

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 1029 - L2 Version 4
Chandra X-Ray Center

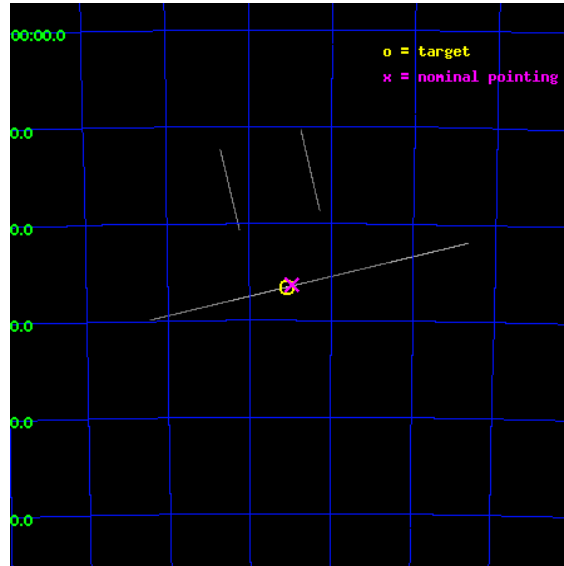
L2 Processing Date : Sep 15 2012

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1 Front

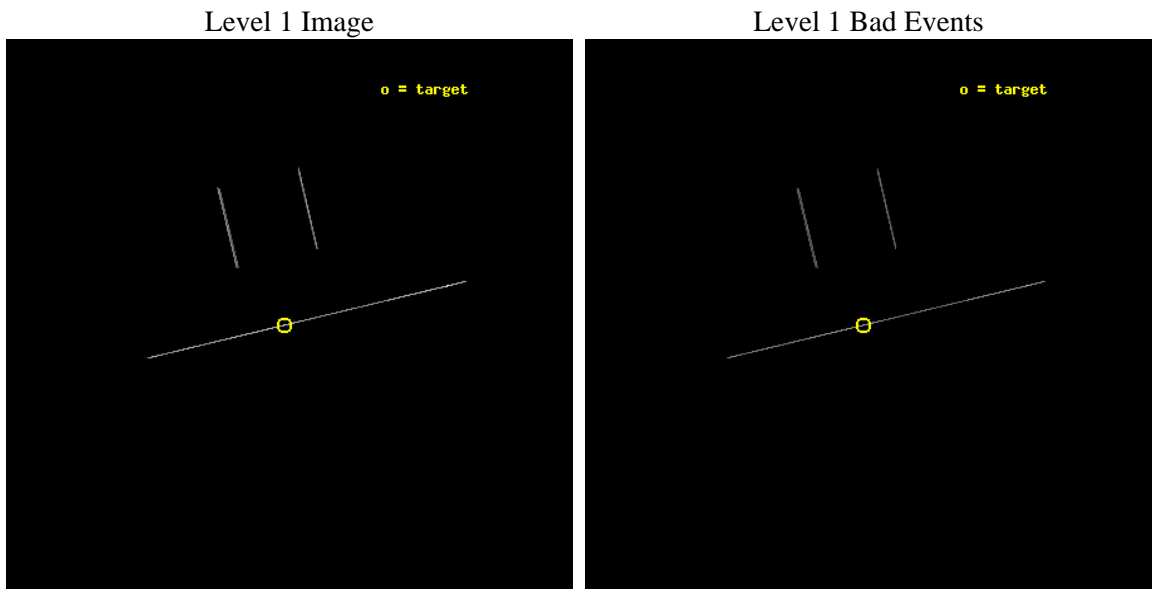
| | | |
|----------|--|---------------------------------------|
| seq_num | 400107 | Sequence number |
| obs_id | 1029 | Observation id |
| title | HIGH RESOLUTION UV/X-RAY SPECTROSCOPY OF SMC X-1 | Proposal title |
| observer | Dr. Saeqa Vrtilek | Principal investigator |
| object | SMC X-1 | Source name |
| ra_targ | 19.271667 | Observer's specified target RA [deg] |
| dec_targ | -73.442944 | Observer's specified target Dec [deg] |
| ra_nom | 19.240082215974 | Nominal RA [deg] |
| dec_nom | -73.438969633419 | Nominal Dec [deg] |
| roll_nom | 166.56460164345 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 6120.0 | Sum of GTIs [s] |
| livetime | 6096.09375 | Livetime [s] |
| ontime2 | 6120.0 | Sum of GTIs [s] |
| ontime3 | 6120.0 | Sum of GTIs [s] |
| ontime5 | 6120.0 | Sum of GTIs [s] |
| ontime6 | 6120.0 | Sum of GTIs [s] |
| ontime7 | 6120.0 | Sum of GTIs [s] |
| ontime8 | 6118.5419579148 | Sum of GTIs [s] |
| l2events | 74707 | Number of level 2 events |



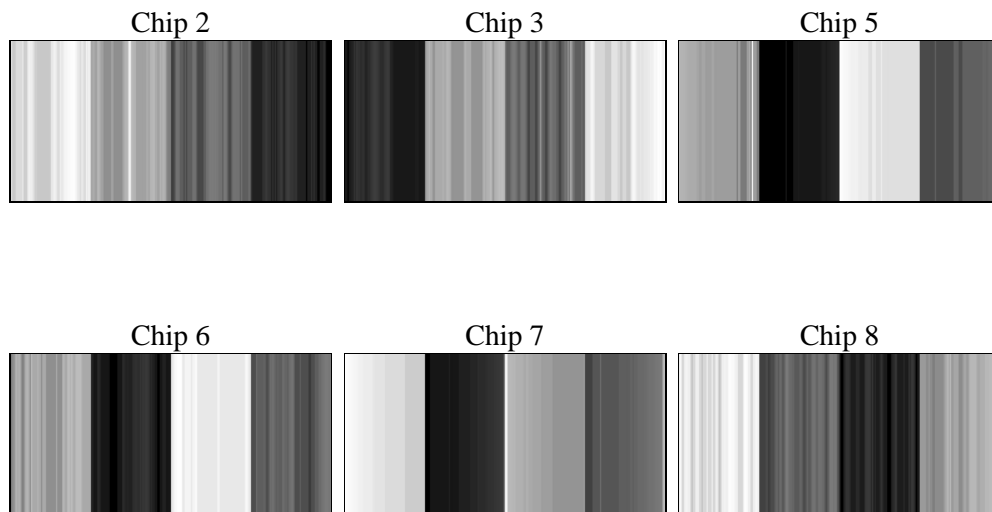
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 2 | Obi number | sched_exp_time | 6000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5 | Processing system revision | ontime | 6120.0 | Sum of GTIs [s] |
| caldsver | 4.5.1.1 | | ontime2 | 6120.0 | Sum of GTIs [s] |
| date | 2012-09-15T15:30:06 | Date and time of file creation | ontime3 | 6120.0 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime5 | 6120.0 | Sum of GTIs [s] |
| | | | ontime6 | 6120.0 | Sum of GTIs [s] |
| | | | ontime7 | 6120.0 | Sum of GTIs [s] |
| | | | ontime8 | 6118.5419579148 | Sum of GTIs [s] |
| | | | l1events | 135179 | Number of level 1 events |

