

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 20864 - L2 Version 2
Chandra X-Ray Center

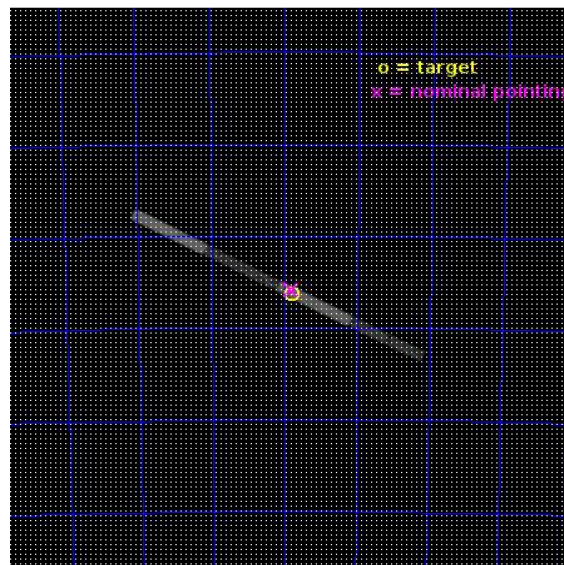
L2 Processing Date : Nov 29 2017

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1 Front

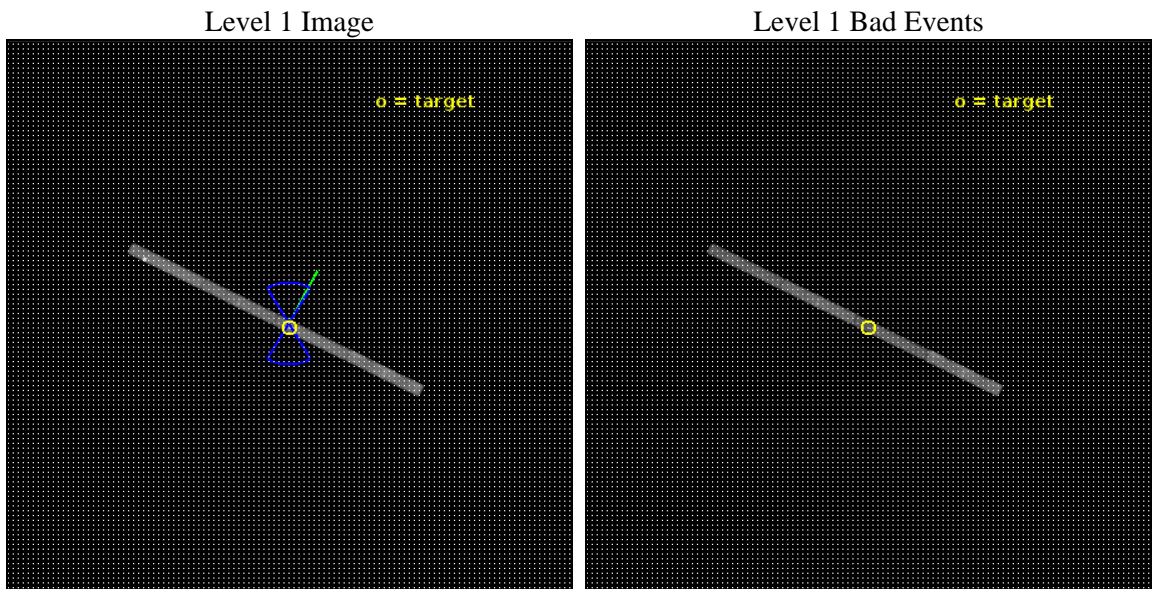
| | | |
|----------|----------------------------------------------------------------|---------------------------------------------|
| seq_num | 703441 | Sequence number |
| obs_id | 20864 | Observation id |
| title | The Physics of the Jets of Powerful Radio Galaxies and Quasars | Pro |
| observer | Eric Perlman | Principal investigator |
| object | PKS 0637-75 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 98.94375 | Observer's specified target RA [deg] |
| dec_targ | -75.271306 | Observer's specified target Dec [deg] |
| ra_nom | 98.952563364289 | Nominal RA [deg] |
| dec_nom | -75.264619151014 | Nominal Dec [deg] |
| roll_nom | 27.165134155304 | Nominal Roll [deg] |
| revision | 2 | Processing version of data |
| ontime | 23086.800917506 | Sum of GTIs [s] |
| livetime | 21608.761622526 | Livetime [s] |
| ontime5 | 23086.800917506 | Sum of GTIs [s] |
| ontime6 | 23086.800917506 | Sum of GTIs [s] |
| ontime7 | 23086.800917506 | Sum of GTIs [s] |
| ontime8 | 23086.800917506 | Sum of GTIs [s] |
| l2events | 50729 | Number of level 2 events |



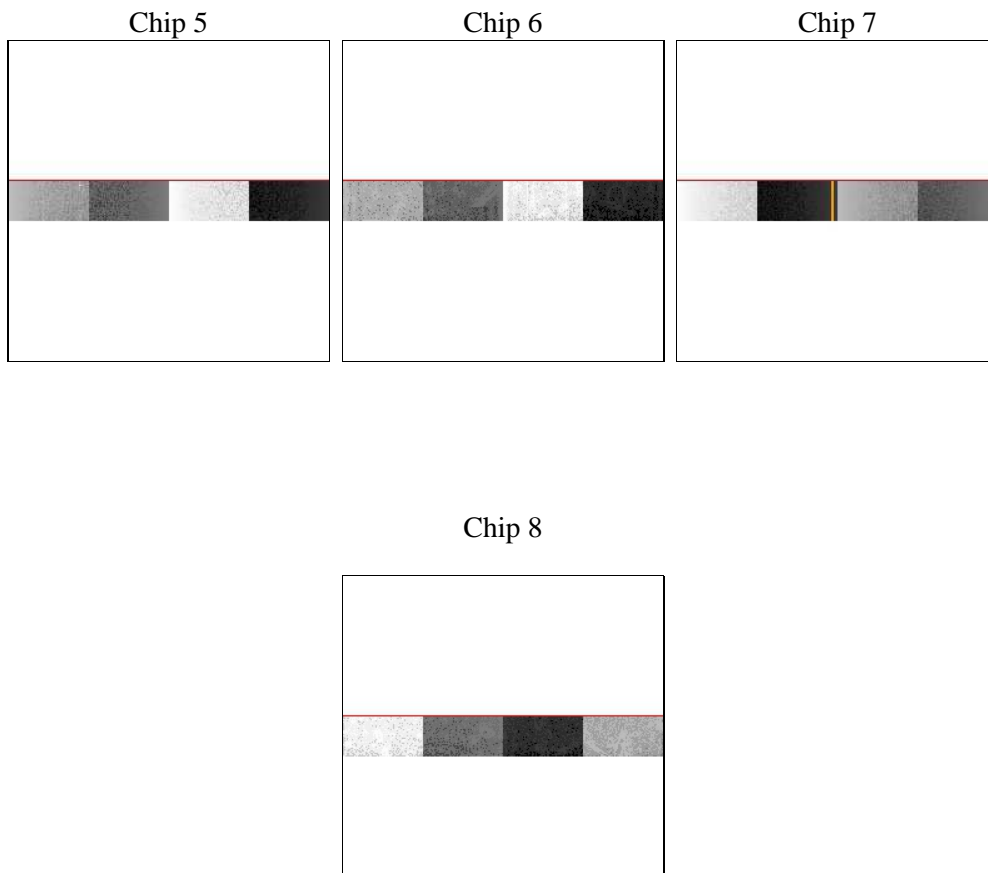
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|-----------------------------------------|
| obi_num | 0 | Obi number | sched_exp_time | 23000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.6 | Processing system revision | ontime | 23086.800917506 | Sum of GTIs [s] |
| caldbver | 4.7.6 | | ontime5 | 23086.800917506 | Sum of GTIs [s] |
| date | 2017-11-29T22:51:42 | Date and time of file creation | ontime6 | 23086.800917506 | Sum of GTIs [s] |
| revision | 2 | Processing version of data | ontime7 | 23086.800917506 | Sum of GTIs [s] |
| | | | ontime8 | 23086.800917506 | Sum of GTIs [s] |
| | | | l1events | 175135 | Number of level 1 events |

