

V&V Reference Report

L2 ASCDS Version : 7.6.11.10

Observation 2177 - L2 Version 5
Chandra X-Ray Center

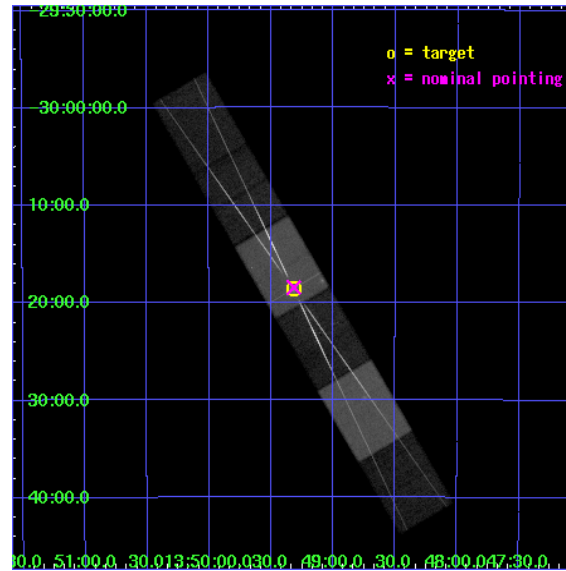
L2 Processing Date : Feb 3 2009

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1 Front

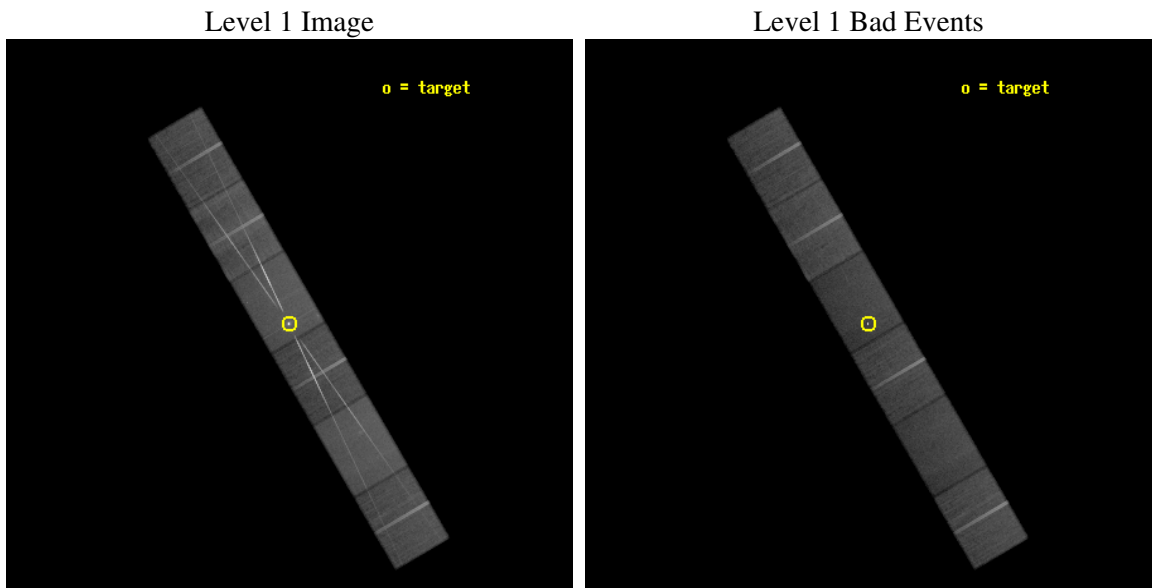
| | |
|----------|--|
| seq_num | 700367 |
| obs_id | 2177 |
| title | CHANDRA OBSERVATIONS OF THE BRIGHT SEYFERT 1 GALAXY IC 4329A |
| observer | DR GRZEGORZ MADEJSKI |
| object | IC 4329A |
| dtcycle | 0 |
| cycle | P |
| ra_targ | 207.33 |
| dec_targ | -30.309444 |
| ra_nom | 207.32911700709 |
| dec_nom | -30.307369564791 |
| roll_nom | 239.67796783844 |
| revision | 5 |
| ontime | 60054.959009841 |
| livetime | 59085.019332479 |
| ontime4 | 60057.5 |
| ontime5 | 60057.5 |
| ontime6 | 60057.5 |
| ontime7 | 60054.959009841 |
| ontime8 | 60057.5 |
| ontime9 | 60057.5 |
| l2events | 724695 |



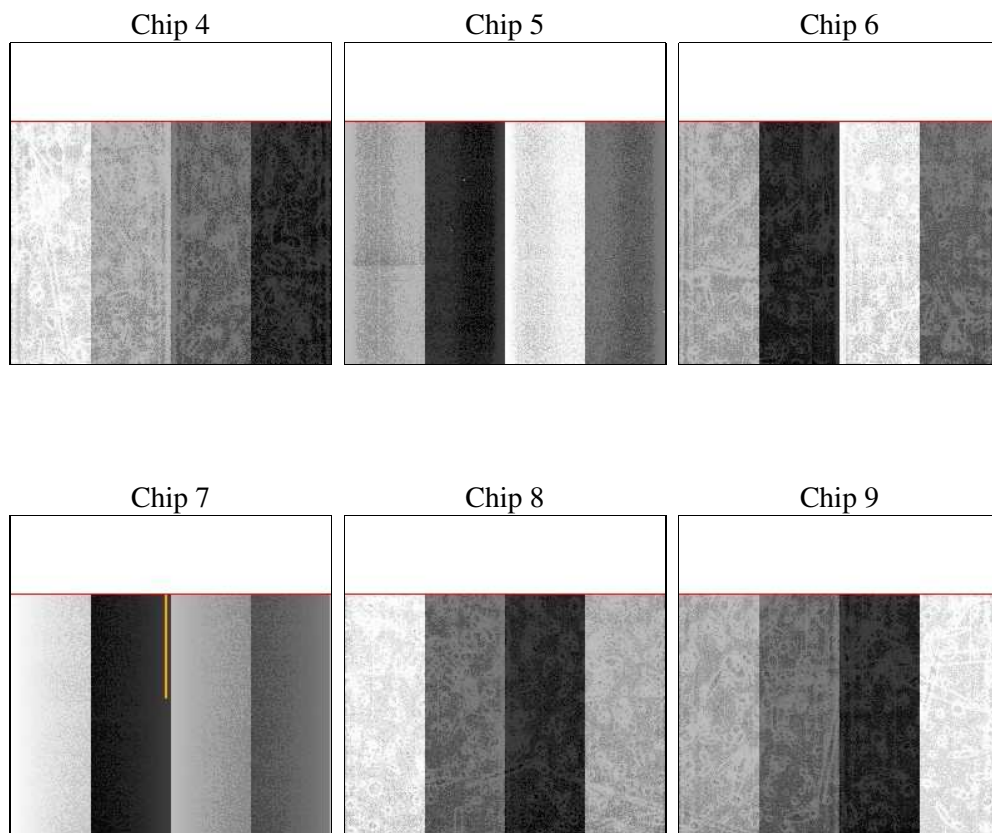
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | |
|----------|---------------------|
| obi_num | 0 |
| ascdsver | 7.6.11.10 |
| caldsver | 3.5.1 |
| date | 2009-02-03T00:55:22 |
| revision | 4 |

| | |
|----------------|-----------------|
| sched_exp_time | 60000.000000 |
| ontime | 60054.959009841 |
| ontime4 | 60057.5 |
| ontime5 | 60057.5 |
| ontime6 | 60057.5 |
| ontime7 | 60054.959009841 |
| ontime8 | 60057.5 |
| ontime9 | 60057.5 |
| l1events | 2369546 |

