

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 11017 - L2 Version 3
Chandra X-Ray Center

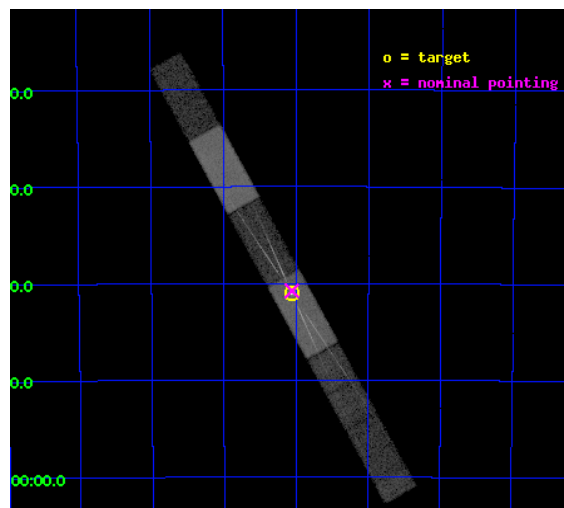
L2 Processing Date : Jun 18 2012

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1 Front

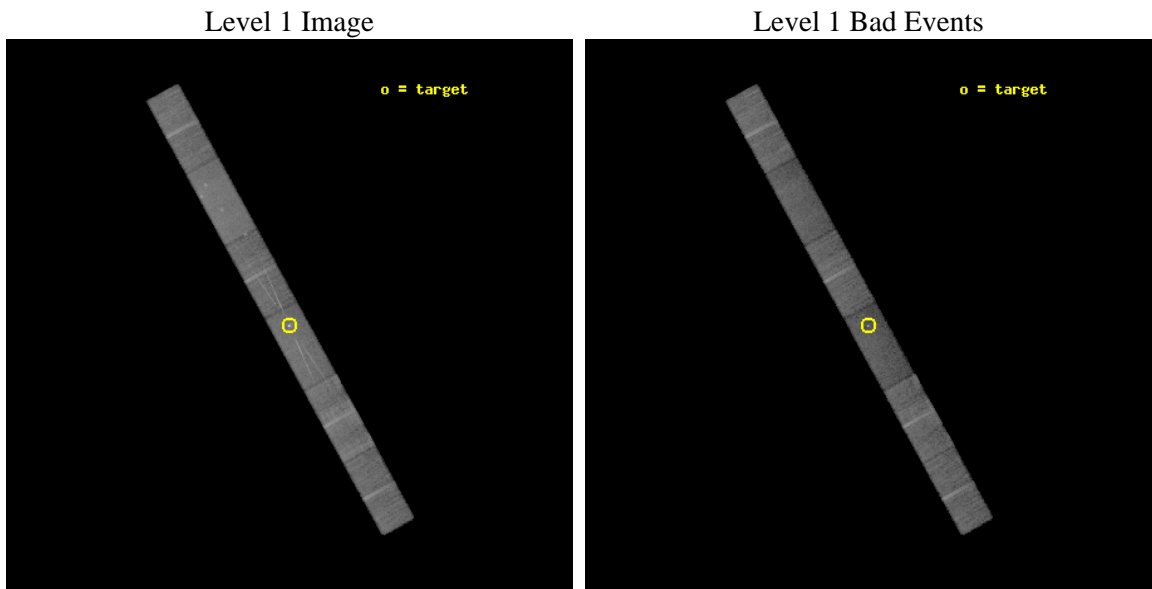
| | | |
|----------|---|---|
| seq_num | 200646 | Sequence number |
| obs_id | 11017 | Observation id |
| title | Monitoring Dynamical Mass Loss from Eta Car with the HETG | Proposal |
| observer | Dr Michael Corcoran | Principal investigator |
| object | Eta Car | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 161.265 | Observer's specified target RA [deg] |
| dec_targ | -59.684528 | Observer's specified target Dec [deg] |
| ra_nom | 161.26455332576 | Nominal RA [deg] |
| dec_nom | -59.679707409225 | Nominal Dec [deg] |
| roll_nom | 61.156228541059 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 17932.5 | Sum of GTIs [s] |
| livetime | 17454.933032238 | Livetime [s] |
| ontime4 | 17932.5 | Sum of GTIs [s] |
| ontime5 | 17932.5 | Sum of GTIs [s] |
| ontime6 | 17932.5 | Sum of GTIs [s] |
| ontime7 | 17932.5 | Sum of GTIs [s] |
| ontime8 | 17932.5 | Sum of GTIs [s] |
| ontime9 | 17932.5 | Sum of GTIs [s] |
| l2events | 137297 | Number of level 2 events |



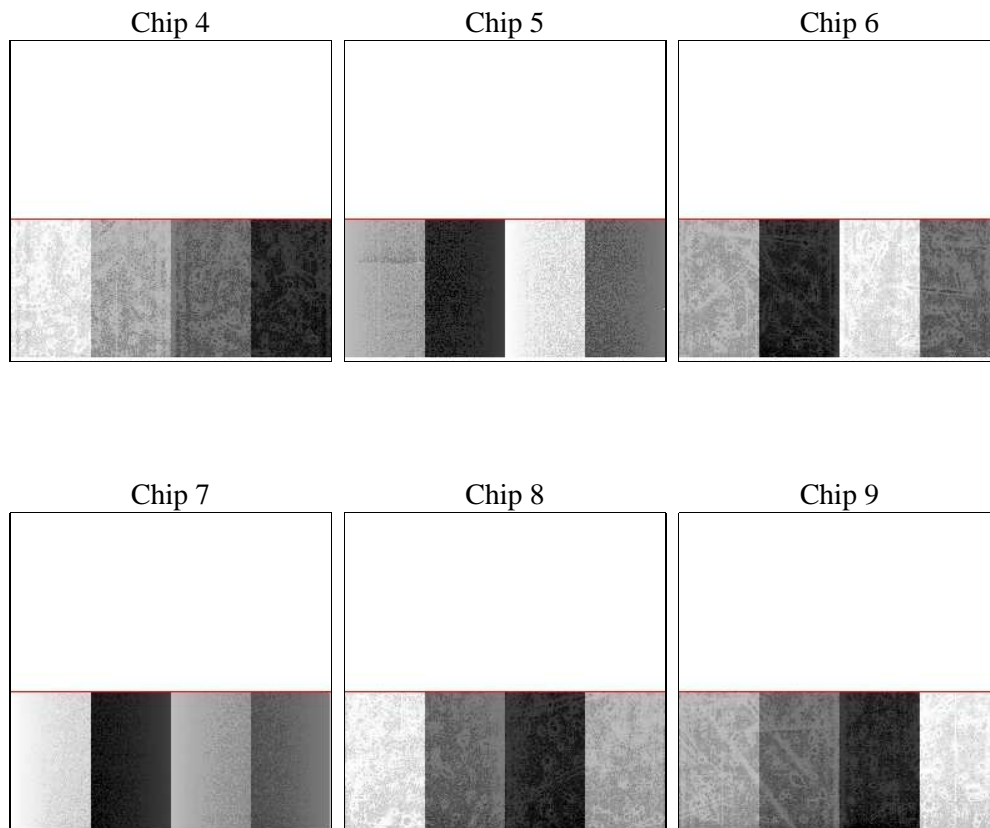
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|--------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 17798.841000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5 | Processing system revision | ontime | 17932.5 | Sum of GTIs [s] |
| caldbver | 4.4.10 | | ontime4 | 17932.5 | Sum of GTIs [s] |
| date | 2012-06-18T18:59:48 | Date and time of file creation | ontime5 | 17932.5 | Sum of GTIs [s] |
| revision | 2 | Processing version of data | ontime6 | 17932.5 | Sum of GTIs [s] |
| | | | ontime7 | 17932.5 | Sum of GTIs [s] |
| | | | ontime8 | 17932.5 | Sum of GTIs [s] |
| | | | ontime9 | 17932.5 | Sum of GTIs [s] |
| | | | l1events | 541915 | Number of level 1 events |

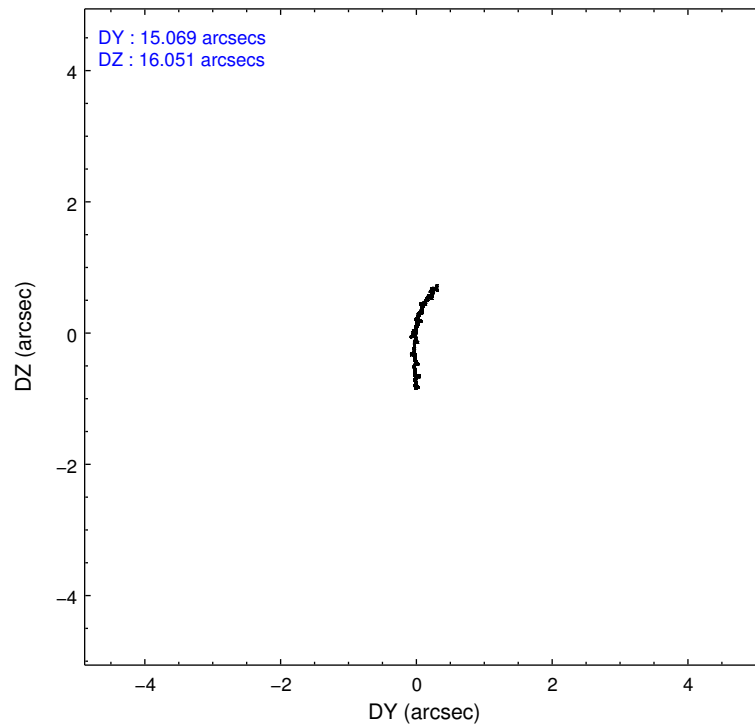
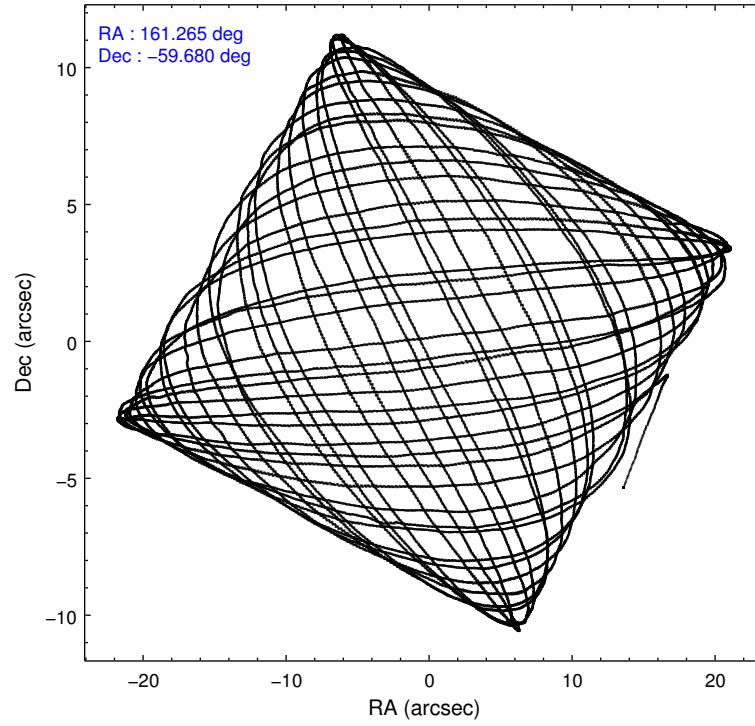
2.1.4 Events

