

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5121 - L2 Version 4
Chandra X-Ray Center

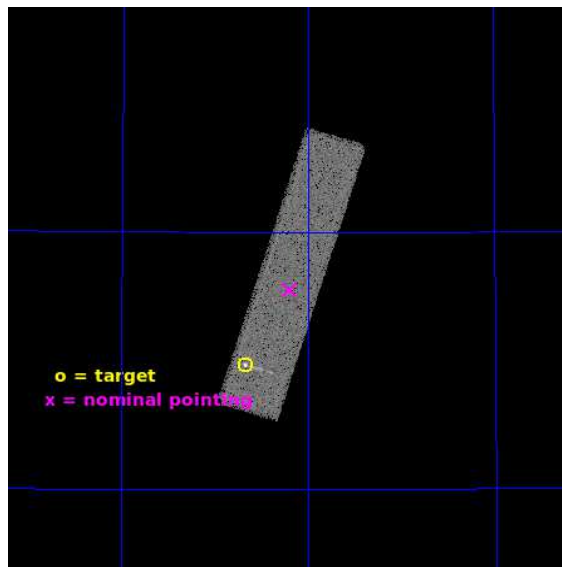
L2 Processing Date : Oct 5 2020

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1 Front

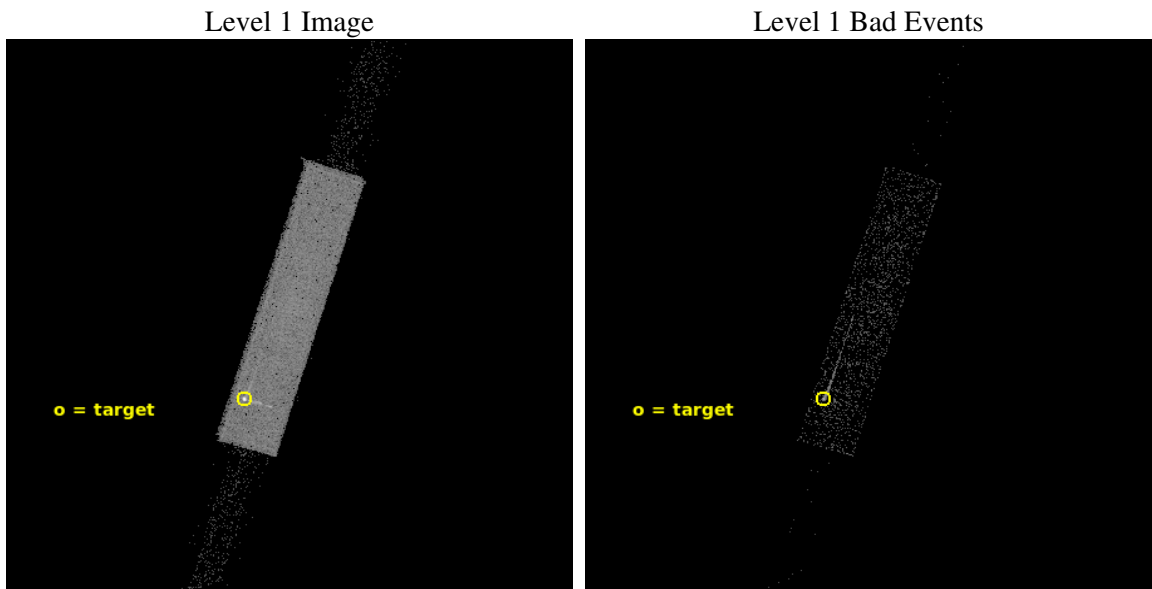
| | | |
|----------|---|---------------------------------------|
| seq_num | 290394 | Sequence number |
| obs_id | 5121 | Observation id |
| title | AO5B Calibration Observations to Monitor the Spatial Variations in the HRC-S Gain | Proposal title |
| observer | CXC Calibration | Principal investigator |
| object | ArLac | Source name |
| ra_targ | 332.17 | Observer's specified target RA [deg] |
| dec_targ | 45.742306 | Observer's specified target Dec [deg] |
| ra_nom | 332.04985415729 | Nominal RA [deg] |
| dec_nom | 45.888430409278 | Nominal Dec [deg] |
| roll_nom | 287.15818748138 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 1052.6750473082 | [s] |
| livetime | 1045.8975589638 | Ontime multiplied by DTCOR |
| l2events | 44803 | Number of level 2 events |



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 1 | Obi number | sched_exp_time | 900.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 1052.6750473082 | [s] |
| caldbver | 4.9.2 | | l1events | 77335 | Number of level 1 events |
| date | 2020-10-05T08:29:05 | Date and time of file creation | | | |
| revision | 4 | Processing version of data | | | |

2.1.3 Events

Level 1 Events

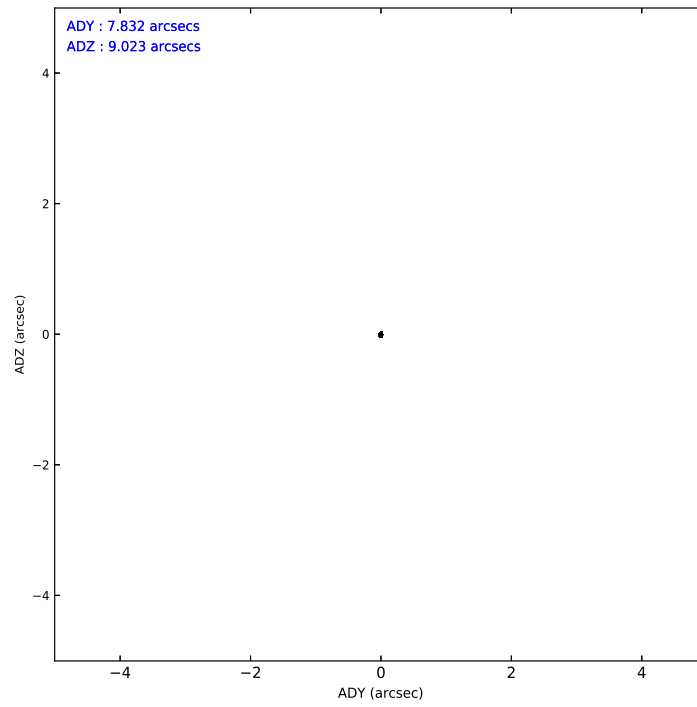
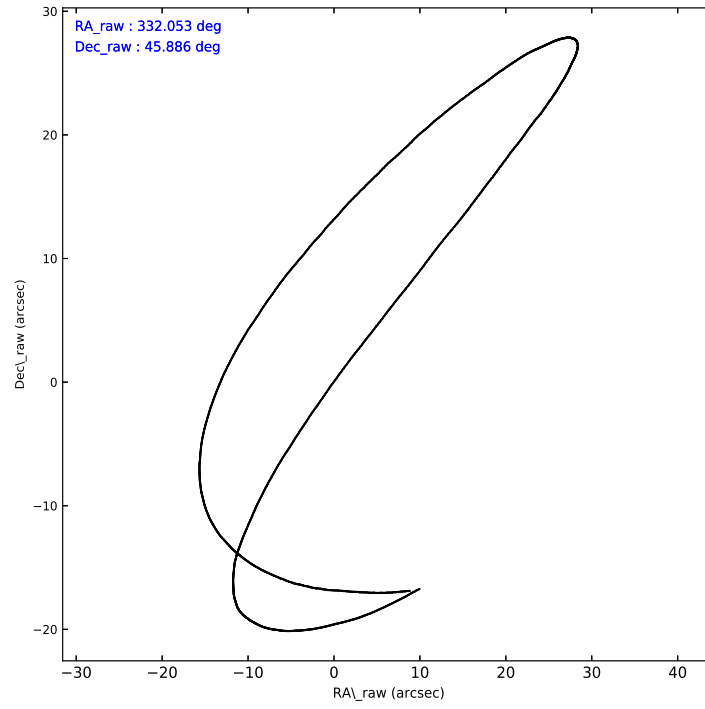
| | segment 1 | segment 2 | segment 3 |
|-----------------|--------------|--------------|--------------|
| level 1 events | 809 | 75757 | 769 |
| rejected events | 809 | 19133 | 769 |
| rejected % | 100% | 25% | 100% |