2.1.4 Events

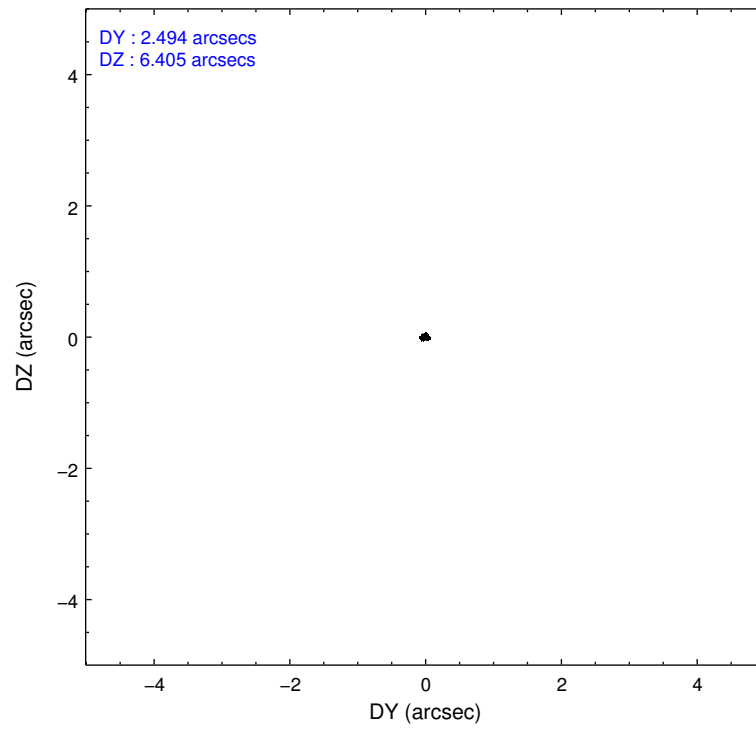
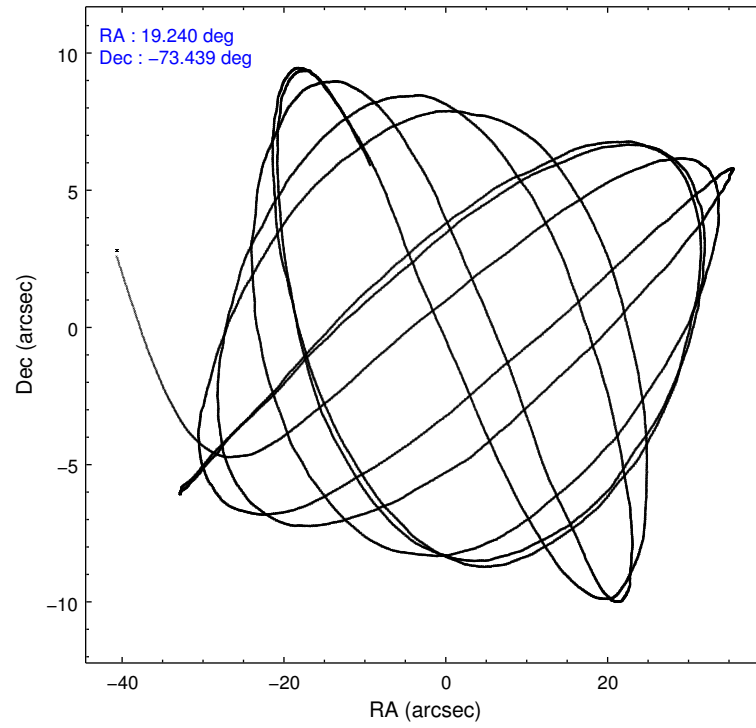
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 9264 | 10468 | 46816 | 10196 | 38849 | 19586 |
| rejected events | 2947 | 3463 | 12128 | 3500 | 10570 | 5841 |
| rejected % | 31% | 33% | 25% | 34% | 27% | 29% |

