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.

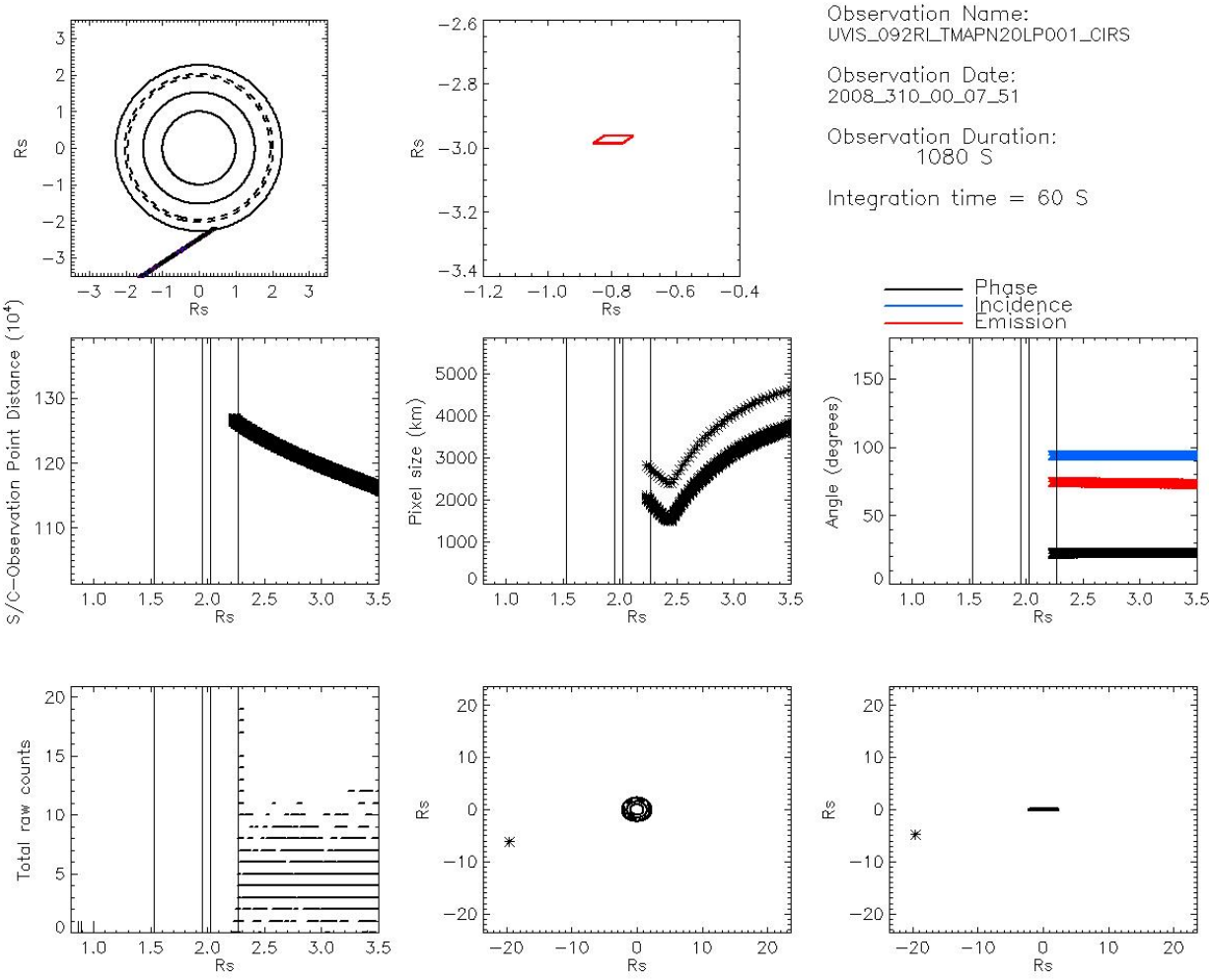
Middle center: Maximum projected smeared pixel size for all data records plotted against the radial location of the projected pixel at the middle of the integration period.

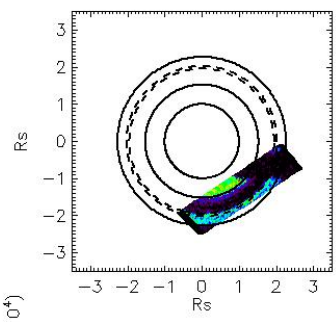
Middle right: Phase, incidence, and emission angles for each pixel for all data records at the middle of the integration period.

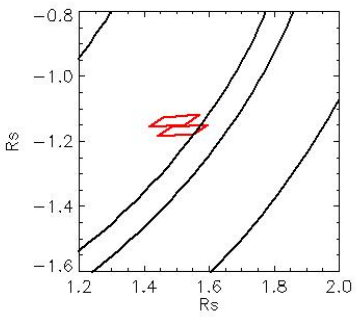
Bottom left: Total raw counts from 175.2 – 189.8 nm for each pixel for all data records.

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_092RI_TMAPN20LP001_CIRS
Observation Date:
2008_310_00_07_51
Observation Duration:
1080 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs



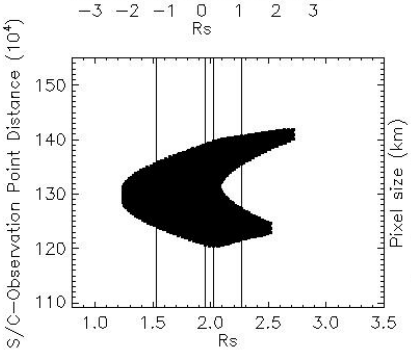


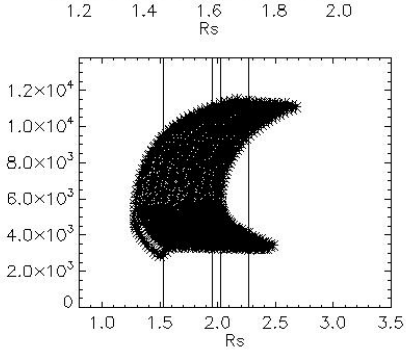
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

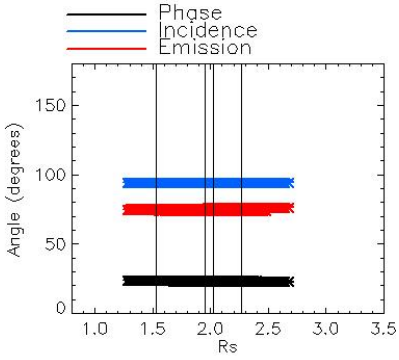
Observation Date:
2008_310_00_30_51

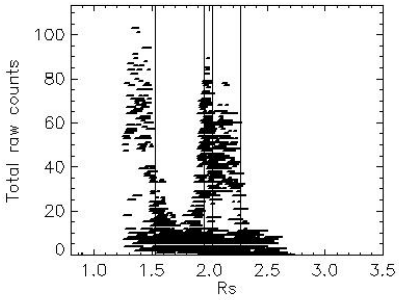
Observation Duration:
1200 S

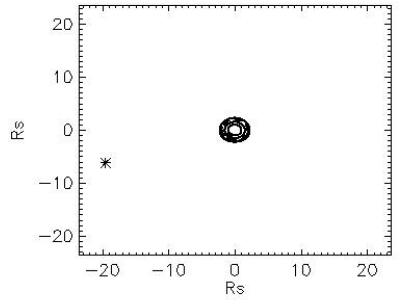
Integration time = 60 S

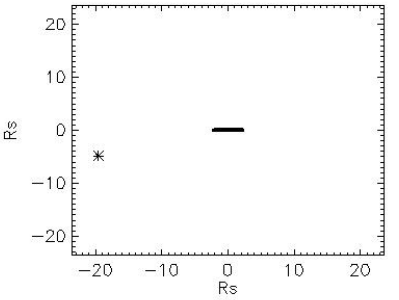










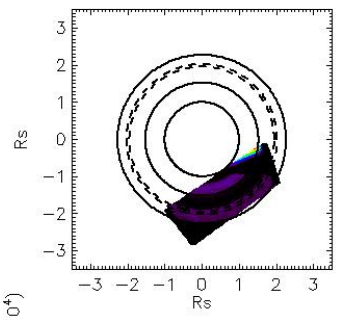


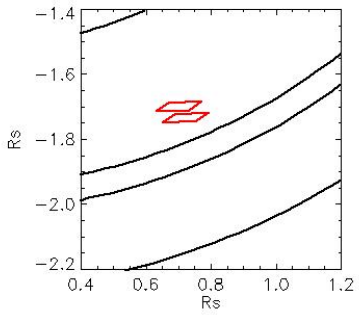
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

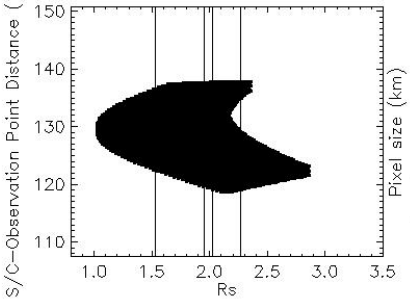
Observation Date:
2008_310_00_56_51

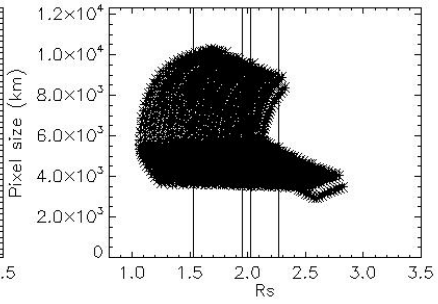
Observation Duration:
1680 S

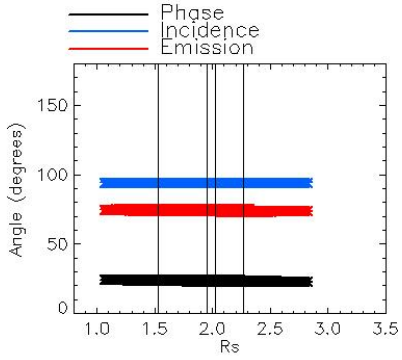
Integration time = 60 S

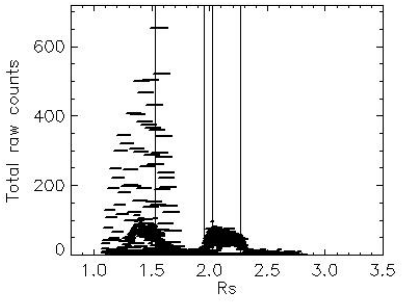


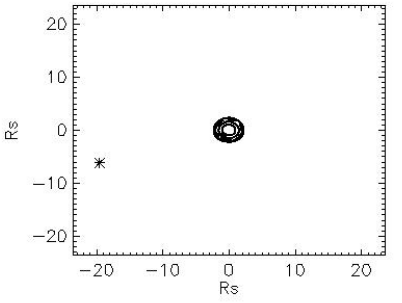


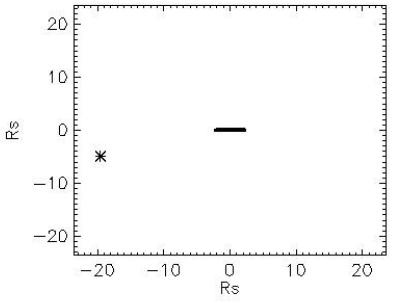


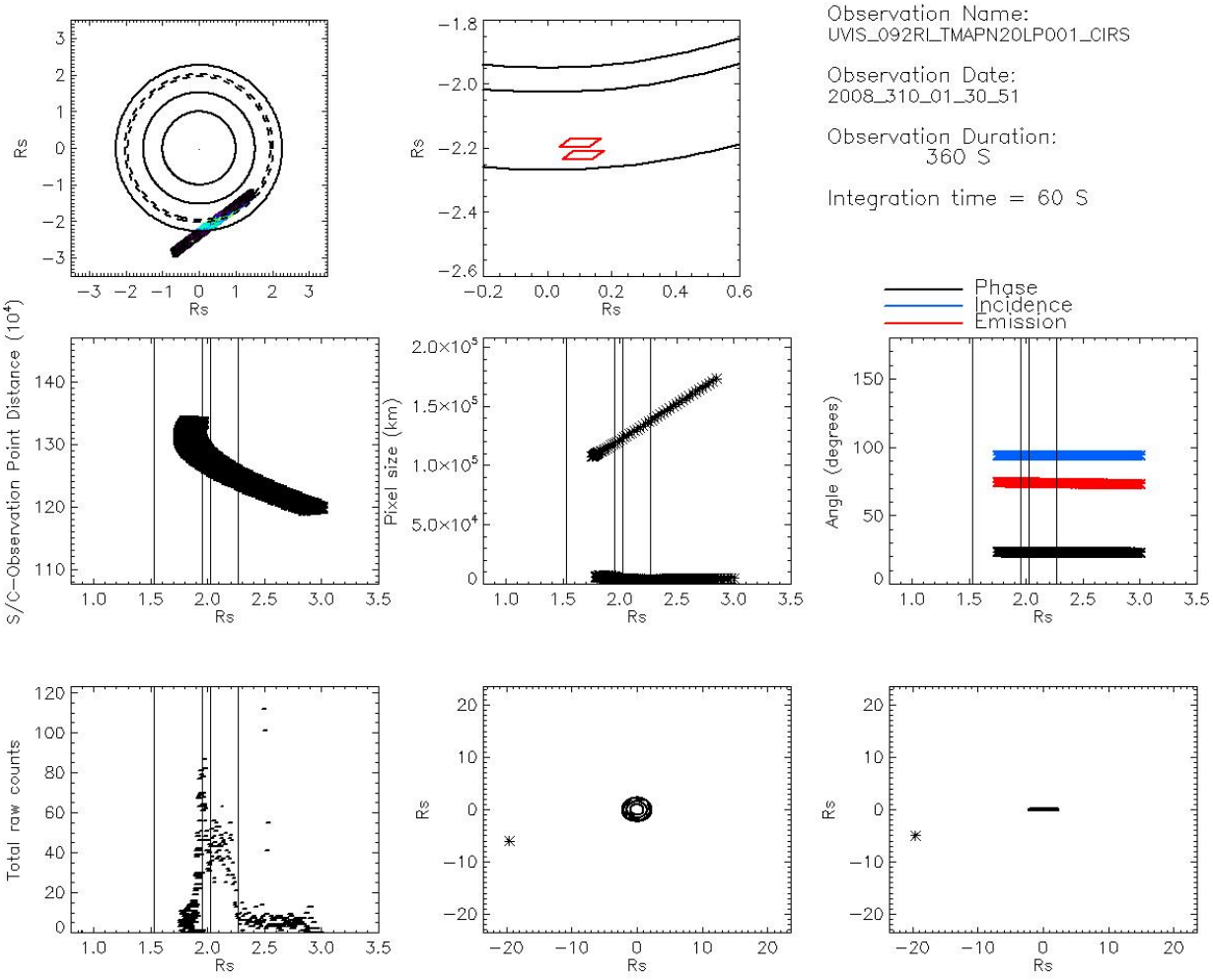


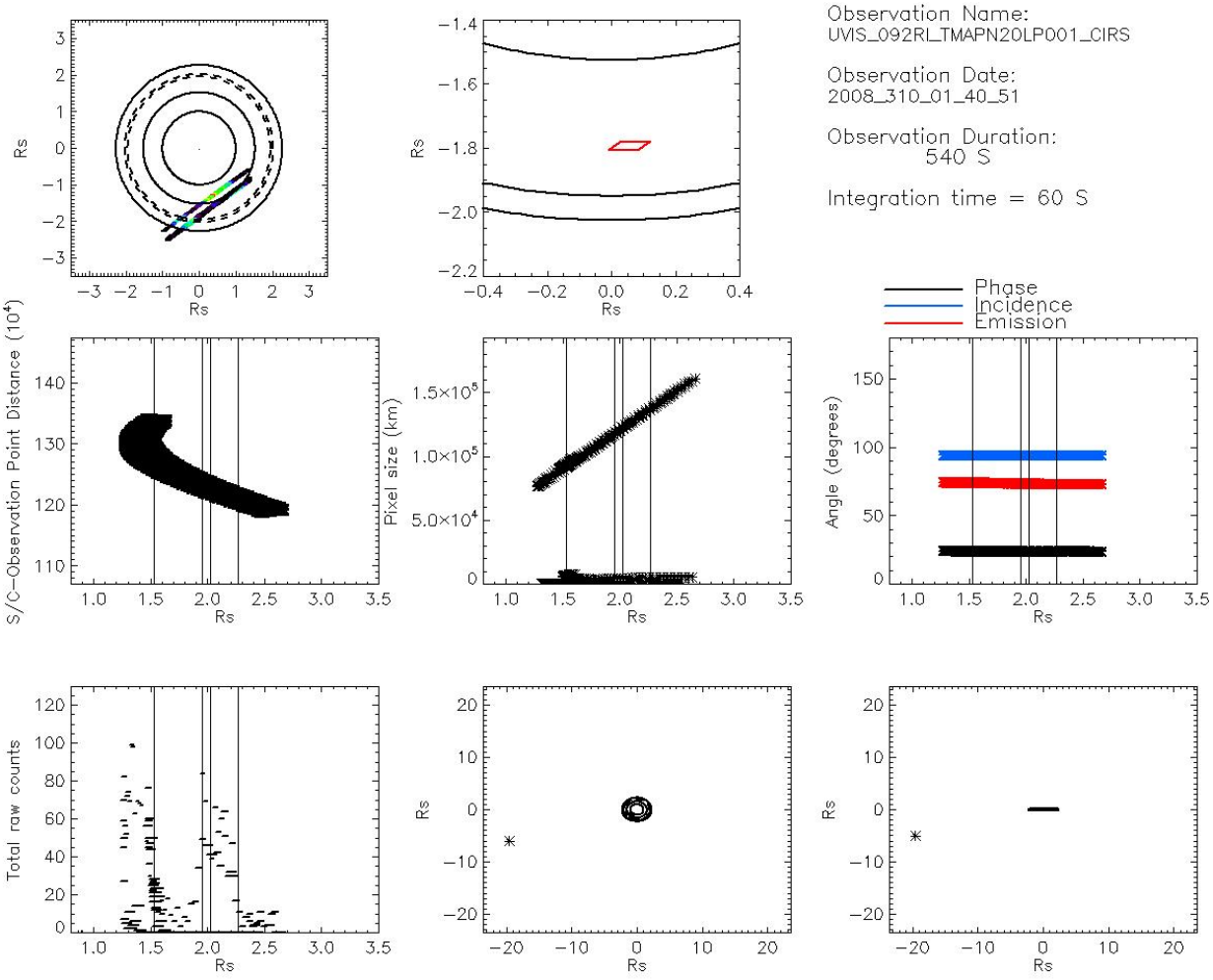


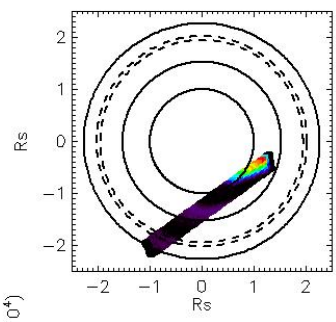


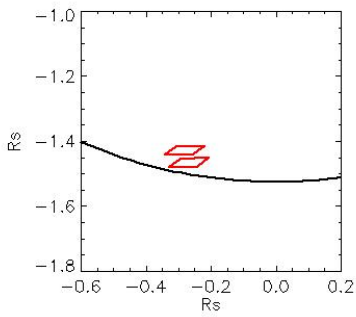





Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS
Observation Date:
2008_310_01_30_51
Observation Duration:
360 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs


Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS
Observation Date:
2008_310_01_40_51
Observation Duration:
540 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs



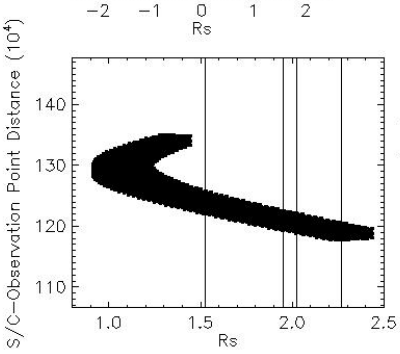


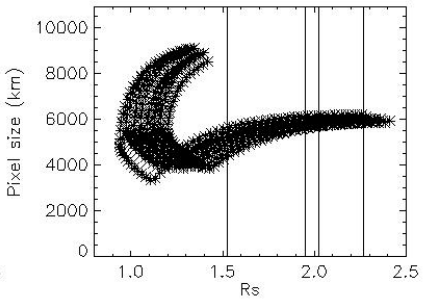
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

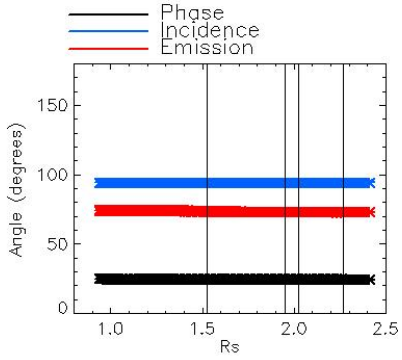
Observation Date:
2008_310_01_49_51

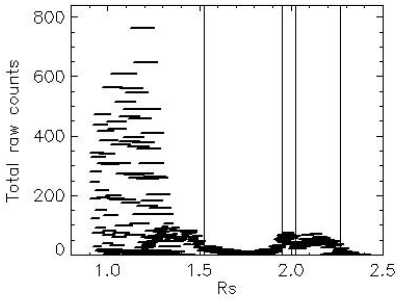
Observation Duration:
540 S

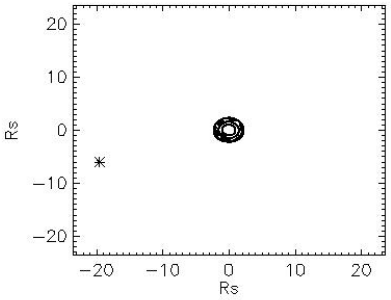
Integration time = 60 S

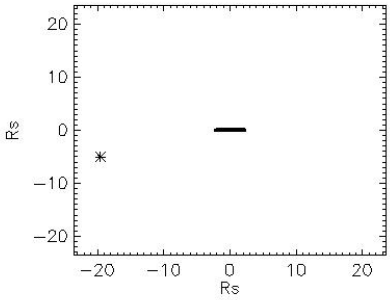


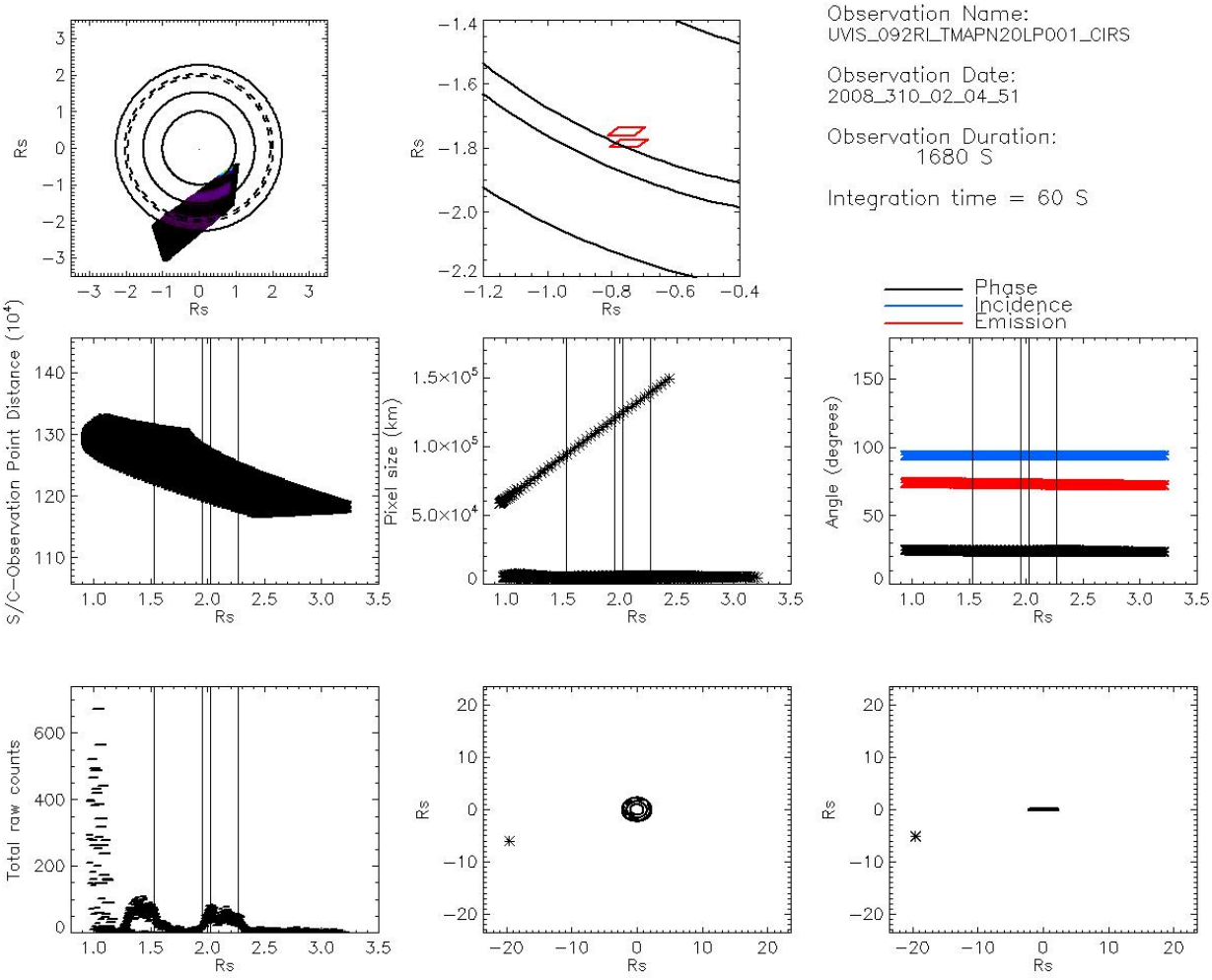


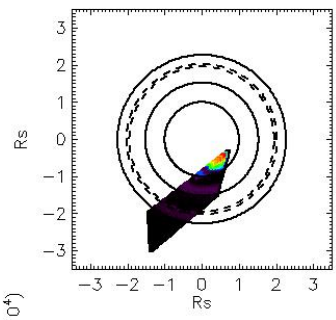


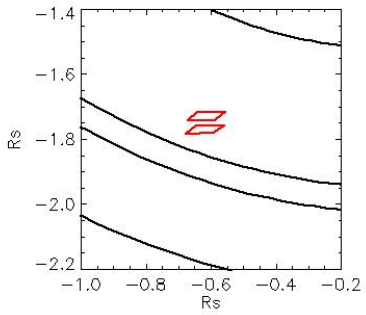







Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS
Observation Date:
2008_310_02_04_51
Observation Duration:
1680 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs



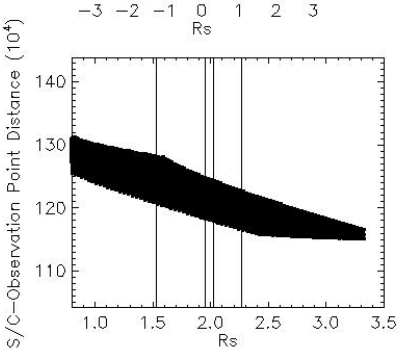


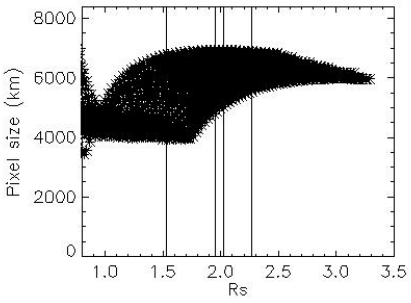
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

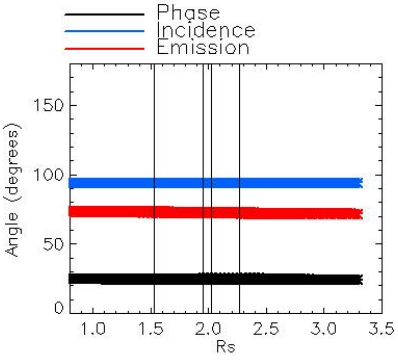
Observation Date:
2008_310_02_38_51

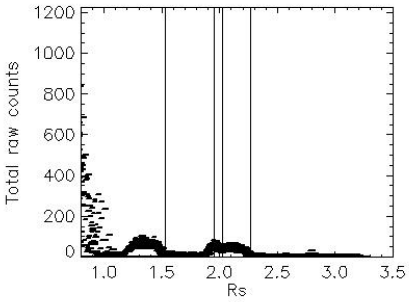
Observation Duration:
1680 S

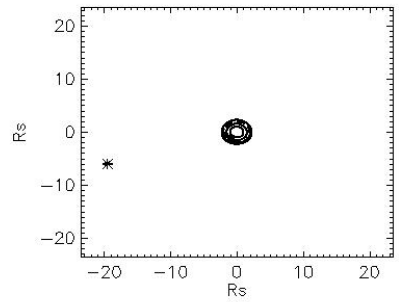
Integration time = 60 S

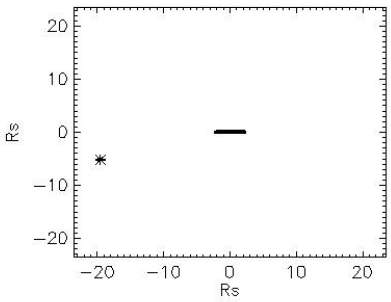


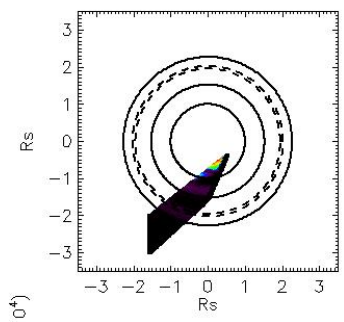


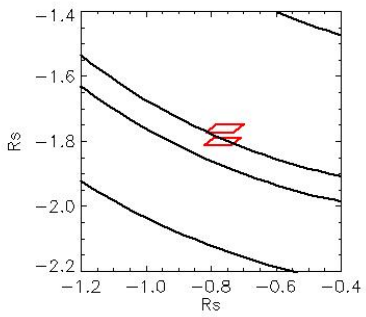










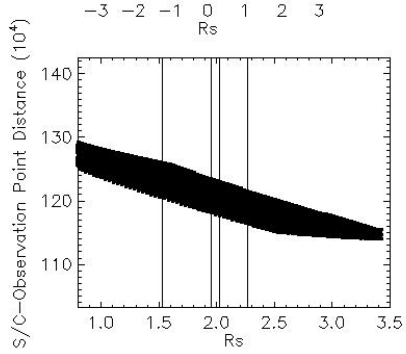


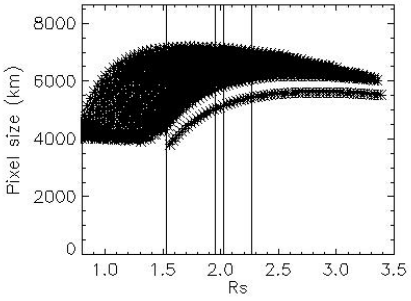
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

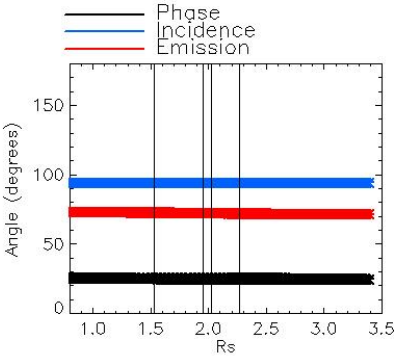
Observation Date:
2008_310_03_12_51

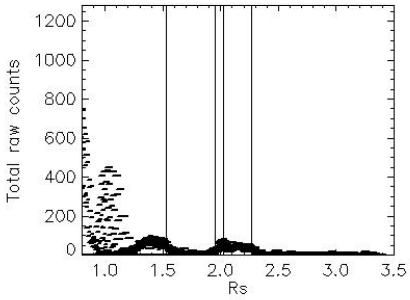
Observation Duration:
1680 S

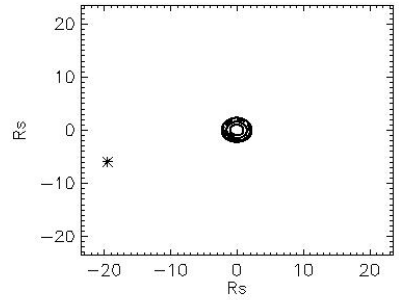
Integration time = 60 S

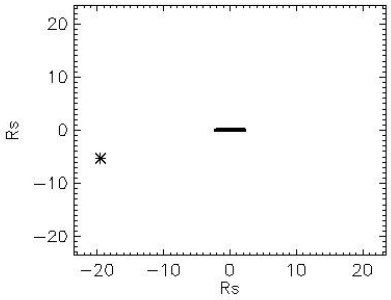


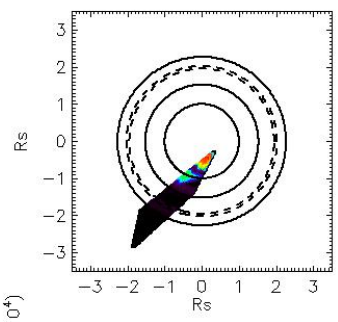


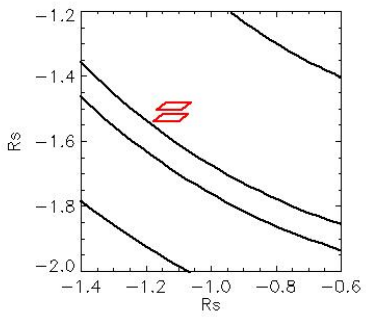










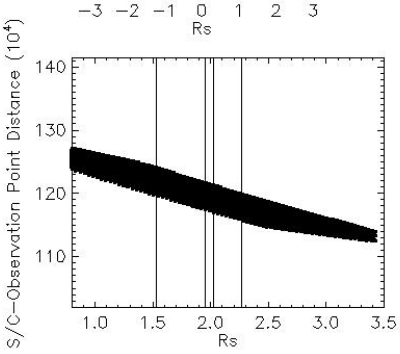


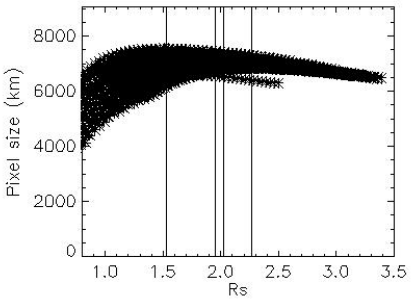
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

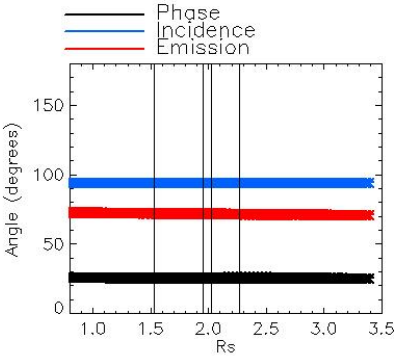
Observation Date:
2008_310_03_46_51

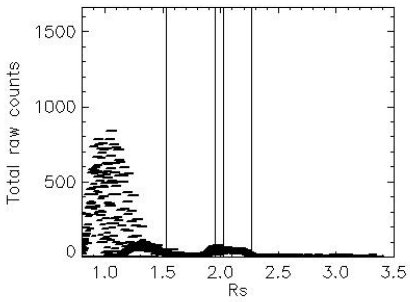
Observation Duration:
1680 S

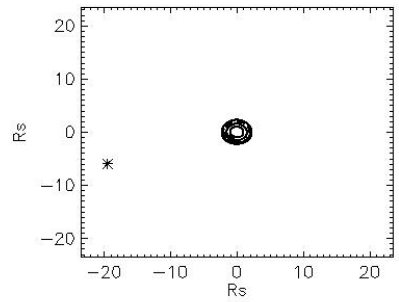
Integration time = 60 S

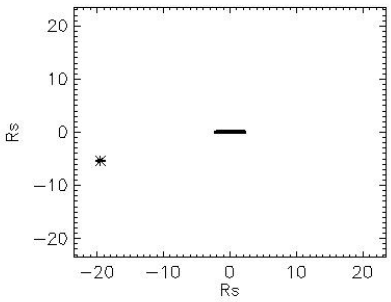


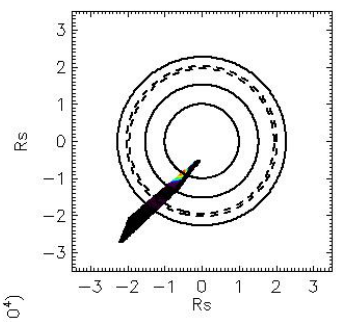


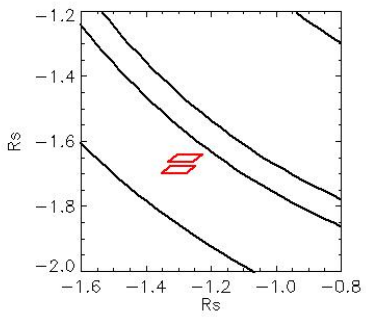










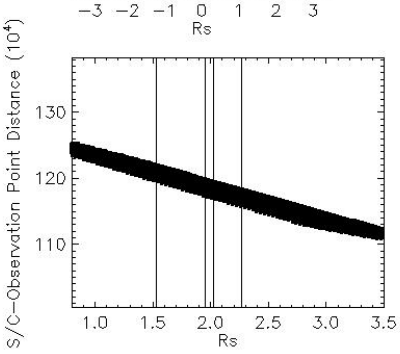


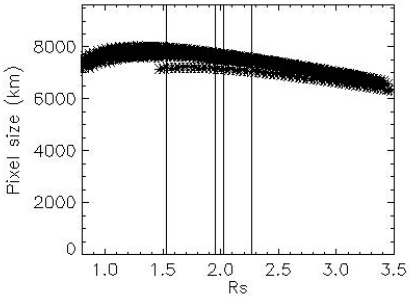
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

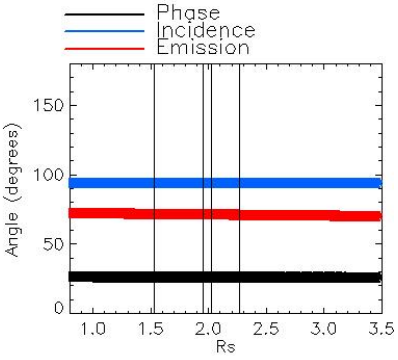
Observation Date:
2008_310_04_20_51

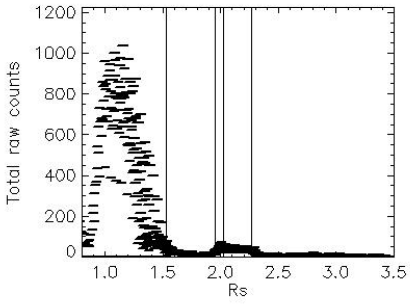
Observation Duration:
1200 S

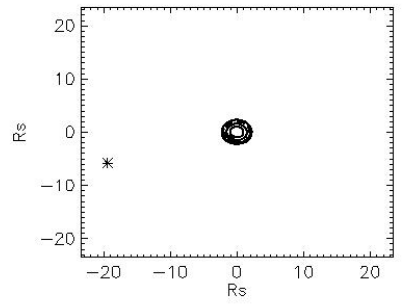
Integration time = 60 S

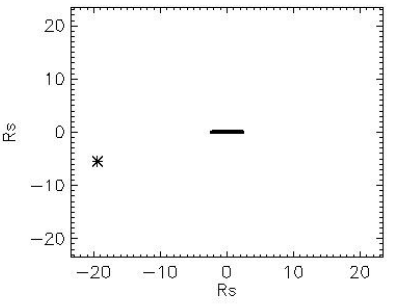


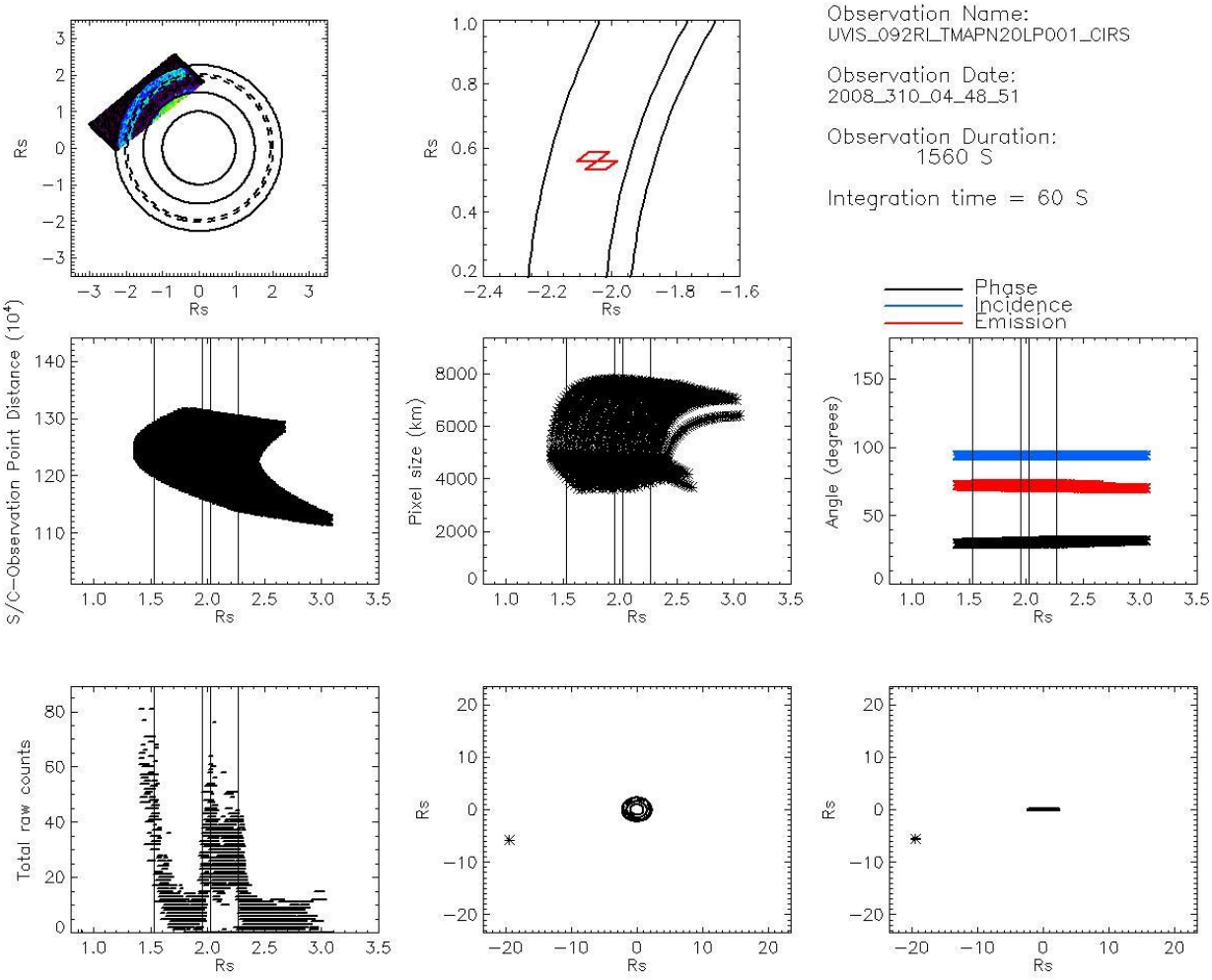


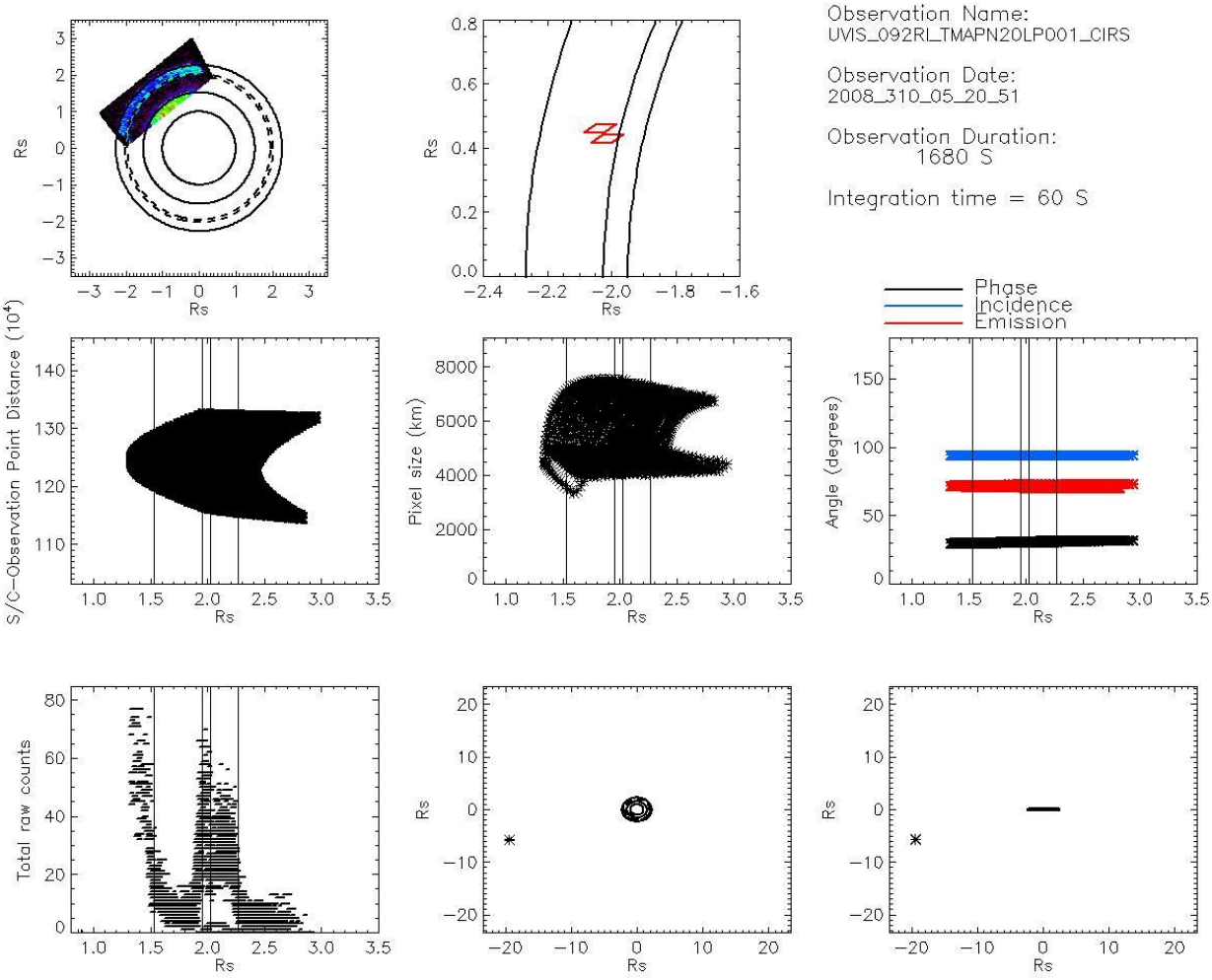


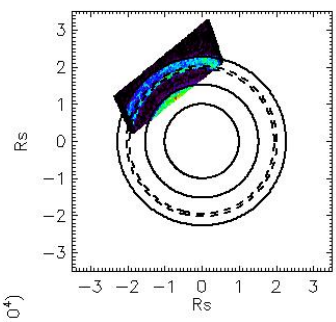


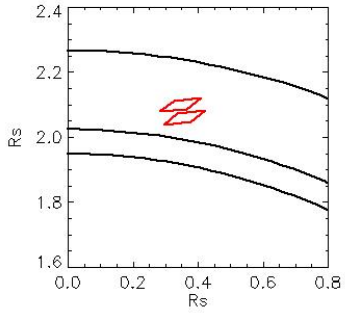





Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS
Observation Date:
2008_310_04_48_51
Observation Duration:
1560 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs


Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS
Observation Date:
2008_310_05_20_51
Observation Duration:
1680 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts



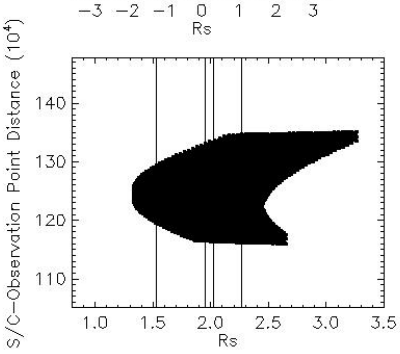


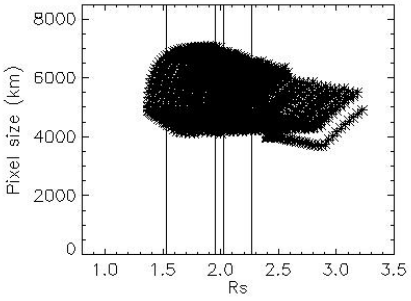
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

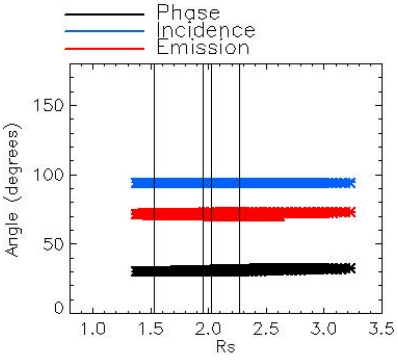
Observation Date:
2008_310_05_54_51

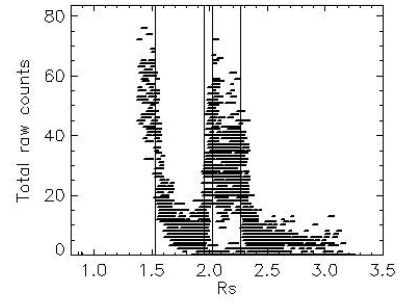
Observation Duration:
1680 S

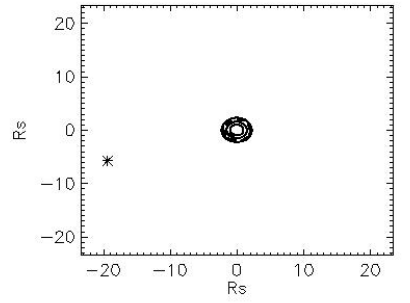
Integration time = 60 S

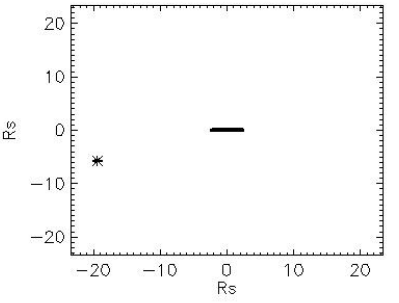


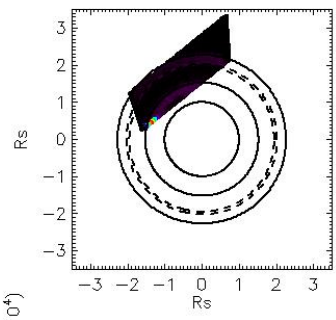


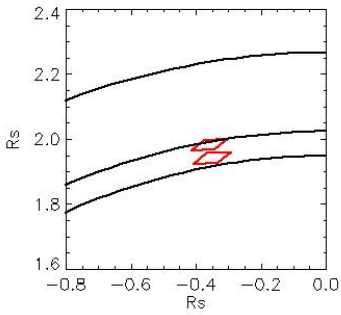










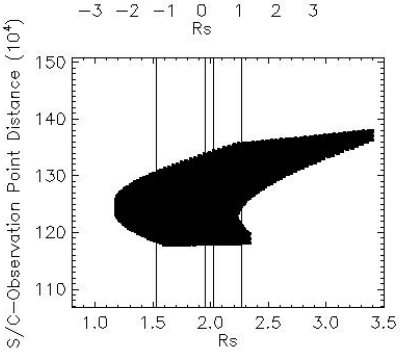


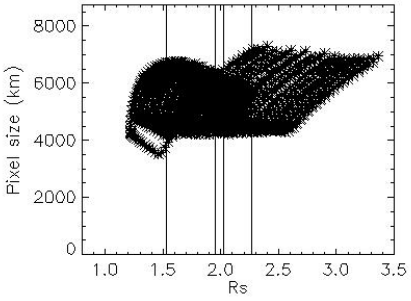
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

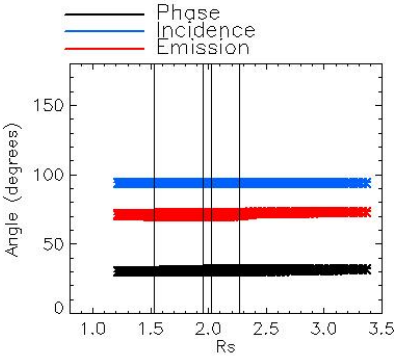
Observation Date:
2008_310_06_28_51

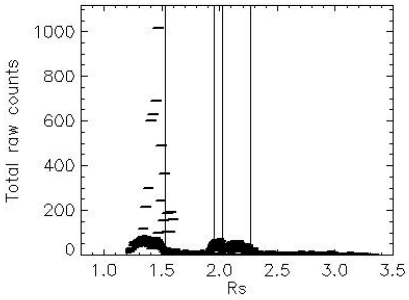
Observation Duration:
1680 S

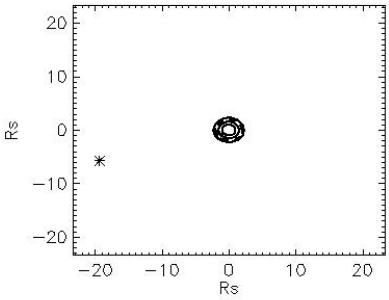
Integration time = 60 S

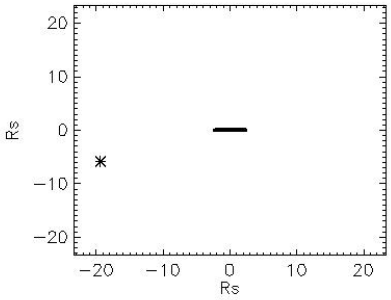


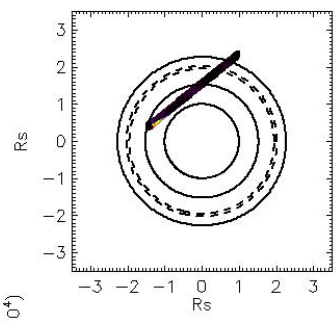


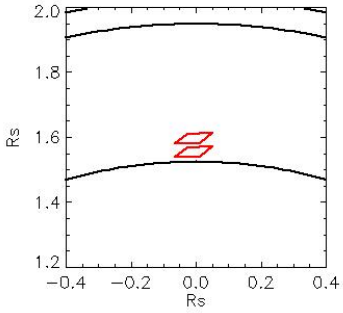










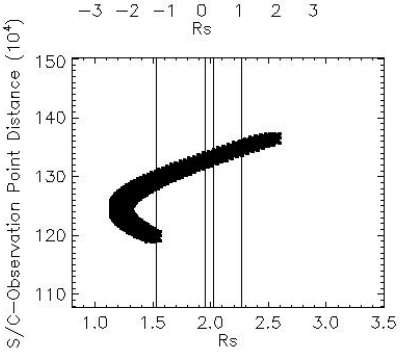


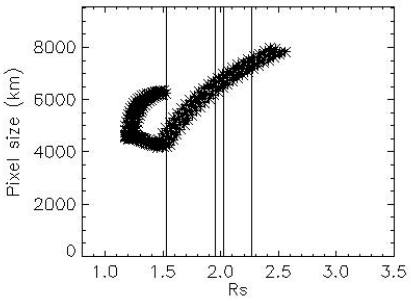
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

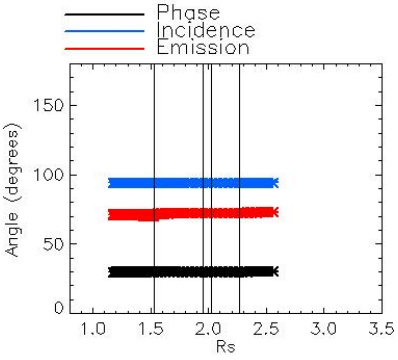
Observation Date:
2008_310_07_02_51

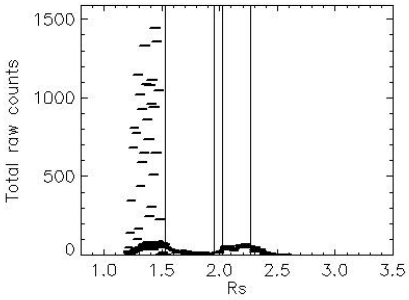
Observation Duration:
240 S

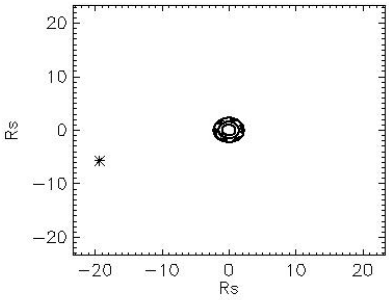
Integration time = 60 S

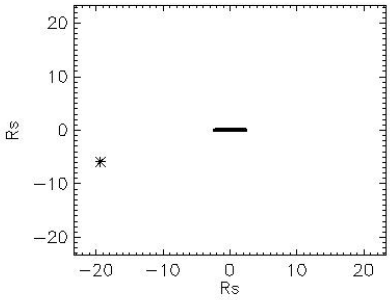


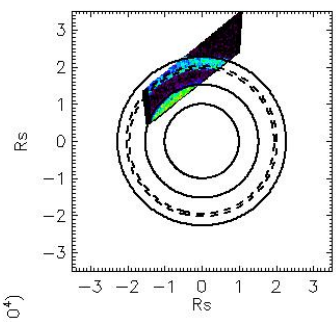


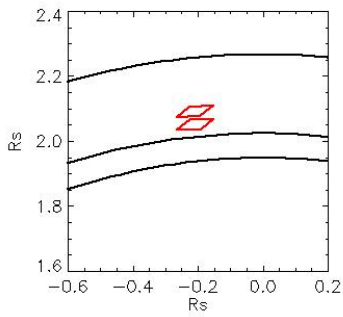










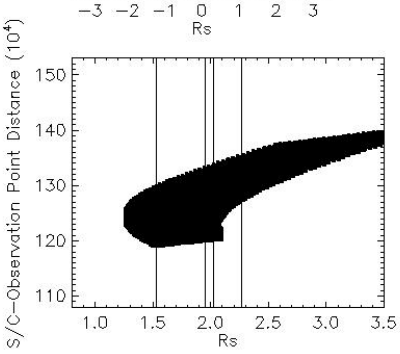


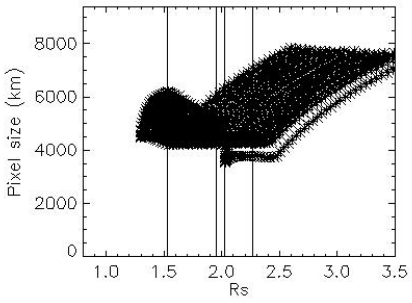
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

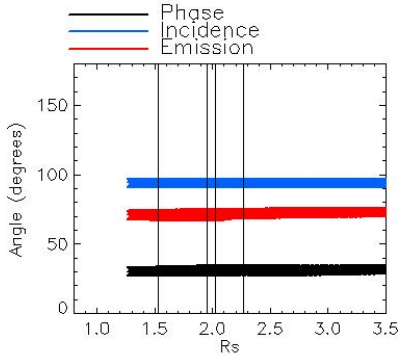
Observation Date:
2008_310_07_06_51

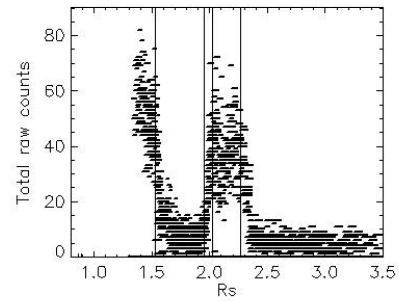
Observation Duration:
1440 S

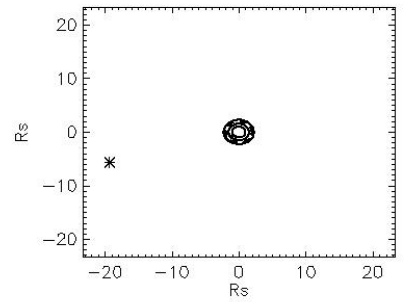
Integration time = 60 S

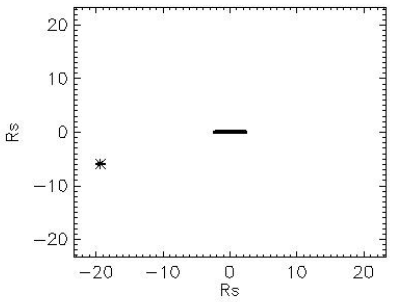


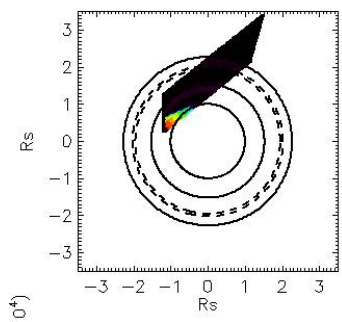


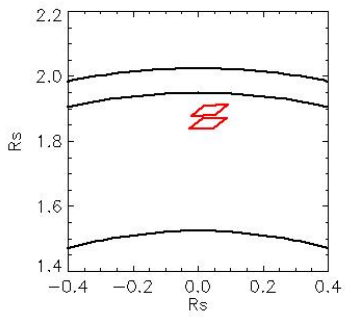










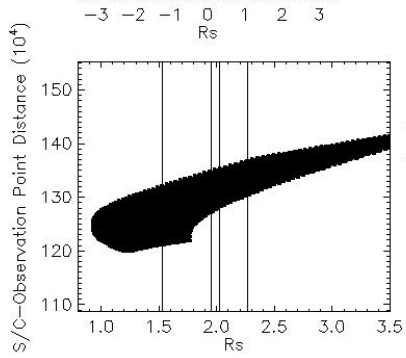


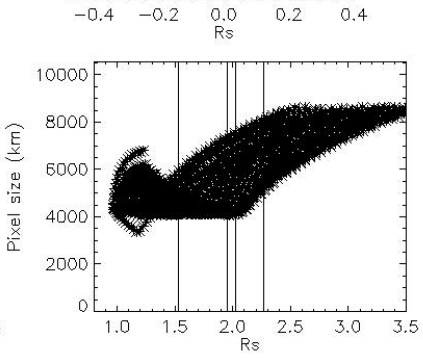
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

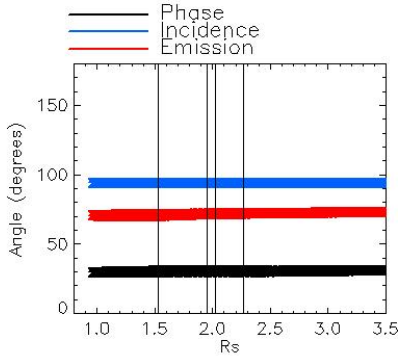
Observation Date:
2008_310_07_36_51

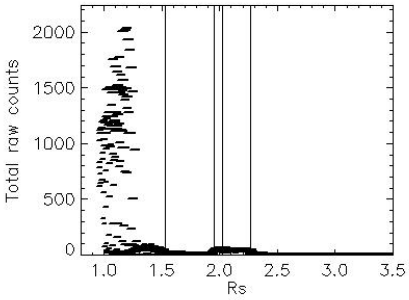
Observation Duration:
1680 S

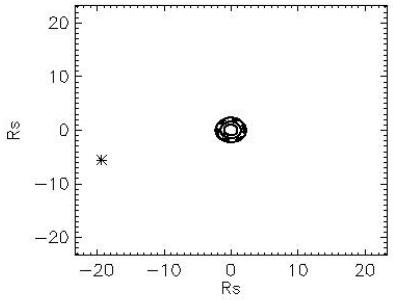
Integration time = 60 S

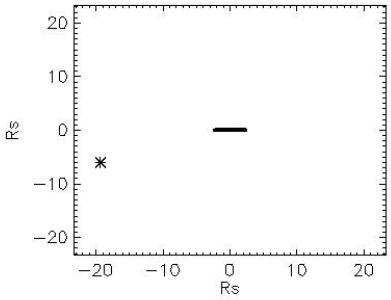


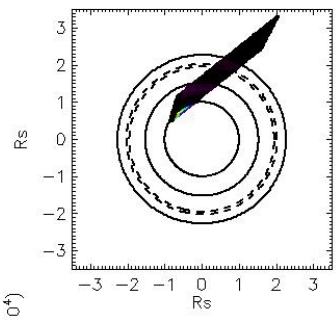


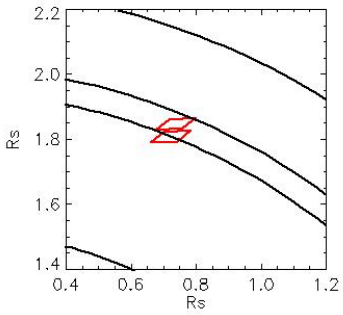










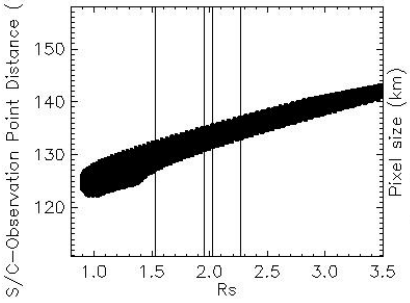


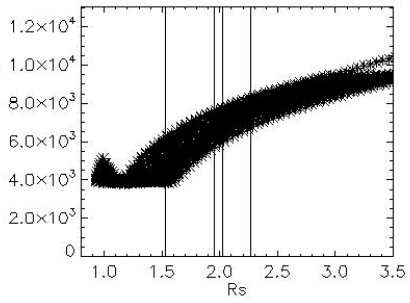
Observation Name:
UVIS_092RI_TMAPN20LP001_CIRS

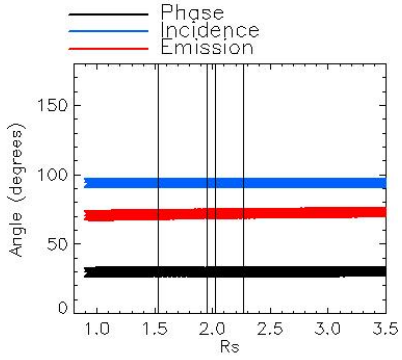
Observation Date:
2008_310_08_10_51

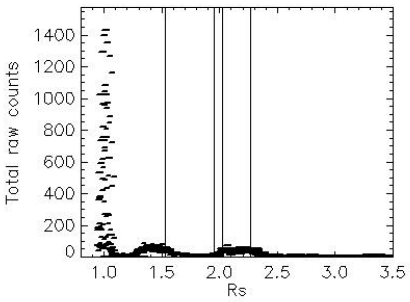
Observation Duration:
1200 S

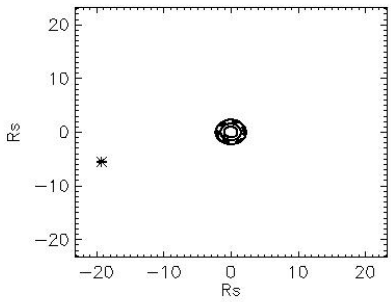
Integration time = 60 S

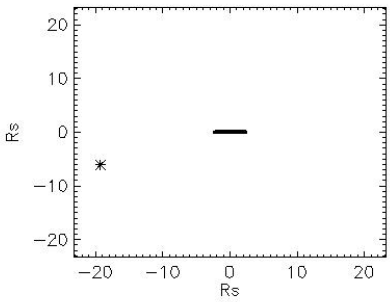


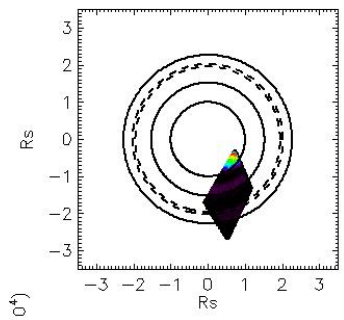


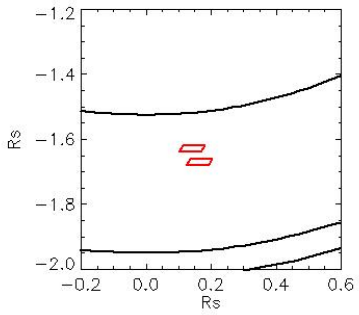










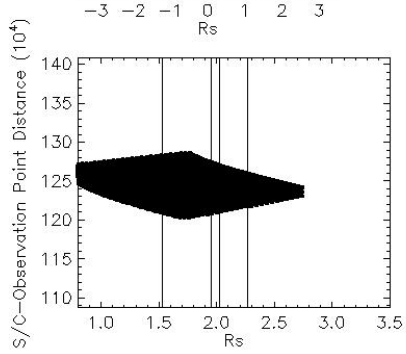


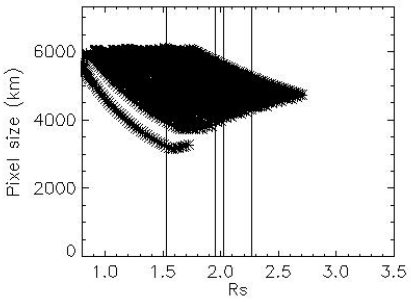
Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS

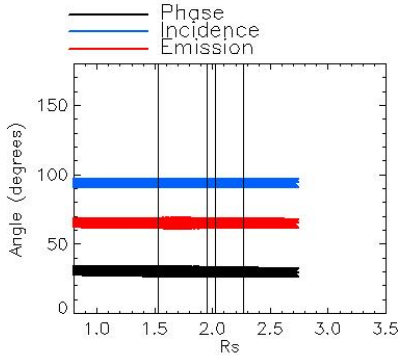
Observation Date:
2008_310_20_10_51

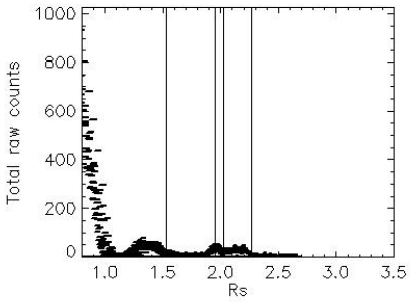
Observation Duration:
1440 S

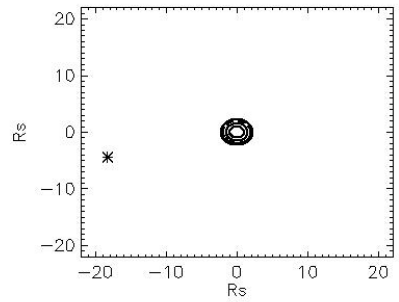
Integration time = 60 S

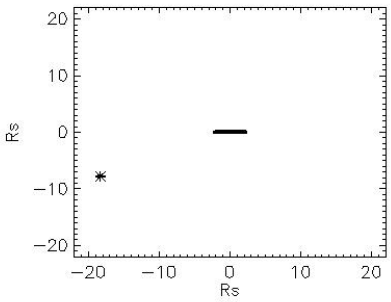


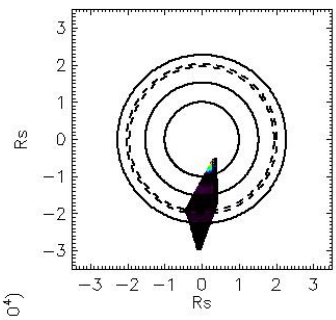


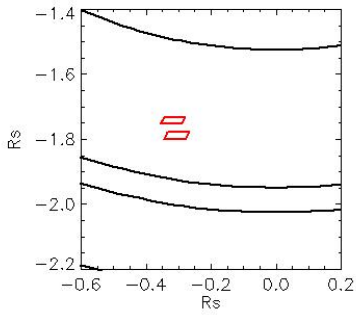










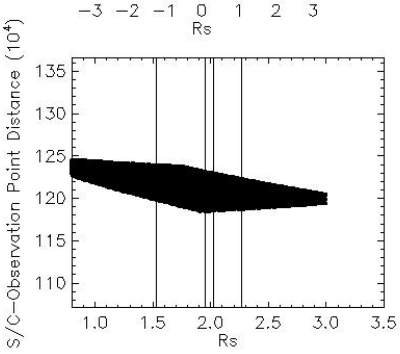


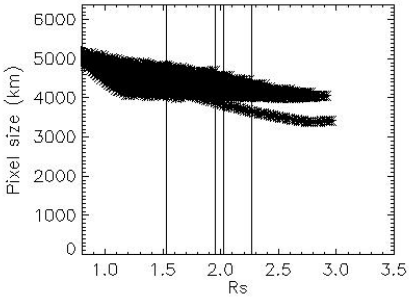
Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS

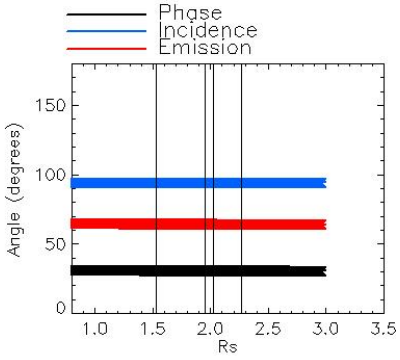
Observation Date:
2008_310_20_40_51

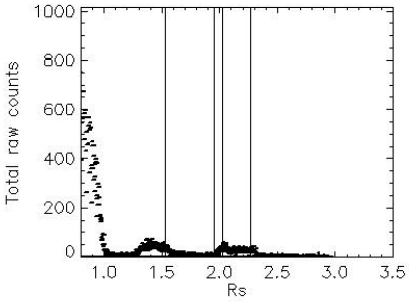
Observation Duration:
1440 S

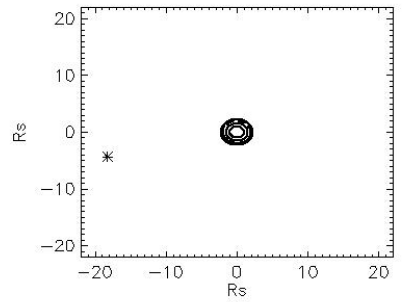
Integration time = 60 S

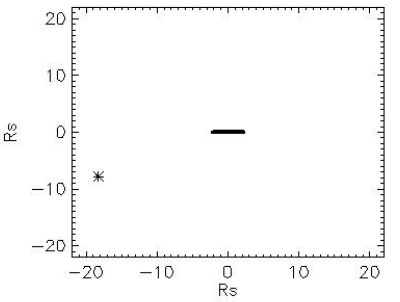


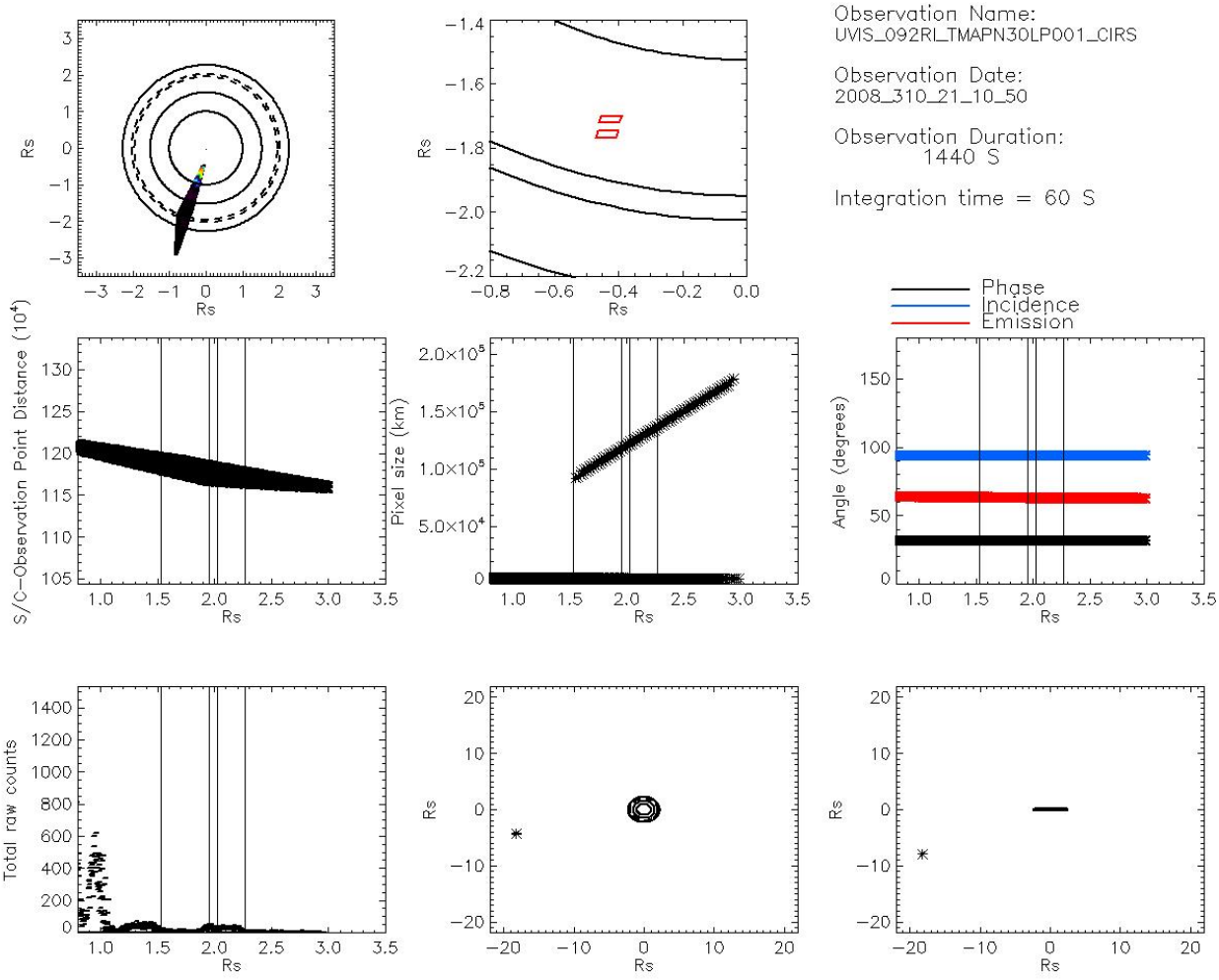


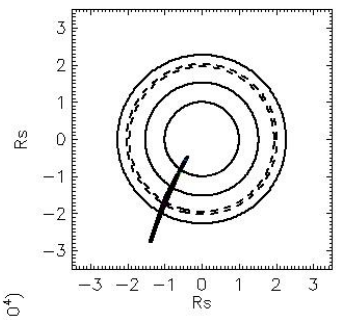


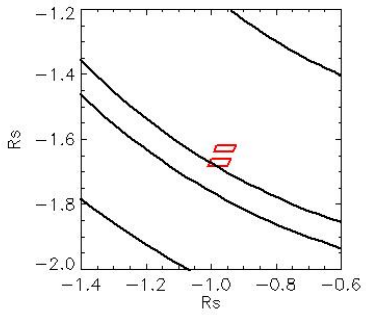







Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS
Observation Date:
2008_310_21_10_50
Observation Duration:
1440 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs



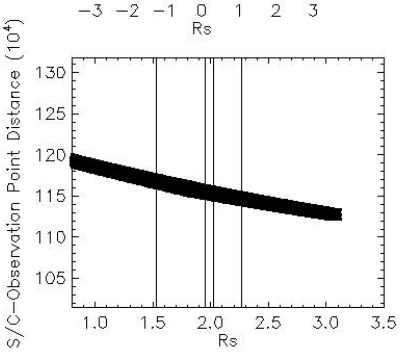


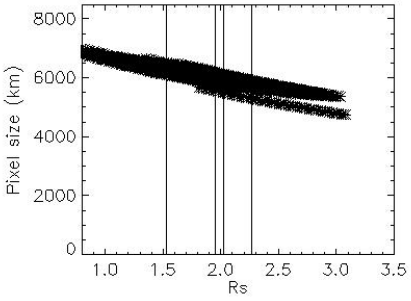
Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS

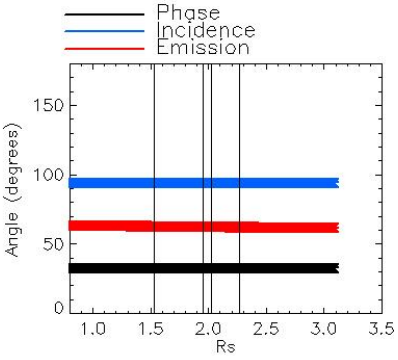
Observation Date:
2008_310_21_40_50

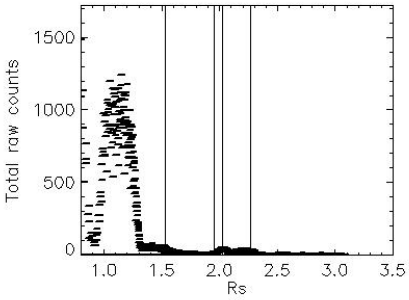
Observation Duration:
1440 S

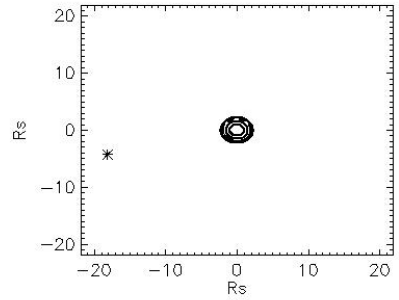
Integration time = 60 S

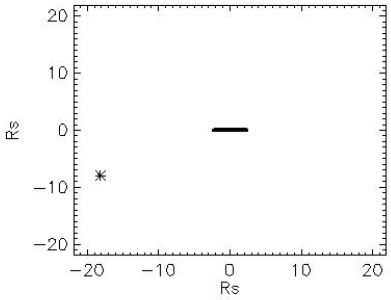


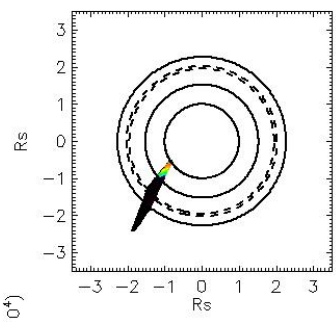


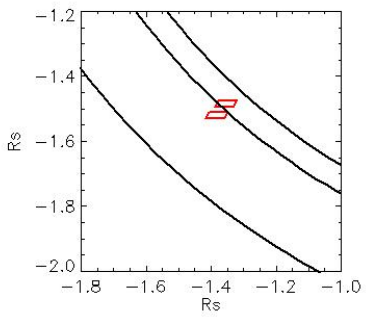










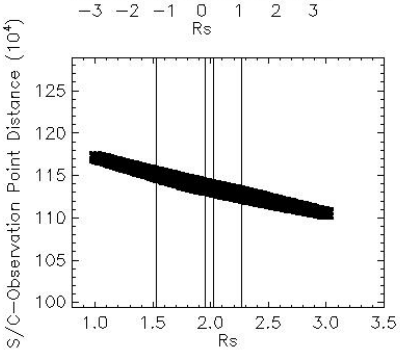


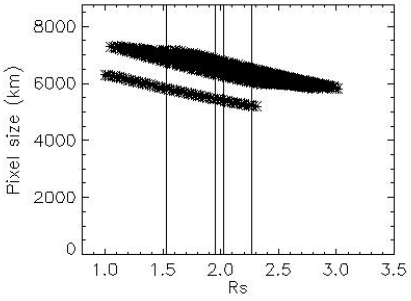
Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS

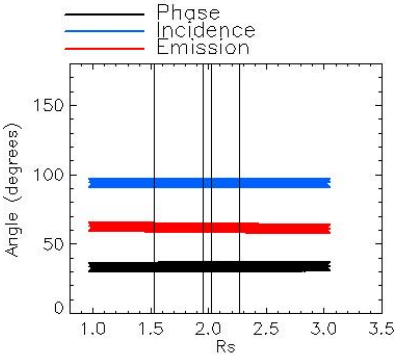
Observation Date:
2008_310_22_10_50

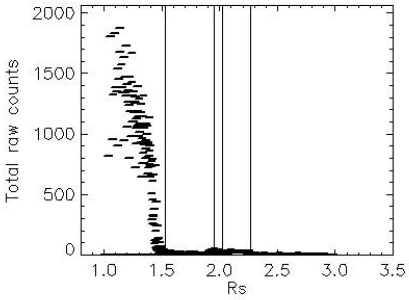
Observation Duration:
1020 S

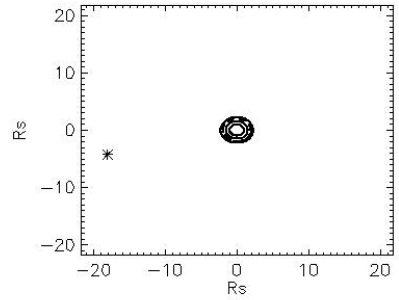
Integration time = 60 S

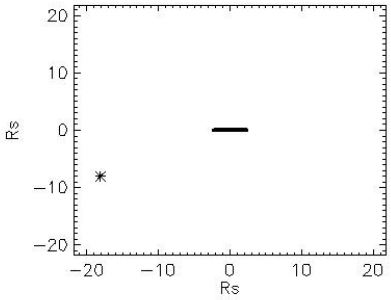


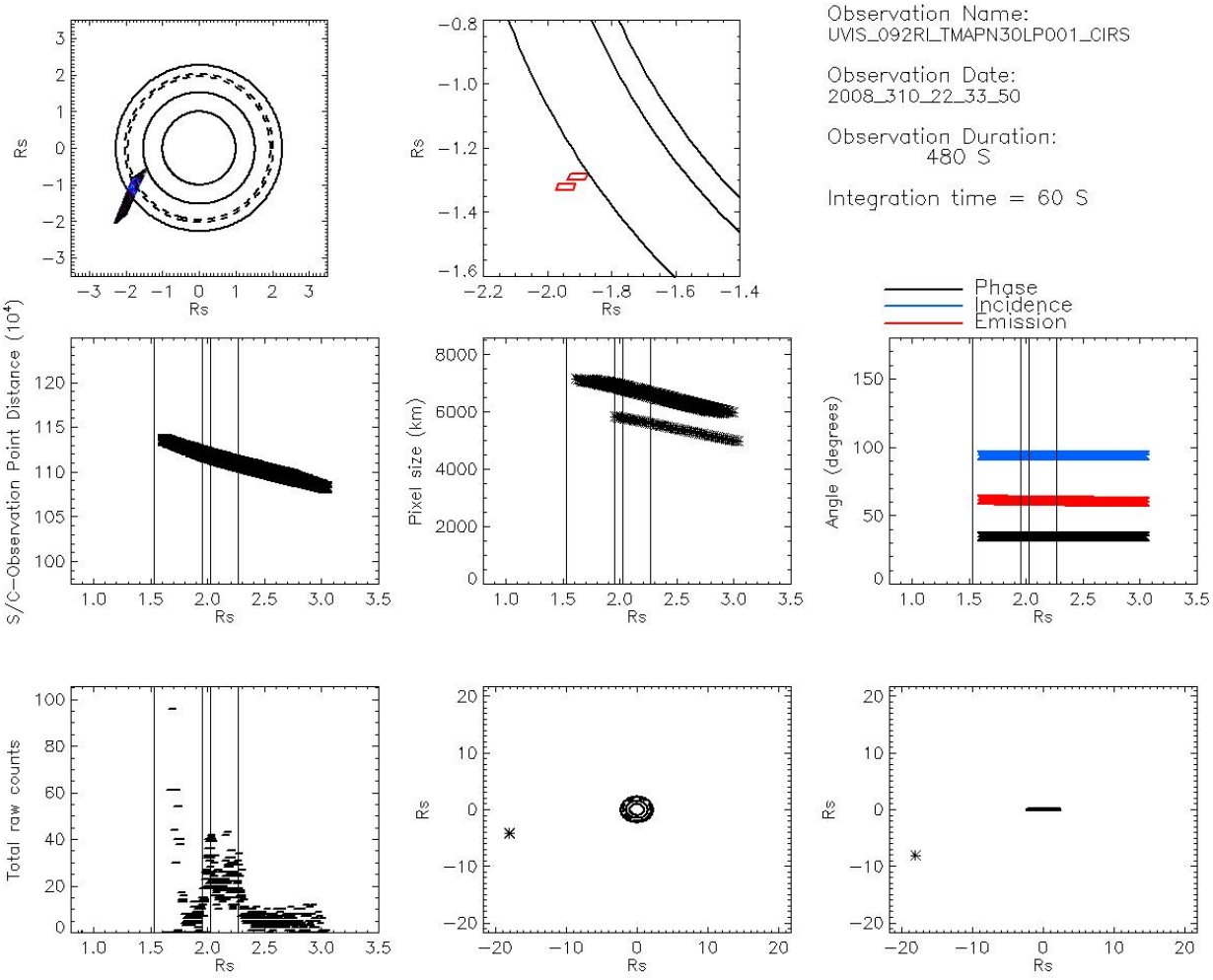


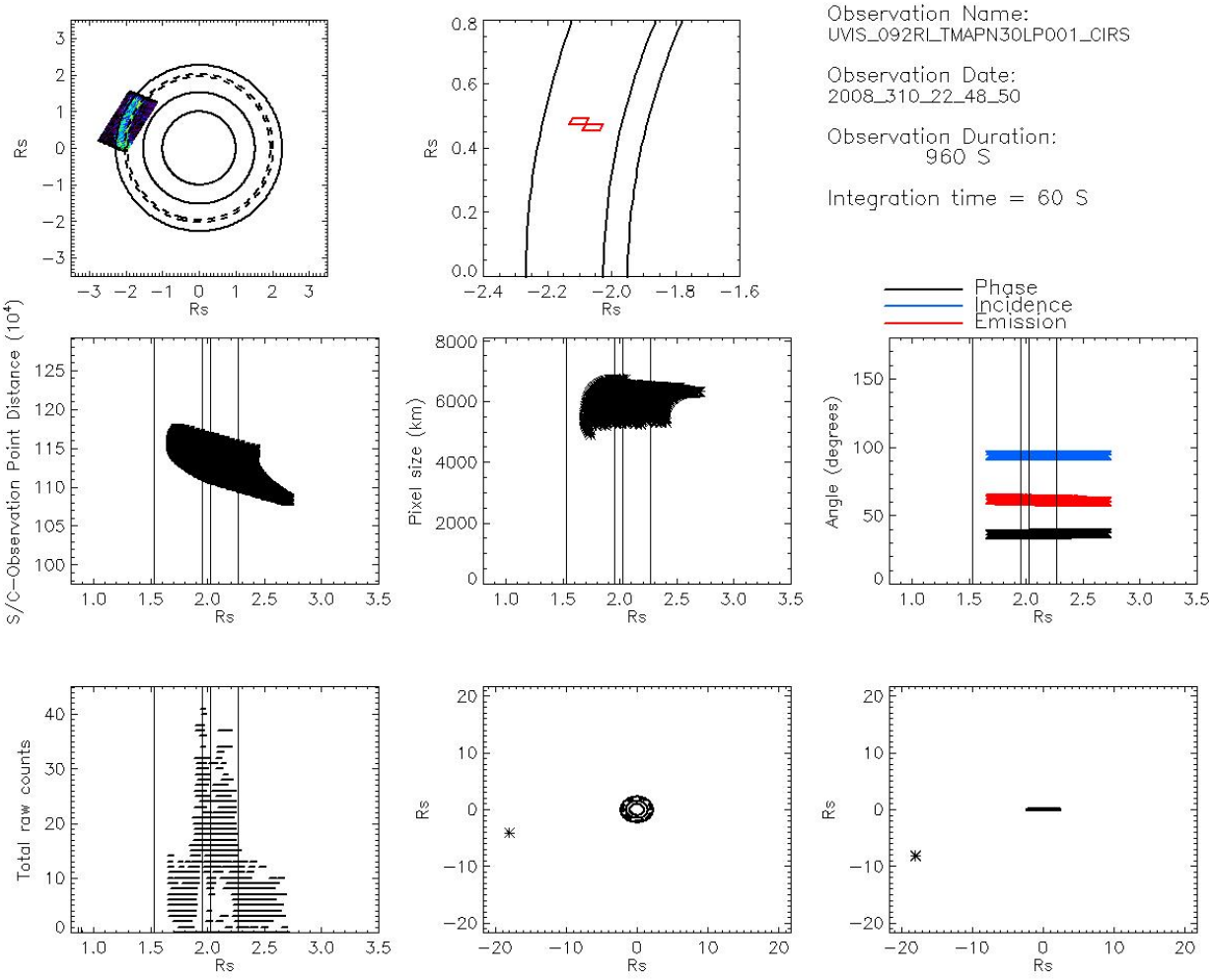


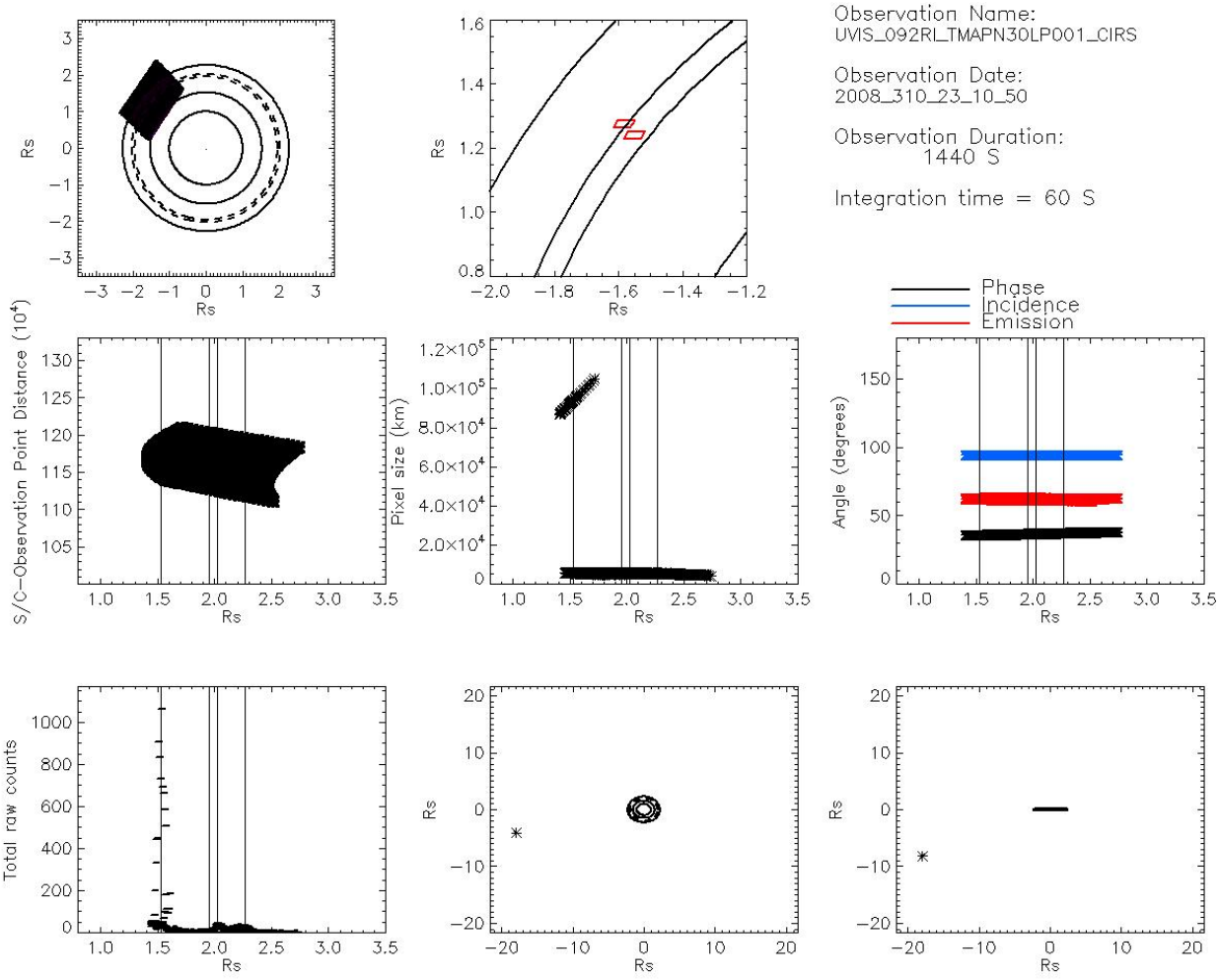


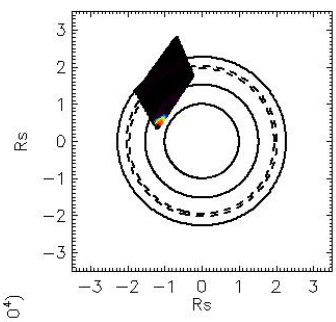


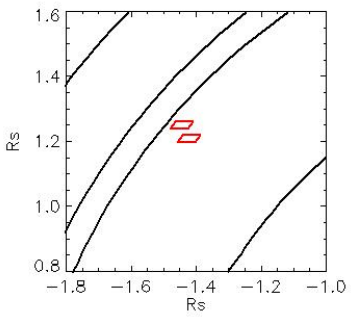



Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS
Observation Date:
2008_310_22_33_50
Observation Duration:
480 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs


Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS
Observation Date:
2008_310_22_48_50
Observation Duration:
960 S
Integration time = 60 S
Rs
S/C-Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Phase
Incidence
Emission
Total raw counts


Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS
Observation Date:
2008_310_23_10_50
Observation Duration:
1440 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts



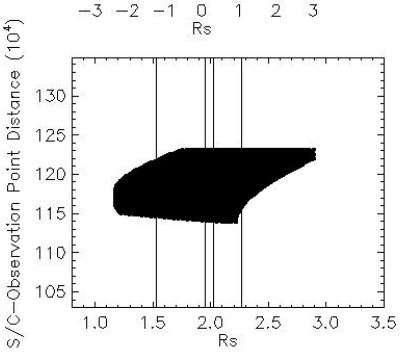


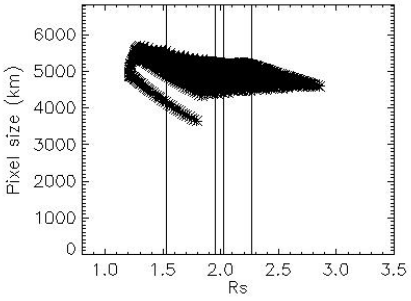
Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS

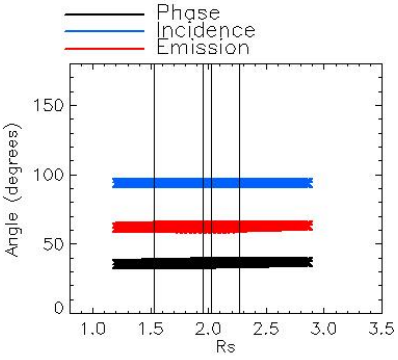
Observation Date:
2008_310_23_40_50

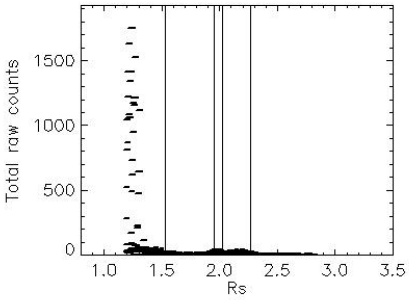
Observation Duration:
1440 S

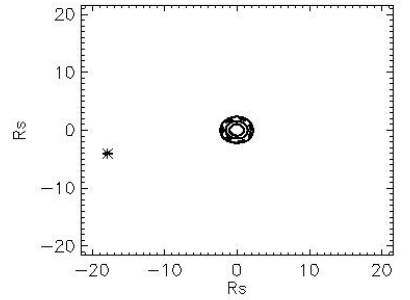
Integration time = 60 S

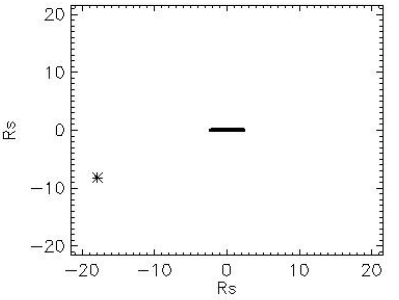


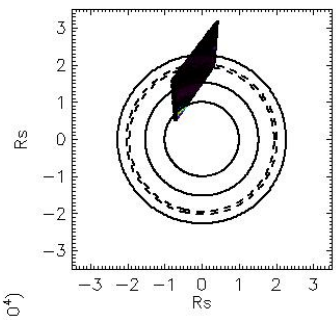


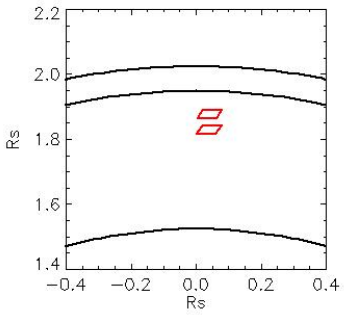










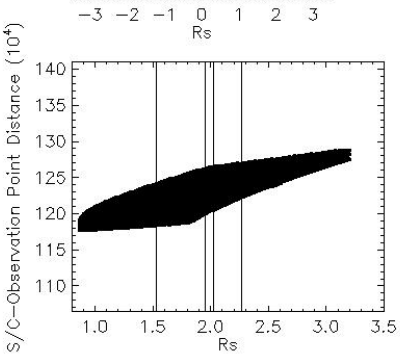


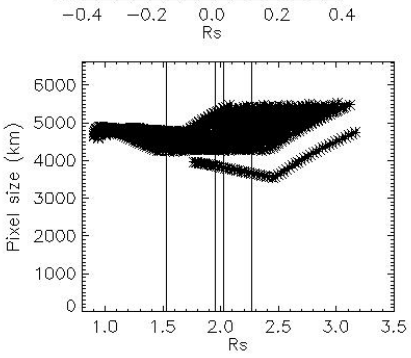
Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS

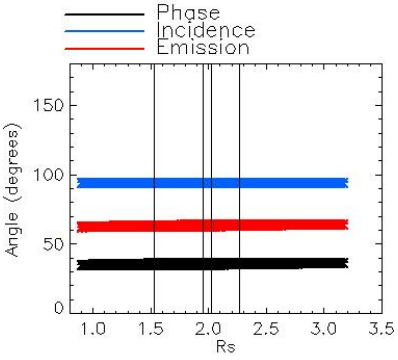
Observation Date:
2008_311_00_10_50

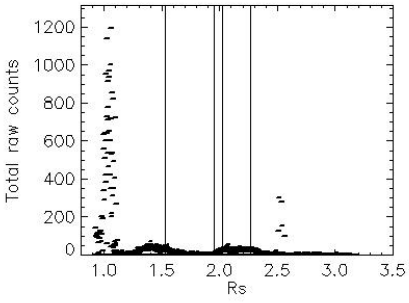
Observation Duration:
1440 S

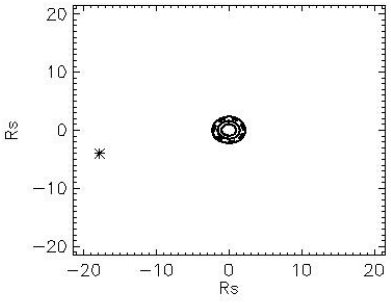
Integration time = 60 S

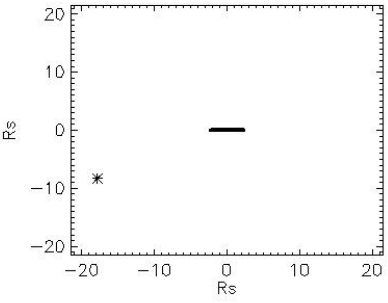


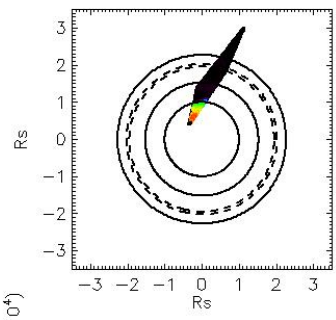


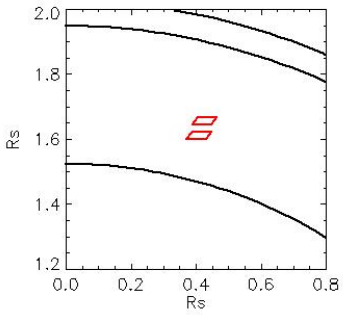










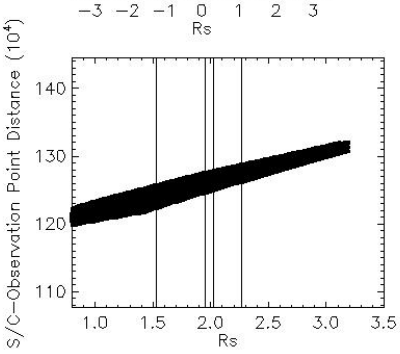


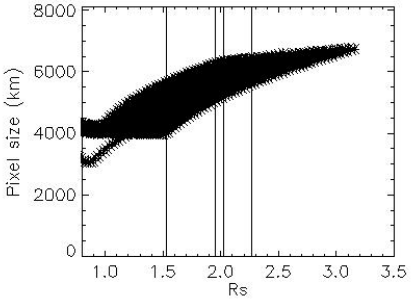
Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS

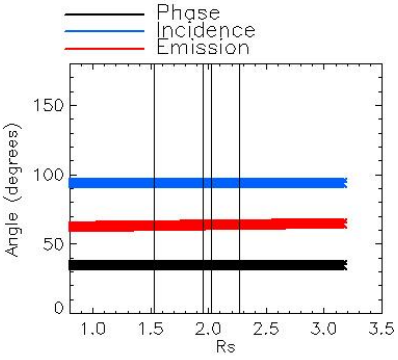
Observation Date:
2008_311_00_40_50

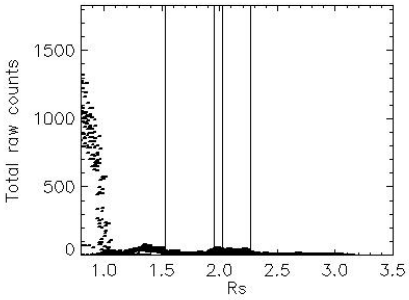
Observation Duration:
1440 S

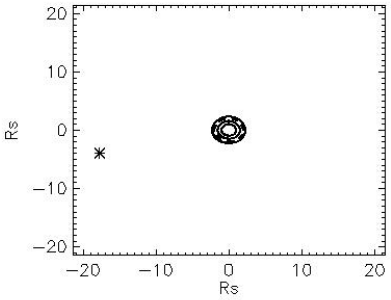
Integration time = 60 S

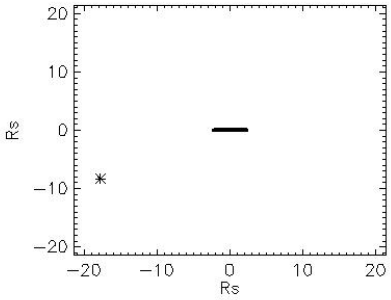


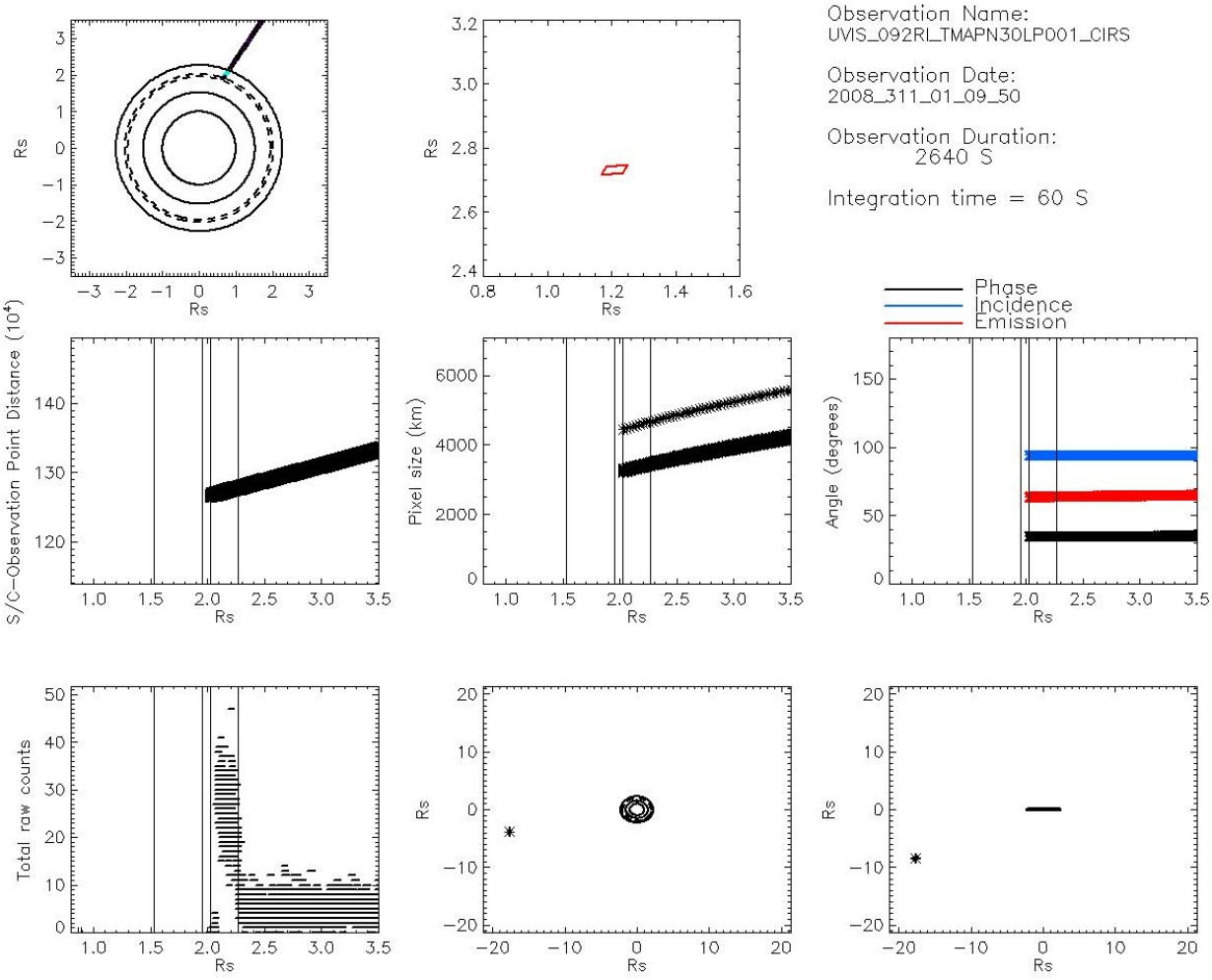


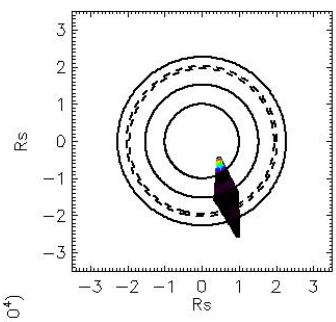


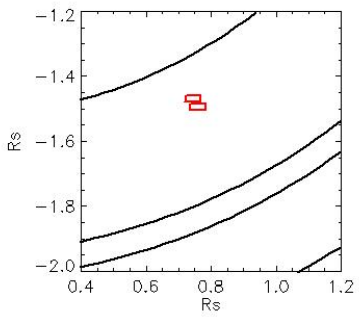







Observation Name:
UVIS_092RI_TMAPN30LP001_CIRS
Observation Date:
2008_311_01_09_50
Observation Duration:
2640 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts



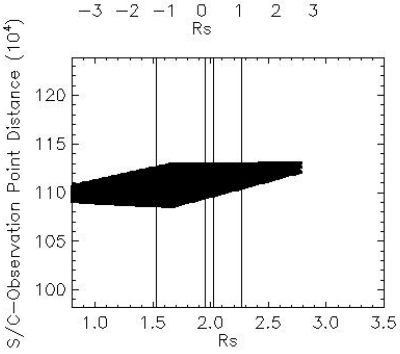


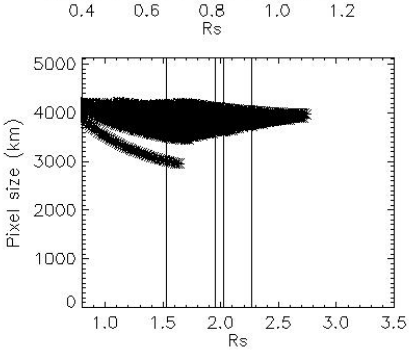
Observation Name:
UVIS_092RI_TMAPN45LP001_CIRS

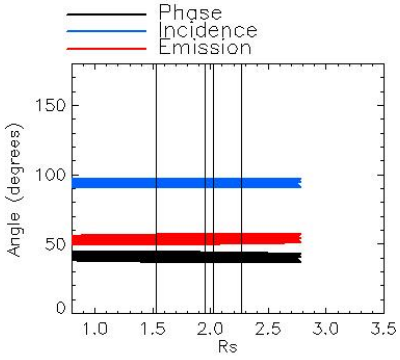
Observation Date:
2008_311_18_22_51

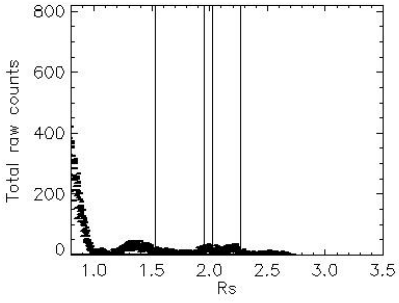
Observation Duration:
2340 S

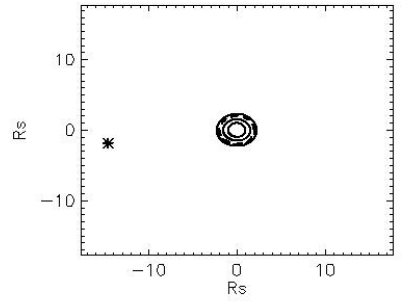
Integration time = 60 S

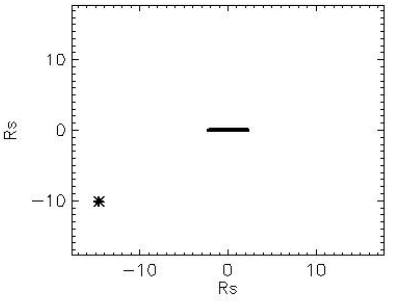


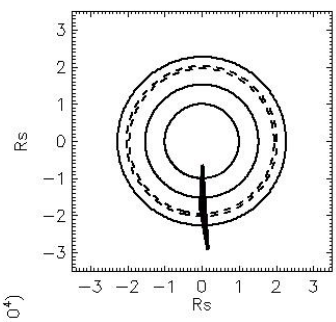


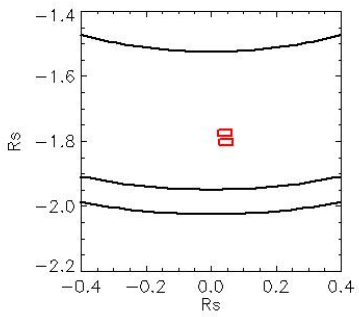










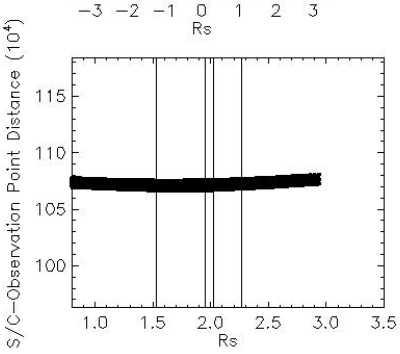


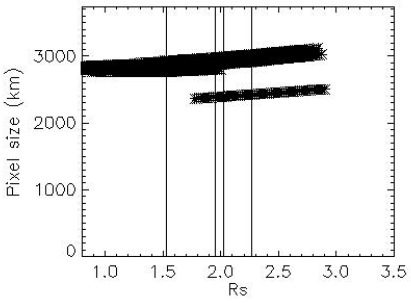
Observation Name:
UVIS_092RI_TMAPN45LP001_CIRS

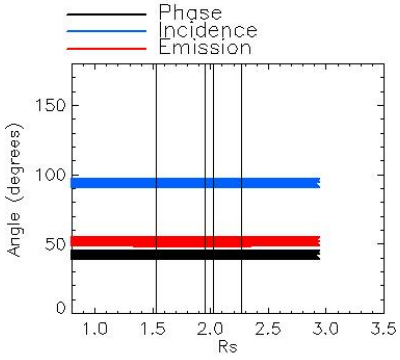
Observation Date:
2008_311_19_07_51

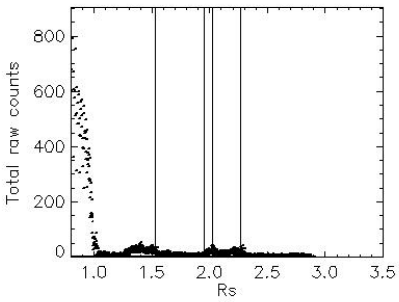
Observation Duration:
2340 S

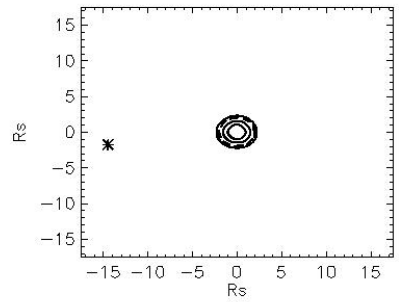
Integration time = 60 S

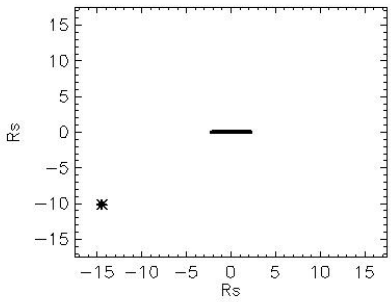


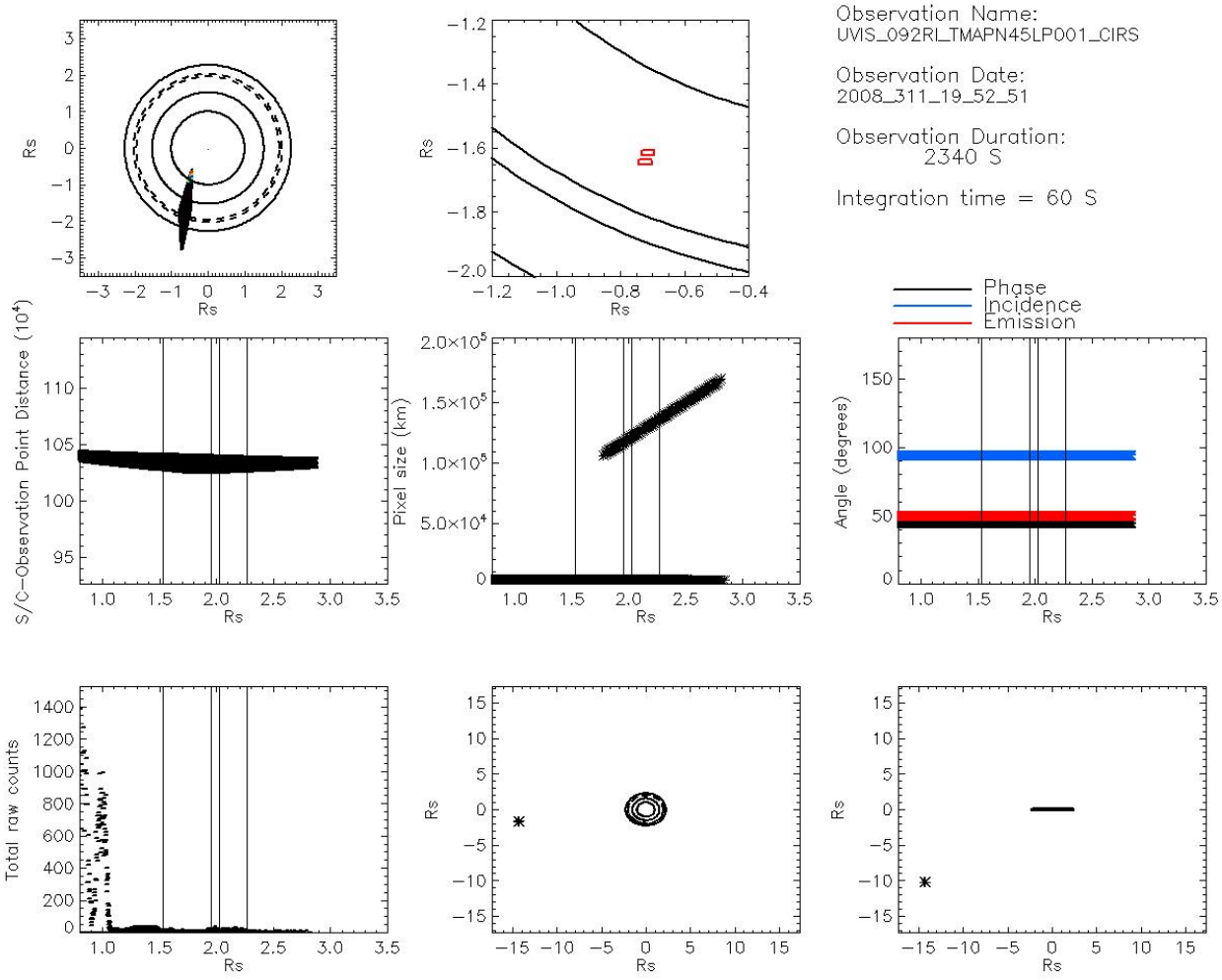


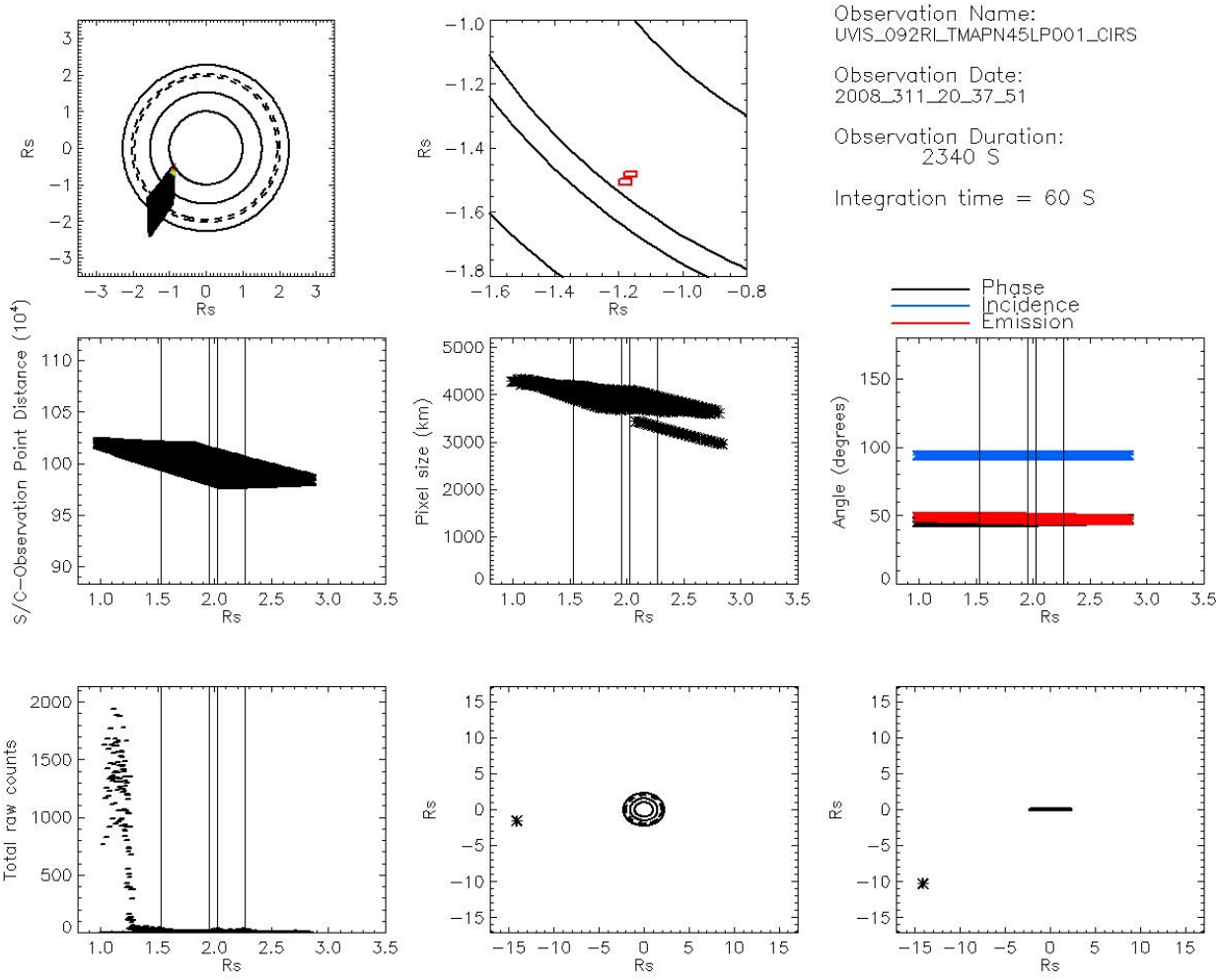


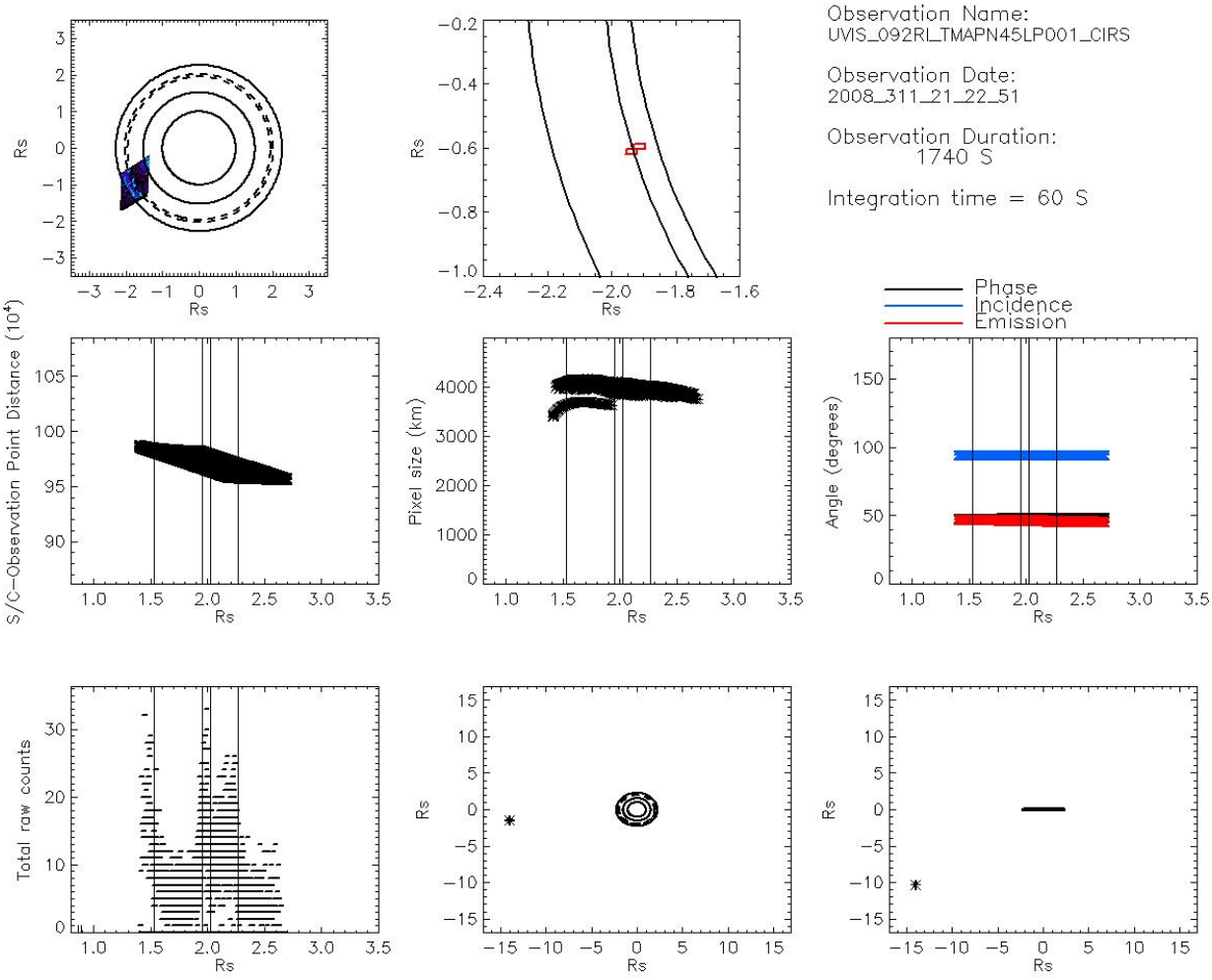


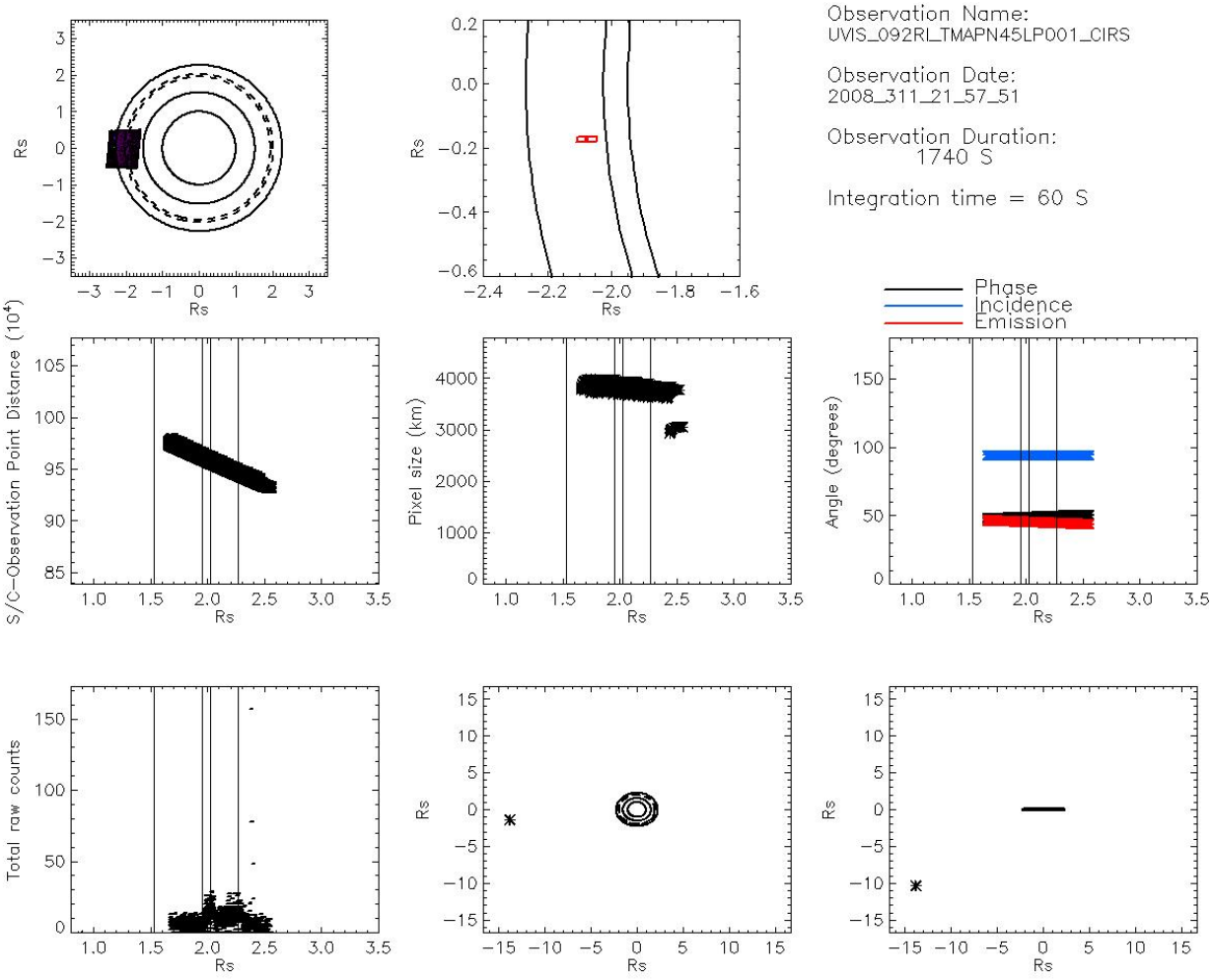


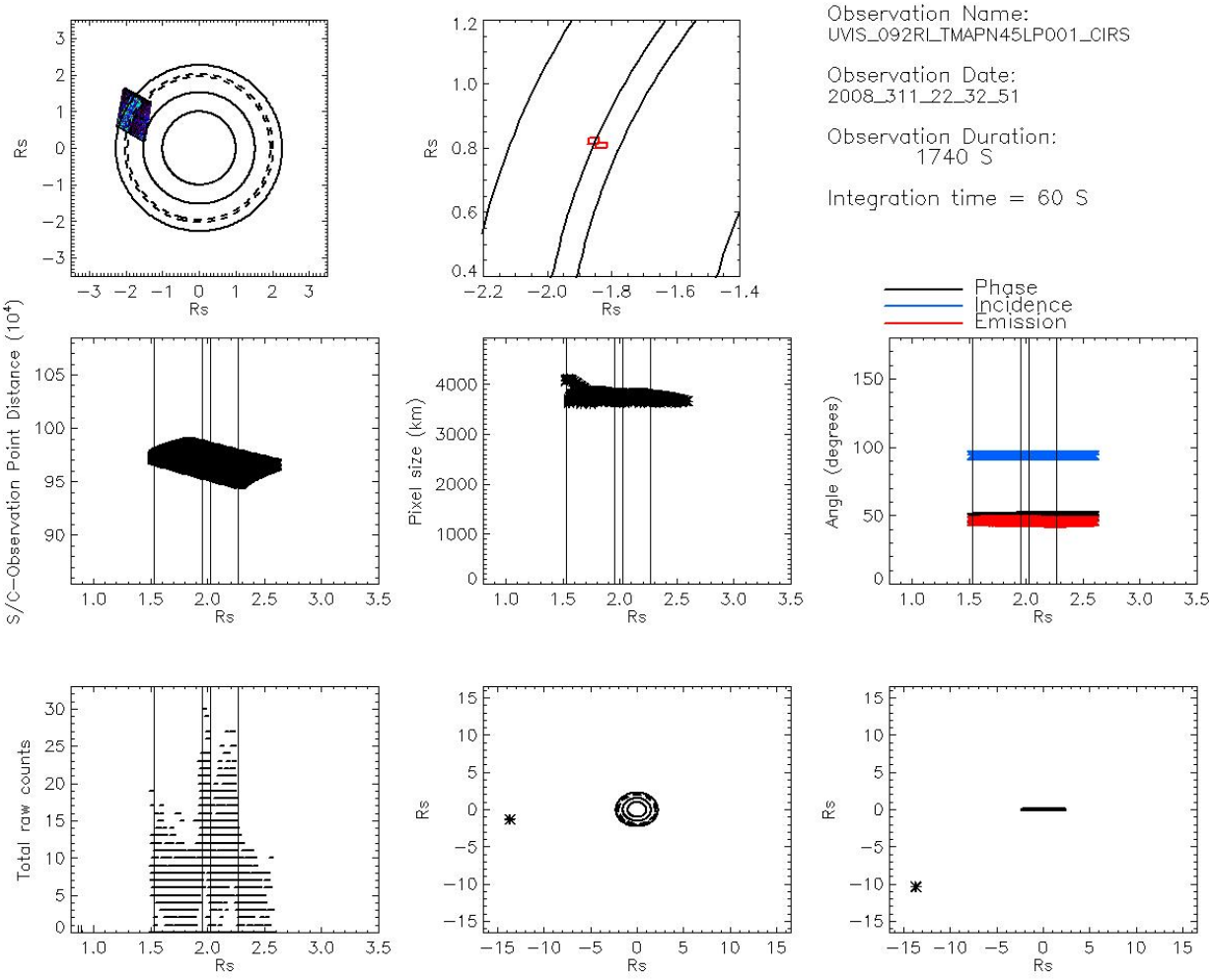


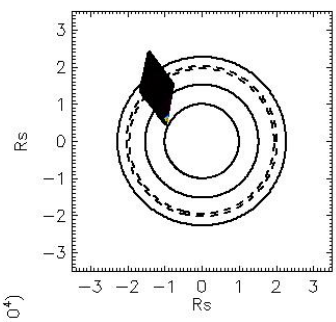

Observation Name:
UVIS_092RI_TMAPN45LP001_CIRS
Observation Date:
2008_311_19_52_51
Observation Duration:
2340 S
Integration time = 60 S
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Phase
Incidence
Emission
Angle (degrees)
Total raw counts

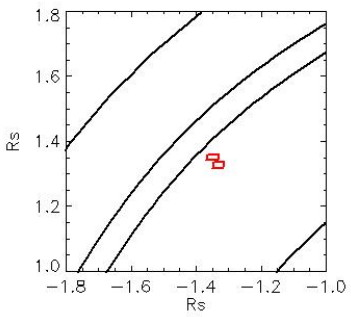

Observation Name:
UVIS_092RI_TMAPN45LP001_CIRS
Observation Date:
2008_311_20_37_51
Observation Duration:
2340 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs


Observation Name:
UVIS_092RI_TMAPN45LP001_CIRS
Observation Date:
2008_311_21_22_51
Observation Duration:
1740 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_092RI_TMAPN45LP001_CIRS
Observation Date:
2008_311_21_57_51
Observation Duration:
1740 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_092RI_TMAPN45LP001_CIRS
Observation Date:
2008_311_22_32_51
Observation Duration:
1740 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs



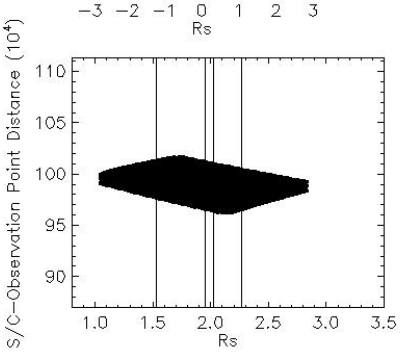


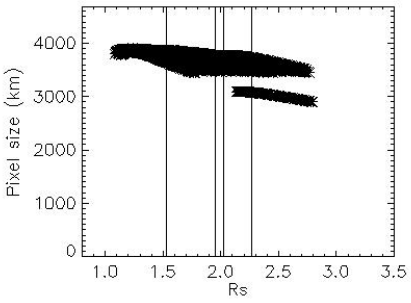
Observation Name:
UVIS_092RI_TMAPN45LP001_CIRS

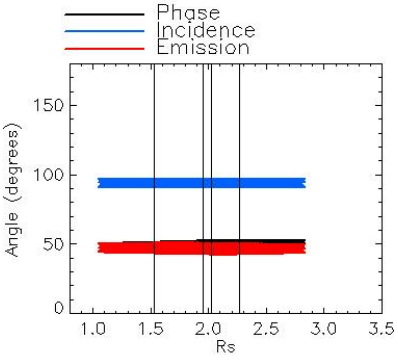
Observation Date:
2008_311_23_07_51

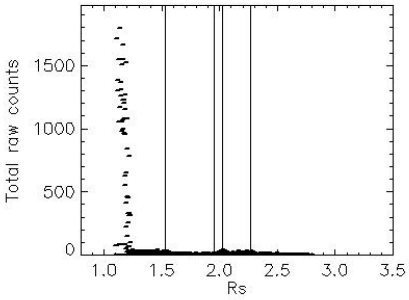
Observation Duration:
2340 S

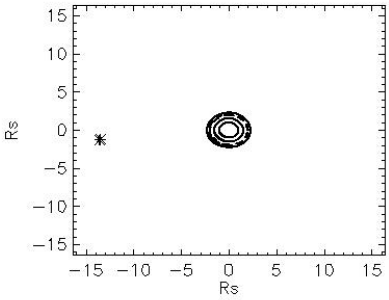
Integration time = 60 S

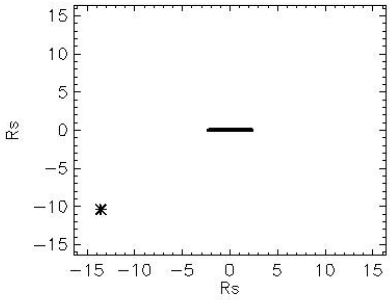


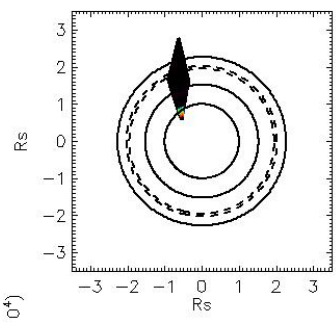


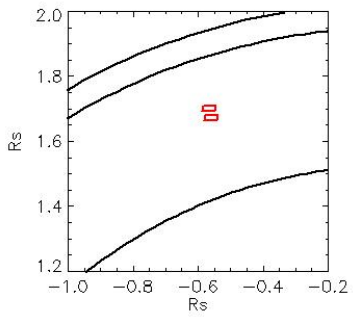










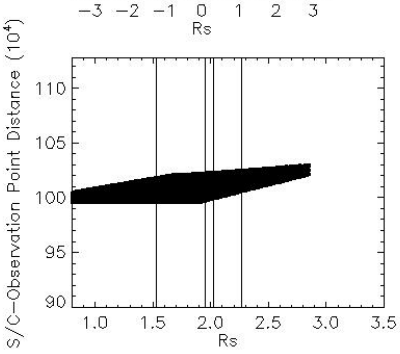


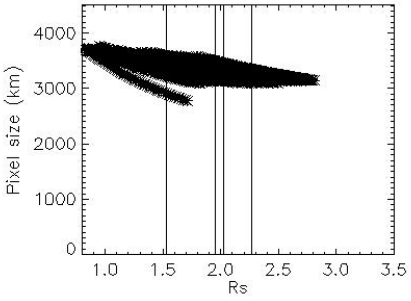
Observation Name:
UVIS_092RI_TMAPN45LP001_CIRS

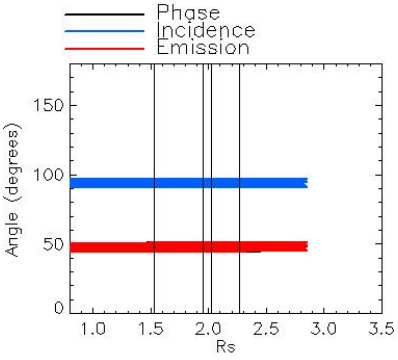
Observation Date:
2008_311_23_52_51

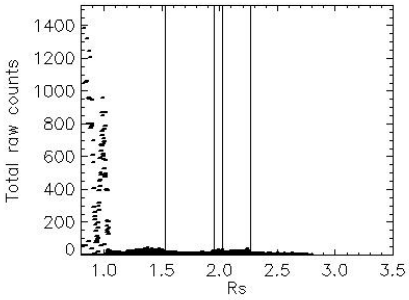
Observation Duration:
2340 S

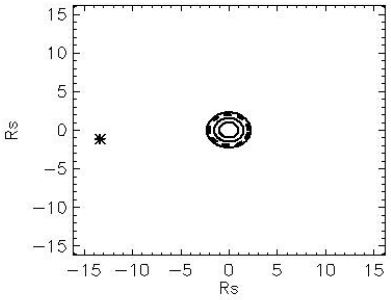
Integration time = 60 S

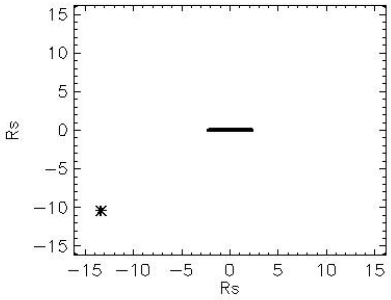


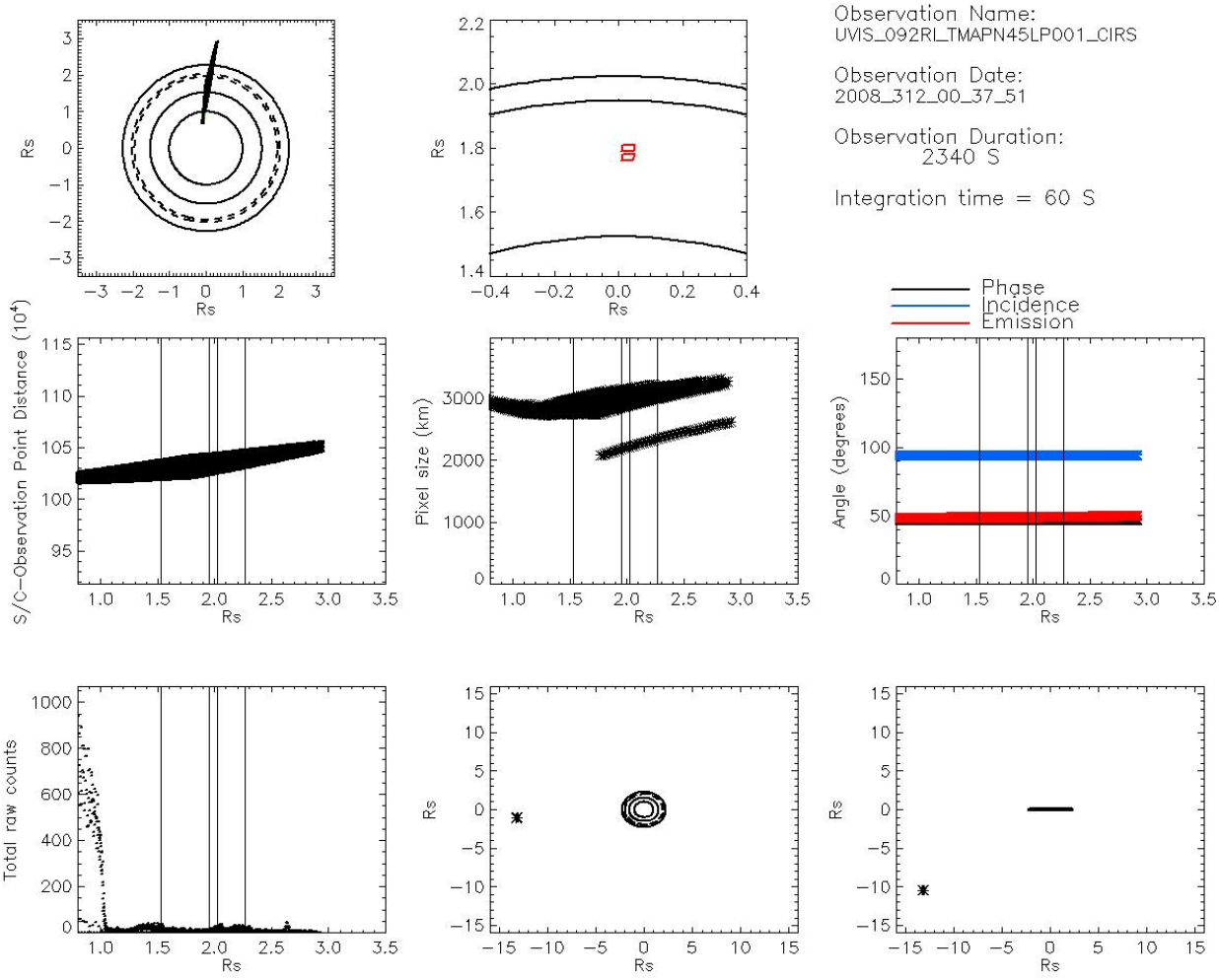


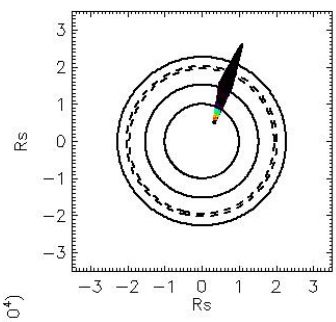


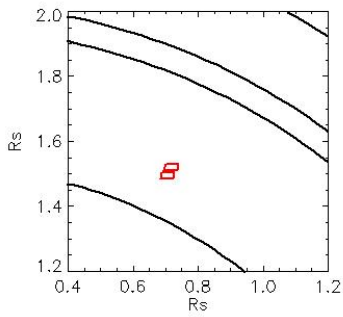







Observation Name:
UVIS_092RI_TMAPN45LP001_CIRS
Observation Date:
2008_312_00_37_51
Observation Duration:
2340 S
Integration time = 60 S
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Phase
Incidence
Emission
Angle (degrees)
Total raw counts



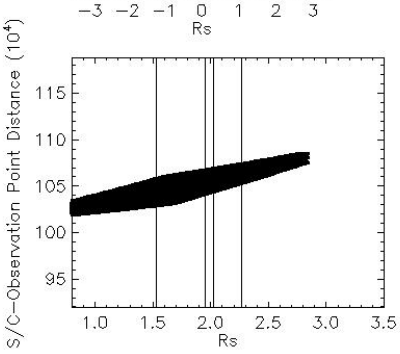


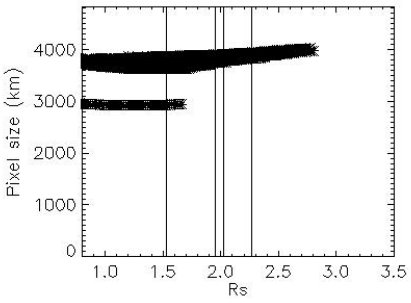
Observation Name:
UVIS_092RI_TMAPN45LP001_CIRS

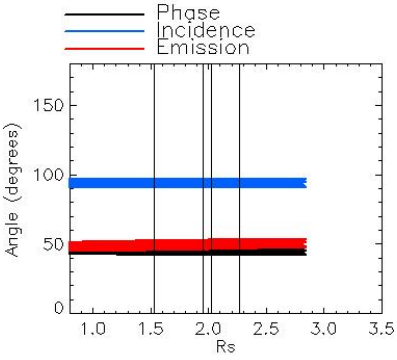
Observation Date:
2008_312_01_22_51

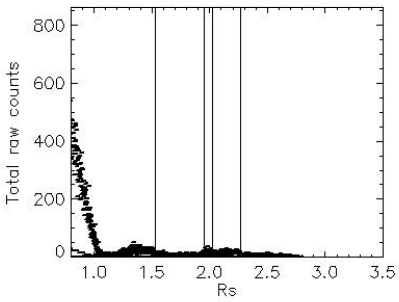
Observation Duration:
2340 S

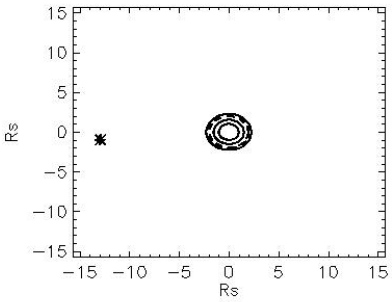
Integration time = 60 S

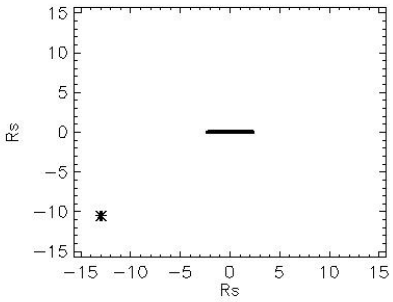


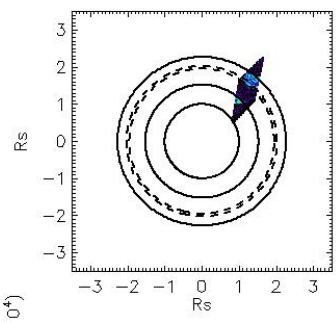


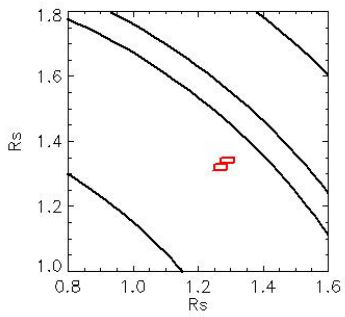










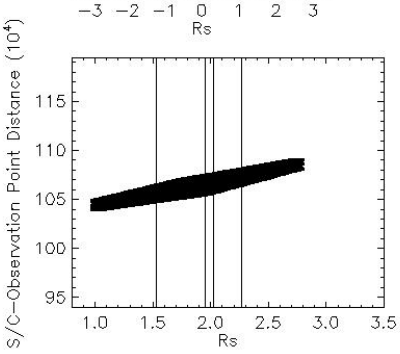


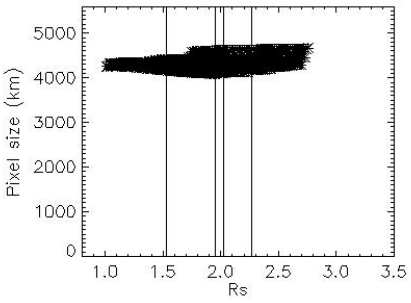
Observation Name:
UVIS_092RI_TMAPN45LP001_CIRS

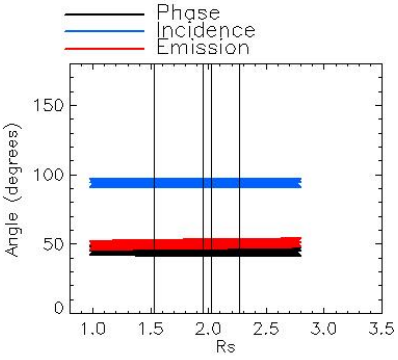
Observation Date:
2008_312_02_07_51

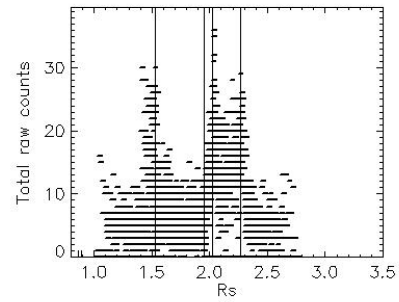
Observation Duration:
1740 S

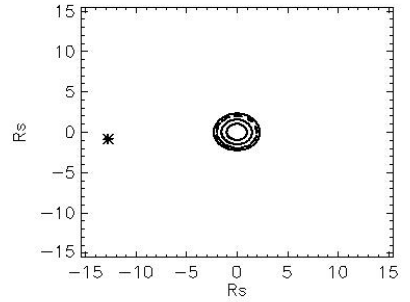
Integration time = 60 S

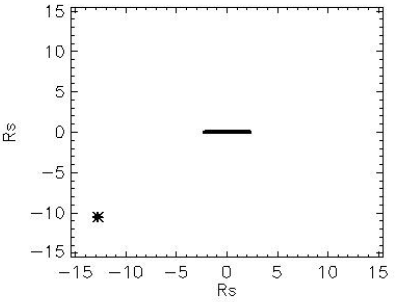


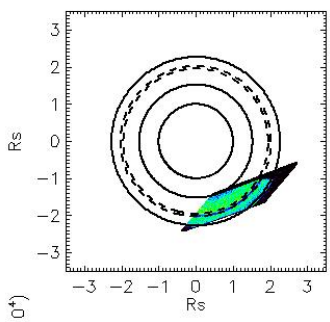


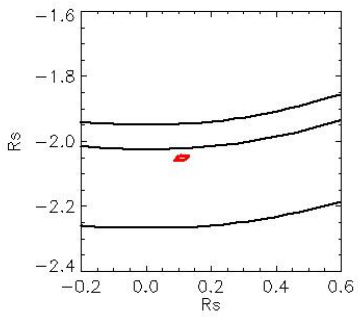










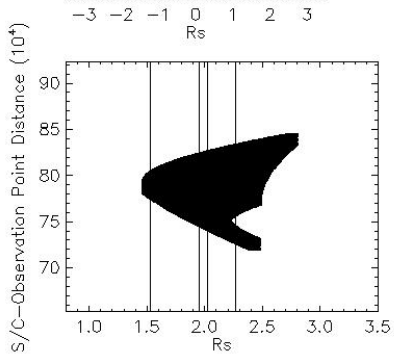


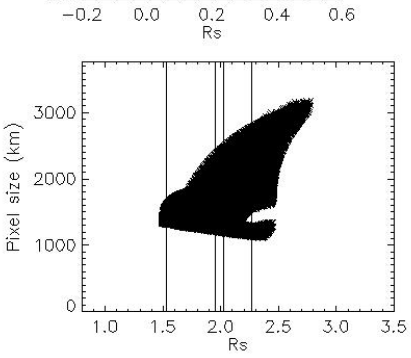
Observation Name:
UVIS_092RI_RSCNCOCC001_VIMS

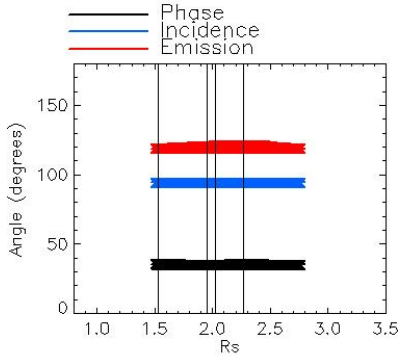
Observation Date:
2008_315_00_06_36

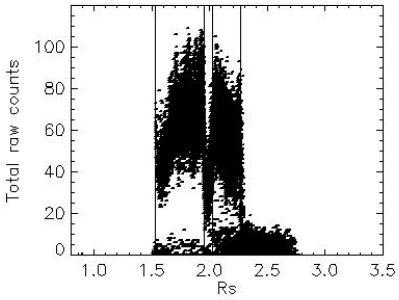
Observation Duration:
14400 S

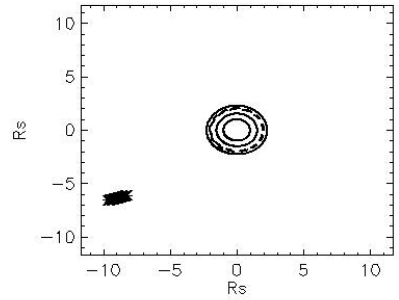
Integration time = 60 S

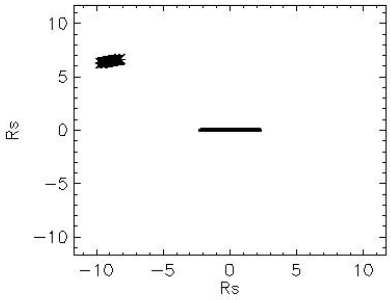










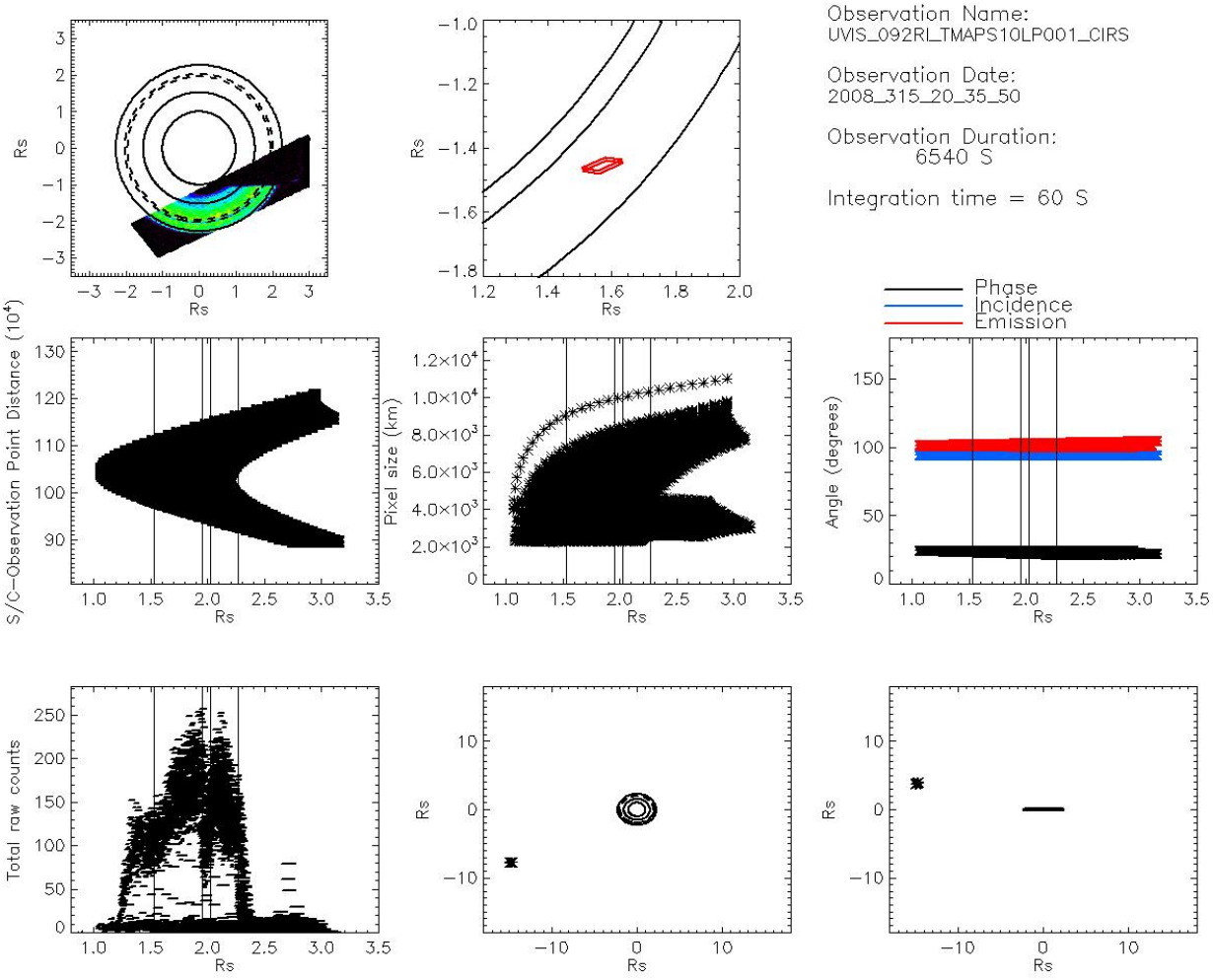


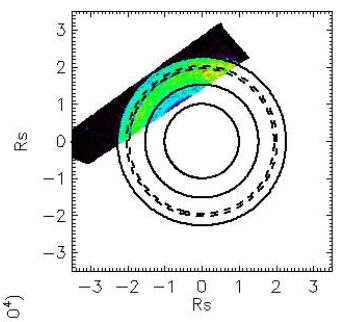
Observation Name:
UVIS_092RI_TMAPS10LP001_CIRS

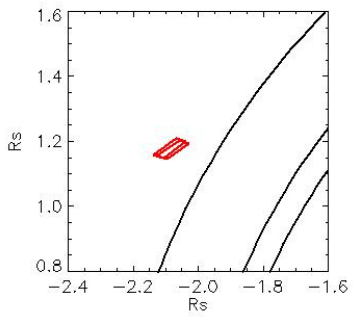
Observation Date:
2008_315_20_35_50

Observation Duration:
6540 S

Integration time = 60 S





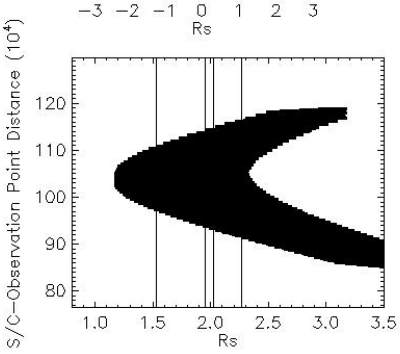


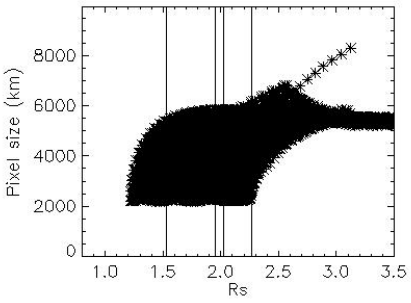
Observation Name:
UVIS_092RI_TMAPS10LP001_CIRS

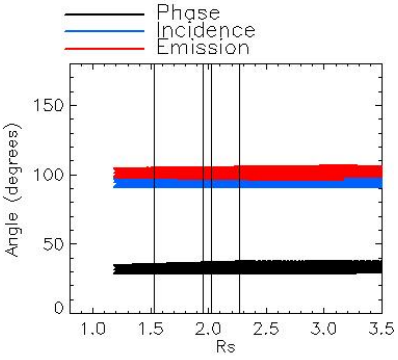
Observation Date:
2008_315_22_30_50

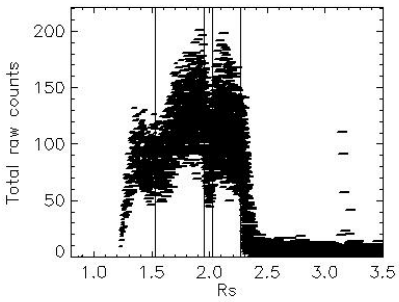
Observation Duration:
6540 S

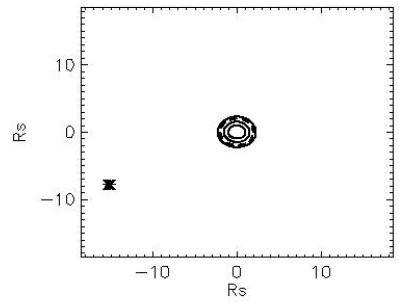
Integration time = 60 S

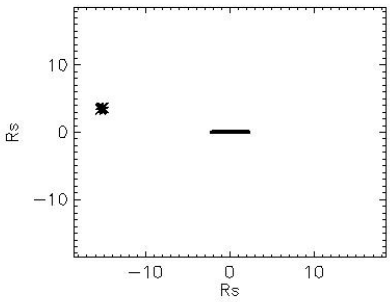


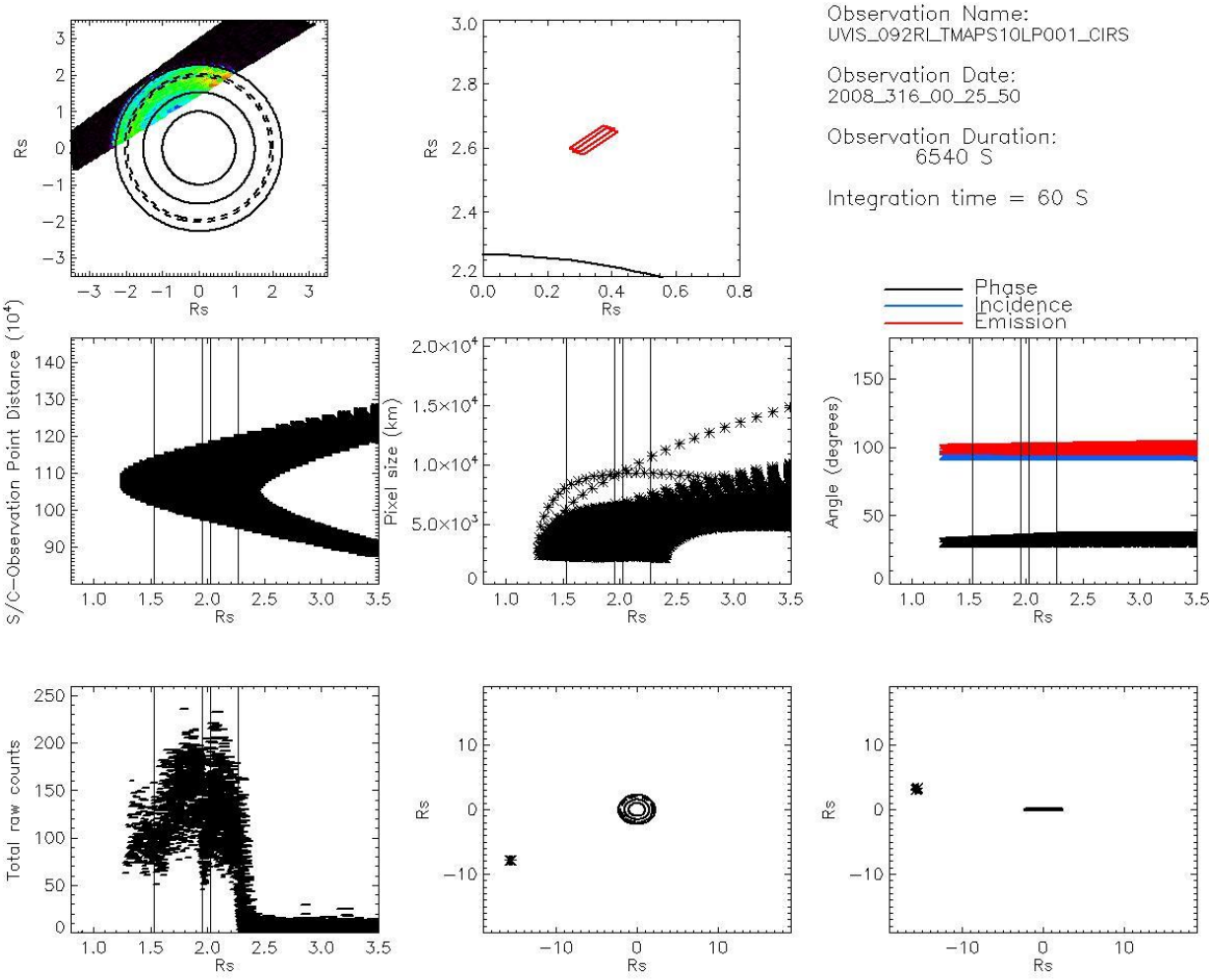


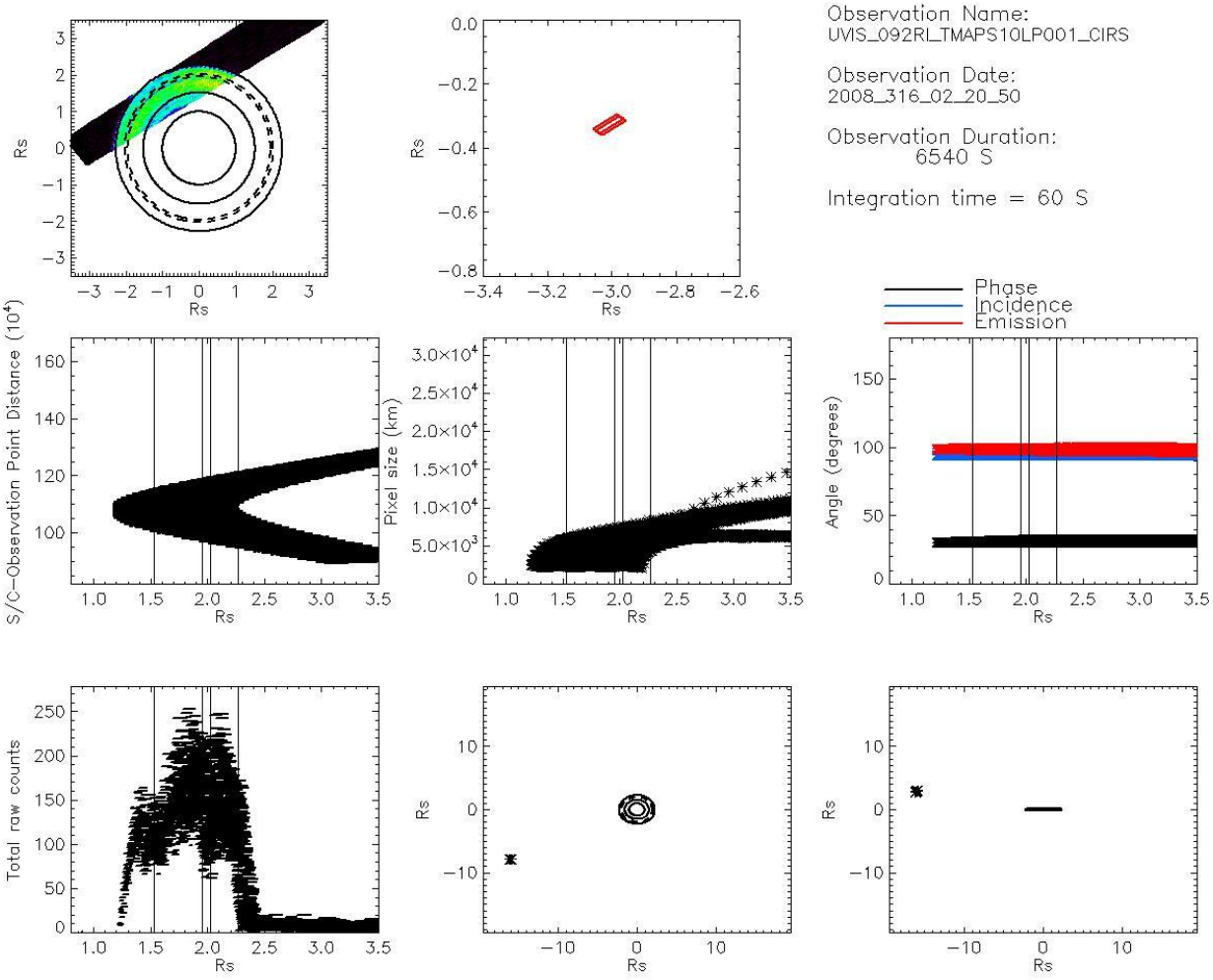


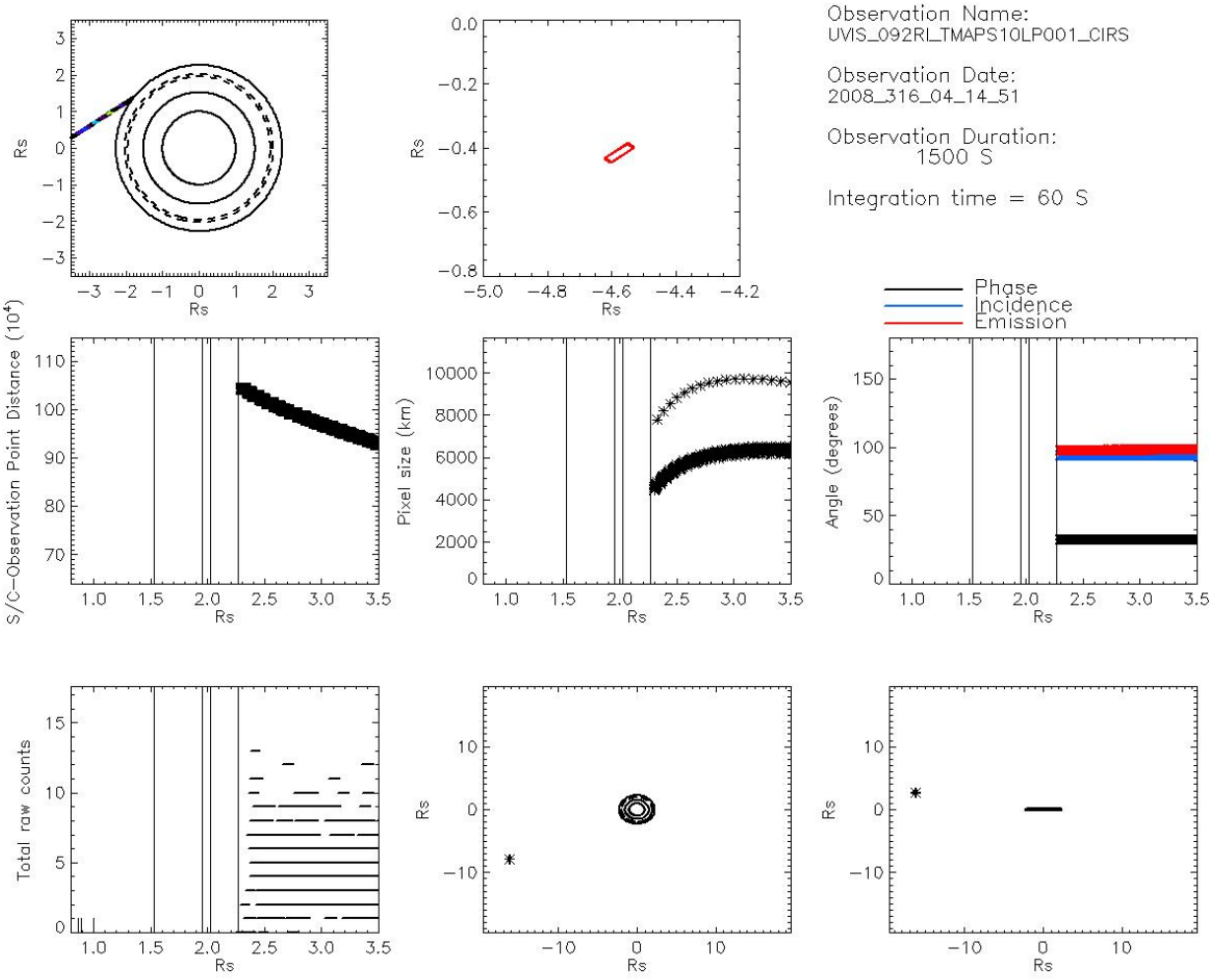


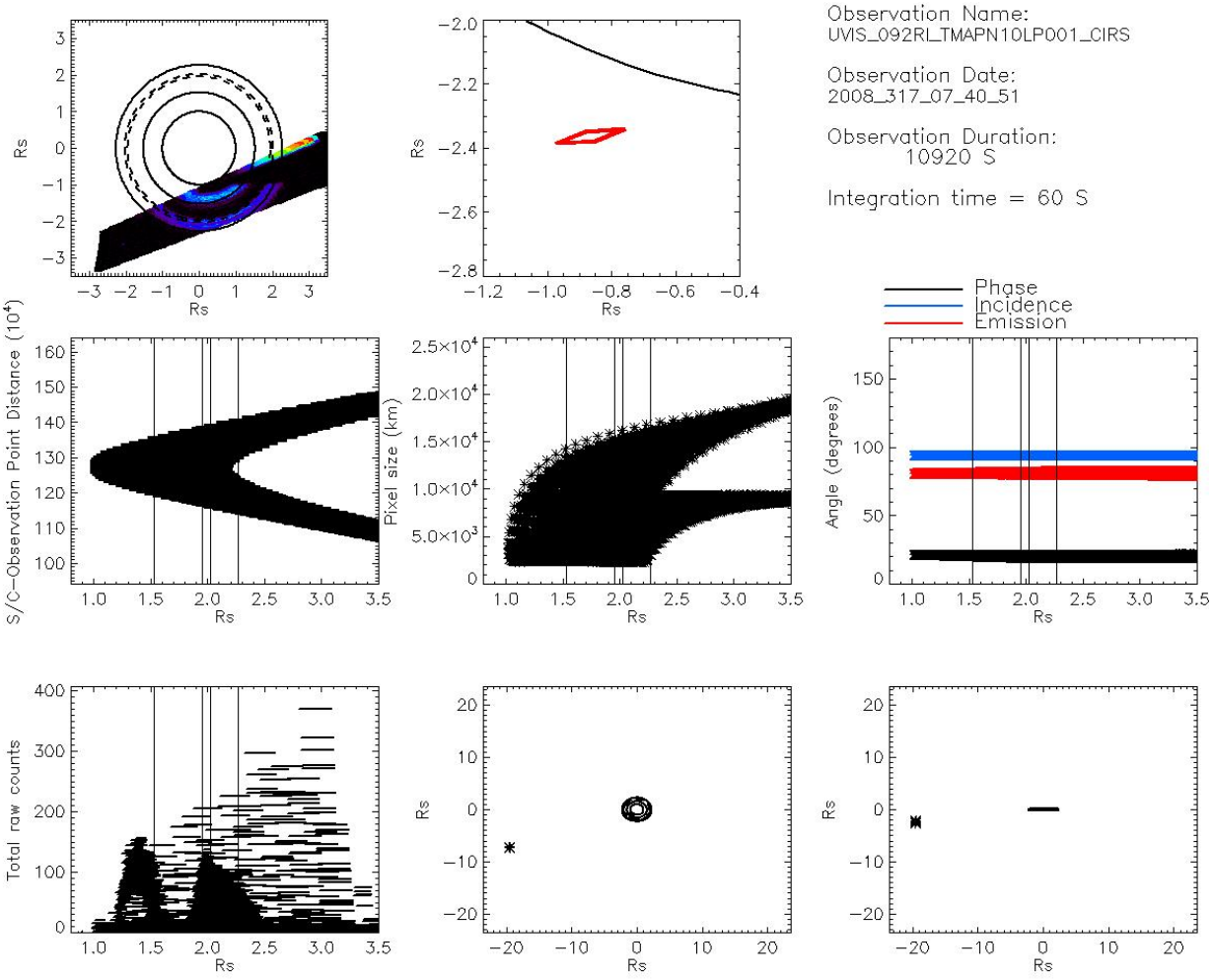


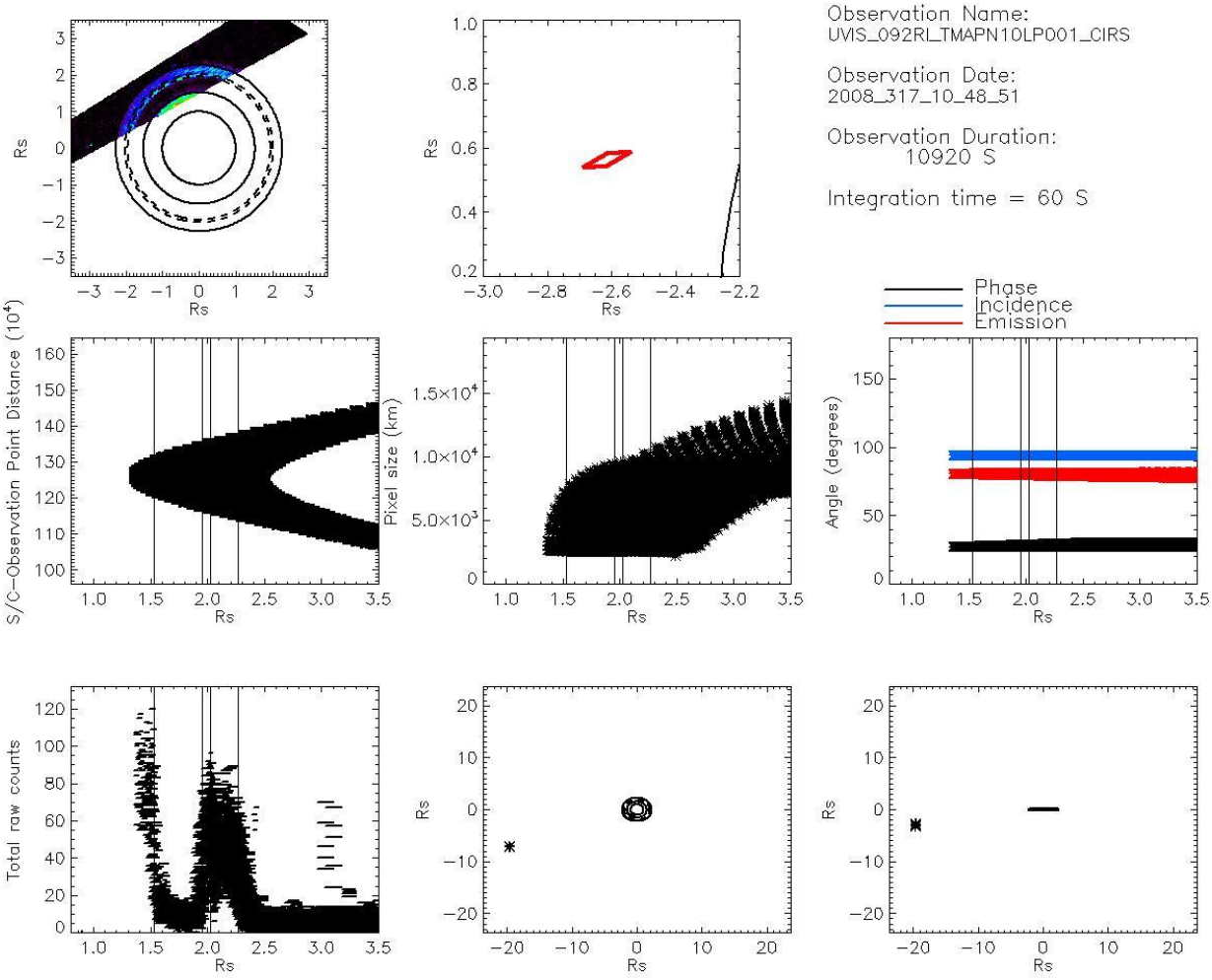



Observation Name:
UVIS_092RI_TMAPS10LP001_CIRS
Observation Date:
2008_316_00_25_50
Observation Duration:
6540 S
Integration time = 60 S
Phase
Incidence
Emission
Rs
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts


Observation Name:
UVIS_092RI_TMAPS10LP001_CIRS
Observation Date:
2008_316_02_20_50
Observation Duration:
6540 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_092RI_TMAPS10LP001_CIRS
Observation Date:
2008_316_04_14_51
Observation Duration:
1500 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_092RI_TMAPN10LP001_CIRS
Observation Date:
2008_317_07_40_51
Observation Duration:
10920 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_092RI_TMAPN10LP001_CIRS
Observation Date:
2008_317_10_48_51
Observation Duration:
10920 S
Integration time = 60 S
Phase
Incidence
Emission
S/C–Observation Point Distance (10^4)
Pixel size (km)
Angle (degrees)
Total raw counts
Rs