2.1.4 Events

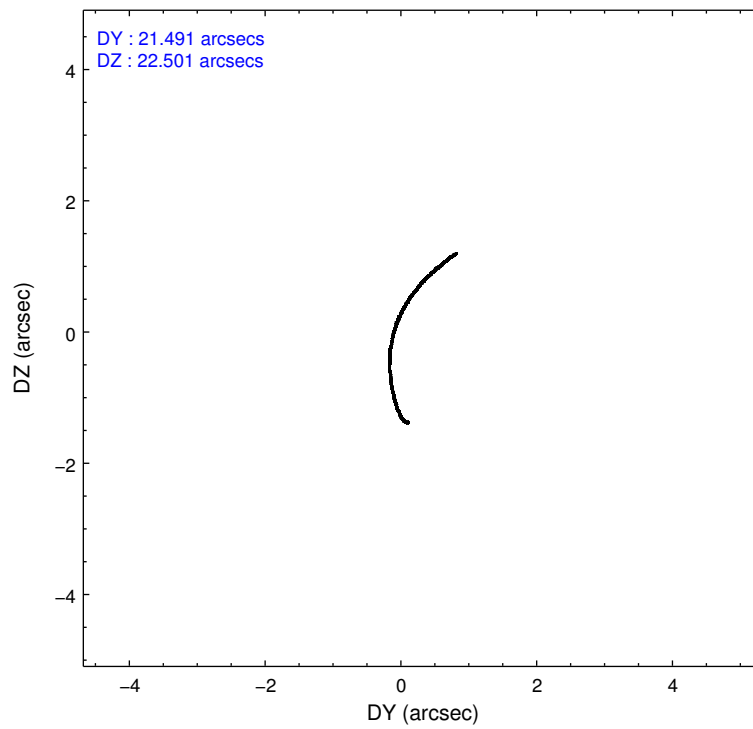
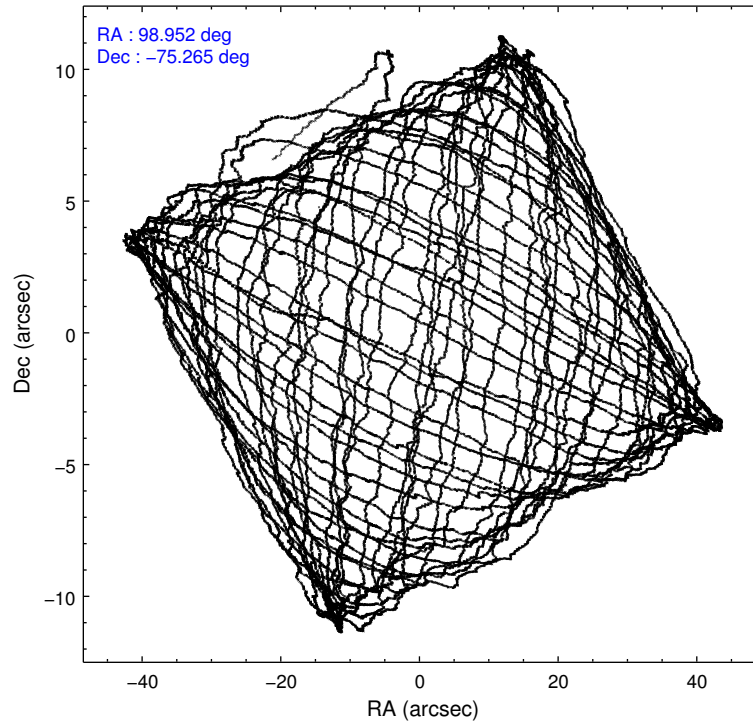
| | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|
| level 1 events | 59524 | 28127 | 46453 | 41031 |
| rejected events | 18438 | 25013 | 17600 | 31487 |
| rejected % | 30% | 88% | 37% | 76% |

