

V&V Reference Report

L2 ASCDS Version : 8.5

Observation 4474 - L2 Version 3
Chandra X-Ray Center

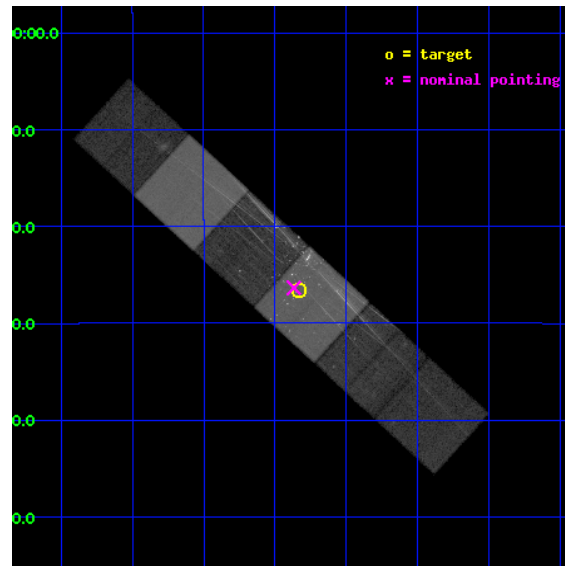
L2 Processing Date : Dec 12 2012

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1 Front

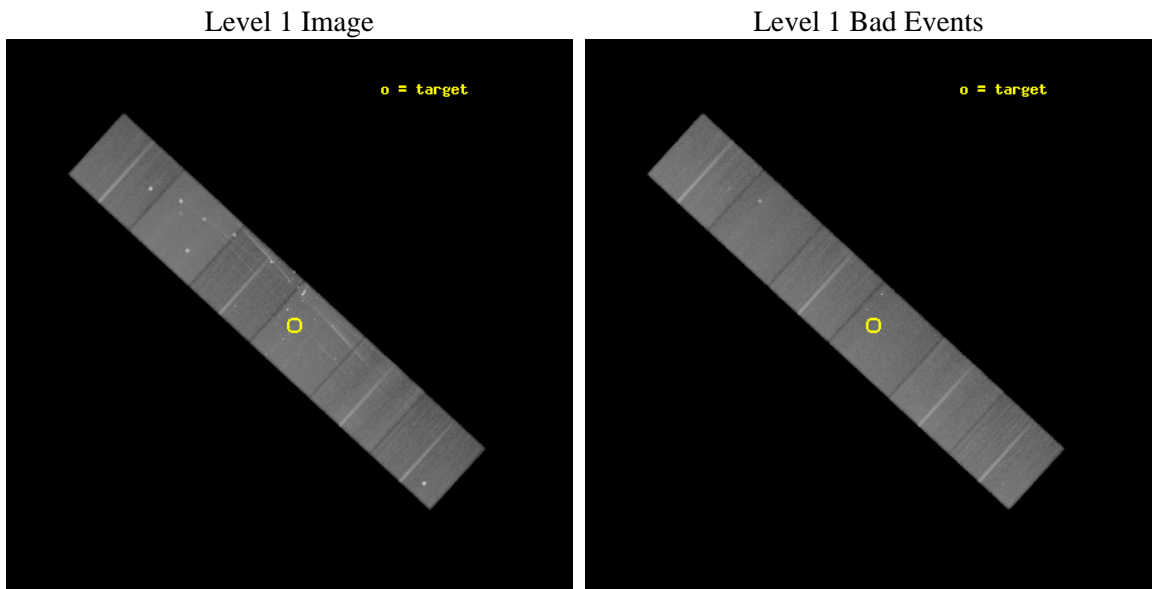
| | | |
|----------|--|---|
| seq_num | 200243 | Sequence number |
| obs_id | 4474 | Observation id |
| title | Study of Pre-Main Sequence Stars Near the Beginning of their Accretion Phase | Proposal title |
| observer | Prof Claude Canizares | Principal investigator |
| object | Orion Nebula Cluster | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 83.83375 | Observer's specified target RA [deg] |
| dec_targ | -5.444194 | Observer's specified target Dec [deg] |
| ra_nom | 83.841957525614 | Nominal RA [deg] |
| dec_nom | -5.4389922448231 | Nominal Dec [deg] |
| roll_nom | 42.488582614525 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 51251.199809074 | Sum of GTIs [s] |
| livetime | 50602.226257324 | Livetime [s] |
| ontime4 | 51251.199809074 | Sum of GTIs [s] |
| ontime5 | 51251.199809074 | Sum of GTIs [s] |
| ontime6 | 51251.199809074 | Sum of GTIs [s] |
| ontime7 | 51251.199809074 | Sum of GTIs [s] |
| ontime8 | 51251.199809074 | Sum of GTIs [s] |
| ontime9 | 51251.199809074 | Sum of GTIs [s] |
| l2events | 812358 | Number of level 2 events |



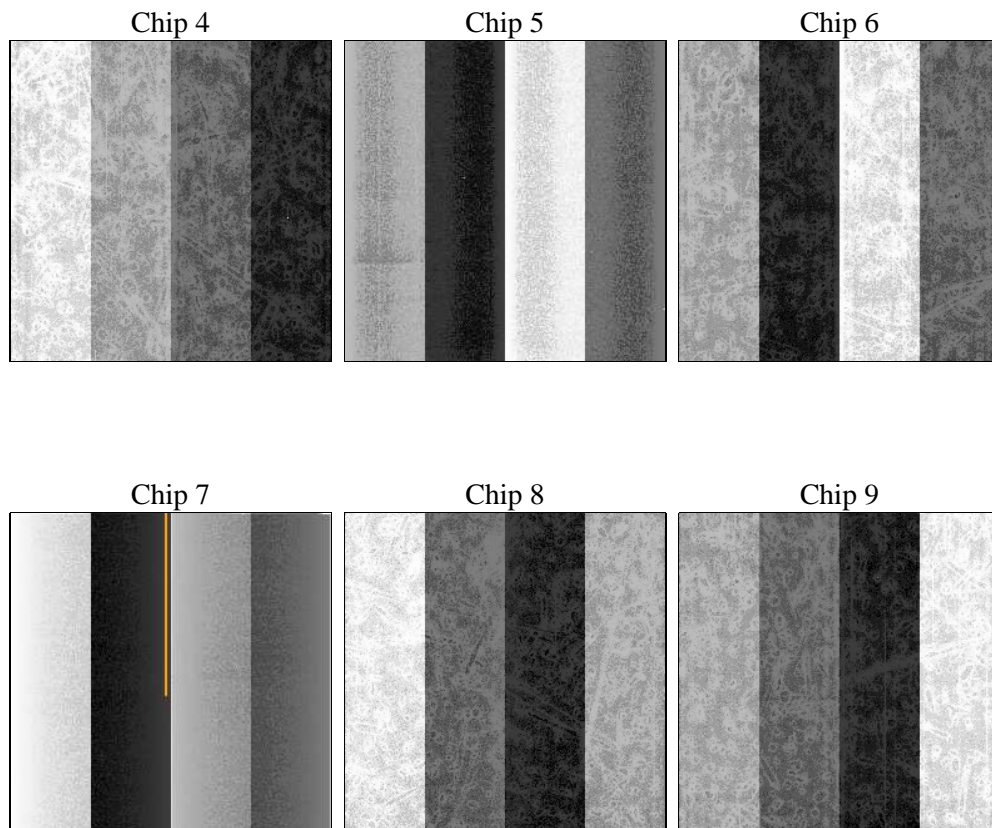
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 51100.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.5 | Processing system revision | ontime | 51251.199809074 | Sum of GTIs [s] |
| caldsver | 4.5.4 | | ontime4 | 51251.199809074 | Sum of GTIs [s] |
| date | 2012-12-12T03:39:05 | Date and time of file creation | ontime5 | 51251.199809074 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime6 | 51251.199809074 | Sum of GTIs [s] |
| | | | ontime7 | 51251.199809074 | Sum of GTIs [s] |
| | | | ontime8 | 51251.199809074 | Sum of GTIs [s] |
| | | | ontime9 | 51251.199809074 | Sum of GTIs [s] |
| | | | l1events | 3126744 | Number of level 1 events |

2.1.4 Events

| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 | | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|--------|--------|
| level 1 events | 462928 | 621194 | 453906 | 638190 | 525383 | 425143 | grade 0 events | 37999 | 38722 | 56230 | 38611 | 47656 | 38171 |
| rejected events | 396370 | 326169 | 357293 | 320821 | 401184 | 357774 | | 8% | 6% | 12% | 6% | 9% | 8% |
| rejected % | 85% | 52% | 78% | 50% | 76% | 84% | grade 1 events | 571 | 858 | 410 | 846 | 419 | 335 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 10882 | 89348 | 15801 | 68914 | 25460 | 9924 |
| | | | | | | | | 2% | 14% | 3% | 10% | 4% | 2% |
| | | | | | | | grade 3 events | 5113 | 11823 | 6674 | 30528 | 12095 | 4985 |
| | | | | | | | | 1% | 1% | 1% | 4% | 2% | 1% |
| | | | | | | | grade 4 events | 4944 | 11113 | 6337 | 30399 | 11267 | 4999 |
| | | | | | | | | 1% | 1% | 1% | 4% | 2% | 1% |
| | | | | | | | grade 5 events | 17511 | 43783 | 18586 | 53437 | 24098 | 19508 |
| | | | | | | | | 3% | 7% | 4% | 8% | 4% | 4% |
| | | | | | | | grade 6 events | 7897 | 145096 | 11951 | 149973 | 28128 | 9510 |
| | | | | | | | | 1% | 23% | 2% | 23% | 5% | 2% |
| | | | | | | | grade 7 events | 378011 | 280451 | 337917 | 265482 | 376260 | 337711 |
| | | | | | | | | 81% | 45% | 74% | 41% | 71% | 79% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-456789 | ACIS-456789 | Obspar file type | PREDICTED | ACTUAL |
| Grating | HETG | HETG | Obspar update status | NONE | UPDATED |
| Data mode | FAINT | FAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| [deg] Pointing RA | 83.834079 | 83.84195752561357 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | -5.465090 | -5.438992244823149 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 42.331210 | 42.48858261452468 | [s] Primary exposure time | 0.000000 | 3.2 |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | | | |
| [mm] SIM defocus | 0 | 0.001444936568705701 | | | |
| [mm] SIM translation stage pos | -190.132523 | -190.1400660498719 | | | |
| [mm] SIM translation stage offset | 0 | 0.00754346686406393 | | | |
| [s] Observation start time (MET) | 217584642.184000 | 217583318.91163 | | | |
| Observation start date | 2004-11-23T08:09:38 | 2004-11-23T07:48:38 | | | |
| [s] Observation end time (MET) | 217635742.184000 | 217636825.96403 | | | |
| Observation end date | 2004-11-23T22:21:18 | 2004-11-23T22:40:25 | | | |
| Read mode | TIMED | TIMED | | | |

