

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 2702 - L2 Version 3
Chandra X-Ray Center

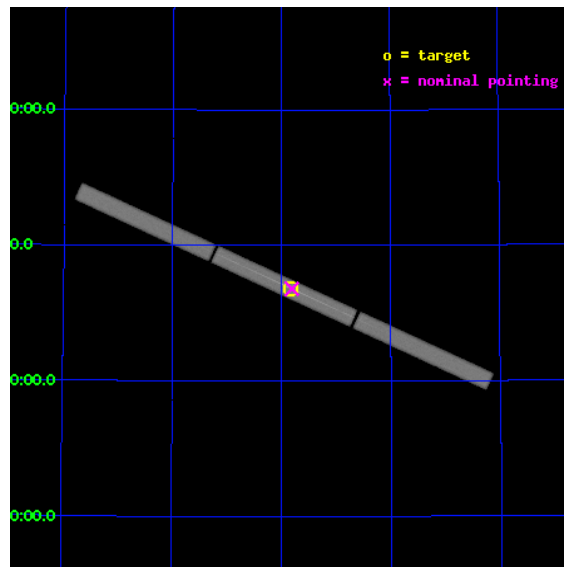
L2 Processing Date : Oct 10 2012

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1 Front

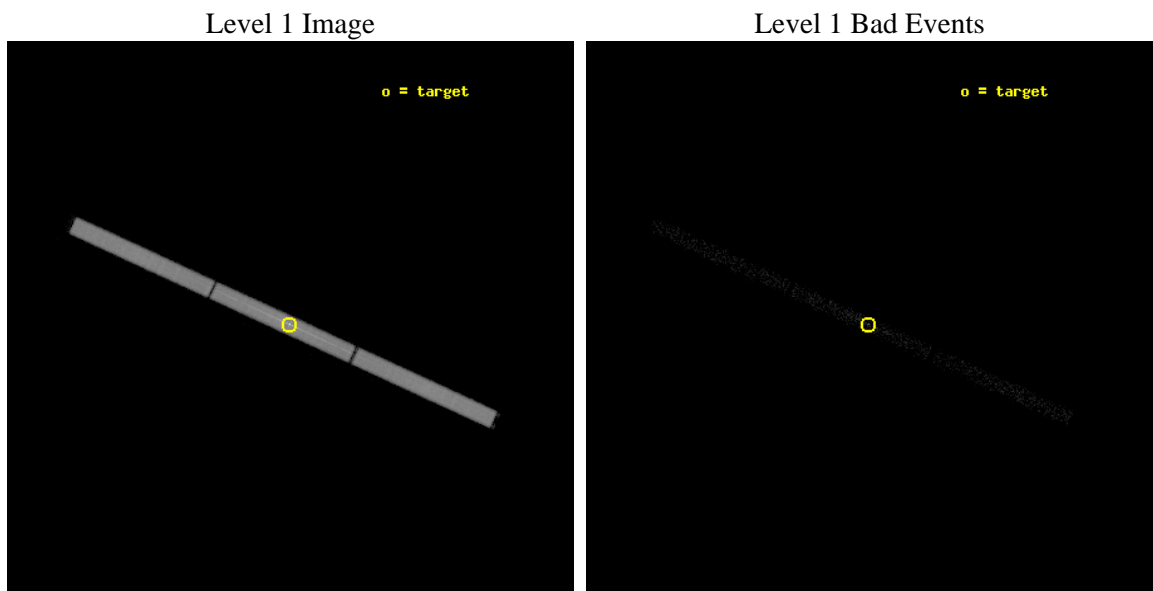
| | | |
|----------|--|---------------------------------------|
| seq_num | 400182 | Sequence number |
| obs_id | 2702 | Observation id |
| title | HIGH RESOLUTION SPECTROSCOPY OF HERCULES X-1 | Proposal title |
| observer | Dr. Daniel Scott | Principal investigator |
| object | HER X-1 MAIN HI PEAK | Source name |
| ra_targ | 254.4575 | Observer's specified target RA [deg] |
| dec_targ | 35.342472 | Observer's specified target Dec [deg] |
| ra_nom | 254.45238102066 | Nominal RA [deg] |
| dec_nom | 35.340685205233 | Nominal Dec [deg] |
| roll_nom | 204.49355939031 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 8855.2316129804 | [s] |
| livetime | 8801.1191414507 | Ontime multiplied by DTCOR |
| l2events | 434481 | Number of level 2 events |



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 9000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5 | Processing system revision | ontime | 8855.2316129804 | [s] |
| caldbver | 4.5.2 | | l1events | 604911 | Number of level 1 events |
| date | 2012-10-10T03:26:56 | Date and time of file creation | | | |
| revision | 3 | Processing version of data | | | |

2.1.3 Events

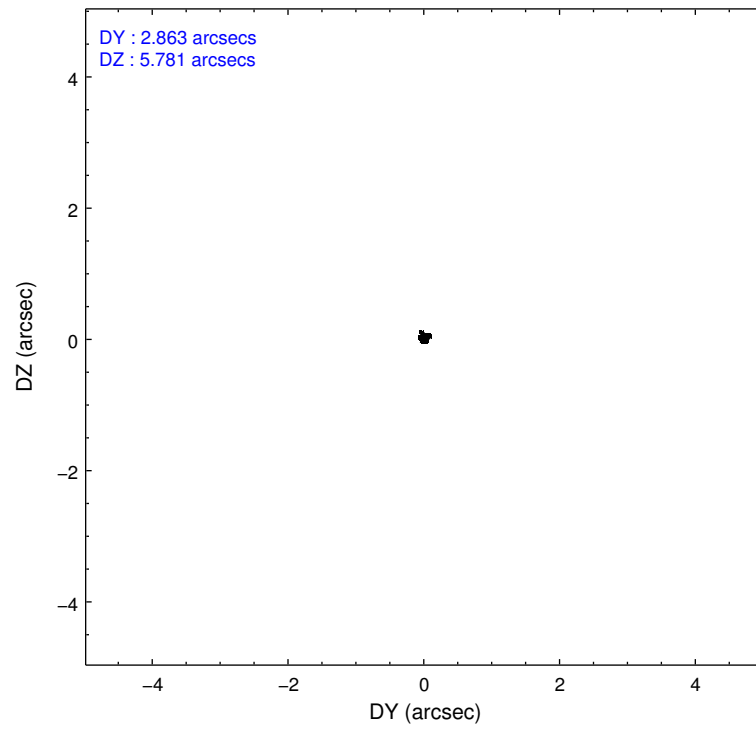
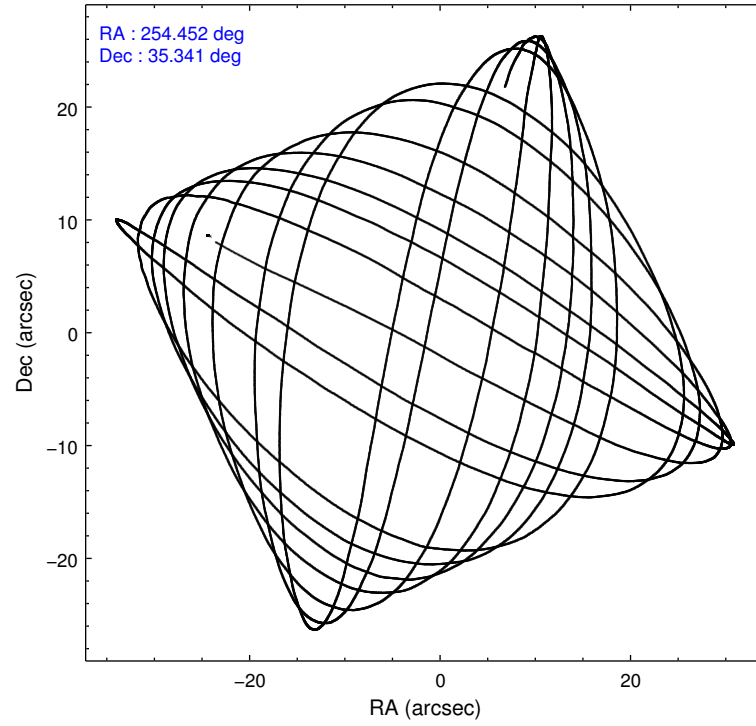
Level 1 Events