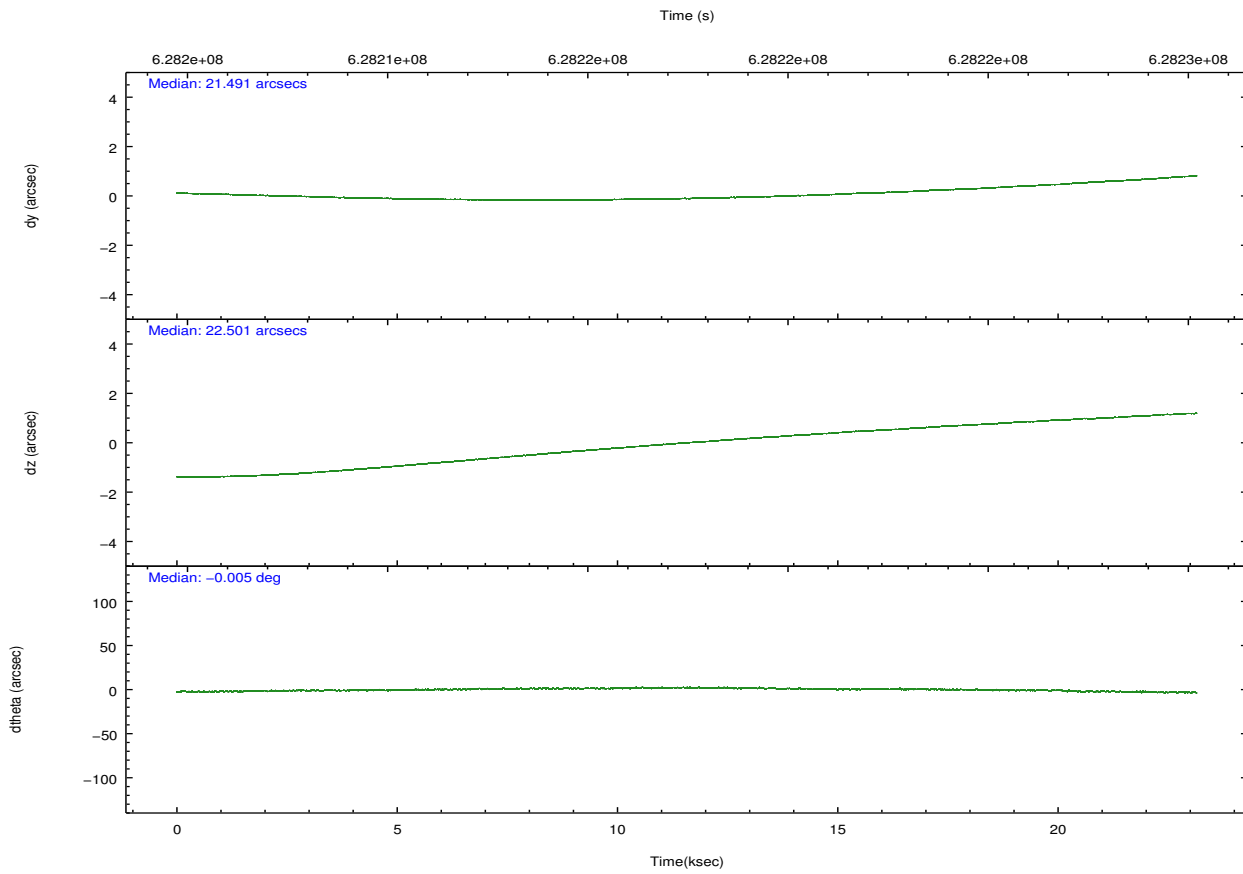
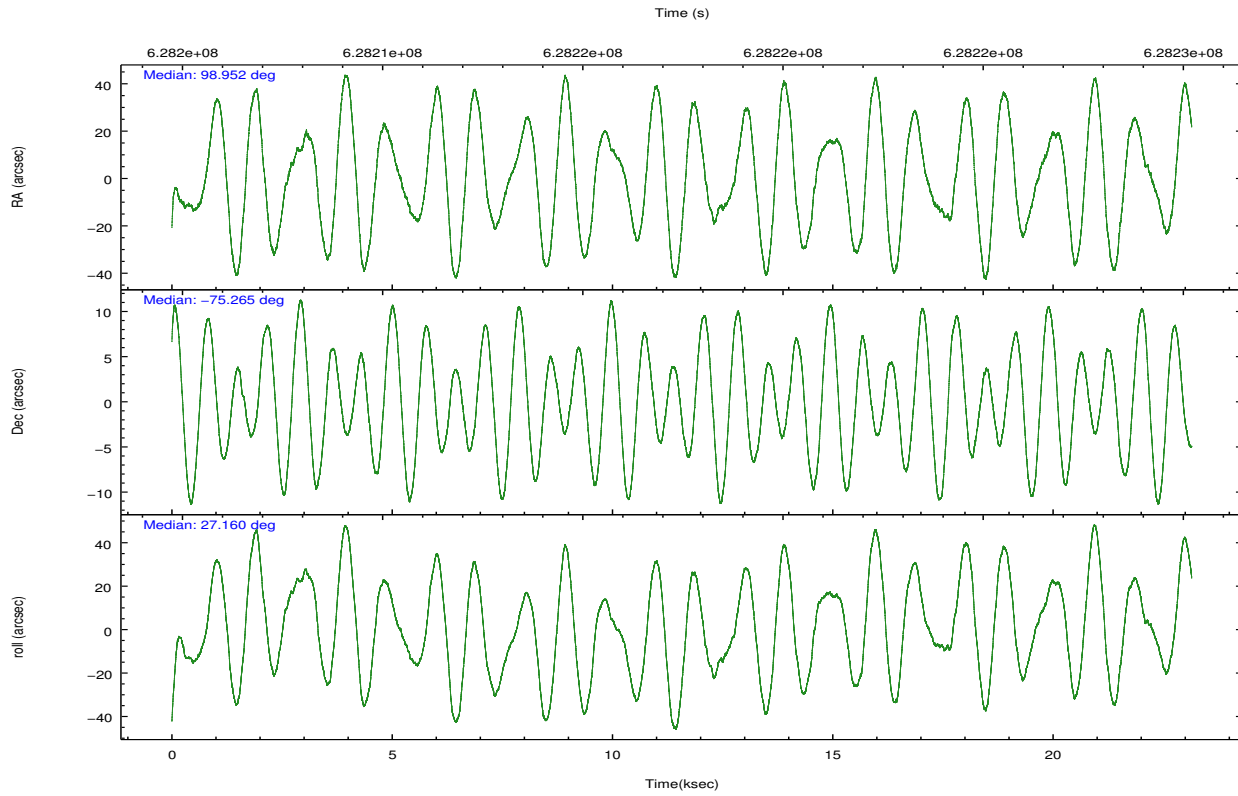
| | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|
| grade 0 events | 16099 | 870 | 4822 | 2181 |
| | 27% | 3% | 10% | 5% |
| grade 1 events | 153 | 8 | 164 | 24 |
| | 0% | 0% | 0% | 0% |
| grade 2 events | 13738 | 567 | 6644 | 2036 |
| | 23% | 2% | 14% | 4% |
| grade 3 events | 1133 | 551 | 3363 | 1072 |
| | 1% | 1% | 7% | 2% |
| grade 4 events | 1232 | 529 | 3255 | 1060 |
| | 2% | 1% | 7% | 2% |
| grade 5 events | 3154 | 1049 | 3730 | 1469 |
| | 5% | 3% | 8% | 3% |
| grade 6 events | 8887 | 597 | 10770 | 3195 |
| | 14% | 2% | 23% | 7% |
| grade 7 events | 15128 | 23956 | 13705 | 29994 |
| | 25% | 85% | 29% | 73% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|--------------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-5678 | ACIS-5678 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | 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 | 98.895158 | 98.95256336428902 | Subarray requested | CUSTOM | 1/8 |
| [deg] Pointing Dec | -75.287869 | -75.26461915101386 | Subarray start row | 449 | 449 |
| [deg] Pointing Roll | 26.953009 | 27.16513415530389 | Subarray row count | 128 | 128 |
| [deg] Roll angle | 0.000000 | 0.000000 | Alternating exposures requested | N | N |
| [deg] Roll tolerance | 30.000000 | 30.000000 | [s] Primary exposure time | 0.000000 | 0.6 |
| Roll constraint allows 180D rotation | Y | Y | | | |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | | | |
| [mm] SIM defocus | 0 | 0.001444936568705701 | | | |
| [mm] SIM translation stage pos | -190.132523 | -190.1425803651734 | | | |
| [mm] SIM translation stage offset | 0 | 0.01005778216563158 | | | |
| [s] Observation start time (MET) | 628206066.184000 | 628205018.05388 | | | |
| Observation start date | 2017-11-27T21:39:57 | 2017-11-27T21:23:38 | | | |
| [s] Observation end time (MET) | 628229066.184000 | 628229872.25534 | | | |
| Observation end date | 2017-11-28T04:03:17 | 2017-11-28T04:17:52 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect





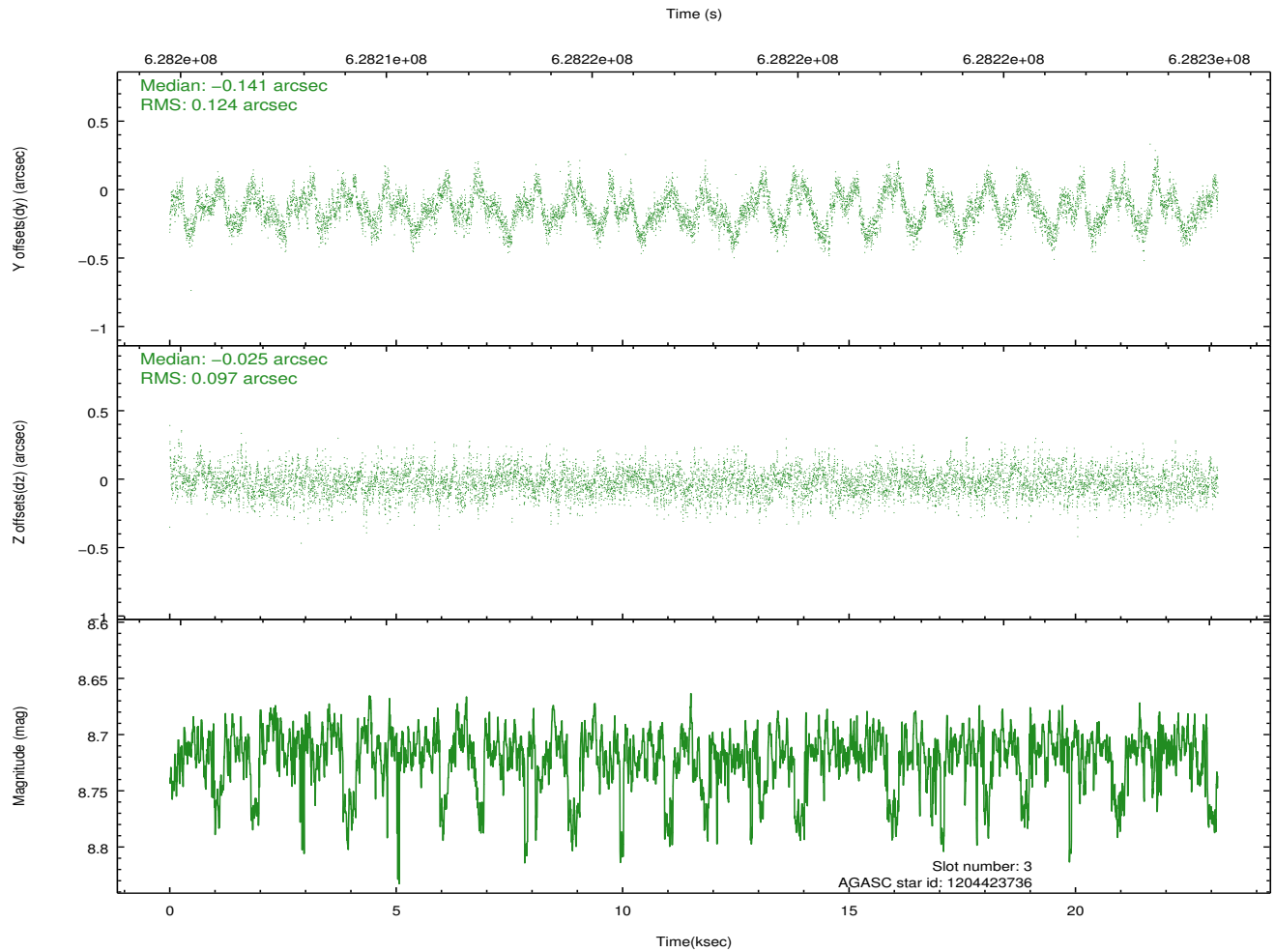
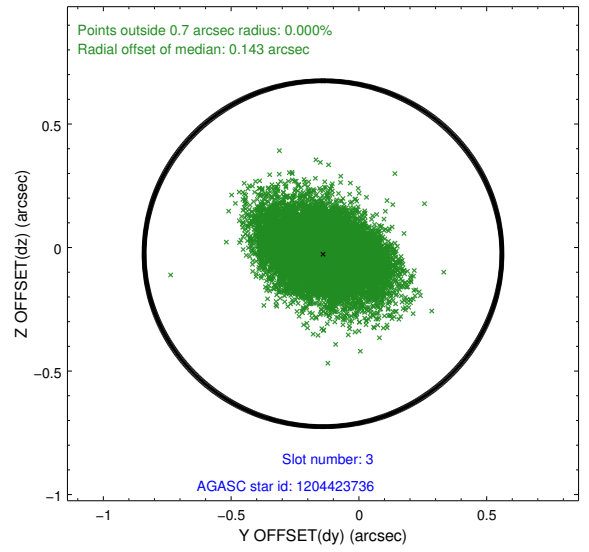
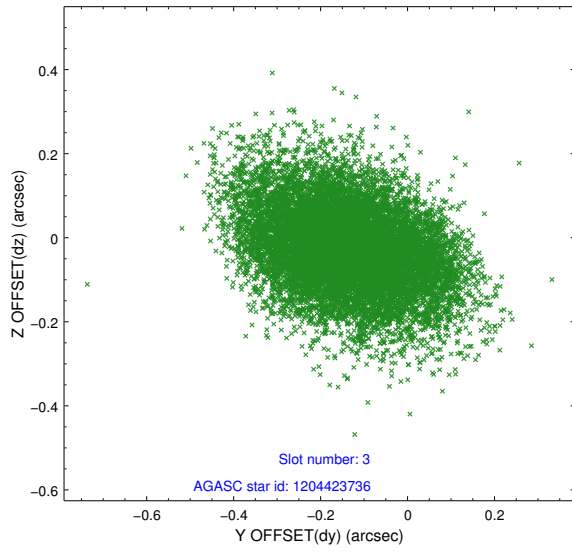
Slot Statistics

