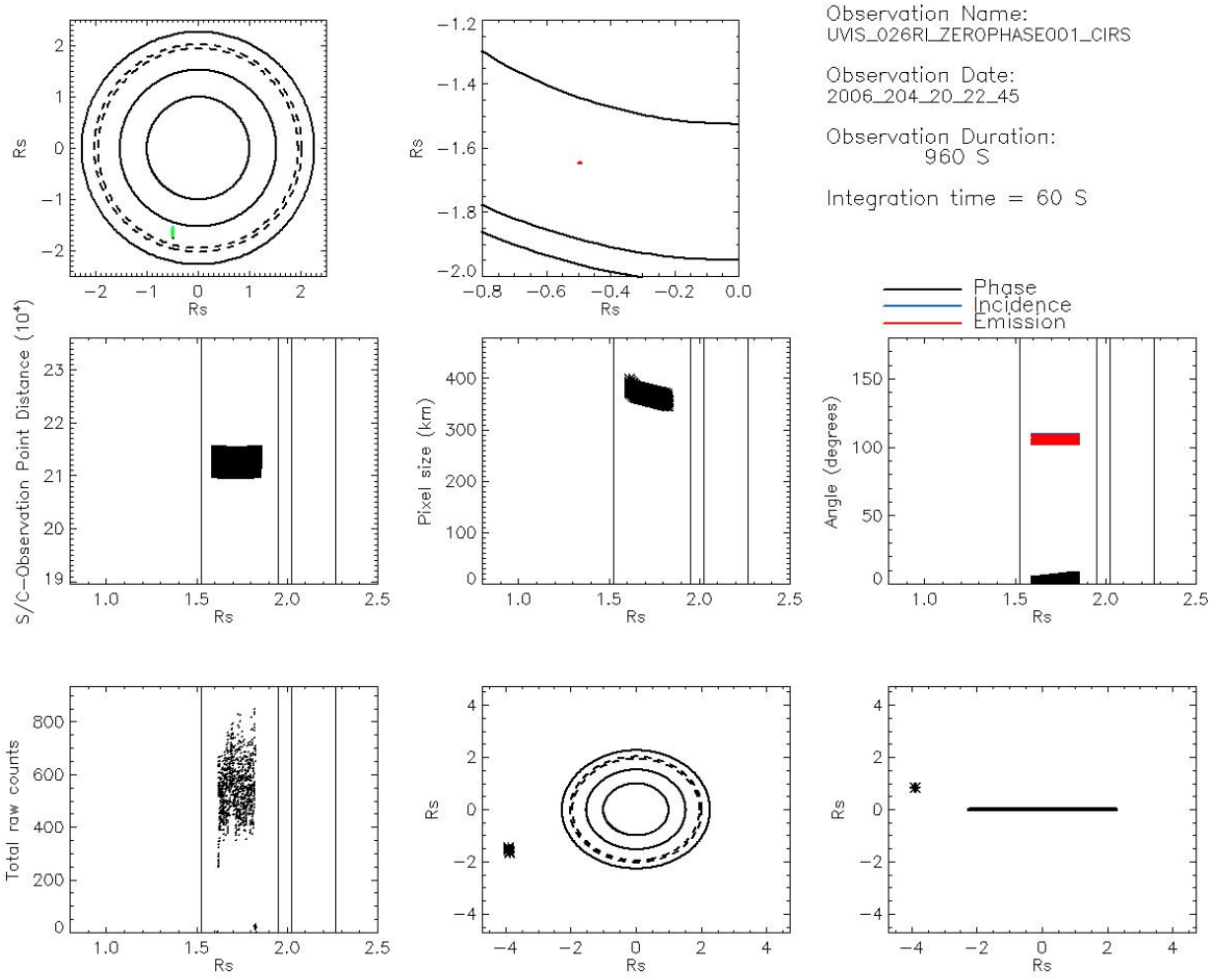

Observation Name:
UVIS_026RI_RDHRESSCN001_ISS
Observation Date:
2006_204_18_18_55
Observation Duration:
3600 S
Integration time = 600 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts


Observation Name:
UVIS_026RI_ZEROPHASE001_CIRS
Observation Date:
2006_204_19_32_44
Observation Duration:
300 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts


Observation Name:
UVIS_026RI_ZEROPHASE001_CIRS
Observation Date:
2006_204_19_41_44
Observation Duration:
360 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts


Observation Name:
UVIS_026RI_ZEROPHASE001_CIRS
Observation Date:
2006_204_19_50_44
Observation Duration:
540 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts


Observation Name:
UVIS_026RI_ZEROPHASE001_CIRS
Observation Date:
2006_204_20_02_44
Observation Duration:
960 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts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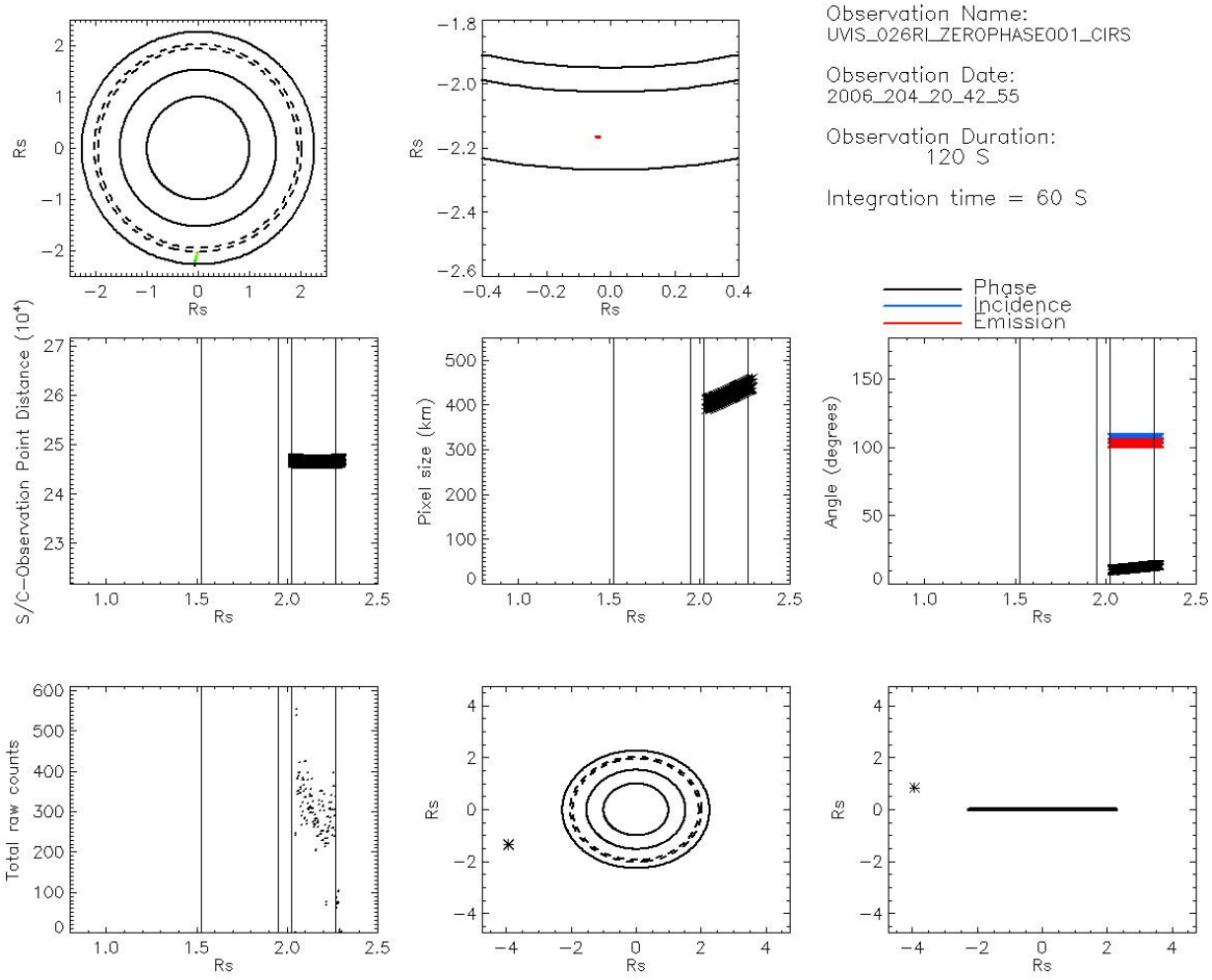
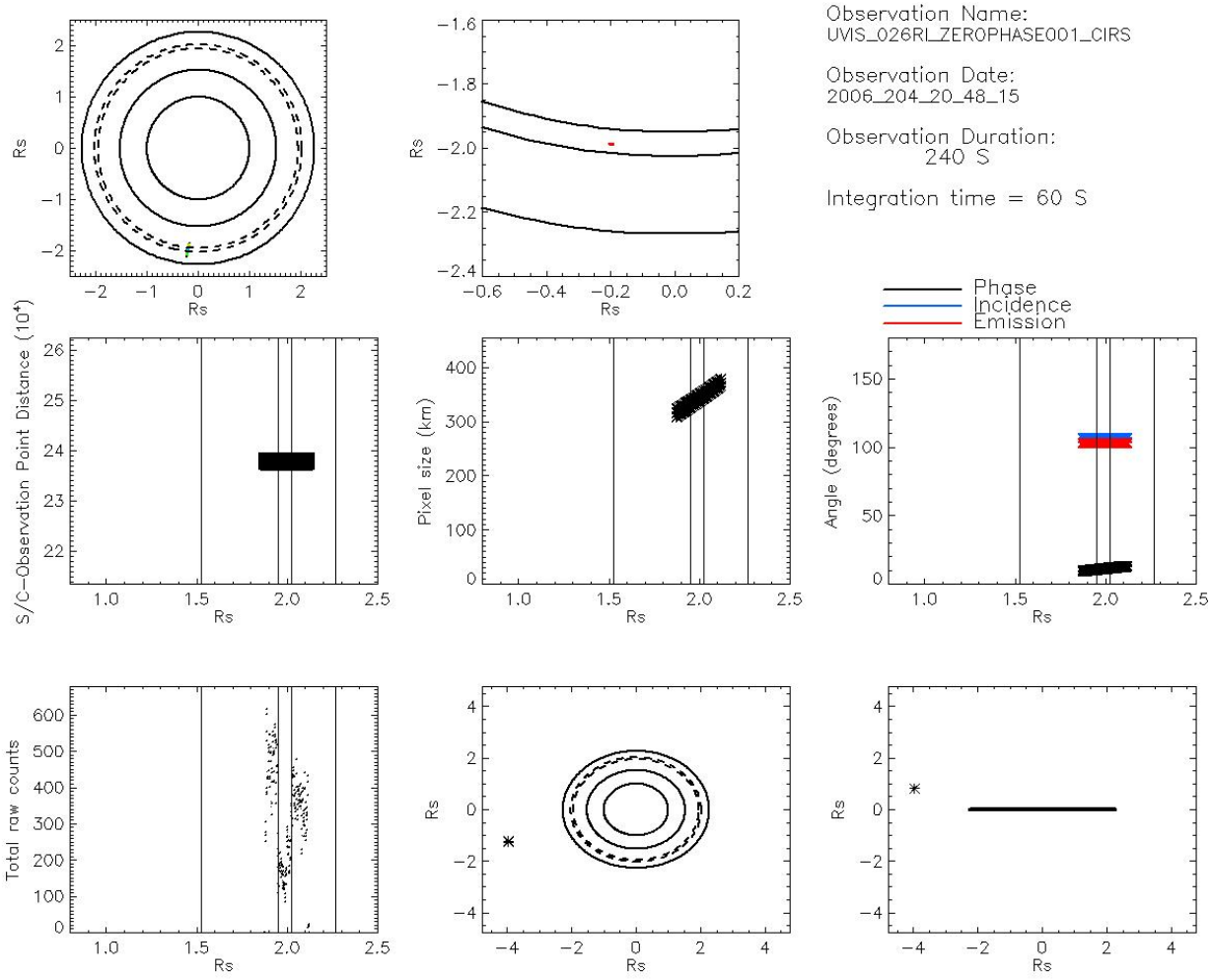
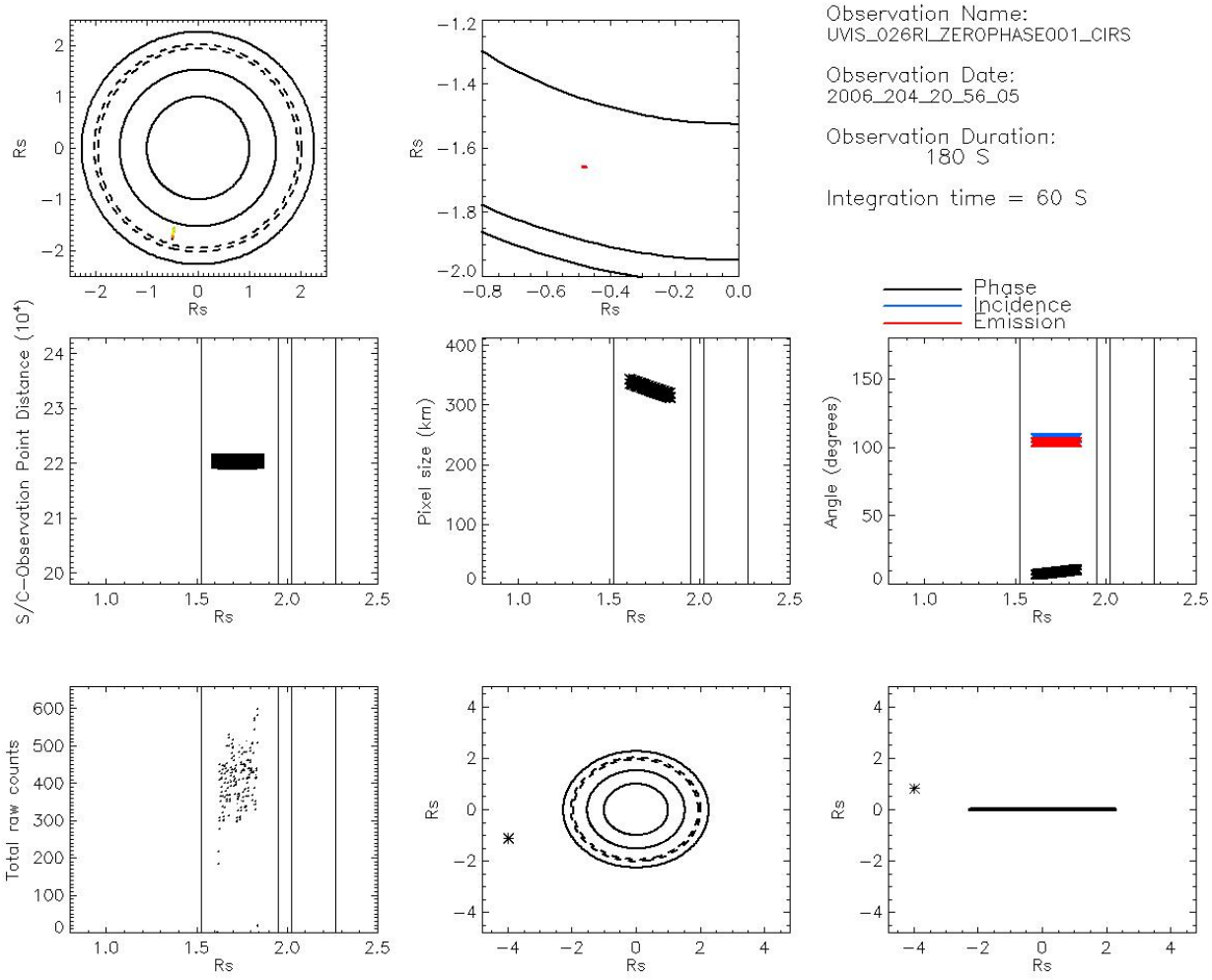
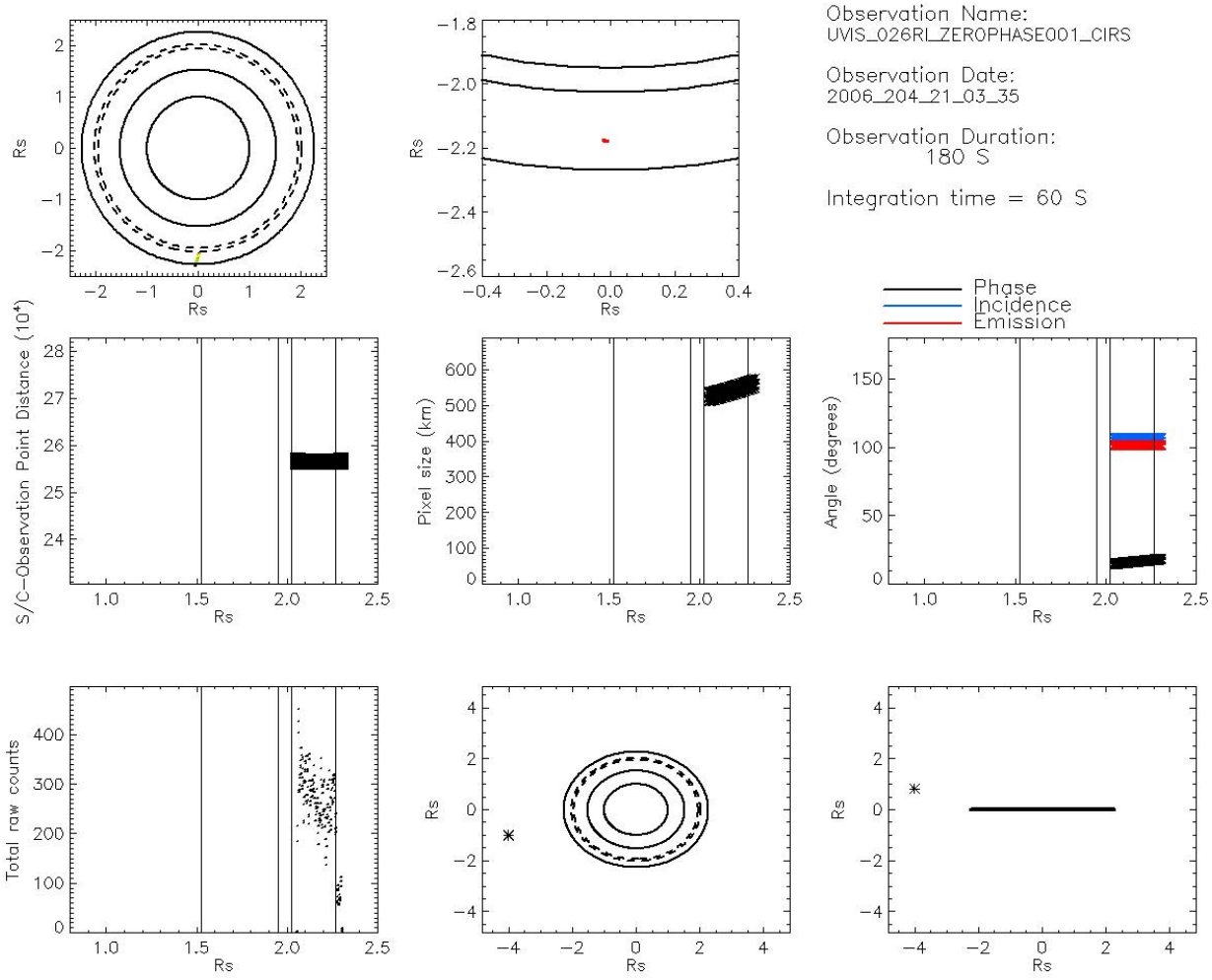
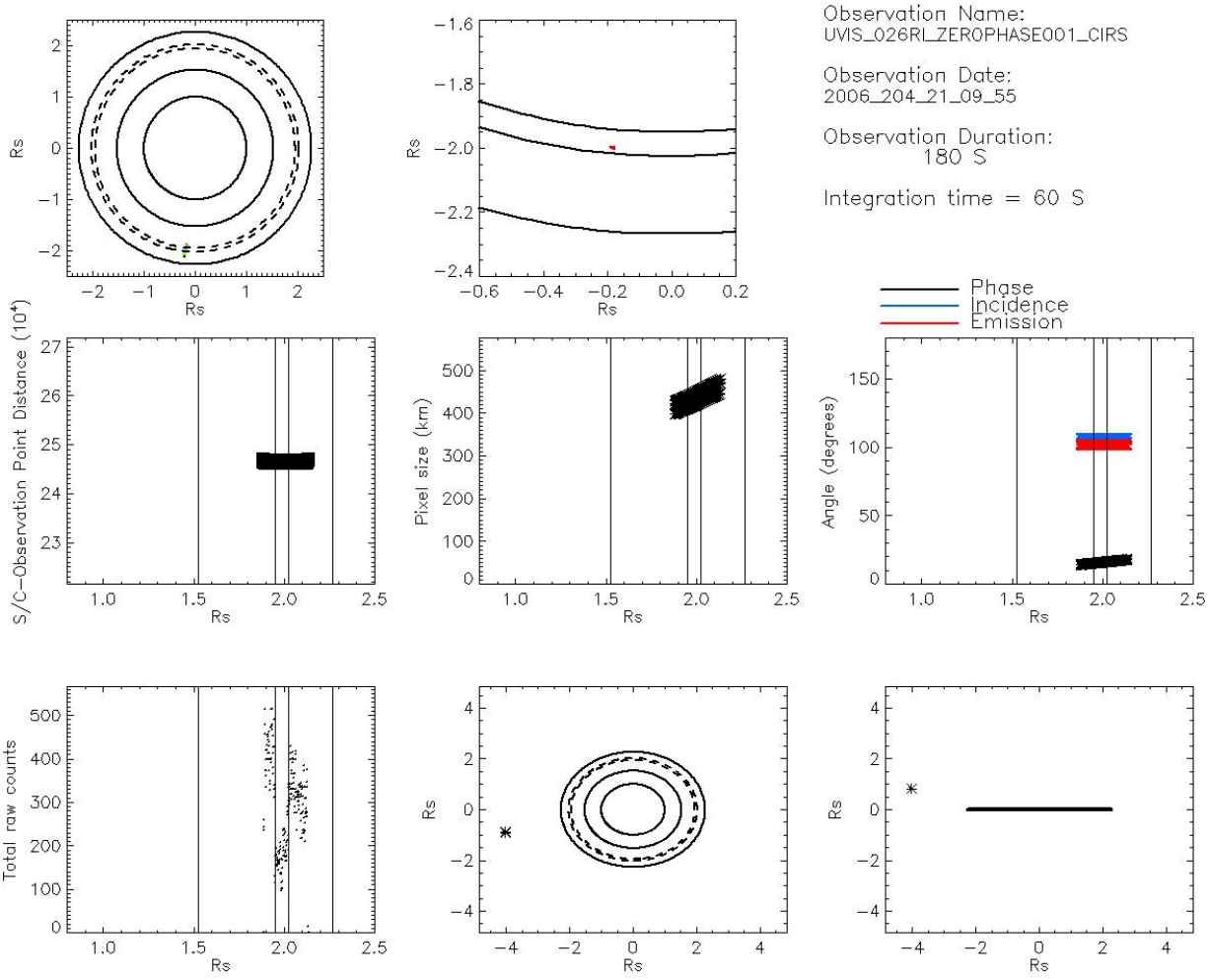
UVIS_026RI_ZEROPHASE001_CIRS
Observation Date:
2006_204_20_22_45
Observation Duration:
960 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts

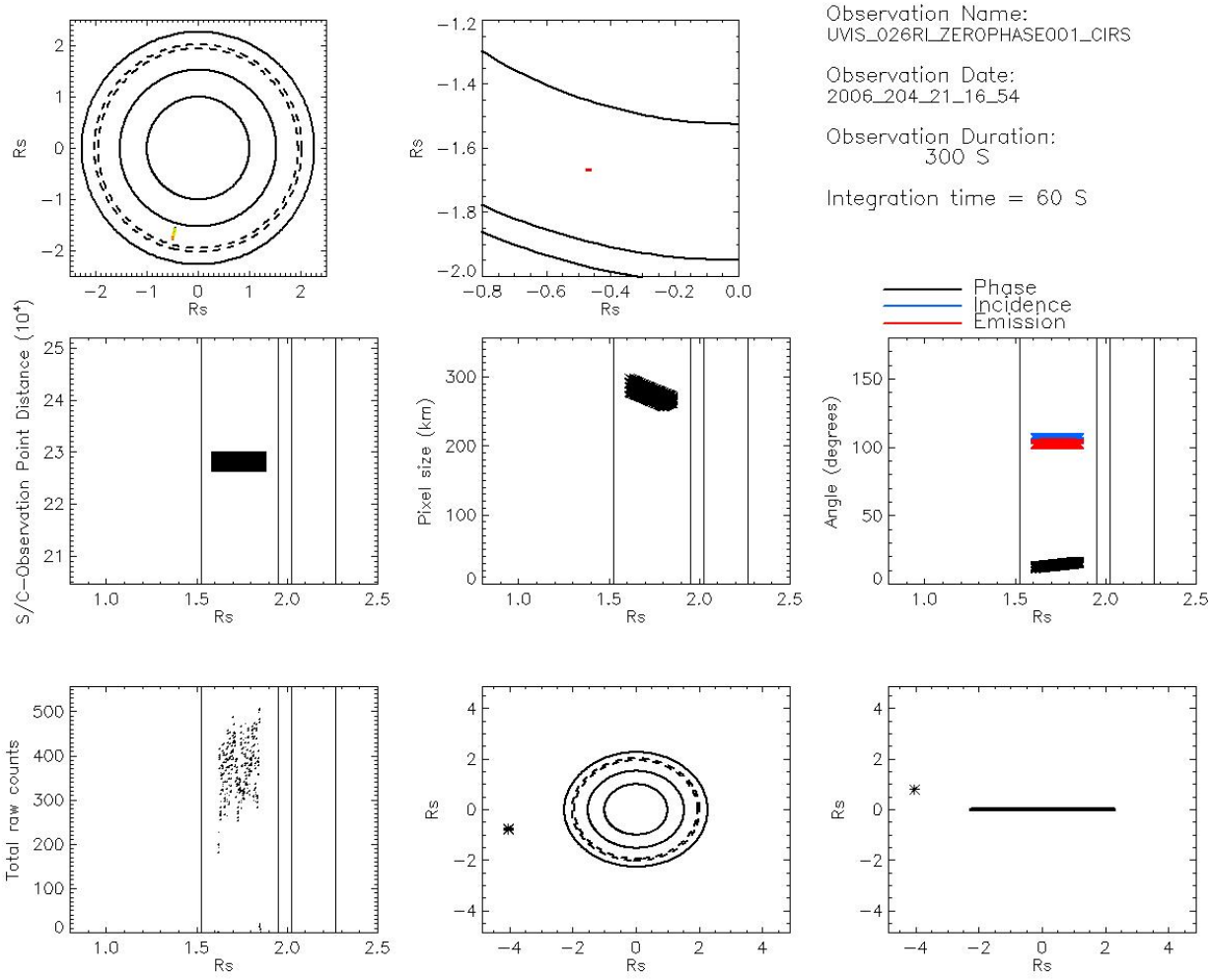

Observation Name:
UVIS_026RI_ZEROPHASE001_CIRS
Observation Date:
2006_204_20_42_55
Observation Duration:
120 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts

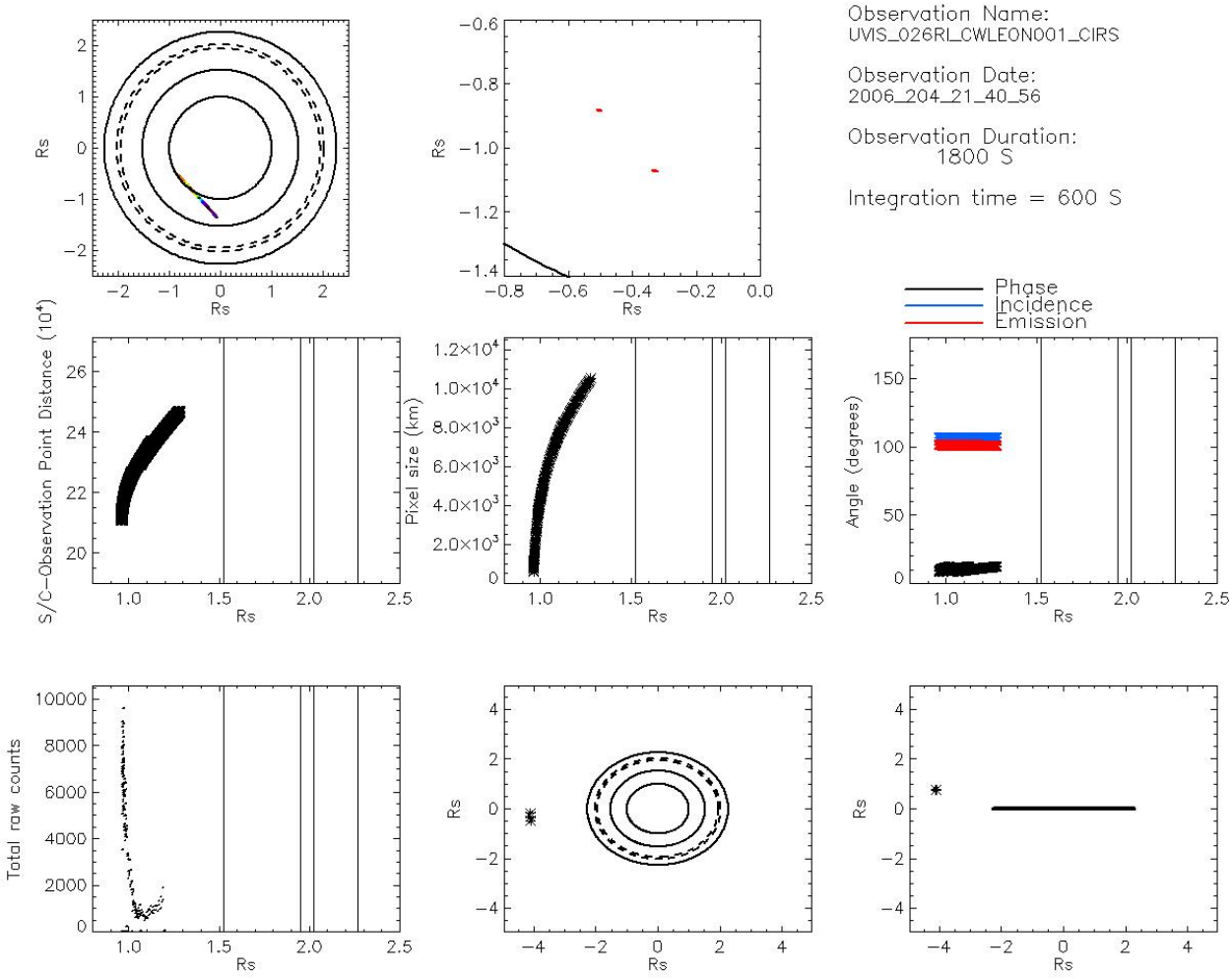

Observation Name:
UVIS_026RI_ZEROPHASE001_CIRS
Observation Date:
2006_204_20_48_15
Observation Duration:
240 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts

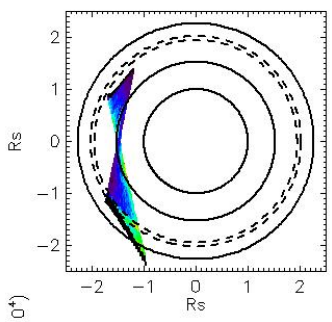

Observation Name:
UVIS_026RI_ZEROPHASE001_CIRS
Observation Date:
2006_204_20_56_05
Observation Duration:
180 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts

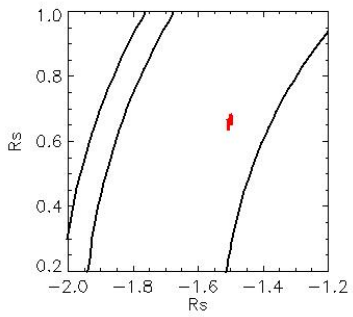

Observation Name:
UVIS_026RI_ZEROPHASE001_CIRS
Observation Date:
2006_204_21_03_35
Observation Duration:
180 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs


Observation Name:
UVIS_026RI_ZEROPHASE001_CIRS
Observation Date:
2006_204_21_09_55
Observation Duration:
180 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs


Observation Name:
UVIS_026RI_ZEROPHASE001_CIRS
Observation Date:
2006_204_21_16_54
Observation Duration:
300 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts


Observation Name:
UVIS_026RI_CWLEON001_CIRS
Observation Date:
2006_204_21_40_56
Observation Duration:
1800 S
Integration time = 600 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10⁴)
Pixel size (km)
Angle (degrees)
Total raw counts



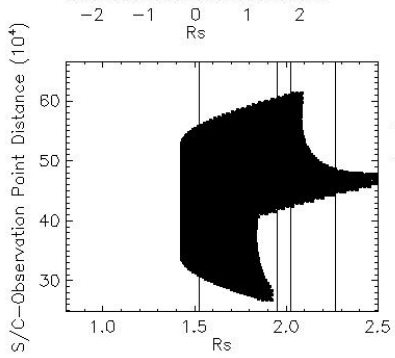


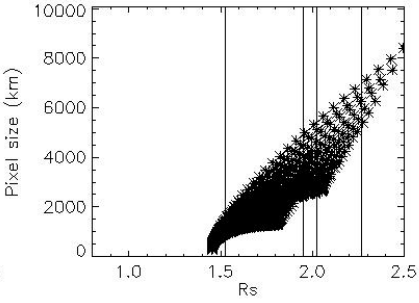
Observation Name:
UVIS_026RI_LPHRDFMOV001_JSS