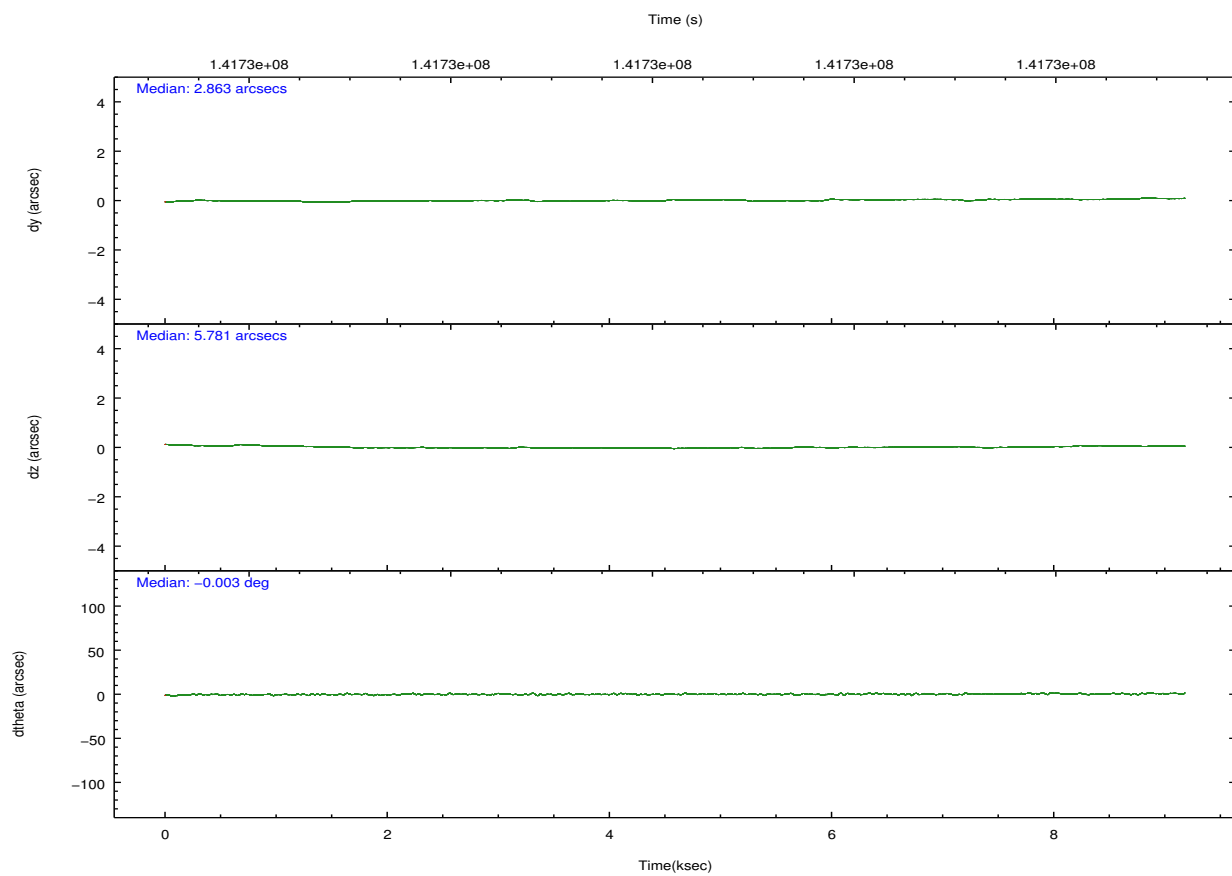
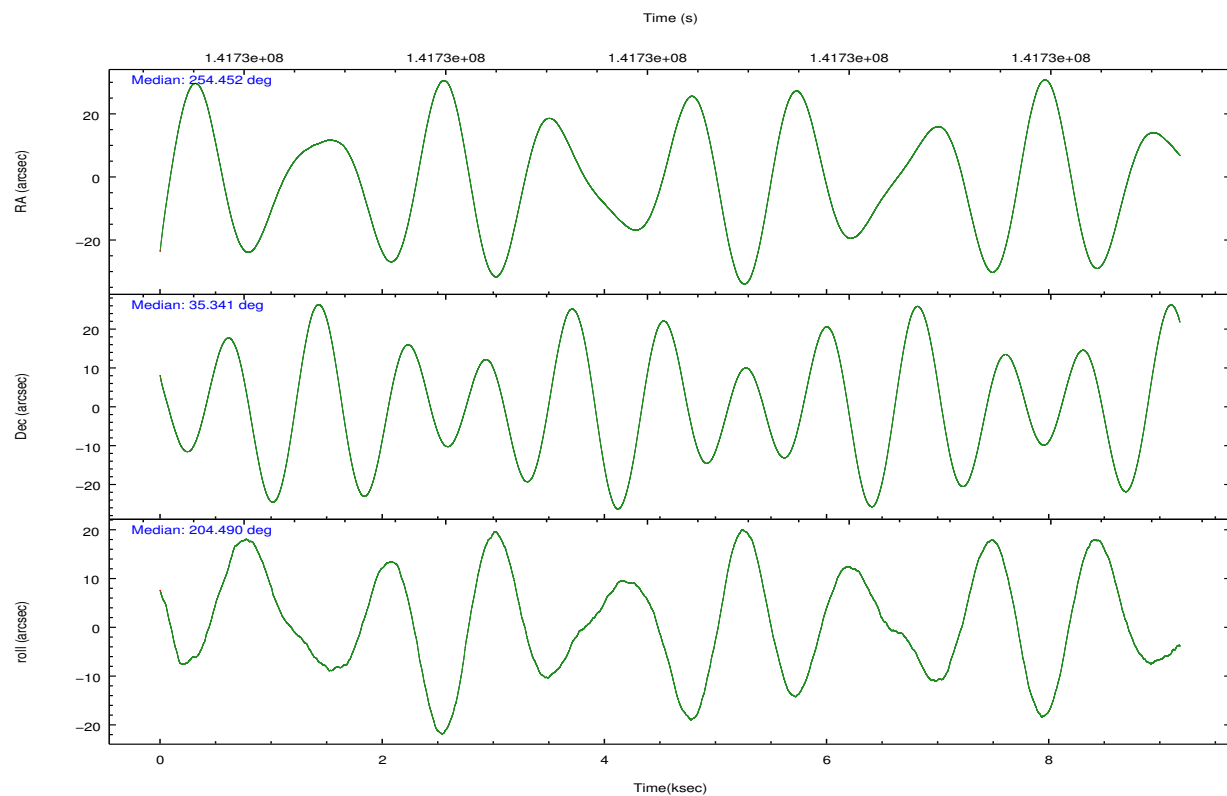
| | segment 1 | segment 2 | segment 3 |
|-----------------|----------------------|----------------------|----------------------|
| level 1 events | 193142 | 216390 | 195379 |
| rejected events | 1895 | 2277 | 1959 |
| rejected % | 0% | 1% | 1% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|------------------------------|-----------|---------|
| Instrument | HRC | HRC | Obspar format version number | 7 | 7 |
| Detector | HRC-S | HRC-S | Obspar file type | PREDICTED | ACTUAL |
| Grating | LETG | LETG | Obspar update status | NONE | UPDATED |
| Data mode | OBSERVING | OBSERVING | | | |
| Observation mode | POINTING | POINTING | | | |
| [deg] Pointing RA | 254.471136 | 254.4523810206565 | | | |
| [deg] Pointing Dec | 35.364728 | 35.34068520523346 | | | |
| [deg] Pointing Roll | 204.415371 | 204.4935593903074 | | | |
| [s] Window start time (MET) | 141704584.184000 | 141704584.184000 | | | |
| [s] Window stop time (MET) | 141743344.184000 | 141743344.184000 | | | |
| [mm] SIM focus pos | -1.429586 | -1.428180813131781 | | | |
| [mm] SIM defocus | 0.1037507710433287 | 0.1051558262725154 | | | |
| [mm] SIM translation stage pos | 250.455976 | 250.466033080201 | | | |
| [mm] SIM translation stage offset | 0 | -0.01005468664627074 | | | |
| Phase constraints | Y | Y | | | |
| [d] Phase period | 34.853430 | 34.853430 | | | |
| [d] Phase epoch (MJD) | 52242.791000 | 52242.791000 | | | |
| Phase start | 0.050000 | 0.050000 | | | |
| Phase end | 0.100000 | 0.100000 | | | |
| Phase start error | 0.001000 | 0.001000 | | | |
| Phase end error | 0.001000 | 0.001000 | | | |
| [s] Observation start time (MET) | 141725813.184000 | 141724982.40307 | | | |
| Observation start date | 2002-06-29T08:15:49 | 2002-06-29T08:03:02 | | | |
| [s] Observation end time (MET) | 141734813.184000 | 141735719.79101 | | | |
| Observation end date | 2002-06-29T10:45:49 | 2002-06-29T11:01:59 | | | |