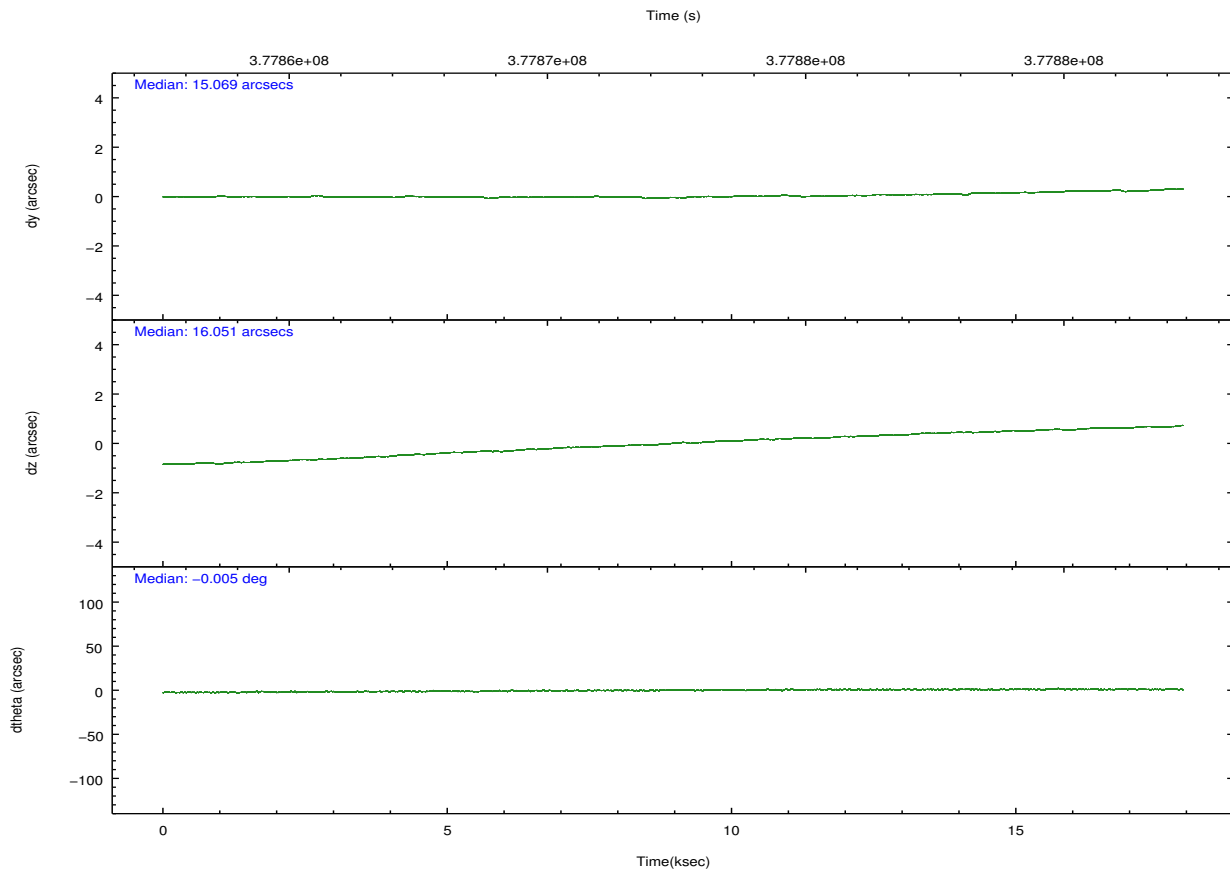
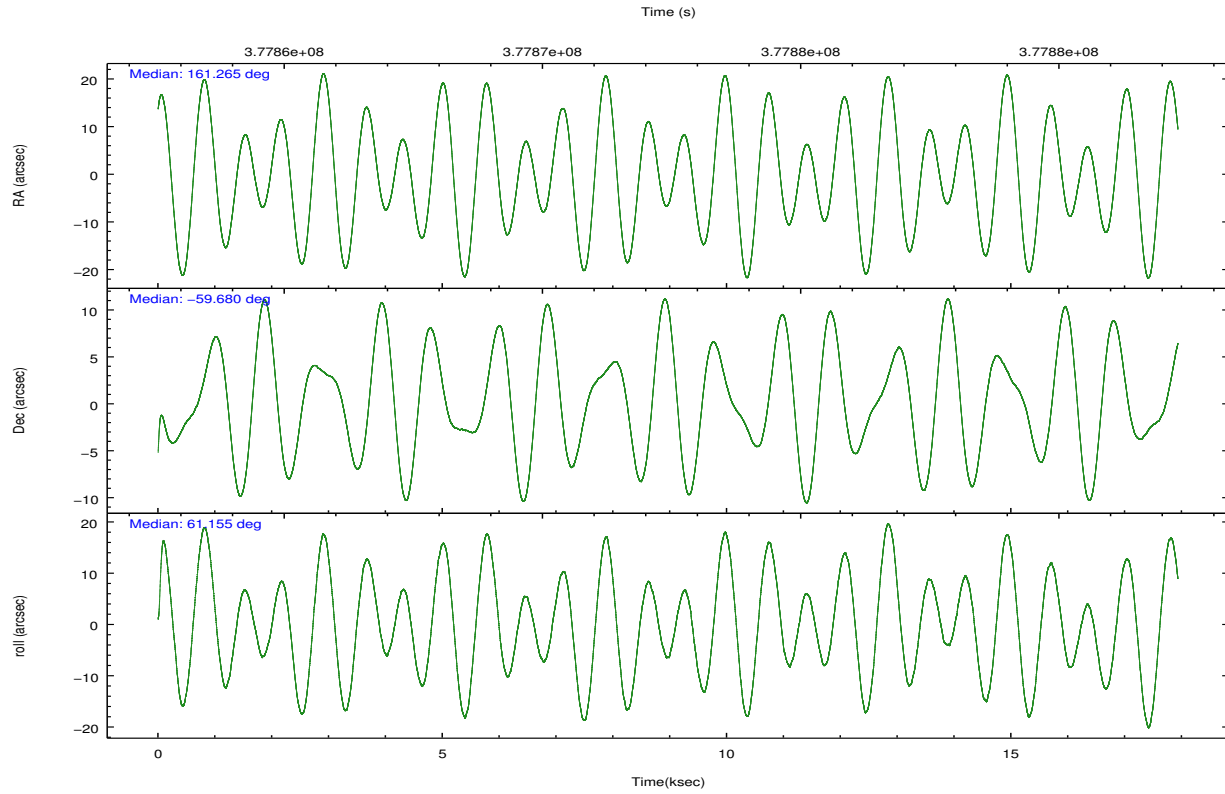
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 | | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|-------|--------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 85564 | 103794 | 82303 | 97978 | 99305 | 72971 | grade 0 events | 3395 | 6770 | 6953 | 6574 | 9399 | 3861 |
| rejected events | 76545 | 51593 | 68627 | 45355 | 72010 | 63455 | | 3% | 6% | 8% | 6% | 9% | 5% |
| rejected % | 89% | 49% | 83% | 46% | 72% | 86% | grade 1 events | 40 | 260 | 61 | 215 | 71 | 34 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 2143 | 14759 | 2561 | 11593 | 5787 | 1898 |
| | | | | | | | | 2% | 14% | 3% | 11% | 5% | 2% |
| | | | | | | | grade 3 events | 1101 | 3207 | 1309 | 5499 | 2968 | 1163 |
| | | | | | | | | 1% | 3% | 1% | 5% | 2% | 1% |
| | | | | | | | grade 4 events | 1074 | 3365 | 1181 | 5302 | 2741 | 1141 |
| | | | | | | | | 1% | 3% | 1% | 5% | 2% | 1% |
| | | | | | | | grade 5 events | 2689 | 8923 | 2709 | 8696 | 4118 | 3006 |
| | | | | | | | | 3% | 8% | 3% | 8% | 4% | 4% |
| | | | | | | | grade 6 events | 1480 | 25382 | 1906 | 24633 | 6841 | 1633 |
| | | | | | | | | 1% | 24% | 2% | 25% | 6% | 2% |
| | | | | | | | grade 7 events | 73642 | 41128 | 65623 | 35466 | 67380 | 60235 |
| | | | | | | | | 86% | 39% | 79% | 36% | 67% | 82% |

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 | CCD I0 on | N | N |
| Observation mode | POINTING | POINTING | CCD I1 on | N | N |
| [deg] Pointing RA | 161.266366 | 161.2645533257627 | CCD I2 on | N | N |
| [deg] Pointing Dec | -59.707011 | -59.67970740922467 | CCD I3 on | N | N |
| [deg] Pointing Roll | 61.001186 | 61.15622854105884 | CCD S0 on | O1 | Y |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | CCD S1 on | Y | Y |
| [mm] SIM defocus | 0 | 0.001444936568705701 | CCD S2 on | Y | Y |
| [mm] SIM translation stage pos | -183.332523 | -183.3212429520412 | CCD S3 on | Y | Y |
| [mm] SIM translation stage offset | -6.8 | -6.811279630966652 | CCD S4 on | Y | Y |
| [s] Observation start time (MET) | 377863596.184000 | 377862445.65731 | CCD S5 on | O2 | Y |
| Observation start date | 2009-12-22T10:05:30 | 2009-12-22T09:47:25 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation end time (MET) | 377881395.184000 | 377881625.45828 | On-chip summing requested | N | N |
| Observation end date | 2009-12-22T15:02:09 | 2009-12-22T15:07:05 | Subarray requested | CUSTOM | CUSTOM |
| Read mode | TIMED | TIMED | Subarray start row | 15 | 15 |
| | | | Subarray row count | 440 | 440 |
| | | | Alternating exposures requested | N | N |
| | | | [s] Primary exposure time | 0.000000 | 1.5 |