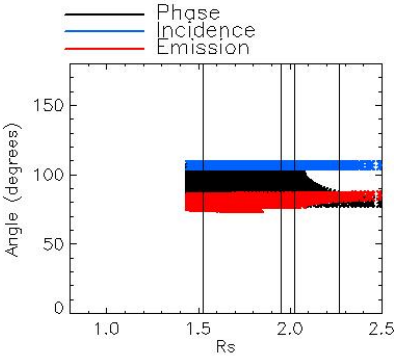
Observation Date:
2006_205_04_28_57

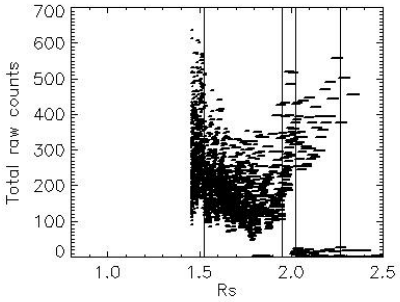
Observation Duration:
22800 S

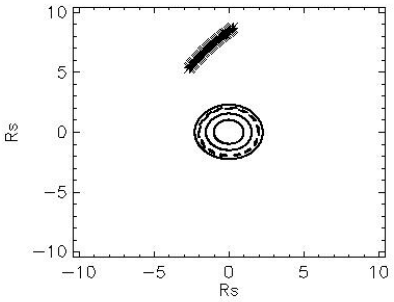
Integration time = 600 S

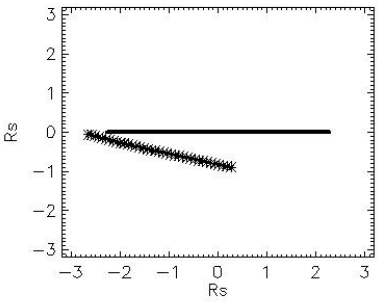


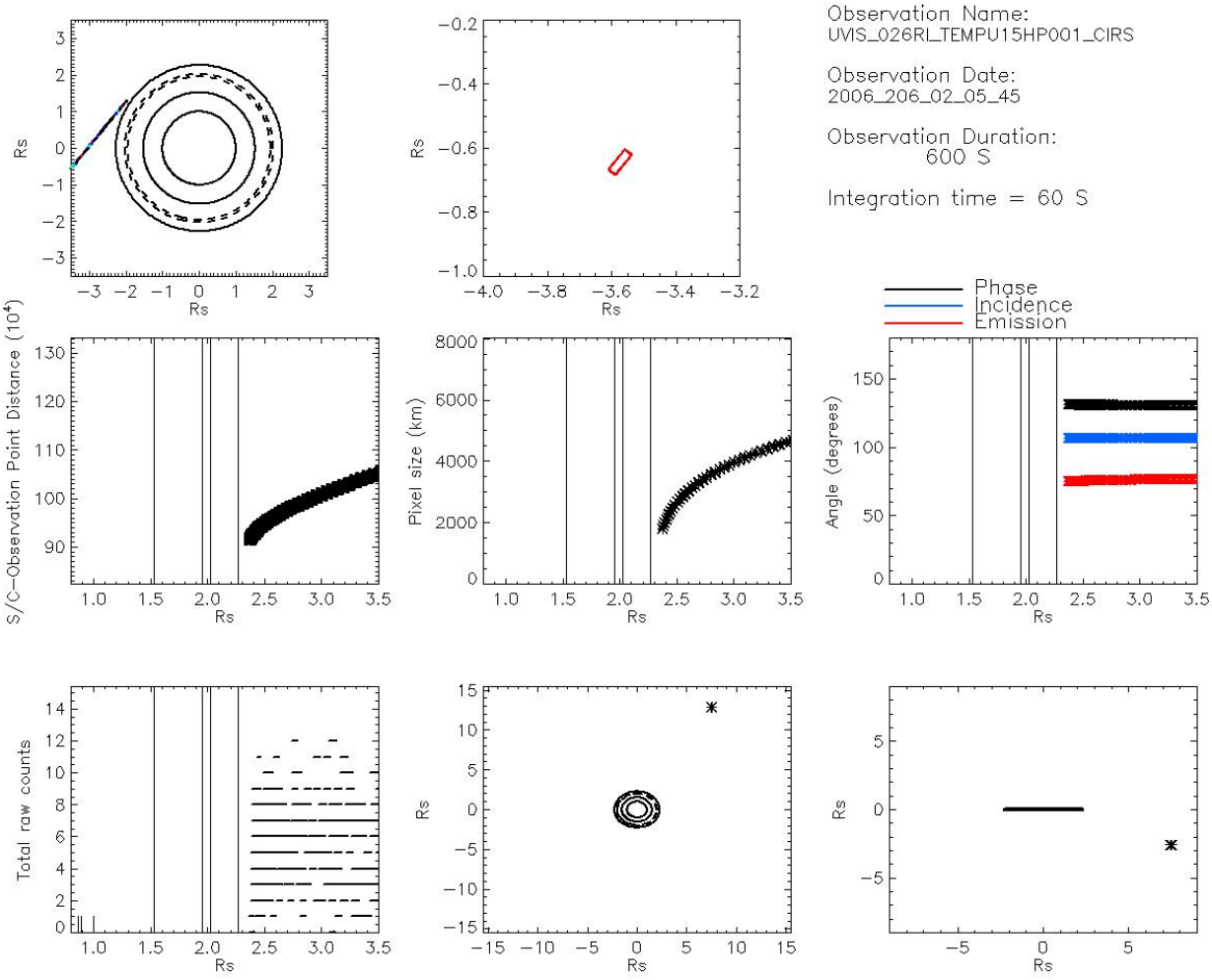


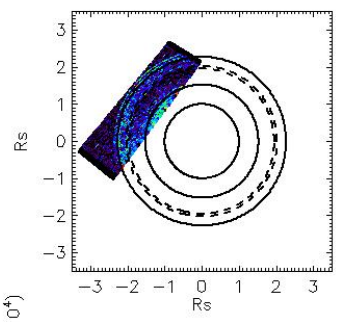


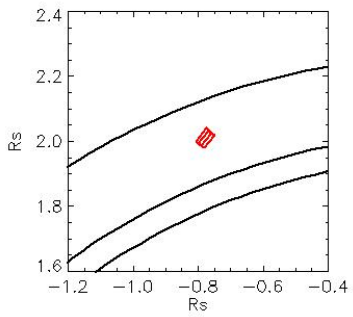







Observation Name:
UVIS_026RI_TEMPU15HP001_CIRS
Observation Date:
2006_206_02_05_45
Observation Duration:
600 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs



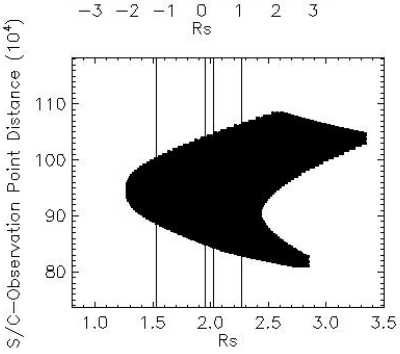


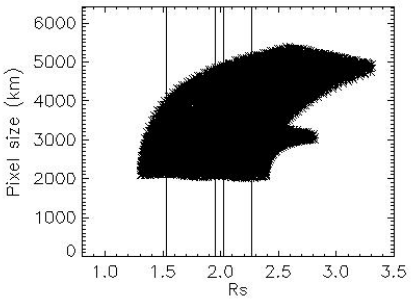
Observation Name:
UVIS_026RI_TEMPU15HP001_CIRS

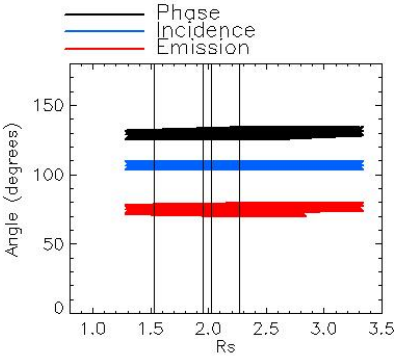
Observation Date:
2006_206_02_20_45

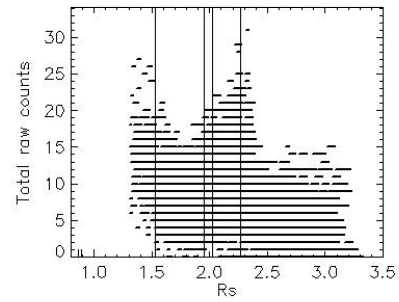
Observation Duration:
5520 S

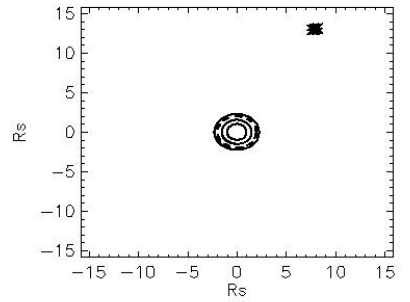
Integration time = 60 S

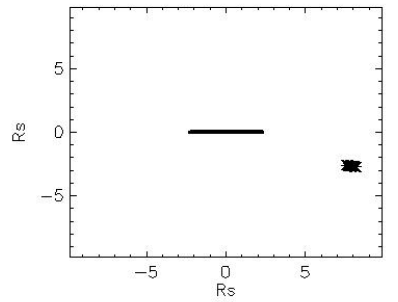


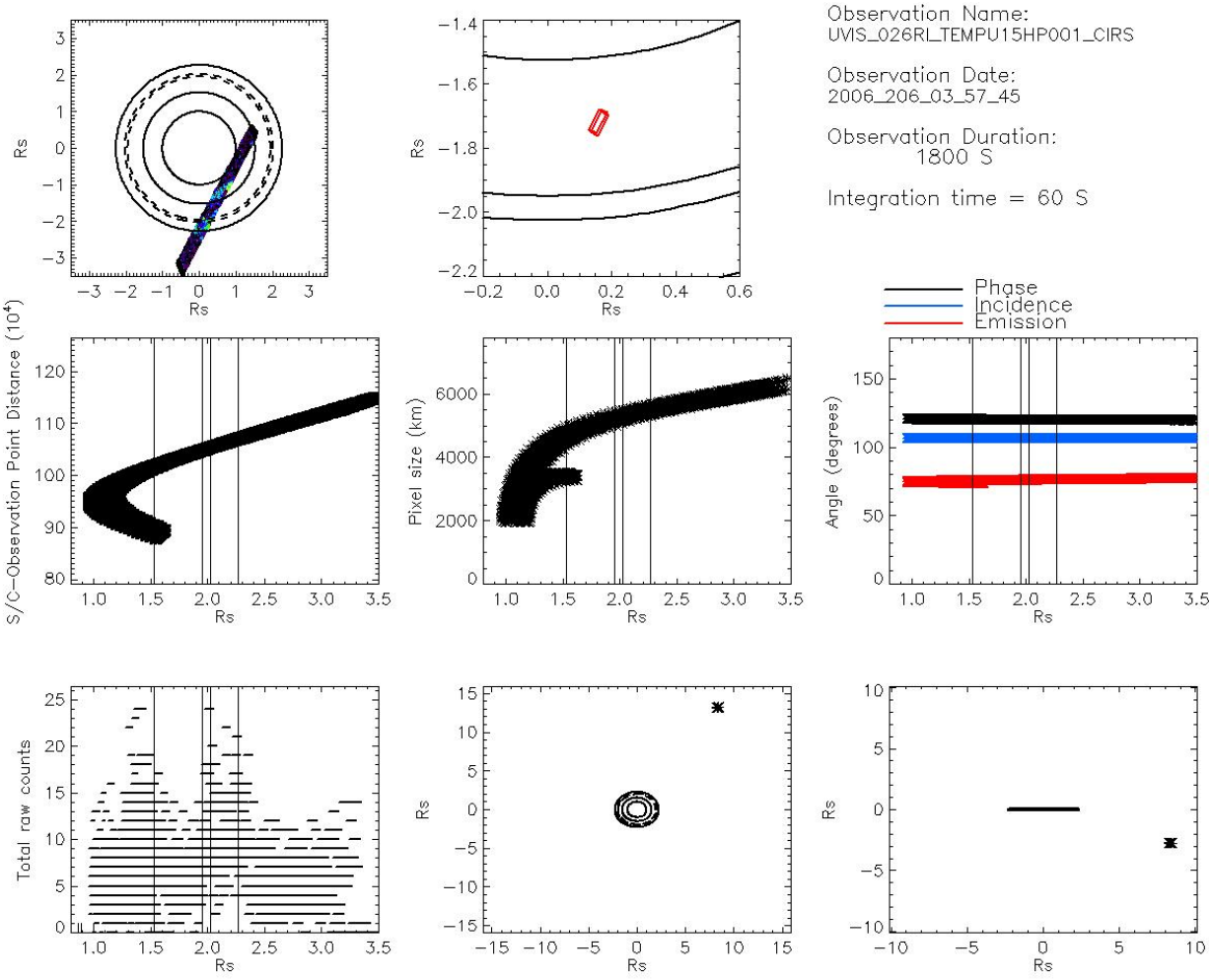


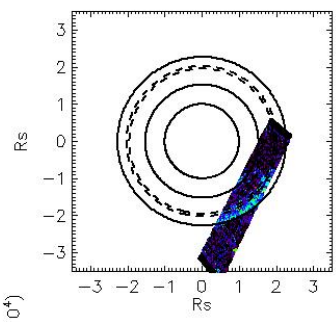


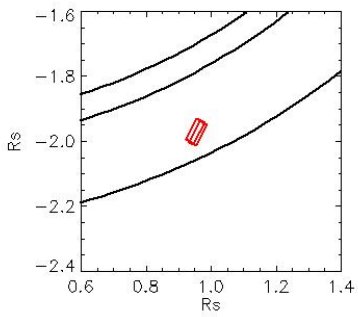







Observation Name:
UVIS_026RI_TEMPU15HP001_CIRS
Observation Date:
2006_206_03_57_45
Observation Duration:
1800 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs



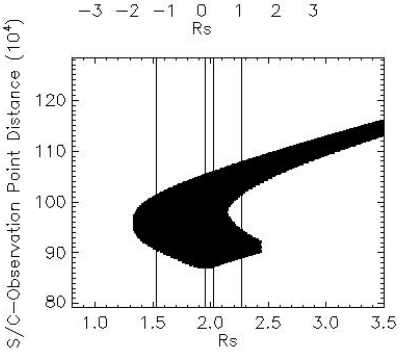


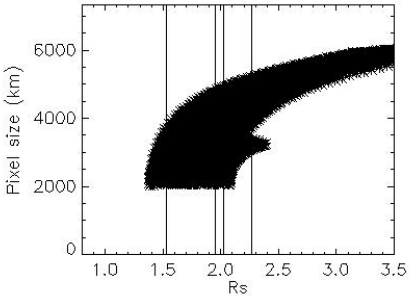
Observation Name:
UVIS_026RI_TEMPU15HP001_CIRS