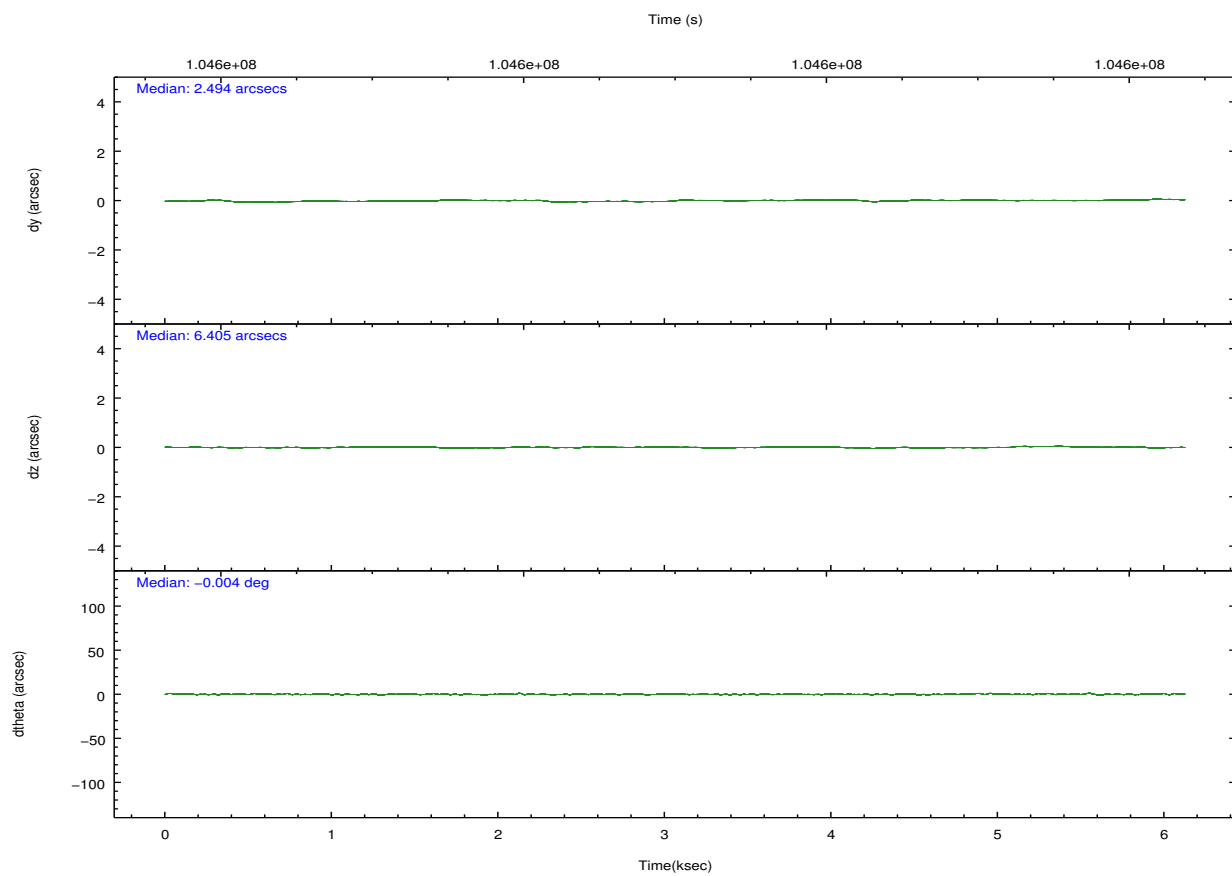
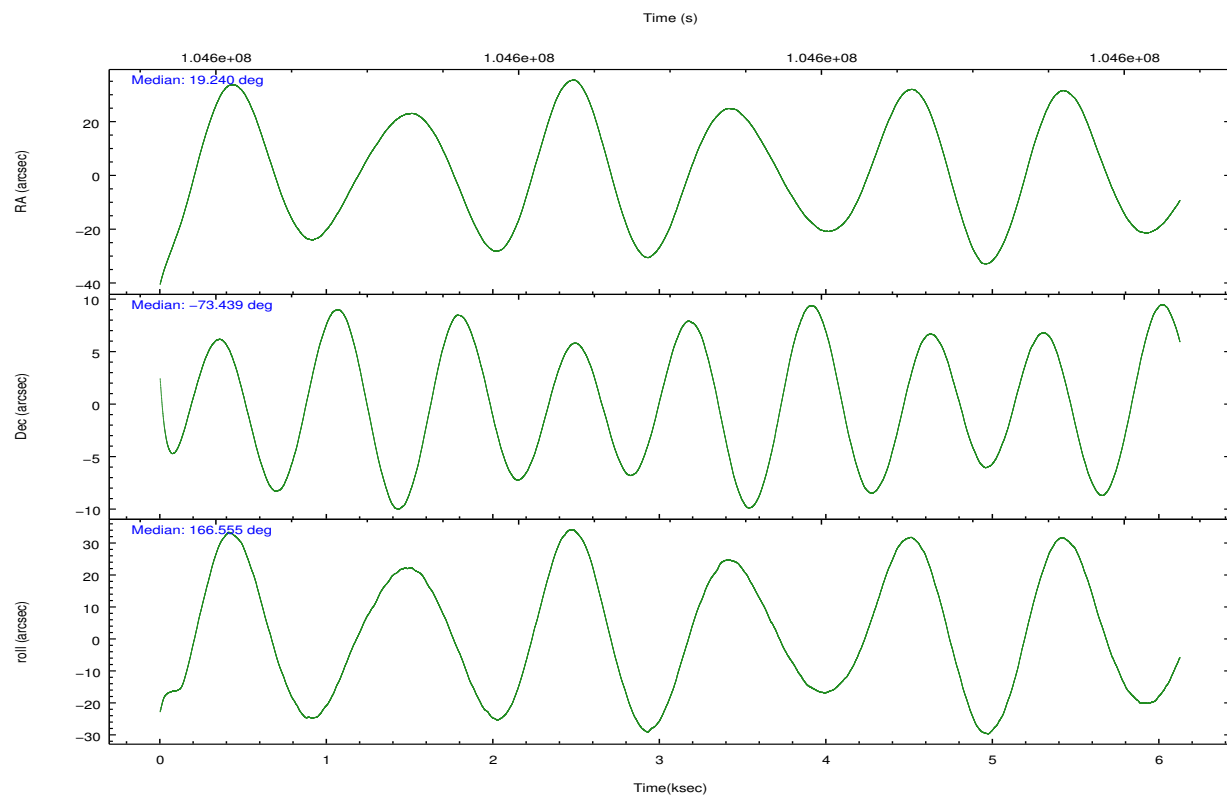
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 1014 | 1084 | 12241 | 1007 | 5018 | 3184 |
| | 10% | 10% | 26% | 9% | 12% | 16% |
| grade 1 events | 36 | 31 | 62 | 31 | 81 | 63 |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 2890 | 3037 | 11187 | 3039 | 8018 | 5161 |
| | 31% | 29% | 23% | 29% | 20% | 26% |
| grade 3 events | 1122 | 1563 | 930 | 1203 | 2857 | 2184 |
| | 12% | 14% | 1% | 11% | 7% | 11% |
| grade 4 events | 1098 | 1260 | 925 | 1123 | 2933 | 2082 |
| | 11% | 12% | 1% | 11% | 7% | 10% |
| grade 5 events | 1535 | 1776 | 4221 | 1891 | 5605 | 2577 |
| | 16% | 16% | 9% | 18% | 14% | 13% |
| grade 6 events | 1569 | 1717 | 17250 | 1902 | 14337 | 4335 |
| | 16% | 16% | 36% | 18% | 36% | 22% |
| grade 7 events | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0% | 0% | 0% | 0% | 0% | 0% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-235678 | ACIS-235678 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | CC33_FAINT | CC33_FAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| [deg] Pointing RA | 19.331683 | 19.24008221597433 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | -73.430959 | -73.43896963341912 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 166.495766 | 166.5646016434453 | [s] Primary exposure time | 0.000000 | 0 |
| [s] Window start time (MET) | 104596877.184000 | 104596877.184000 | | | |
| [s] Window stop time (MET) | 104606173.184000 | 104606173.184000 | | | |
| [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 | | | |
| Phase constraints | Y | Y | | | |
| [d] Phase period | 3.892000 | 3.892000 | | | |
| [d] Phase epoch (MJD) | 50141.466800 | 50141.466800 | | | |
| Phase start | 0.000000 | 0.000000 | | | |
| Phase end | 0.800000 | 0.800000 | | | |
| Phase start error | 0.050000 | 0.050000 | | | |
| Phase end error | 0.050000 | 0.050000 | | | |
| [s] Observation start time (MET) | 104598064.184000 | 104596480.7459 | | | |
| Observation start date | 2001-04-25T15:00:00 | 2001-04-25T14:34:40 | | | |
| [s] Observation end time (MET) | 104604064.184000 | 104604508.54621 | | | |