2.3 Aspect



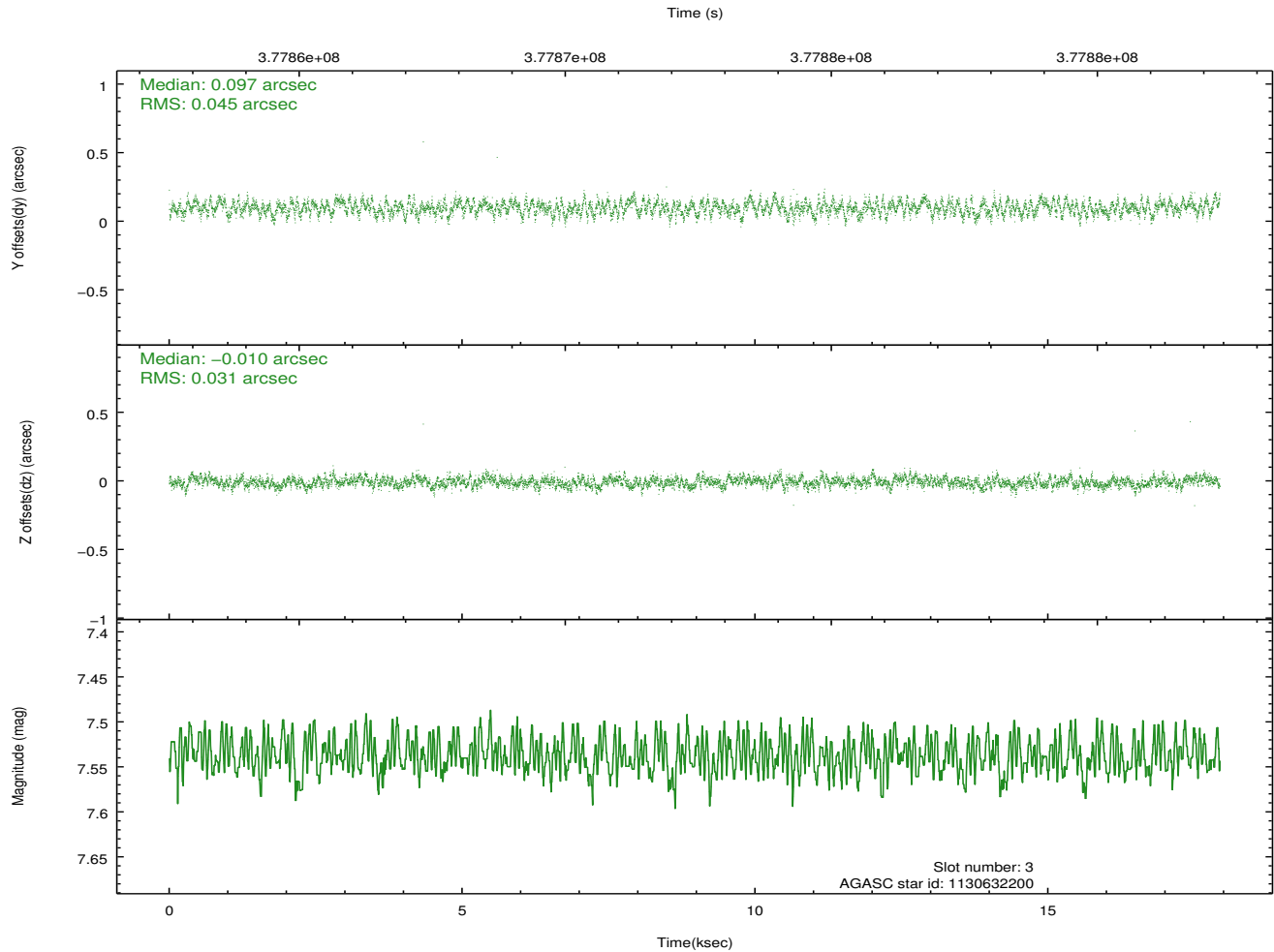
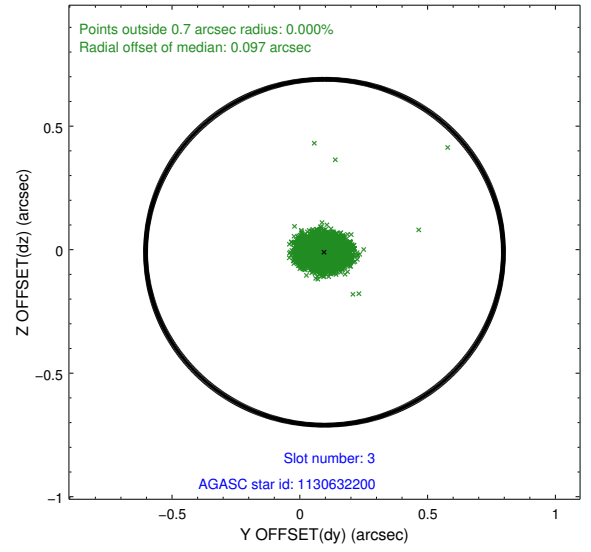
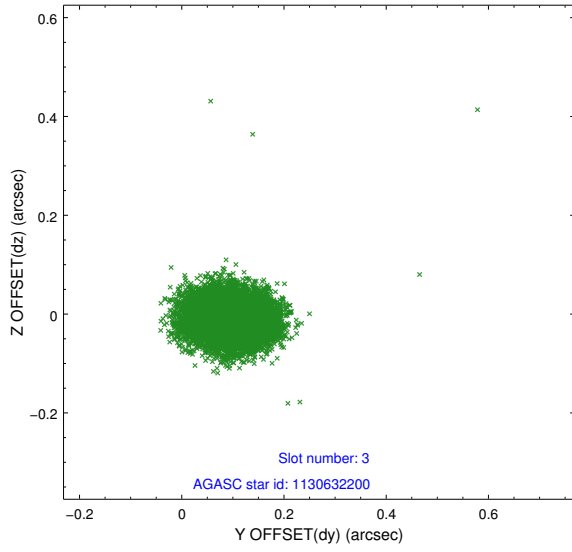


Slot Statistics

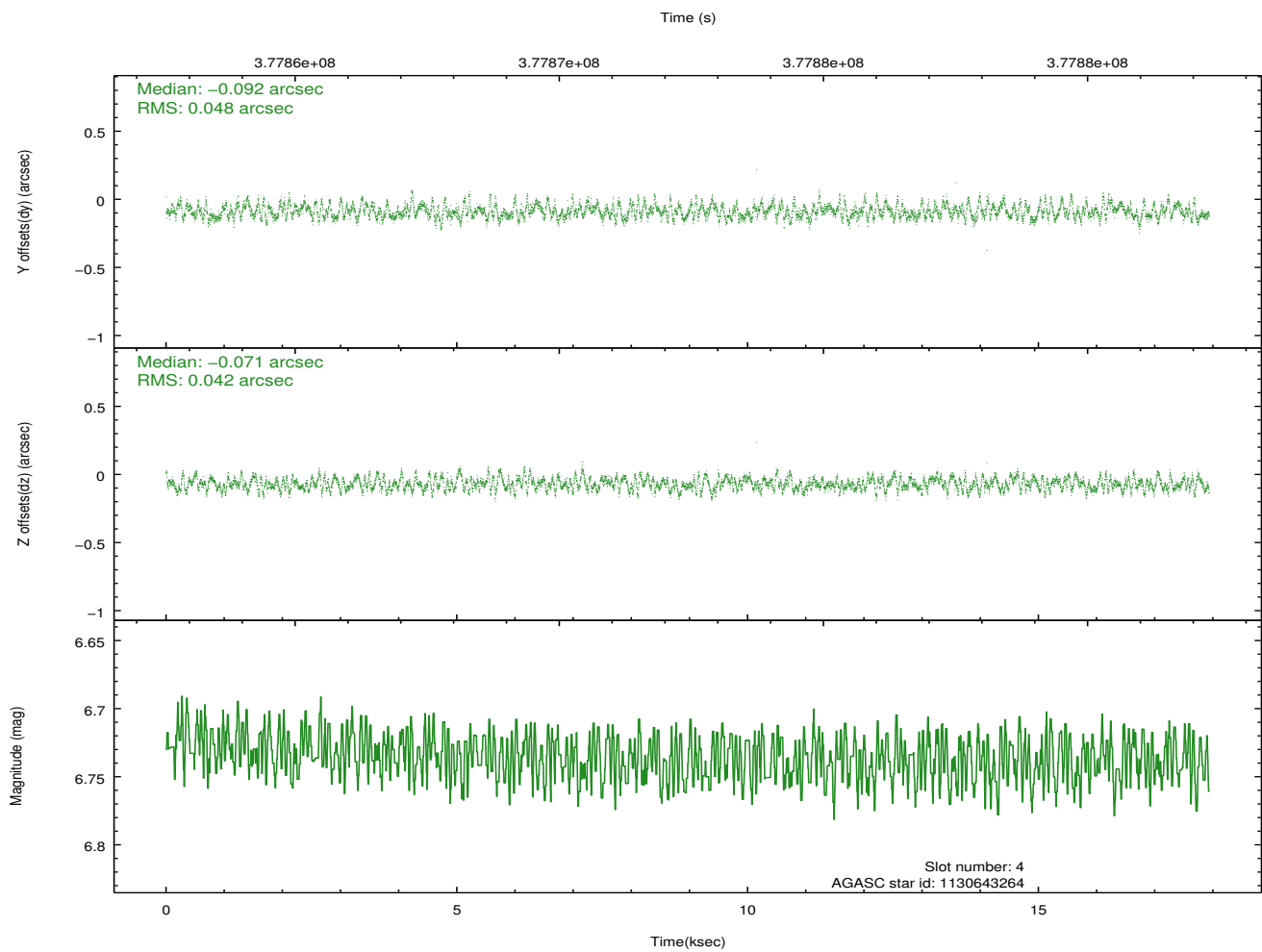
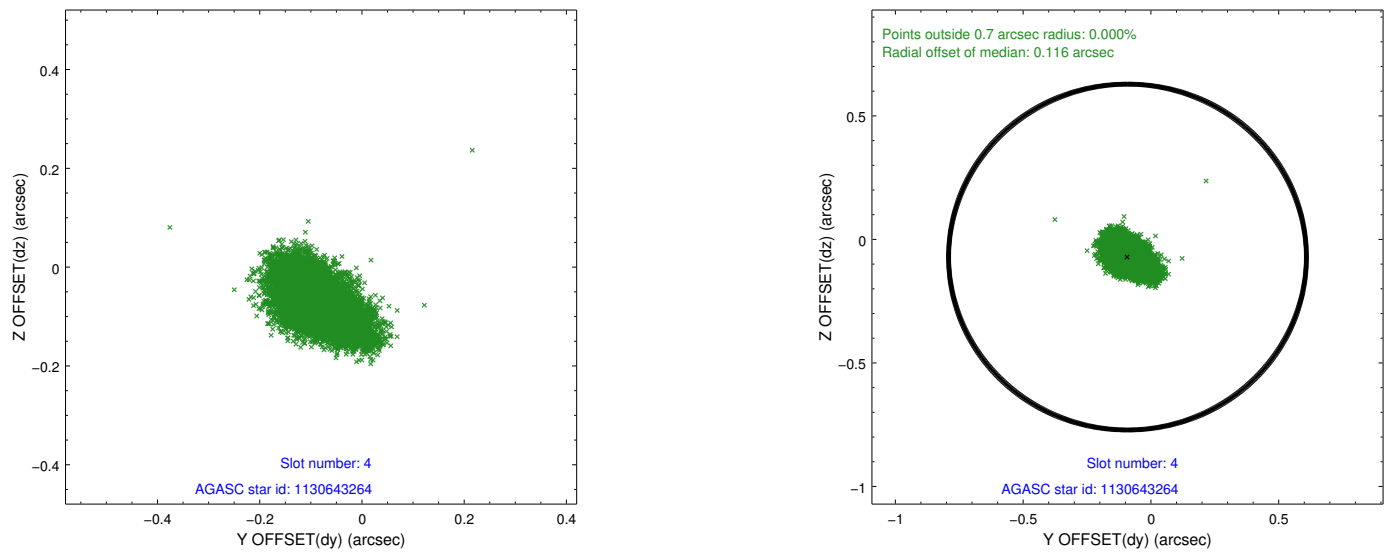
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0 | FID | ACIS-S-1 | 6.95 | 4375 | 0.055 | 0.086 | 0.025 | 0.038 | 0.000000 | 0.000000 | 928.47 | -1873.34 |
| 1 | FID | ACIS-S-4 | 6.94 | 4375 | 0.161 | -0.082 | 0.020 | 0.032 | 0.000000 | 0.000000 | 2146.12 | 30.37 |
| 2 | FID | ACIS-S-5 | 7.00 | 4375 | -0.243 | 0.008 | 0.008 | 0.014 | 0.000000 | 0.000000 | -1820.39 | 24.34 |
| 3 | GUIDE | 1130632200 | 7.54 | 8747 | 0.097 | -0.010 | 0.058 | 0.092 | 161.433843 | -59.407820 | 1090.71 | 253.85 |
| 4 | GUIDE | 1130643264 | 6.74 | 8750 | -0.092 | -0.071 | 0.067 | 0.112 | 160.322990 | -59.676912 | -746.97 | 1546.41 |
| 5 | GUIDE | 1130632064 | 8.51 | 8737 | -0.188 | -0.147 | 0.065 | 0.107 | 160.452382 | -59.130948 | 1076.77 | 2316.21 |
| 6 | GUIDE | 1174012960 | 7.16 | 8749 | 0.178 | 0.223 | 0.057 | 0.089 | 160.855674 | -60.332270 | -2325.04 | -451.63 |
| 7 | UNUSED | | 0.00 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000000 | 0.000000 | 0.00 | 0.00 |