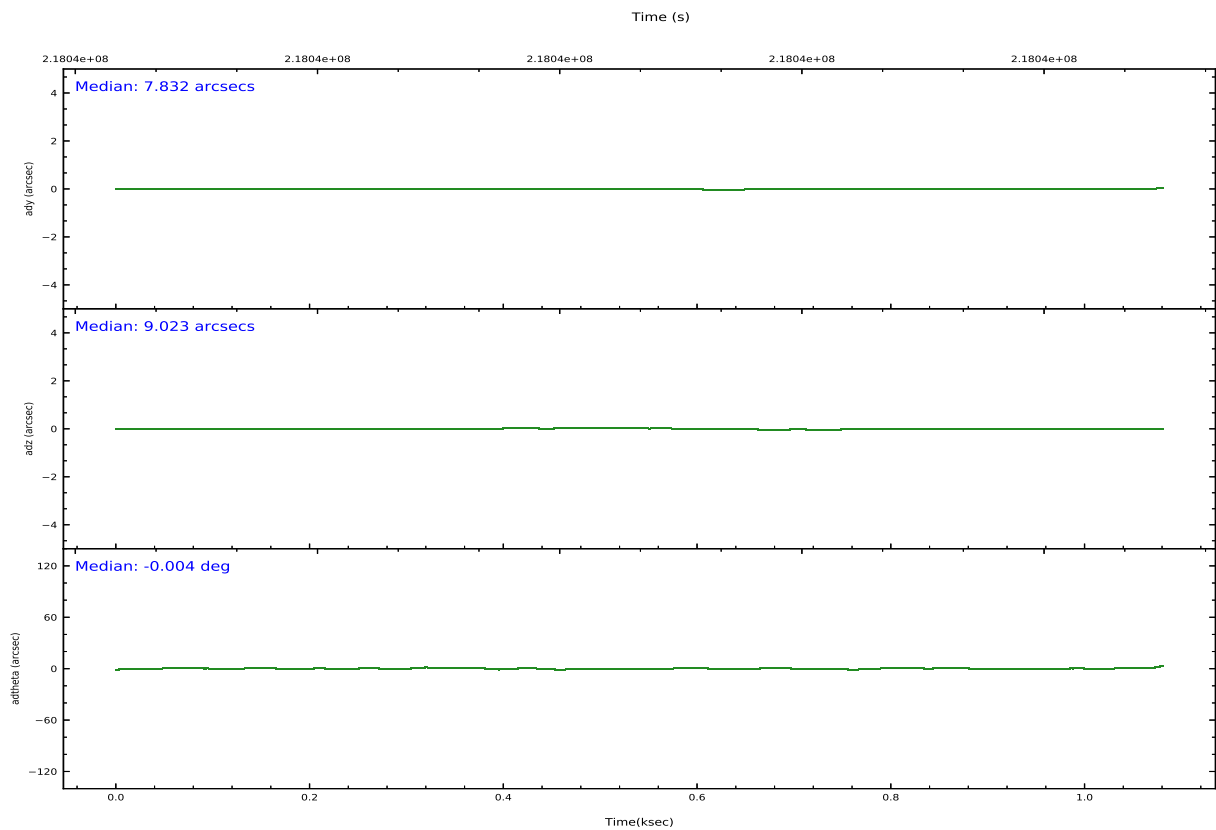
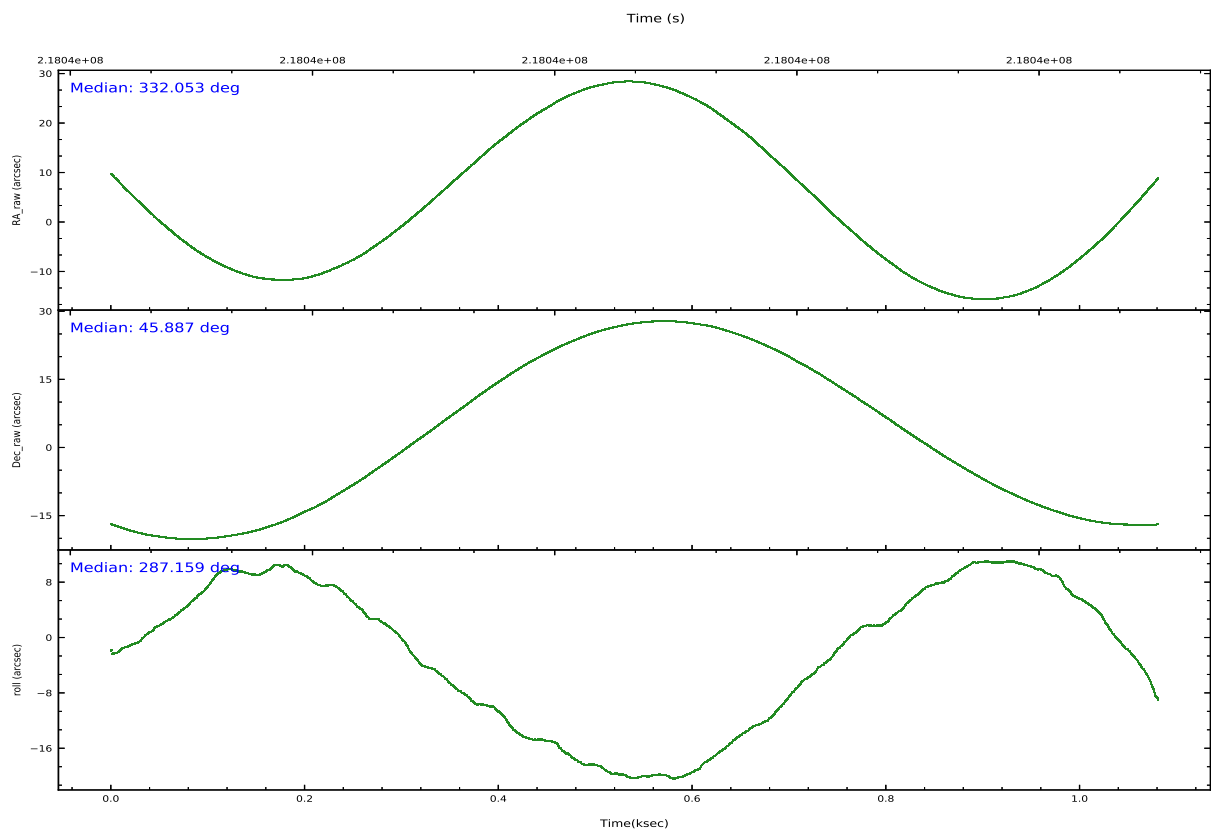
2.2 Compared Parameters

| Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|
| Instrument | HRC | HRC |
| Detector | HRC-S | HRC-S |
| Grating | NONE | NONE |
| Data mode | OBSERVING | OBSERVING |
| Observation mode | POINTING | POINTING |
| [deg] Pointing RA | 332.024454 | 332.04985415729 |
| [deg] Pointing Dec | 45.905735 | 45.888430409278 |
| [deg] Pointing Roll | 287.116244 | 287.15818748138 |
| [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 |
| [s] Observation start time (MET) | 218035473.184000 | 218035096.90693 |
| Observation start date | 2004-11-28T13:23:29 | 2004-11-28T13:18:16 |
| [s] Observation end time (MET) | 218036373.184000 | 218036506.7945 |
| Observation end date | 2004-11-28T13:38:29 | 2004-11-28T13:41:46 |

| Parameter | Planned | Actual |
|-----------------------|-----------|---------|
| Obspar version number | 8 | 8 |
| Obspar file type | PREDICTED | ACTUAL |
| Obspar update status | NONE | UPDATED |