2.3 Aspect



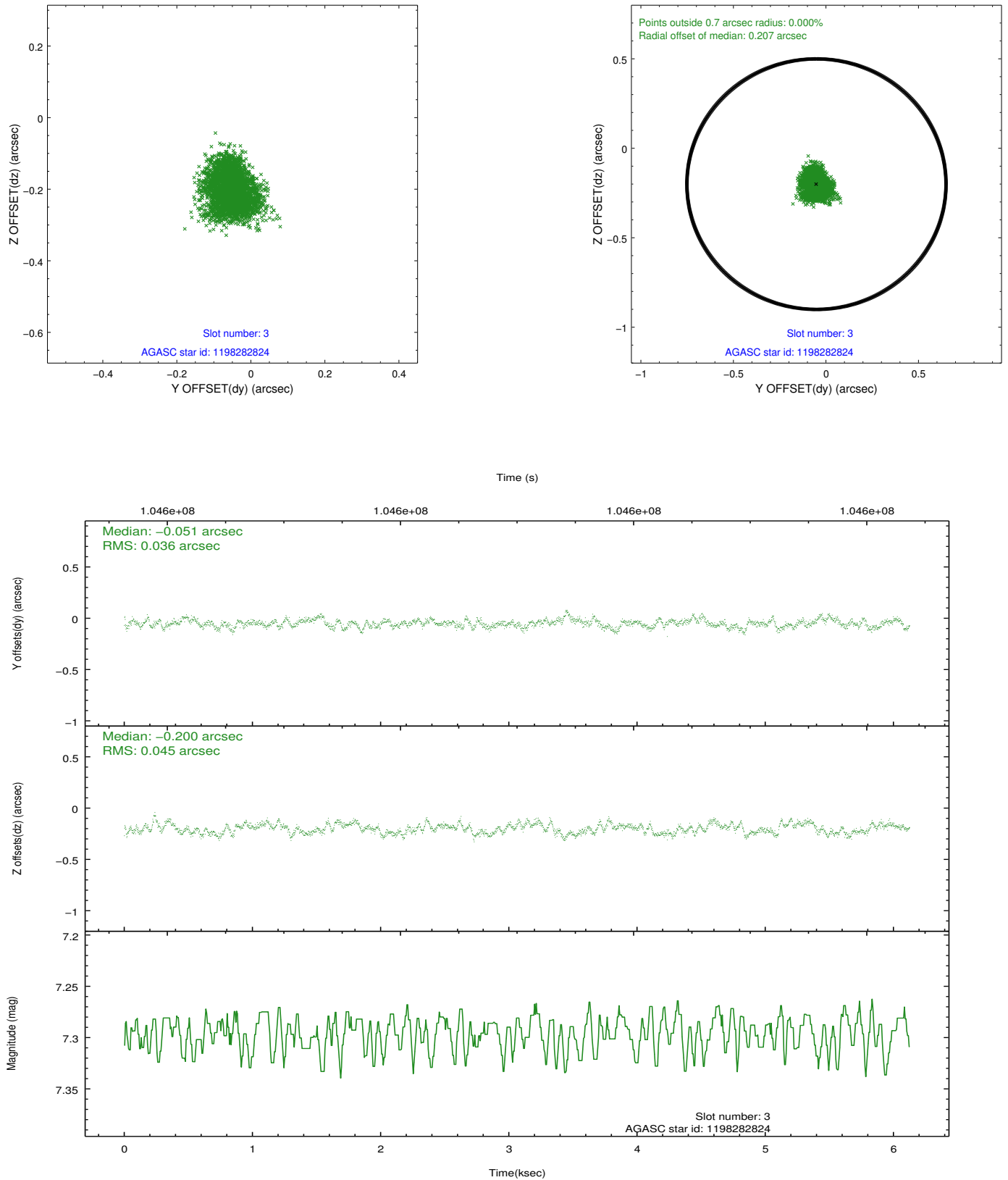


Slot Statistics

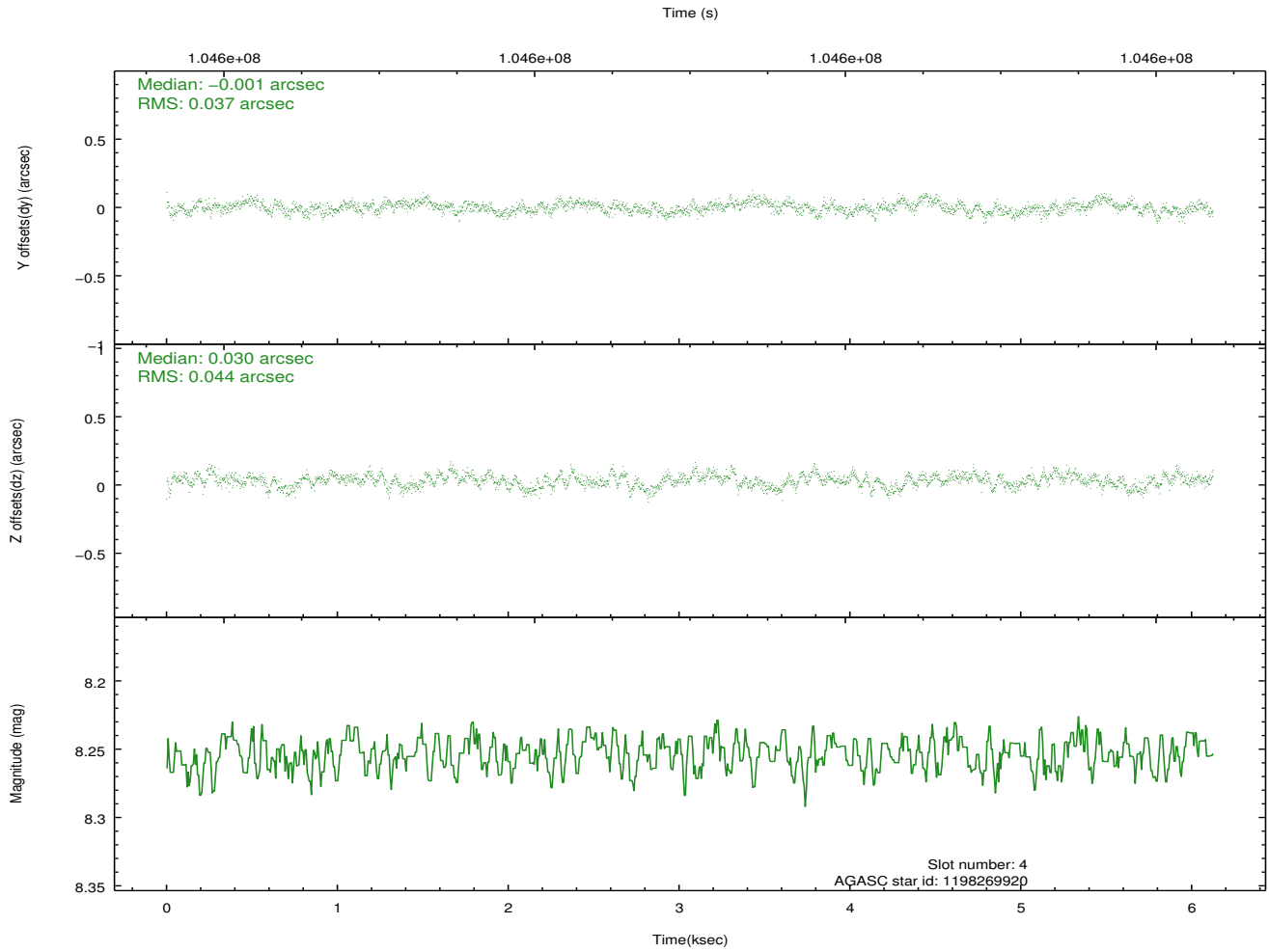
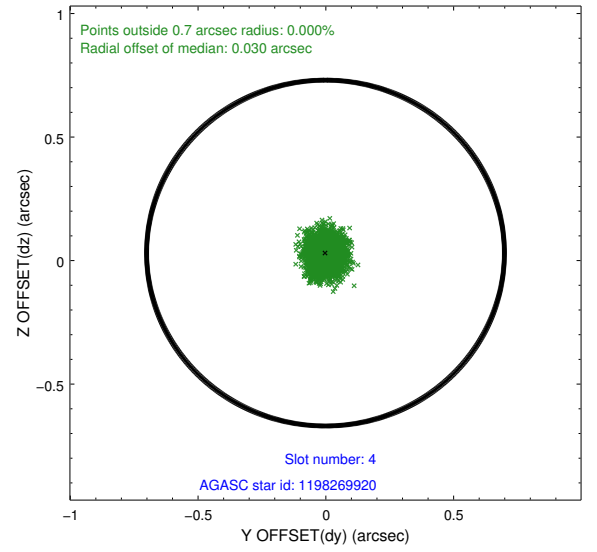
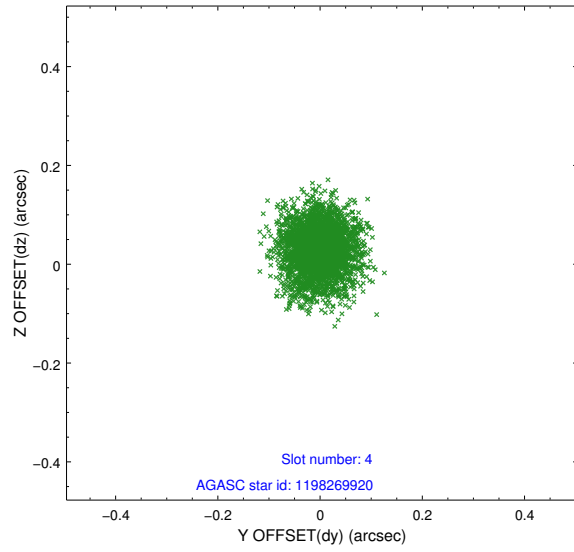
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------------|------|-------|--------|--------|-------|-------|-----------|------------|----------|----------|
| 0 | FID | ACIS-S-3 | 7.36 | 1494 | -0.085 | -0.087 | 0.007 | 0.012 | 0.000000 | 0.000000 | 58.01 | -1856.65 |
| 1 | FID | ACIS-S-4 | 7.20 | 1494 | -0.005 | 0.086 | 0.005 | 0.009 | 0.000000 | 0.000000 | 2158.27 | 179.99 |
| 2 | FID | ACIS-S-5 | 7.24 | 1494 | 0.062 | 0.011 | 0.006 | 0.010 | 0.000000 | 0.000000 | -1806.65 | 174.76 |
| 3 | GUIDE | 1198282824 | 7.30 | 2989 | -0.051 | -0.200 | 0.062 | 0.095 | 18.044095 | -73.907062 | 845.01 | 1979.85 |
| 4 | GUIDE | 1198269920 | 8.25 | 2985 | -0.001 | 0.030 | 0.062 | 0.101 | 20.316466 | -73.033728 | -673.81 | -1623.32 |
| 5 | GUIDE | 1198282880 | 9.59 | 2985 | 0.015 | -0.018 | 0.099 | 0.167 | 17.772623 | -73.017886 | 1935.62 | -1042.83 |
| 6 | GUIDE | 1198283120 | 9.34 | 2985 | -0.024 | 0.079 | 0.072 | 0.123 | 18.724531 | -73.257934 | 757.26 | -455.80 |
| 7 | GUIDE | 1198264832 | 9.52 | 2988 | 0.065 | 0.102 | 0.149 | 0.242 | 20.353668 | -72.974637 | -665.76 | -1840.25 |