2.3 Aspect



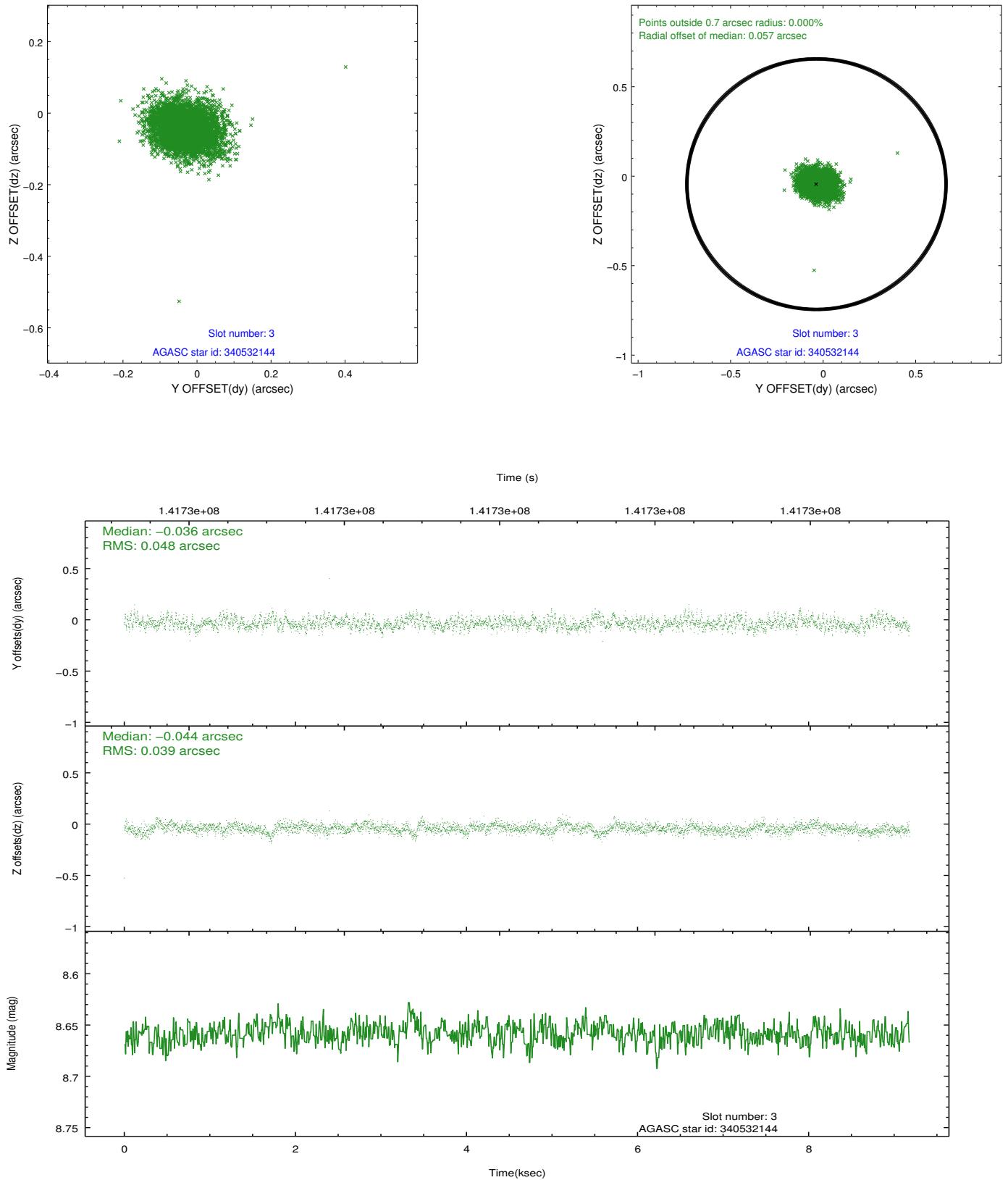


Slot Statistics

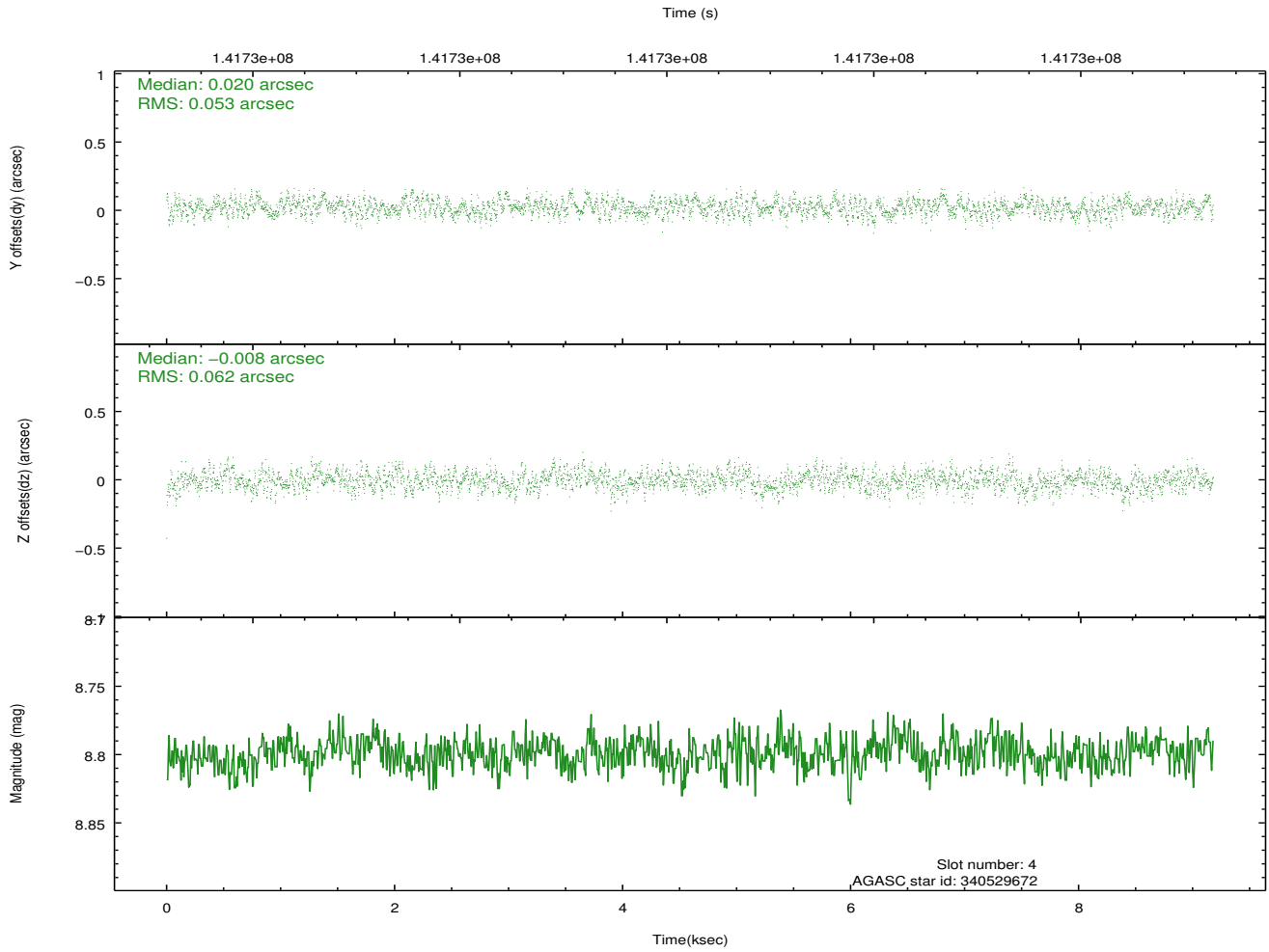
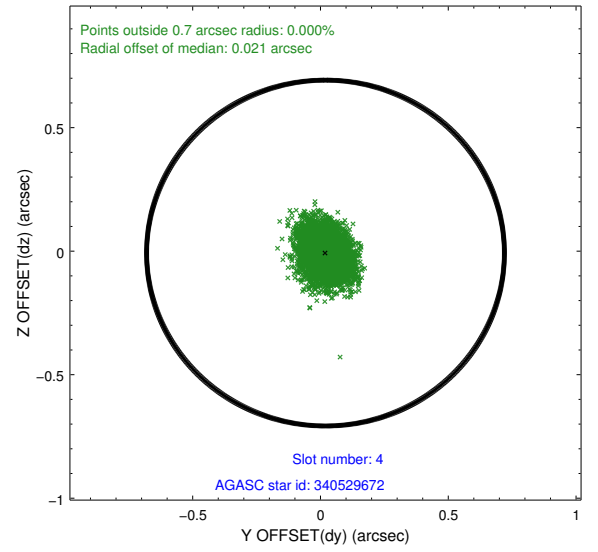
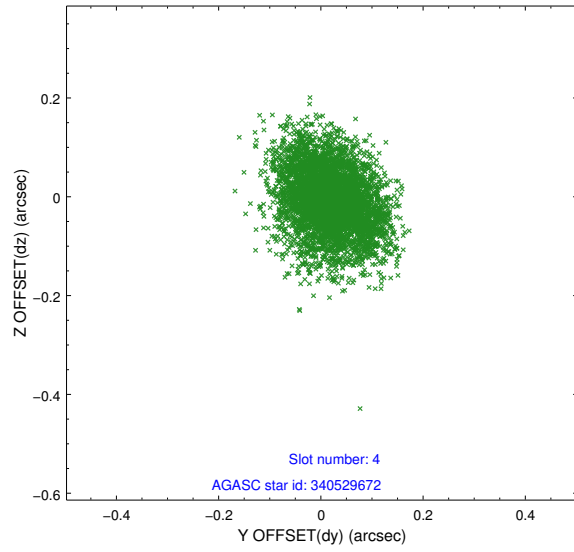
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | HRC-S-1 | 6.97 | 2240 | 0.143 | -0.151 | 0.009 | 0.016 | 0.000000 | 0.000000 | -1156.91 | -454.32 |
| 1 | FID | HRC-S-2 | 6.98 | 2240 | 0.119 | -0.101 | 0.008 | 0.023 | 0.000000 | 0.000000 | 1242.23 | -447.14 |
| 2 | FID | HRC-S-3 | 7.00 | 2240 | 0.129 | -0.050 | 0.008 | 0.014 | 0.000000 | 0.000000 | -1159.08 | 575.11 |
| 3 | GUIDE | 340532144 | 8.66 | 4478 | -0.036 | -0.044 | 0.065 | 0.109 | 255.164643 | 35.156544 | -1551.75 | 1520.40 |
| 4 | GUIDE | 340529672 | 8.80 | 4476 | 0.020 | -0.008 | 0.087 | 0.139 | 254.827180 | 34.864332 | -214.09 | 2074.53 |
| 5 | GUIDE | 340534080 | 8.83 | 4477 | 0.014 | 0.003 | 0.074 | 0.122 | 255.228954 | 35.471551 | -2185.46 | 561.69 |
| 6 | GUIDE | 341060696 | 9.21 | 4475 | -0.002 | 0.048 | 0.098 | 0.183 | 254.855764 | 35.681180 | -1495.75 | -574.36 |
| 7 | GUIDE | 341058456 | 9.67 | 4472 | 0.007 | -0.001 | 0.098 | 0.162 | 254.910348 | 35.836463 | -1870.42 | -1018.55 |