2.3 Aspect



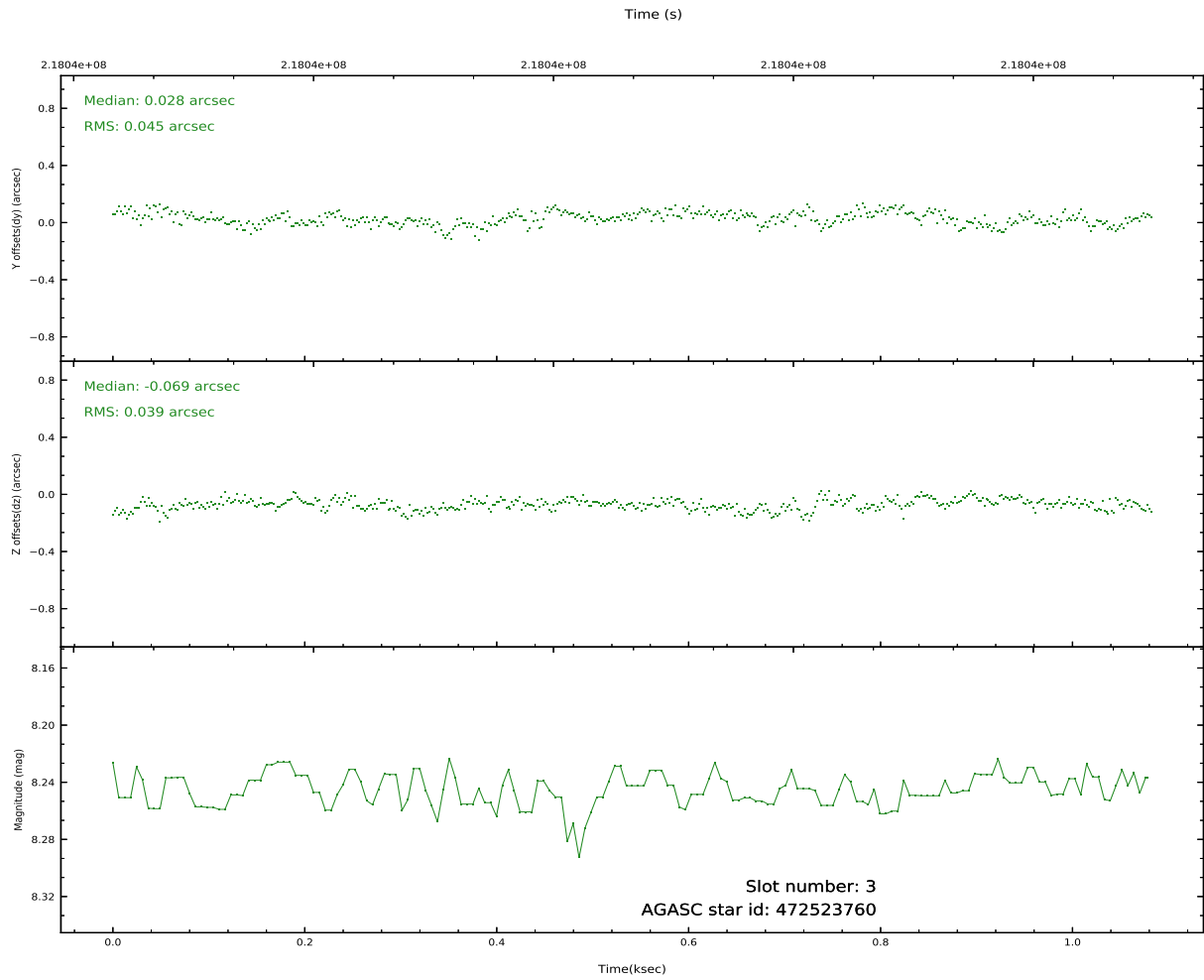
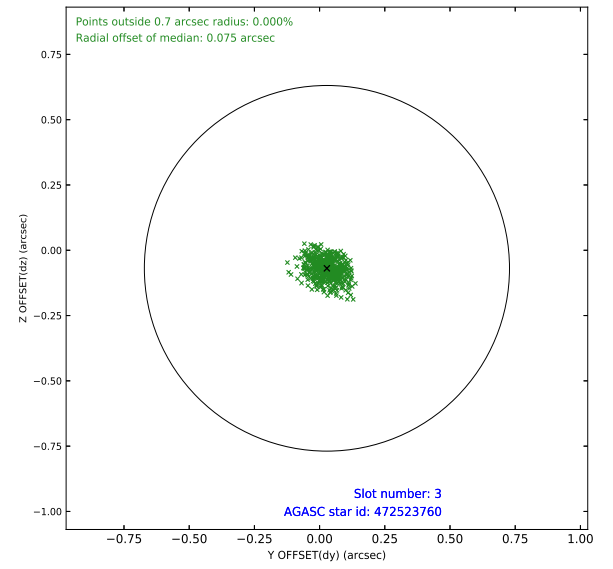
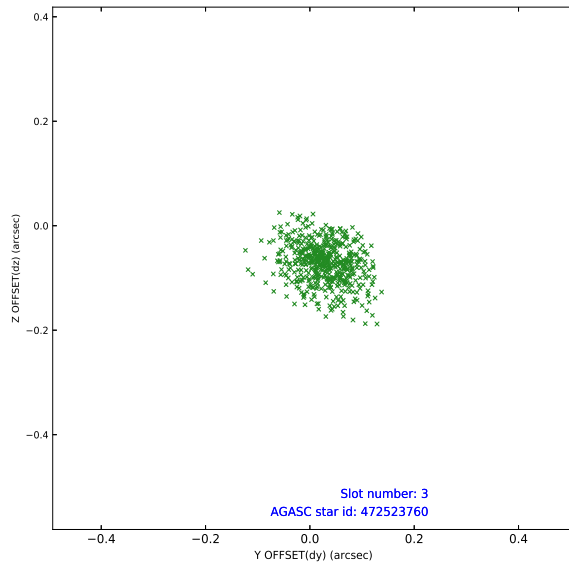