| slot | status | used | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|---------|------|------------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0 | FID | | ACIS-S-2 | 7.04 | 5645 | -0.240 | -0.153 | 0.018 | 0.030 | 0.000000 | 0.000000 | -774.95 | -1744.11 |
| 1 | FID | | ACIS-S-4 | 7.16 | 5646 | 0.527 | 0.156 | 0.009 | 0.024 | 0.000000 | 0.000000 | 2139.00 | 164.57 |
| 2 | FID | | ACIS-S-5 | 7.16 | 5645 | -0.321 | 0.006 | 0.018 | 0.028 | 0.000000 | 0.000000 | -1827.72 | 158.20 |
| 3 | GUIDE | used | 1204423736 | 8.72 | 11278 | -0.141 | -0.025 | 0.168 | 0.272 | 99.272017 | -74.796122 | 1119.12 | 1415.99 |
| 4 | GUIDE | used | 1229457576 | 9.30 | 11275 | 0.063 | 0.258 | 0.234 | 0.377 | 100.335360 | -75.489746 | 822.05 | -1250.31 |
| 5 | OMITTED | | | 0.00 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000000 | 0.000000 | 0.00 | 0.00 |
| 6 | GUIDE | used | 1229457032 | 9.15 | 11278 | 0.123 | 0.311 | 0.162 | 0.267 | 100.958417 | -75.581890 | 1154.15 | -1810.41 |
| 7 | GUIDE | used | 1204429184 | 9.62 | 11266 | -0.046 | -0.536 | 0.268 | 0.405 | 99.730987 | -74.425450 | 2125.06 | 2396.73 |

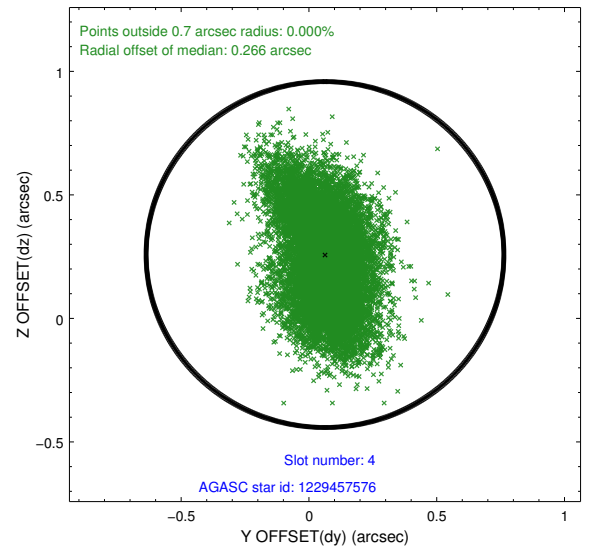
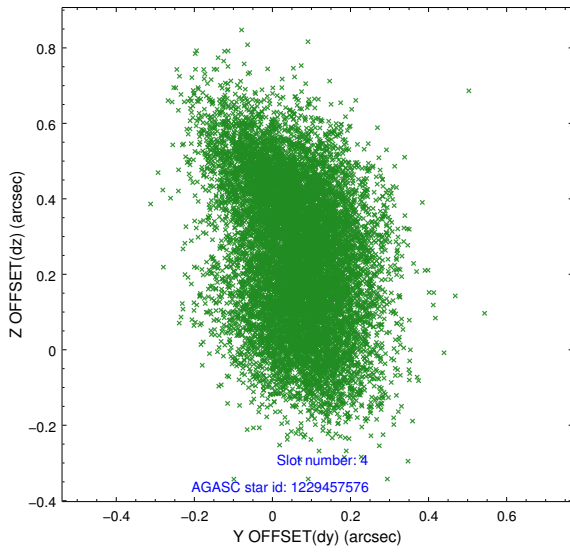
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2.4 Star Slots