2.1.4 Events

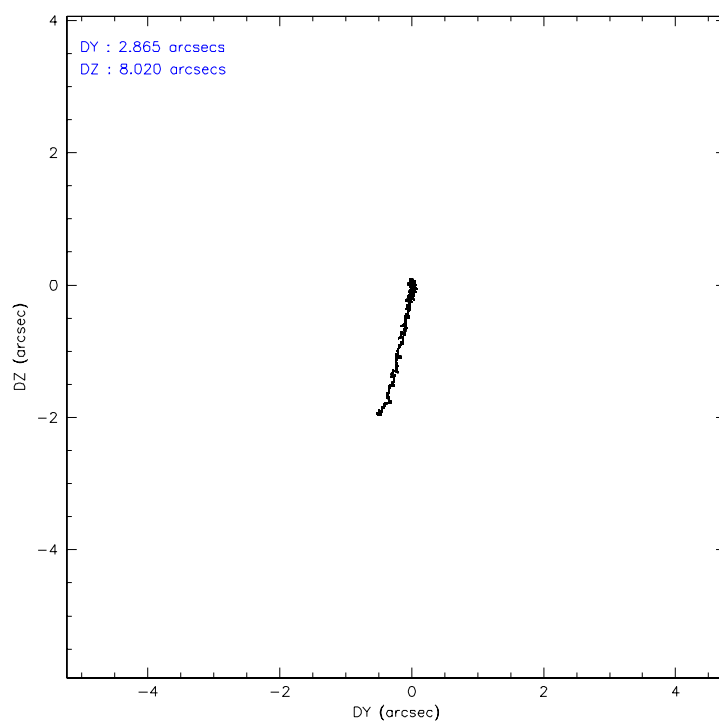
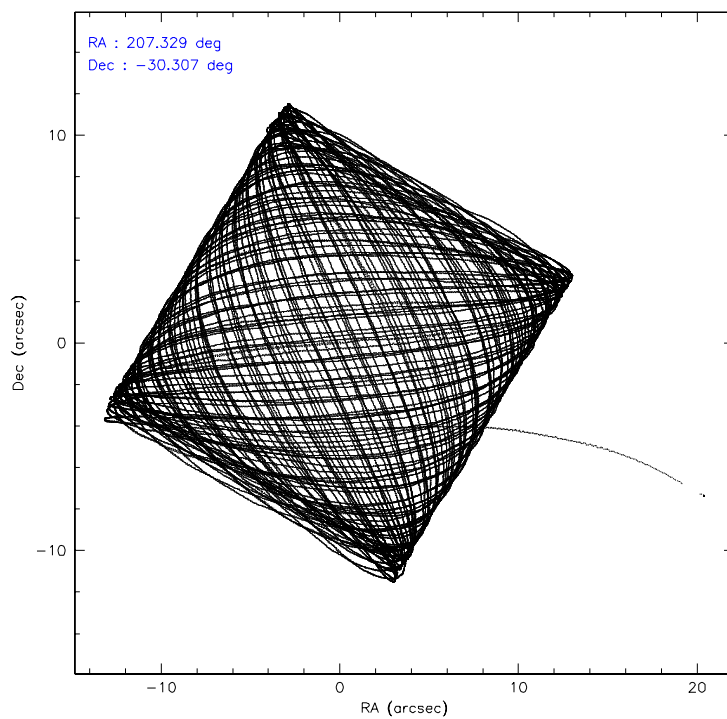
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|--------|--------|--------|--------|--------|--------|
| level 1 events | 335947 | 422381 | 396404 | 491106 | 422699 | 301009 |
| rejected events | 293997 | 218389 | 264714 | 225445 | 300425 | 257545 |
| rejected % | 87% | 51% | 66% | 45% | 71% | 85% |

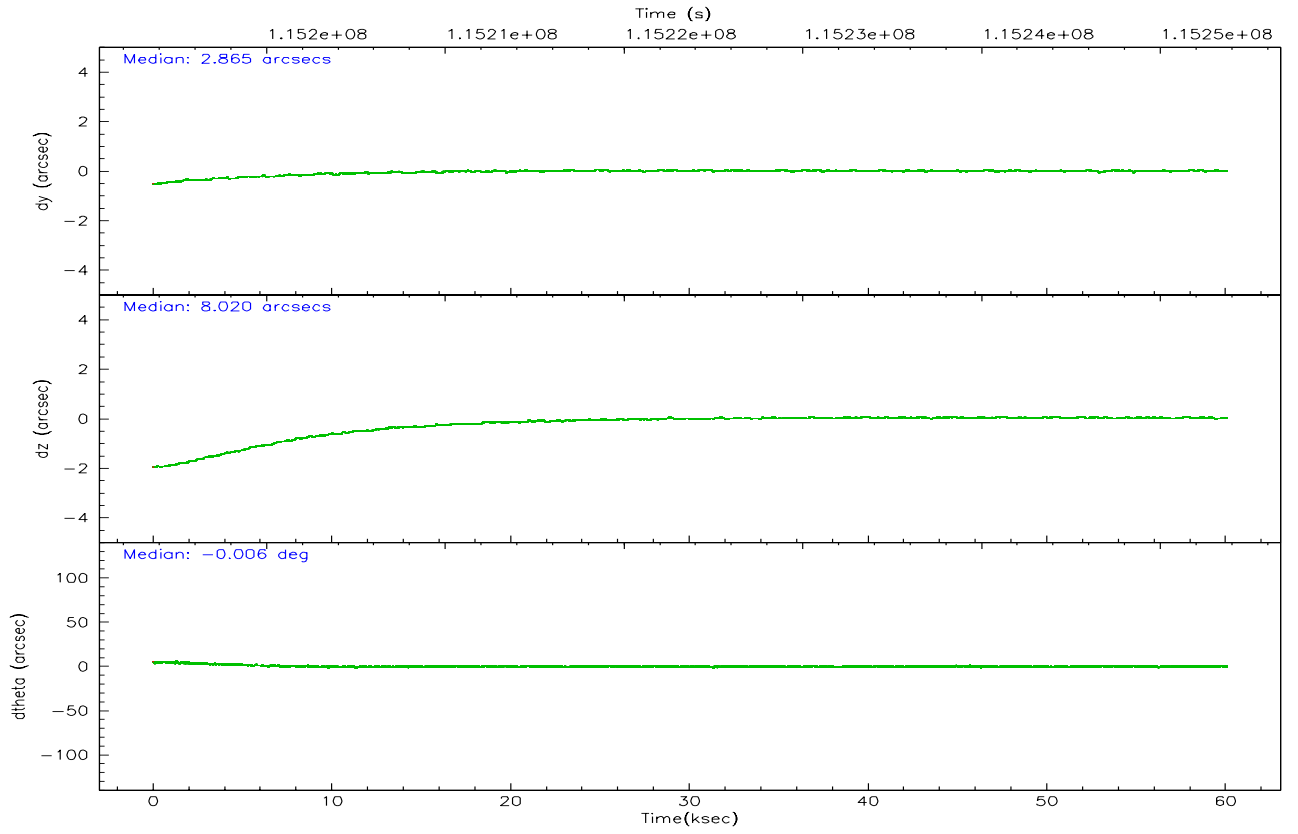
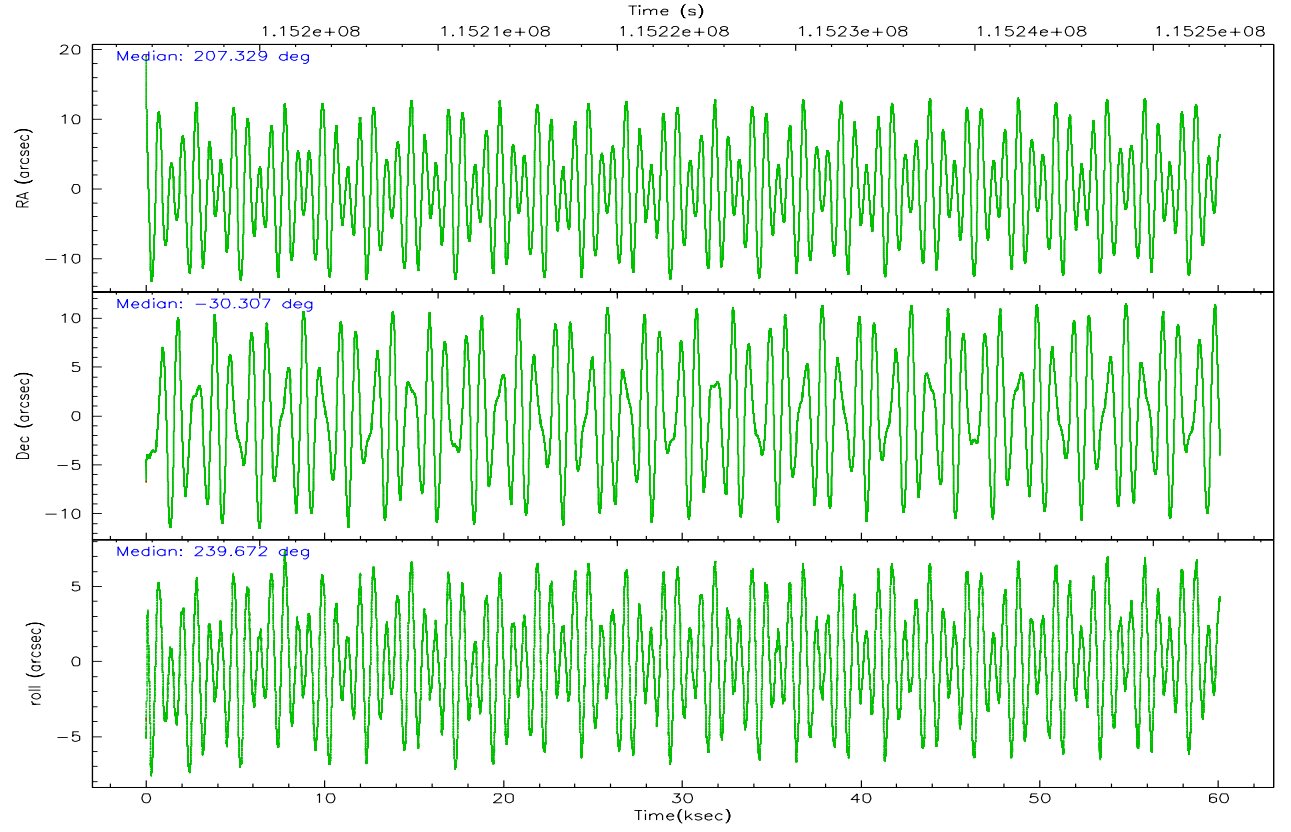
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|----------------|--------|--------|--------|--------|--------|--------|
| grade 0 events | 19537 | 22660 | 89013 | 39611 | 57777 | 21041 |
| | 5% | 5% | 22% | 8% | 13% | 6% |
| grade 1 events | 151 | 423 | 446 | 792 | 298 | 140 |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 9066 | 59485 | 18285 | 58501 | 20924 | 7840 |
| | 2% | 14% | 4% | 11% | 4% | 2% |
| grade 3 events | 3642 | 11674 | 7232 | 26901 | 11086 | 4034 |
| | 1% | 2% | 1% | 5% | 2% | 1% |
| grade 4 events | 3602 | 11348 | 7205 | 26393 | 10332 | 3739 |
| | 1% | 2% | 1% | 5% | 2% | 1% |
| grade 5 events | 10247 | 32340 | 12285 | 38179 | 15589 | 12319 |
| | 3% | 7% | 3% | 7% | 3% | 4% |
| grade 6 events | 6183 | 99205 | 10213 | 114761 | 22396 | 6879 |
| | 1% | 23% | 2% | 23% | 5% | 2% |
| grade 7 events | 283519 | 185246 | 251725 | 185968 | 284297 | 245017 |