Slot Statistics

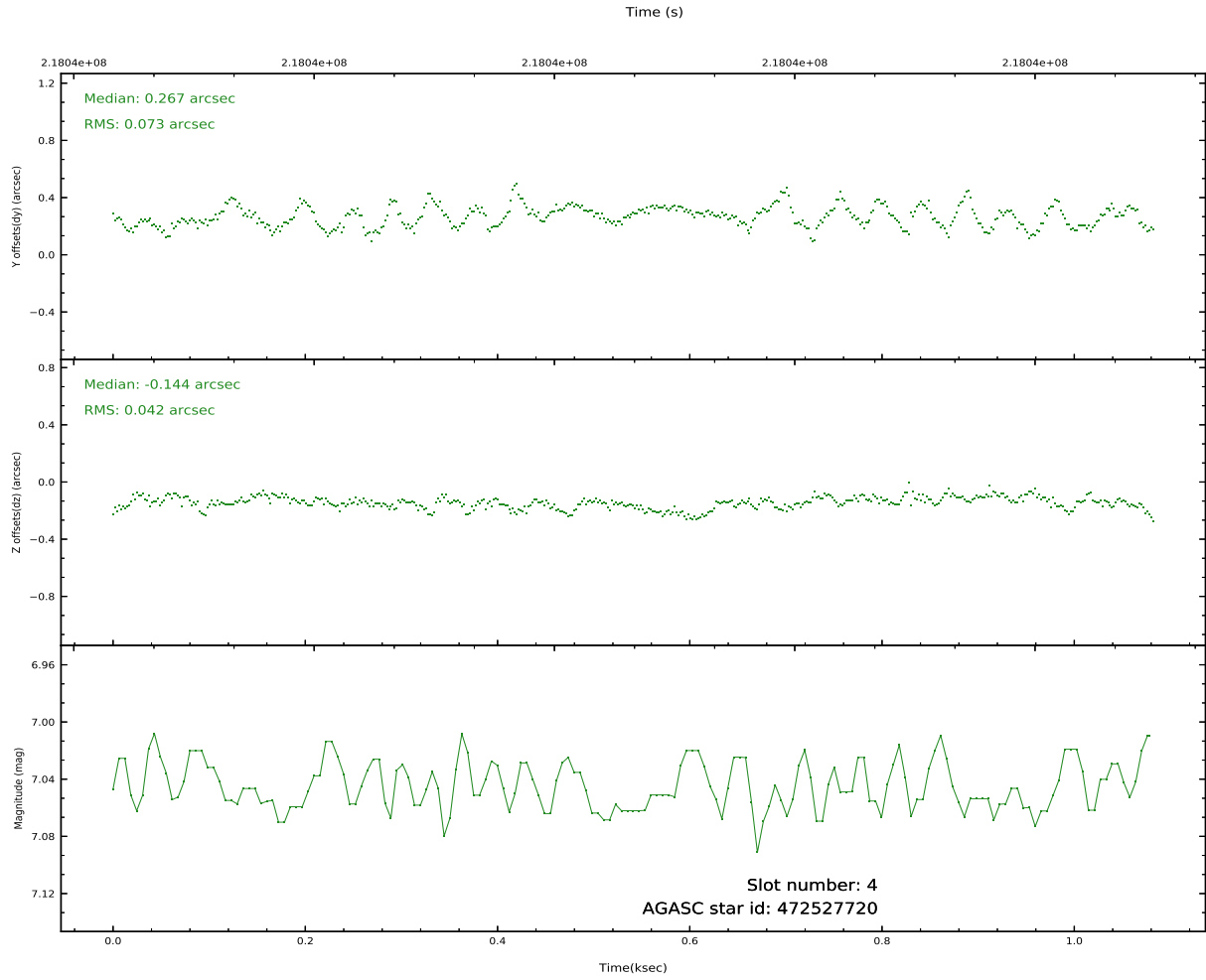
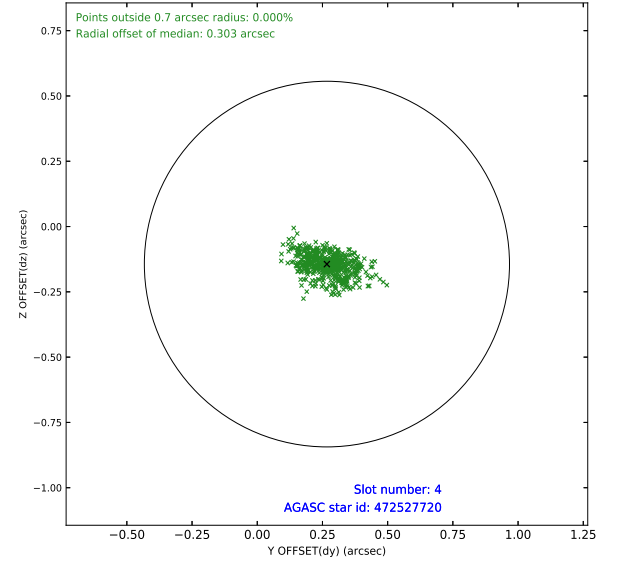
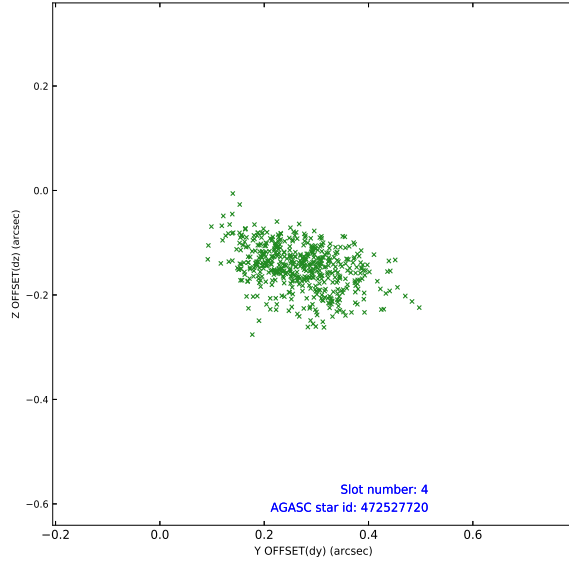
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|-----------|------|-------|----------|--------|--------|-------|-------|------------|-----------|----------|-------|
| 0 | FID | | HRC-S-1 | 7.03 | 264 | 1.000 | 0.121 | -0.173 | 0.007 | 0.010 | 0.000000 | 0.000000 | -1162.01 | -457 |
| 1 | FID | | HRC-S-2 | 7.03 | 264 | 1.000 | 0.188 | -0.122 | 0.005 | 0.009 | 0.000000 | 0.000000 | 1233.34 | -452 |
| 2 | FID | | HRC-S-3 | 7.04 | 264 | 1.000 | 0.080 | -0.008 | 0.007 | 0.013 | 0.000000 | 0.000000 | -1160.11 | 570 |
| 3 | GUIDE | used | 472523760 | 8.25 | 529 | 1.000 | 0.028 | -0.069 | 0.064 | 0.103 | 331.645363 | 45.403260 | 1445.27 | -1443 |
| 4 | GUIDE | used | 472527720 | 7.05 | 529 | 1.000 | 0.267 | -0.144 | 0.090 | 0.152 | 331.460205 | 45.112509 | 2306.21 | -2207 |
| 5 | GUIDE | used | 472535400 | 8.78 | 529 | 1.000 | -0.286 | -0.109 | 0.080 | 0.129 | 331.047001 | 46.353888 | -2266.23 | -1842 |
| 6 | GUIDE | used | 472655152 | 9.43 | 528 | 1.000 | 0.010 | 0.164 | 0.097 | 0.165 | 332.504239 | 45.862991 | 493.61 | 1106 |
| 7 | GUIDE | used | 472659832 | 9.46 | 528 | 1.000 | -0.020 | 0.162 | 0.106 | 0.168 | 332.780399 | 46.098139 | -114.07 | 2016 |