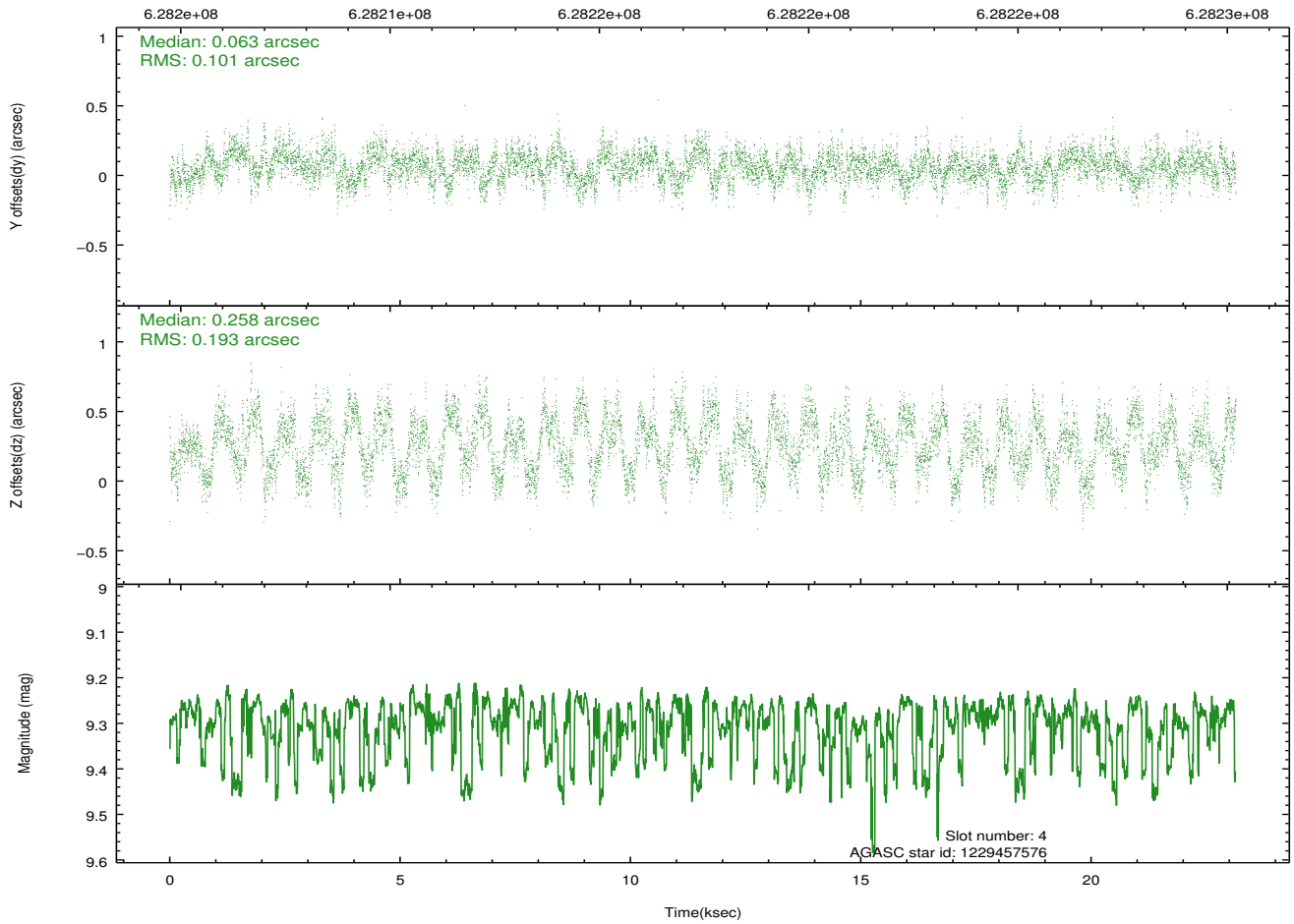
2.4.1 Slot 3



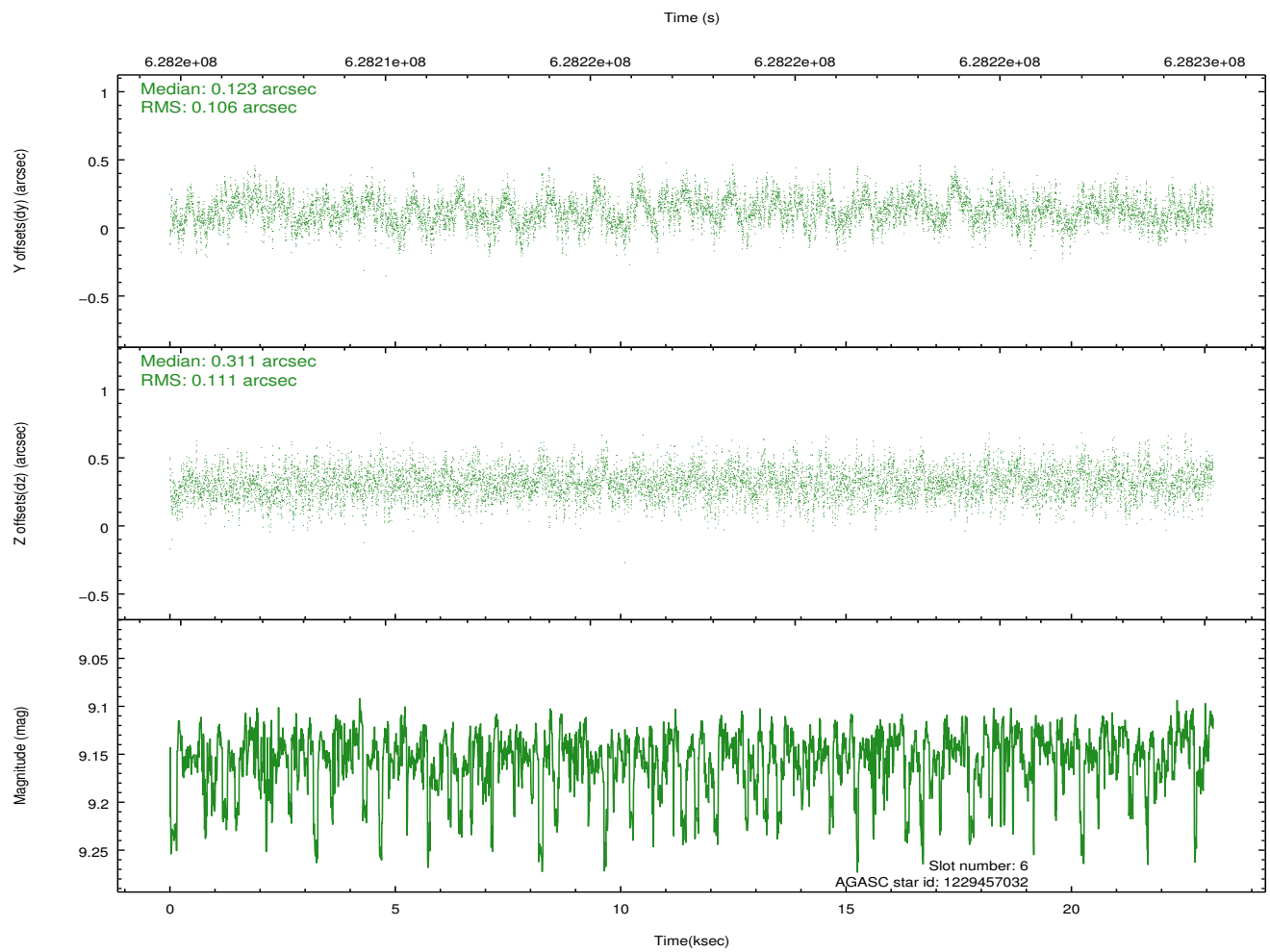
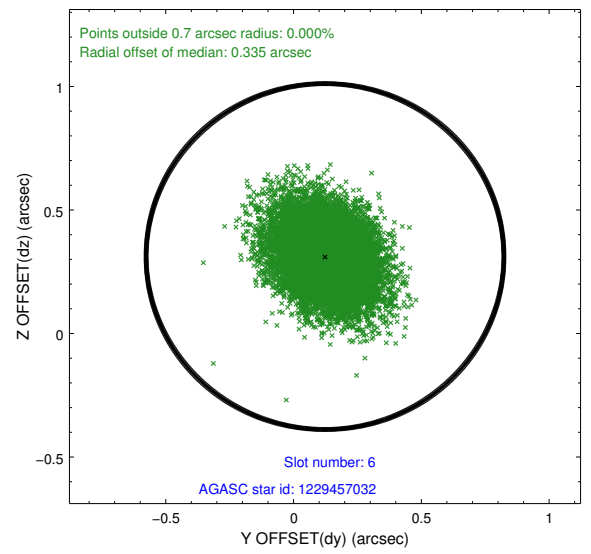
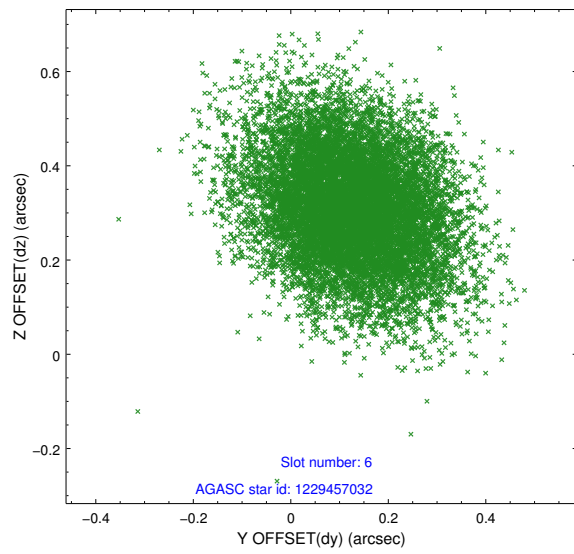
2.4.2 Slot 4