2.4 Star Slots

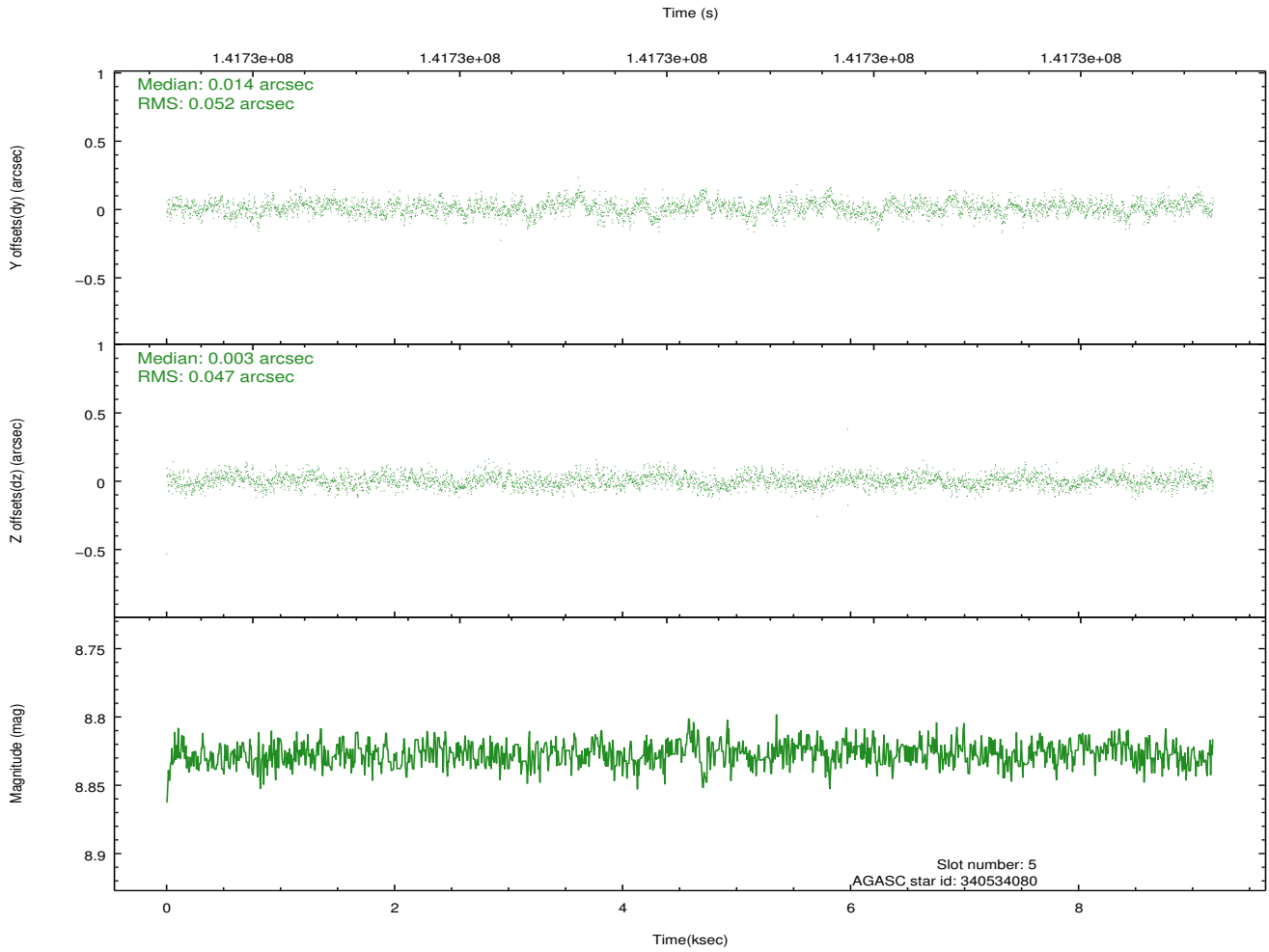
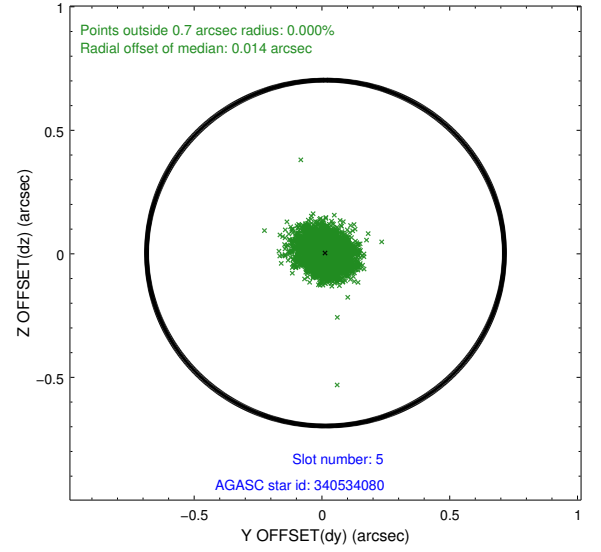
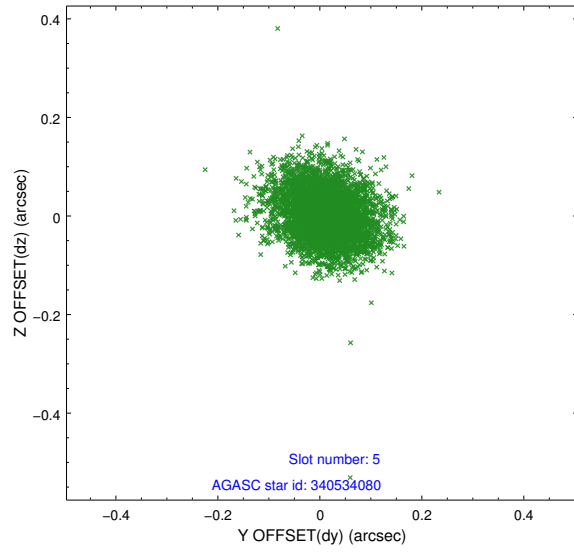
2.4.1 Slot 3