2.4 Star Slots

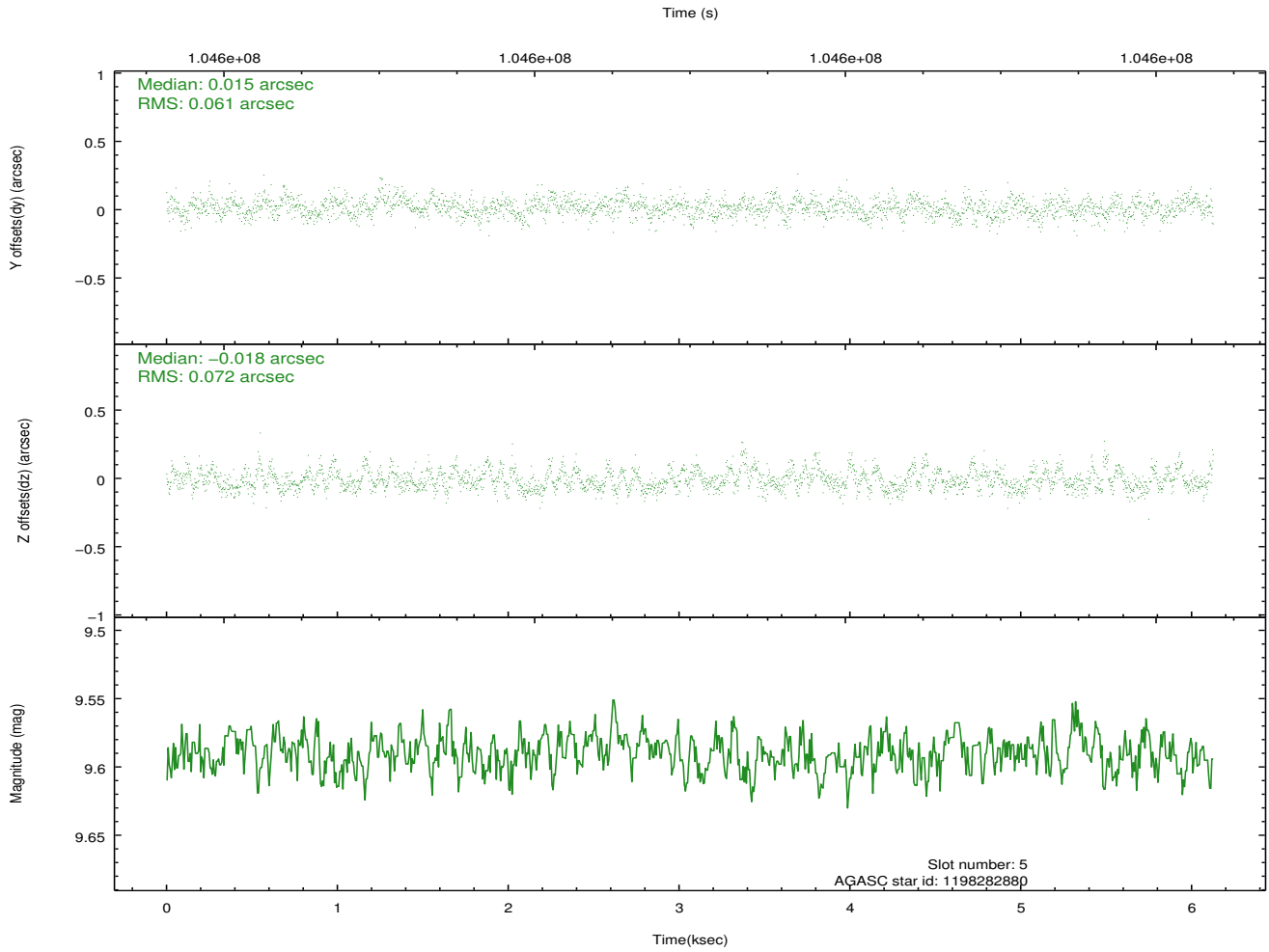
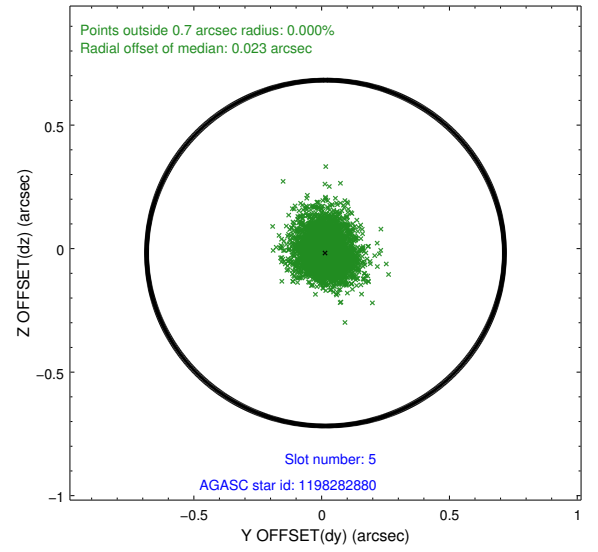
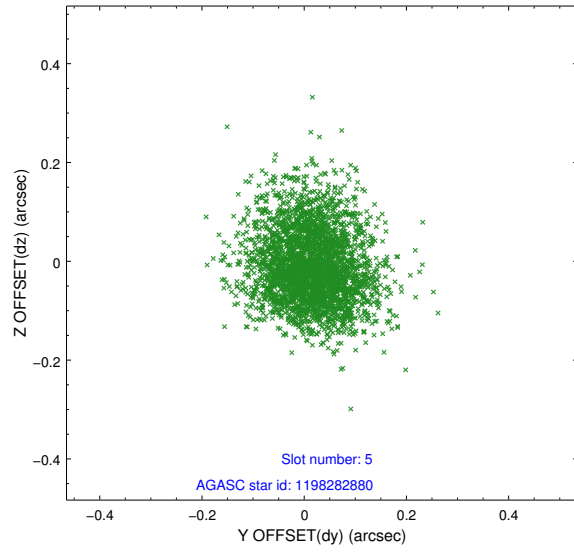
2.4.1 Slot 3