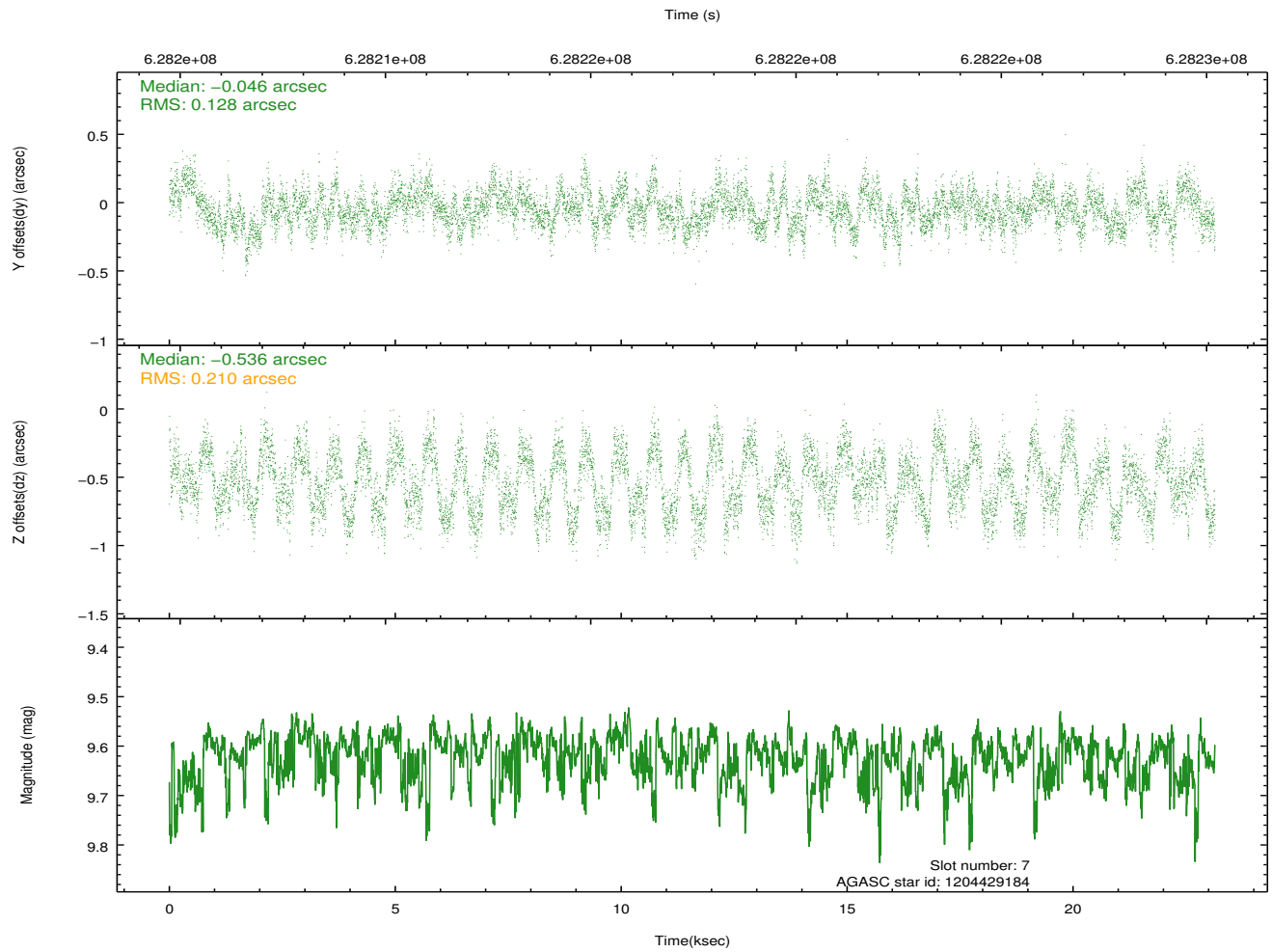
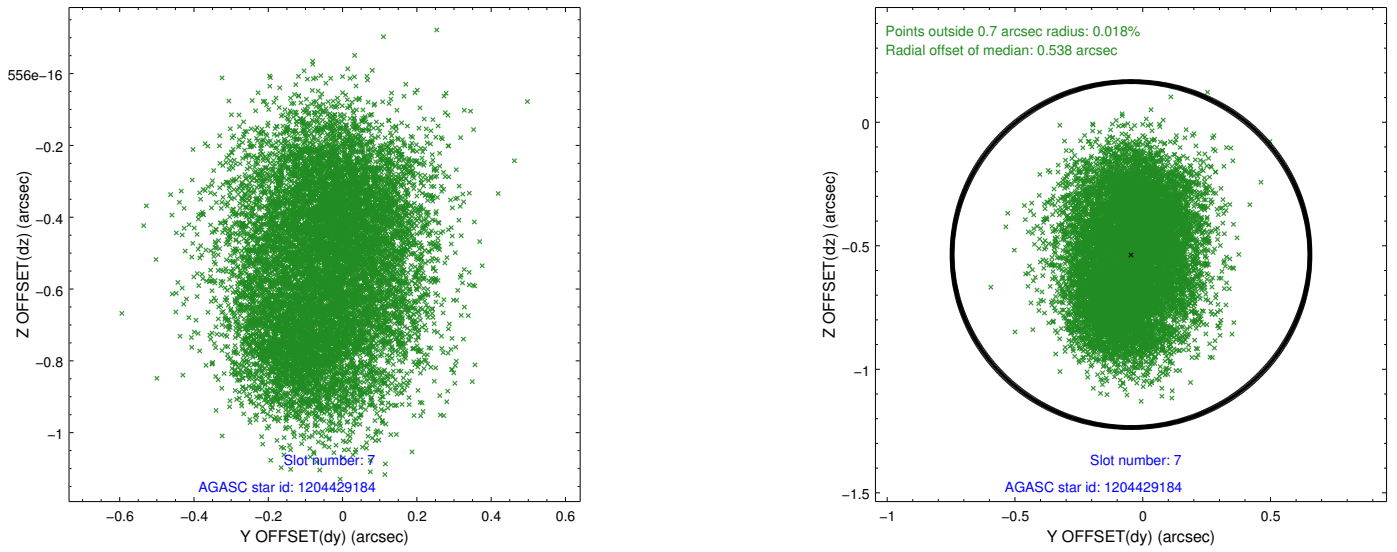
Time (s)