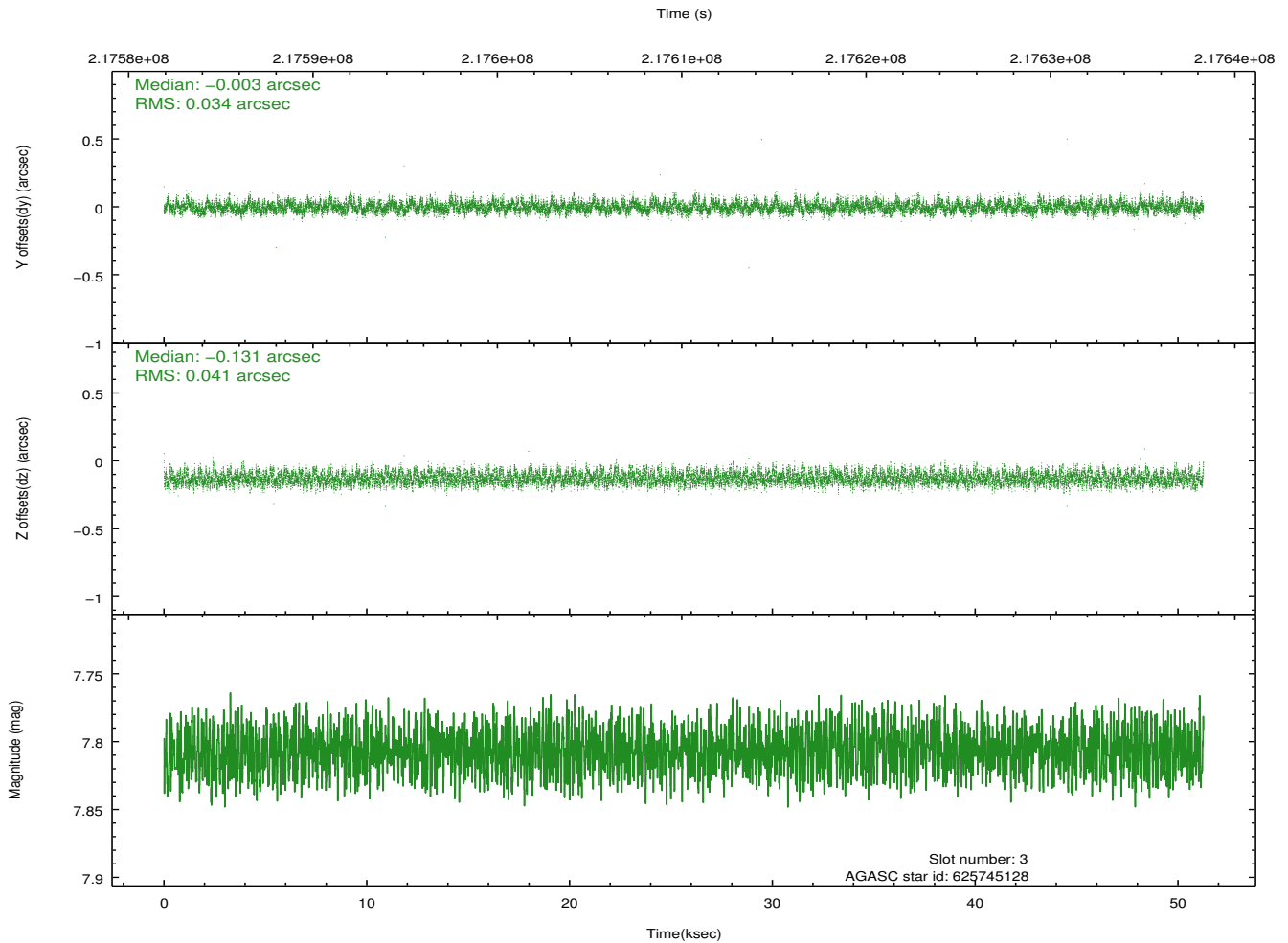
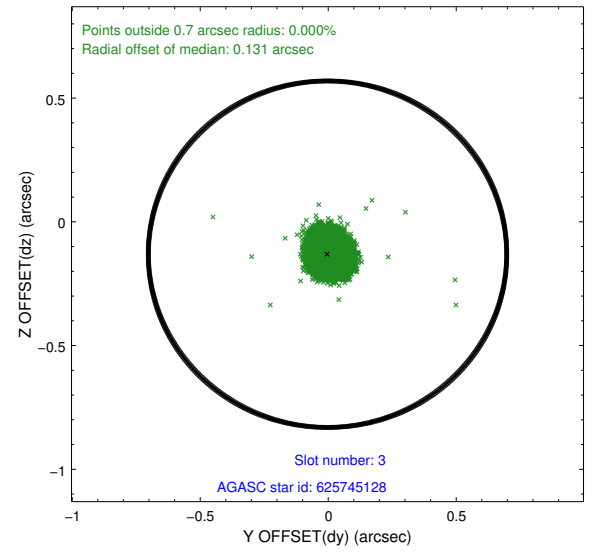
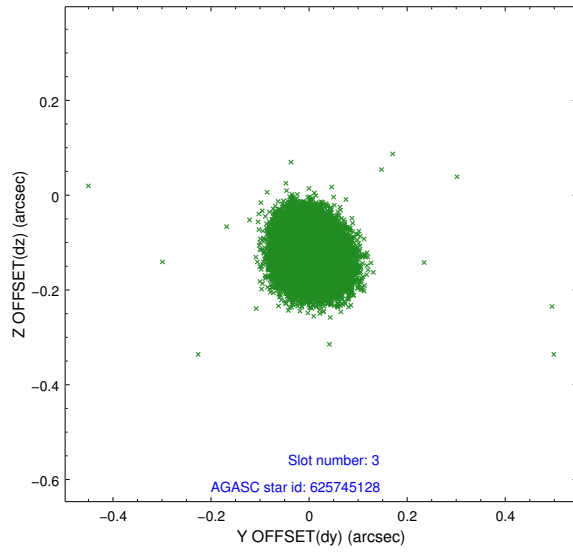
2.3 Aspect