2.4 Star Slots

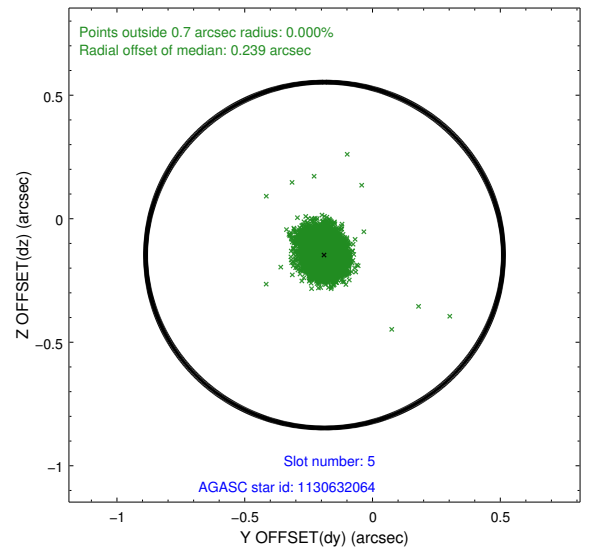
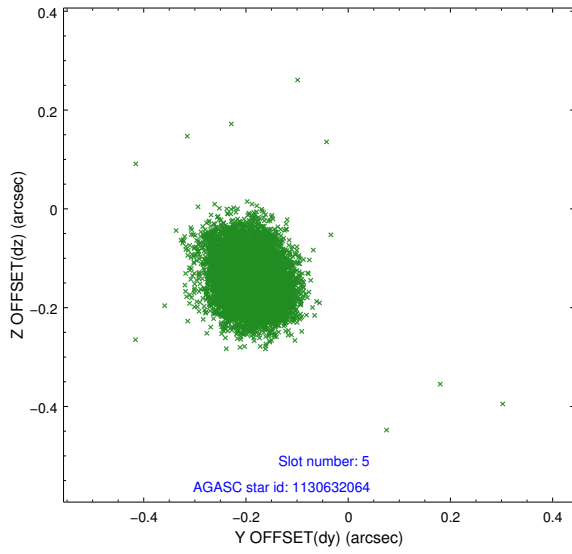
2.4.1 Slot 3