2.4.3 Slot 6

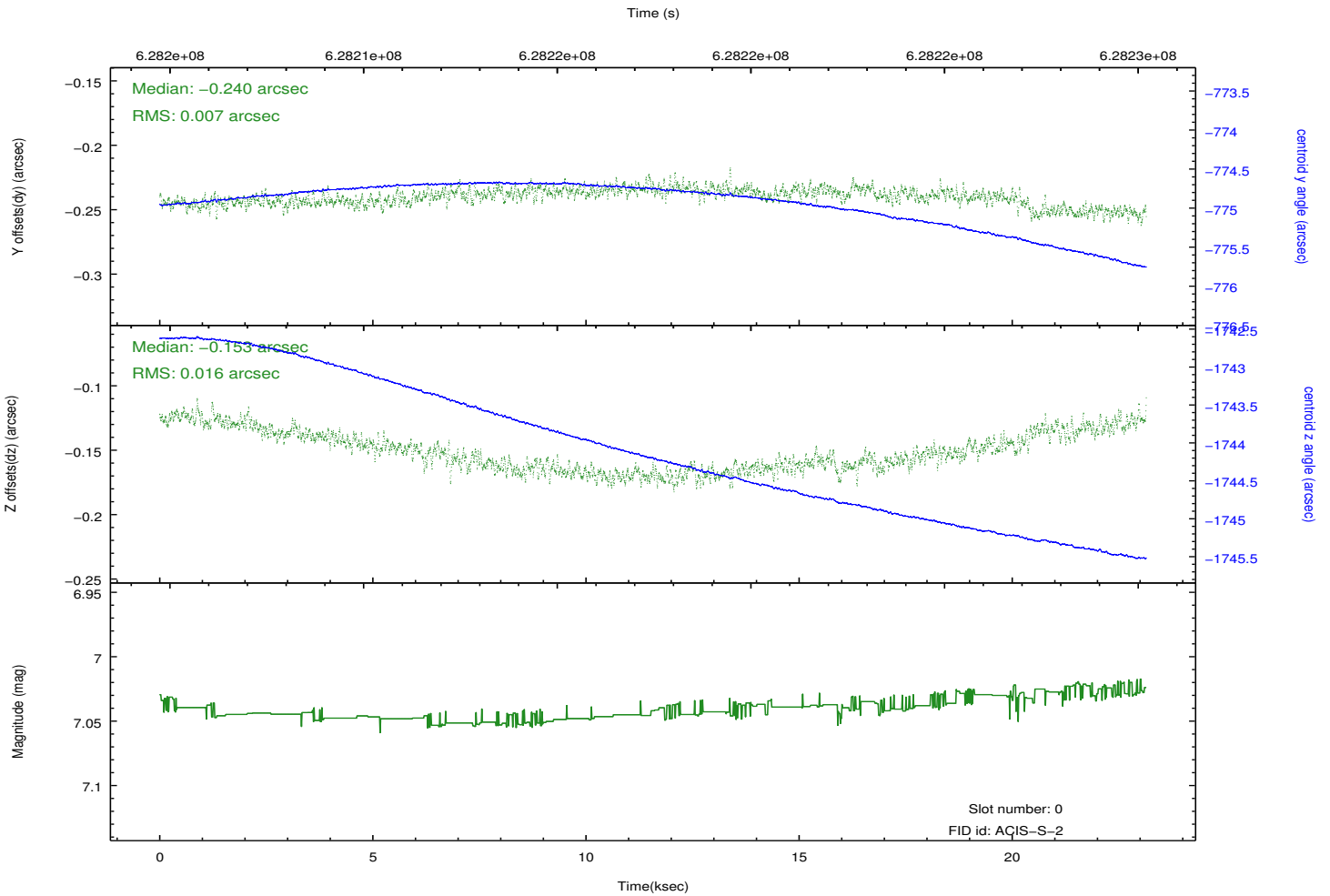
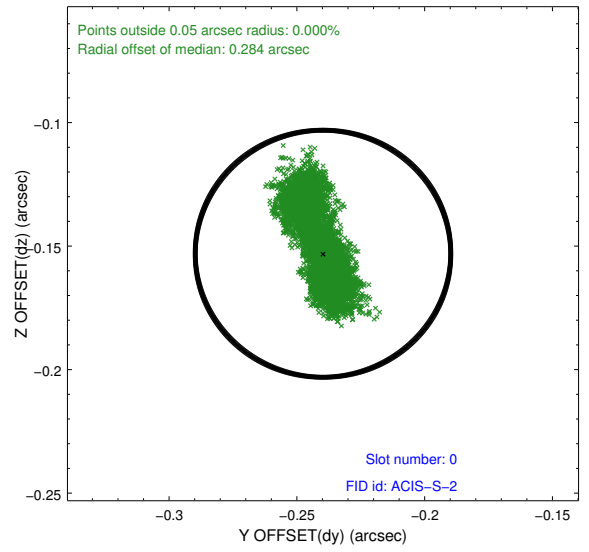
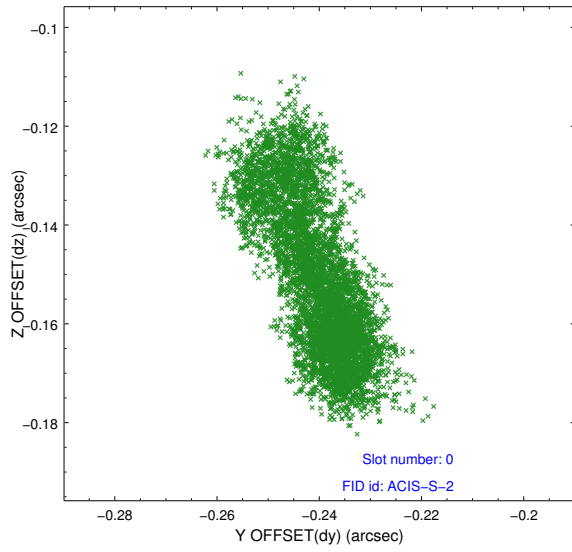


2.4.4 Slot 7

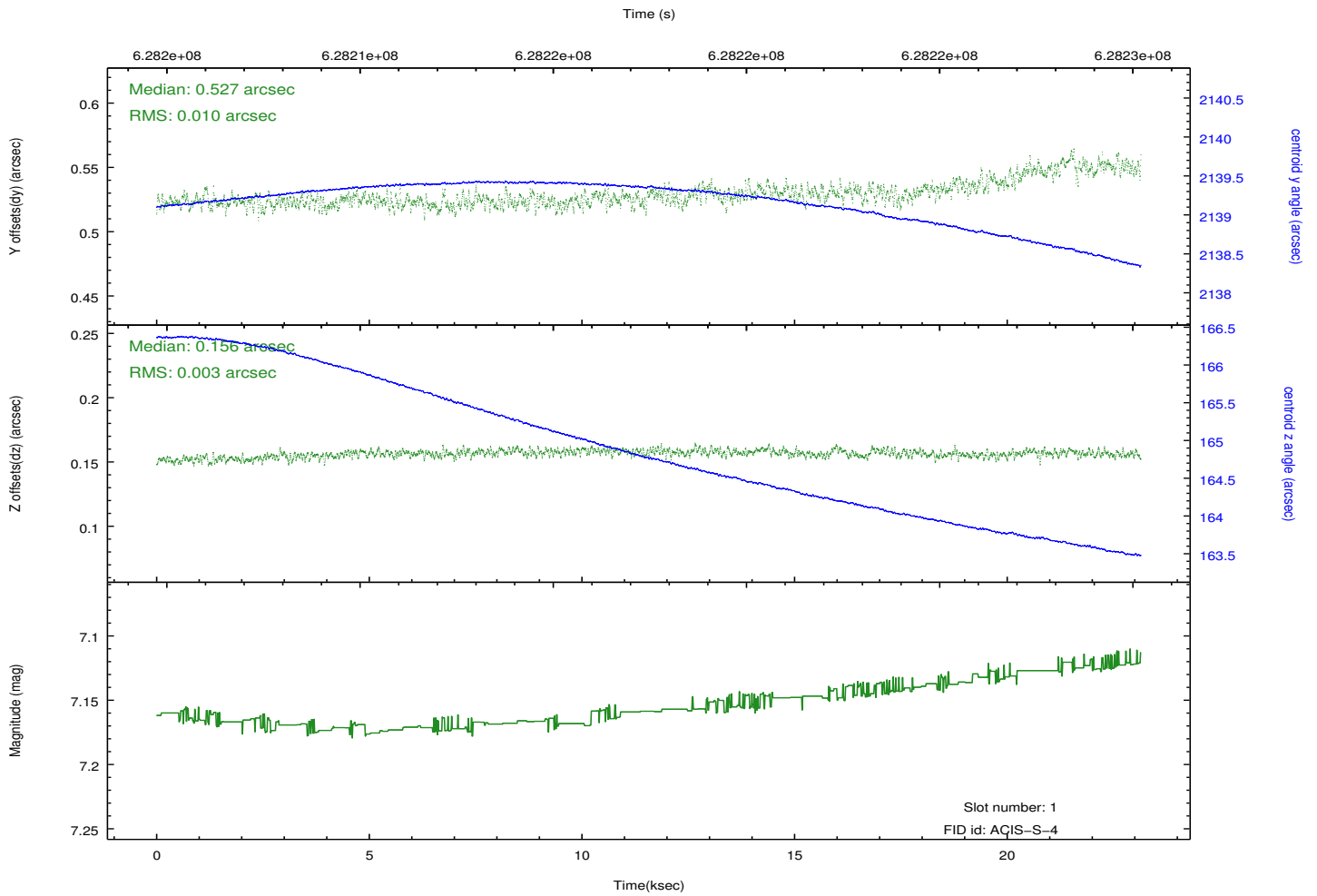
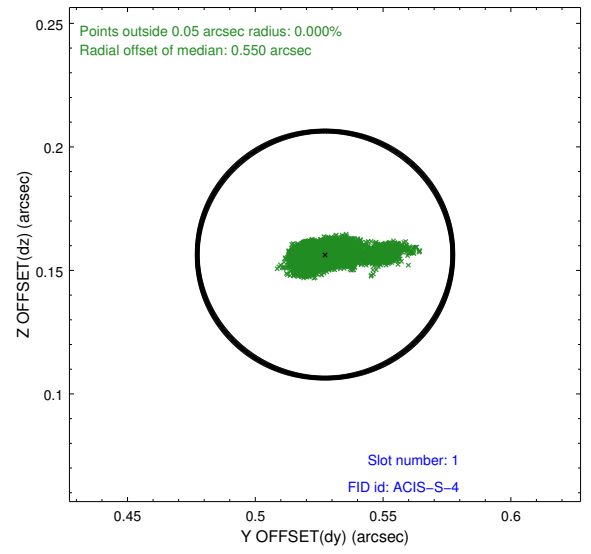
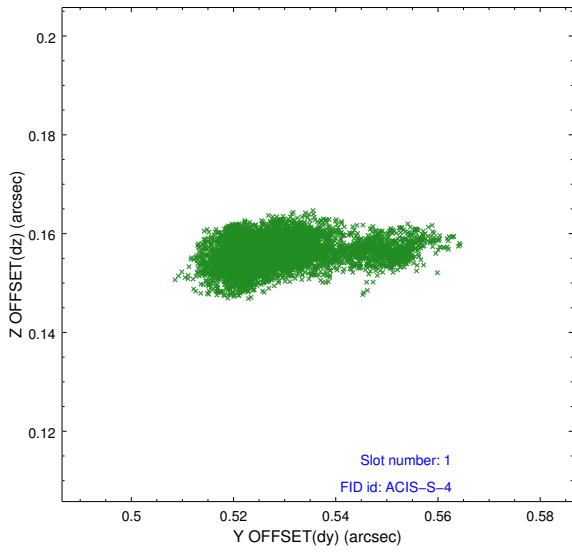