2.4 Star Slots

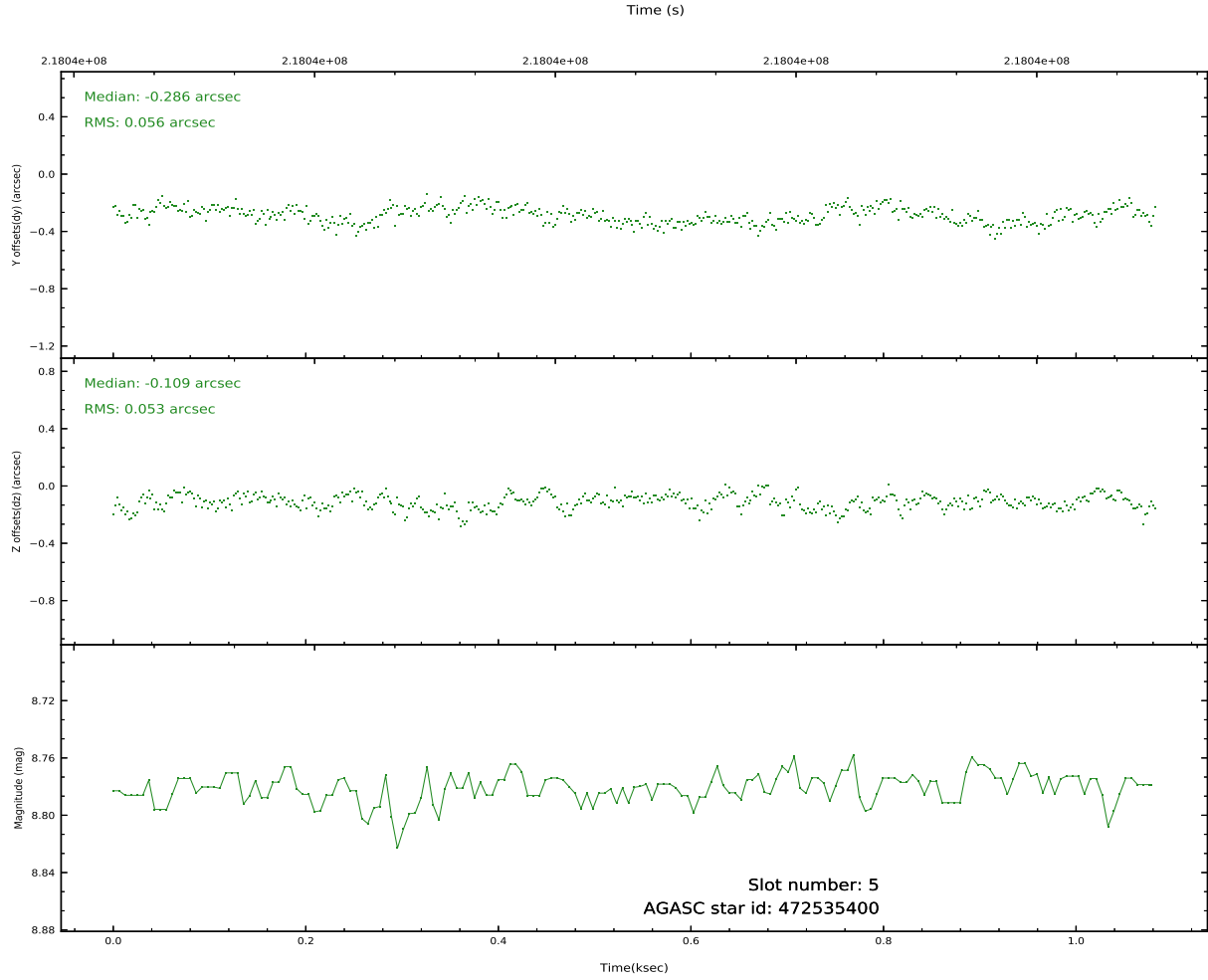
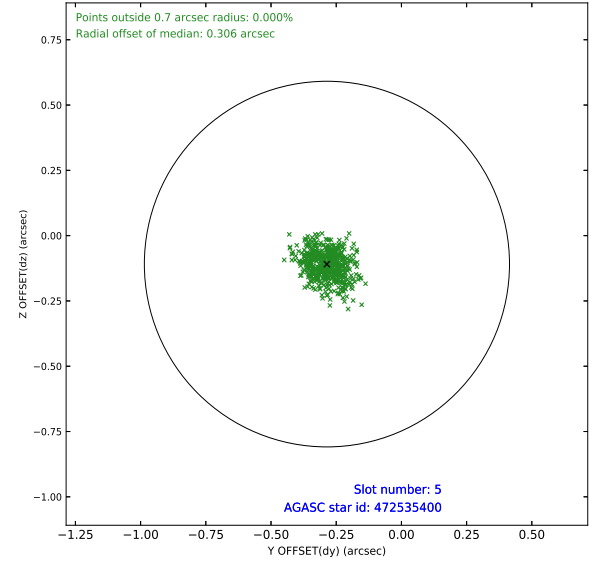
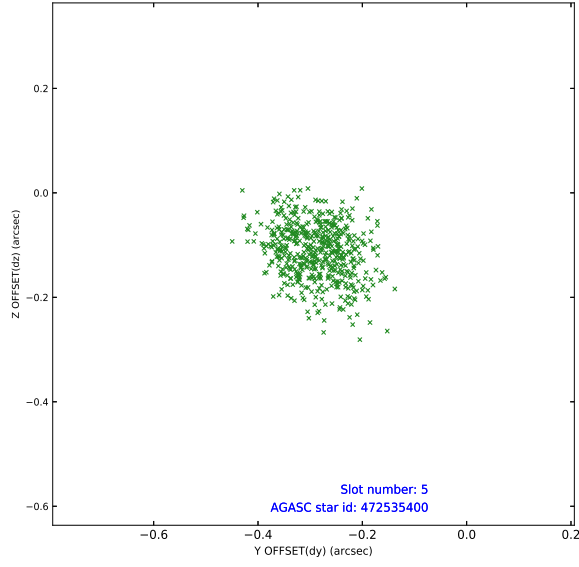
2.4.1 Slot 3



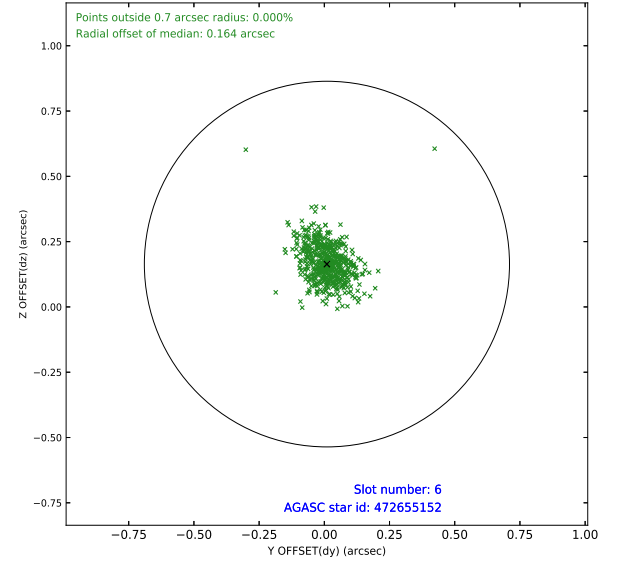
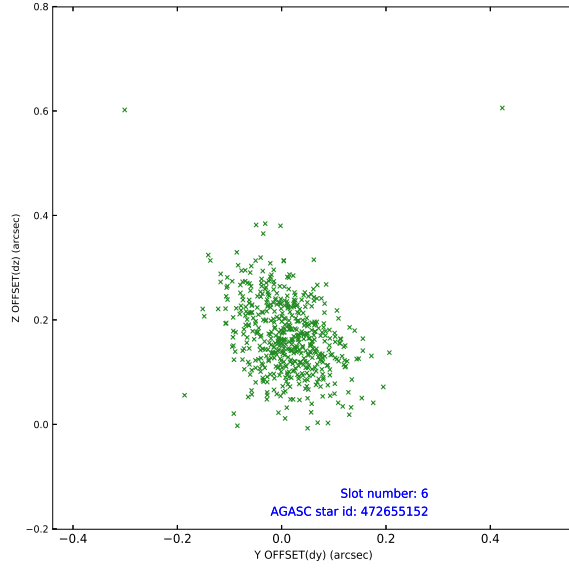
2.4.2 Slot 4