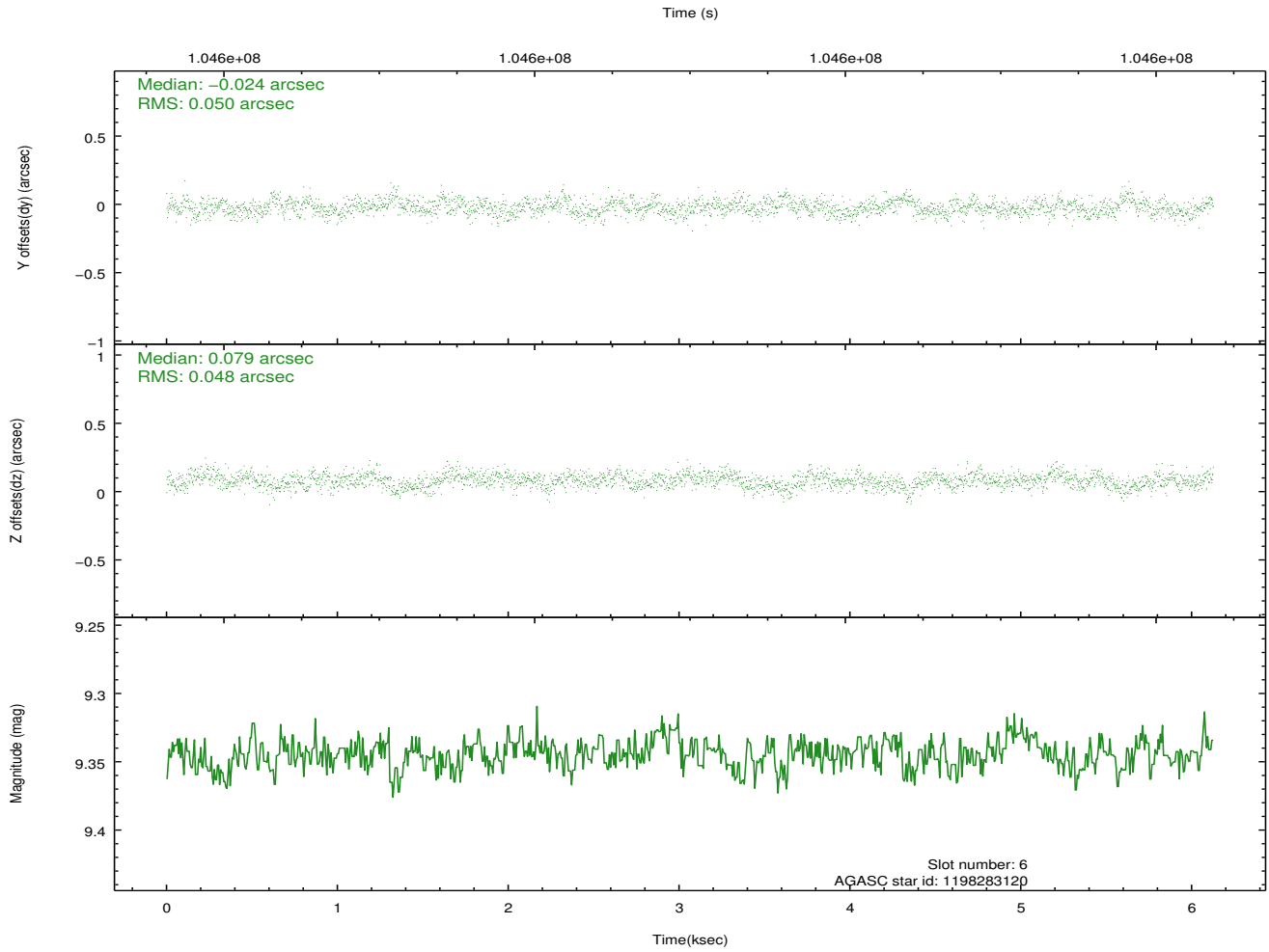
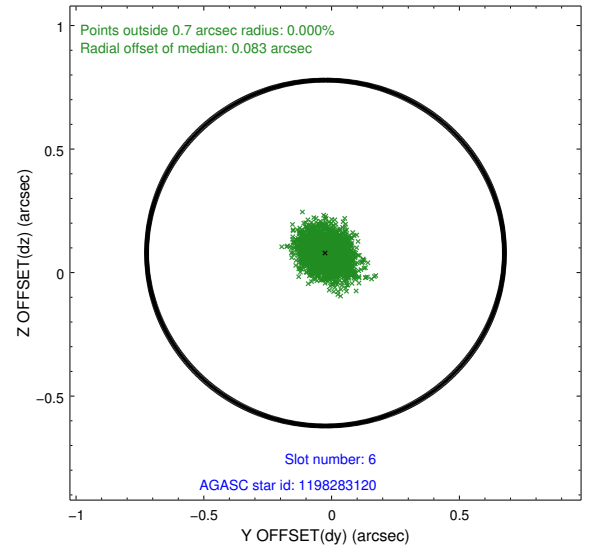
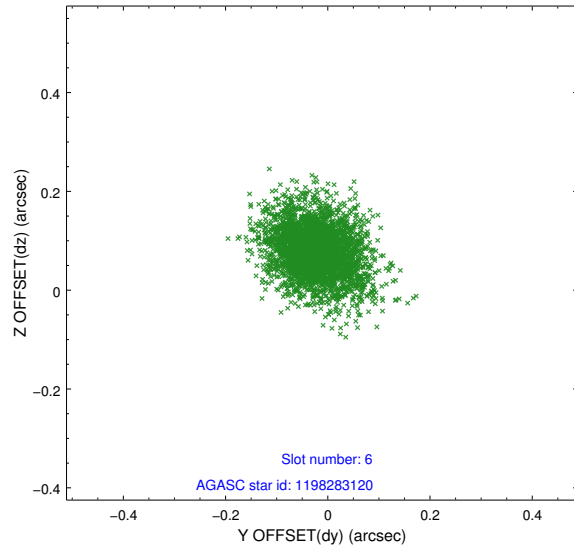
2.4.2 Slot 4