2.5 FID Slots

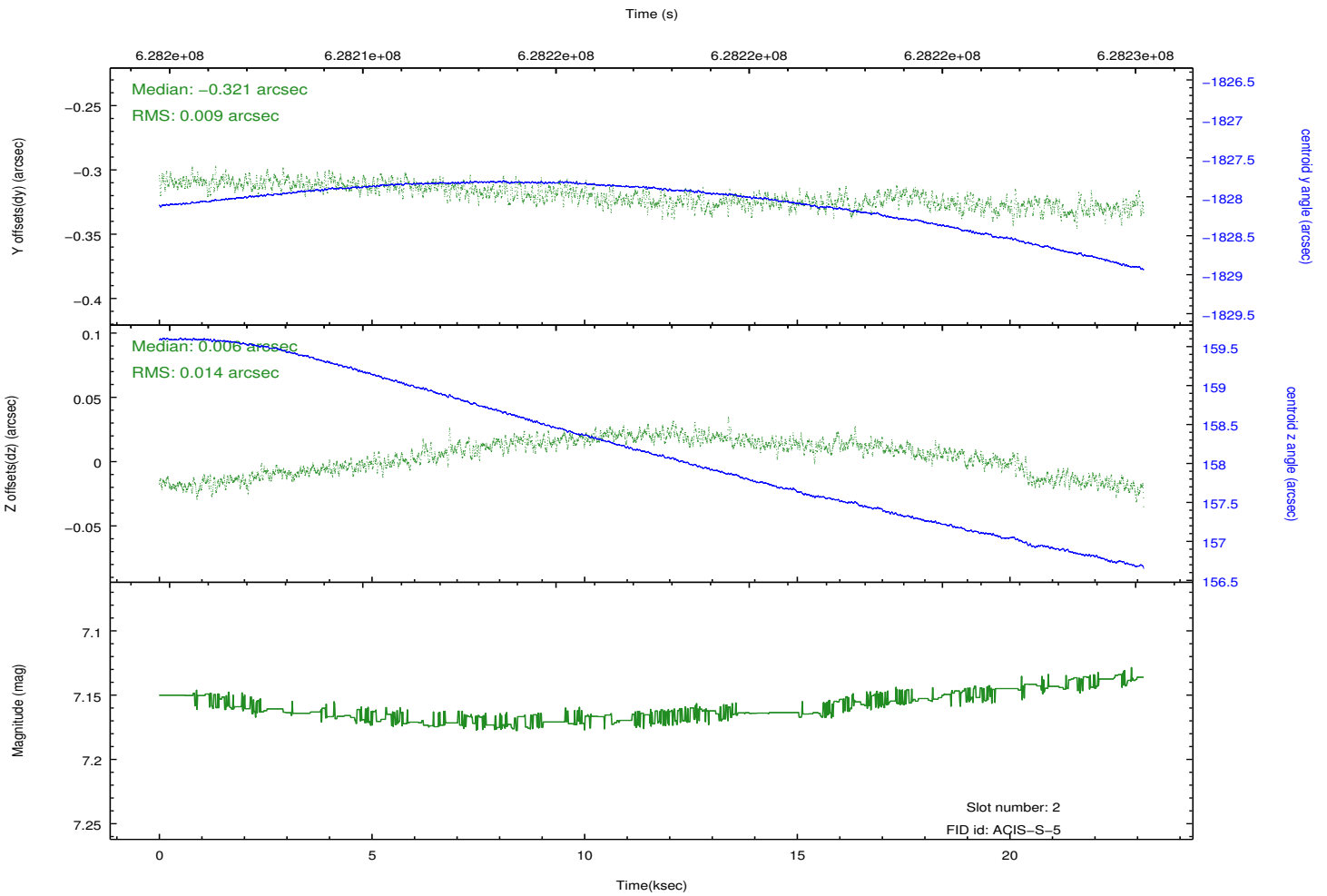
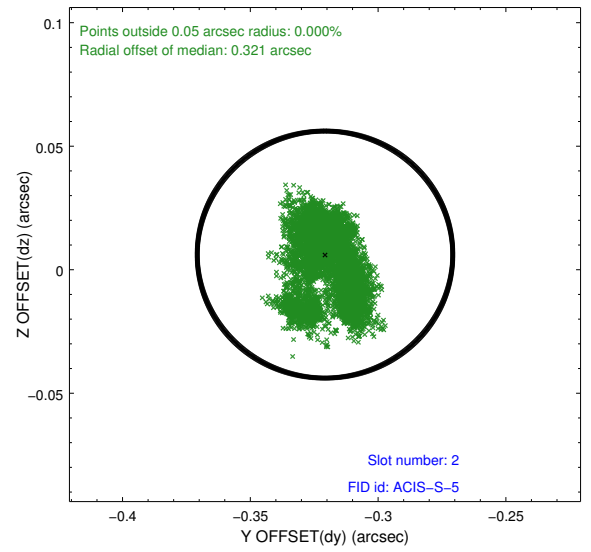
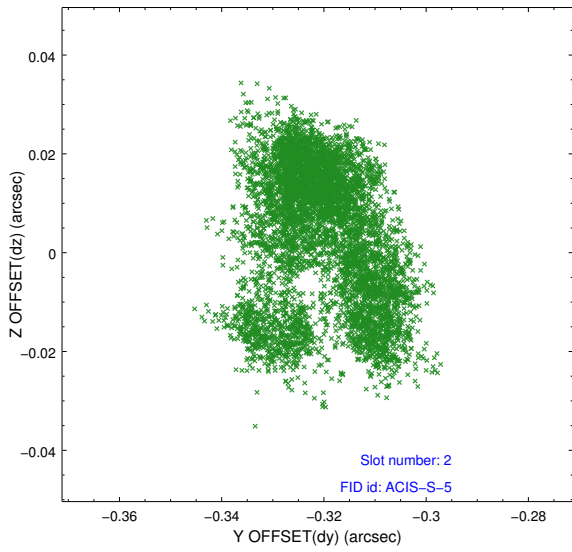
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|-----------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2017.11.30 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 23.086800917506 |

A.2 Comments

Joint Proposal: CX0-HST. Roll constraint met.

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The guide star in slot 5 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.