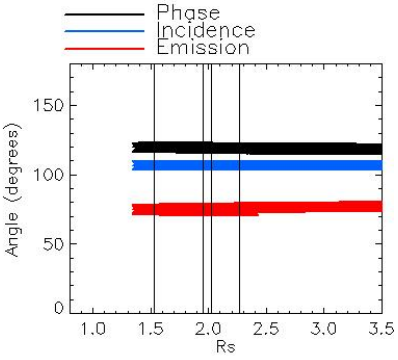
Observation Date:
2006_206_04_30_45

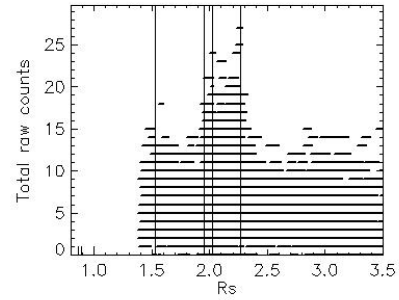
Observation Duration:
4200 S

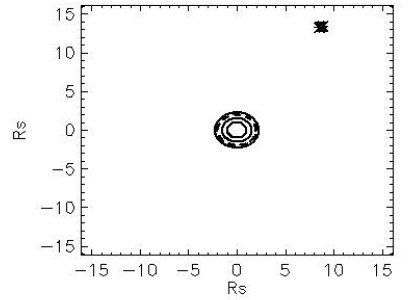
Integration time = 60 S

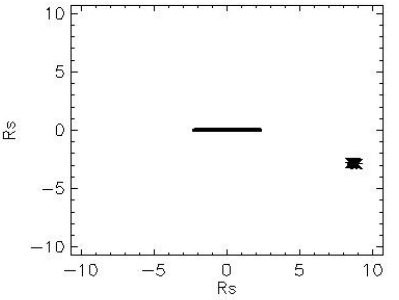


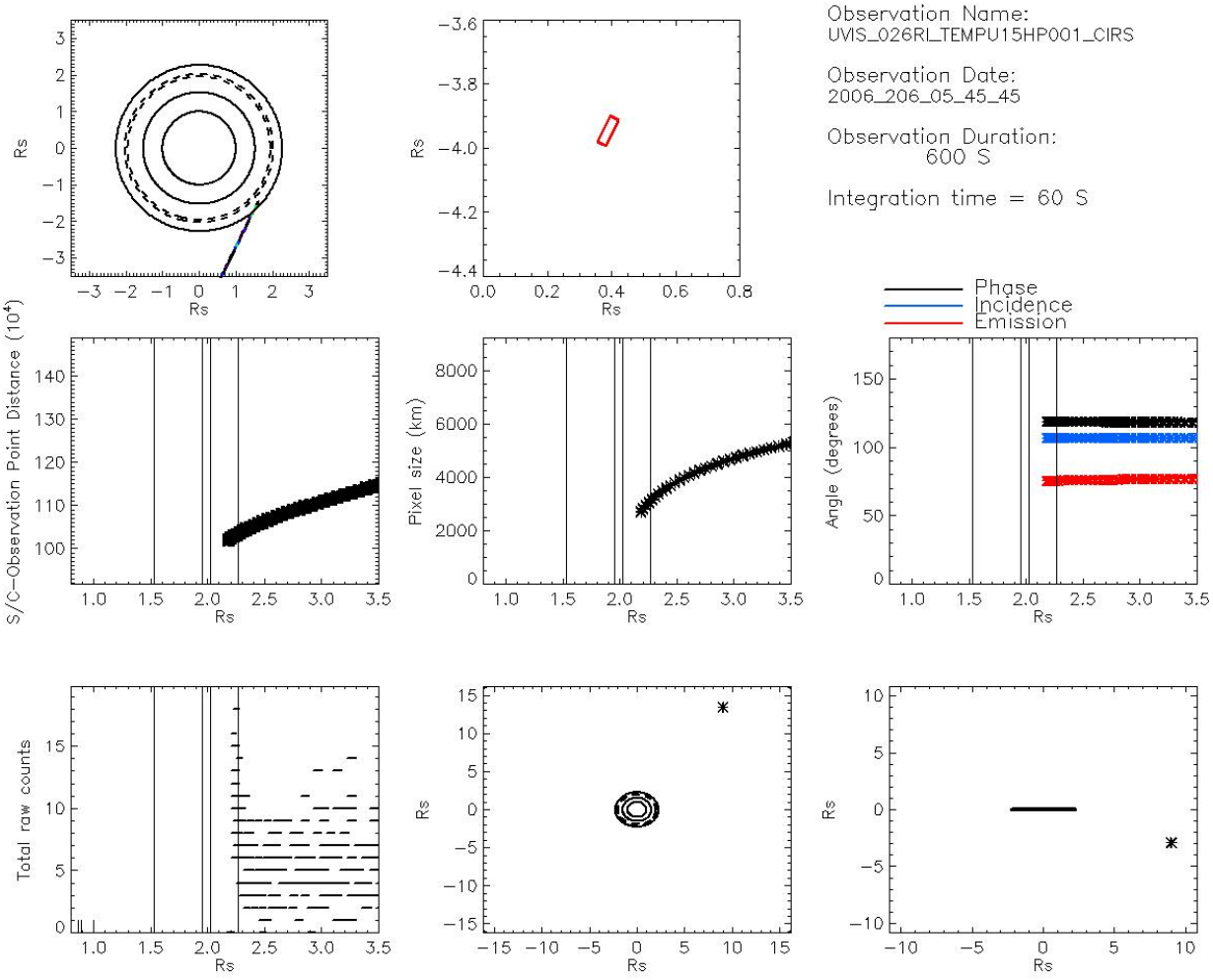


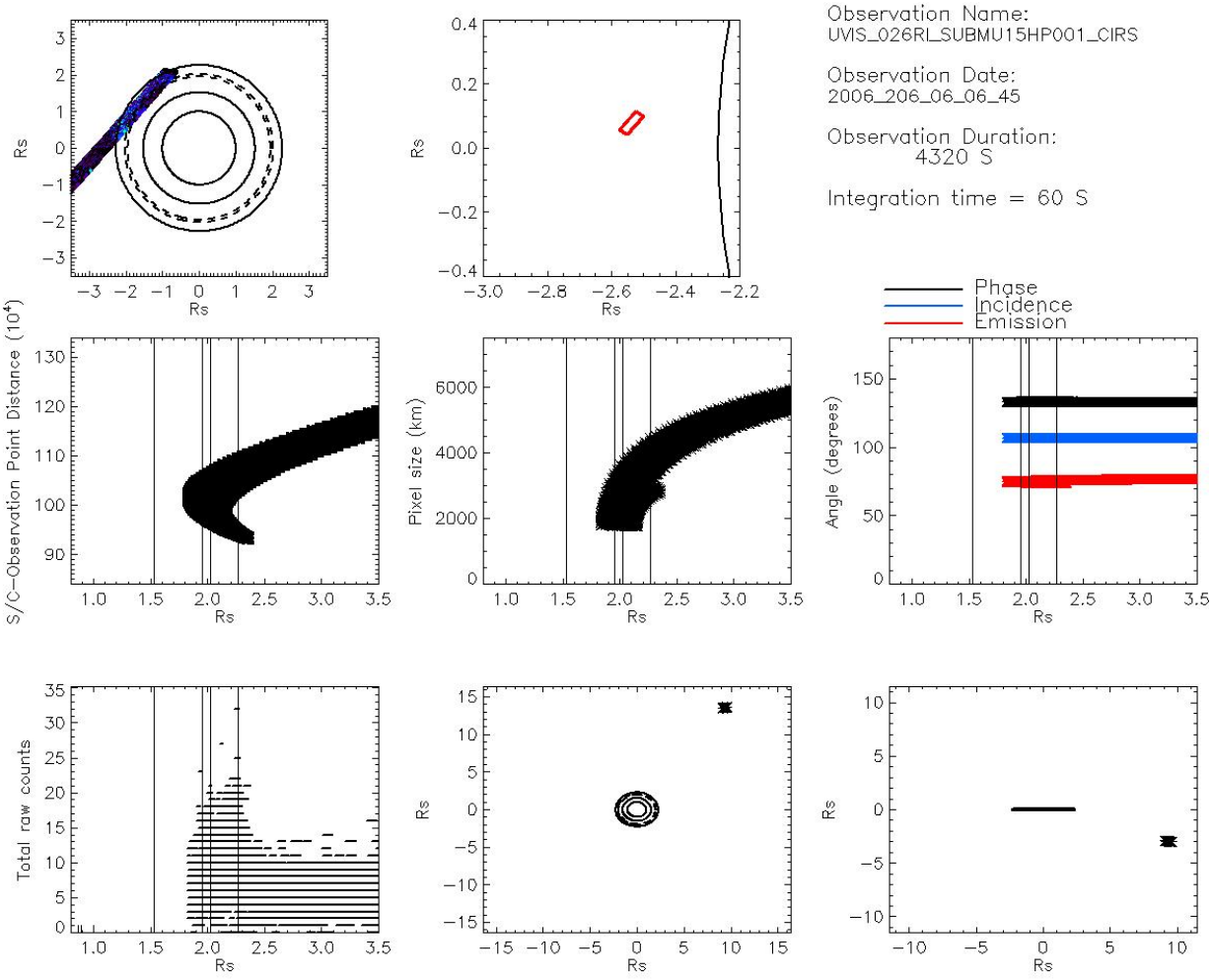


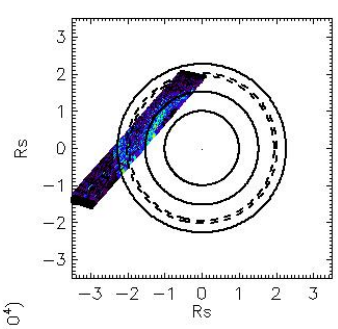


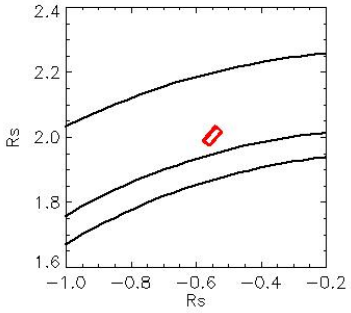





Observation Name:
UVIS_026RI_TEMPU15HP001_CIRS
Observation Date:
2006_206_05_45_45
Observation Duration:
600 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs


Observation Name:
UVIS_026RI_SUBMU15HP001_CIRS
Observation Date:
2006_206_06_06_45
Observation Duration:
4320 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs



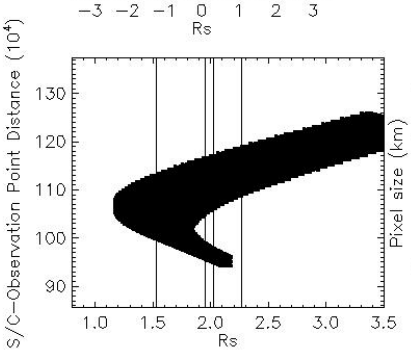


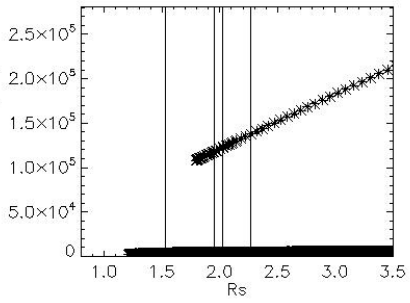
Observation Name:
UVIS_026RI_SUBMU15HP001_CIRS

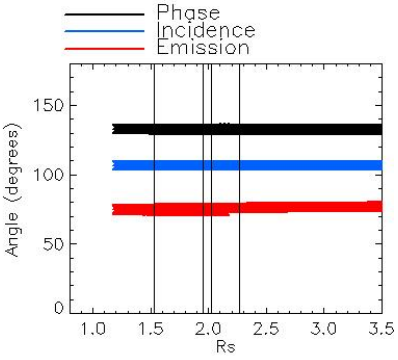
Observation Date:
2006_206_07_23_45

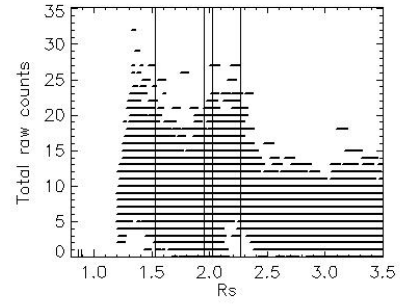
Observation Duration:
7800 S

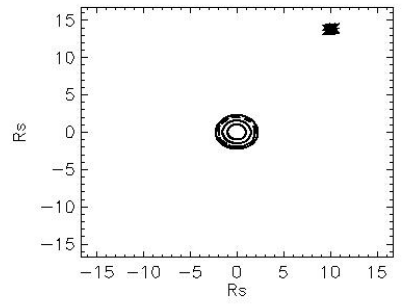
Integration time = 60 S

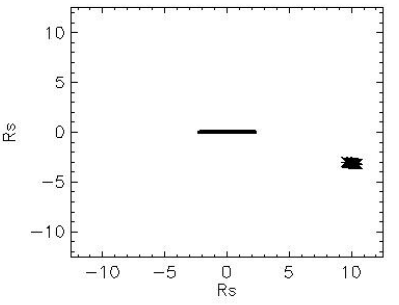


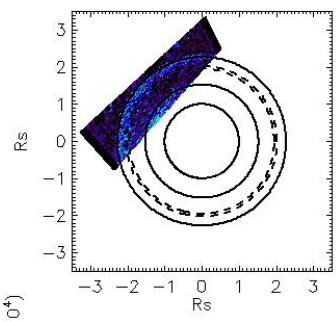


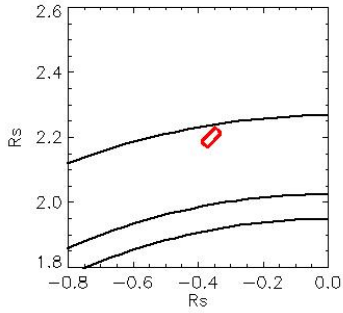










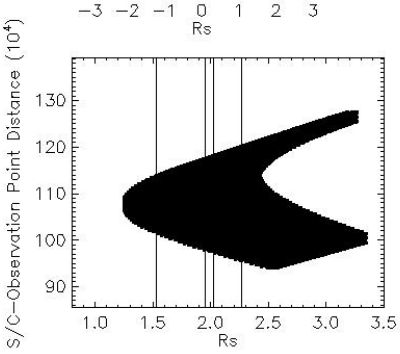


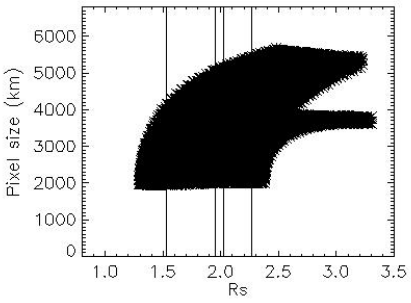
Observation Name:
UVIS_026RI_SUBMU15HP001_CIRS