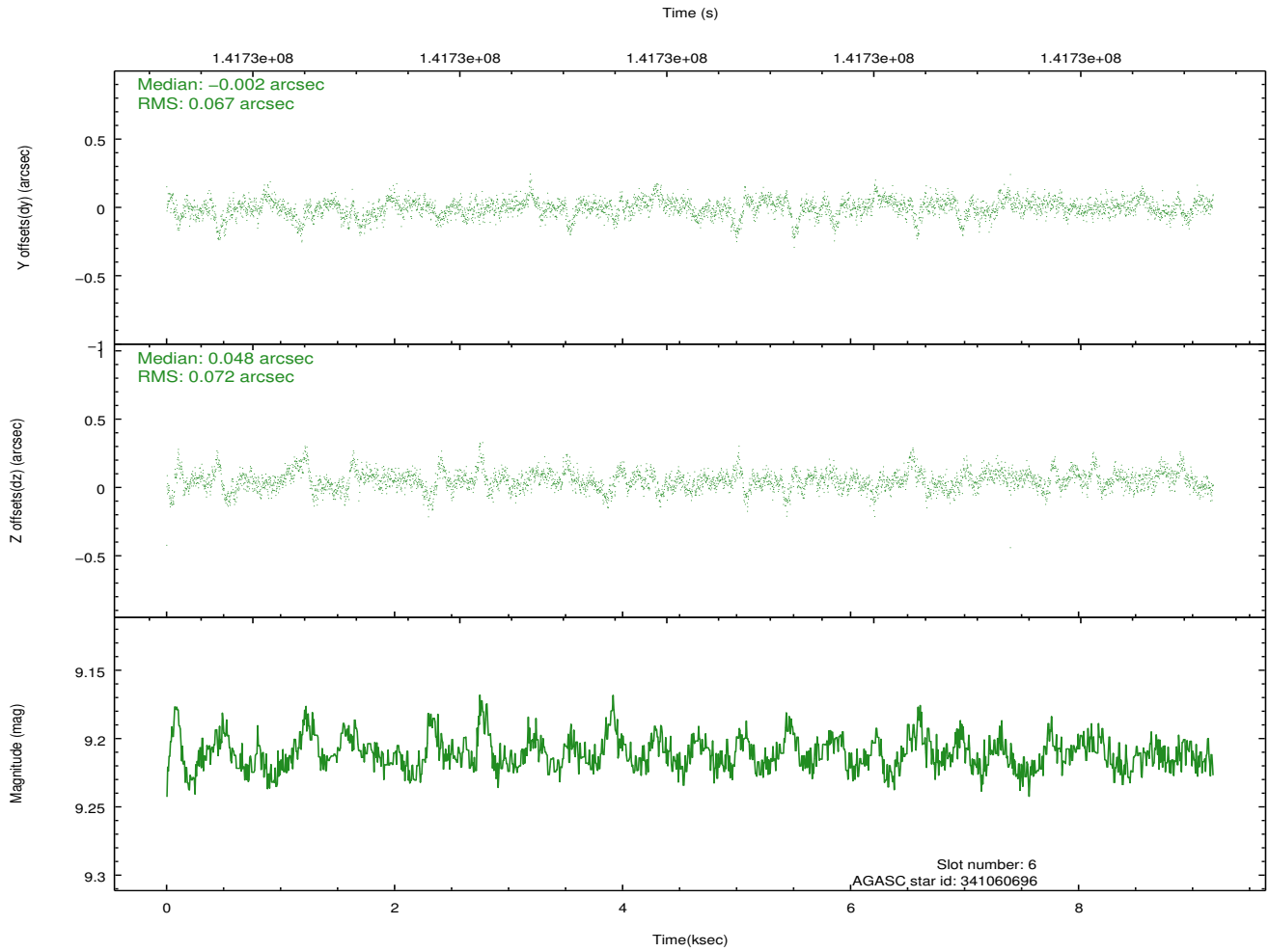
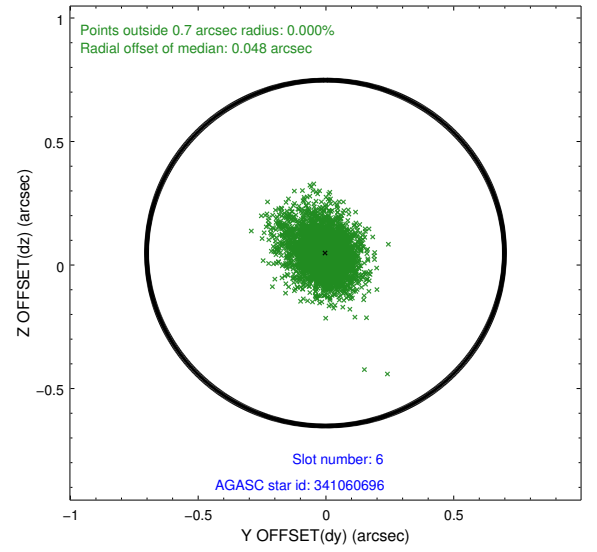
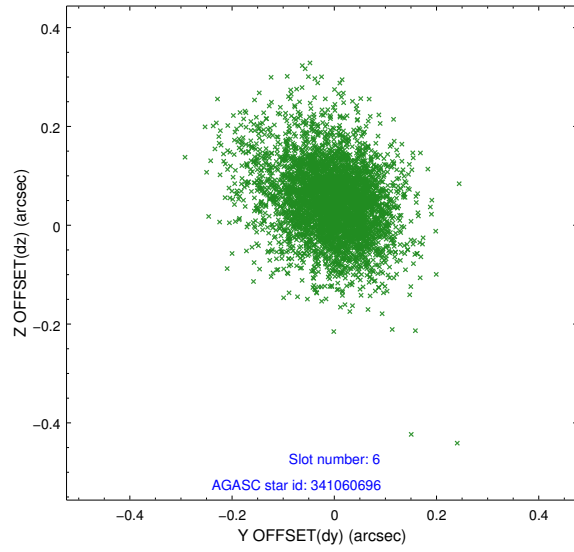
2.4.2 Slot 4