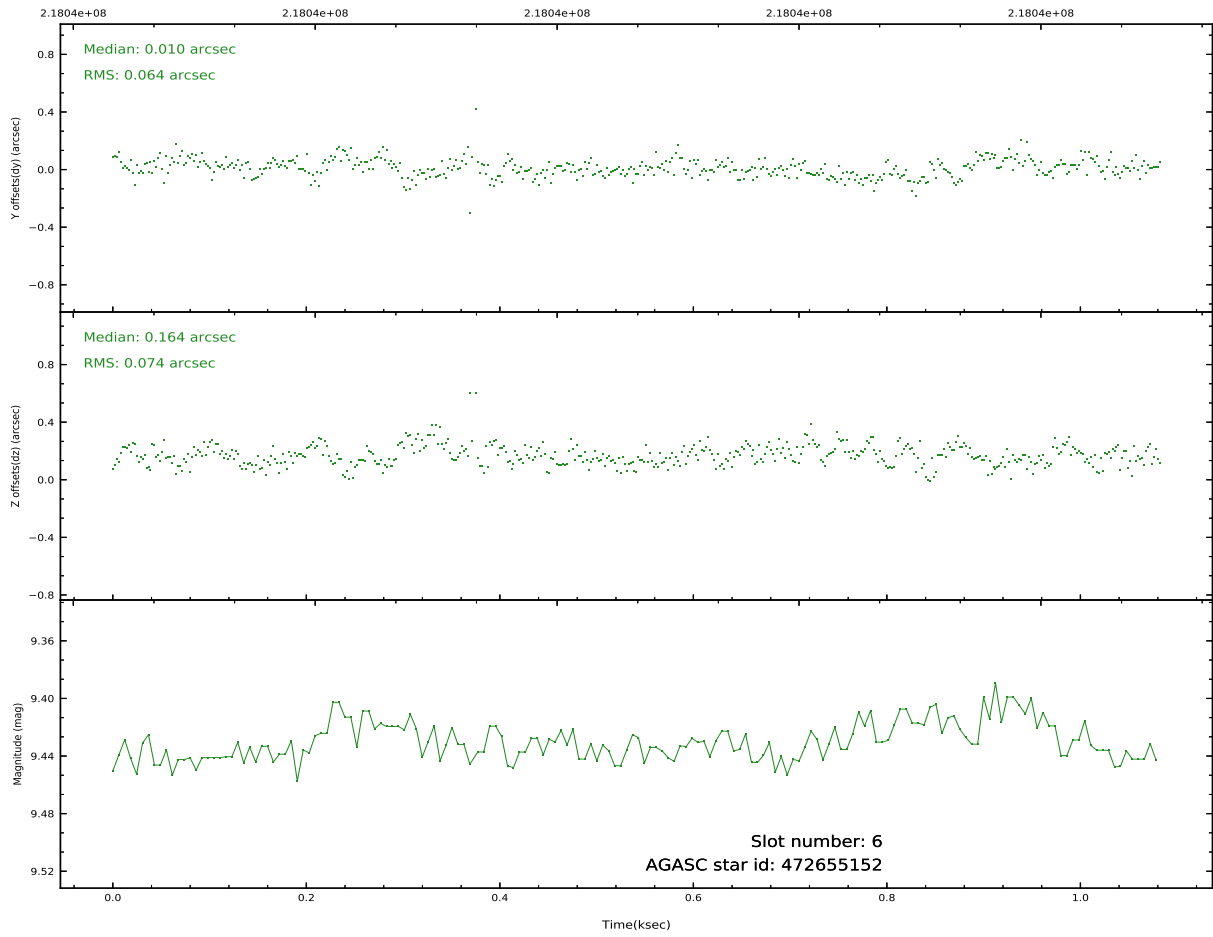
2.4.3 Slot 5



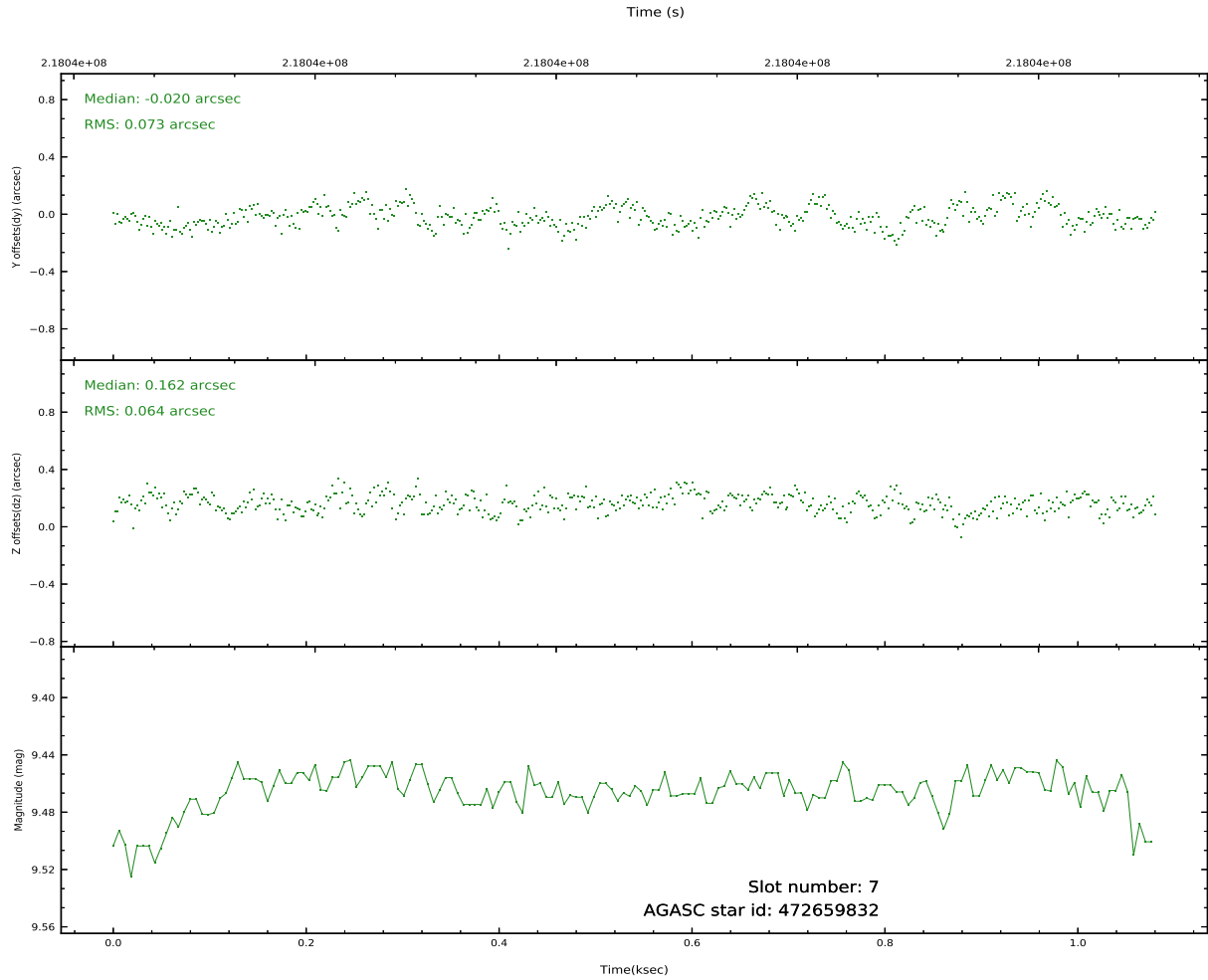
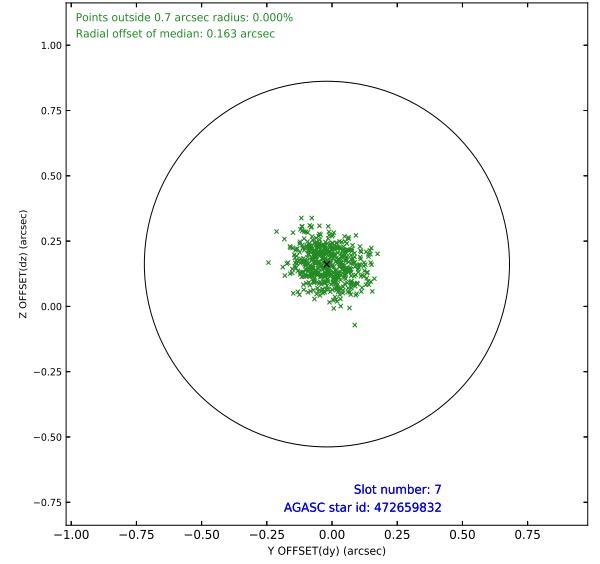
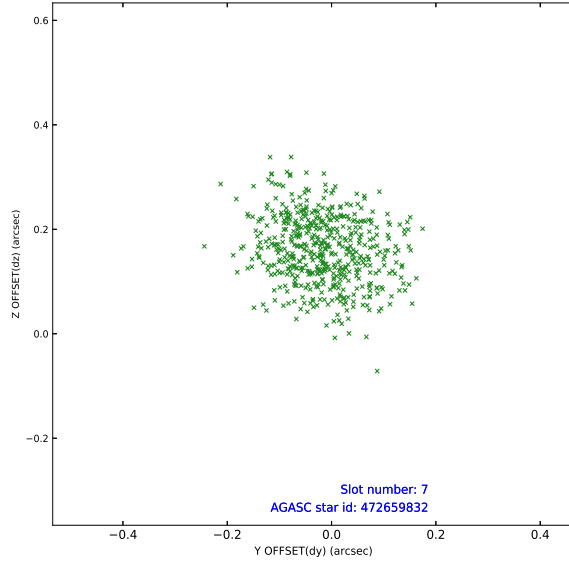
2.4.4 Slot 6



Time (s)