| | 84% | 43% | 63% | 37% | 67% | 81% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|----------------------|----------------------|---------------------------------------|-----------|----------|
| Instrument | ACIS | ACIS | Obspar format version number | 6 | 6 |
| Detector | ACIS-456789 | ACIS-456789 | Obspar file type | PREDICTED | ACTUAL |
| Grating | HETG | HETG | Obspar update status | OVERRIDE | OVERRIDE |
| Data mode | FAINT | FAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| Pointing RA | 207.3291170070887 | 207.3291170070887 | Subarray requested | CUSTOM | CUSTOM |
| Pointing Dec | -30.30736956479091 | -30.30736956479091 | Subarray start row | 1 | 1 |
| Pointing Roll | 239.6779678384383 | 239.6779678384383 | Subarray row count | 774 | 774 |
| SIM focus pos (mm) | -0.68282252473119 | -0.68282252473119 | Alternating exposures requested | N | N |
| SIM defocus (mm) | 0.001444942264670734 | 0.001444942264670734 | Primary exposure time | 2.5 | 2.5 |
| SIM translation stage pos (mm) | -187.122887688 | -187.122887688 | | | |
| SIM translation stage offset (mm) | -3.00963541596721 | -3.00963541596721 | | | |
| Observation start time | 115193457 | 115193457 | | | |
| Observation start date | 2001-08-26T06:14:39 | 2001-08-26T06:10:56 | | | |
| Observation end time | 115253747 | 115253747 | | | |
| Observation end date | 2001-08-26T22:54:39 | 2001-08-26T22:55:47 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