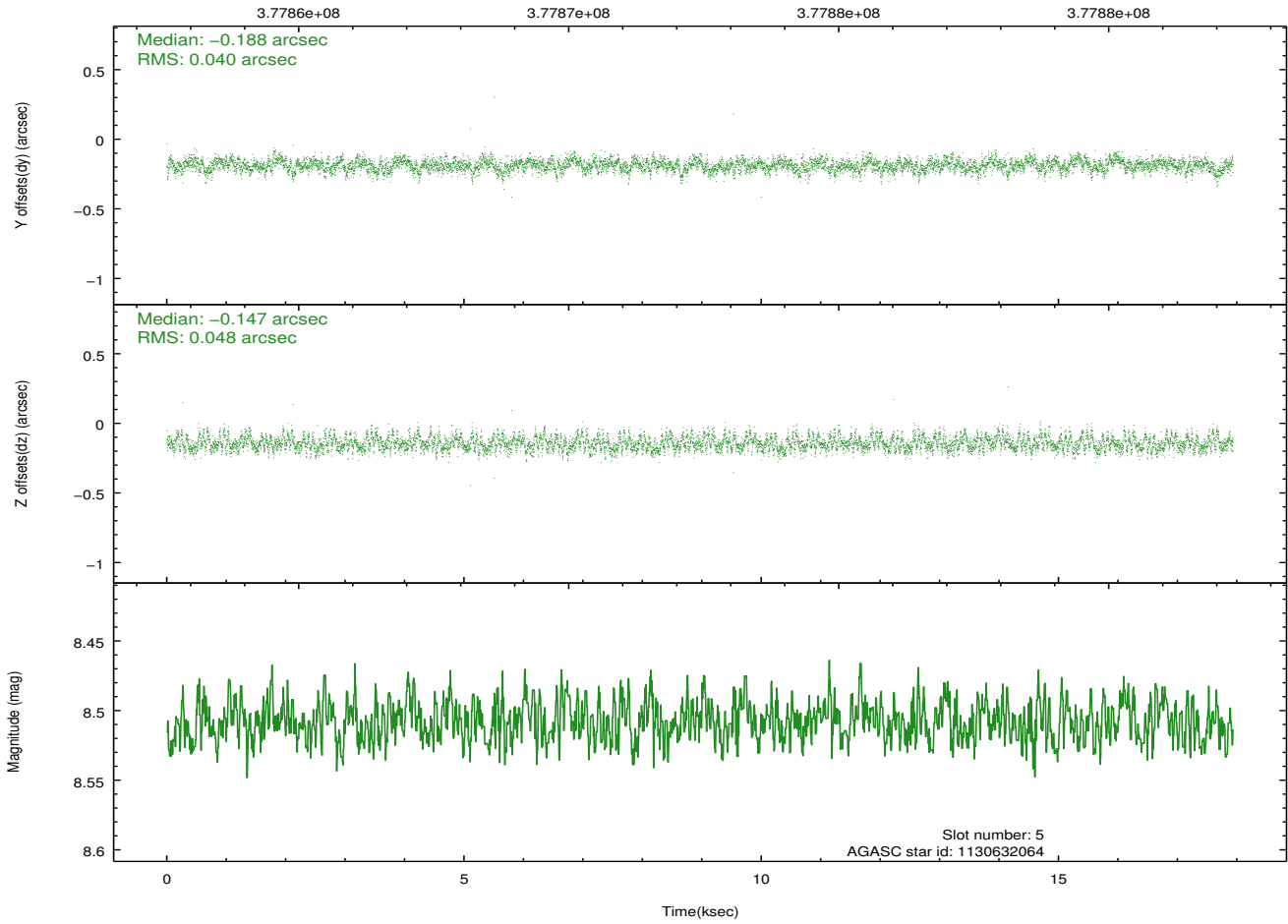
2.4.2 Slot 4



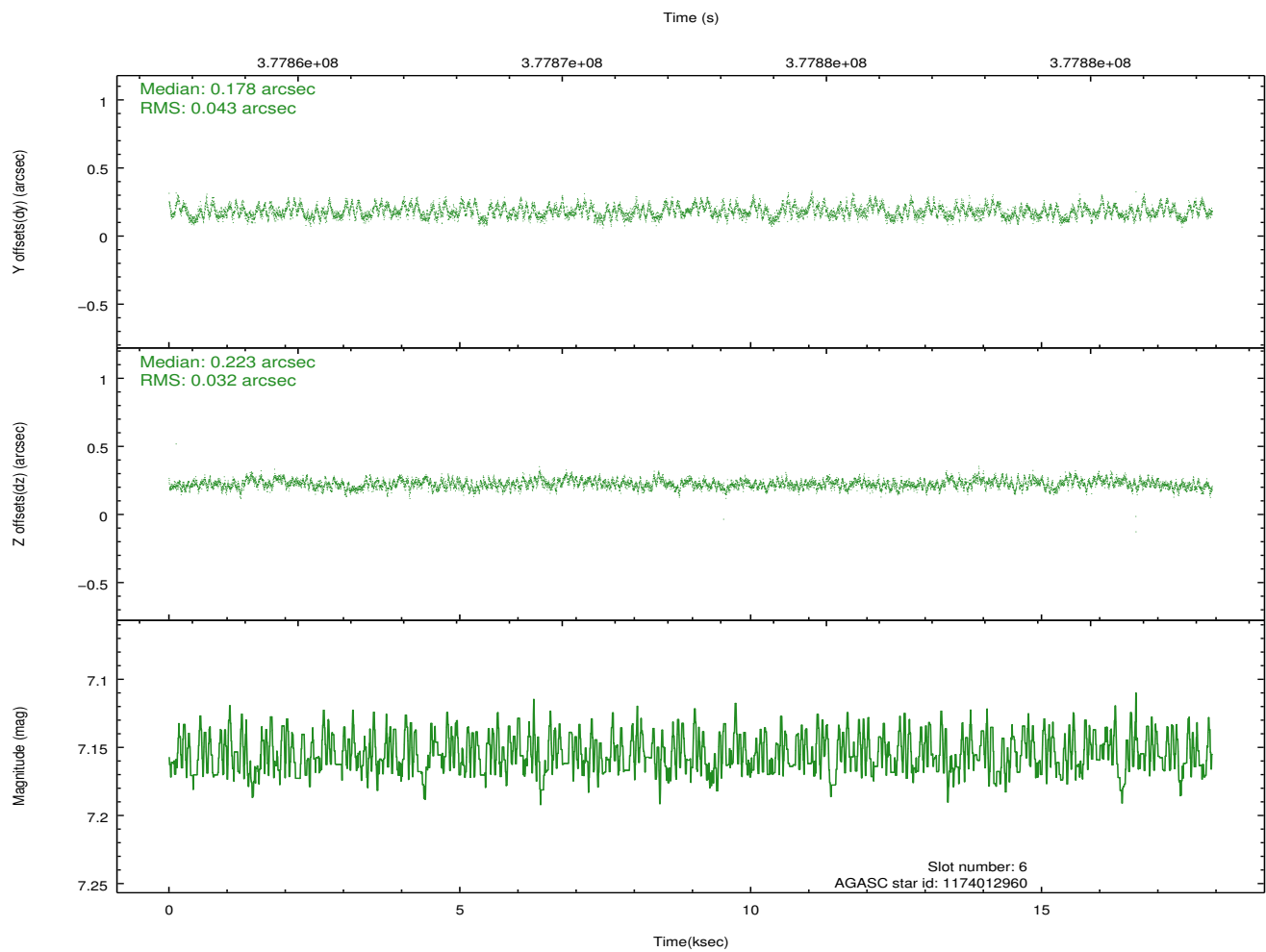
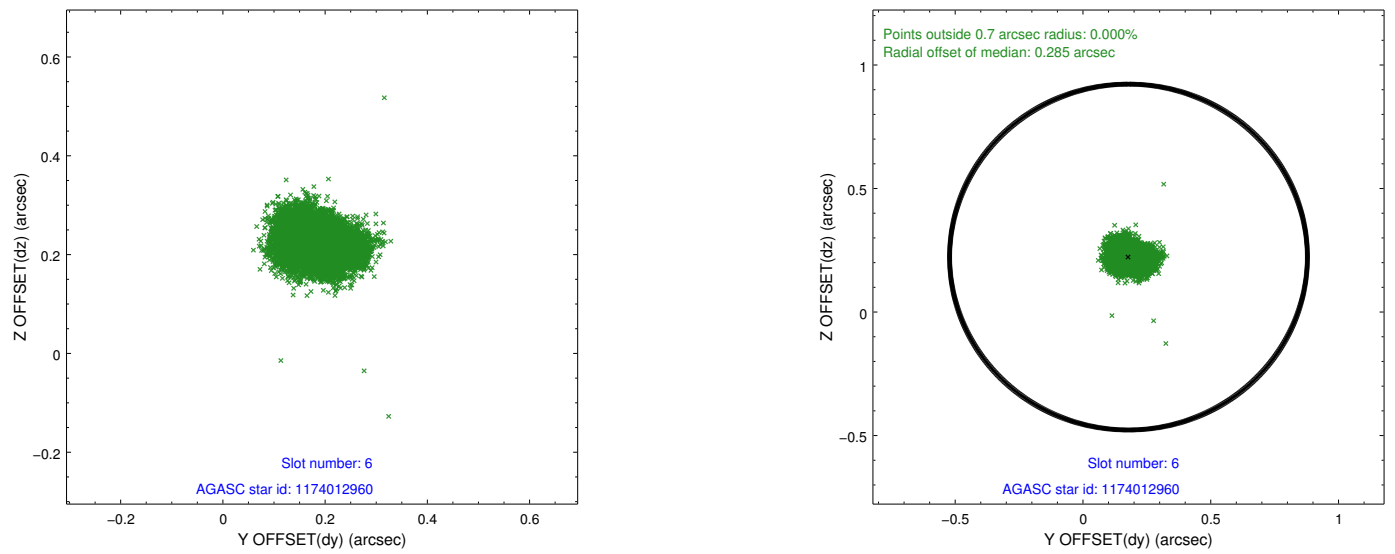
2.4.3 Slot 5



Time (s)

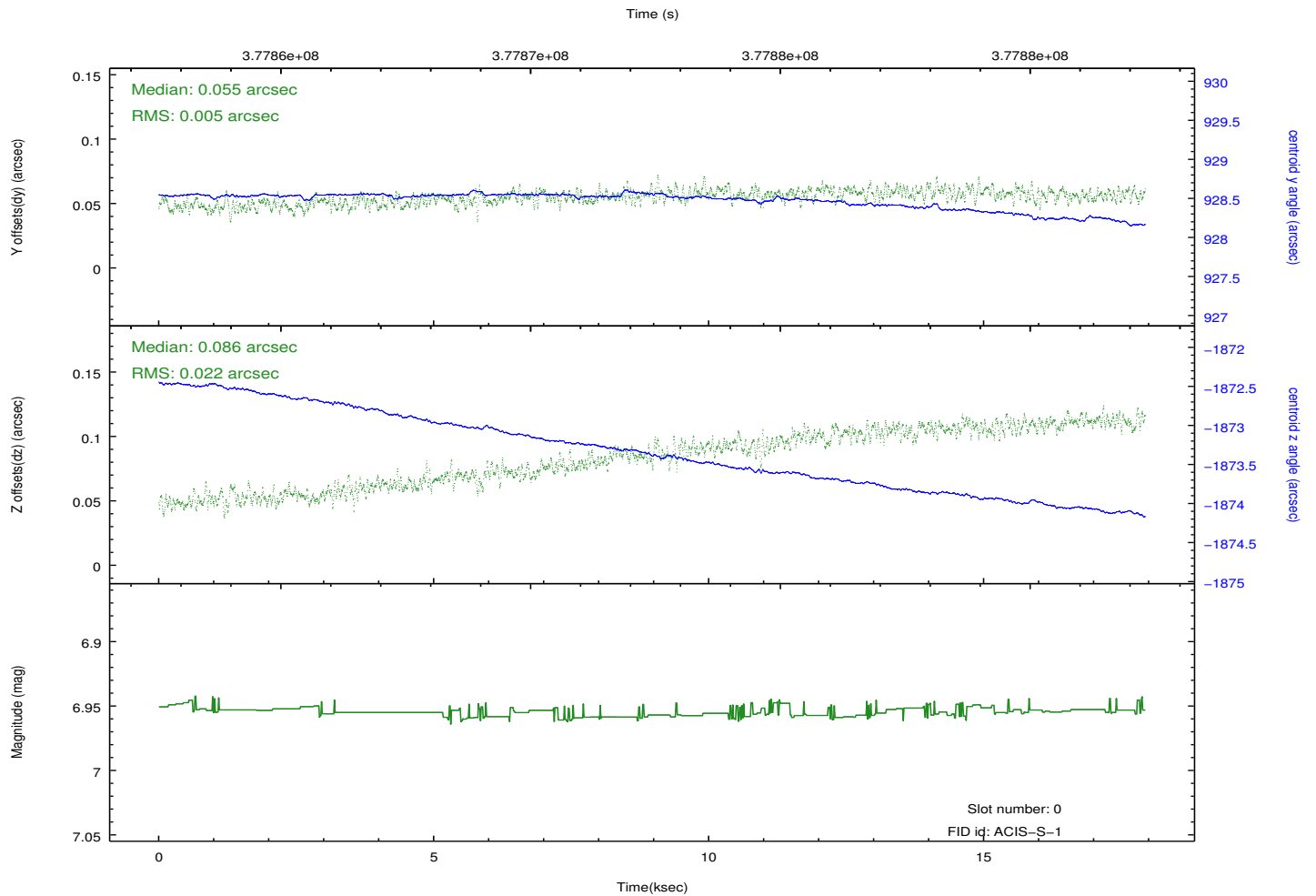
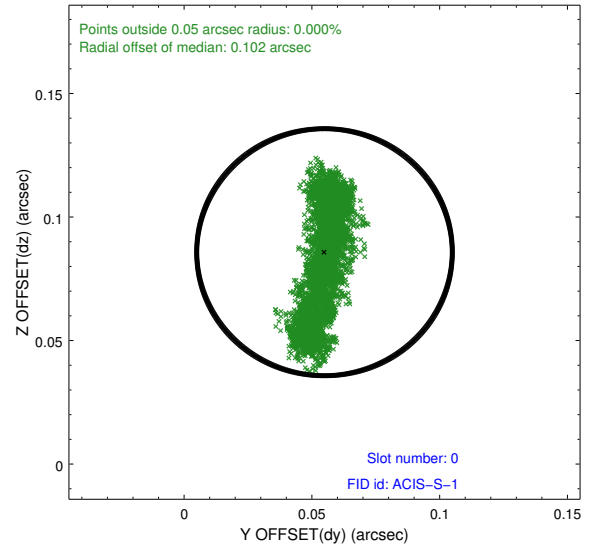
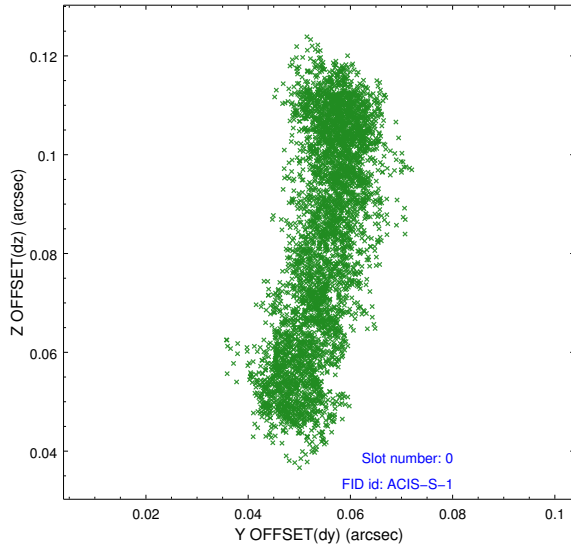