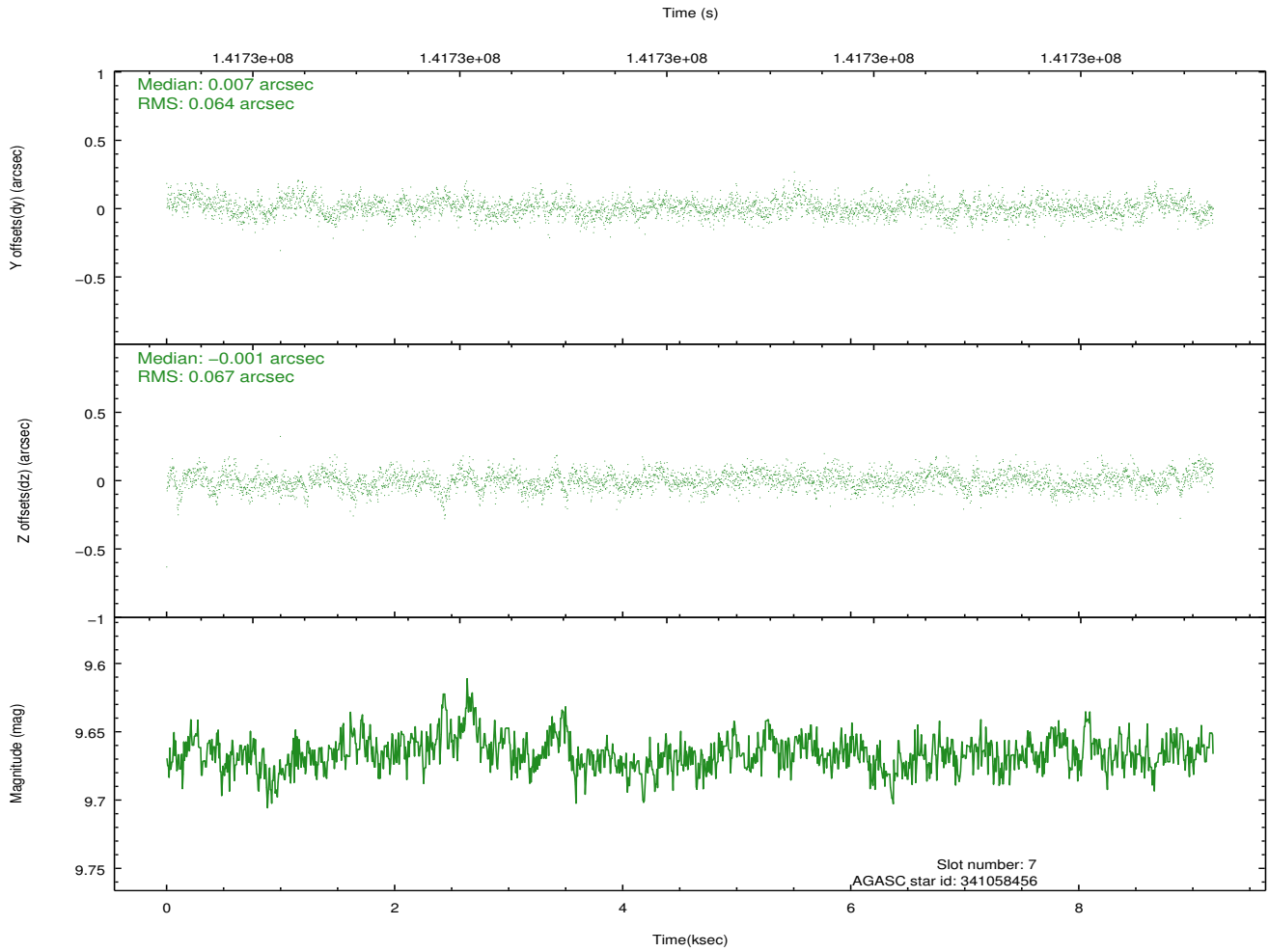
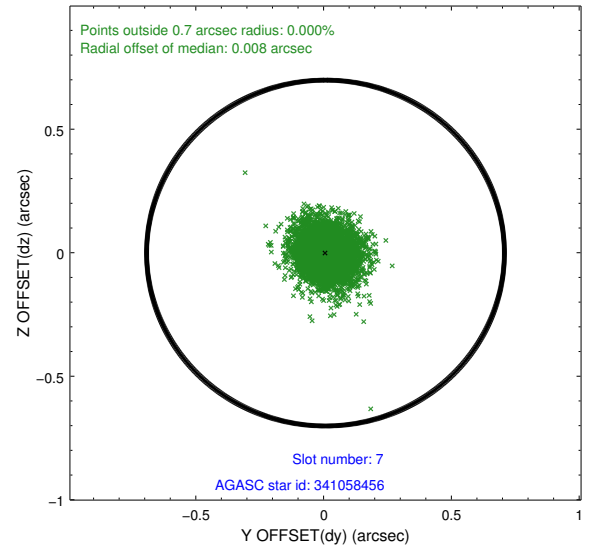
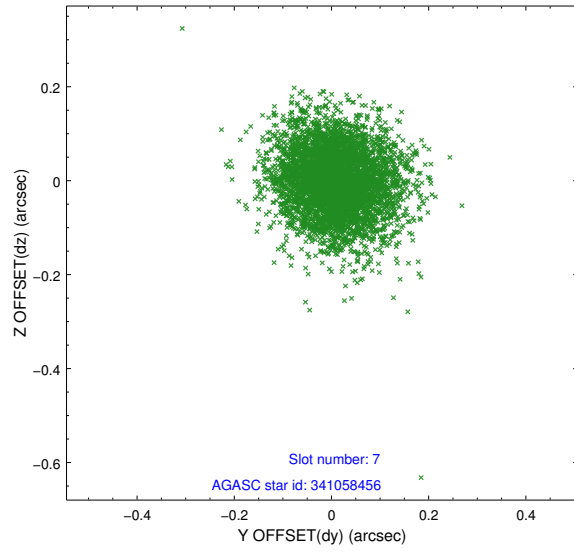
2.4.3 Slot 5