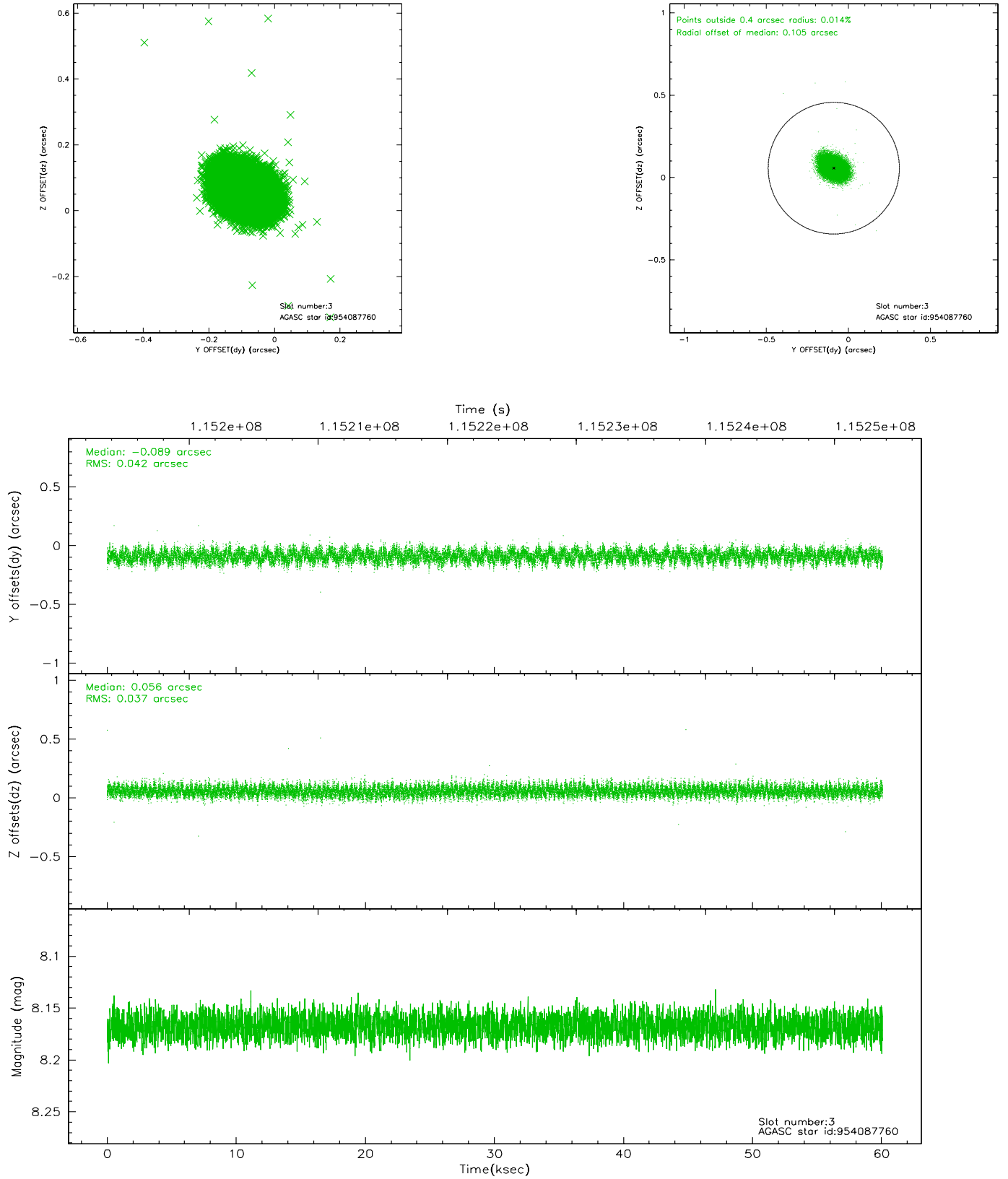


Slot Statistics

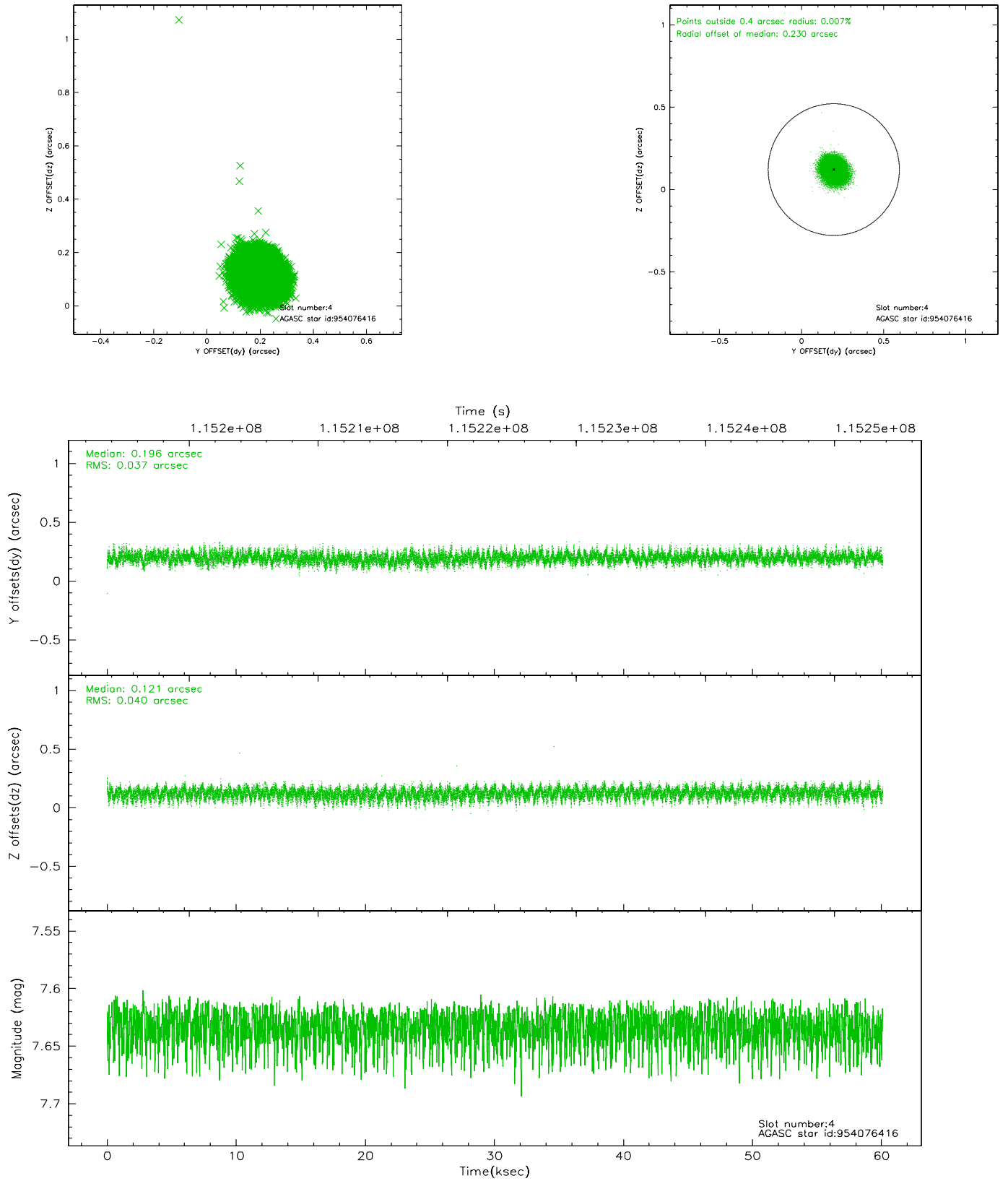
| | | | | | | | | |
|-------|--------|-----------|----------|----------|--------|--------|-------|-------|
| | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 |
| | FID | ACIS-S-1 | 7.19 | 14657 | -0.002 | 0.003 | 0.018 | 0.049 |
| | FID | ACIS-S-5 | 7.23 | 14657 | -0.007 | 0.009 | 0.009 | 0.022 |
| | FID | ACIS-S-6 | 7.38 | 14658 | -0.013 | 0.000 | 0.016 | 0.069 |
| | GUIDE | 954087760 | 8.17 | 29312 | -0.089 | 0.056 | 0.060 | 0.096 |
| | GUIDE | 954076416 | 7.63 | 29308 | 0.196 | 0.121 | 0.058 | 0.094 |
| | GUIDE | 881859840 | 8.29 | 29309 | -0.144 | -0.122 | 0.062 | 0.101 |
| | GUIDE | 954073864 | 9.06 | 29299 | 0.036 | -0.050 | 0.072 | 0.116 |
| 0.000 | 0.000 | 0.000 | 0.000000 | 0.000000 | 0.00 | 0.00 | | |