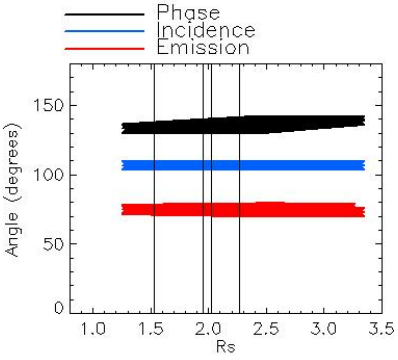
Observation Date:
2006_206_10_03_45

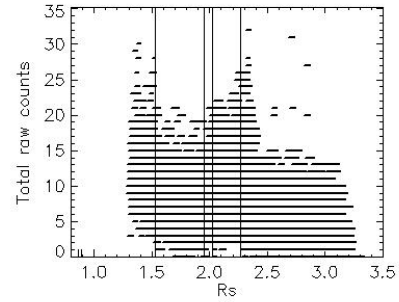
Observation Duration:
12420 S

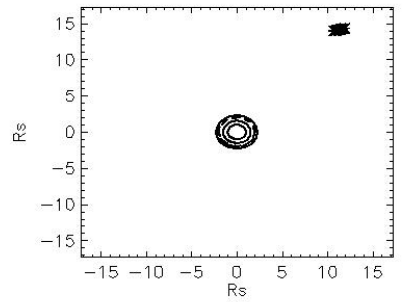
Integration time = 60 S

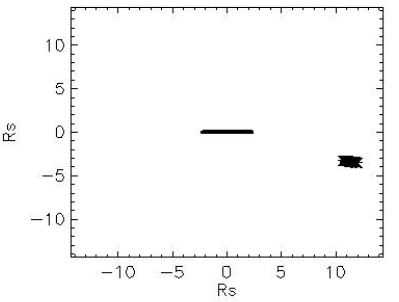


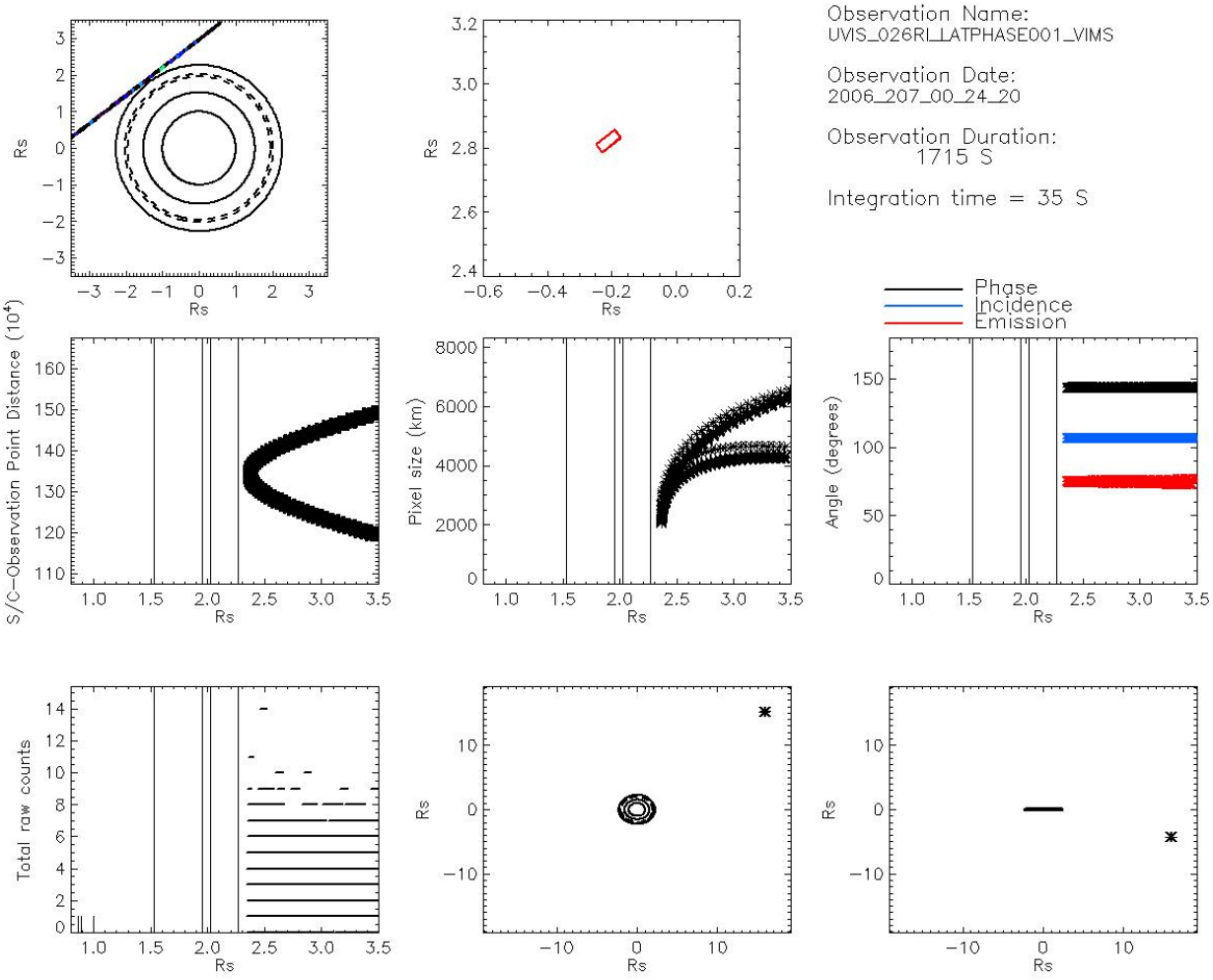


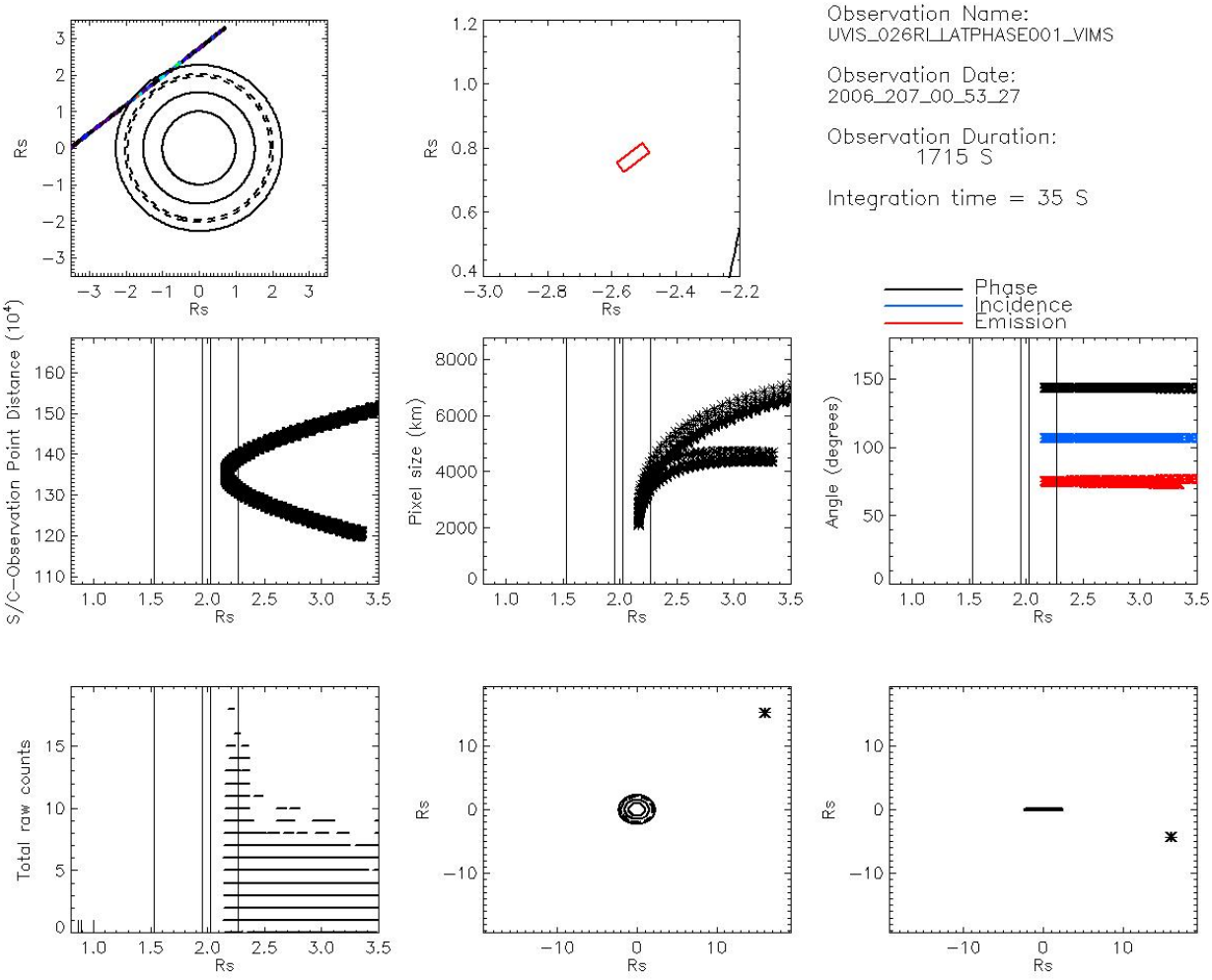


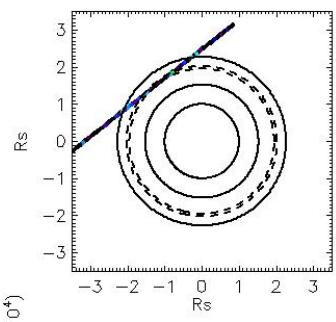


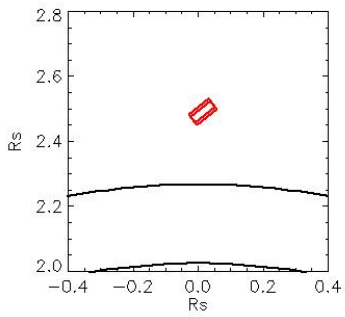





Observation Name:
UVIS_026RI_LATPHASE001_VIMS
Observation Date:
2006_207_00_24_20
Observation Duration:
1715 S
Integration time = 35 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts


Observation Name:
UVIS_026RI_LATPHASE001_VIMS
Observation Date:
2006_207_00_53_27
Observation Duration:
1715 S
Integration time = 35 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts



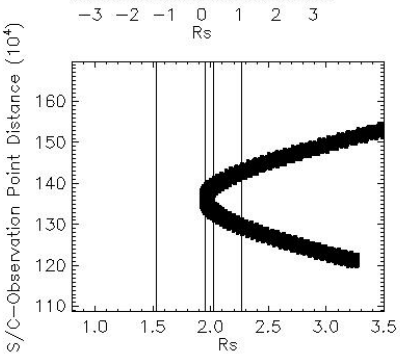


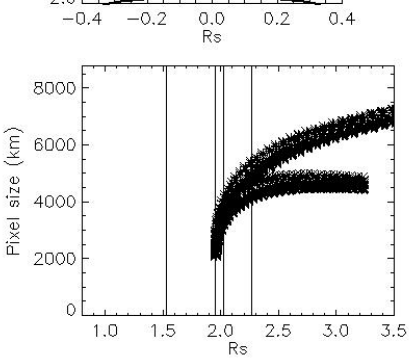
Observation Name:
UVIS_026RI_LATPHASE001_VIMS

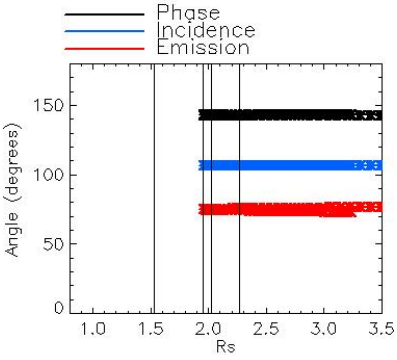
Observation Date:
2006_207_01_22_34

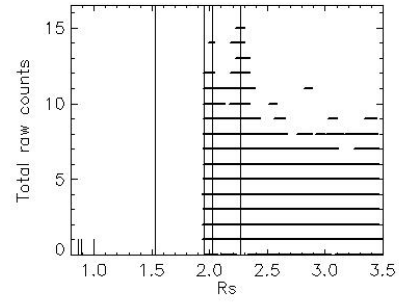
Observation Duration:
1715 S

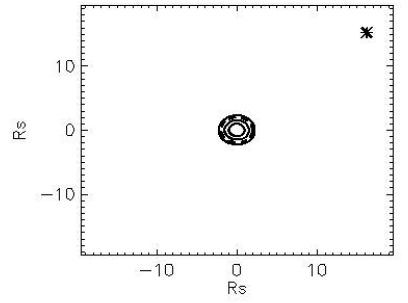
Integration time = 35 S

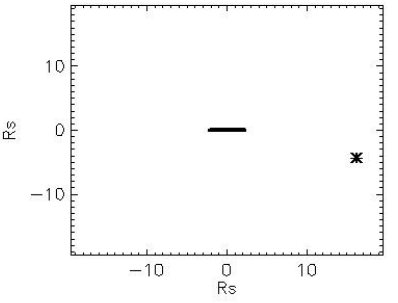


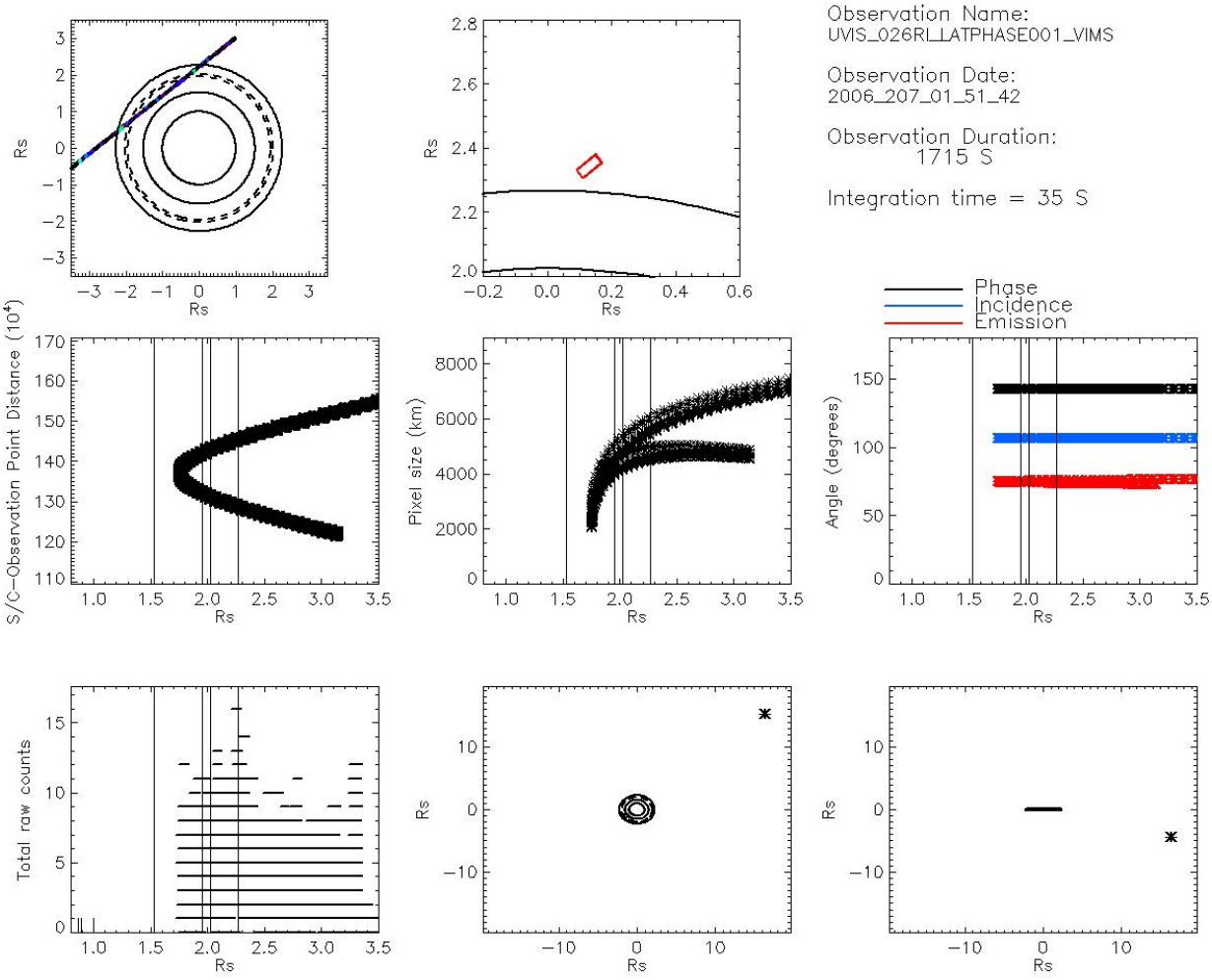


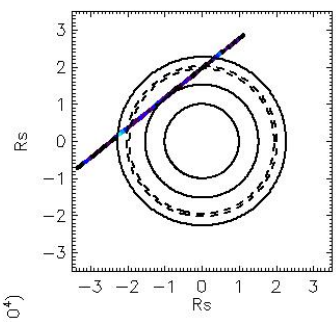


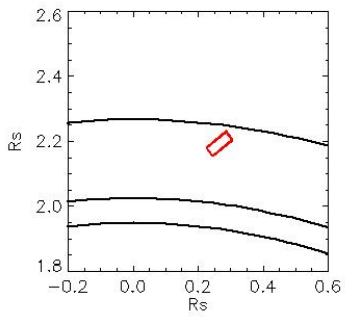







Observation Name:
UVIS_026RI_LATPHASE001_VIMS
Observation Date:
2006_207_01_51_42
Observation Duration:
1715 S
Integration time = 35 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts



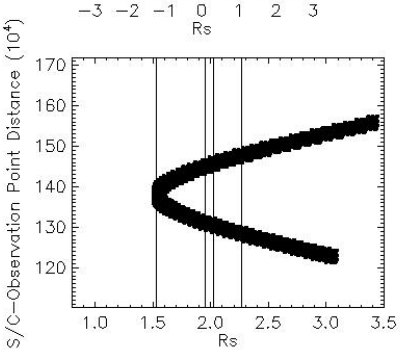


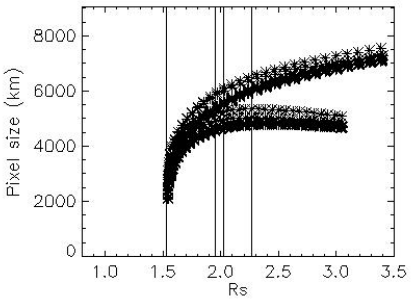
Observation Name:
UVIS_026RI_LATPHASE001_VIMS

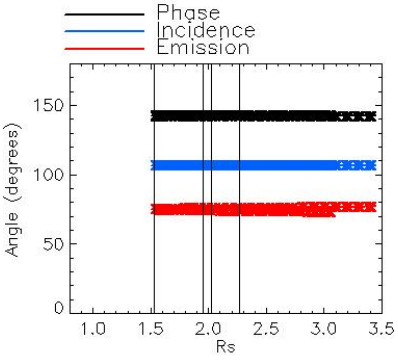
Observation Date:
2006_207_02_20_49

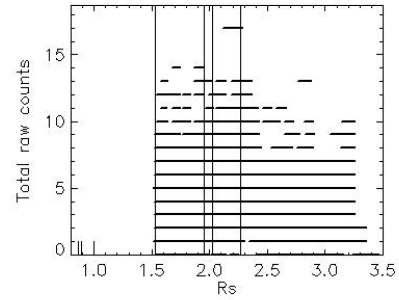
Observation Duration:
1715 S

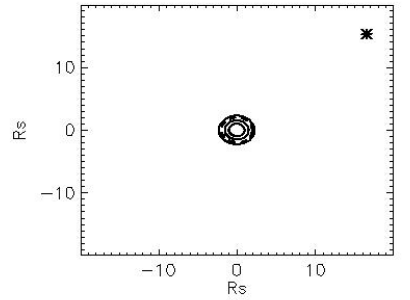
Integration time = 35 S

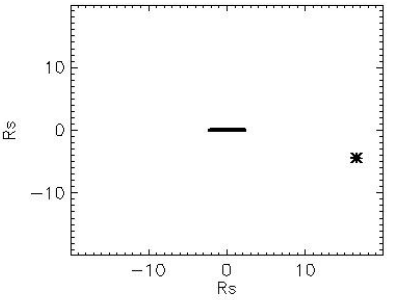


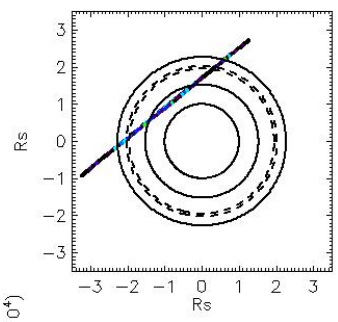


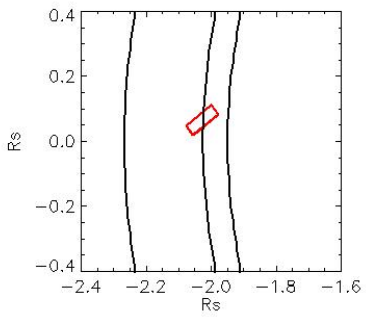










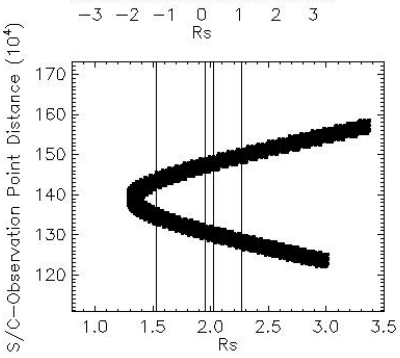


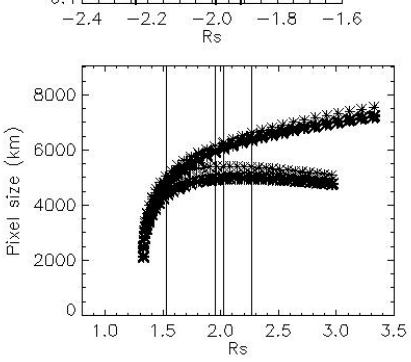
Observation Name:
UVIS_026RI_LATPHASE001_VIMS