2.4.4 Slot 6

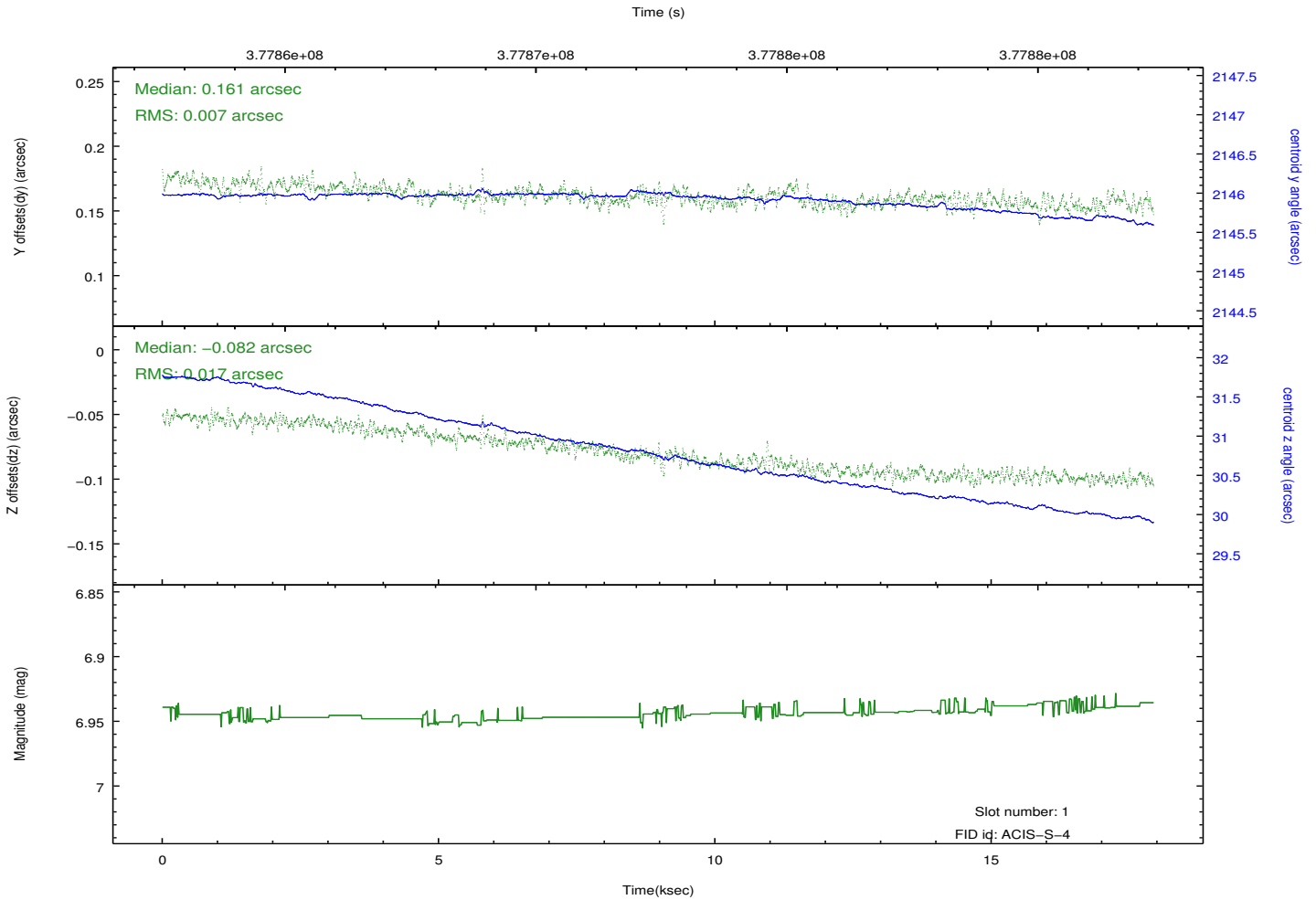
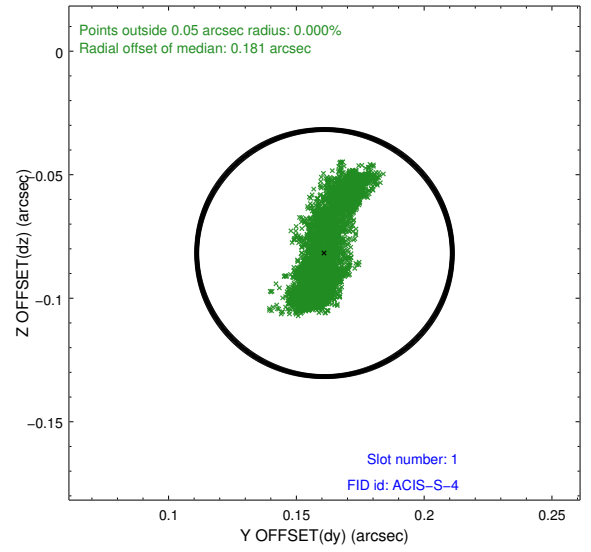
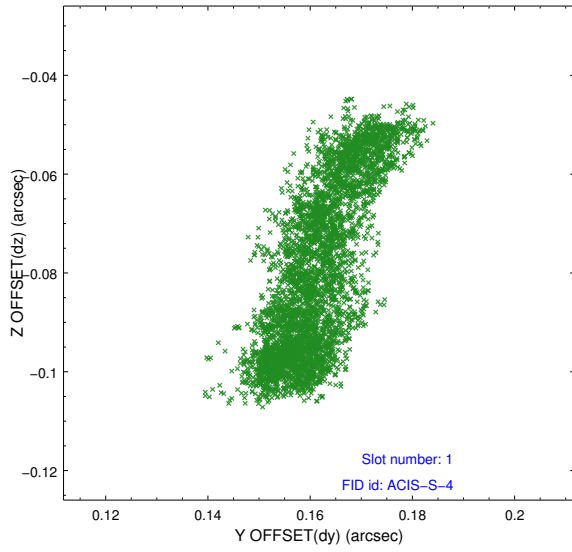


2.5 FID Slots

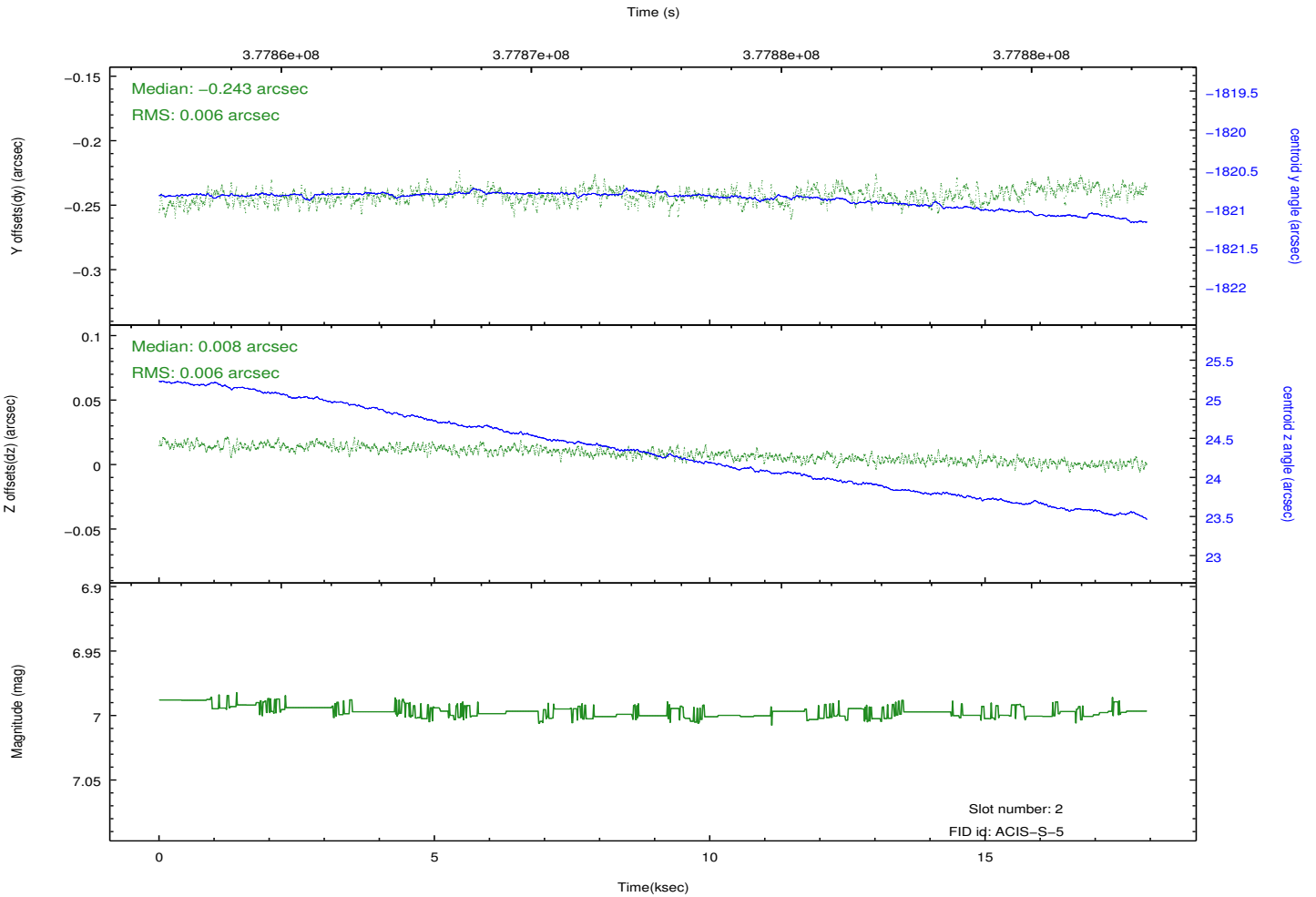
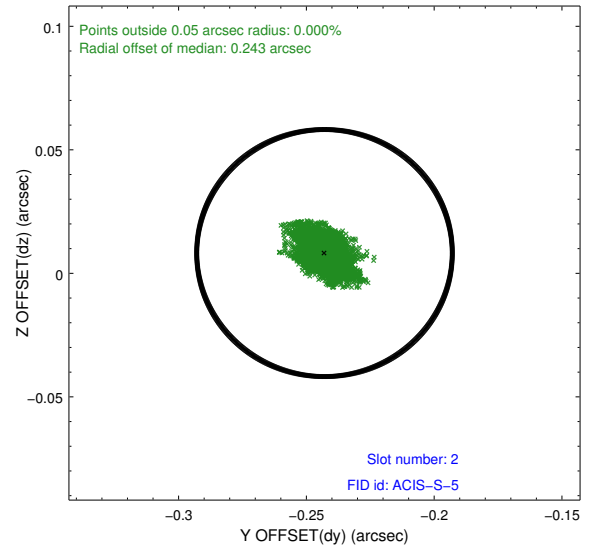
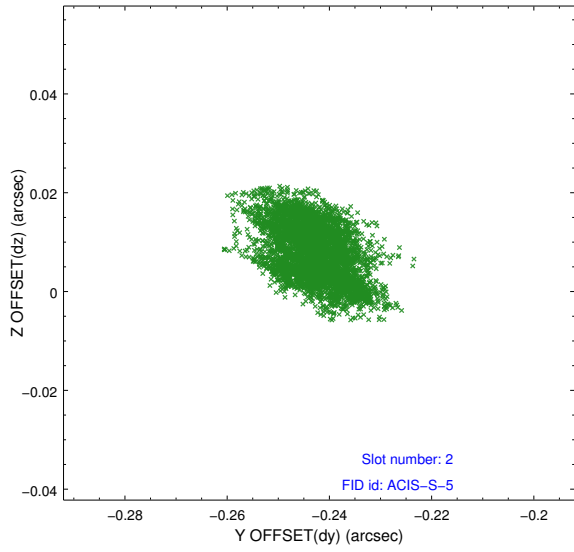
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