2.4 Star Slots

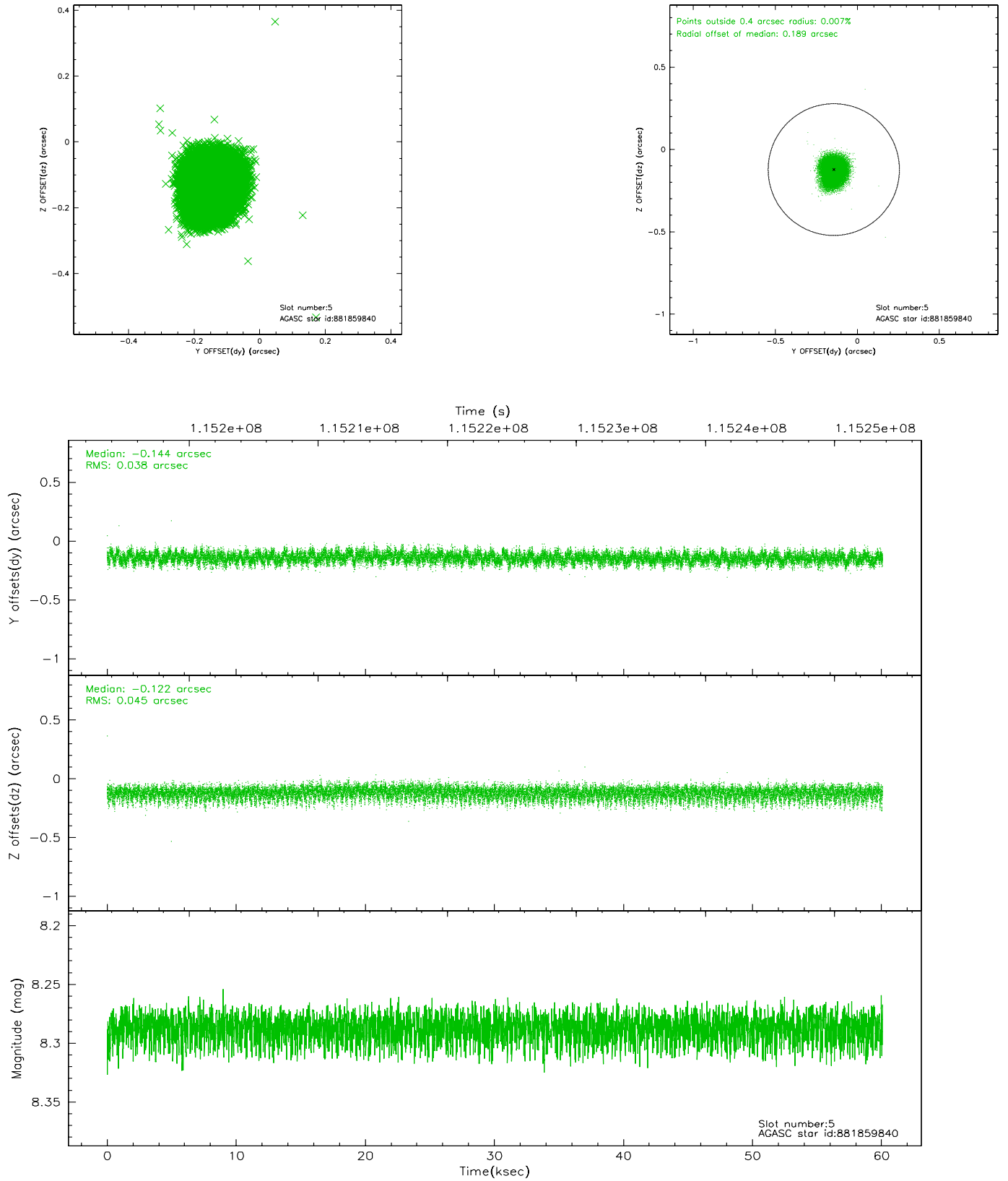
2.4.1 Slot 3



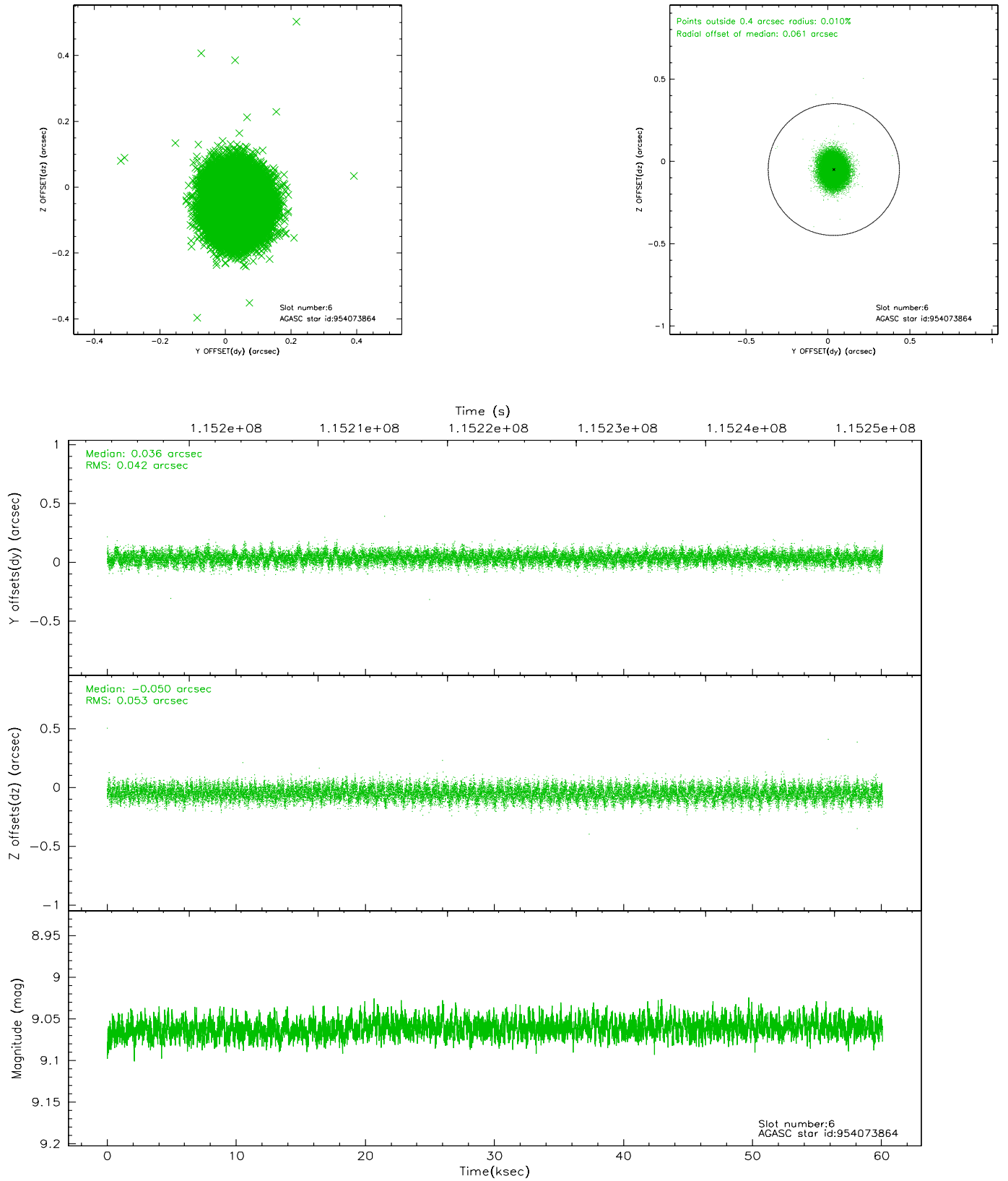
2.4.2 Slot 4



2.4.3 Slot 5

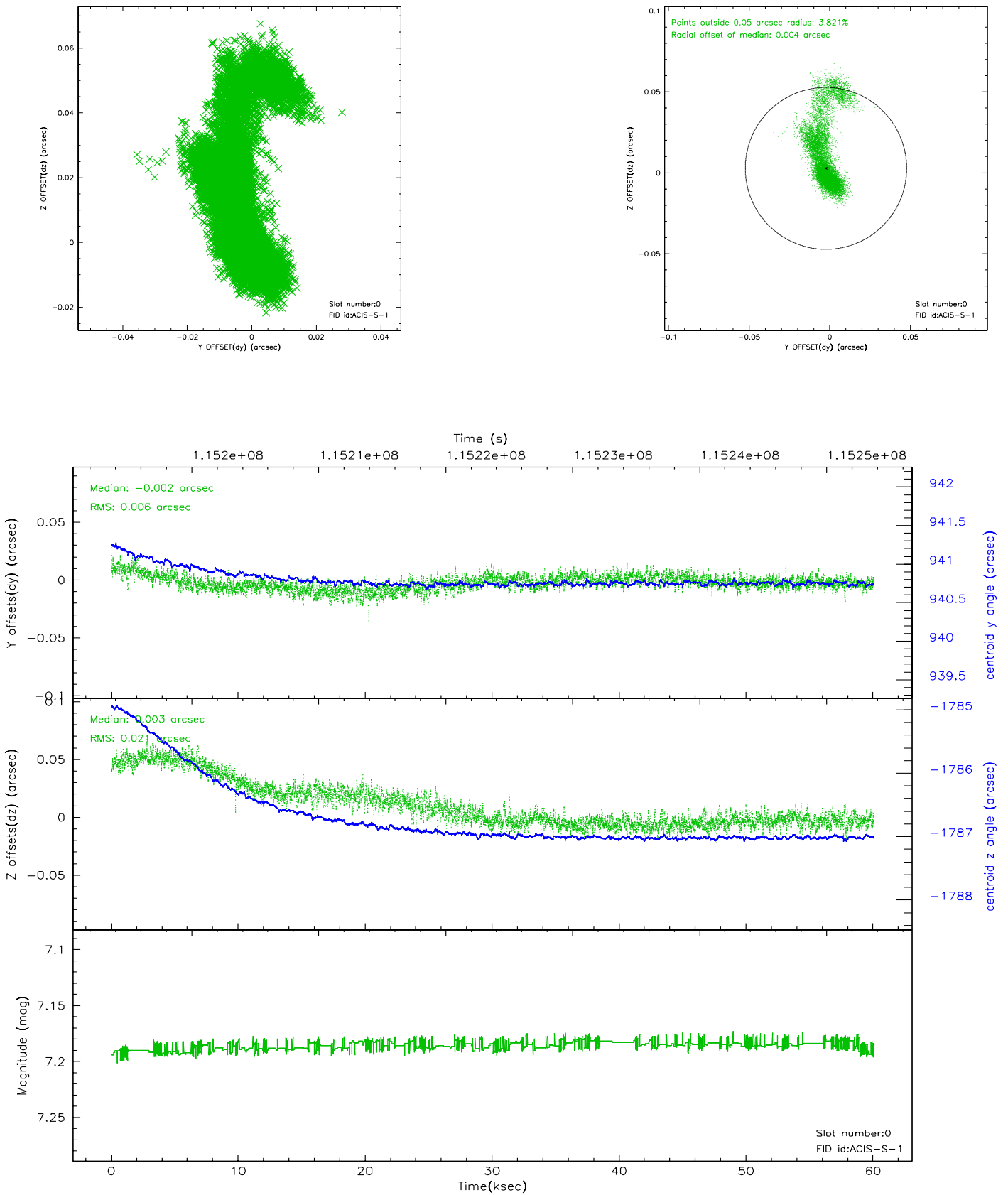


2.4.4 Slot 6

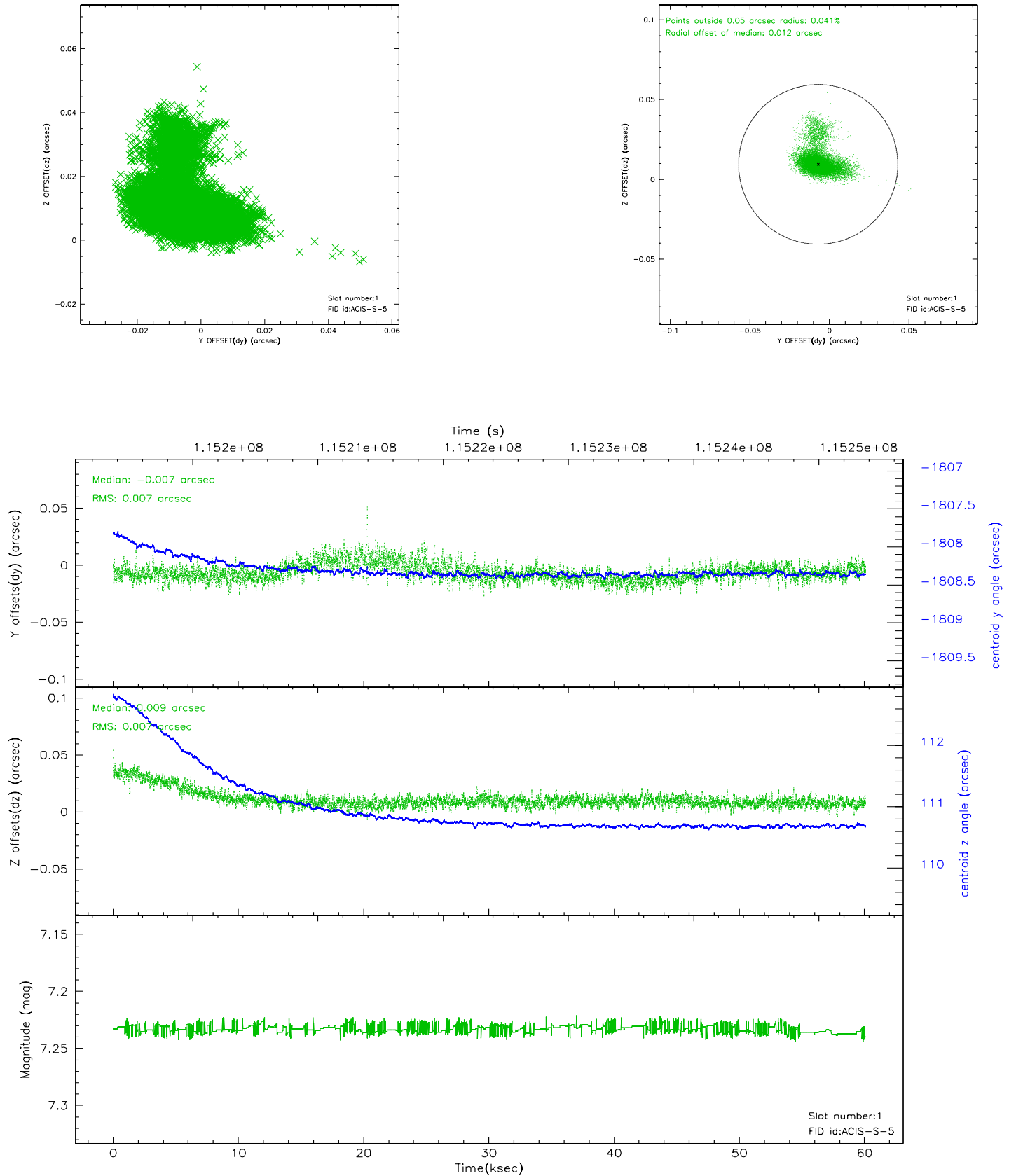


2.5 FID Slots

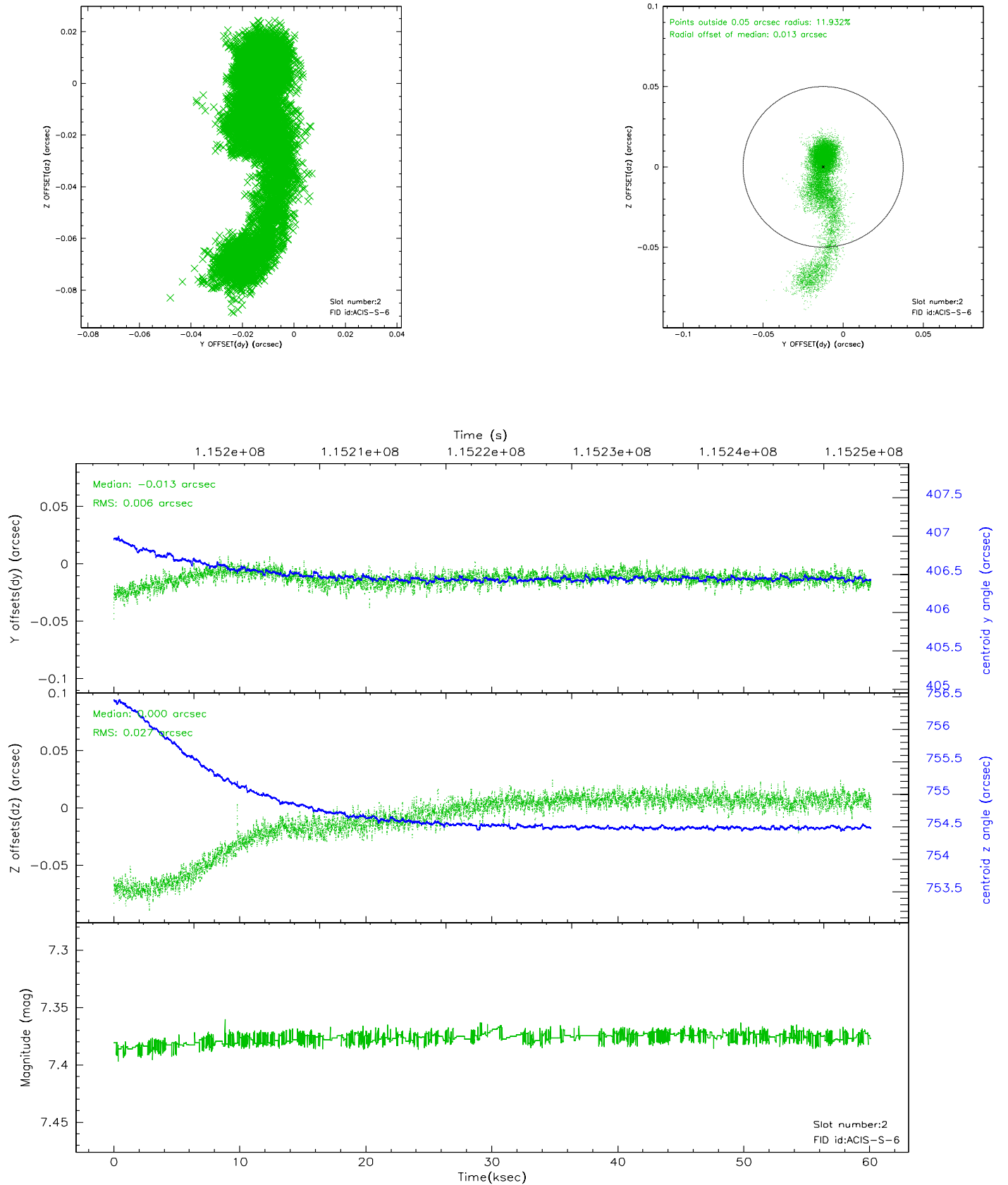
2.5.1 Slot 0



2.5.2 Slot 1

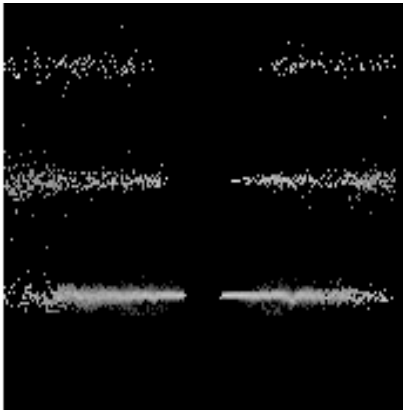


2.5.3 Slot 2

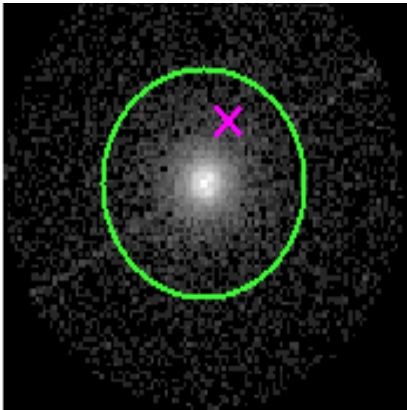


3 Gratings

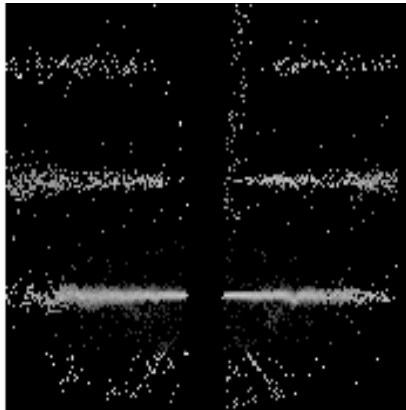
3.1 HEG Arm



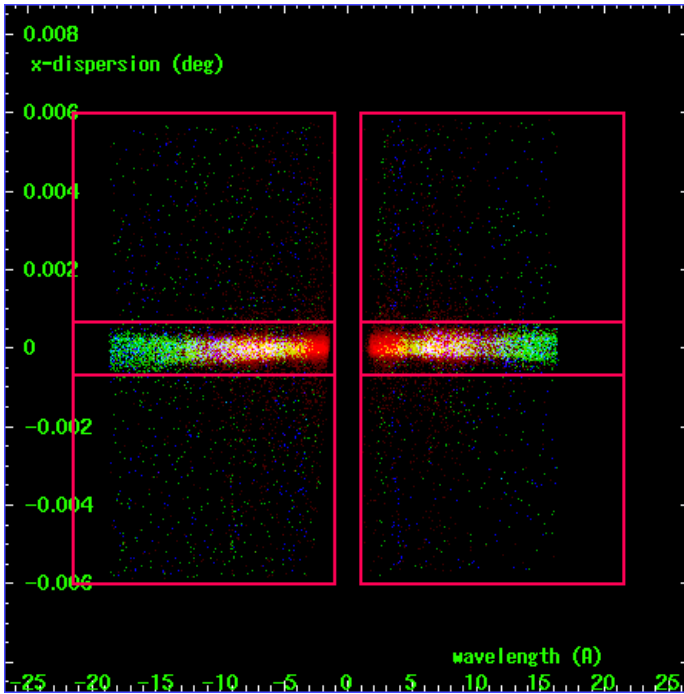
HEG Order Sort 123



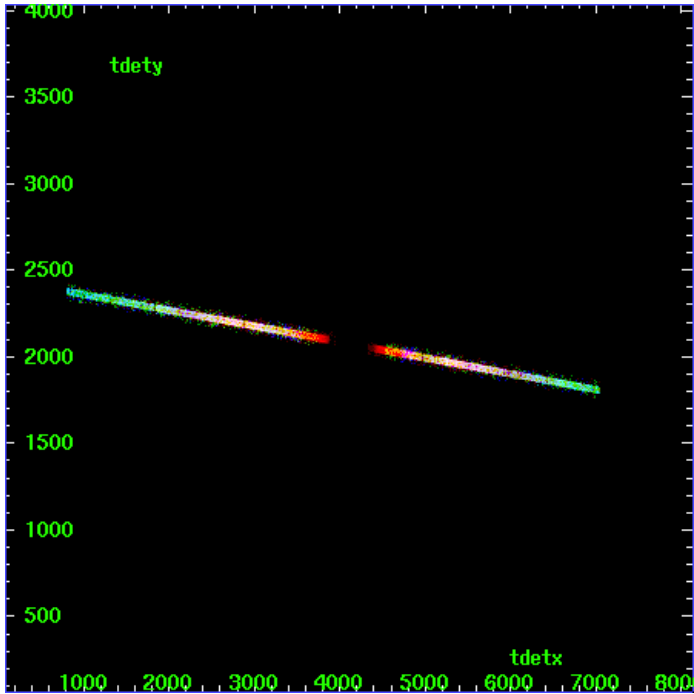
HEG Zero Order



HEG Order Sort ALL

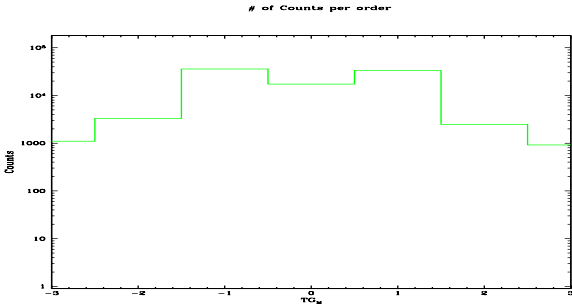


Spot Image HEG

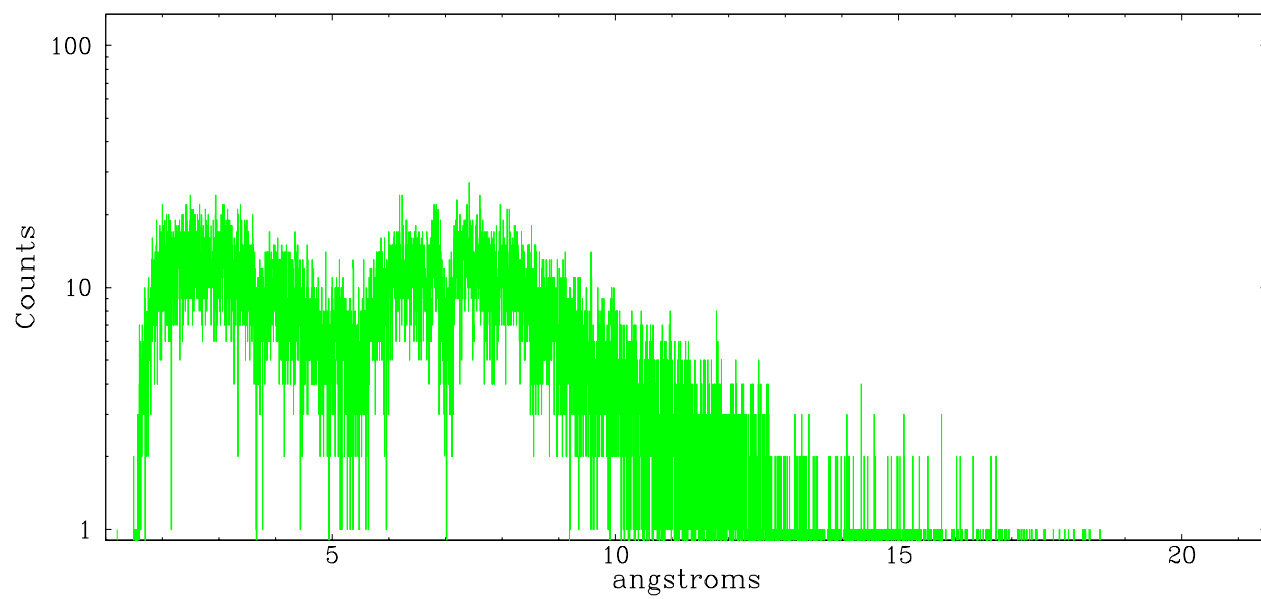


Full Detector HEG

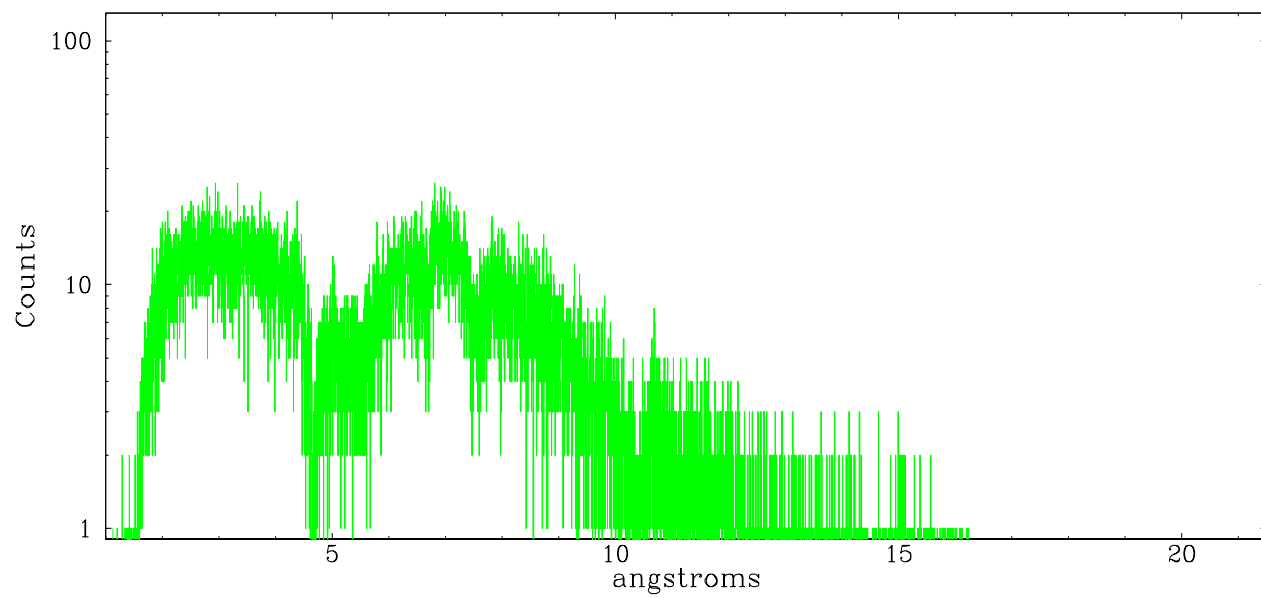
| | order -3 | order -2 | order -1 | order 0 | order 1 | order 2 | order 3 |
|--------|-------------|-------------|-------------|------------|------------|------------|------------|
| Events | 1100 | 3283 | 35728 | 17232 | 33225 | 2465 | 917 |



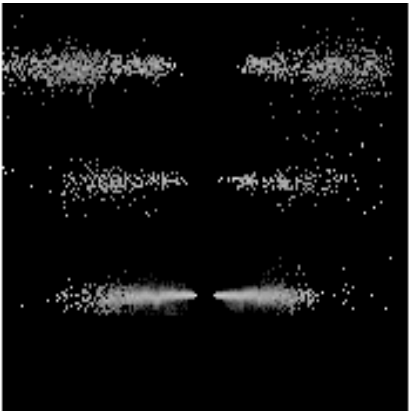
heg order -1



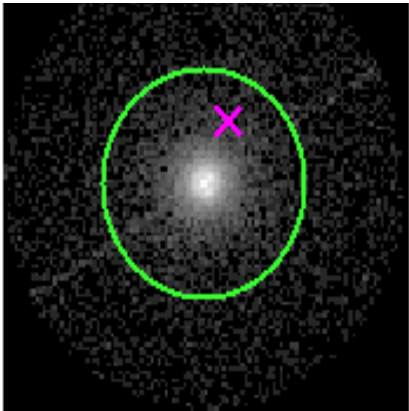
heg order +1



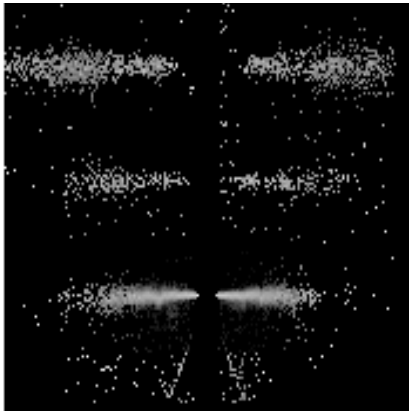
3.2 MEG Arm



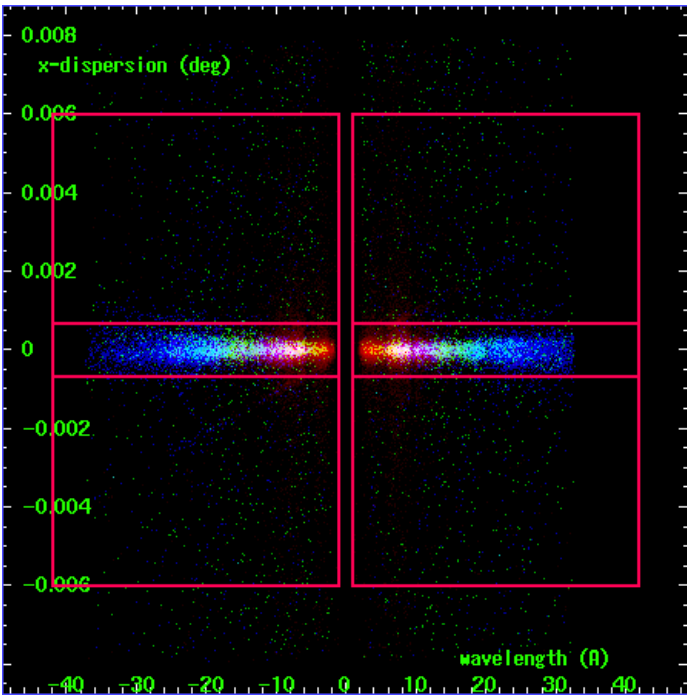
MEG Order Sort 123



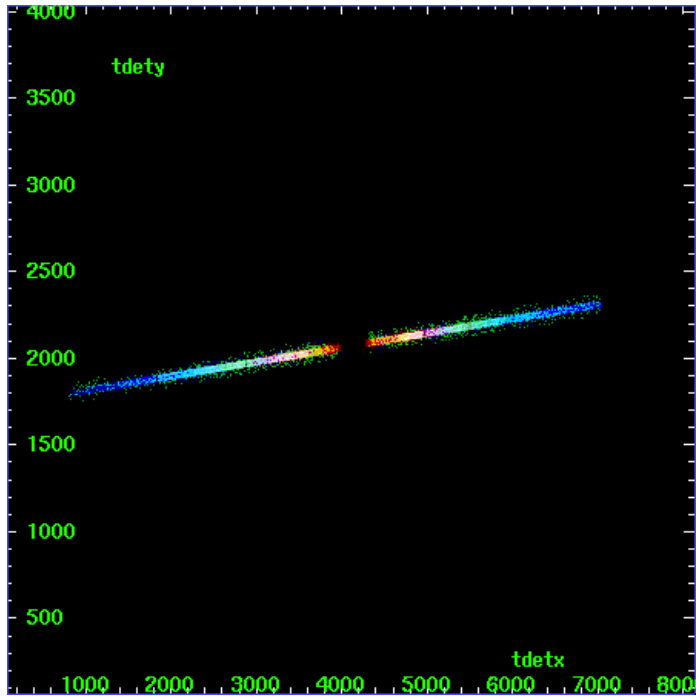
MEG Zero Order



MEG Order Sort ALL

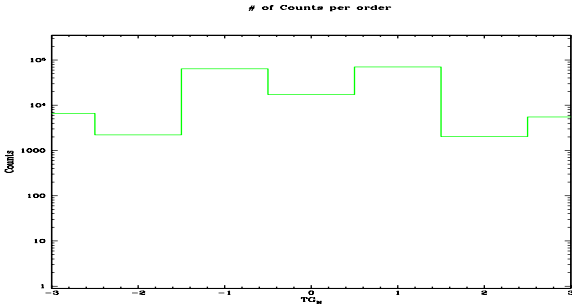


Spot Image MEG

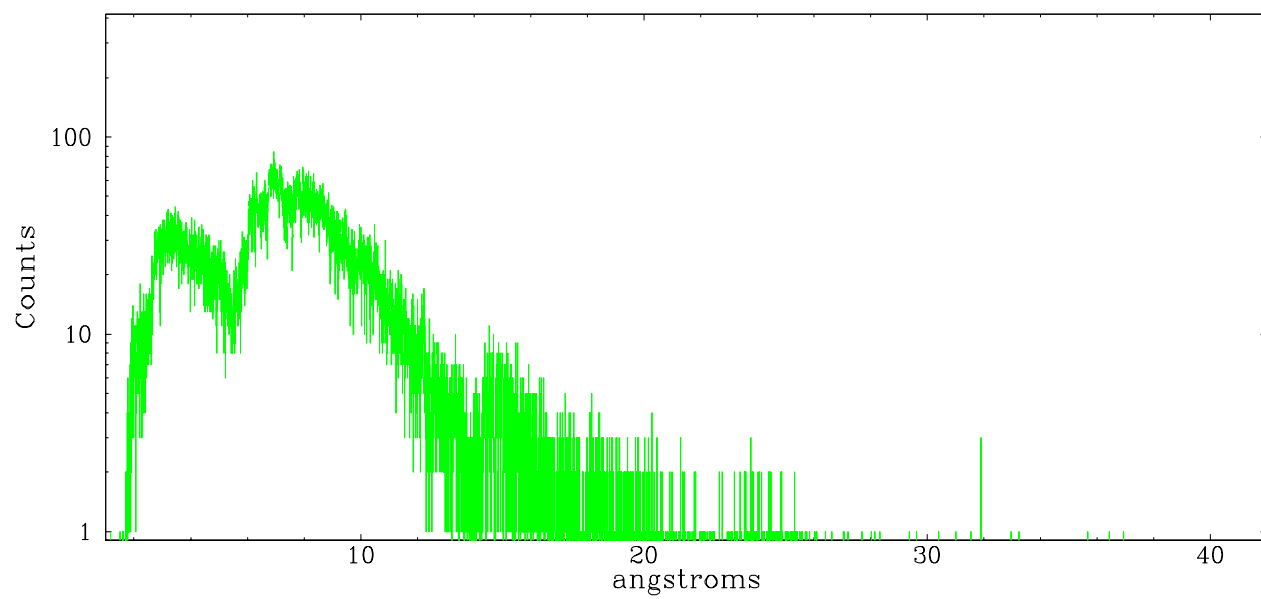


Full Detector MEG

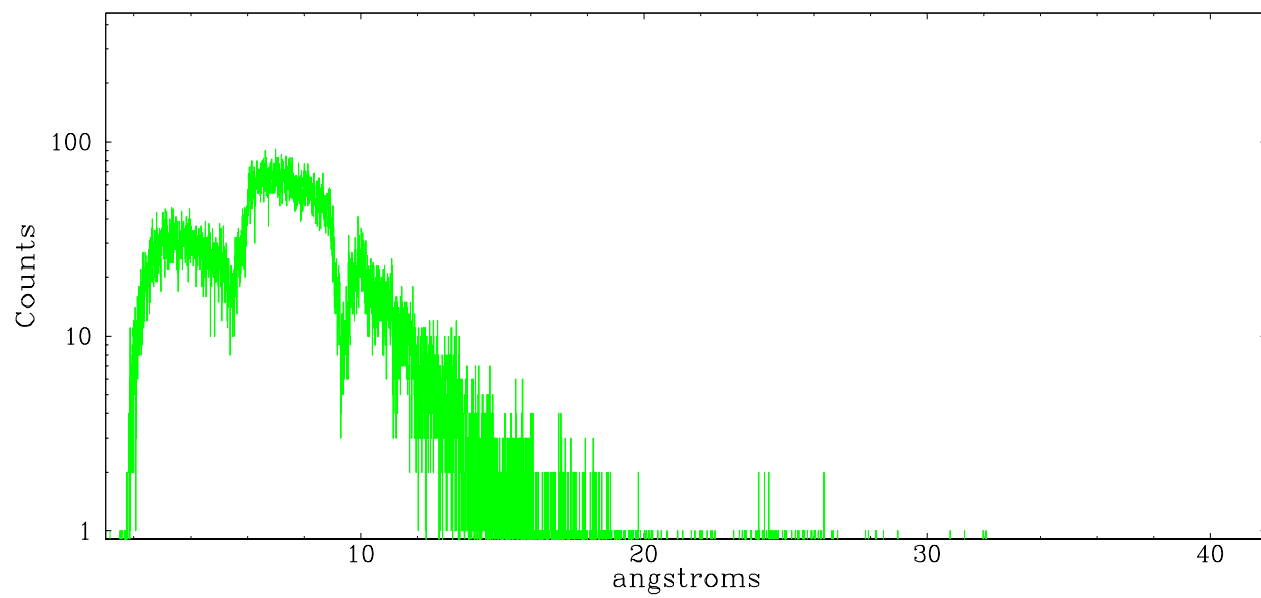
| | order -3 | order -2 | order -1 | order 0 | order 1 | order 2 | order 3 |
|--------|-------------|-------------|-------------|------------|------------|------------|------------|
| Events | 6591 | 2217 | 63795 | 17232 | 70502 | 2043 | 5489 |



meg order -1



meg order +1



A Summary

A.1 Status

| | |
|----------------------------|---------------|
| V&V Scientist | Beth Sundheim |
| V&V Date (YYYY-MM-DD) | 2009.02.04 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 60.054 |

A.2 Comments

Source is extended and standard software processing technique using the tool tgdetect did not give an accurate position for the zeroth order. Zeroth order position for this observation has been determined using the known angle between the readout streak and the meg spectral arm. The newly determined zeroth order coordinates have been placed in the *src1a.fits file, replacing the coordinates determined by tgdetect.

Focal plane temperature is warmer than -118.7 C degrees during the first ~3 ksec of this observation. The ACIS spectral response calibration for the front-illuminated chips is less accurate at these warmer temperatures than it is at -119.7 C. The back-illuminated chips are not affected at the focal plane temperatures recorded for this observation. Users whose science objectives depend on the most accurate spectral response (i.e.: fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.

This obsid was reprocessed to correct minor errors in parameters used in processing. Some of these parameters cannot be determined automatically for this observation and were derived from spacecraft telemetry.