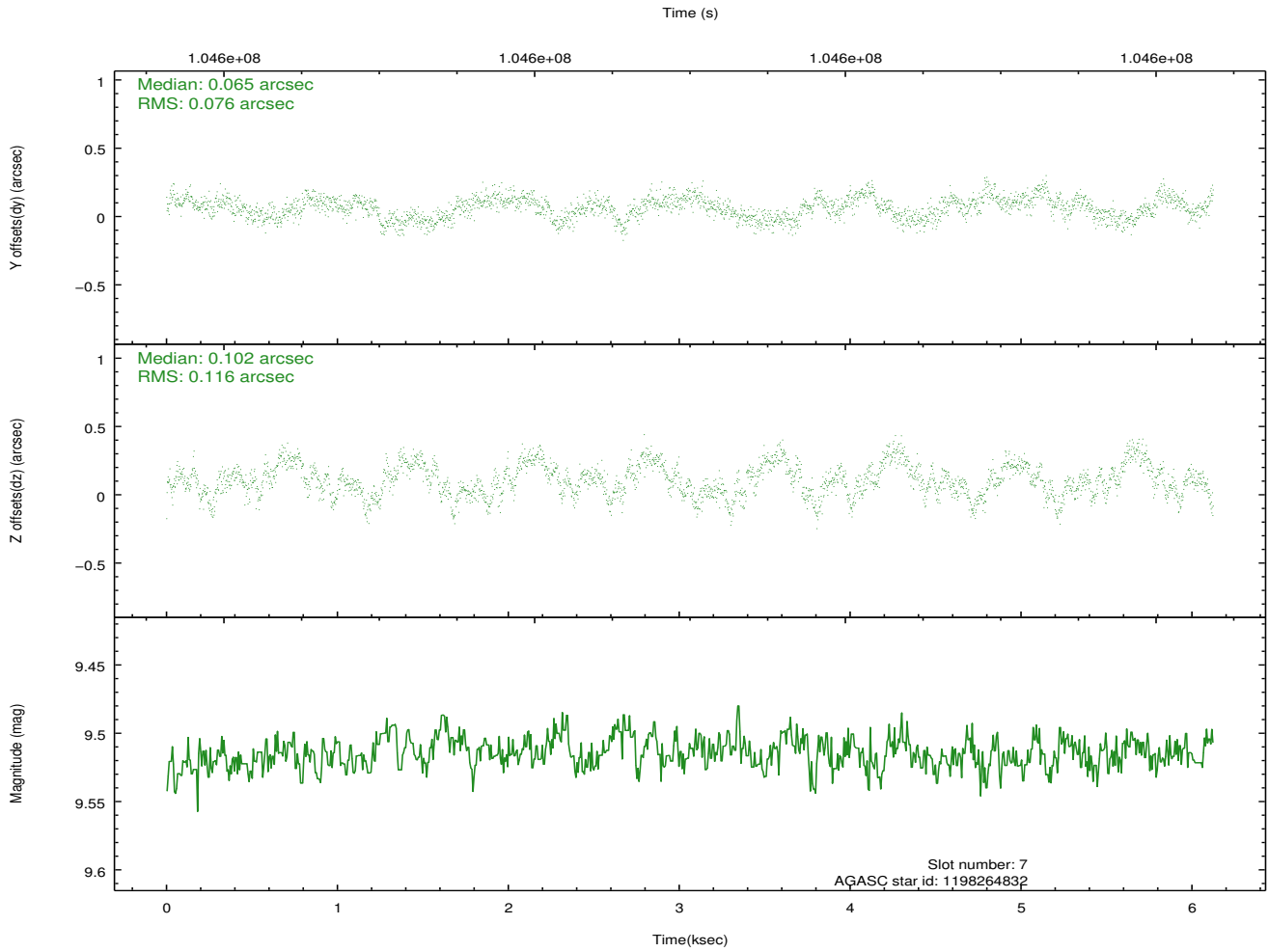
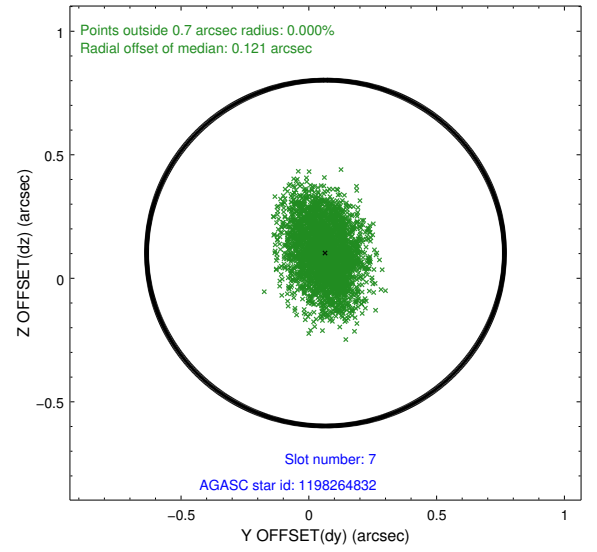
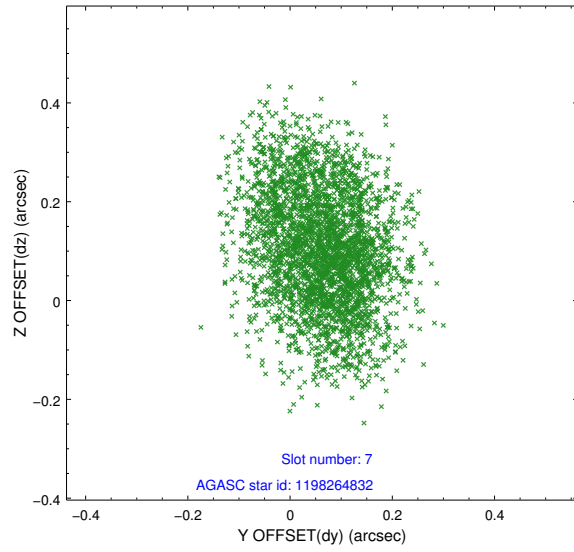
2.4.3 Slot 5