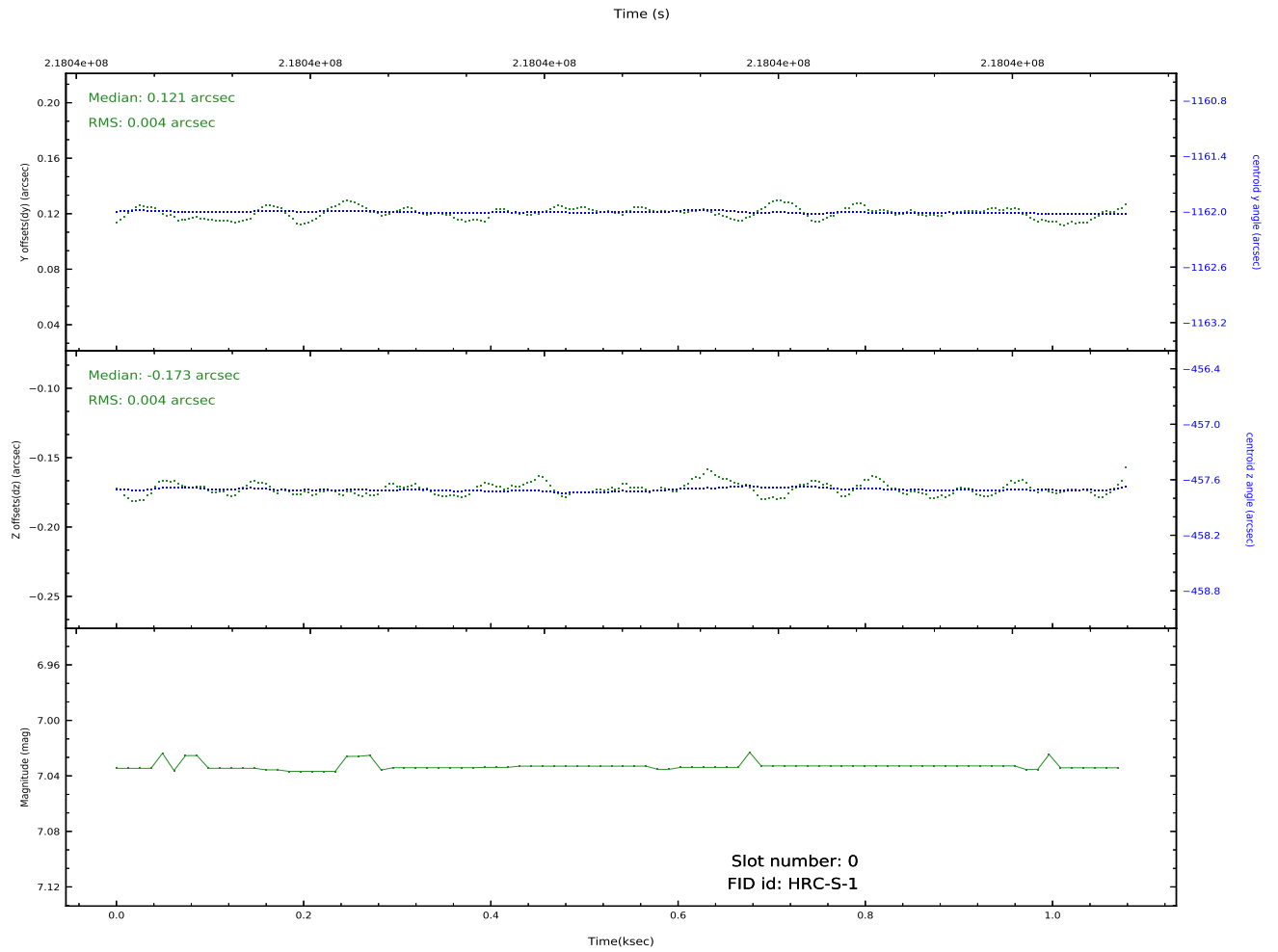
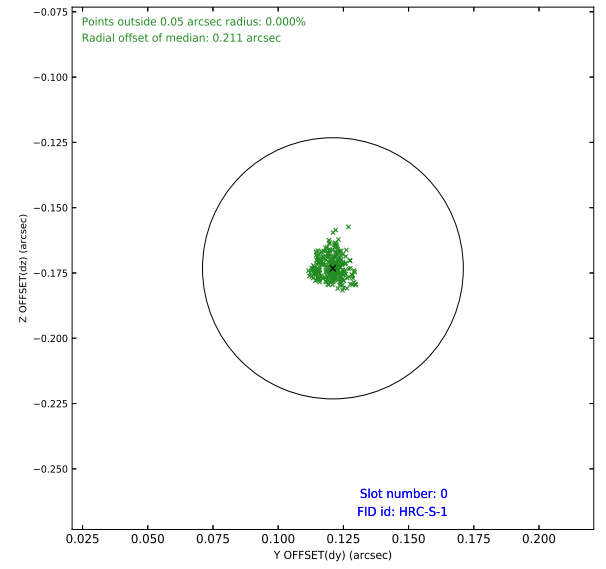
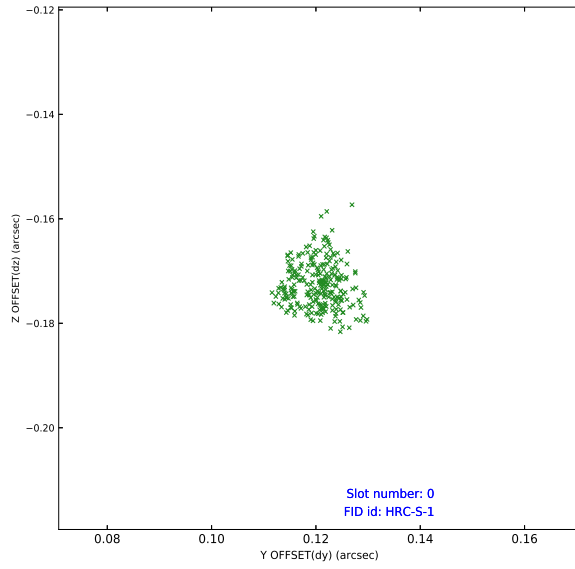