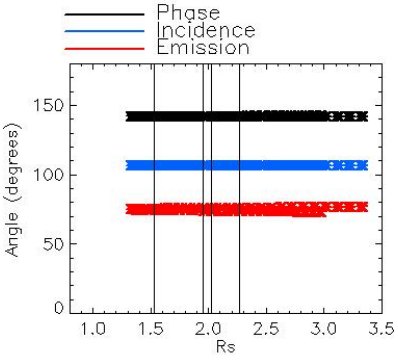
Observation Date:
2006_207_02_49_56

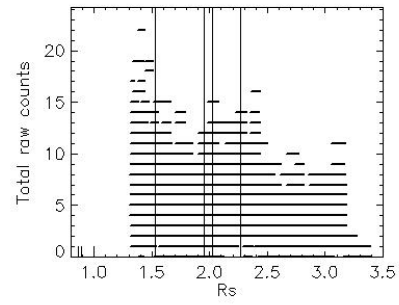
Observation Duration:
2065 S

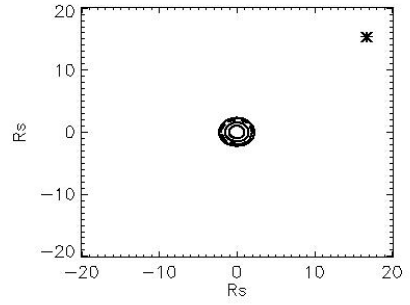
Integration time = 35 S

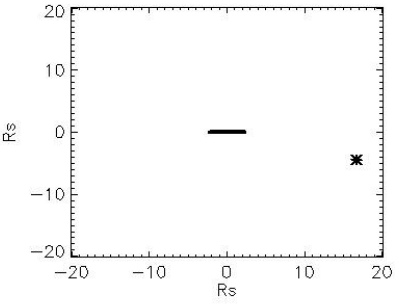


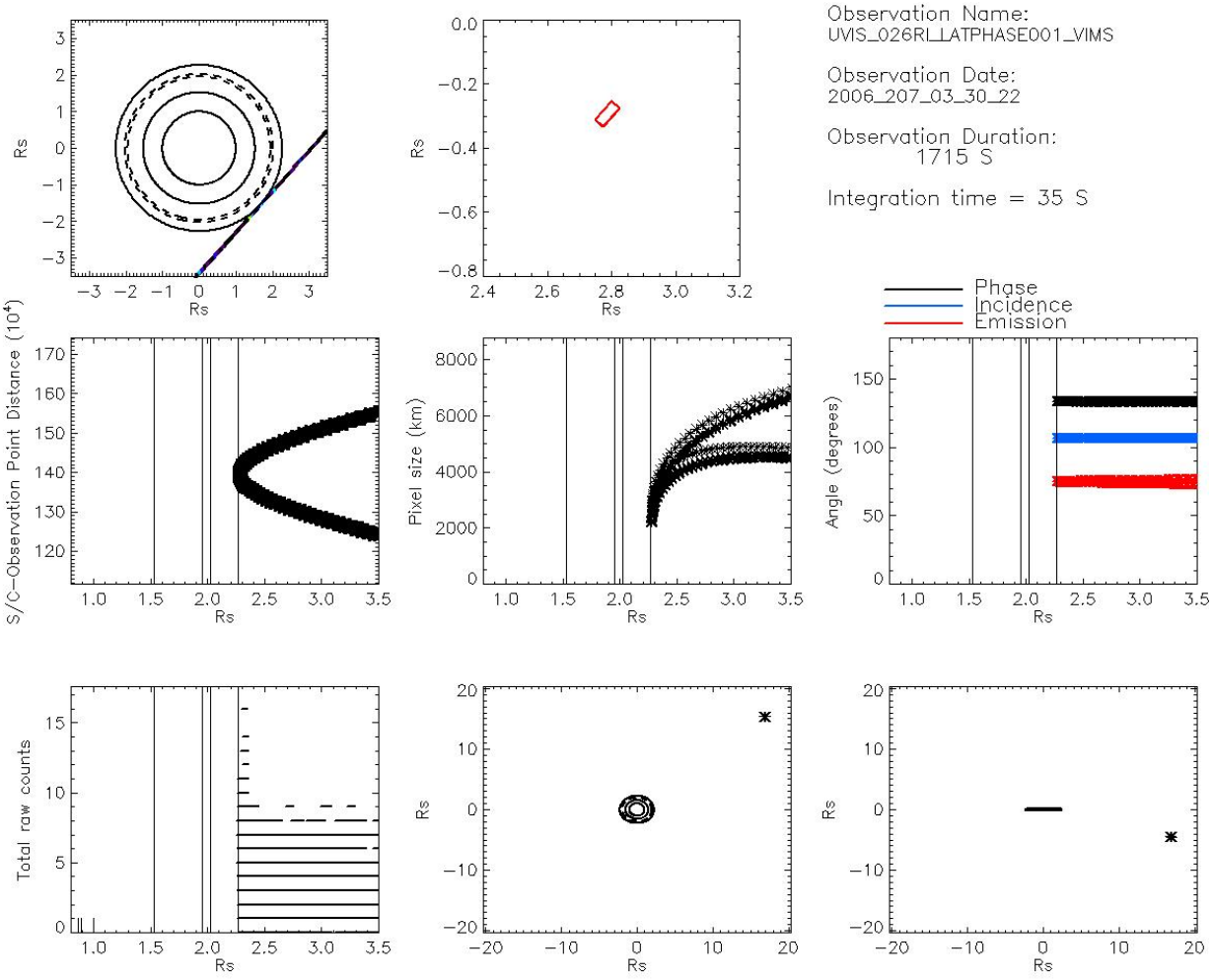


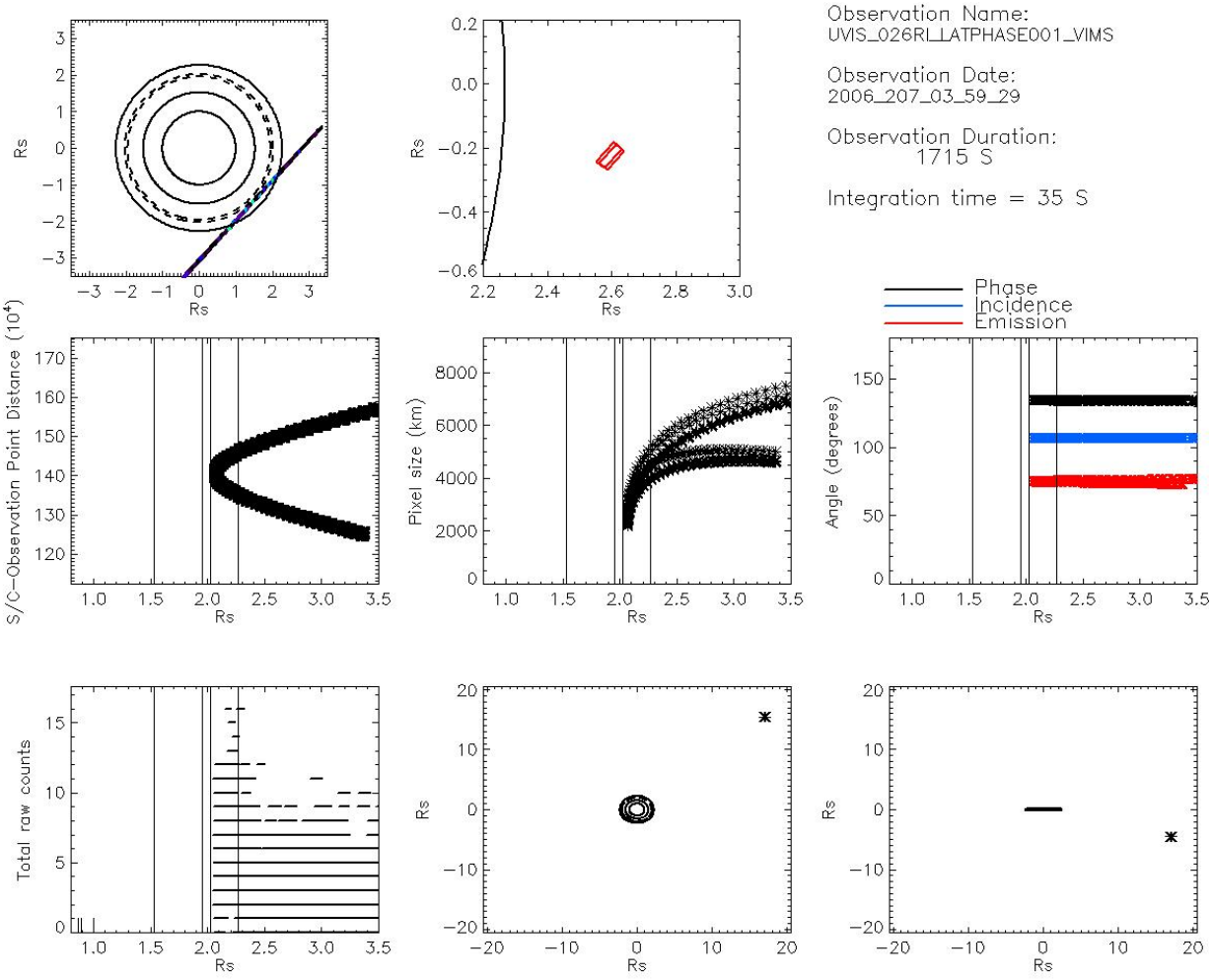


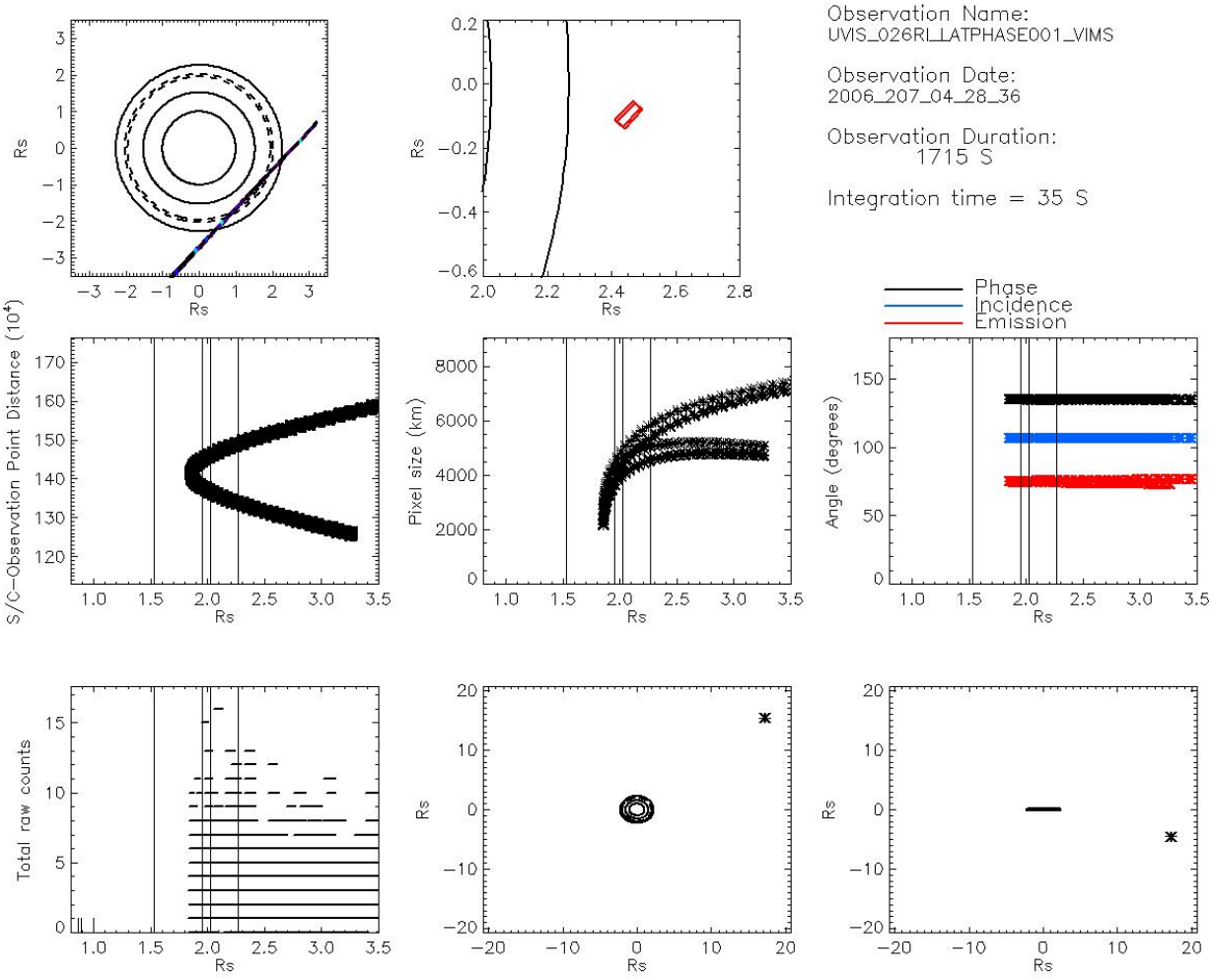


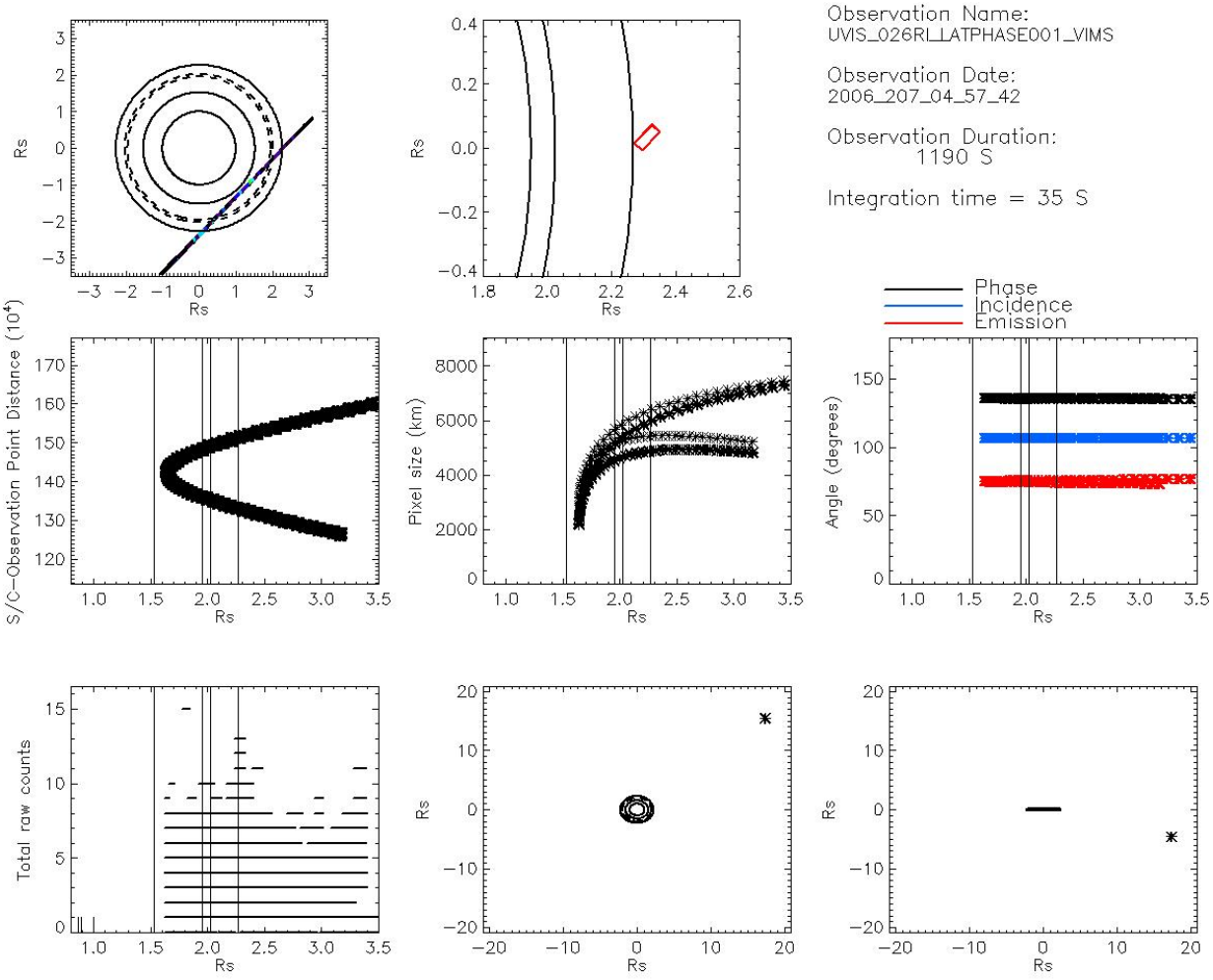


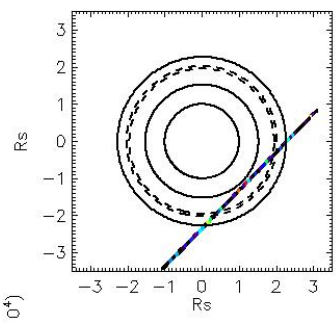


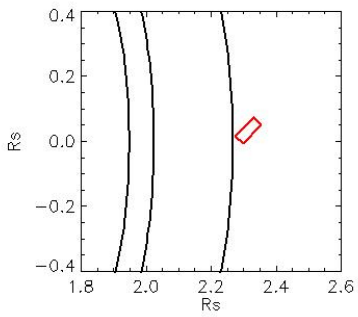

Observation Name:
UVIS_026RI_LATPHASE001_VIMS
Observation Date:
2006_207_03_30_22
Observation Duration:
1715 S
Integration time = 35 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts


Observation Name:
UVIS_026RI_LATPHASE001_VIMS
Observation Date:
2006_207_03_59_29
Observation Duration:
1715 S
Integration time = 35 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts


Observation Name:
UVIS_026RI_LATPHASE001_VIMS
Observation Date:
2006_207_04_28_36
Observation Duration:
1715 S
Integration time = 35 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts


Observation Name:
UVIS_026RI_LATPHASE001_VIMS
Observation Date:
2006_207_04_57_42
Observation Duration:
1190 S
Integration time = 35 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts



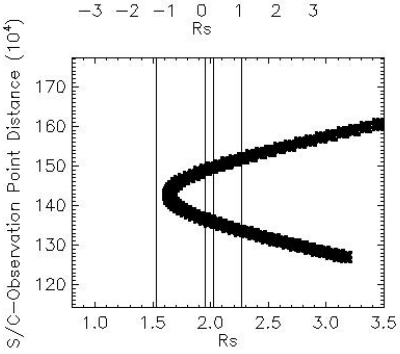


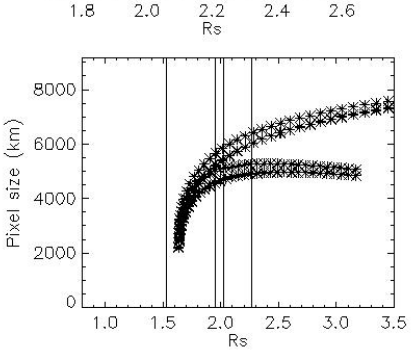
Observation Name:
UVIS_026RI_LATPHASE001_VIMS

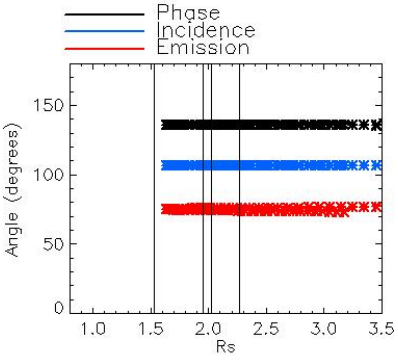
Observation Date:
2006_207_05_23_22

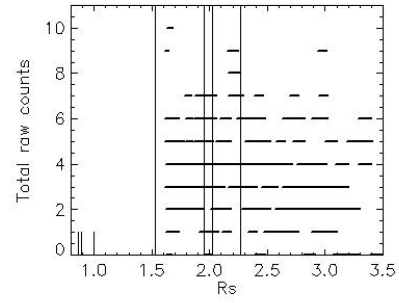
Observation Duration:
175 S

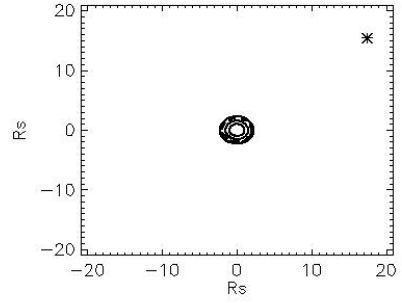
Integration time = 35 S

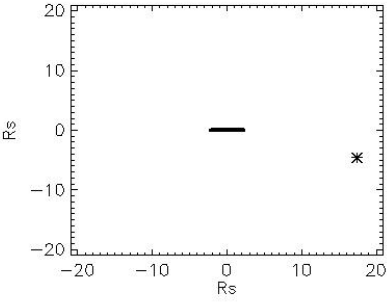


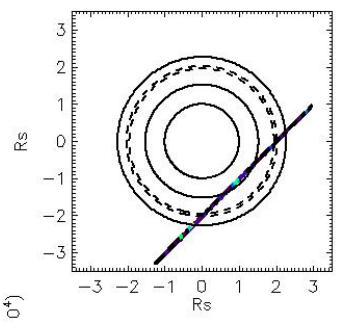


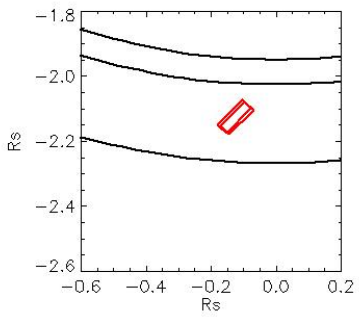










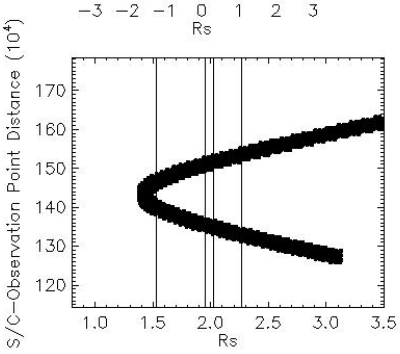


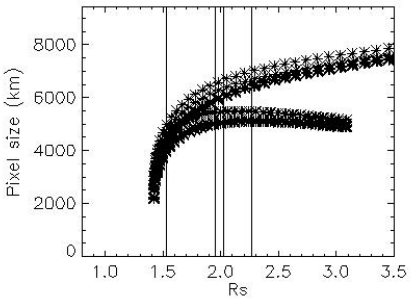
Observation Name:
UVIS_026RI_LATPHASE001_VIMS

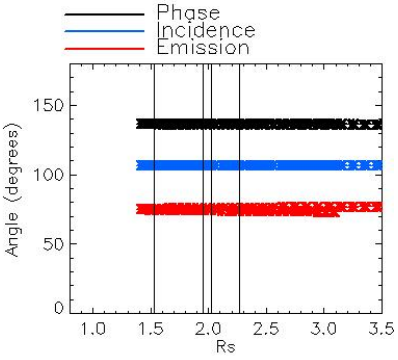
Observation Date:
2006_207_05_26_49

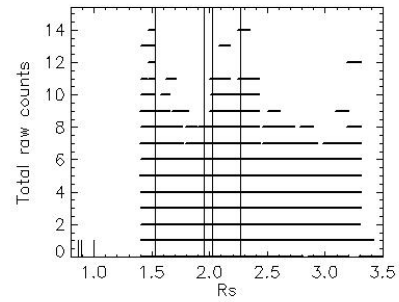
Observation Duration:
1715 S

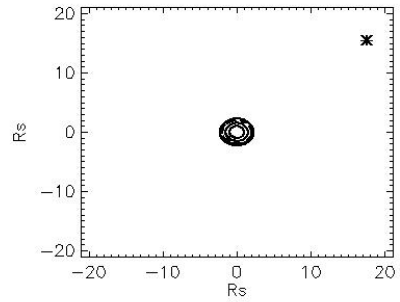
Integration time = 35 S

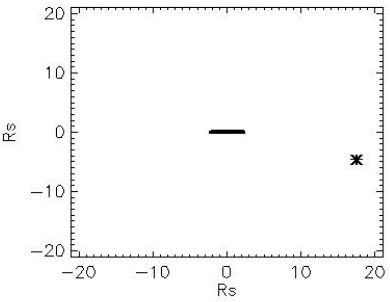


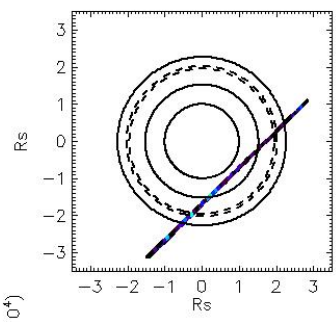


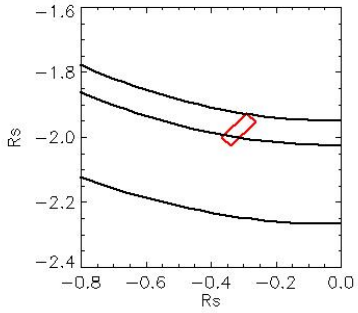










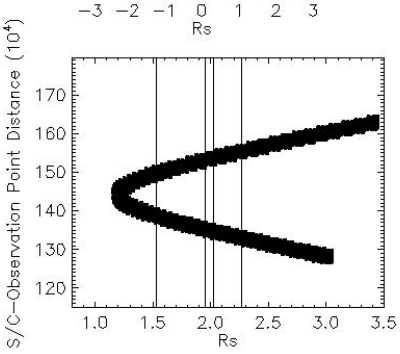


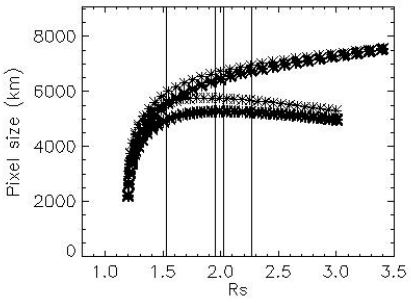
Observation Name:
UVIS_026RI_LATPHASE001_VIMS

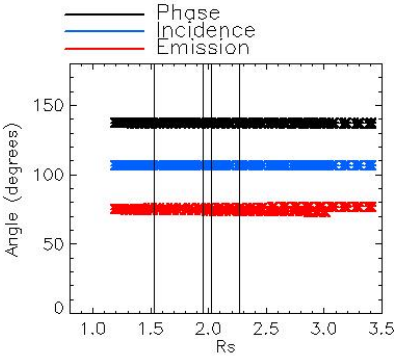
Observation Date:
2006_207_05_55_56

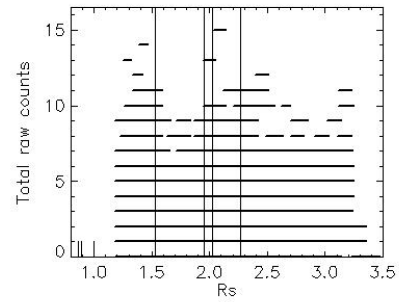
Observation Duration:
2065 S

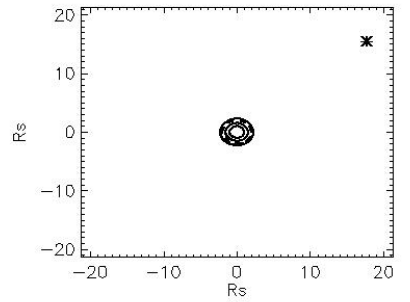
Integration time = 35 S

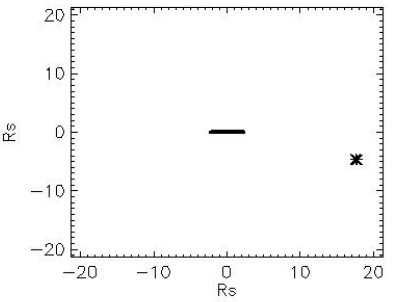


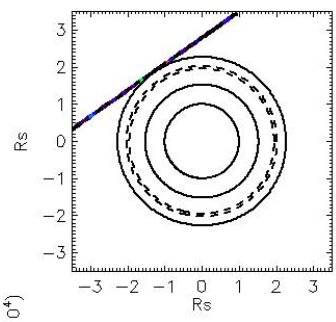


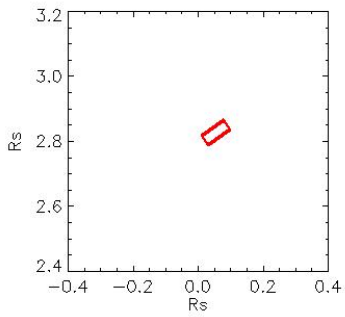










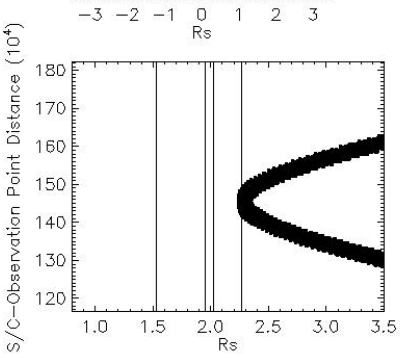


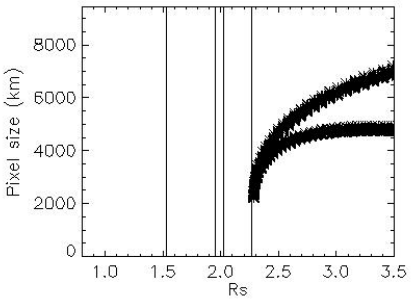
Observation Name:
UVIS_026RI_RDCOLSCNF001_ISS

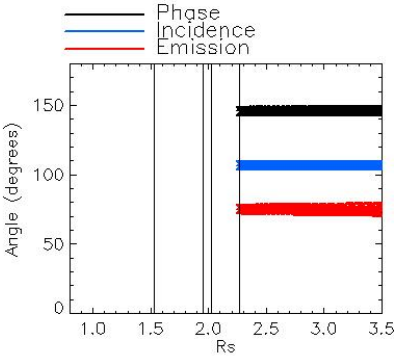
Observation Date:
2006_207_07_03_51

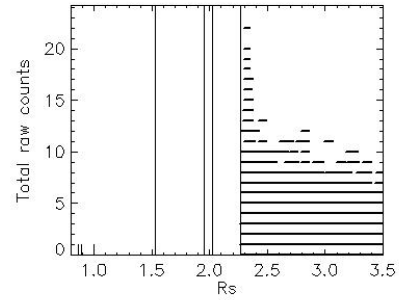
Observation Duration:
1995 S

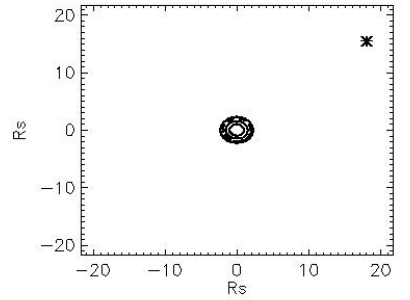
Integration time = 35 S

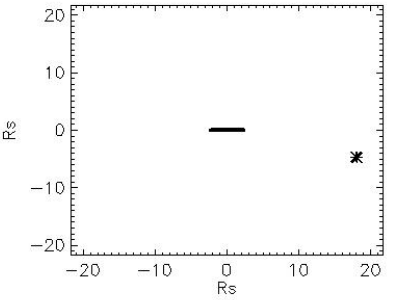


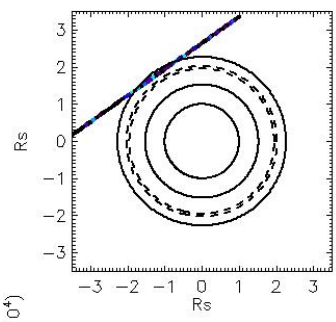


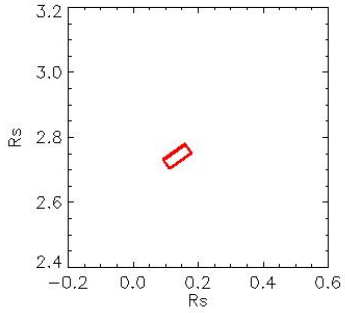










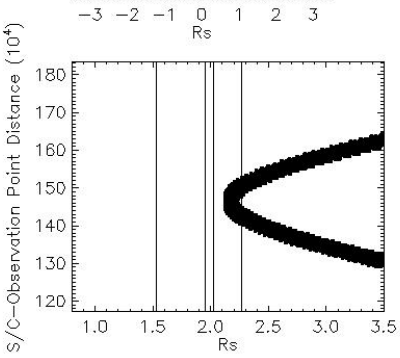


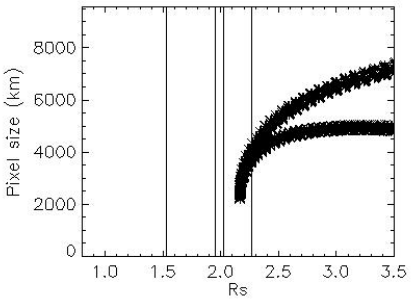
Observation Name:
UVIS_026RI_RDCOLSCNF001_ISS

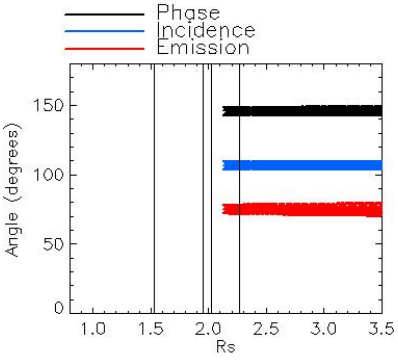
Observation Date:
2006_207_07_37_42

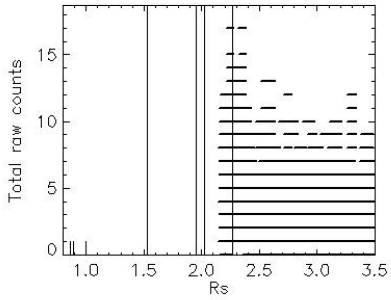
Observation Duration:
1995 S

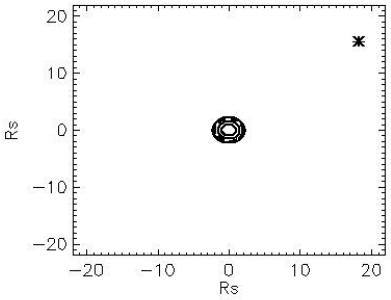
Integration time = 35 S

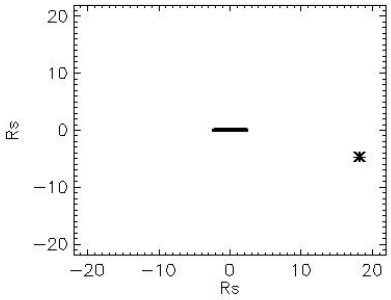


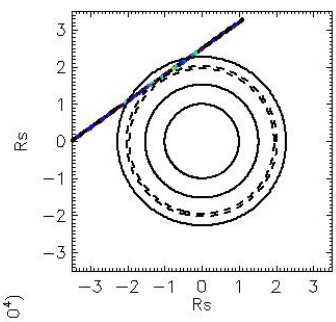


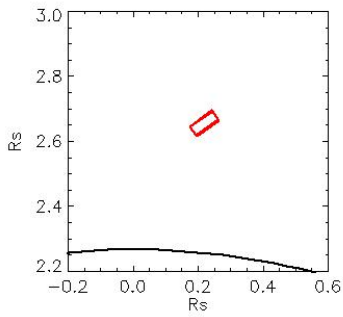










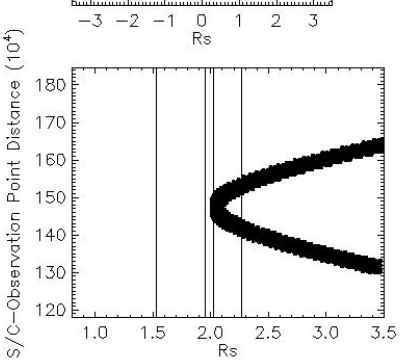


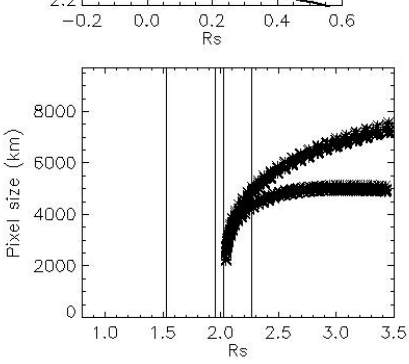
Observation Name:
UVIS_026RI_RDCOLSCNF001_ISS