Slot Statistics

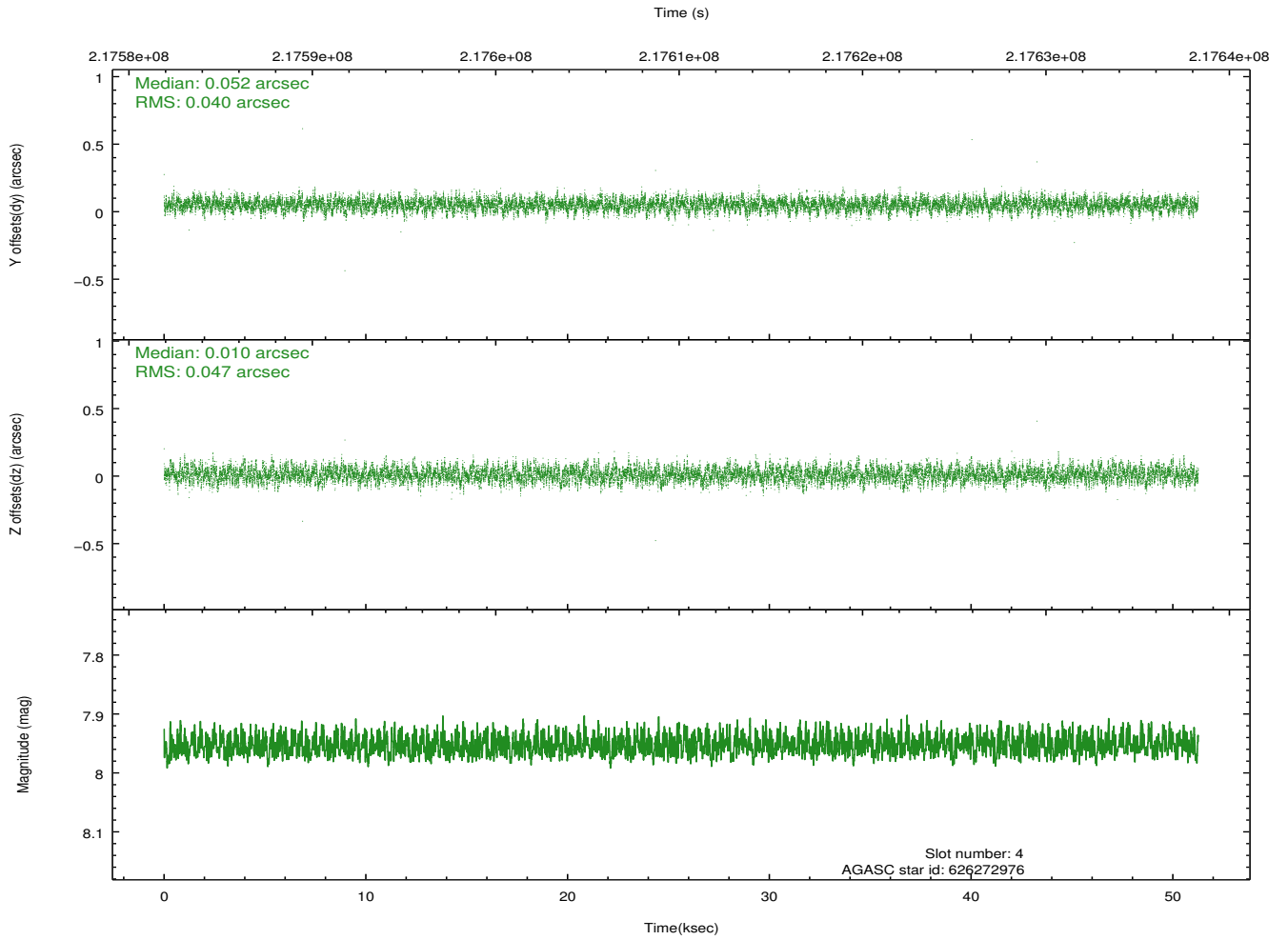
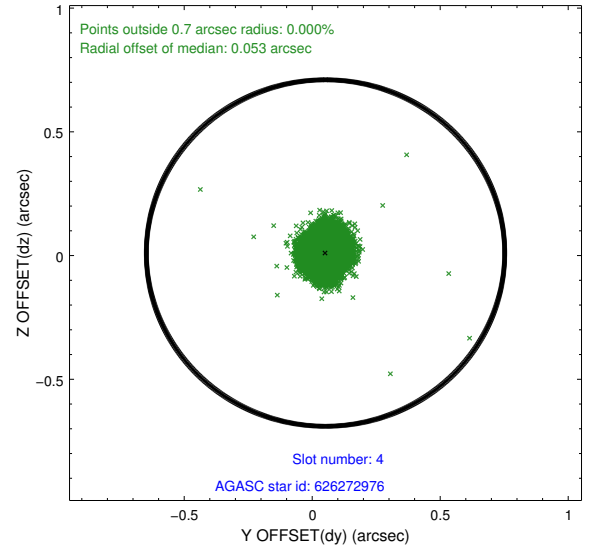
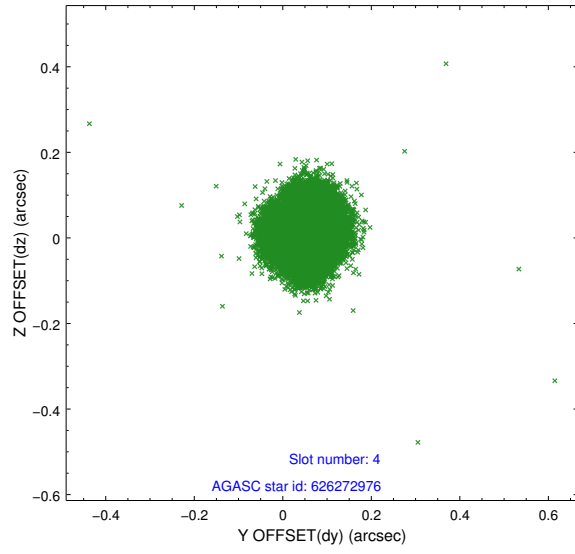
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|-----------|-----------|----------|----------|
| 0 | FID | ACIS-S-2 | 7.10 | 12502 | -0.043 | -0.035 | 0.010 | 0.019 | 0.000000 | 0.000000 | -760.44 | -1731.17 |
| 1 | FID | ACIS-S-4 | 7.21 | 12501 | 0.110 | 0.030 | 0.007 | 0.015 | 0.000000 | 0.000000 | 2152.96 | 177.47 |
| 2 | FID | ACIS-S-5 | 7.23 | 12503 | -0.099 | 0.014 | 0.012 | 0.028 | 0.000000 | 0.000000 | -1813.40 | 171.01 |
| 3 | GUIDE | 625745128 | 7.81 | 25000 | -0.003 | -0.131 | 0.057 | 0.090 | 83.769930 | -4.731835 | 1607.64 | 2106.46 |
| 4 | GUIDE | 626272976 | 7.95 | 25000 | 0.052 | 0.010 | 0.066 | 0.102 | 83.795875 | -5.926912 | -1220.28 | -1136.96 |
| 5 | GUIDE | 626273040 | 7.11 | 25003 | 0.061 | 0.004 | 0.067 | 0.106 | 84.062610 | -5.647920 | 162.26 | -1038.06 |
| 6 | GUIDE | 625745144 | 7.85 | 25000 | -0.107 | 0.038 | 0.059 | 0.095 | 83.888985 | -4.837539 | 1667.06 | 1537.63 |
| 7 | GUIDE | 626272880 | 7.65 | 25001 | -0.015 | 0.079 | 0.065 | 0.106 | 83.815609 | -6.032748 | -1424.66 | -1466.20 |

2.4 Star Slots

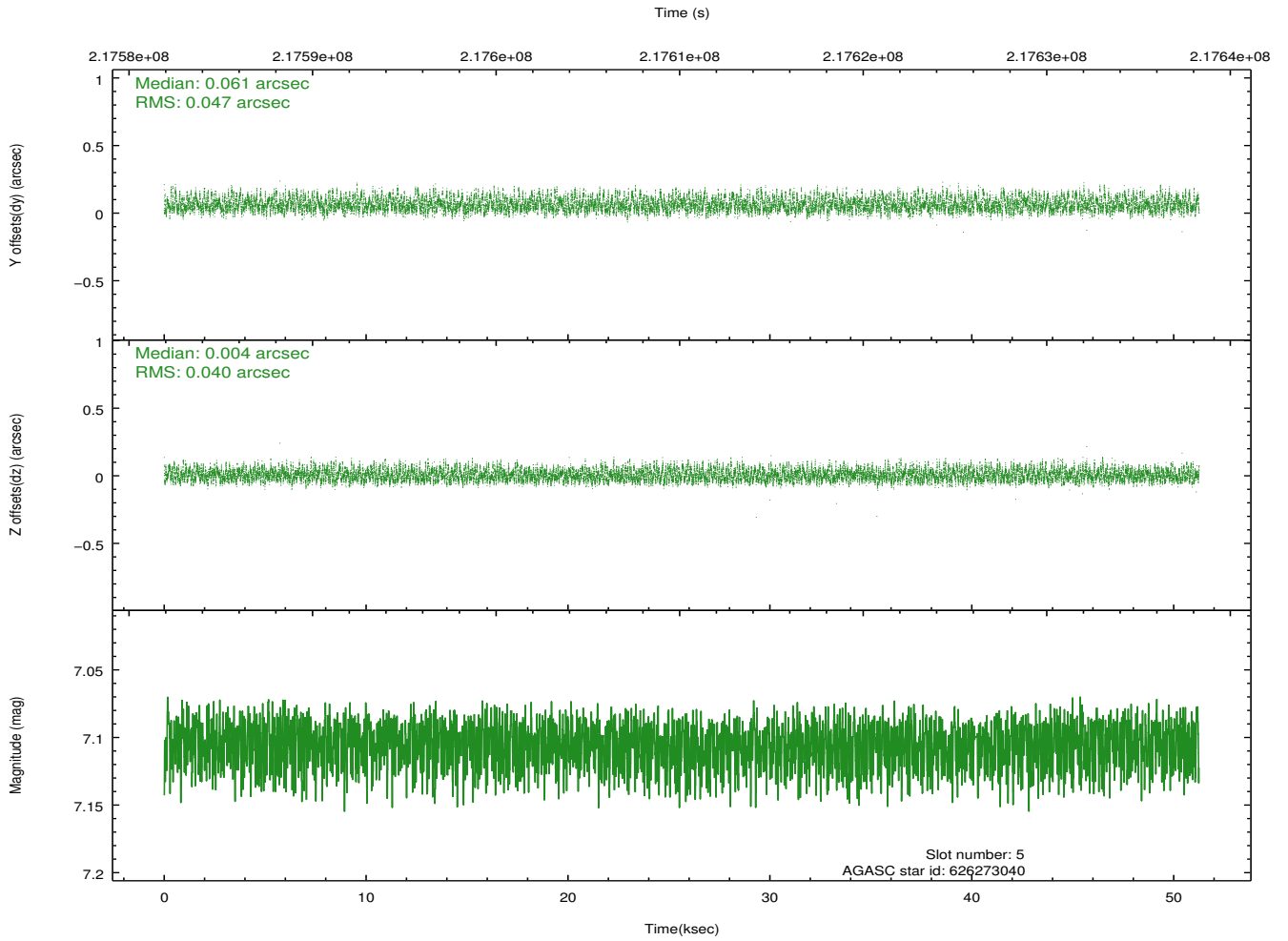
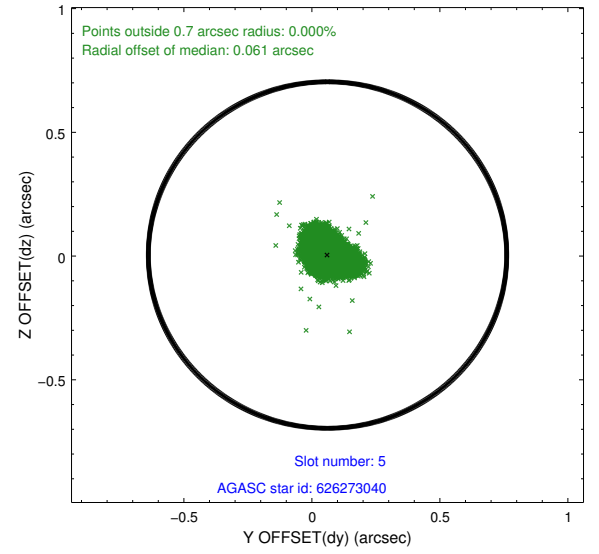
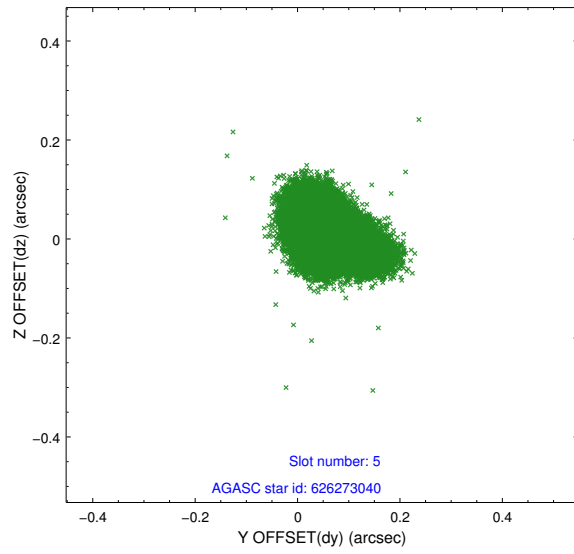
2.4.1 Slot 3



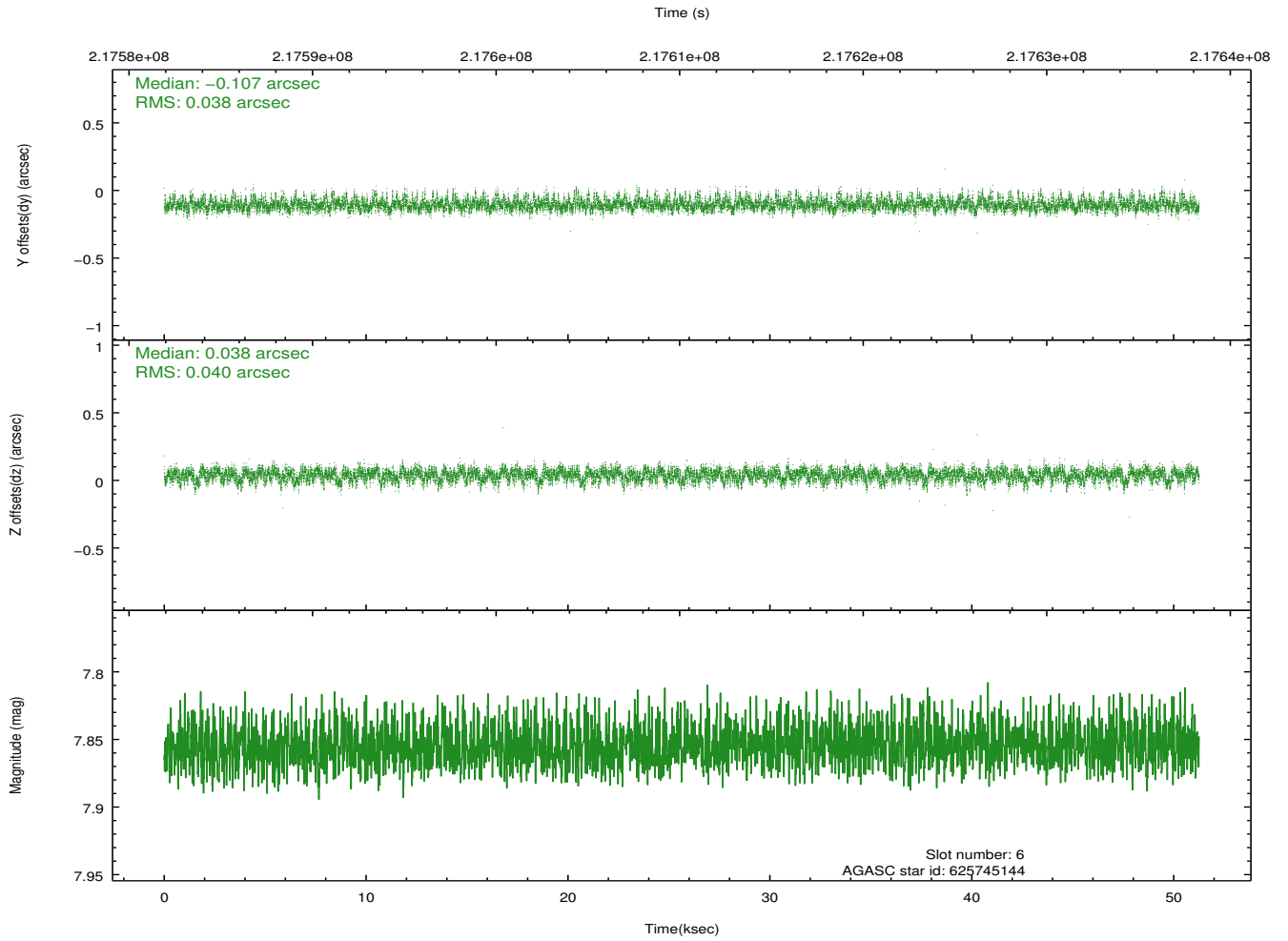
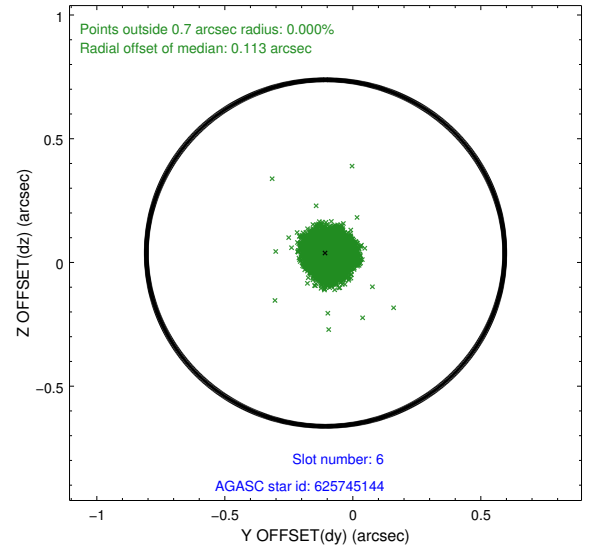
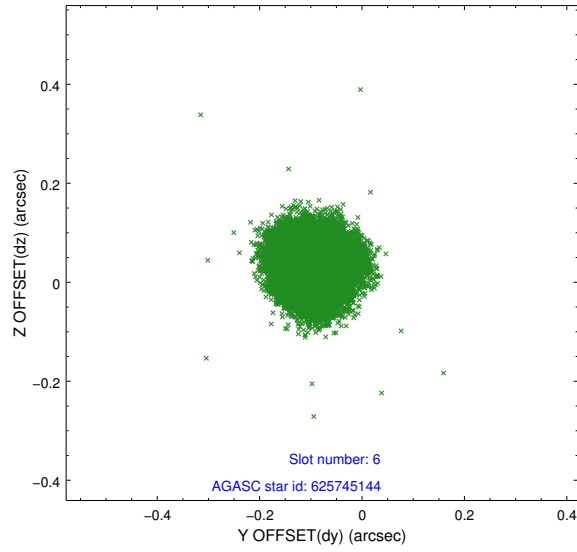
2.4.2 Slot 4



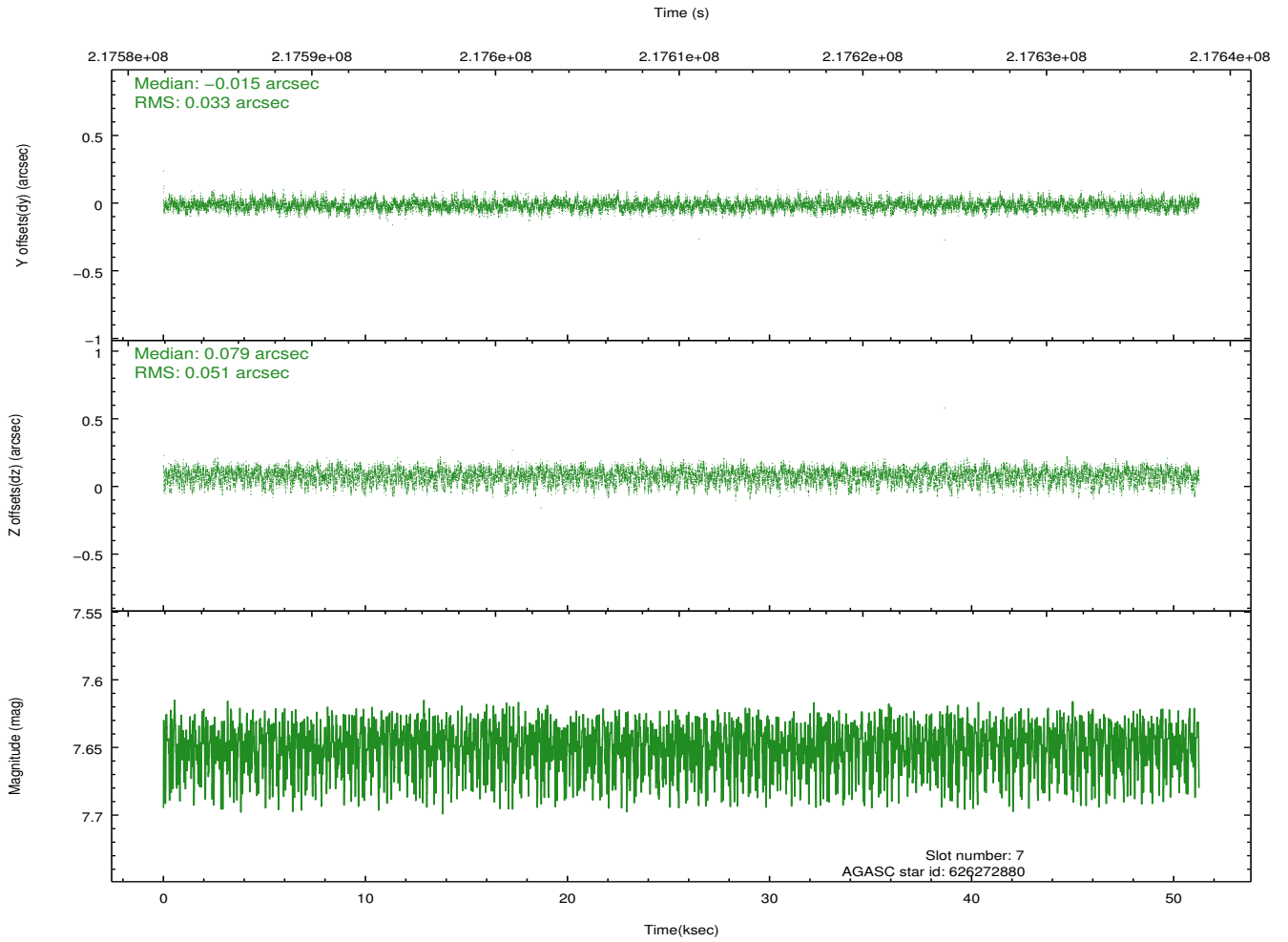
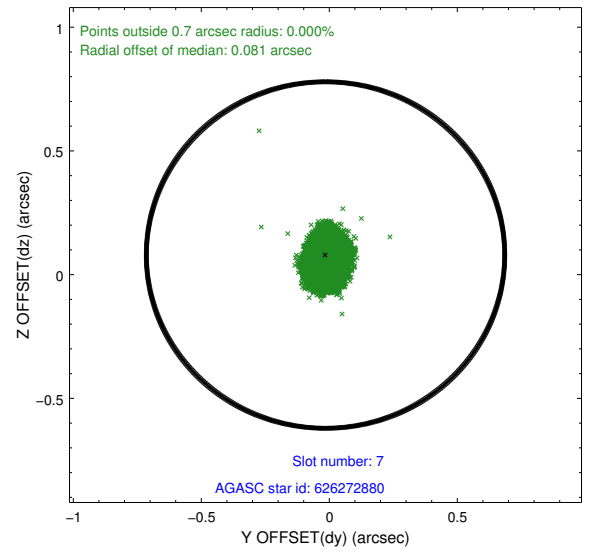
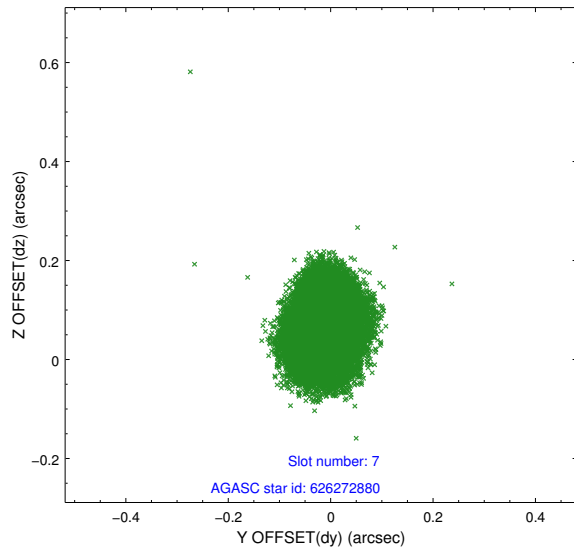
2.4.3 Slot 5



2.4.4 Slot 6

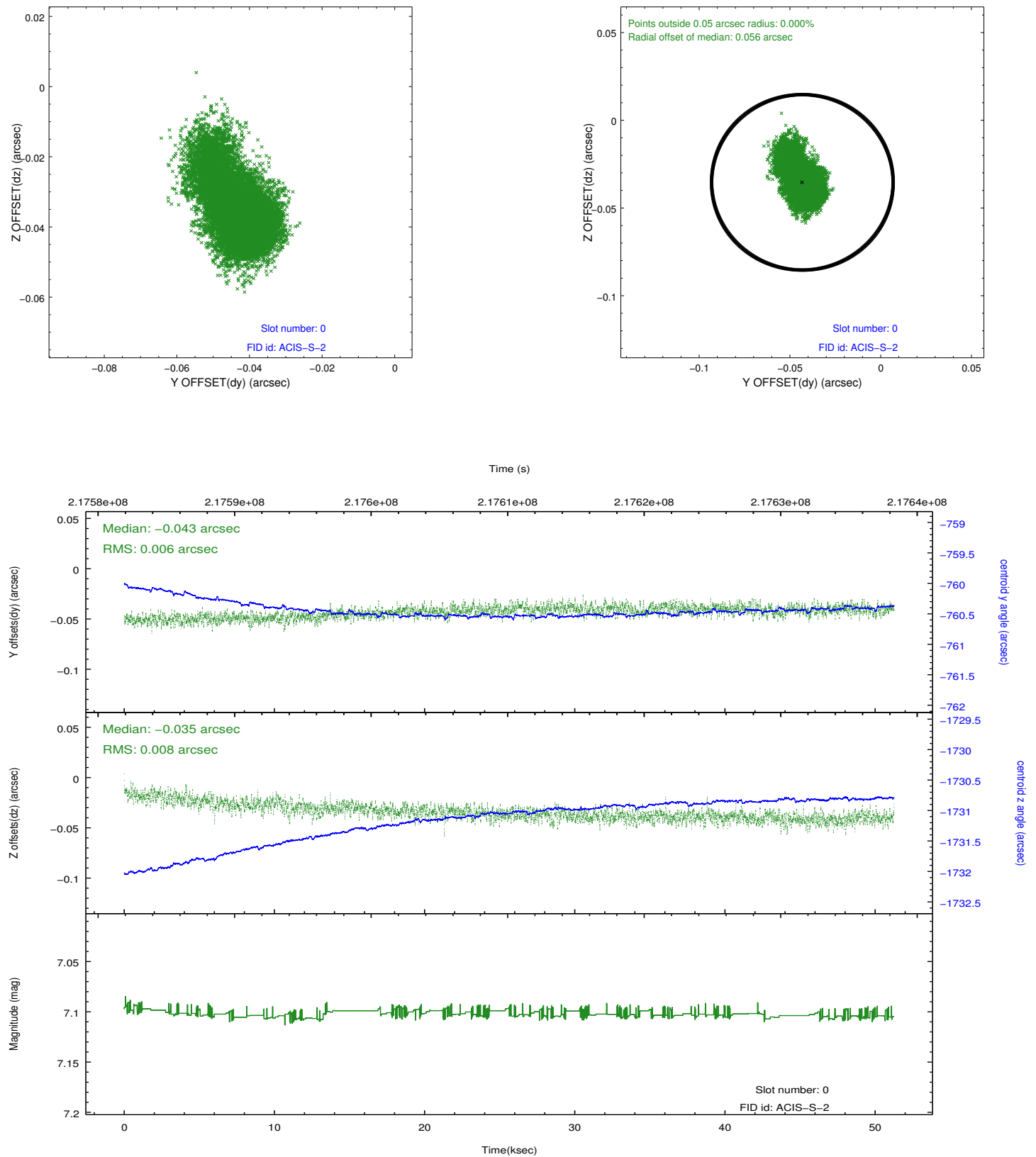


2.4.5 Slot 7

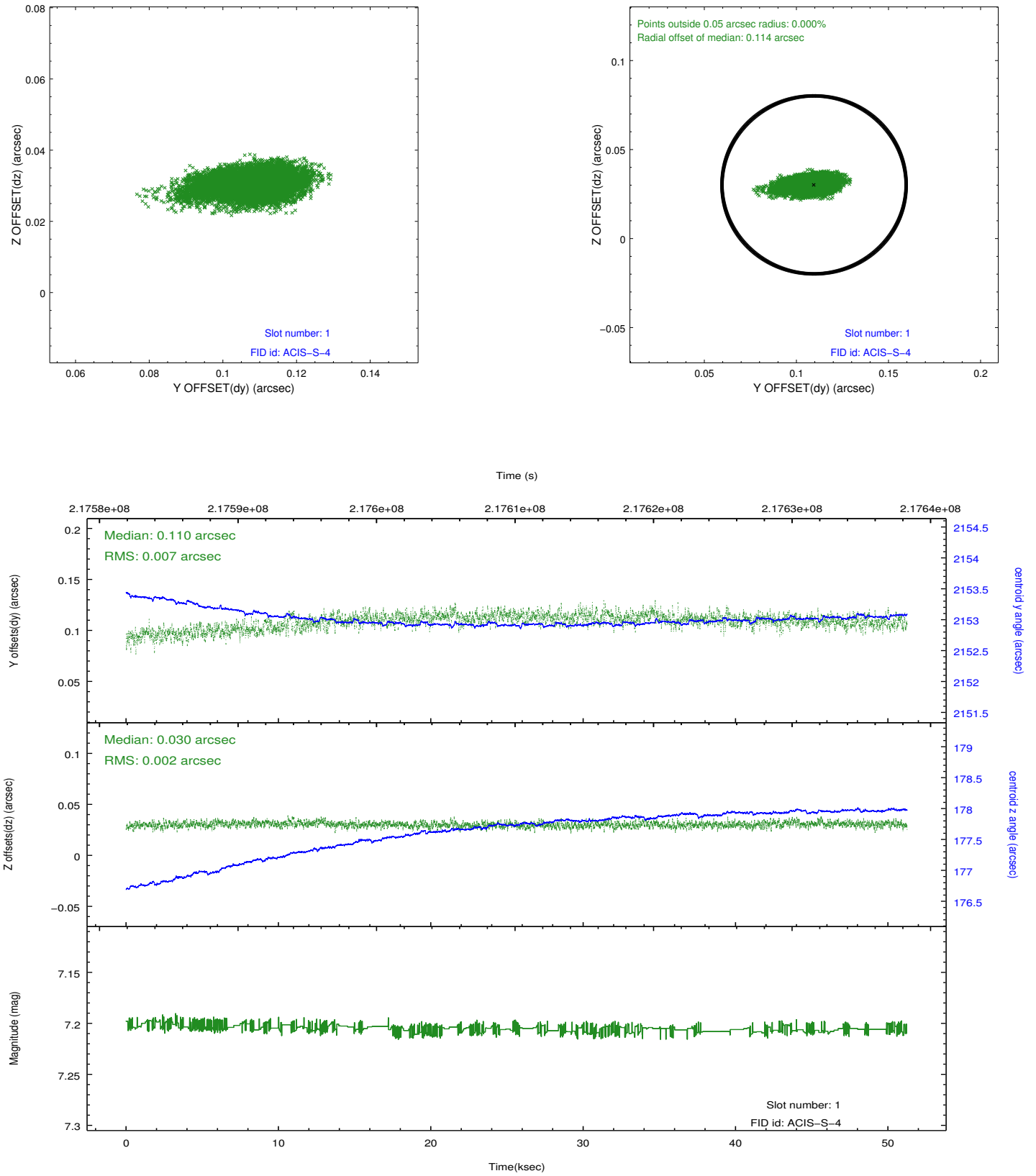


2.5 FID Slots

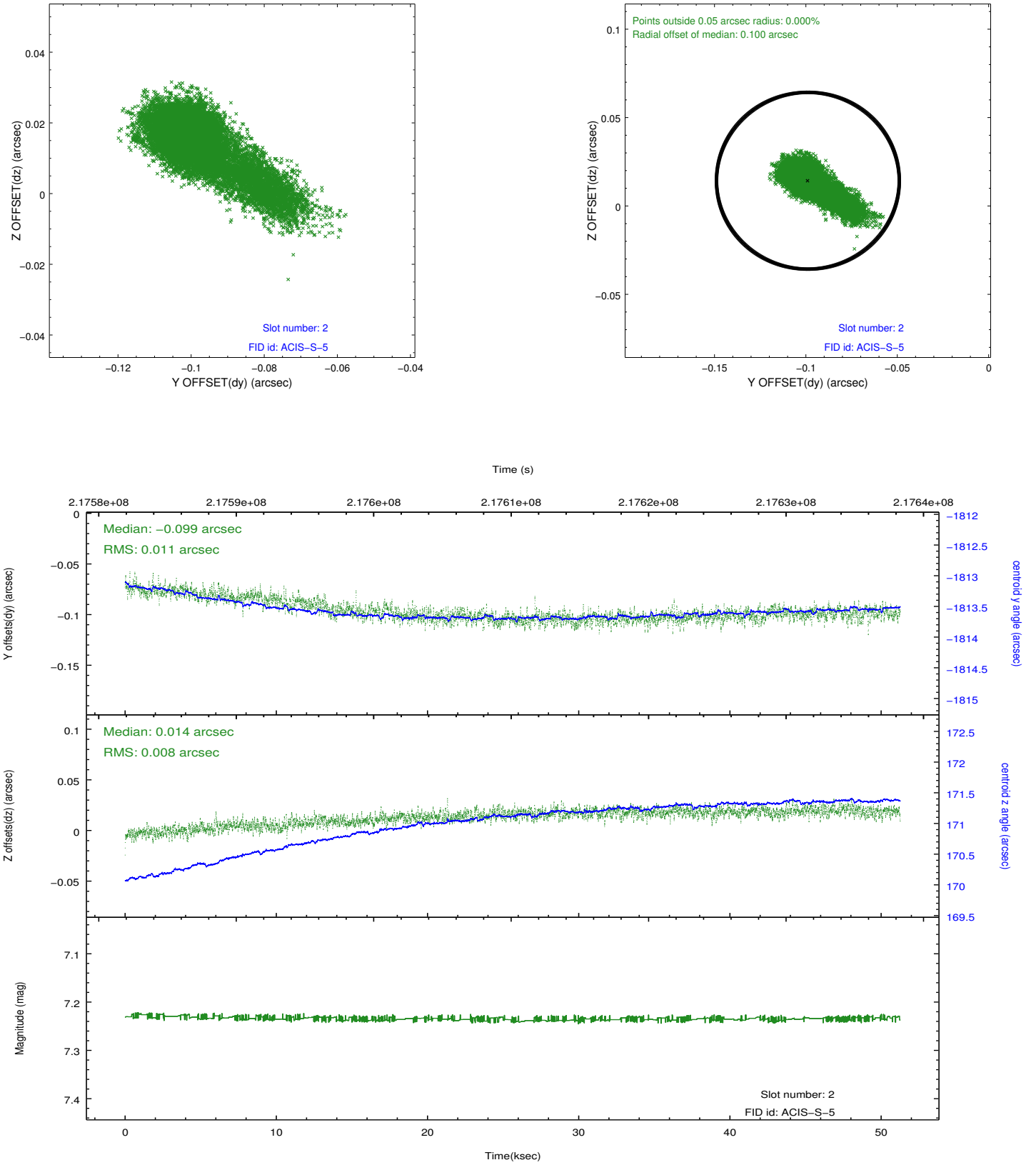
2.5.1 Slot 0



2.5.2 Slot 1

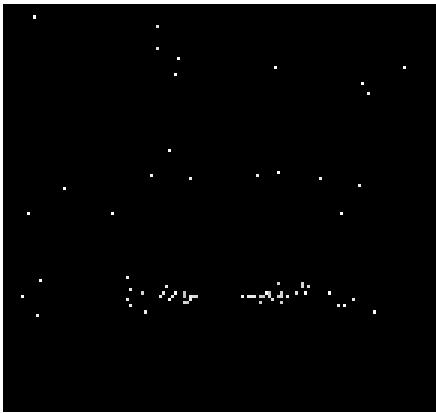


2.5.3 Slot 2

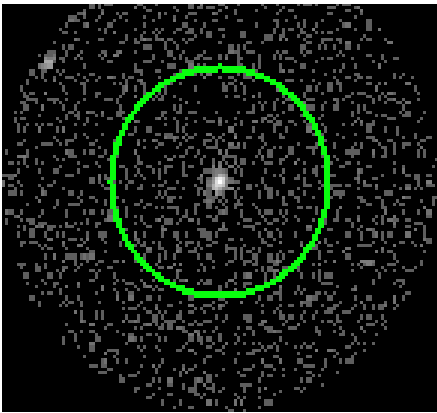


3 Gratings

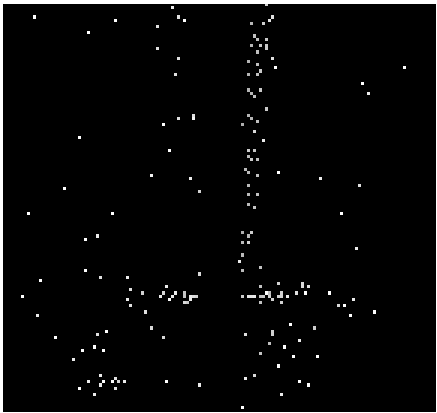
3.1 HEG Arm



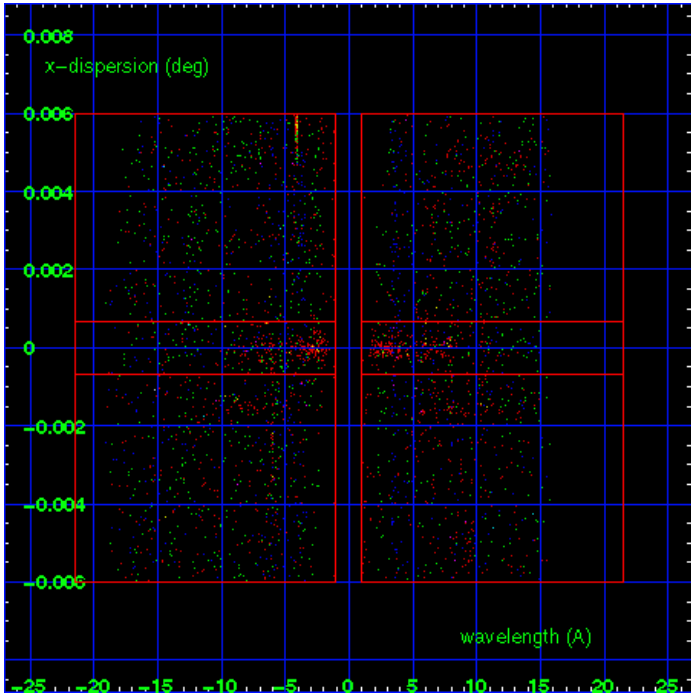
HEG Order Sort 123



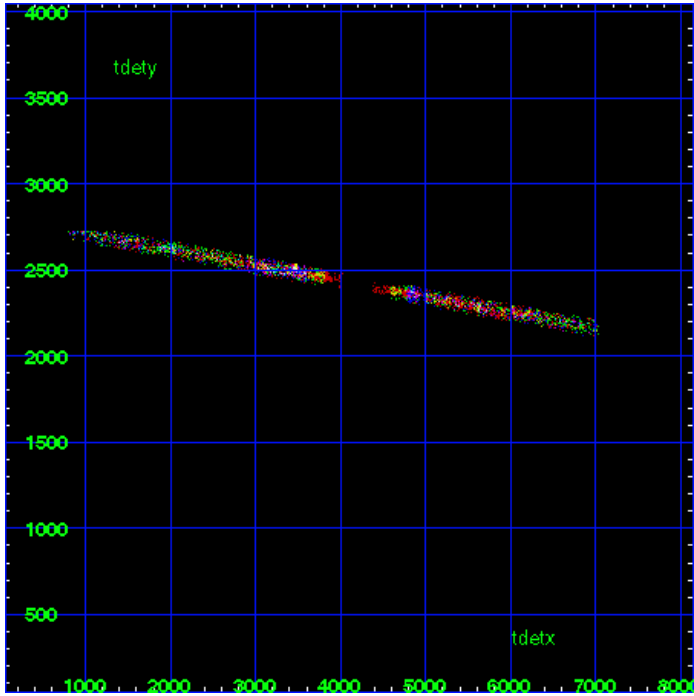
HEG Zero Order



HEG Order Sort ALL

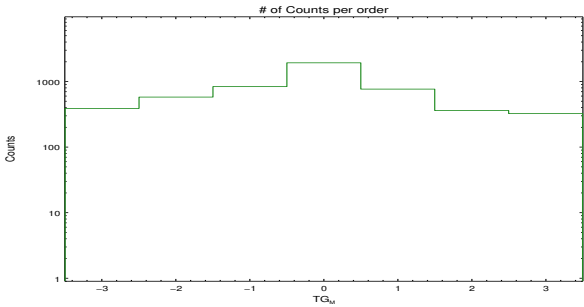


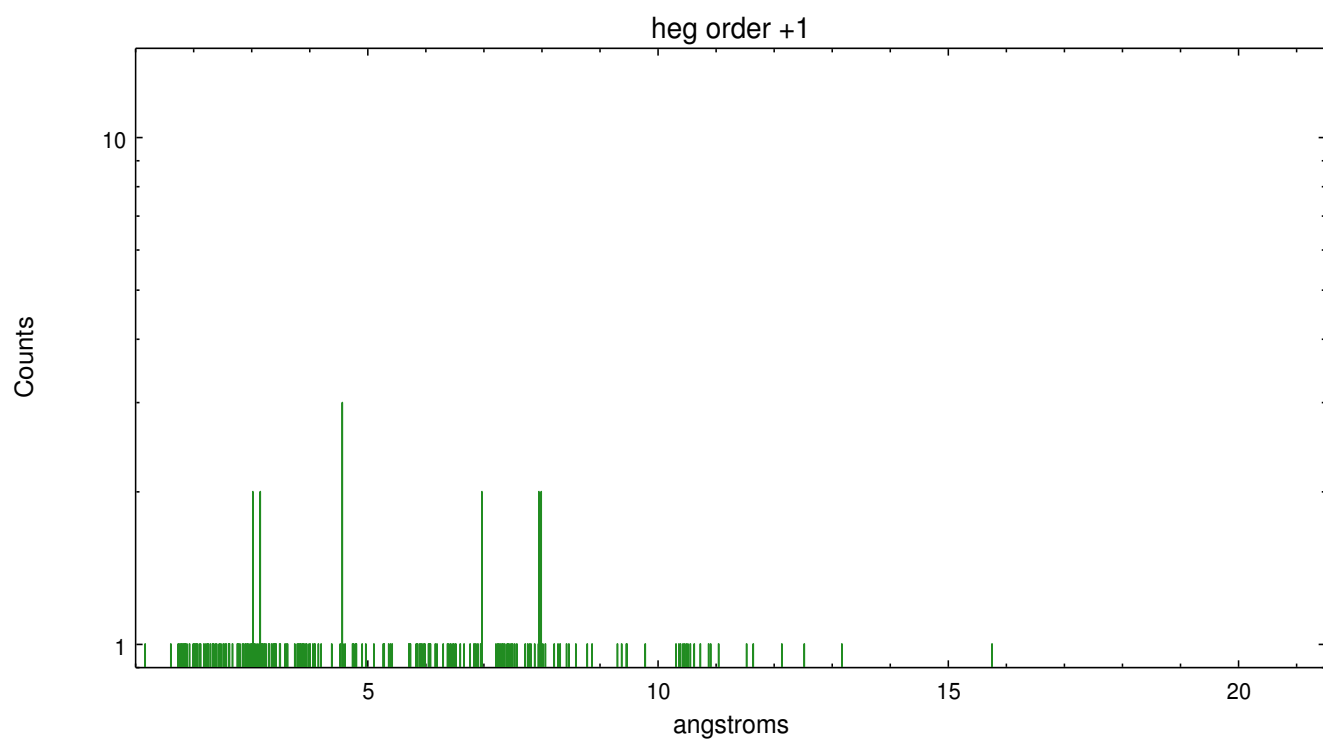
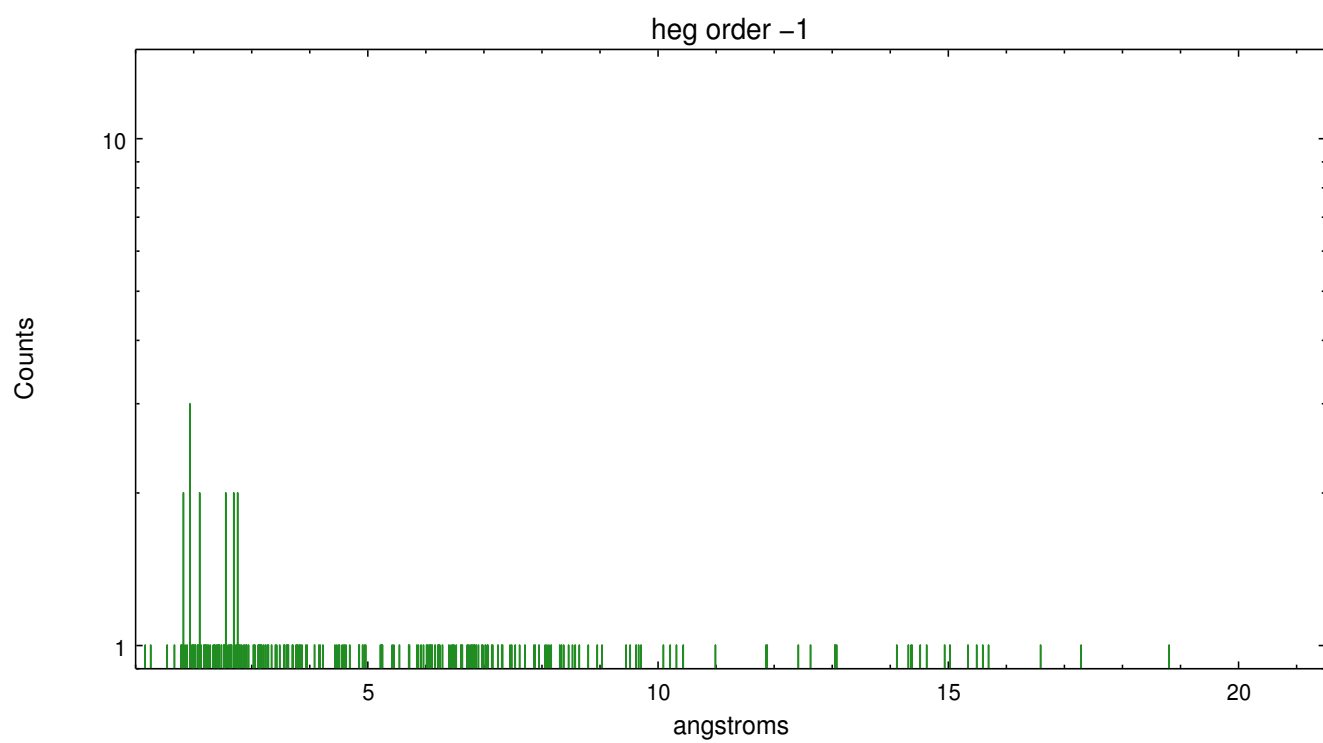
Spot Image HEG



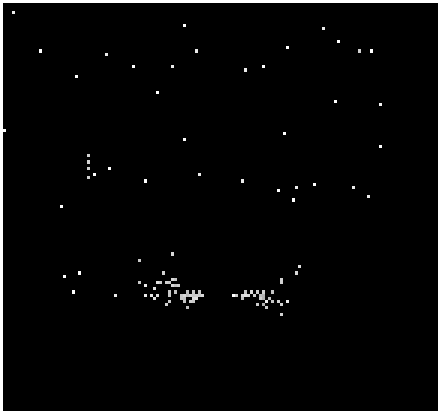
Full Detector HEG

| | order -3 | order -2 | order -1 | order 0 | order 1 | order 2 | order 3 |
|--------|-------------|-------------|-------------|------------|------------|------------|------------|
| Events | 390 | 581 | 840 | 1940 | 769 | 362 | 325 |

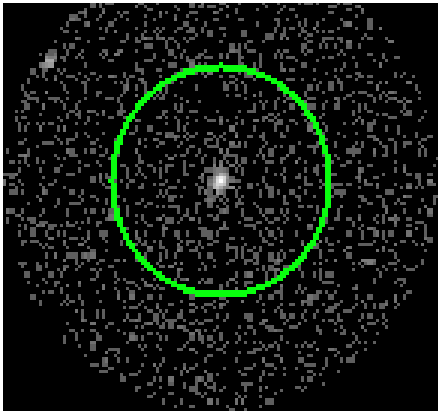




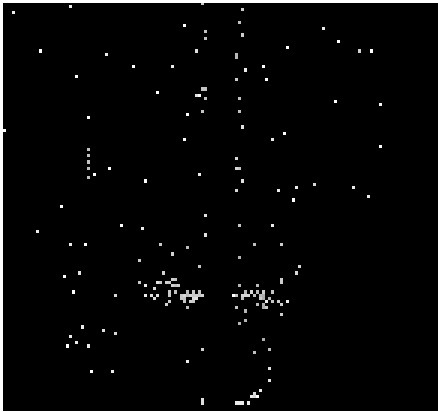
3.2 MEG Arm



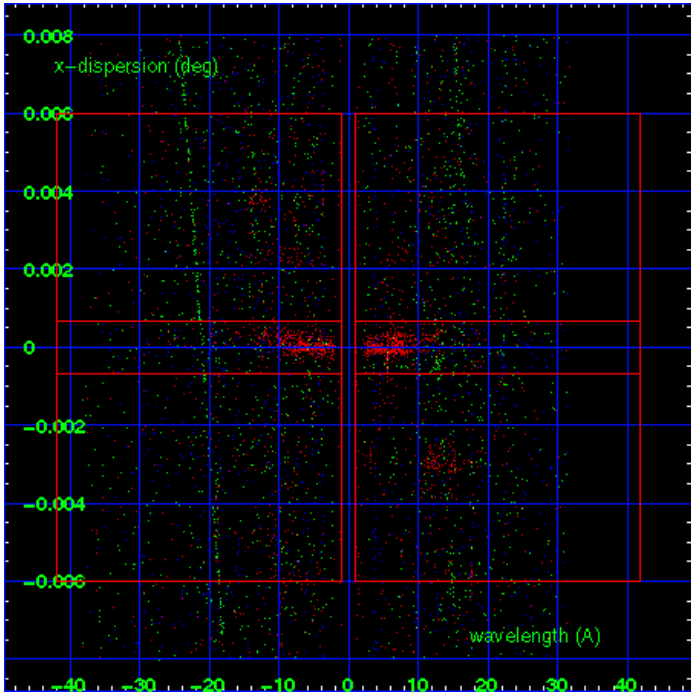
MEG Order Sort 123



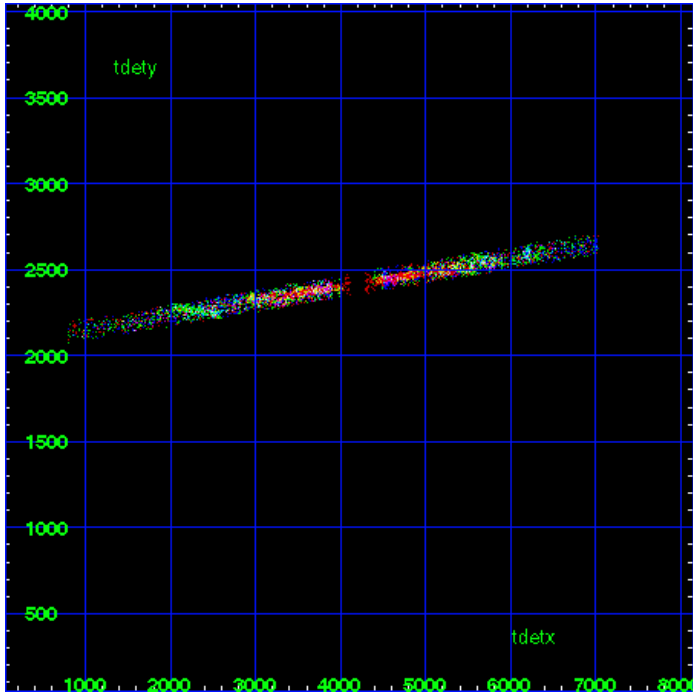
MEG Zero Order



MEG Order Sort ALL

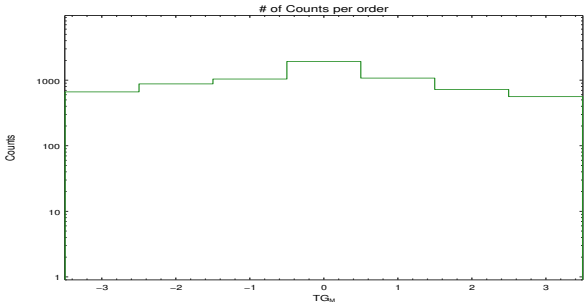


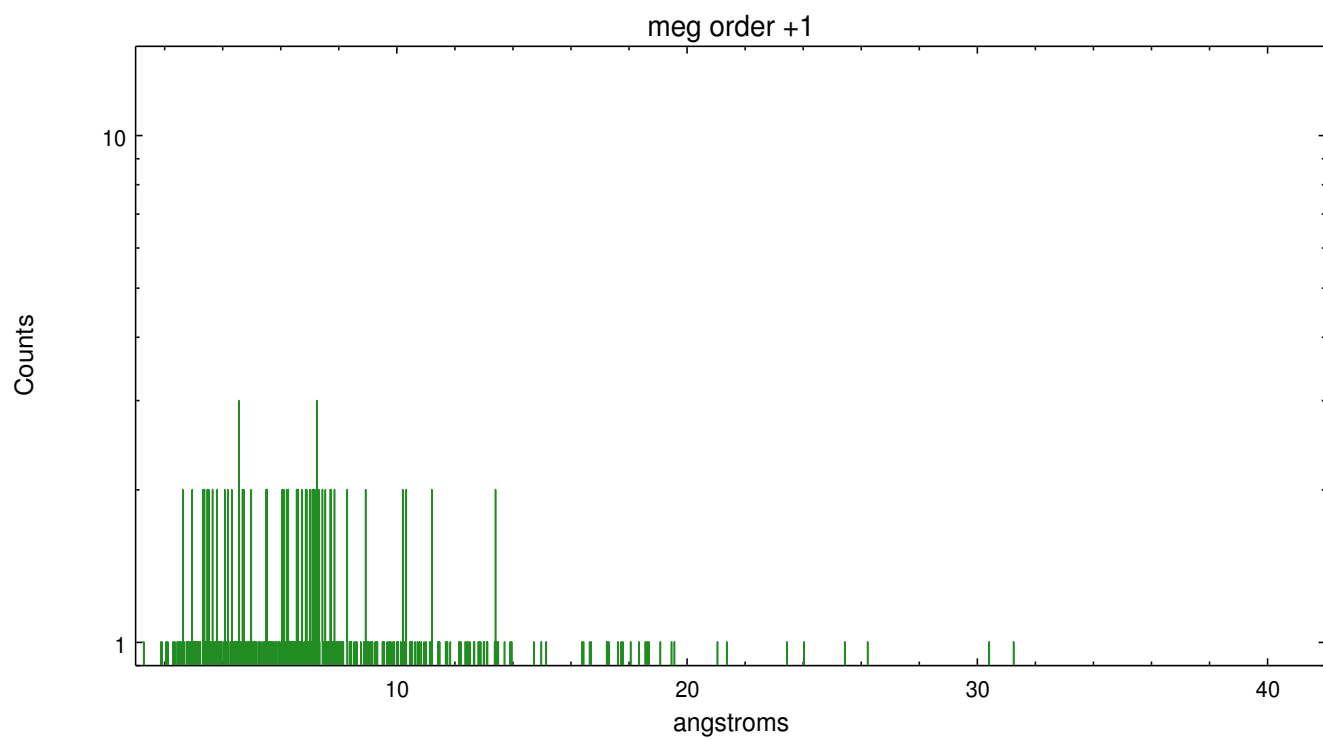
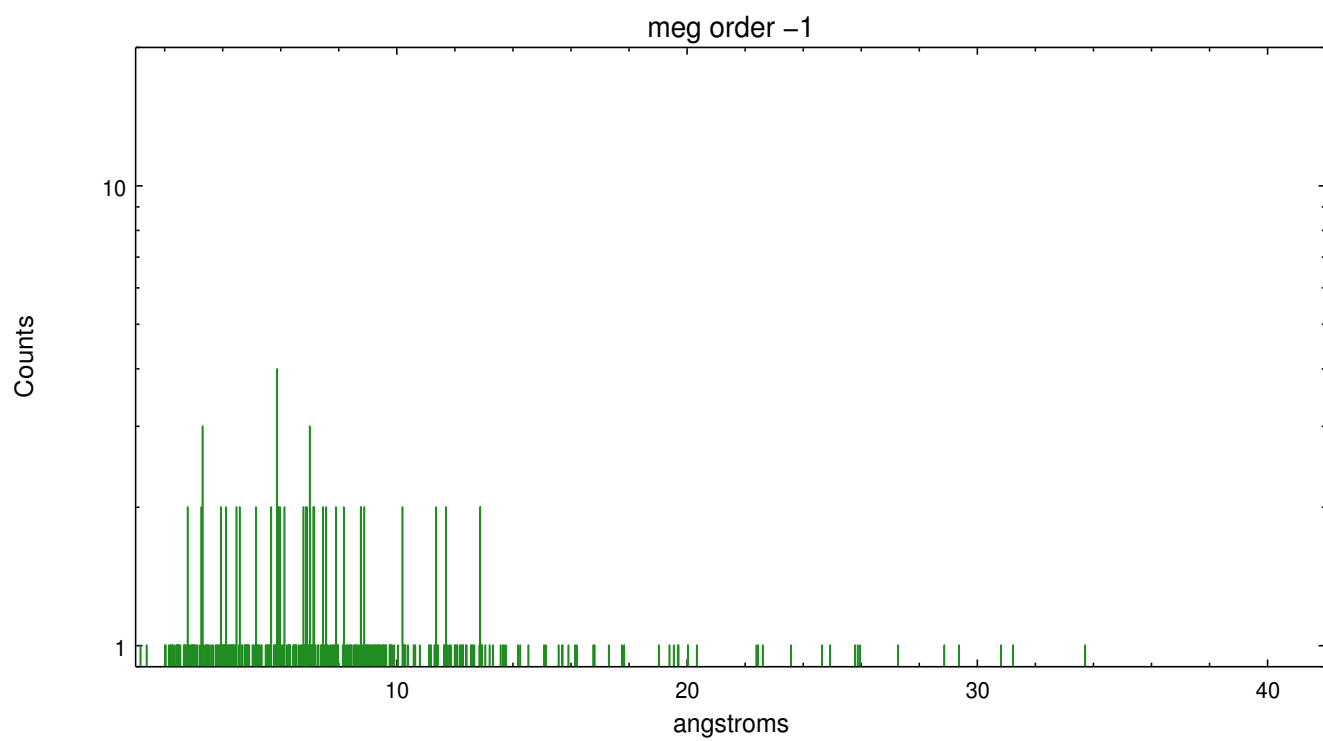
Spot Image MEG



Full Detector MEG

| | order -3 | order -2 | order -1 | order 0 | order 1 | order 2 | order 3 |
|--------|-------------|-------------|-------------|------------|------------|------------|------------|
| Events | 665 | 881 | 1045 | 1940 | 1080 | 723 | 563 |





A Summary

A.1 Status

| | |
|----------------------------|-------------|
| V&V Scientist | Joy Nichols |
| V&V Date (YYYY-MM-DD) | 2013.01.15 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 51.251 |

A.2 Comments

Multiple sources and dispersed spectra present. Only one spectrum is extracted in standard data processing - the source at 05:35:24.7, -05:2:59.5, CX00NC J053524.6-052759. Spectra of other sources can be extracted using CIAO threads. Many of the dispersed spectra and zeroth order images overlap so contamination will be an issue.