2.4.5 Slot 7

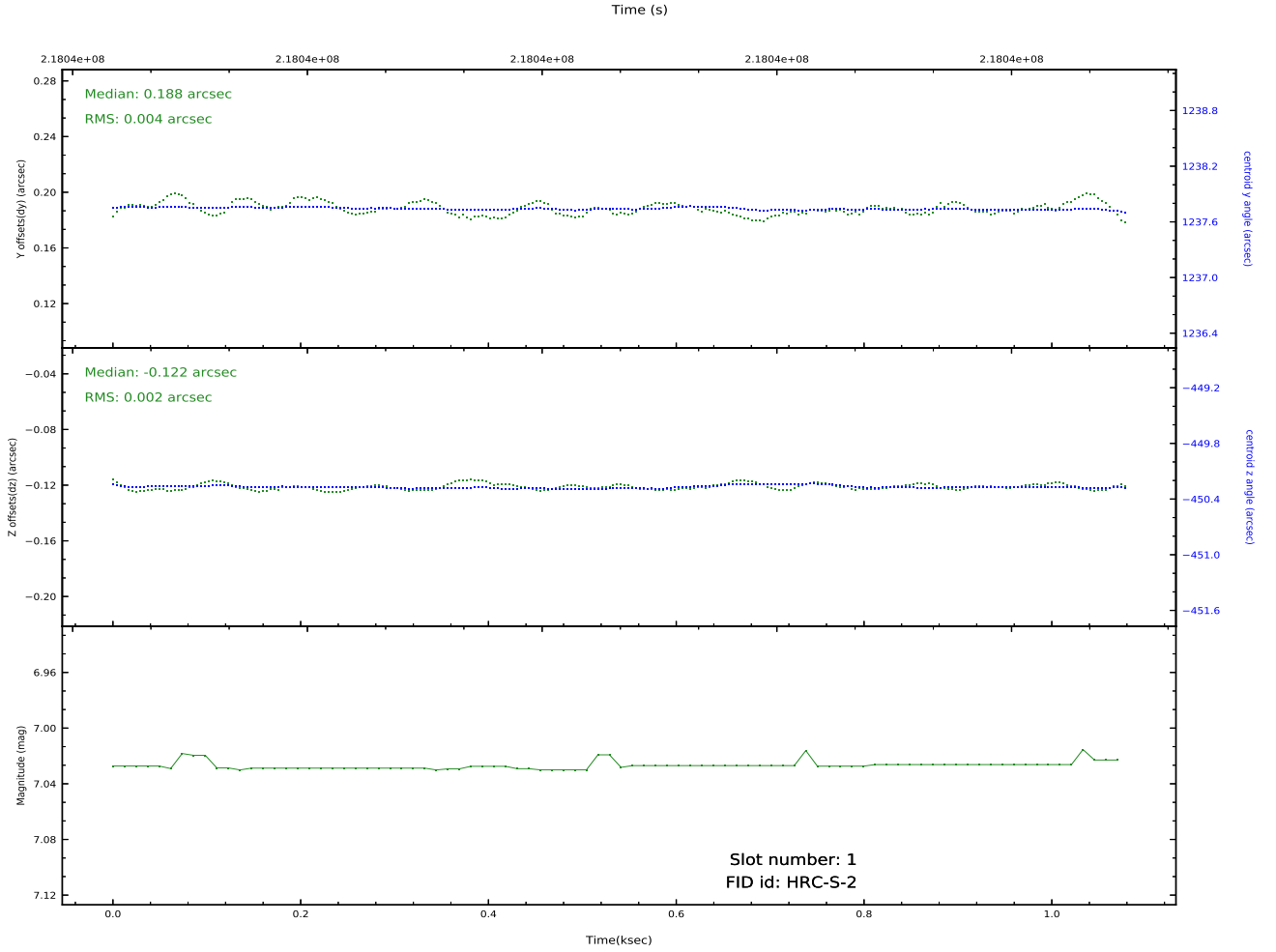
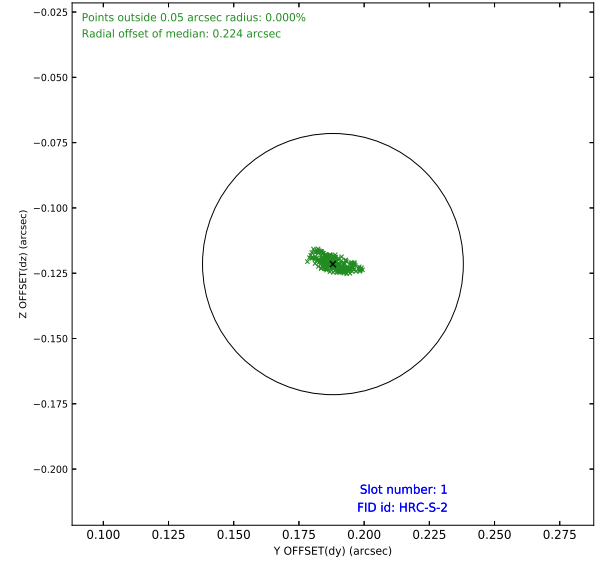
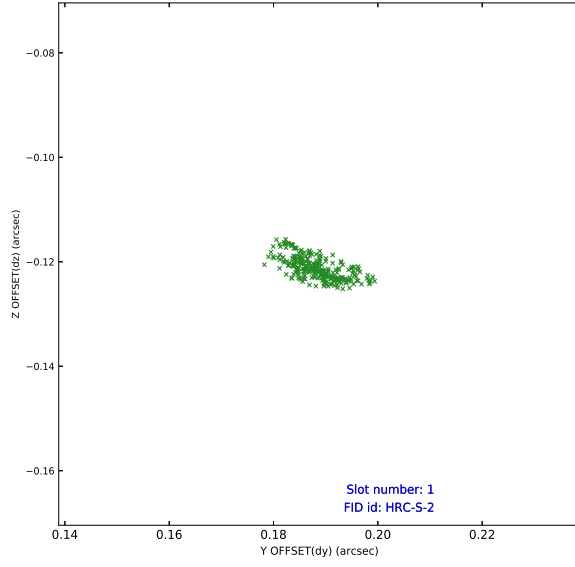


2.5 FID Slots

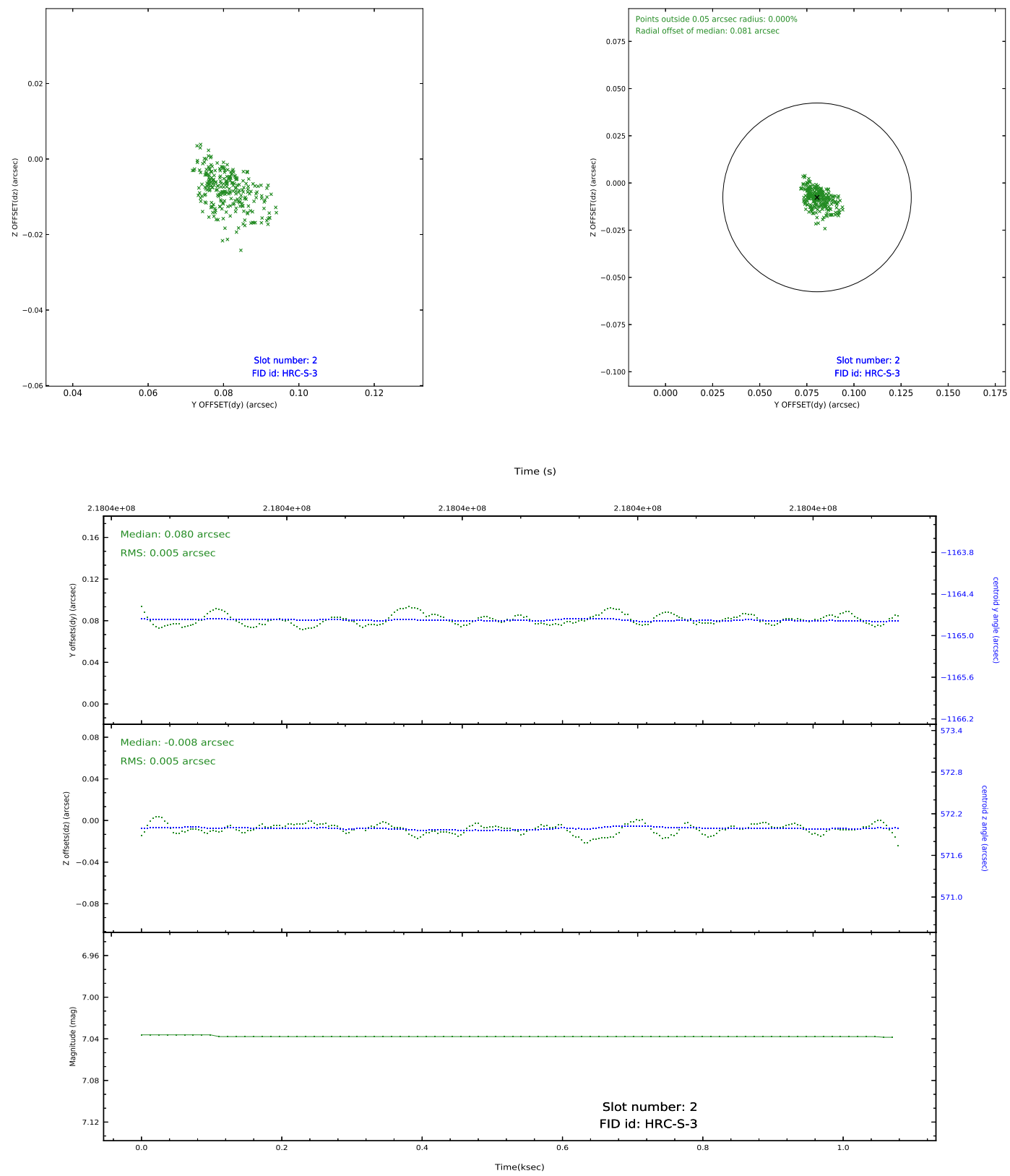
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|---------------|
| V&V Scientist | Beth Sundheim |
| V&V Date (YYYY-MM-DD) | 2020.10.05 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 1.052675 |

A.2 Comments

Due to corruption of the secondary science data during this observation, some instrument parameters have bogus values. The data in this observation have been inspected by the HRC team. PLEASE NOTE: All the event data in this observation are good. The short gaps in the GTI intervals can be eliminated (i.e., use the first START and last STOP). THE DTF values during this observation can be estimated by dropping all the low values and averaging the remaining values near 1.0.