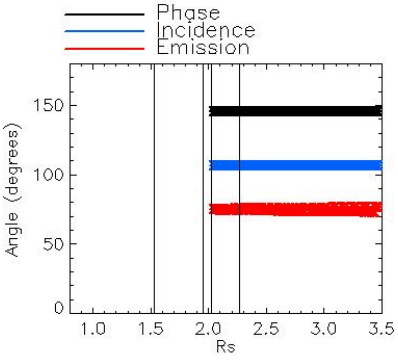
Observation Date:
2006_207_08_11_34

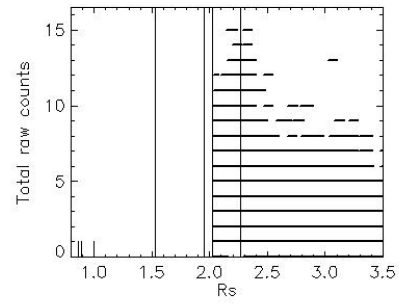
Observation Duration:
1995 S

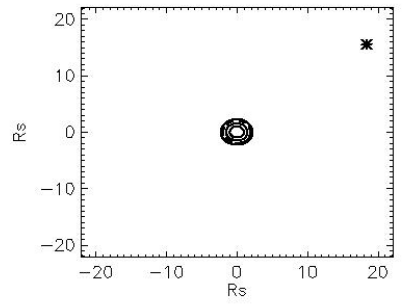
Integration time = 35 S

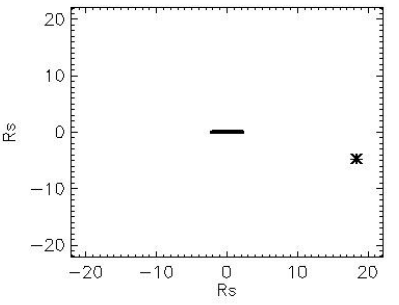


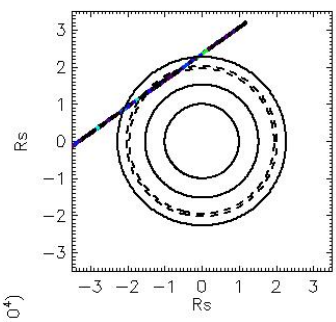


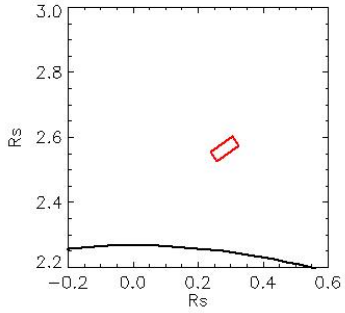










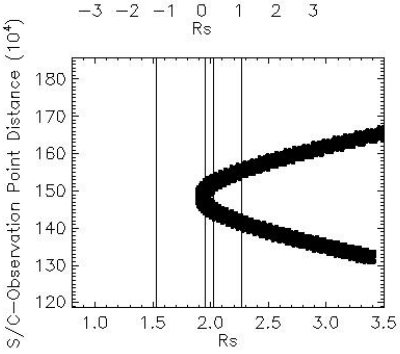


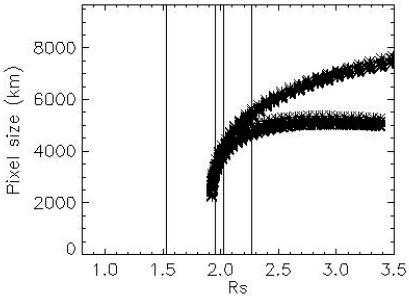
Observation Name:
UVIS_026RI_RDCOLSCNF001_ISS

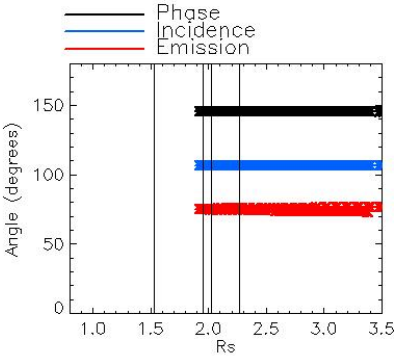
Observation Date:
2006_207_08_45_25

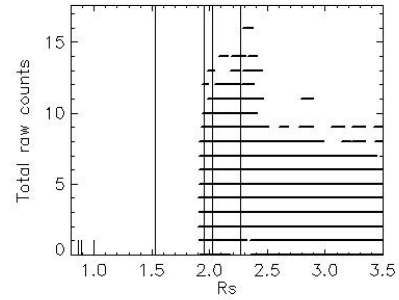
Observation Duration:
1995 S

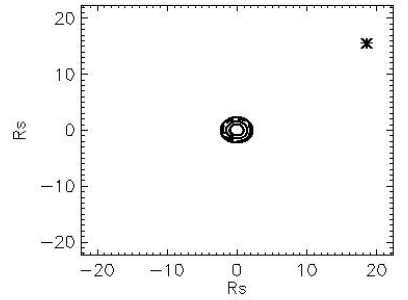
Integration time = 35 S

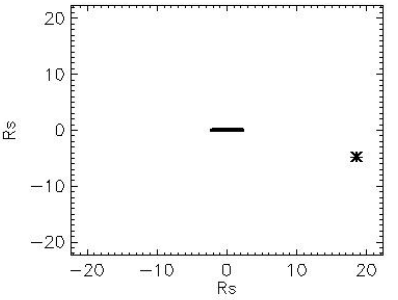


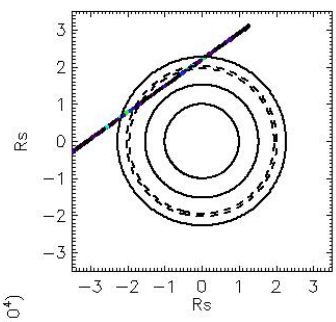


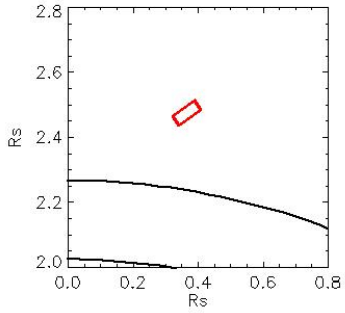










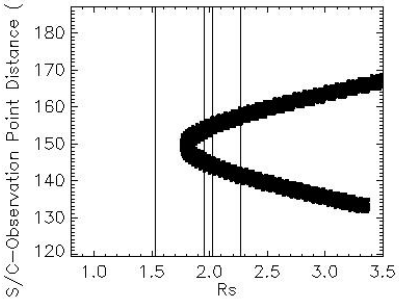


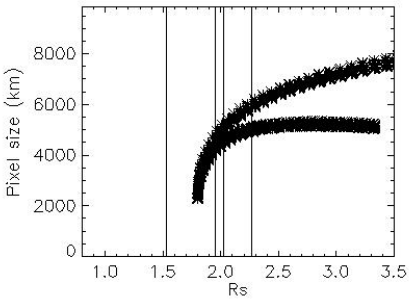
Observation Name:
UVIS_026RI_RDCOLSCNF001_ISS

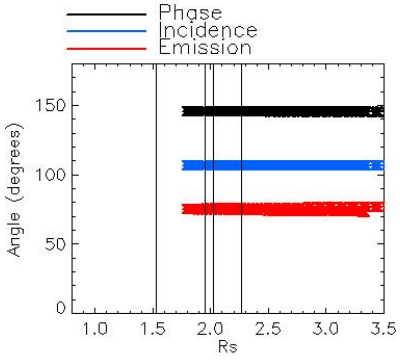
Observation Date:
2006_207_09_19_15

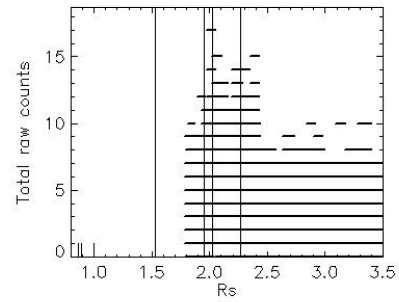
Observation Duration:
2275 S

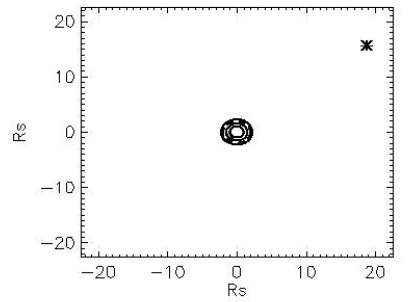
Integration time = 35 S

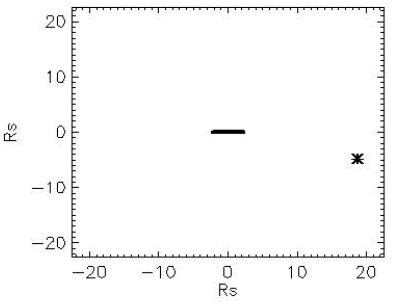


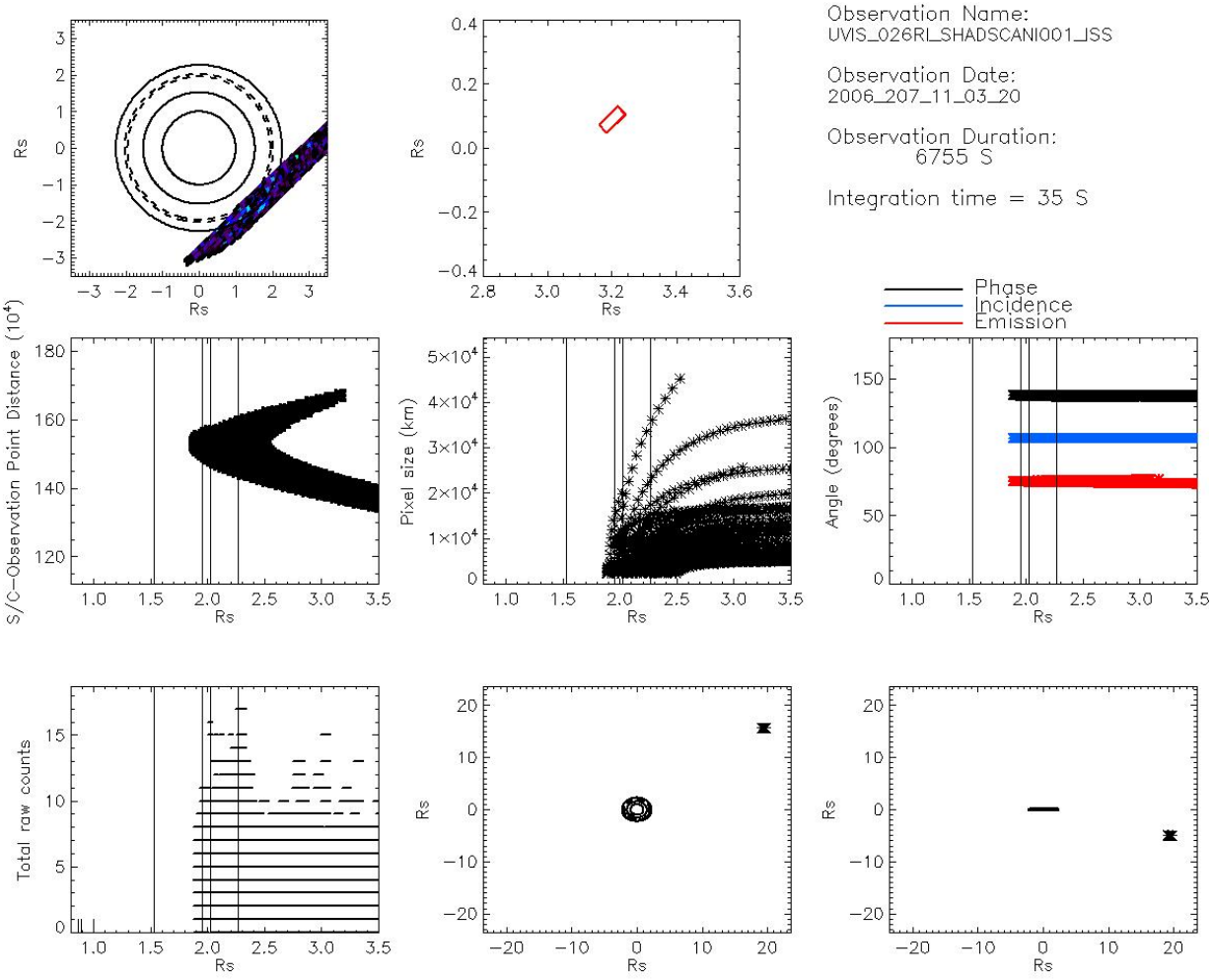


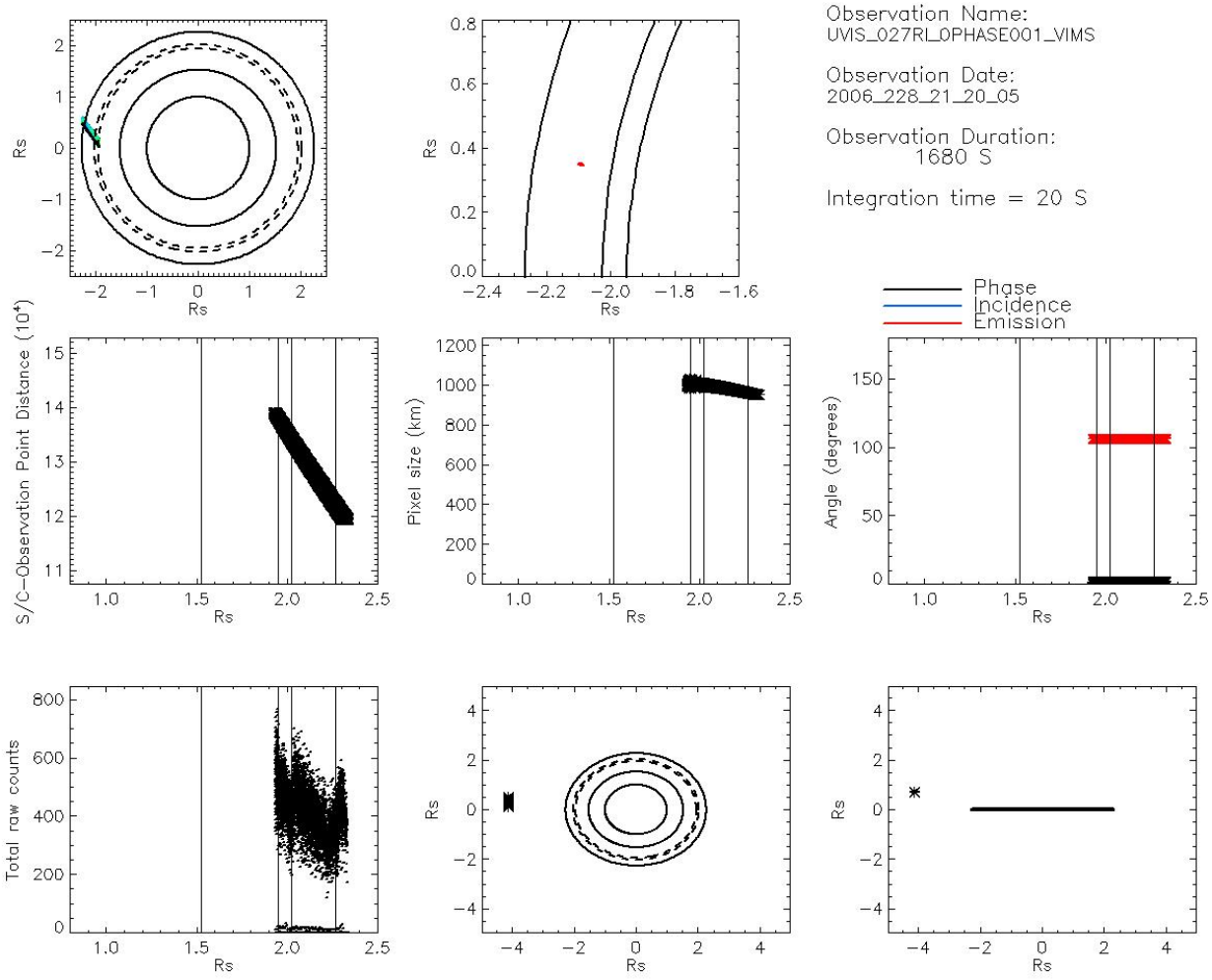









Observation Name:
UVIS_026RI_SHADSCANI001_ISS
Observation Date:
2006_207_11_03_20
Observation Duration:
6755 S
Integration time = 35 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs


Observation Name:
UVIS_027RI_0PHASE001_VIMS
Observation Date:
2006_228_21_20_05
Observation Duration:
1680 S
Integration time = 20 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts