

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.

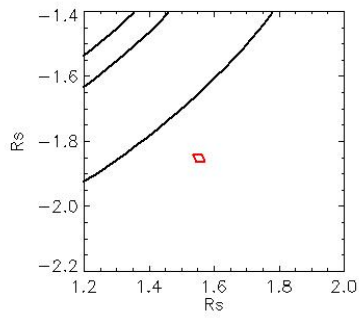
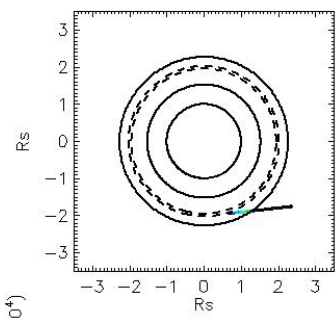
Middle center: Maximum projected smeared pixel size for all data records plotted against the radial location of the projected pixel at the middle of the integration period.

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.



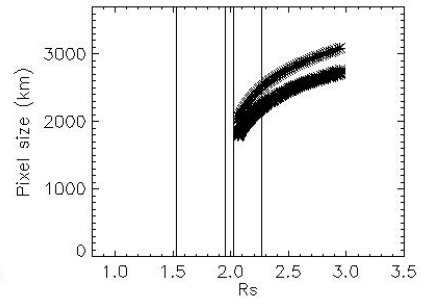
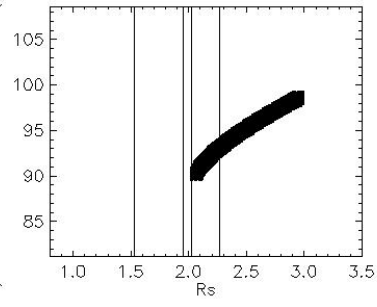
Observation Name:
UVS_077RLVTMPU37MP001_CIRS

Observation Date:
2008_202_04_55_51

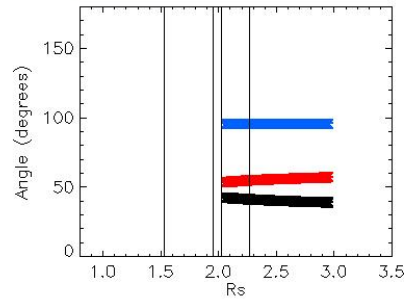
Observation Duration:
600 S

Integration time = 60 S

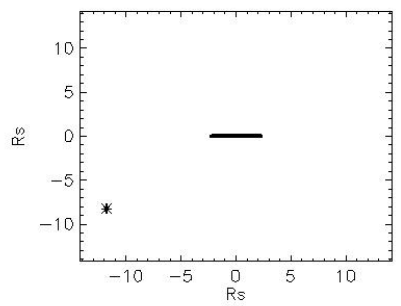
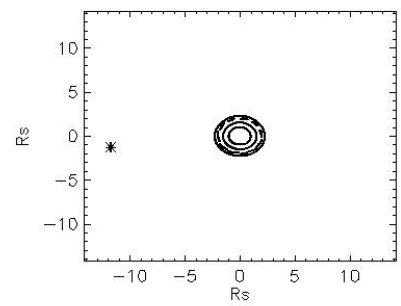
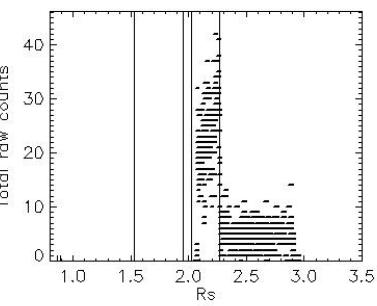
S/C—Observation Point Distance (10^4)

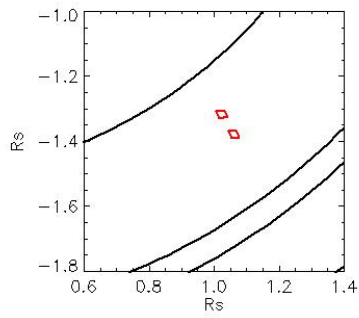
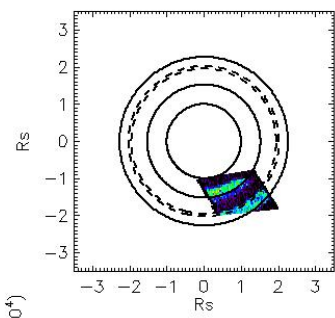


— Phase
— Incidence
— Emission

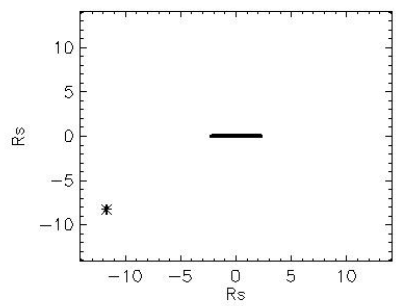
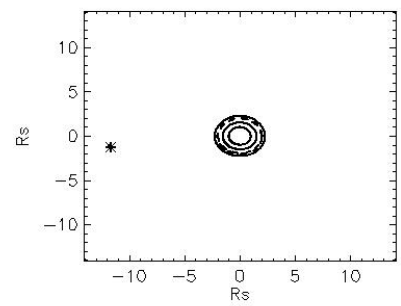
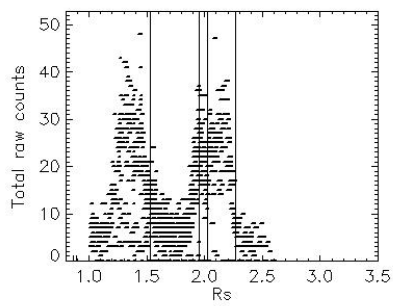
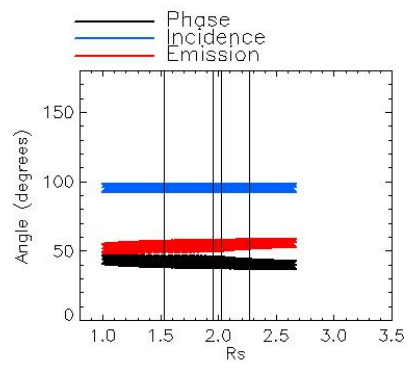
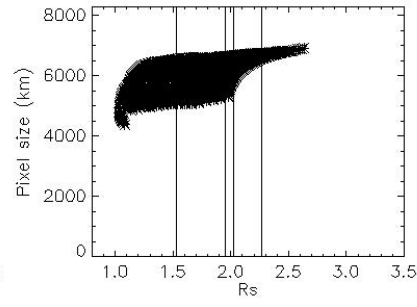
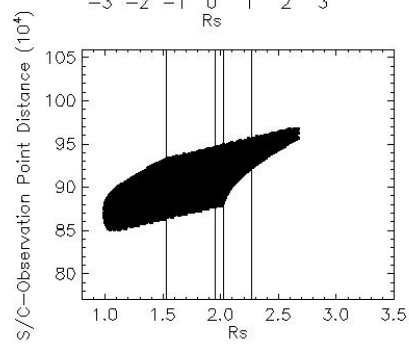


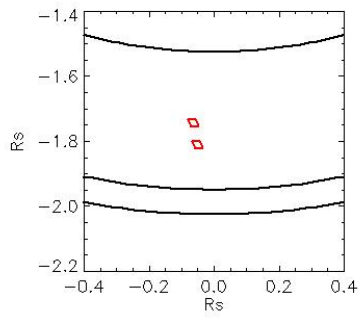
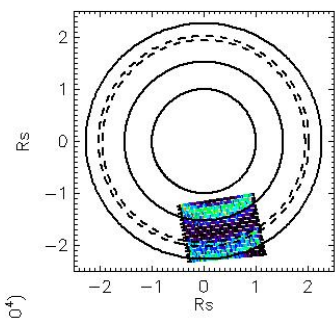
Total raw counts





Observation Name:
 UVS_077RLVTMPU37MP001_CIRS
 Observation Date:
 2008_202_05_10_51
 Observation Duration:
 960 S
 Integration time = 60 S



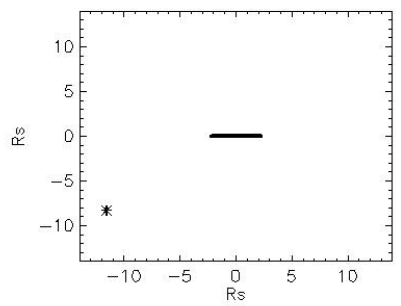
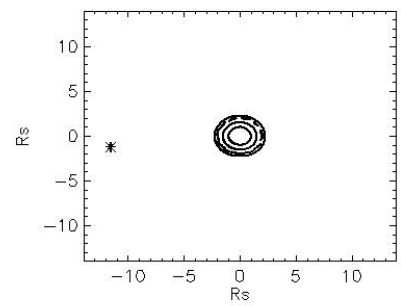
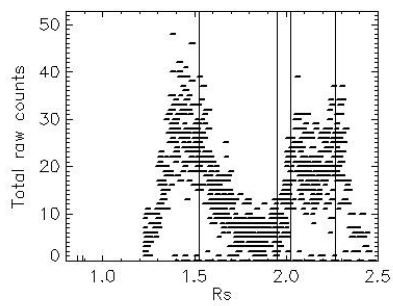
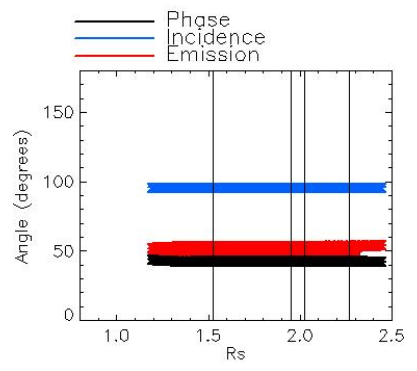
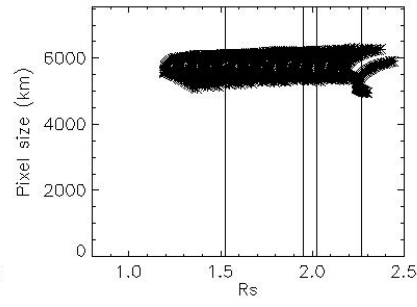
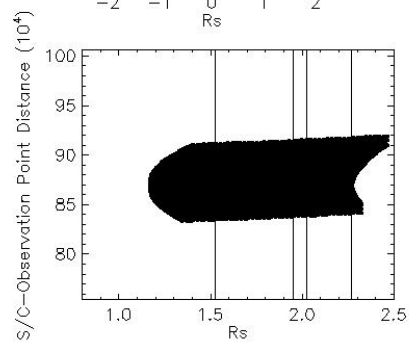


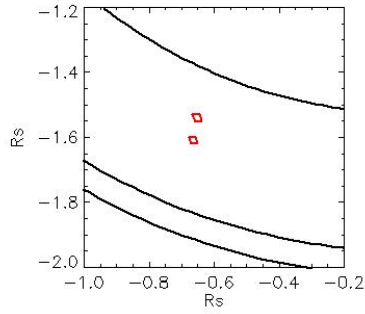
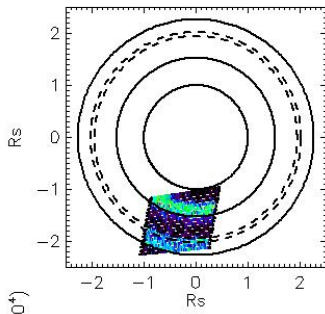
Observation Name:
UMS_077RLVTMPU37MP001_CIRS

Observation Date:
2008_202_05_32_51

Observation Duration:
960 S

Integration time = 60 S



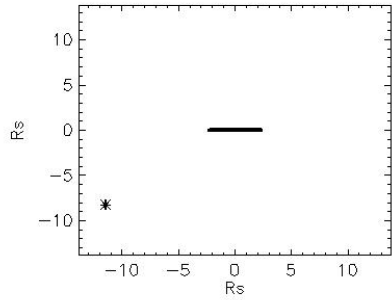
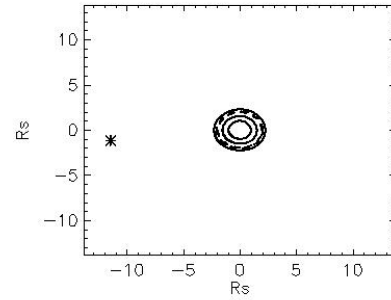
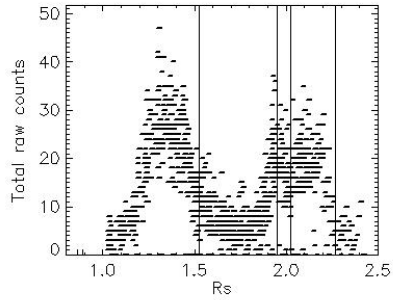
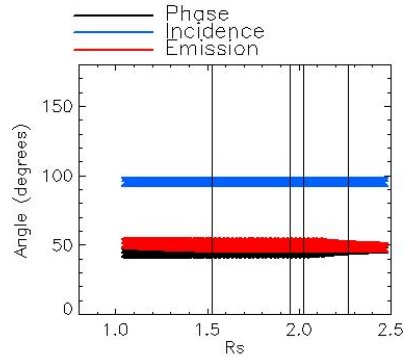
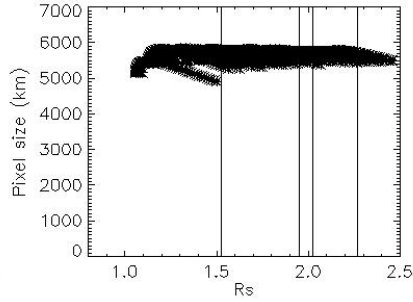
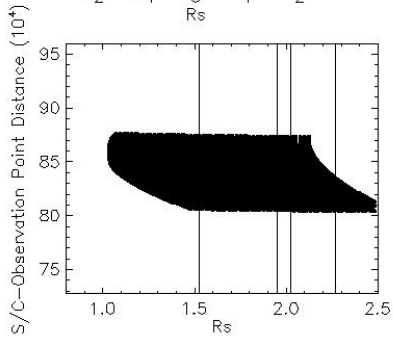


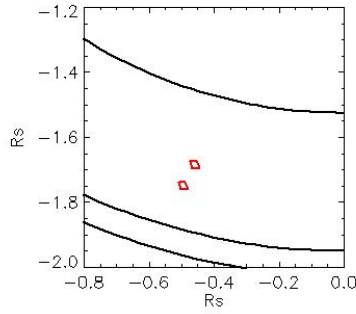
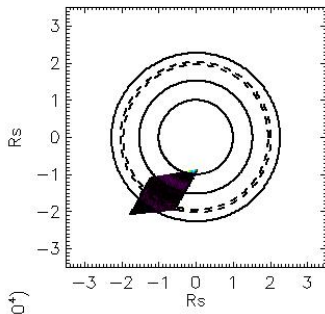
Observation Name:
UMS_077RLVTMPU37MP001_CIRS

Observation Date:
2008_202_05_54_51

Observation Duration:
960 S

Integration time = 60 S



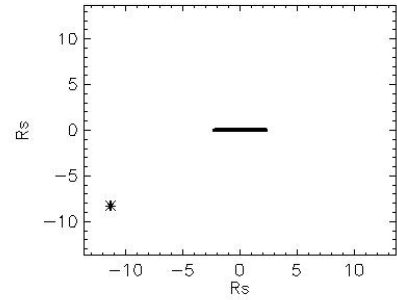
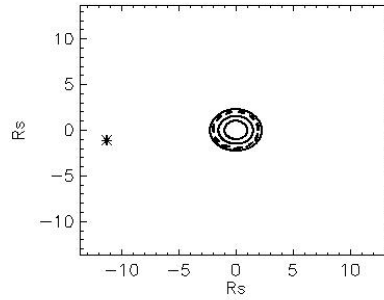
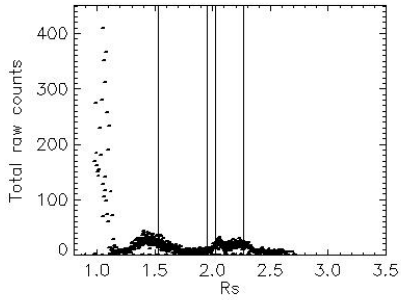
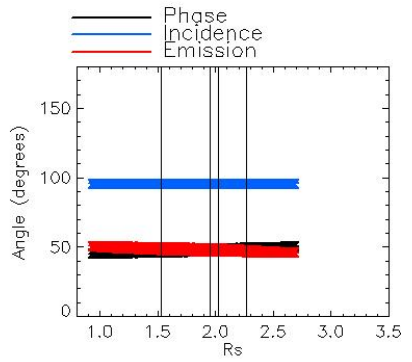
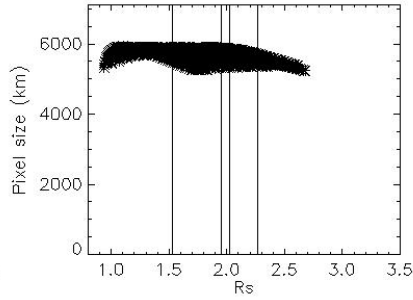
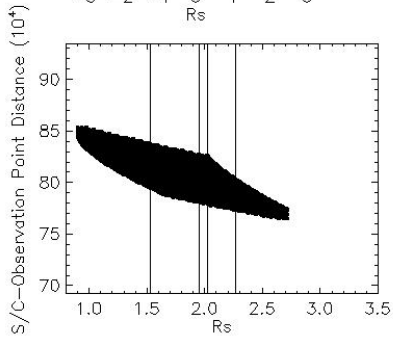


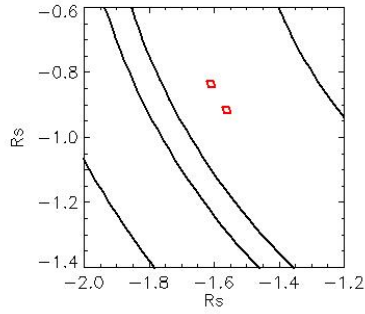
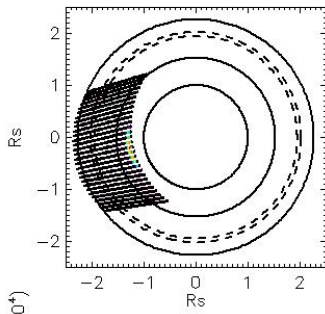
Observation Name:
UMS_077RLVTMPU37MP001_CIRS

Observation Date:
2008_202_06_16_51

Observation Duration:
960 S

Integration time = 60 S



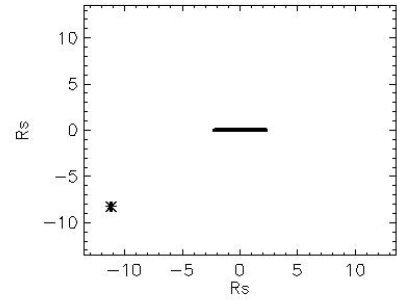
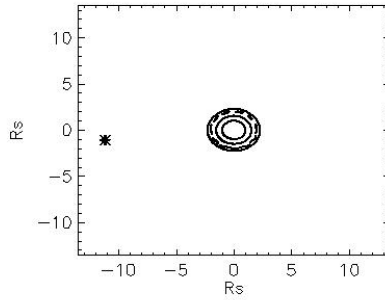
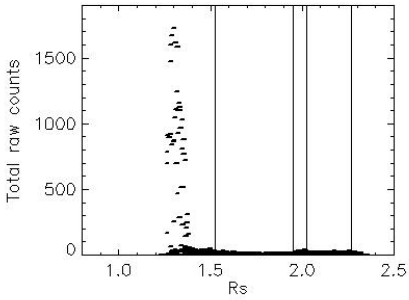
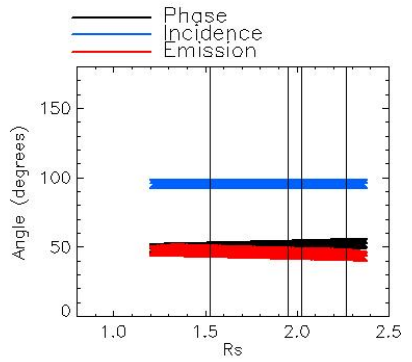
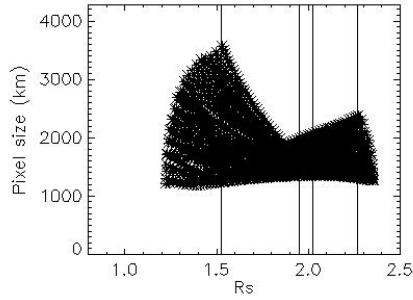
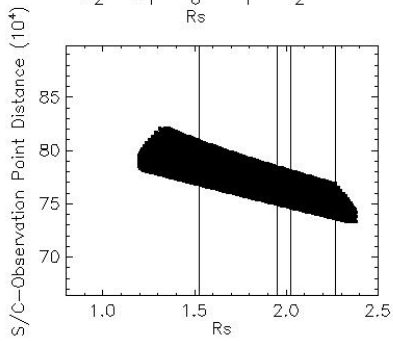


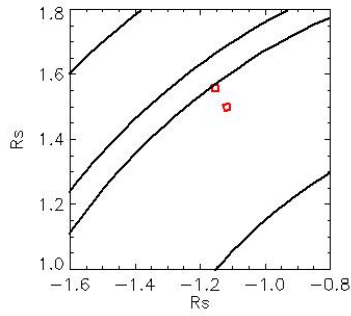
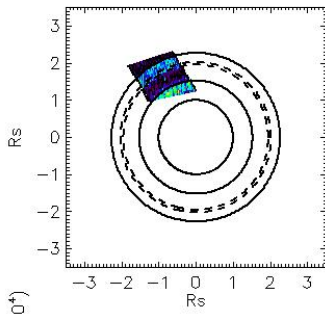
Observation Name:
UVS_077RLVTMPU37MP001_CIRS

Observation Date:
2008_202_06_38_51

Observation Duration:
1680 S

Integration time = 60 S



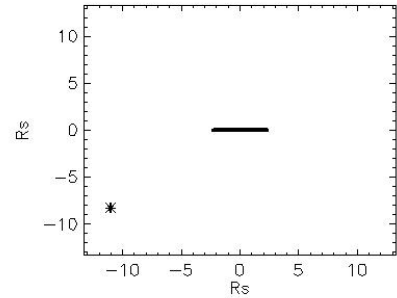
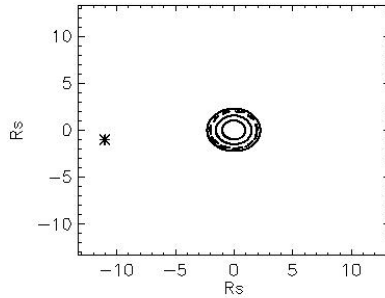
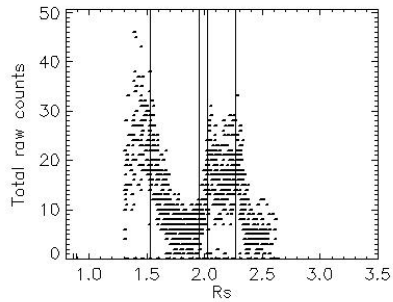
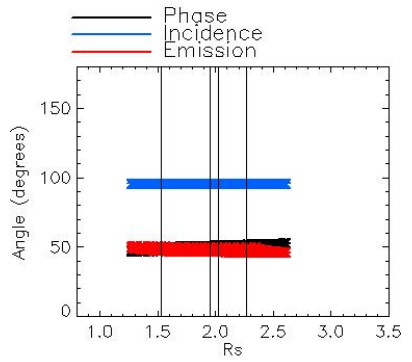
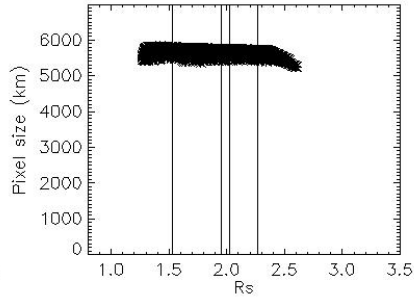
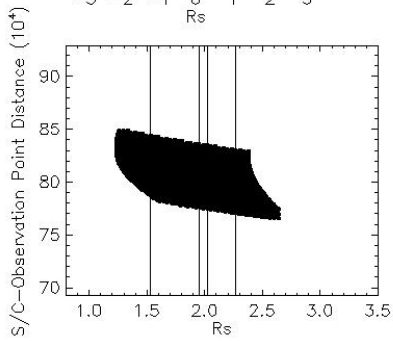


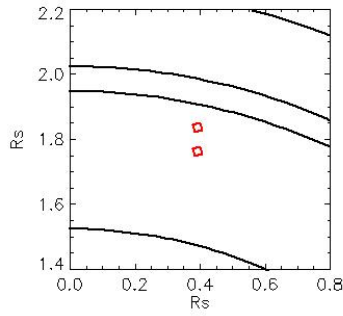
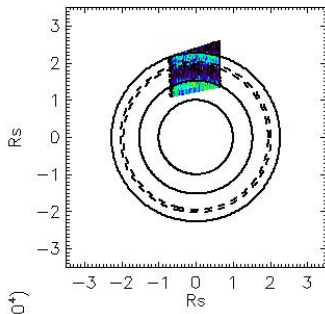
Observation Name:
UVS_077RLVTMPU37MP001_CIRS

Observation Date:
2008_202_07_12_51

Observation Duration:
960 S

Integration time = 60 S



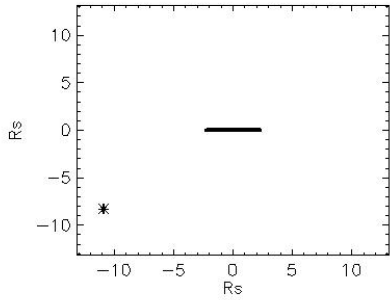
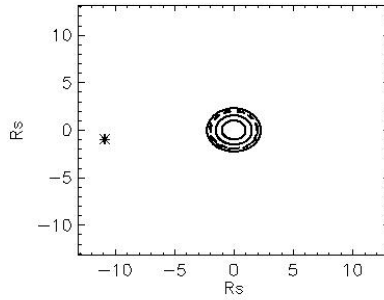
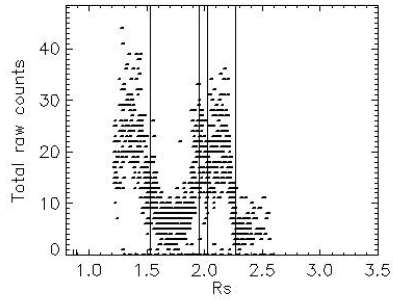
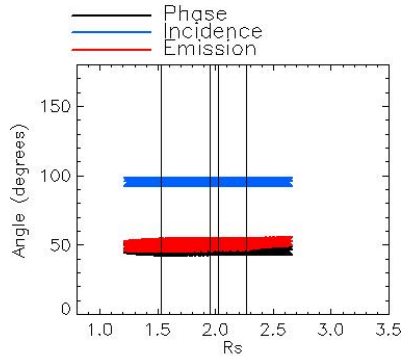
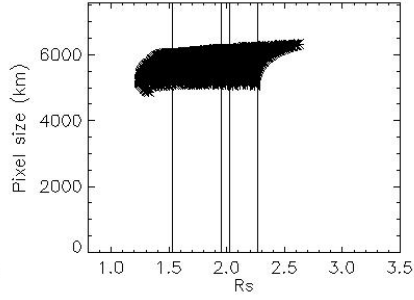
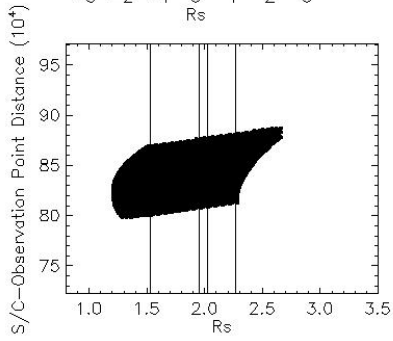


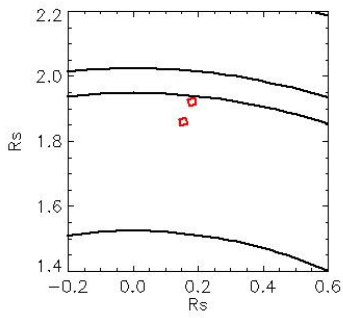
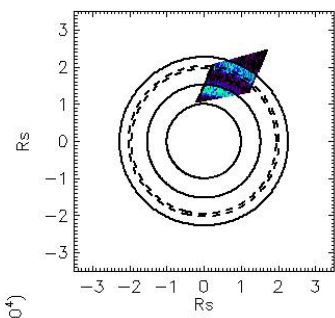
Observation Name:
UVS_077RLVTMPU37MP001_CIRS

Observation Date:
2008_202_07_34_51

Observation Duration:
960 S

Integration time = 60 S



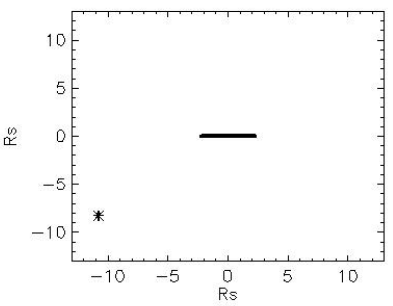
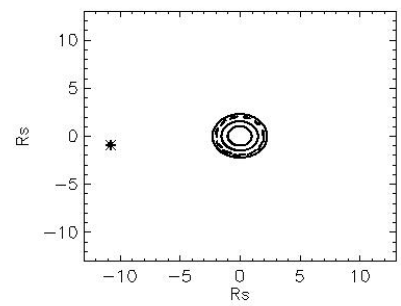
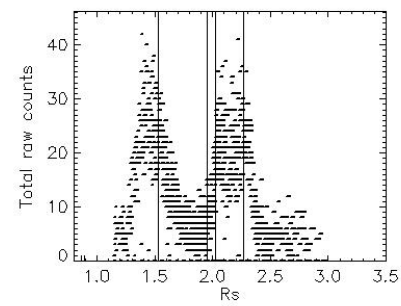
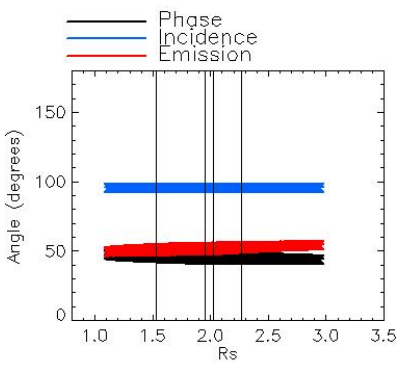
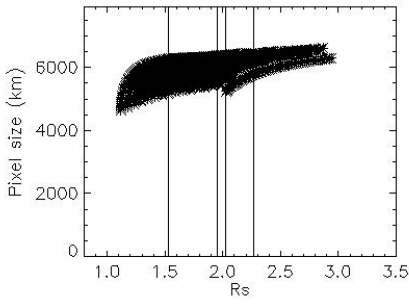
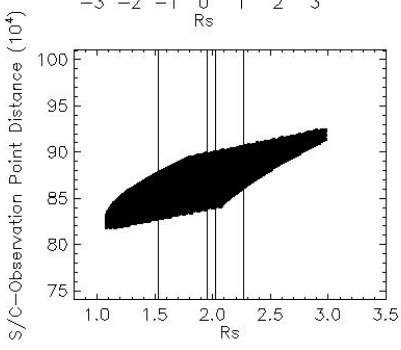


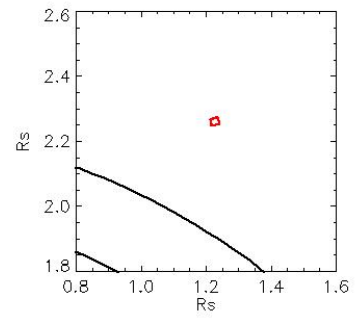
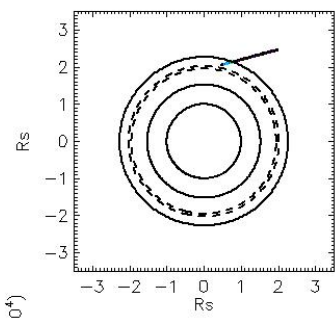
Observation Name:
UMS_077RLVTMPU37MP001_CIRS

Observation Date:
2008_202_07_56_51

Observation Duration:
960 S

Integration time = 60 S





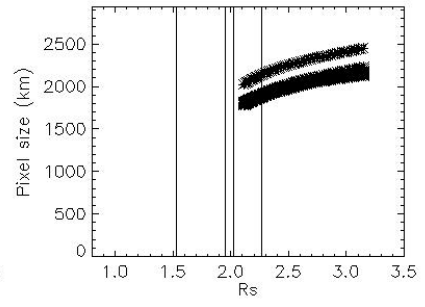
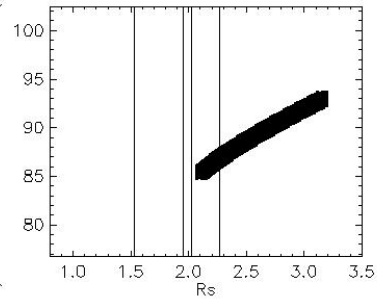
Observation Name:
UMS_077RLVTMPU37MP001_CIRS

Observation Date:
2008_202_08_17_51

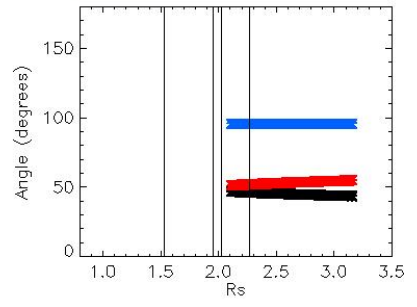
Observation Duration:
780 S

Integration time = 60 S

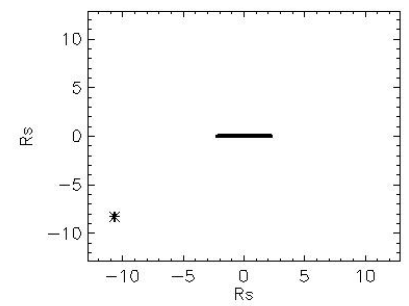
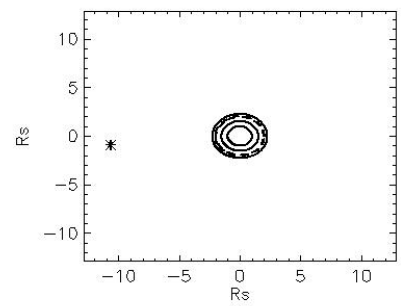
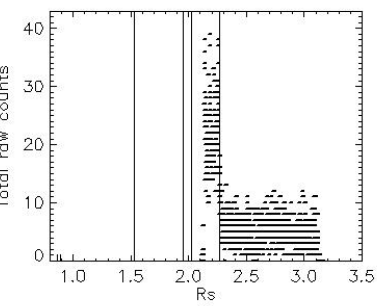
S/C—Observation Point Distance (10^4)



— Phase
— Incidence
— Emission



Total raw counts

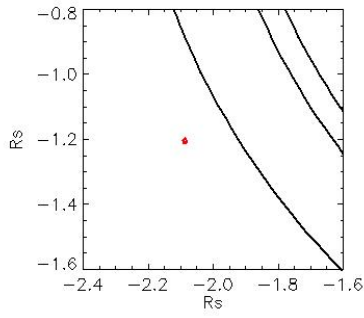
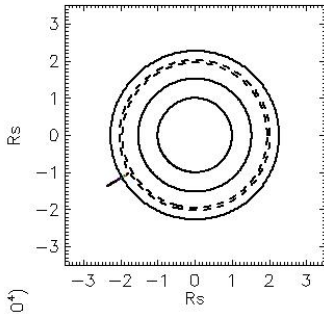


Observation Name:
UMS_077RLSHADLMP001_CIRS

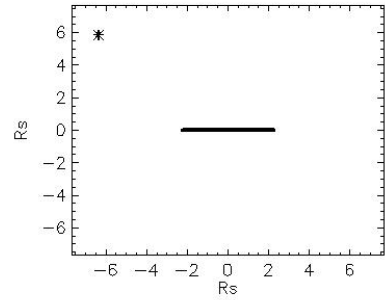
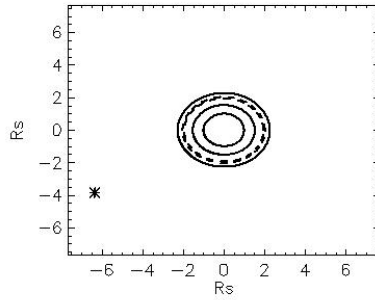
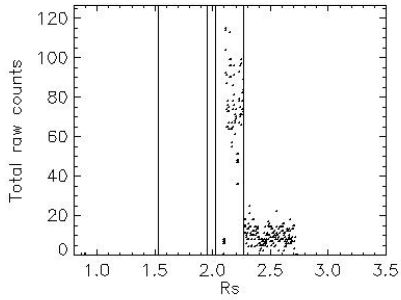
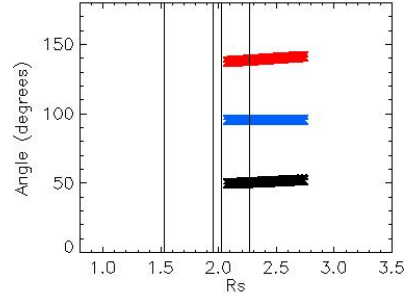
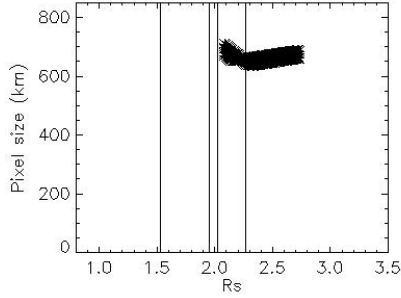
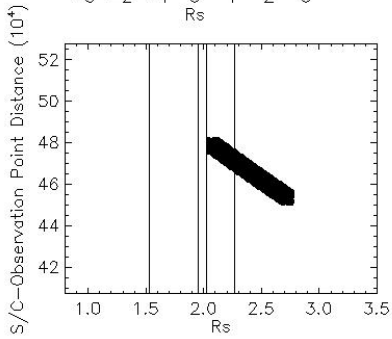
Observation Date:
2008_204_02_57_03

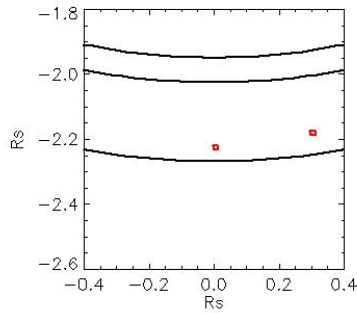
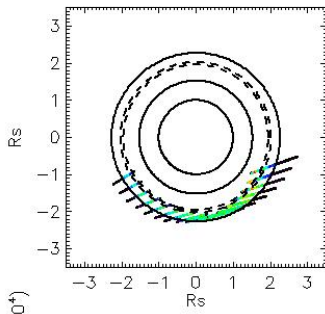
Observation Duration:
480 S

Integration time = 120 S



— Phase
— Incidence
— Emission



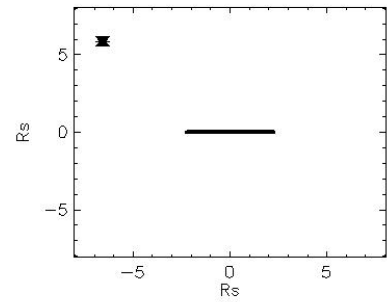
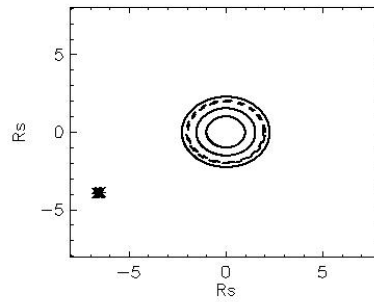
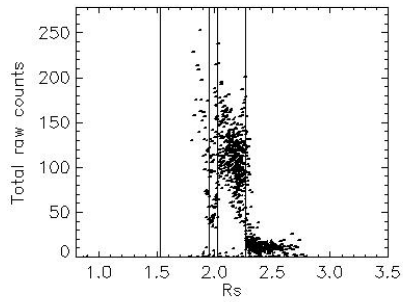
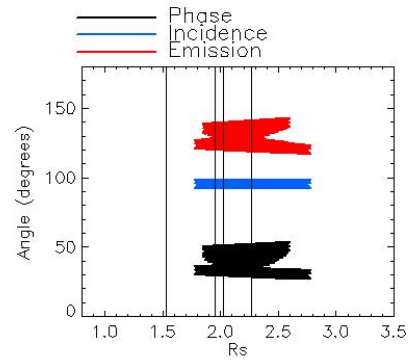
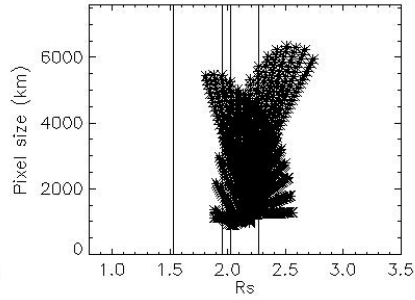
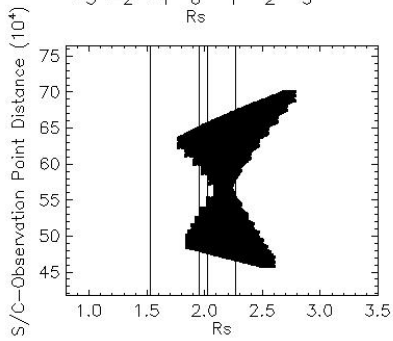


Observation Name:
UMS_077RLSHADLMP001_CIRS

Observation Date:
2008_204_03_12_02

Observation Duration:
1920 S

Integration time = 120 S

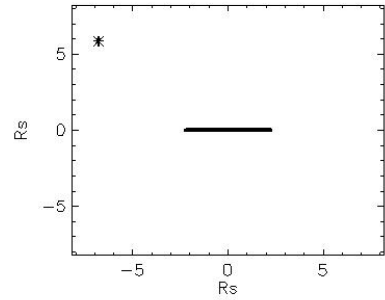
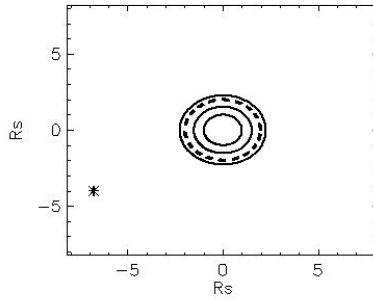
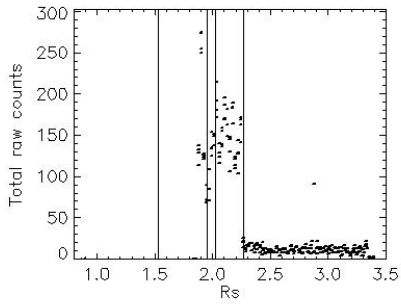
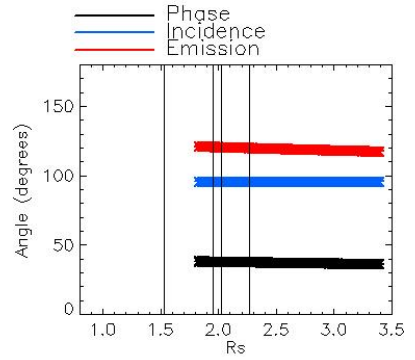
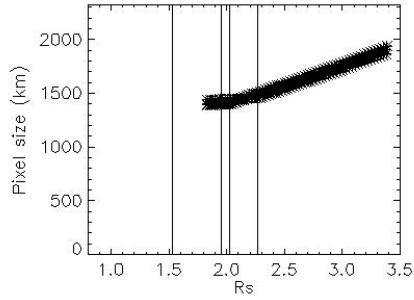
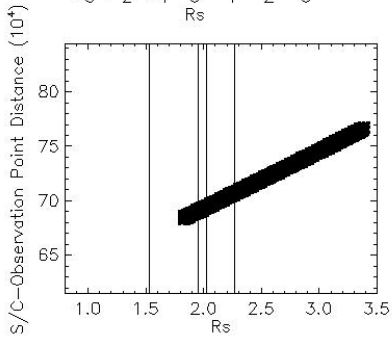
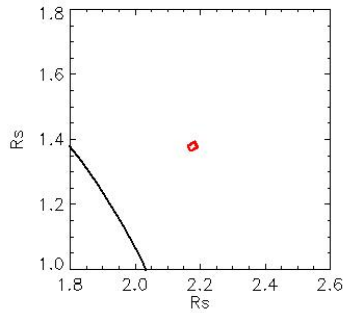
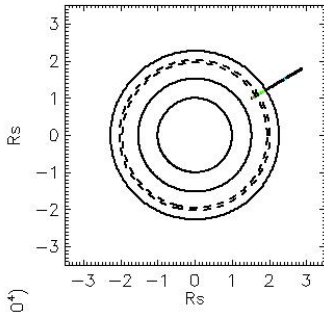


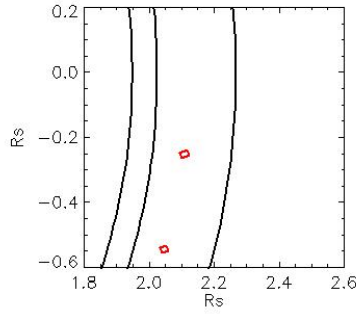
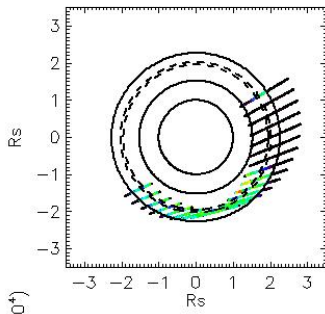
Observation Name:
UMS_077RLSHADLMP001_CIRS

Observation Date:
2008_204_03_51_02

Observation Duration:
480 S

Integration time = 120 S



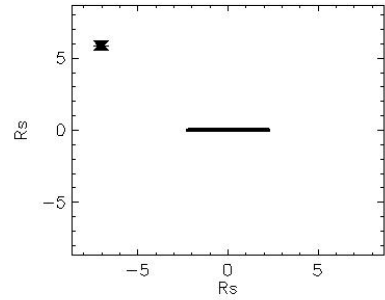
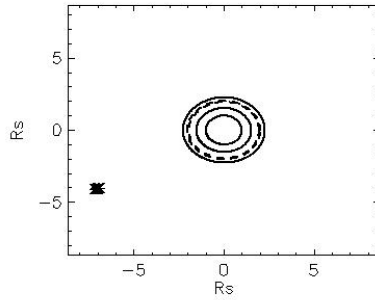
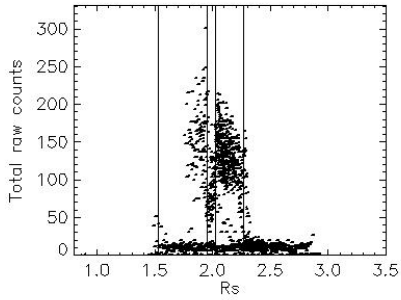
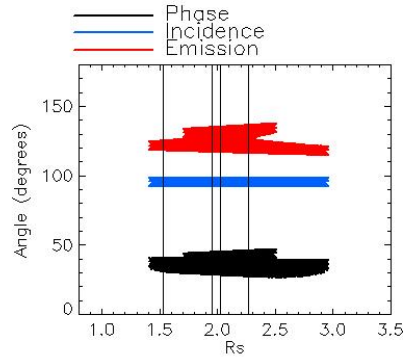
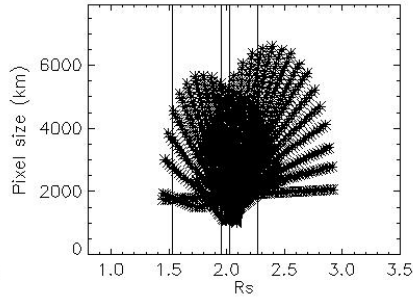
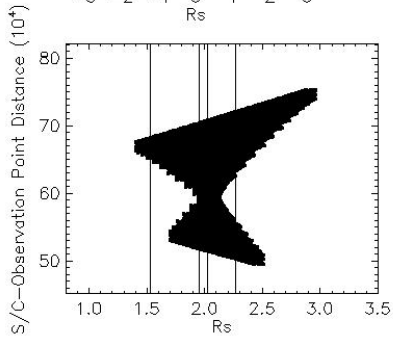


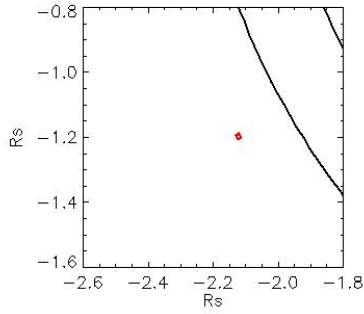
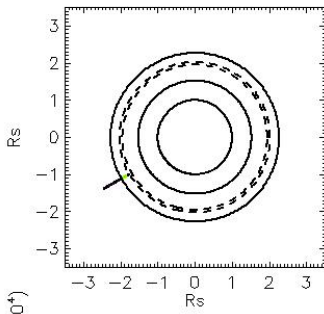
Observation Name:
UMS_077RLSHADLMP001_CIRS

Observation Date:
2008_204_04_06_02

Observation Duration:
2520 S

Integration time = 120 S



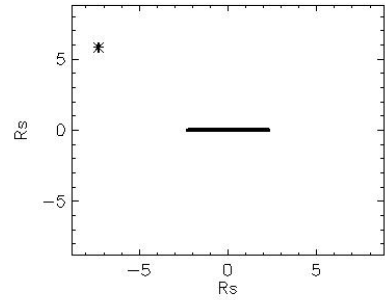
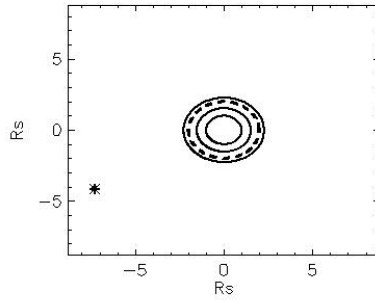
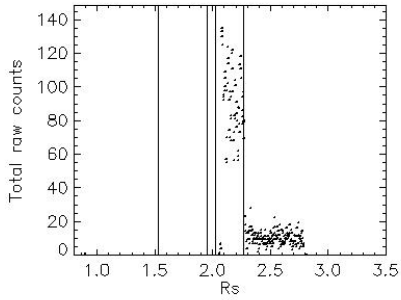
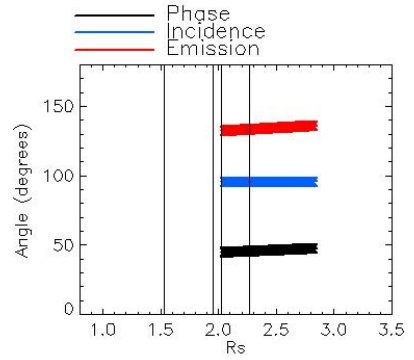
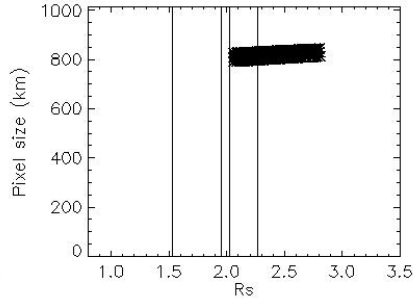
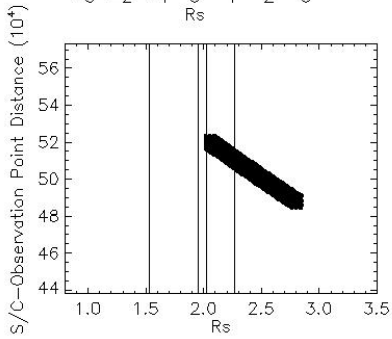


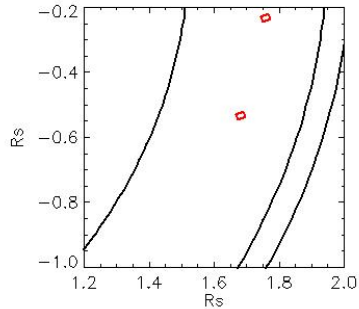
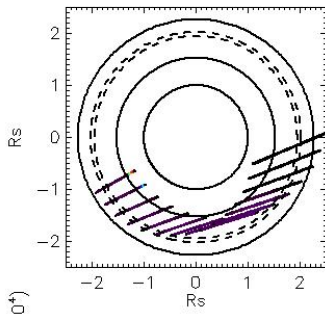
Observation Name:
UMS_077RLSHADLMP001_CIRS

Observation Date:
2008_204_04_54_02

Observation Duration:
480 S

Integration time = 120 S



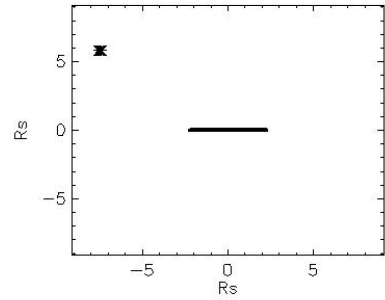
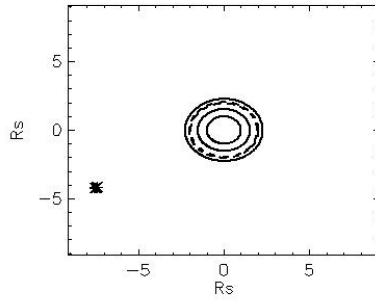
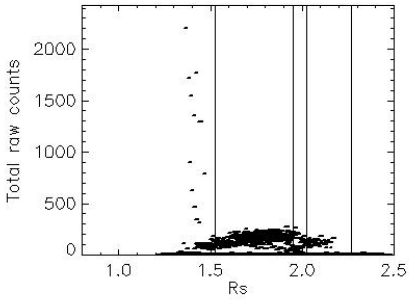
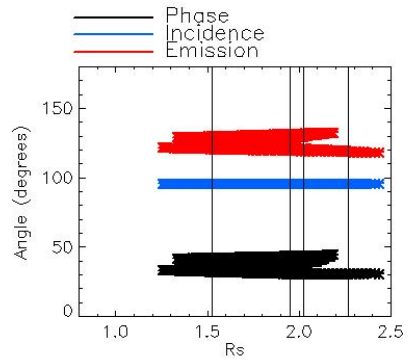
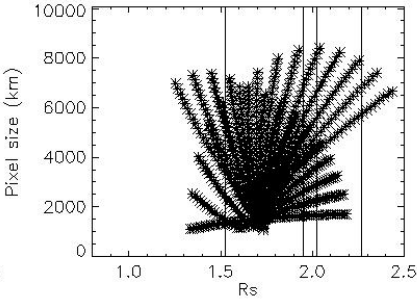
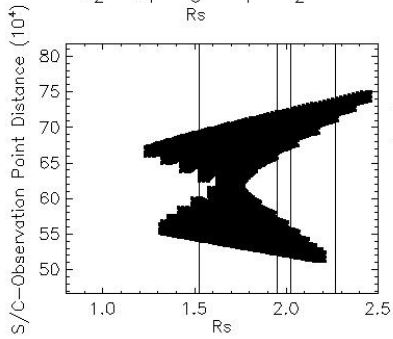


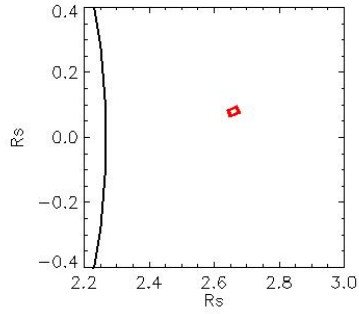
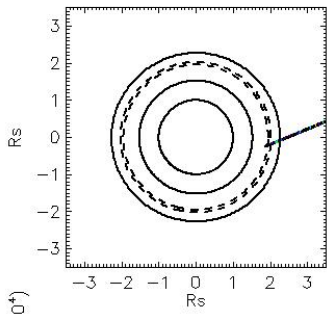
Observation Name:
UMS_077RLSHADLMP001_CIRS

Observation Date:
2008_204_05_09_02

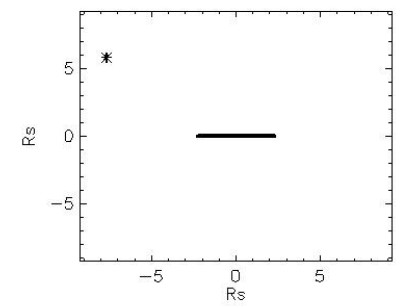
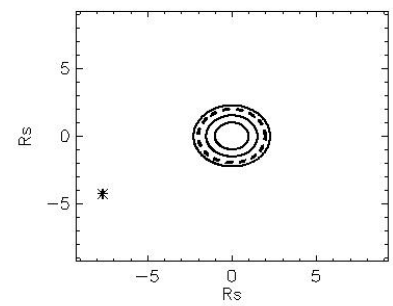
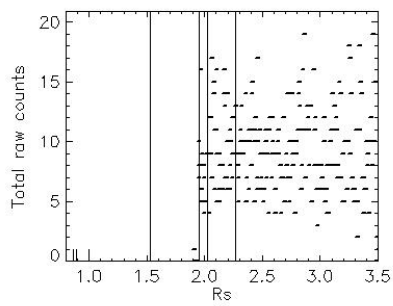
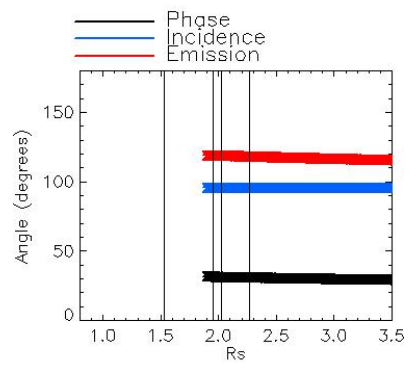
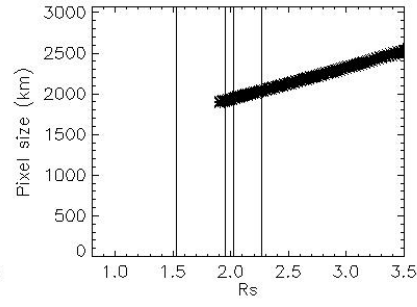
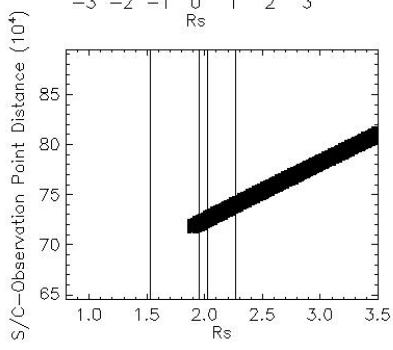
Observation Duration:
1680 S

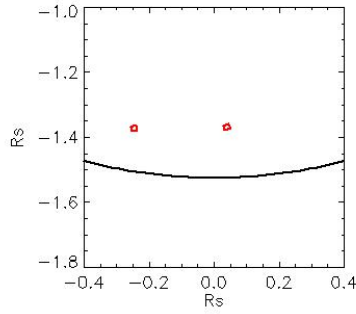
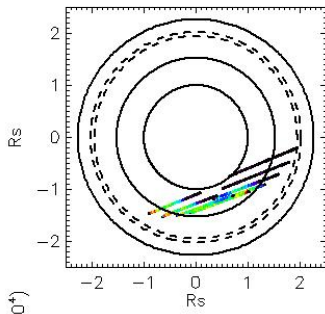
Integration time = 120 S





Observation Name:
 UVS_077RLSHADLMP001_CIRS
 Observation Date:
 2008_204_05_44_02
 Observation Duration:
 480 S
 Integration time = 120 S



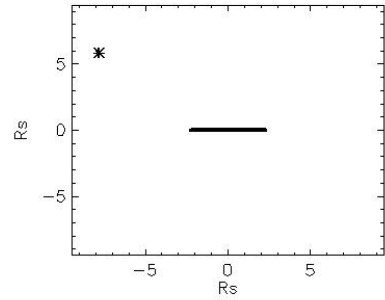
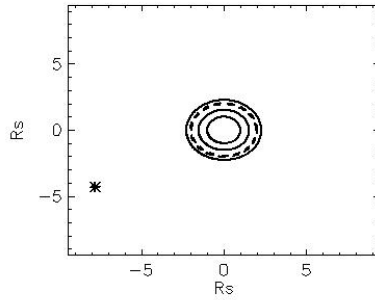
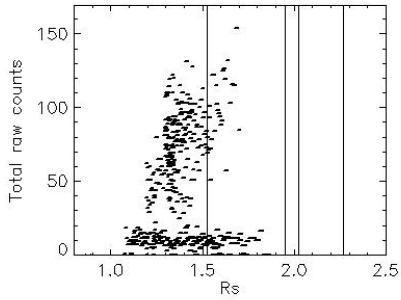
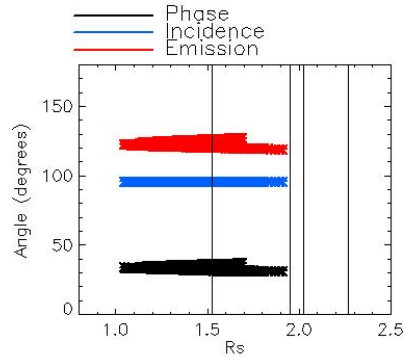
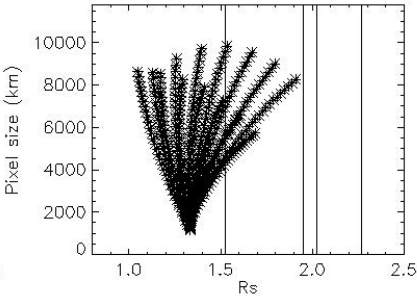
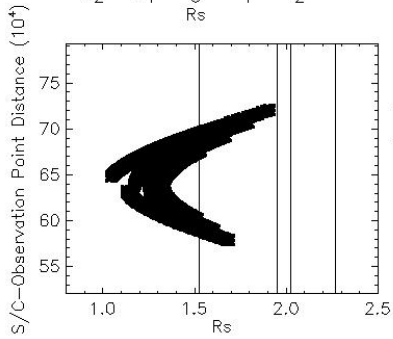


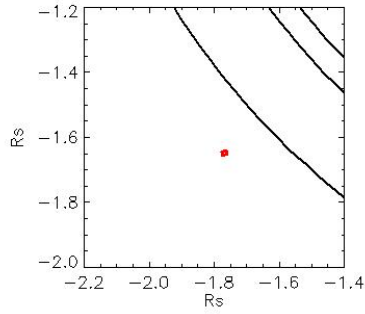
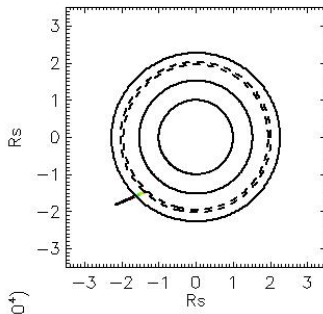
Observation Name:
UMS_077RLSHADLMP001_CIRS

Observation Date:
2008_204_05_59_02

Observation Duration:
840 S

Integration time = 120 S



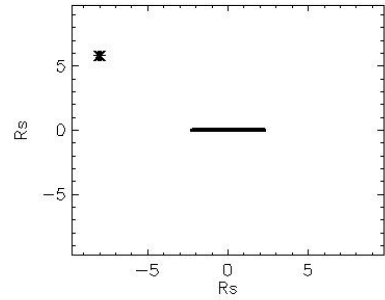
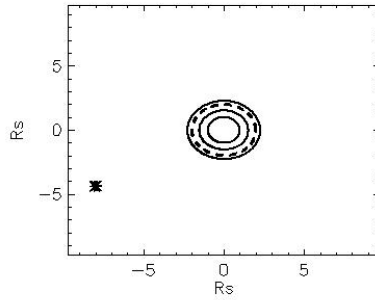
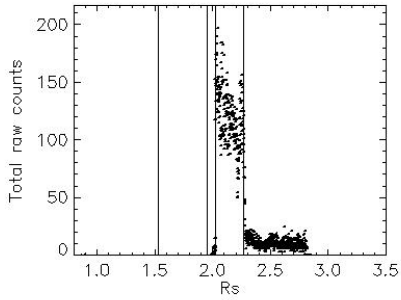
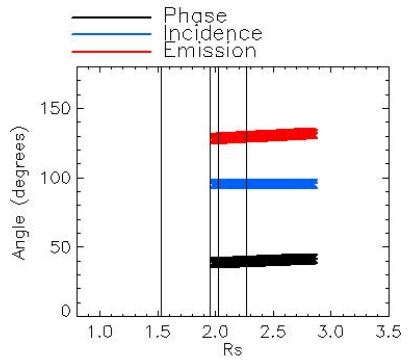
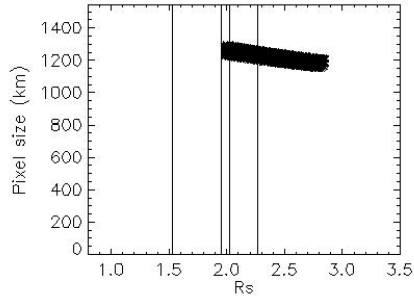
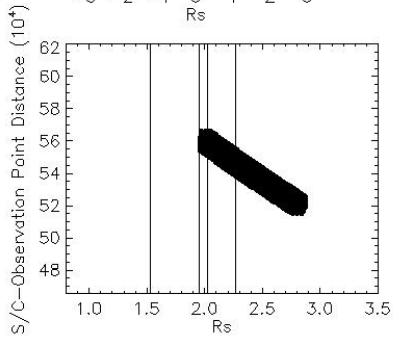


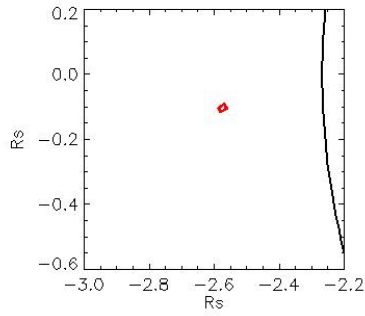
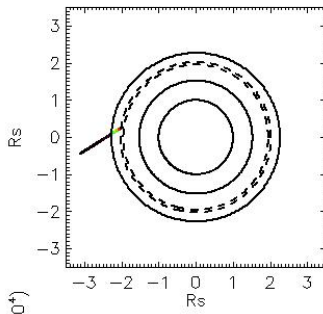
Observation Name:
UVIS_077RLSHADLMP001_CIRS

Observation Date:
2008_204_06_19_02

Observation Duration:
1560 S

Integration time = 120 S



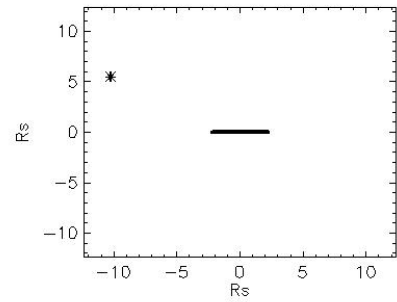
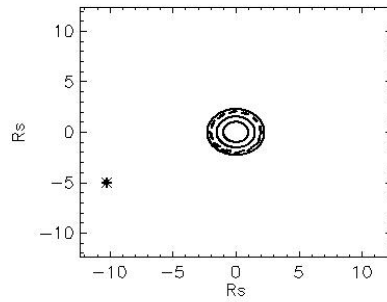
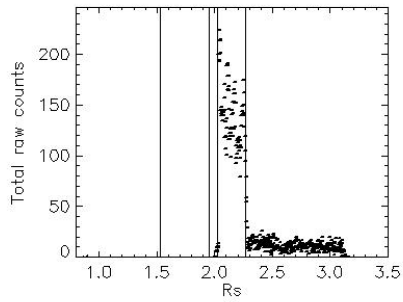
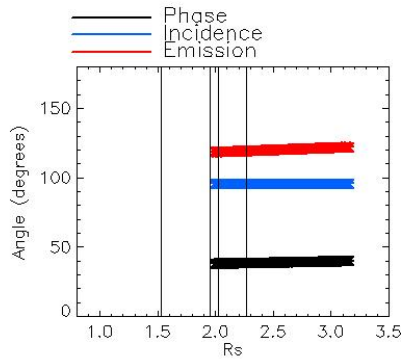
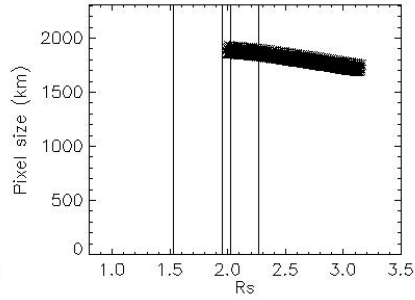
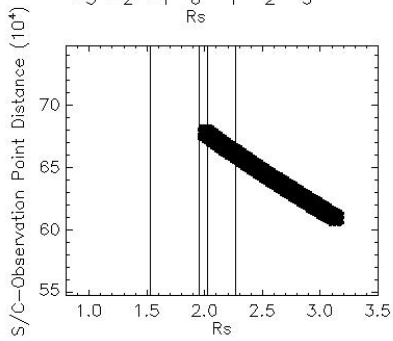


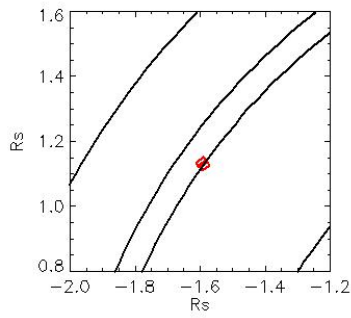
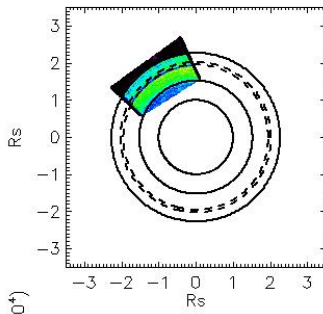
Observation Name:
UMS_077RLSUBML24MP001_CIRS

Observation Date:
2008_204_11_57_03

Observation Duration:
840 S

Integration time = 120 S



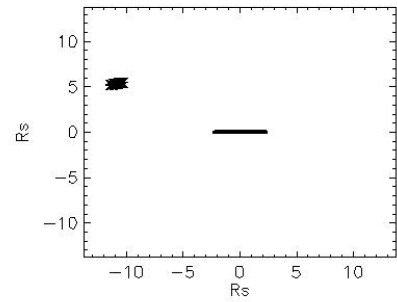
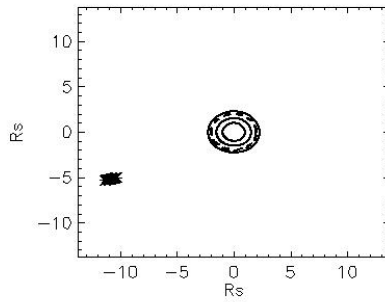
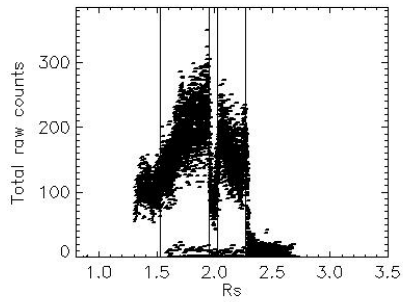
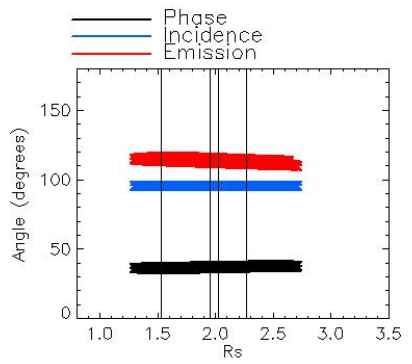
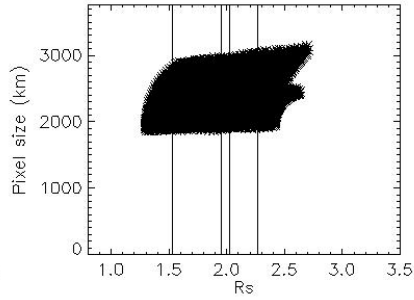
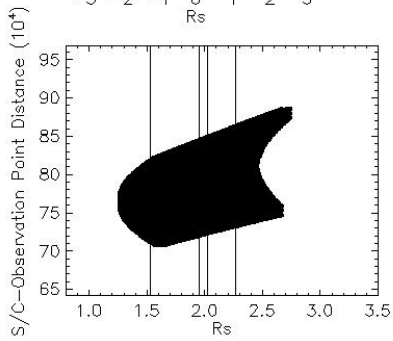


Observation Name:
UVS_077RLSUBML24MP001_CIRS

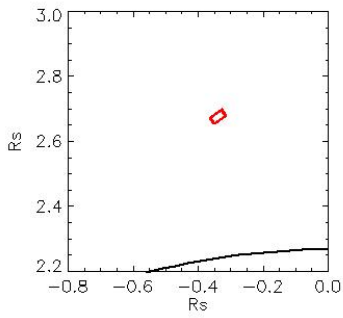
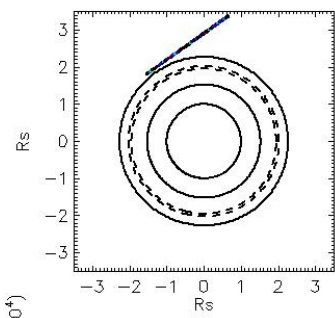
Observation Date:
2008_204_12_17_03

Observation Duration:
11280 S

Integration time = 120 S



— Phase
— Incidence
— Emission

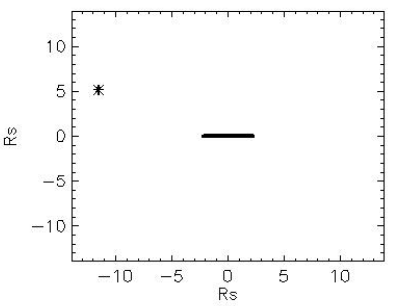
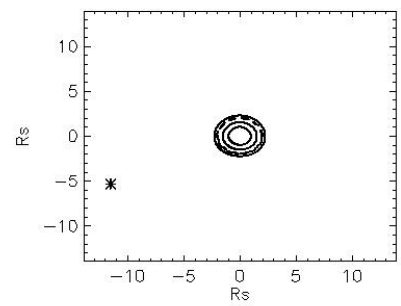
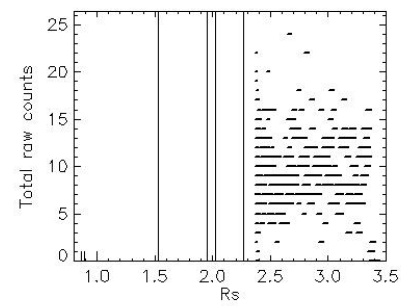
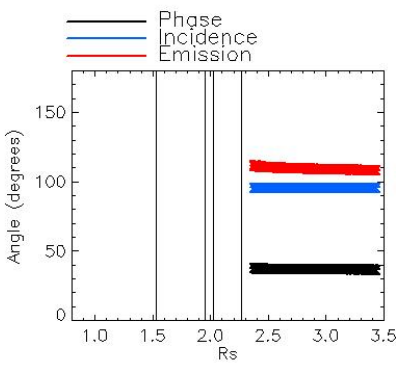
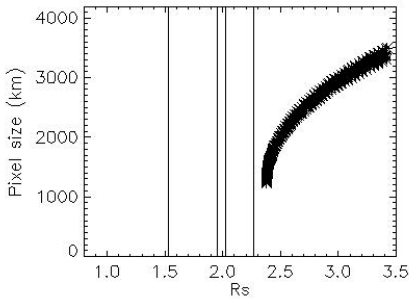
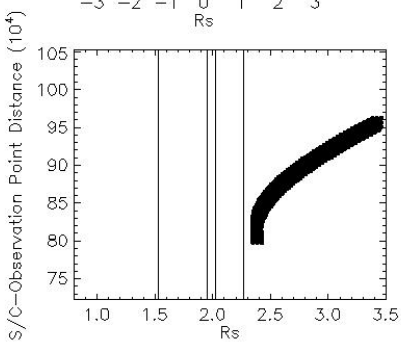


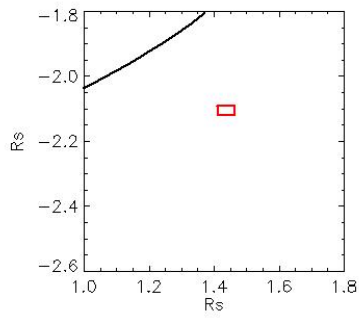
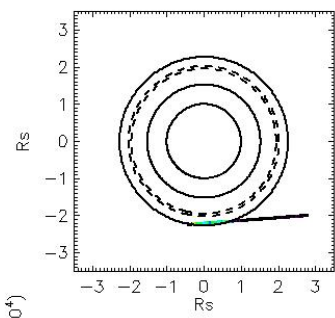
Observation Name:
UVS_077RLSUBML24MP001_CIRS

Observation Date:
2008_204_15_32_02

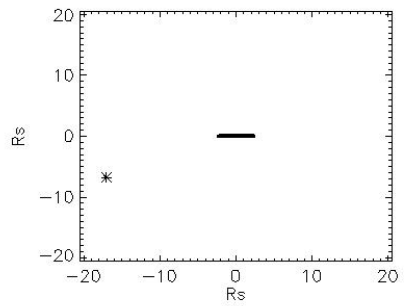
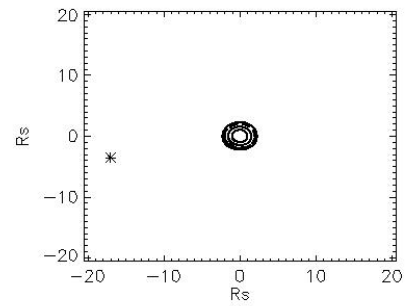
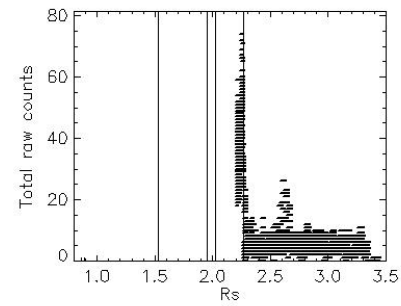
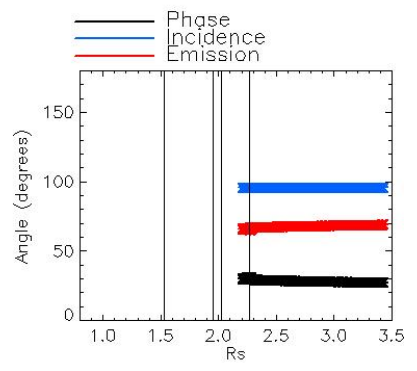
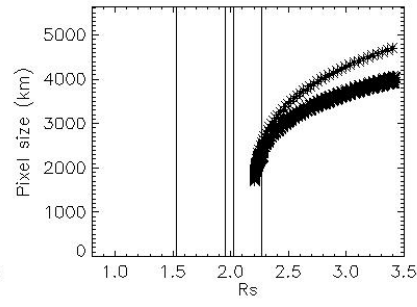
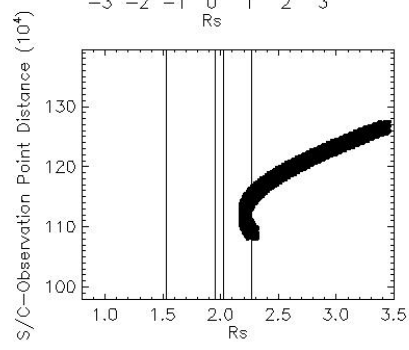
Observation Duration:
840 S

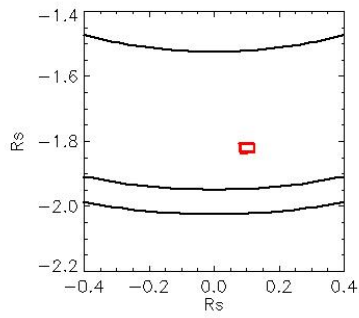
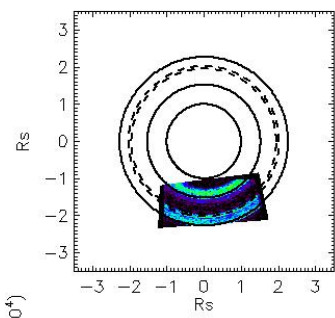
Integration time = 120 S



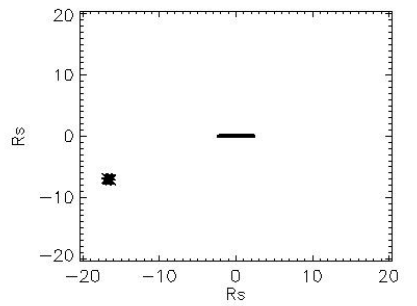
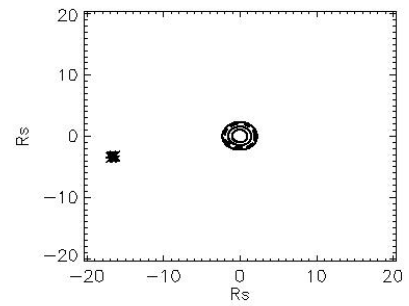
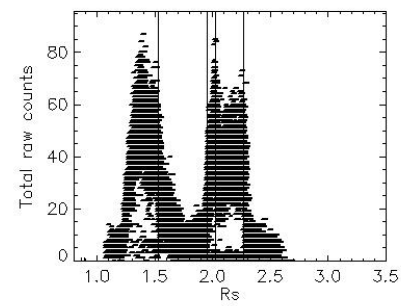
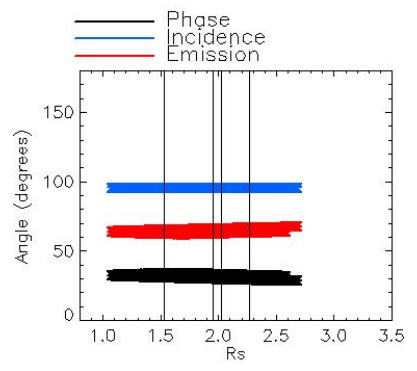
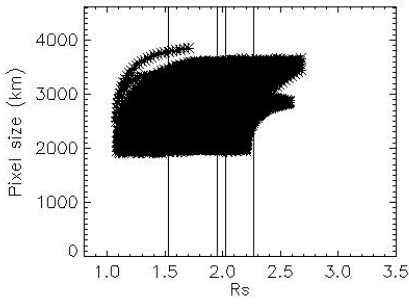
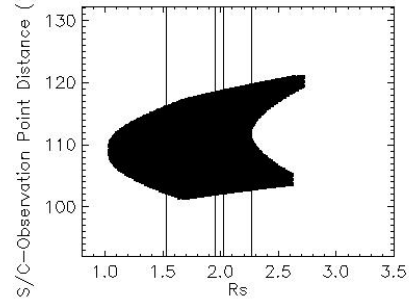


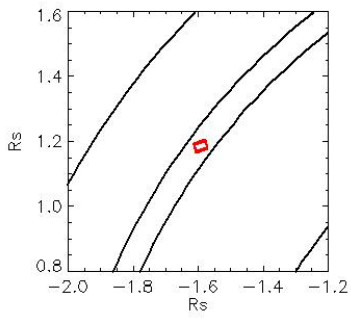
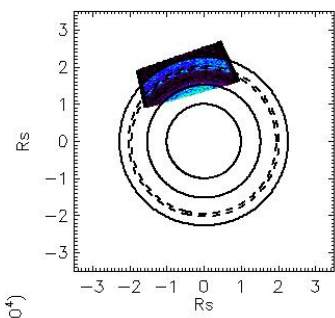
Observation Name:
 UVS_078RLSUBMU27LP001_CIRS
 Observation Date:
 2008_208_07_51_51
 Observation Duration:
 1500 S
 Integration time = 60 S





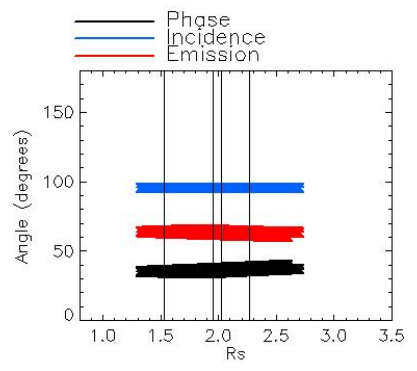
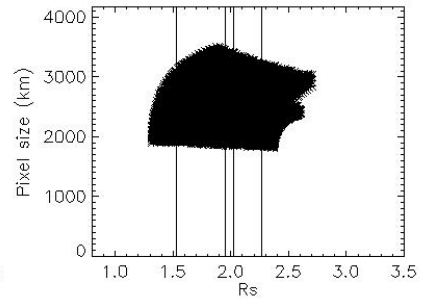
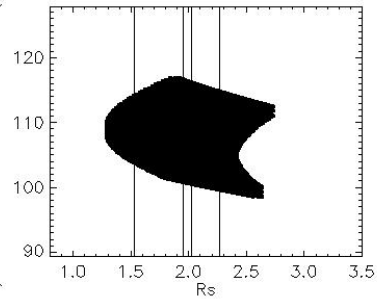
Observation Name:
 UVS_078RLSUBMU27LP001_CIRS
 Observation Date:
 2008_208_08_21_51
 Observation Duration:
 13320 S
 Integration time = 60 S



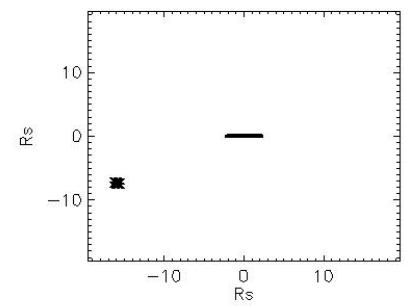
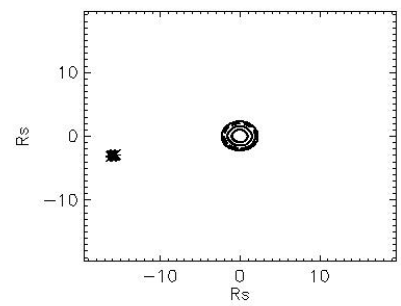
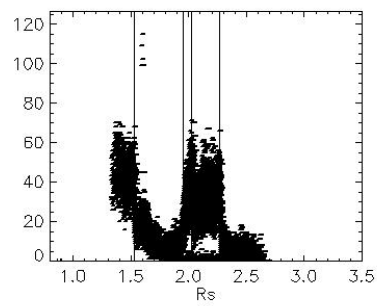


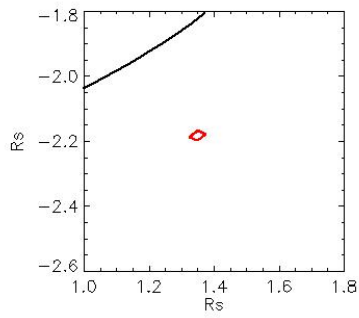
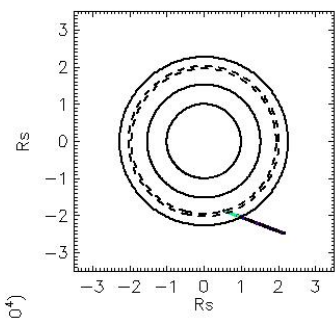
Observation Name:
 UVS_078RLSUBMU27LP001_CIRS
 Observation Date:
 2008_208_12_09_51
 Observation Duration:
 12420 S
 Integration time = 60 S

S/C—Observation Point Distance (10^4)

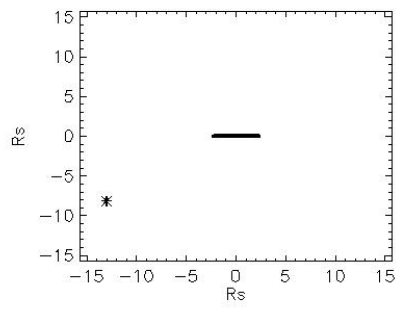
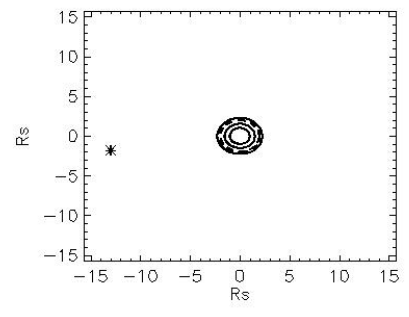
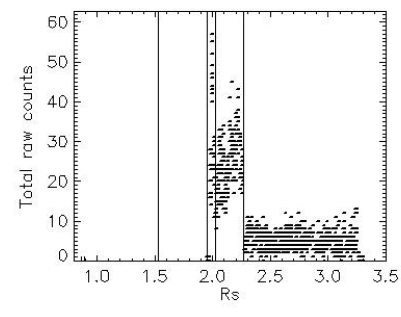
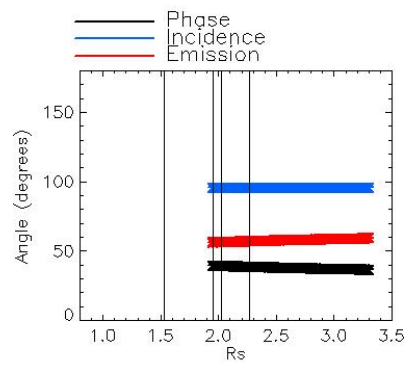
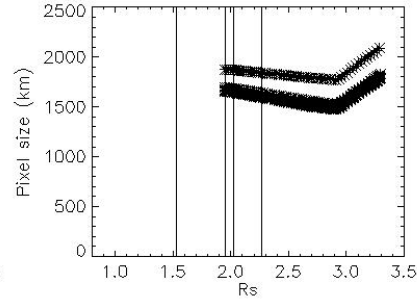
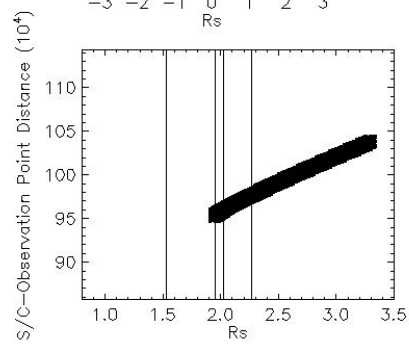


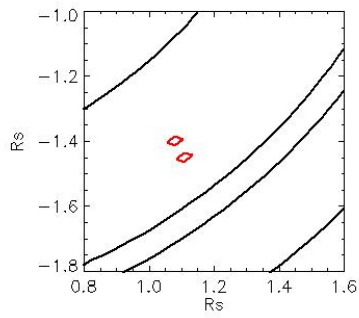
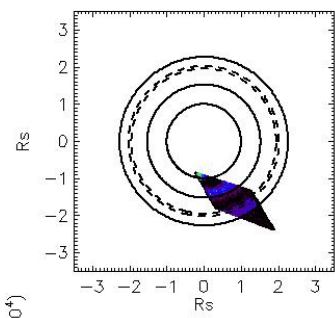
Total raw counts



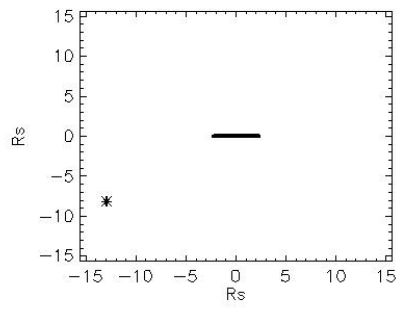
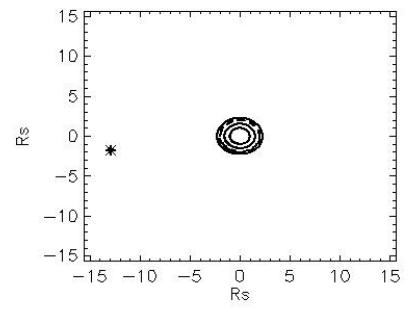
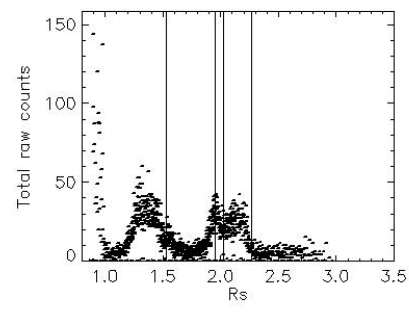
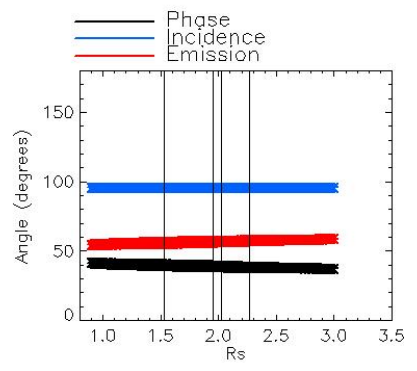
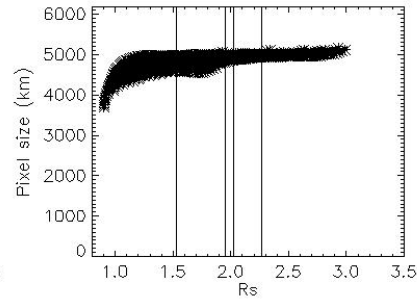
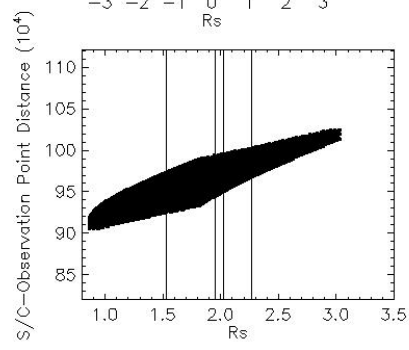


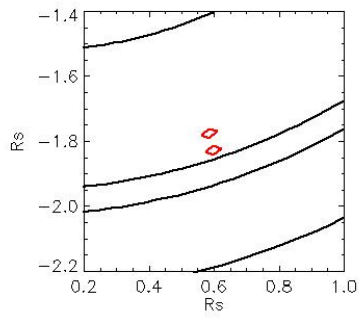
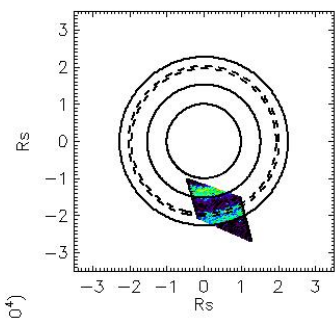
Observation Name:
 UVS_078RLVTMPU36LP001_CIRS
 Observation Date:
 2008_209_01_45_51
 Observation Duration:
 780 S
 Integration time = 60 S





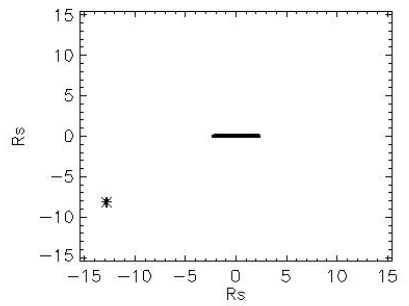
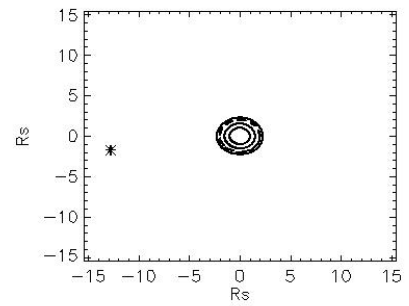
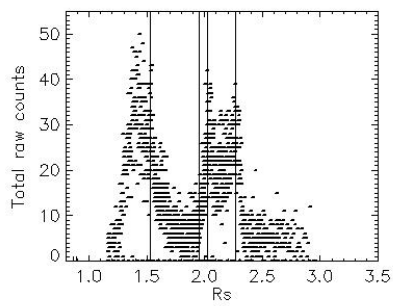
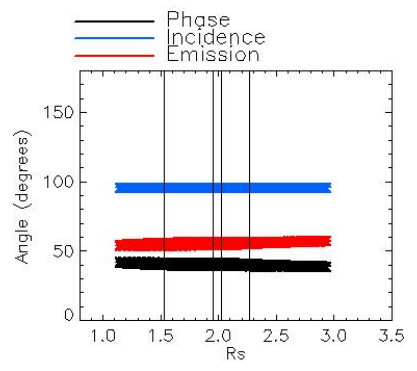
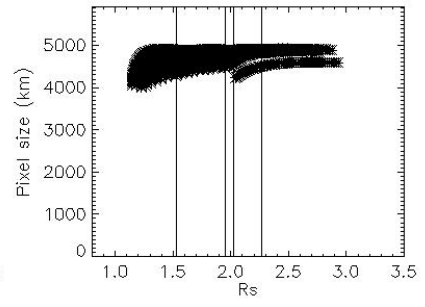
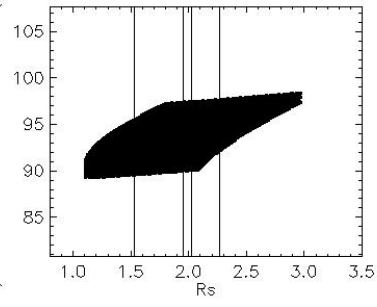
Observation Name:
 UVS_078RLVTMPU36LP001_CIRS
 Observation Date:
 2008_209_02_03_51
 Observation Duration:
 1200 S
 Integration time = 60 S

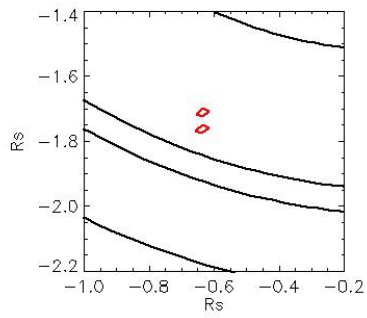
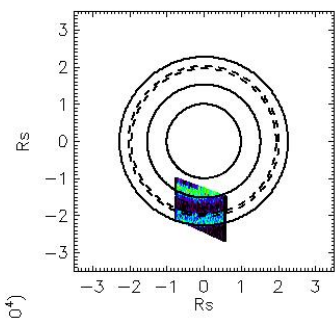




Observation Name:
 UVS_078RLVTMPU36LP001_CIRS
 Observation Date:
 2008_209_02_29_51
 Observation Duration:
 1260 S
 Integration time = 60 S

S/C—Observation Point Distance (10^4)





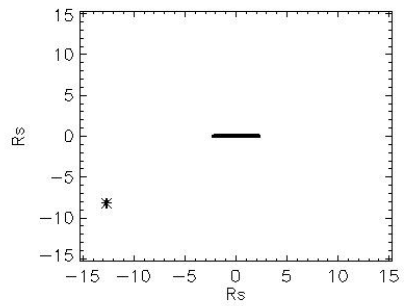
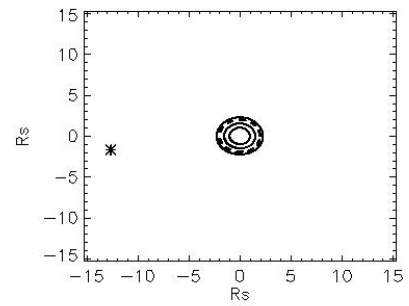
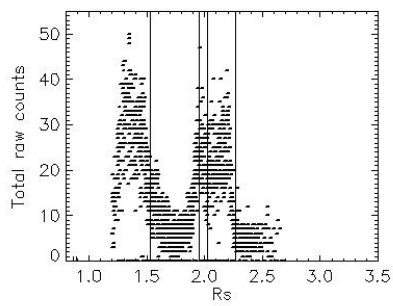
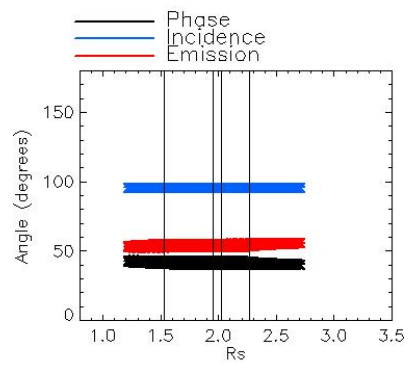
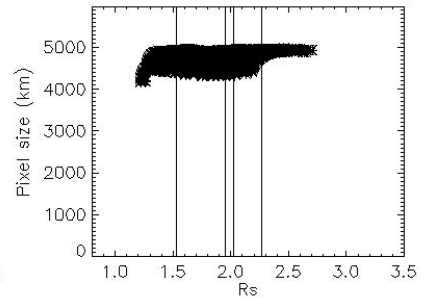
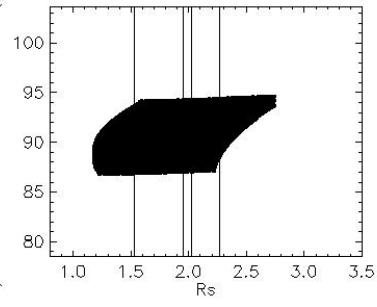
Observation Name:
UVS_078RLVTMPU36LP001_CIRS

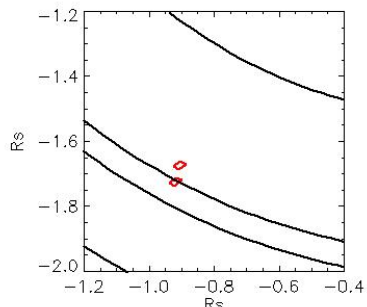
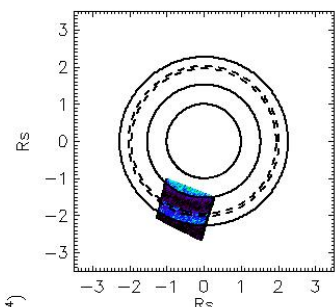
Observation Date:
2008_209_02_56_51

Observation Duration:
1260 S

Integration time = 60 S

S/C—Observation Point Distance (10^4)



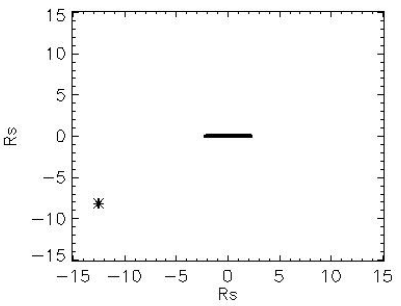
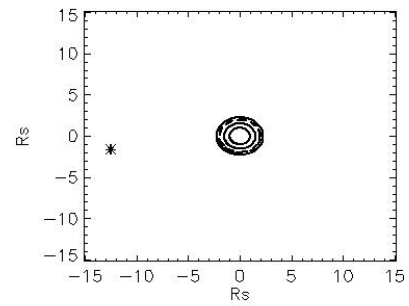
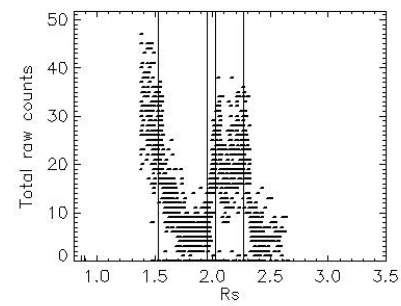
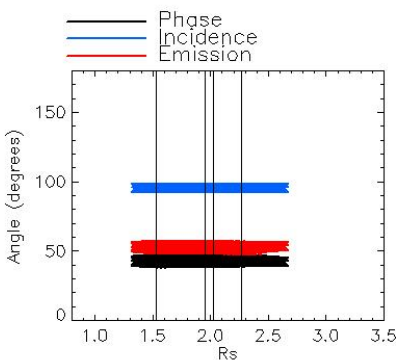
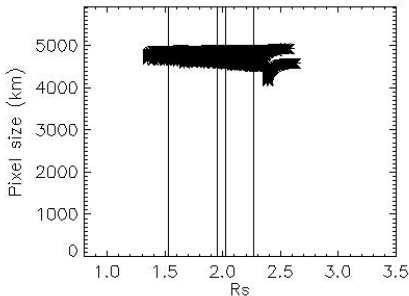
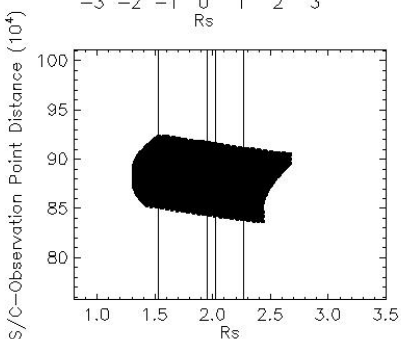


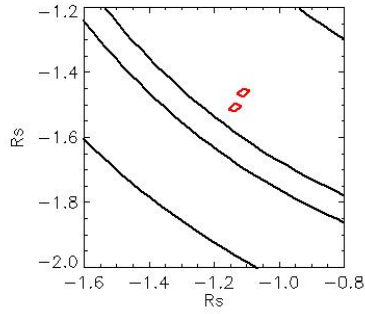
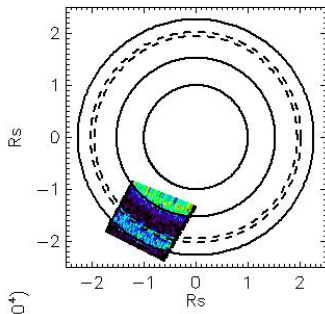
Observation Name:
UMS_078RLVTMPU36LP001_CIRS

Observation Date:
2008_209_03_23_51

Observation Duration:
1260 S

Integration time = 60 S



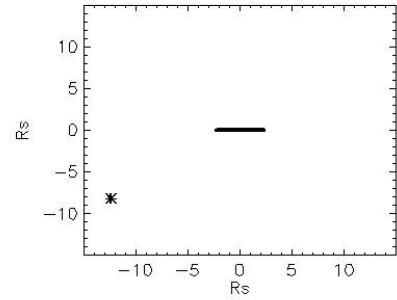
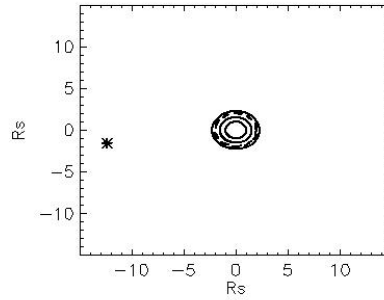
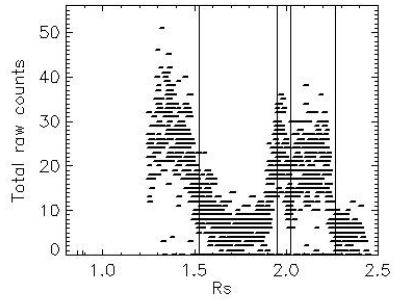
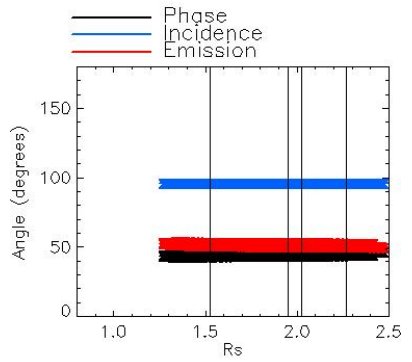
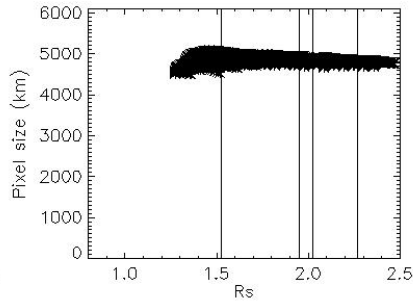
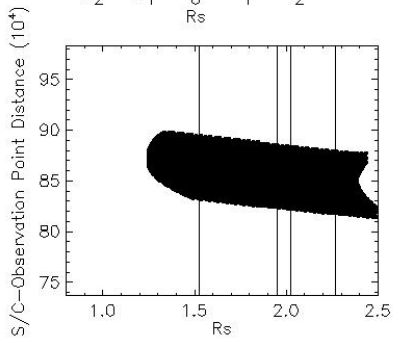


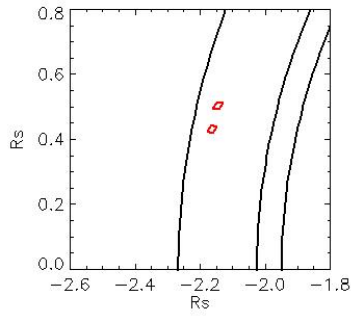
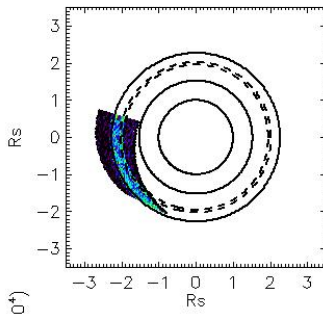
Observation Name:
UMS_078RLVTMPU36LP001_CIRS

Observation Date:
2008_209_03_50_51

Observation Duration:
1260 S

Integration time = 60 S



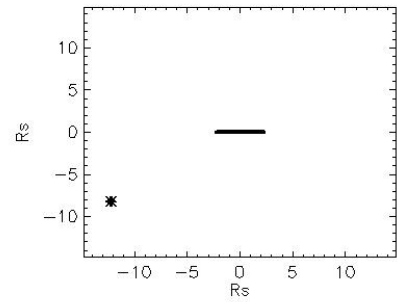
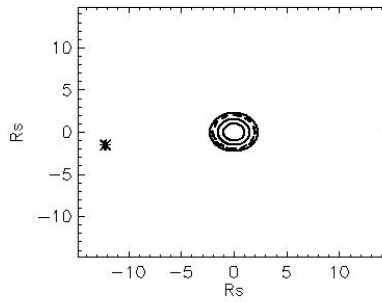
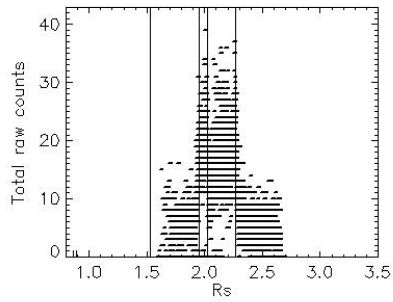
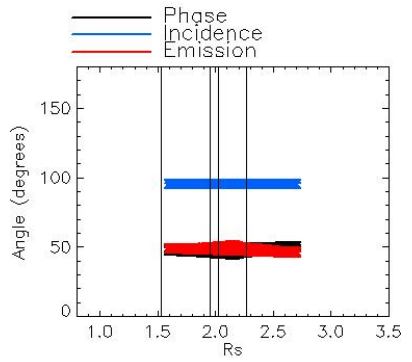
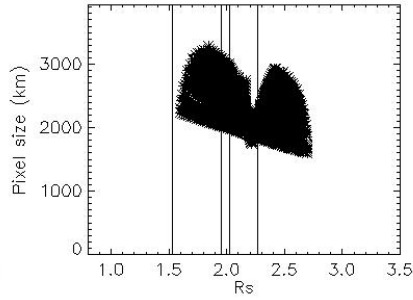
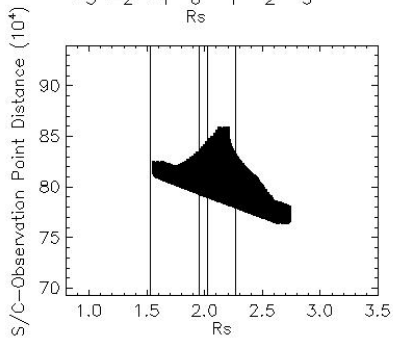


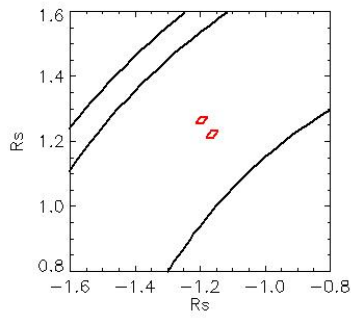
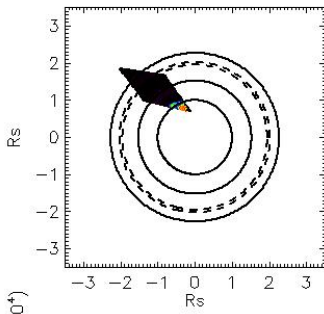
Observation Name:
UMS_078RLVTMPU36LP001_CIRS

Observation Date:
2008_209_04_17_51

Observation Duration:
2100 S

Integration time = 60 S



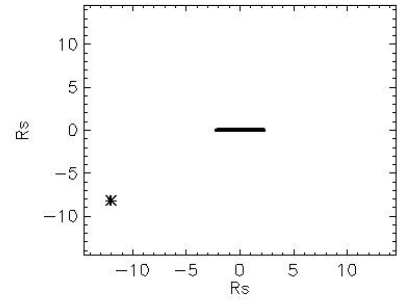
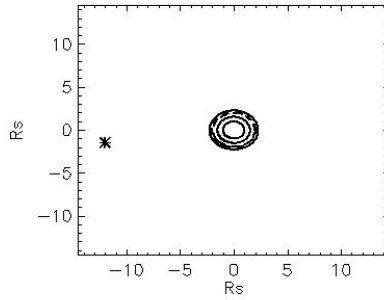
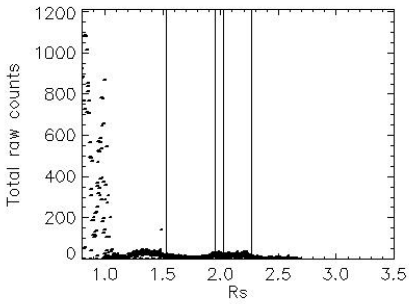
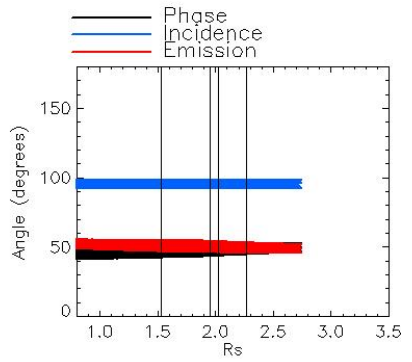
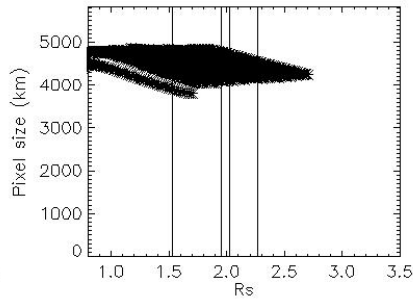
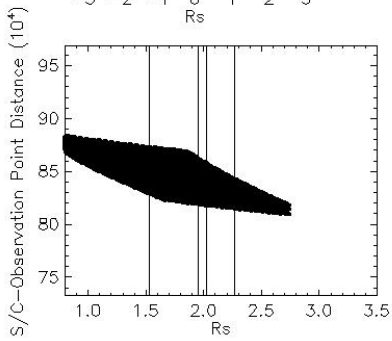


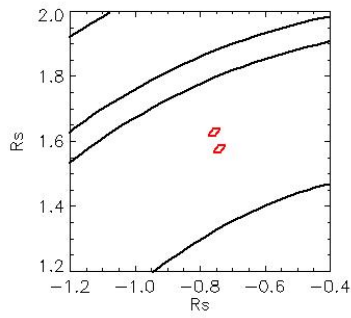
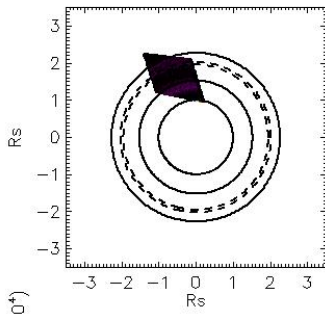
Observation Name:
UMS_078RLVTMPU36LP001_CIRS

Observation Date:
2008_209_04_58_52

Observation Duration:
1260 S

Integration time = 60 S



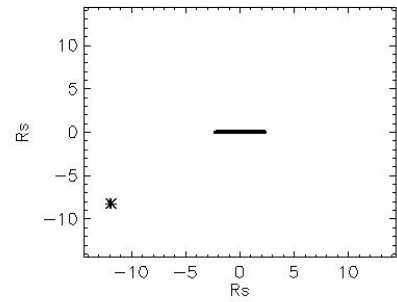
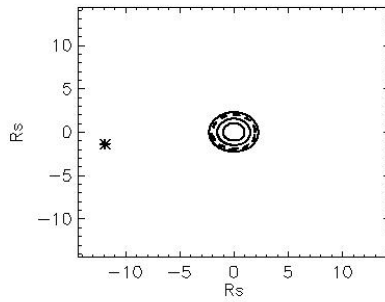
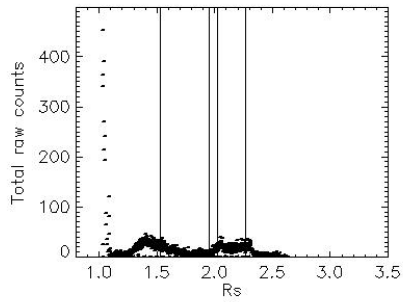
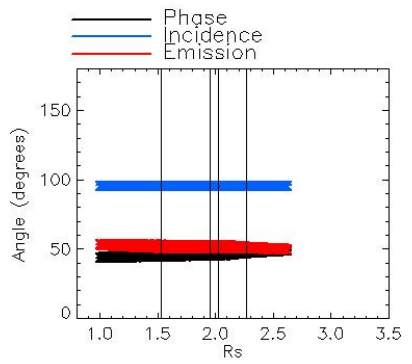
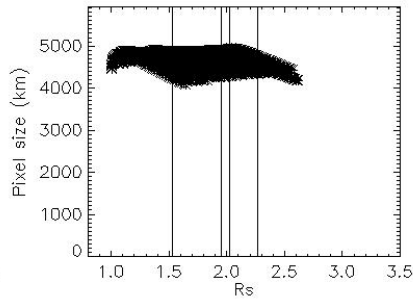
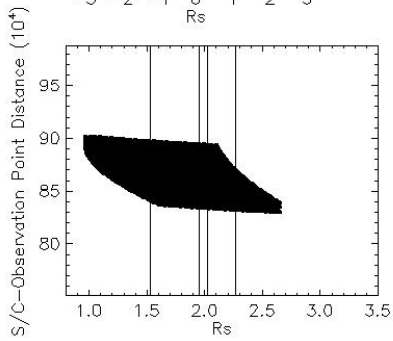


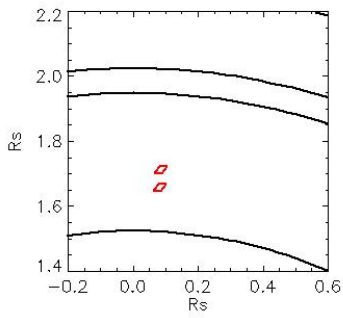
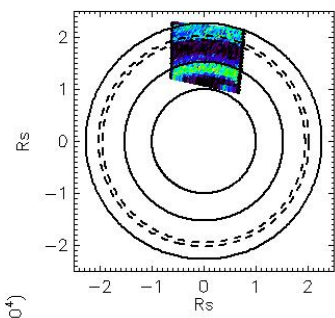
Observation Name:
UMS_078RLVTMPU36LP001_CIRS

Observation Date:
2008_209_05_25_52

Observation Duration:
1260 S

Integration time = 60 S





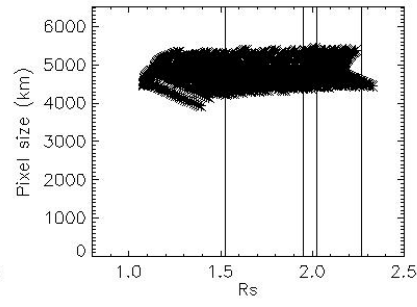
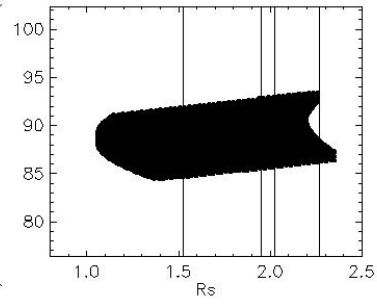
Observation Name:
UMS_078RLVTMPU36LP001_CIRS

Observation Date:
2008_209_05_52_52

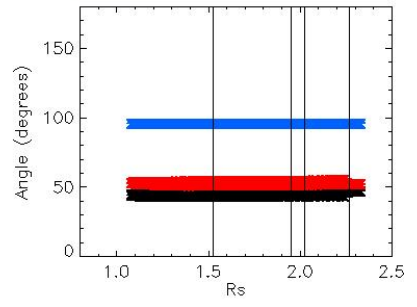
Observation Duration:
1260 S

Integration time = 60 S

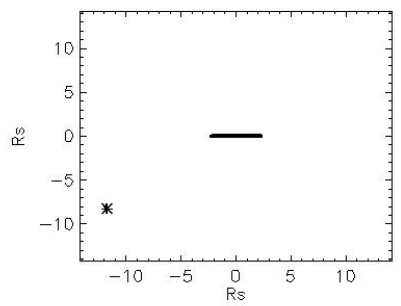
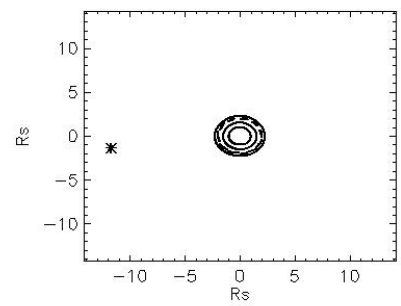
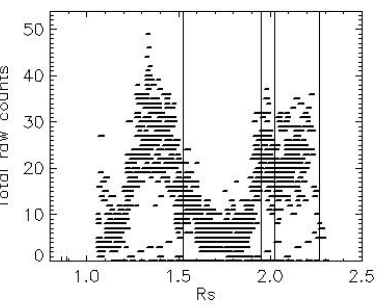
S/C-Observation Point Distance (10^4)

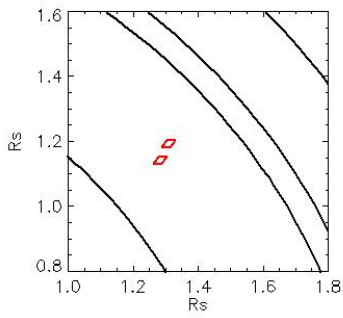
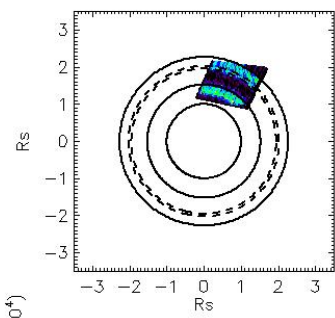


— Phase
— Incidence
— Emission

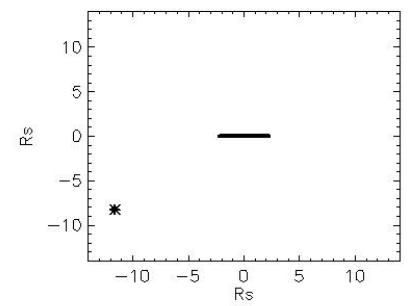
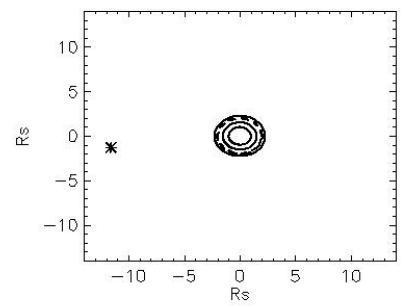
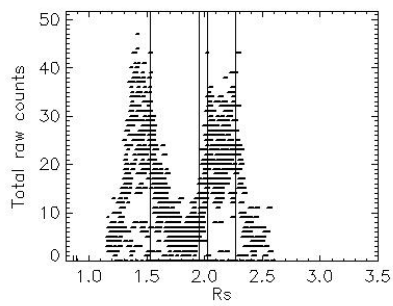
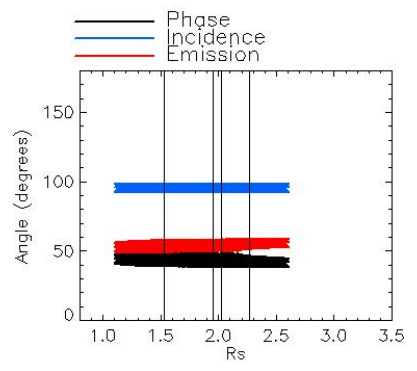
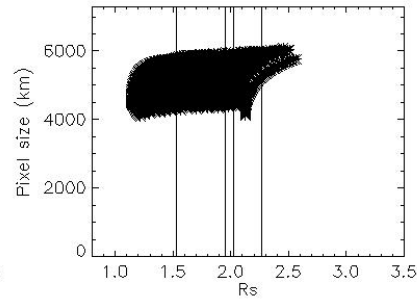
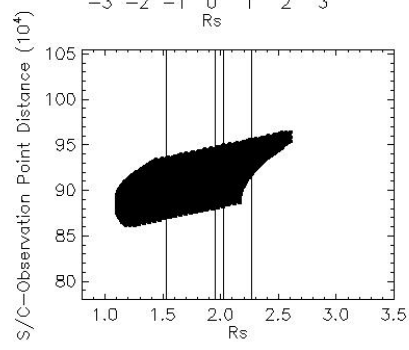


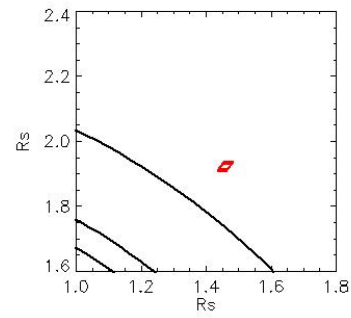
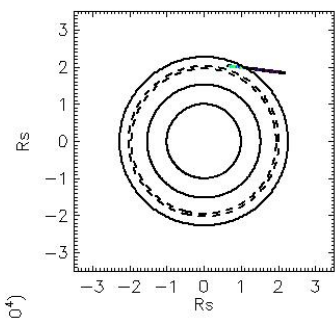
Total raw counts





Observation Name:
 UVS_078RLVTMPU36LP001_CIRS
 Observation Date:
 2008_209_06_19_52
 Observation Duration:
 1260 S
 Integration time = 60 S



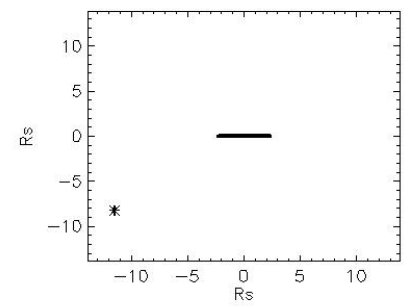
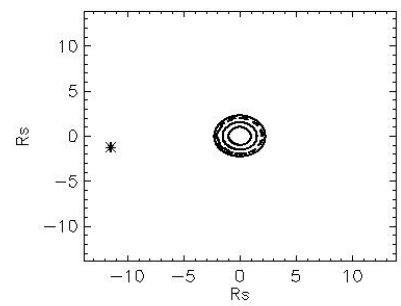
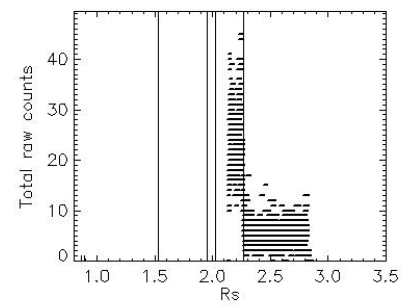
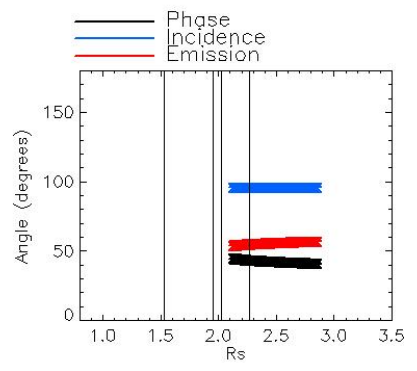
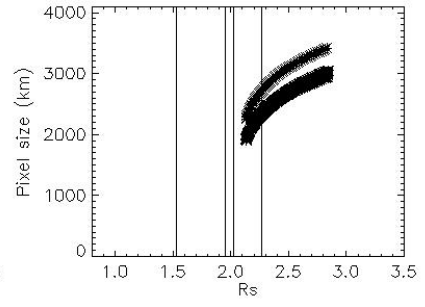
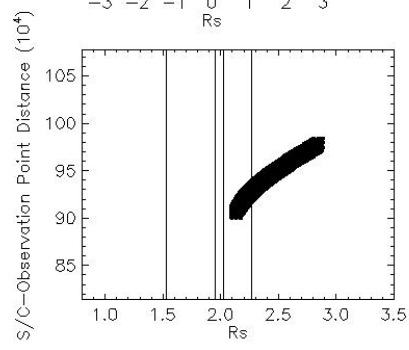


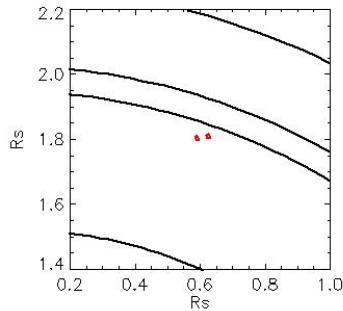
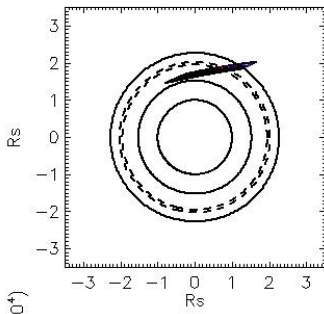
Observation Name:
UMS_078RLVTMPU36LP001_CIRS

Observation Date:
2008_209_06_45_52

Observation Duration:
900 S

Integration time = 60 S





Observation Name:
UMS_078RLETACAR001_CIRS

Observation Date:
2008_209_22_59_51

Observation Duration:
17400 S

Integration time = 300 S