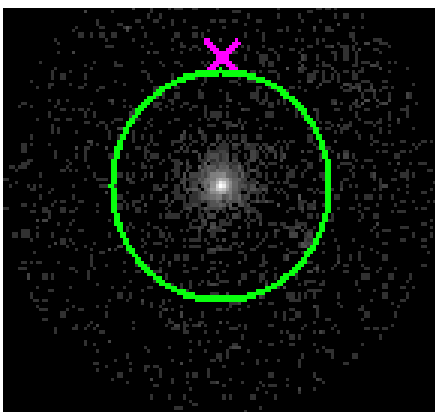


3 Gratings

3.1 HEG Arm



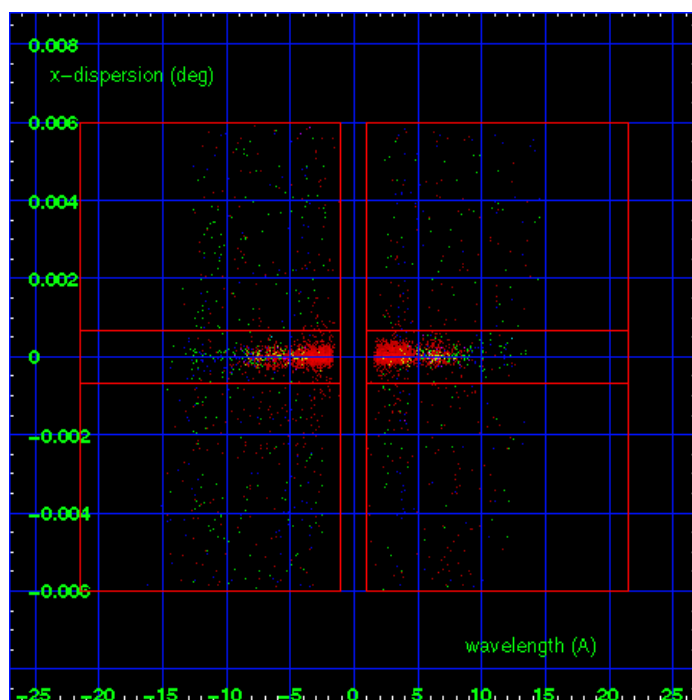
HEG Order Sort 123



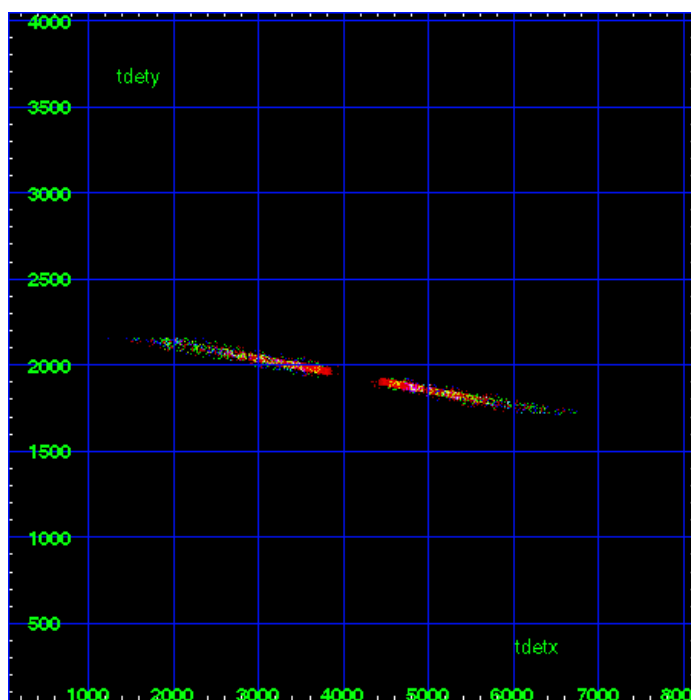
HEG Zero Order



HEG Order Sort ALL

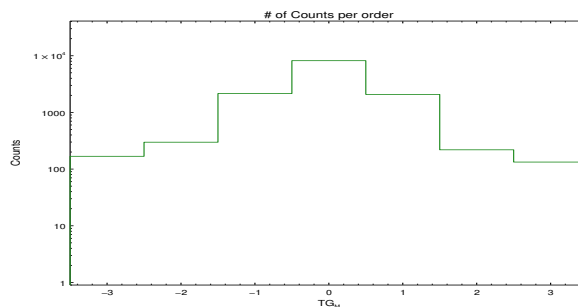


Spot Image HEG

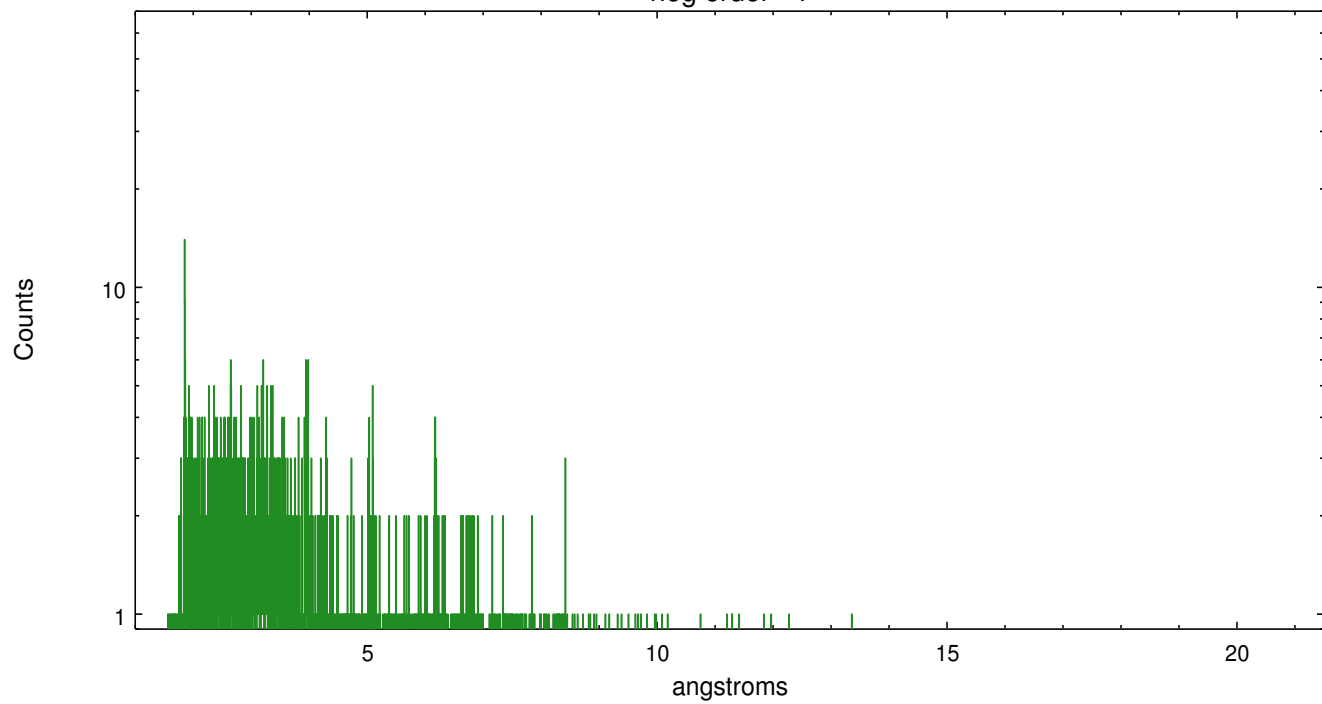


Full Detector HEG

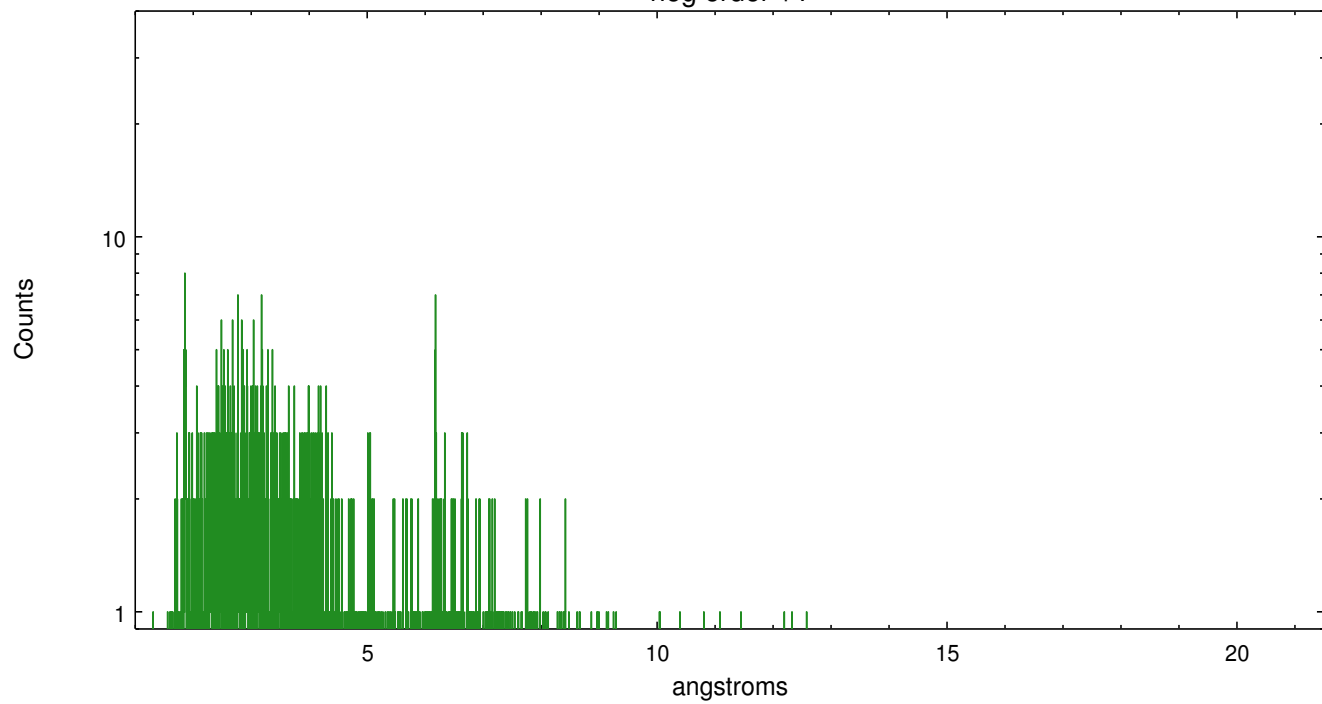
| | order -3 | order -2 | order -1 | order 0 | order 1 | order 2 | order 3 |
|--------|-------------|-------------|-------------|------------|------------|------------|------------|
| Events | 168 | 298 | 2152 | 8184 | 2077 | 219 | 133 |