2.4.4 Slot 6

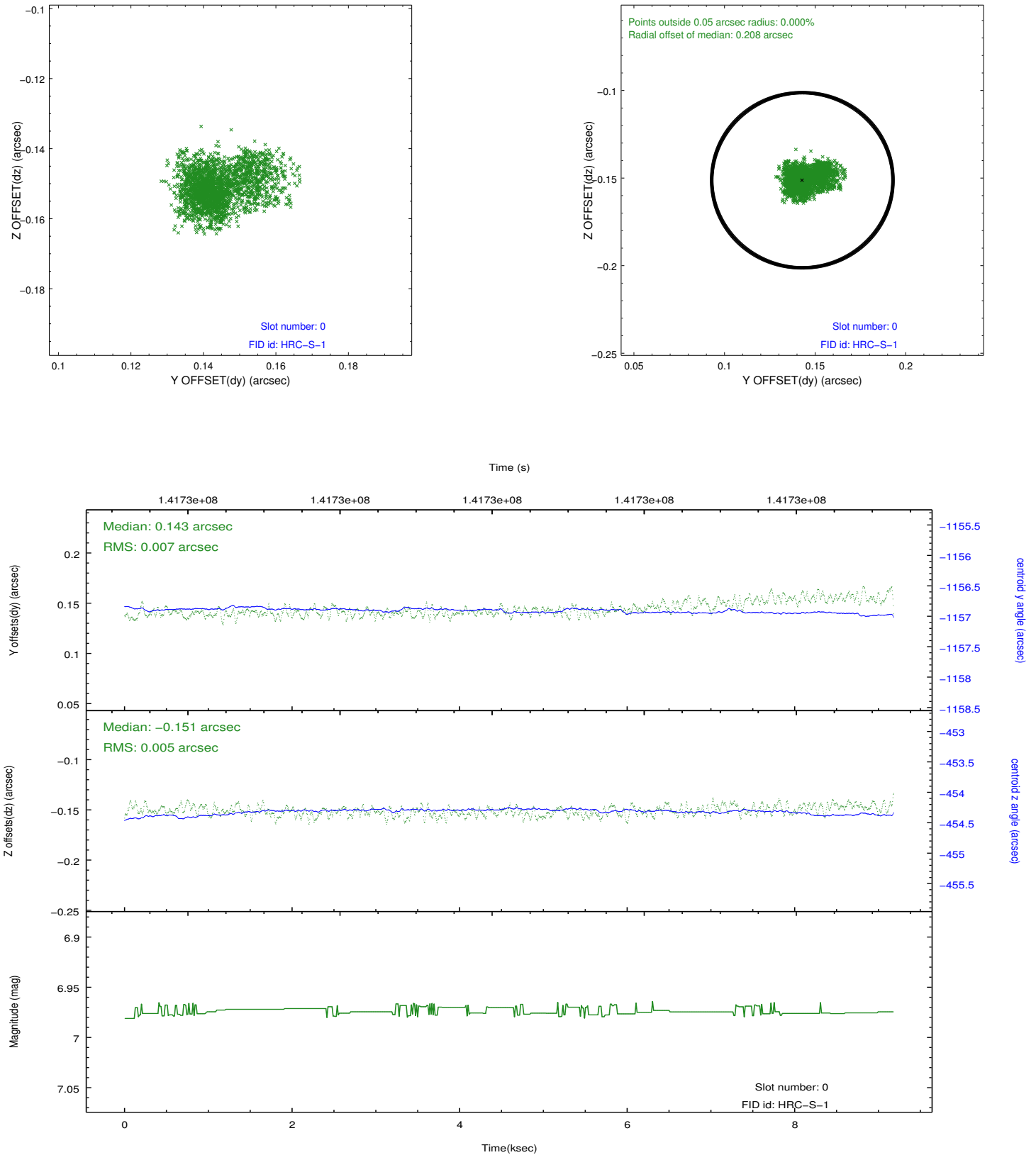


2.4.5 Slot 7

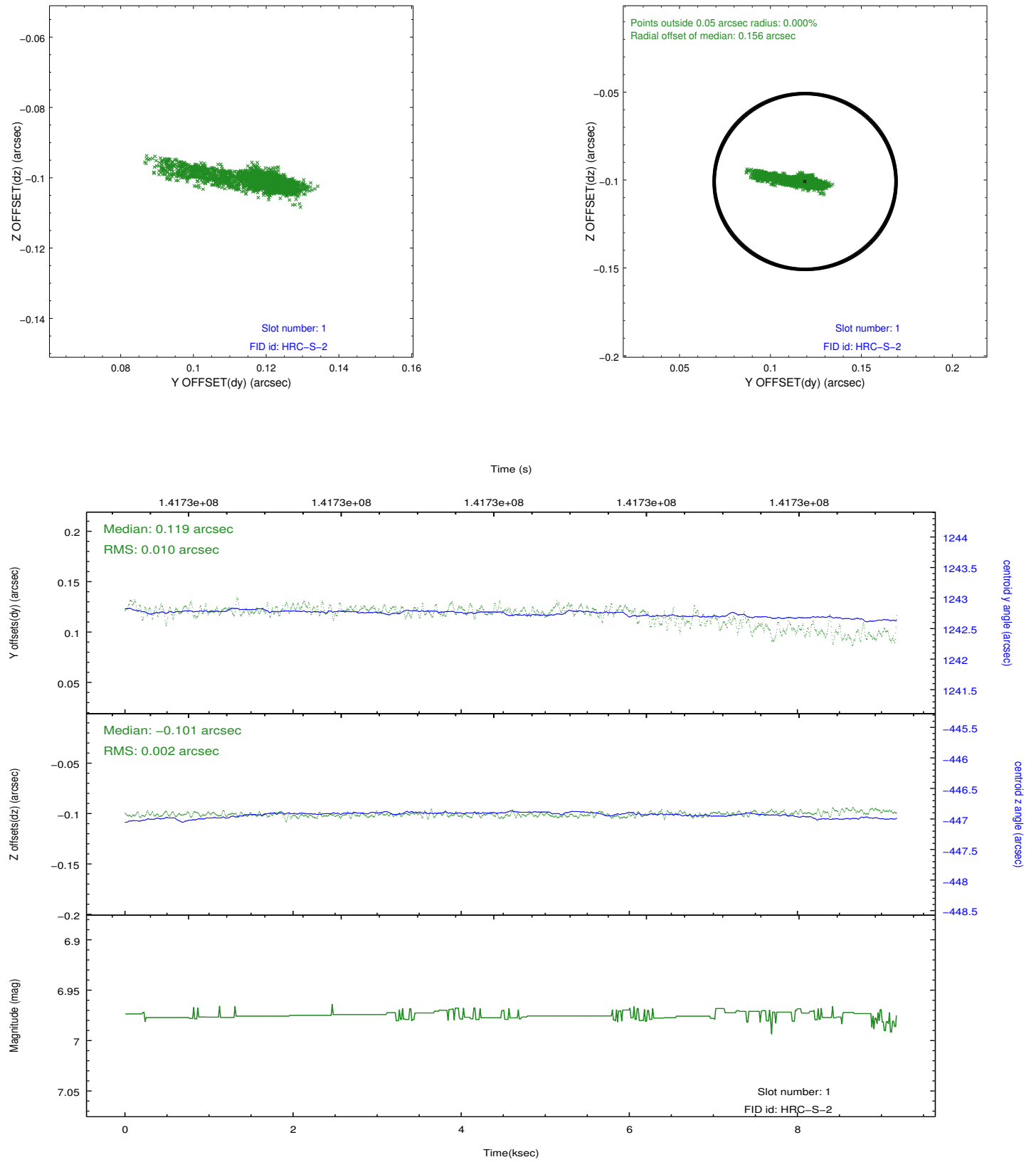


2.5 FID Slots

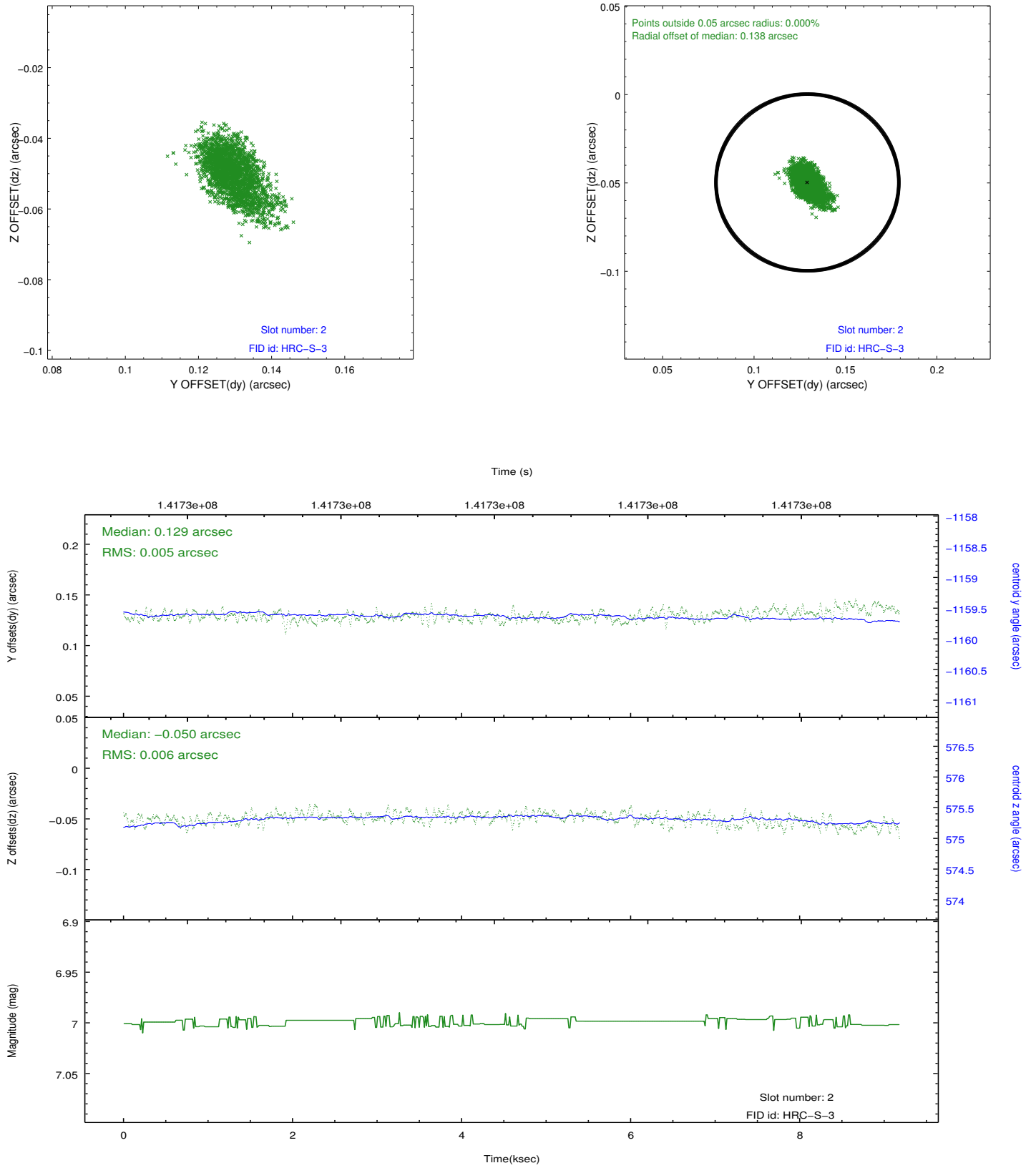
2.5.1 Slot 0



2.5.2 Slot 1

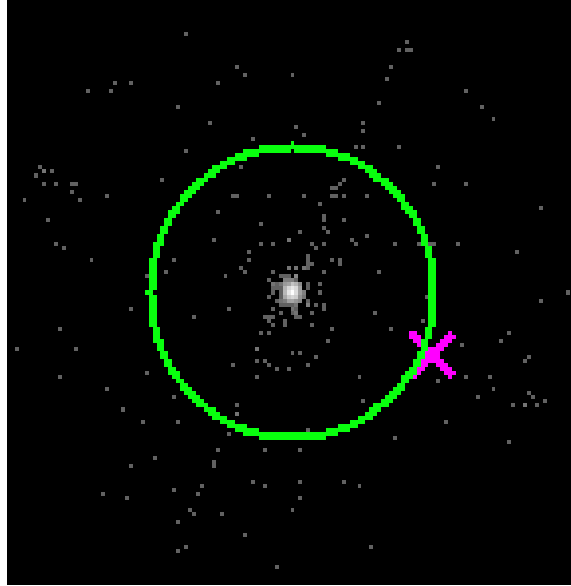


2.5.3 Slot 2

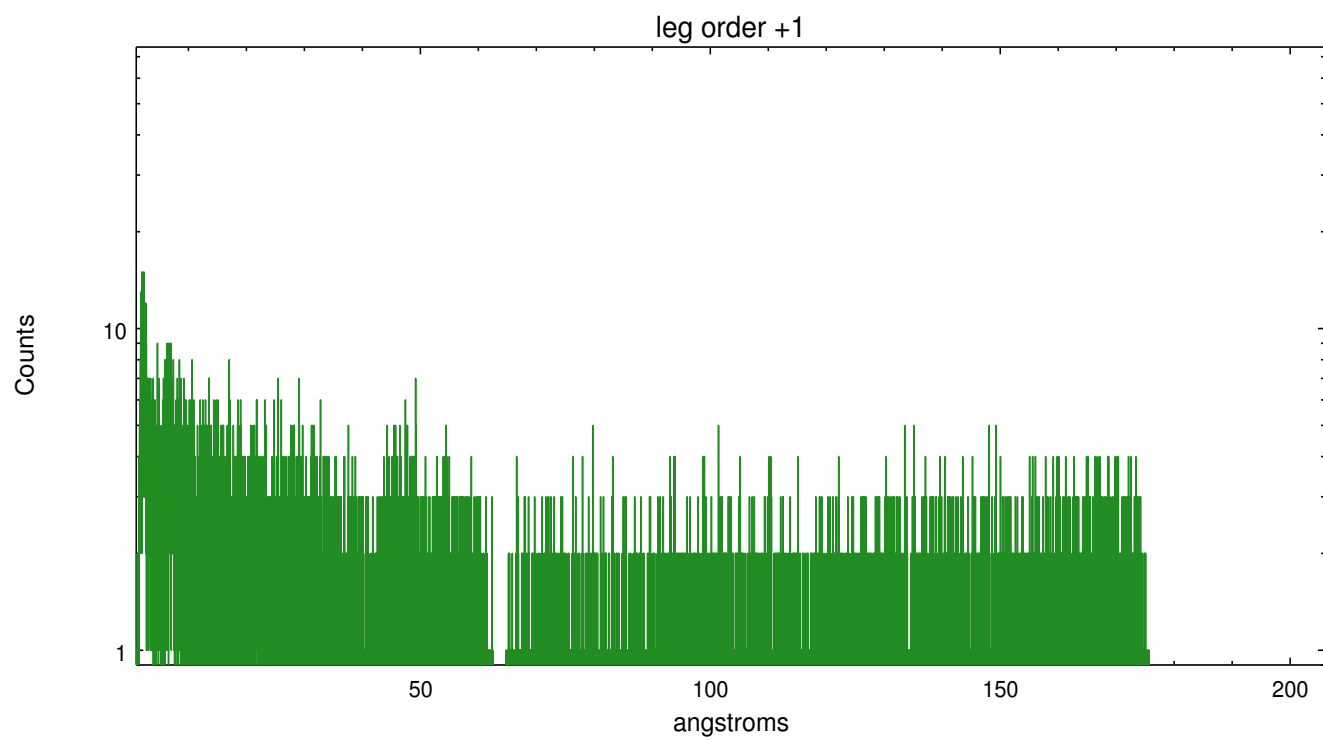
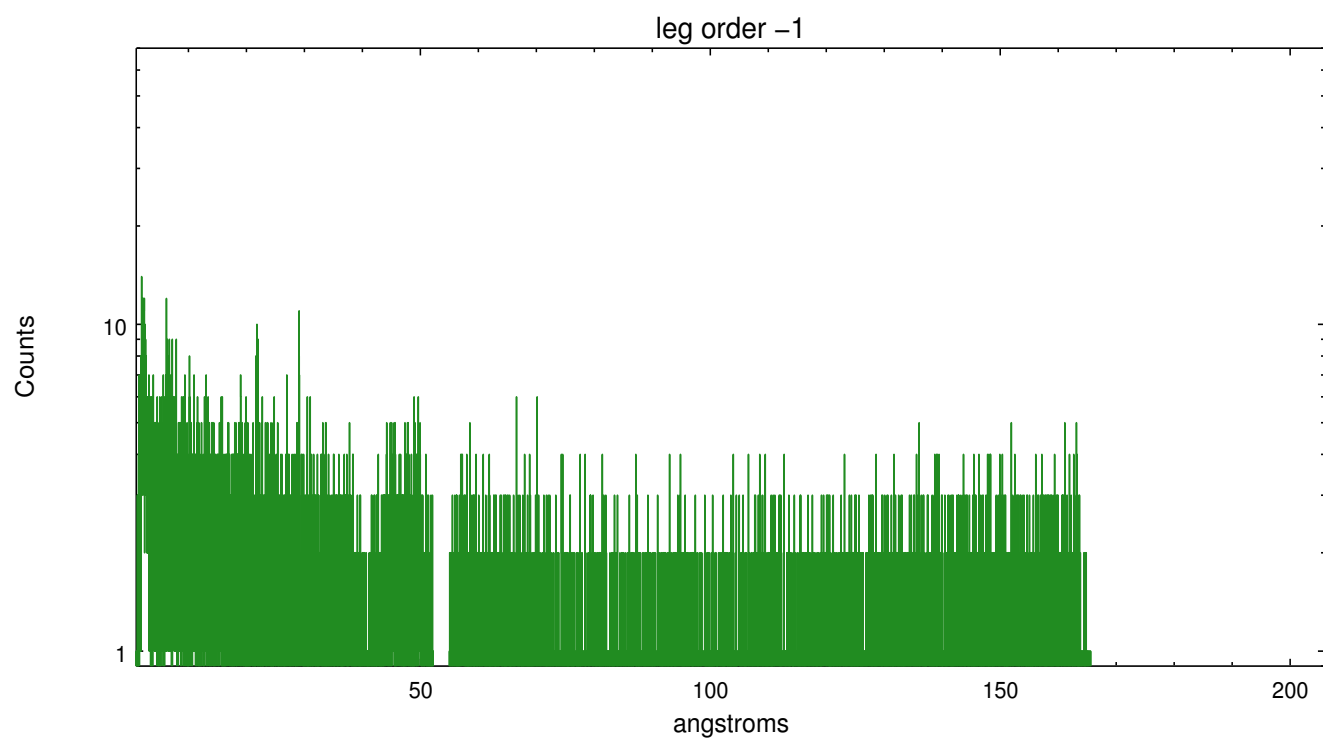


3 Gratings

3.1 LETG Arm



LETG Zero Order



A Summary

A.1 Status

| | |
|----------------------------|-------------|
| V&V Scientist | Joy Nichols |
| V&V Date (YYYY-MM-DD) | 2012.10.22 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 8.855 |

A.2 Comments

Phase constraint met.