heg order -1



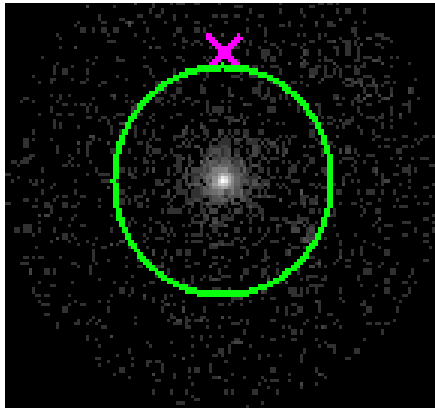
heg order +1



3.2 MEG Arm



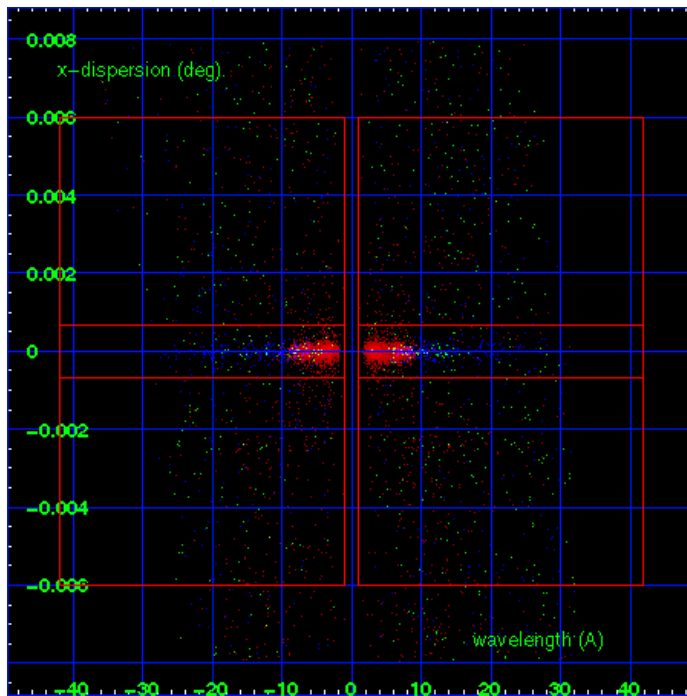
MEG Order Sort 123



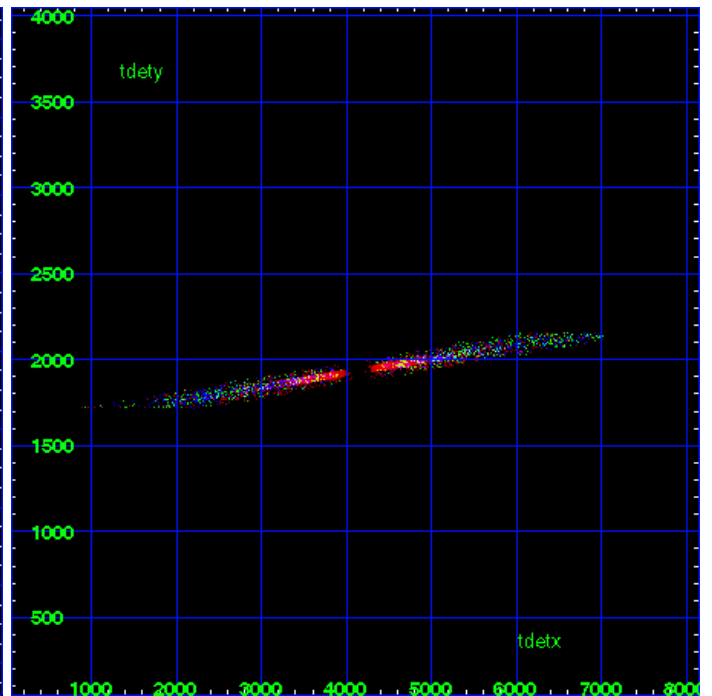
MEG Zero Order



MEG Order Sort ALL

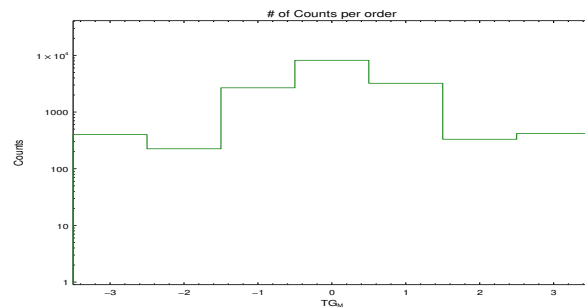


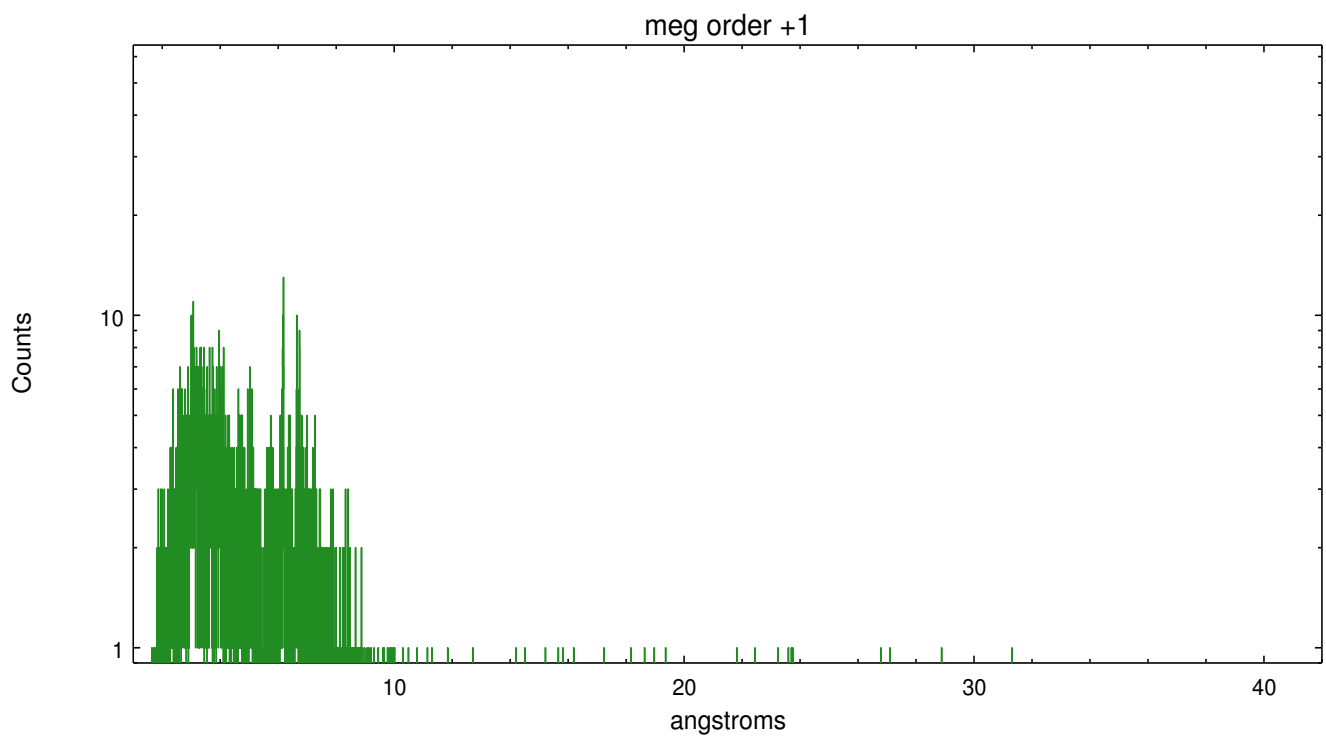
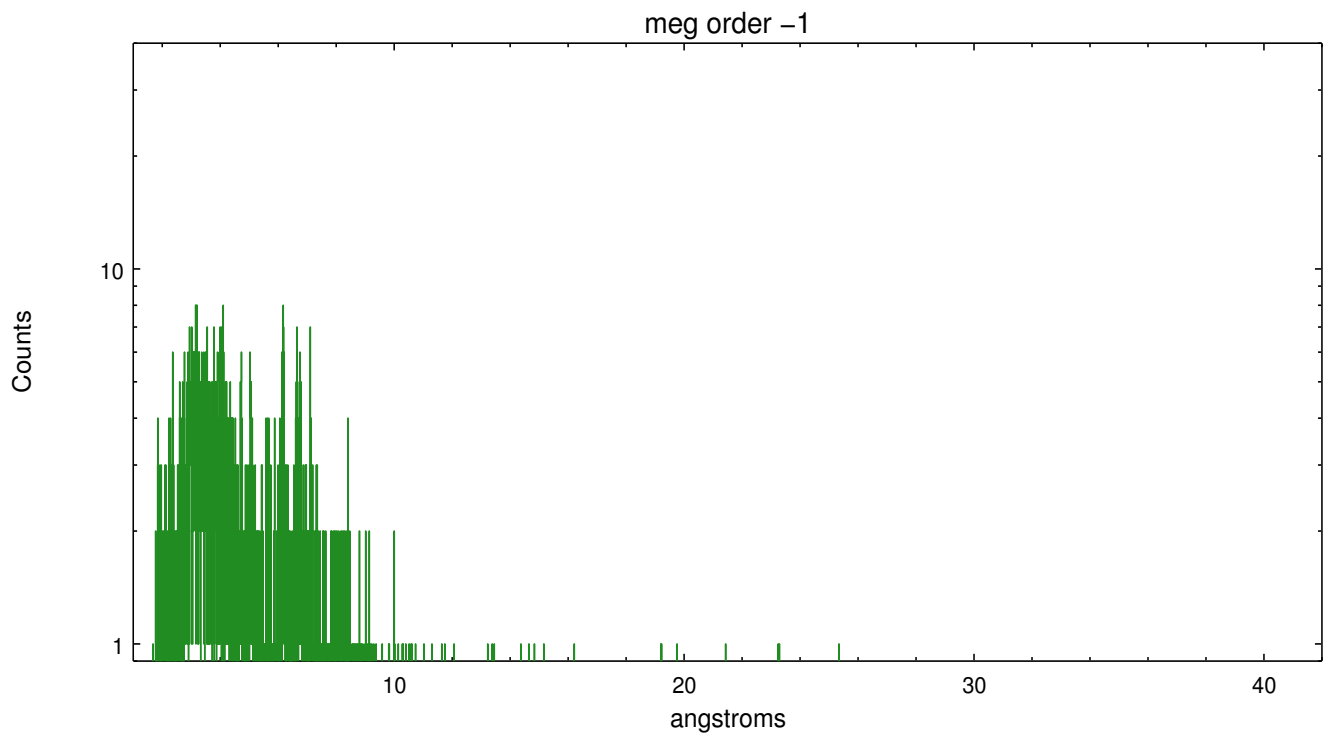
Spot Image MEG



Full Detector MEG

| | order -3 | order -2 | order -1 | order 0 | order 1 | order 2 | order 3 |
|--------|-------------|-------------|-------------|------------|------------|------------|------------|
| Events | 400 | 225 | 2679 | 8184 | 3215 | 331 | 418 |





A Summary

A.1 Status

| | |
|----------------------------|-------------|
| V&V Scientist | Joy Nichols |
| V&V Date (YYYY-MM-DD) | 2012.06.21 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 17.9325 |

A.2 Comments

Spatially complex field. Extraction centered on zeroth order position that was automatically selected by the software (tgdetect).

===

Optical photometry of target in guide star slot 7.