2.4.4 Slot 6

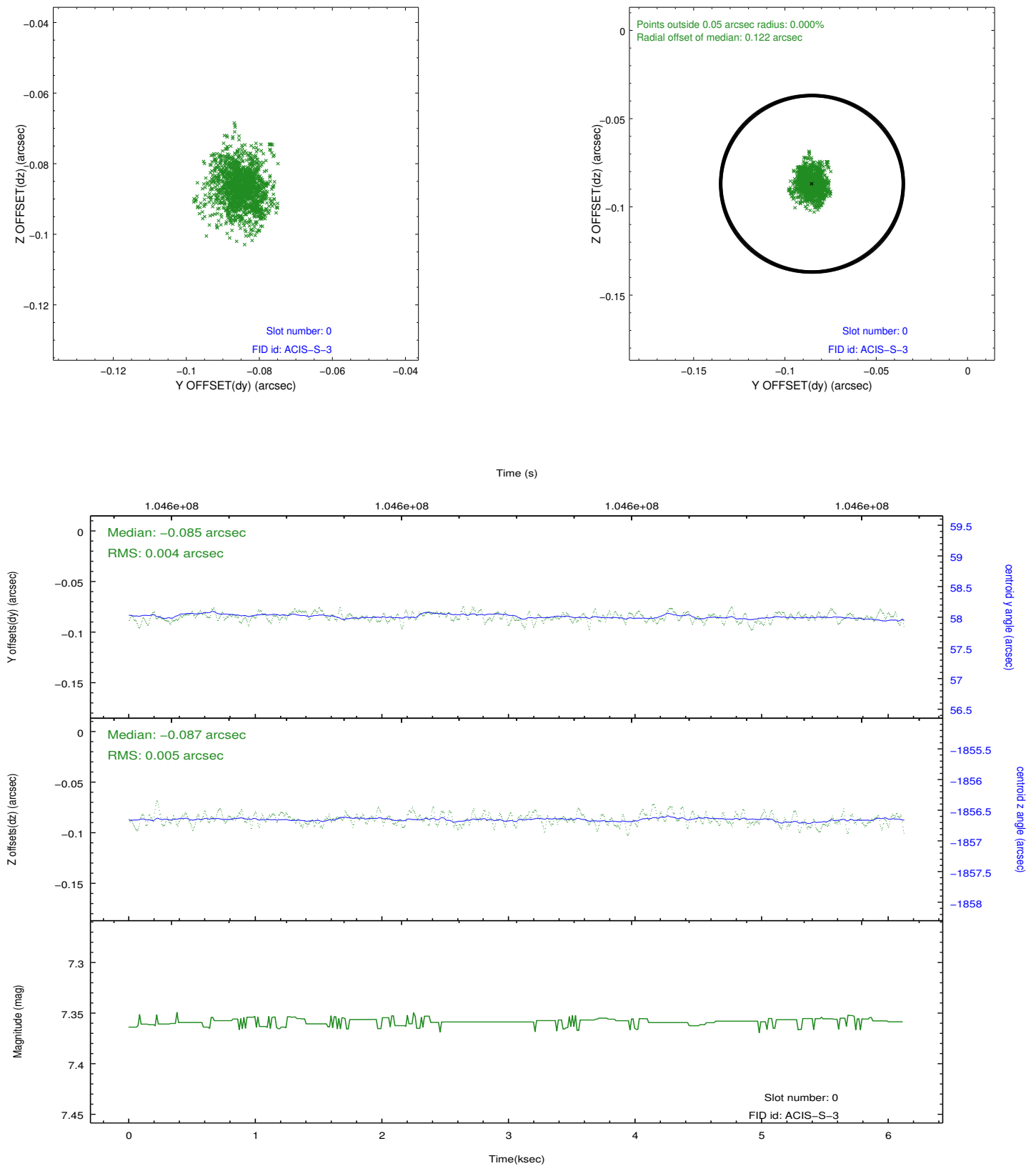


2.4.5 Slot 7

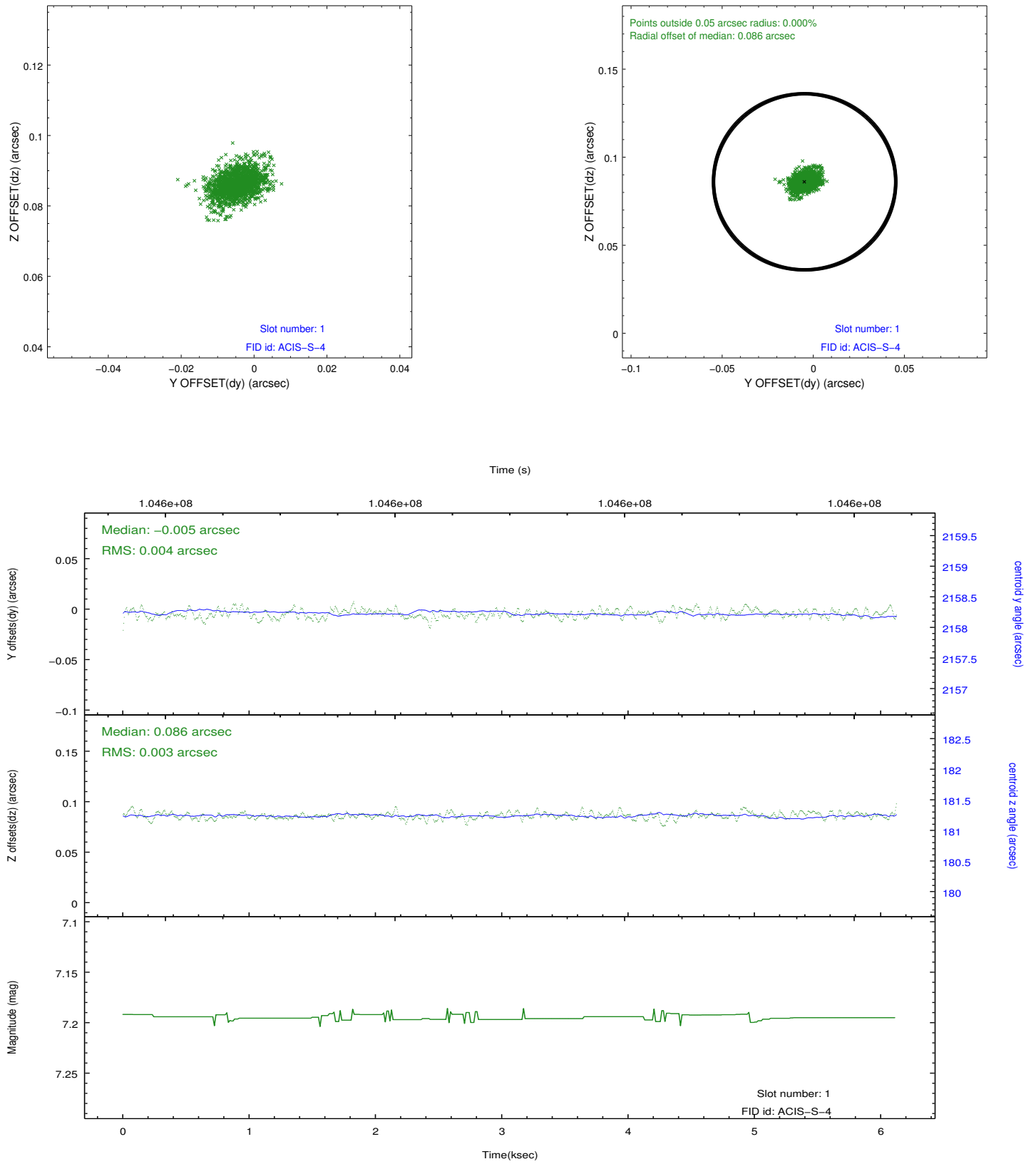


2.5 FID Slots

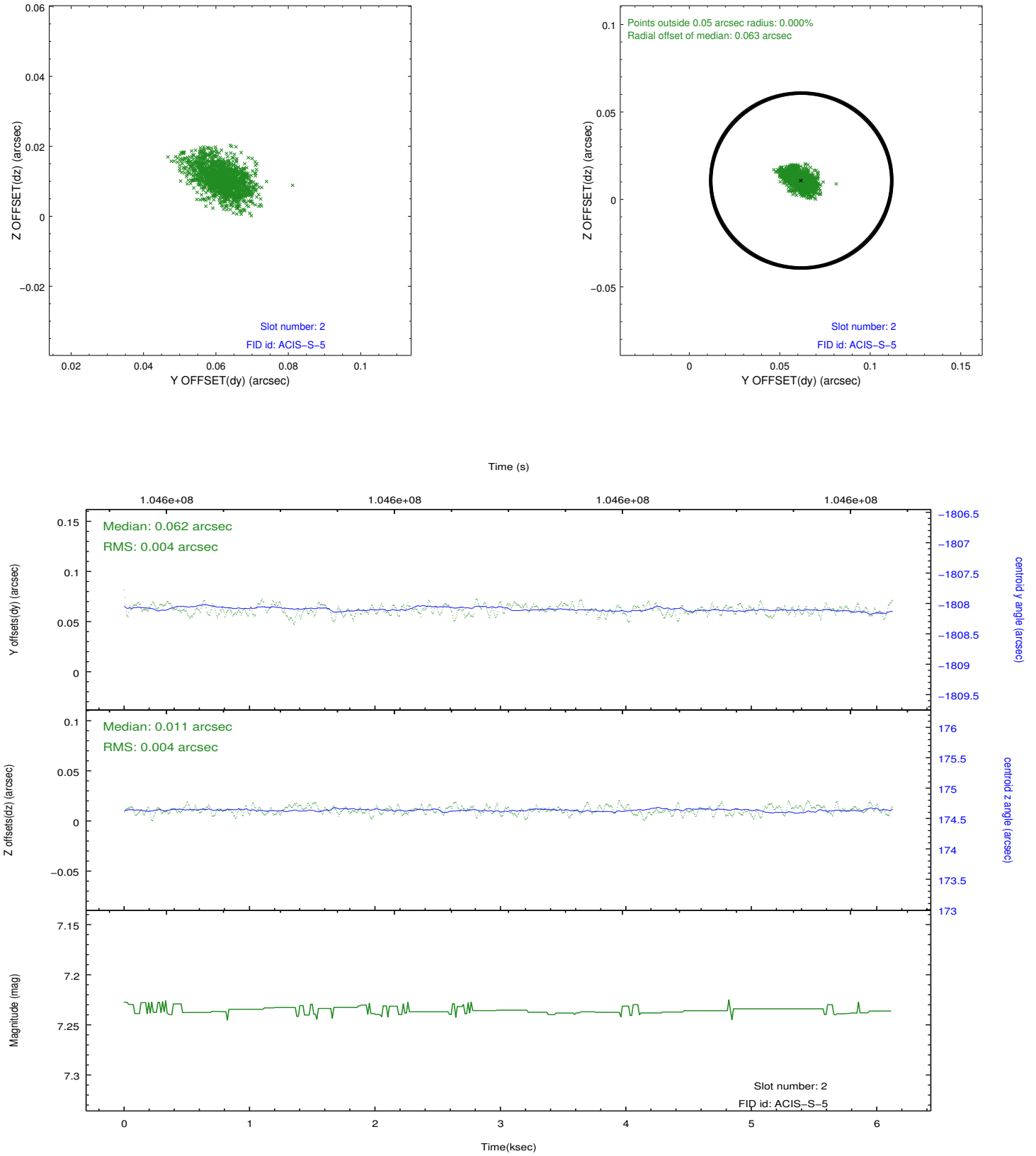
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|-------------|
| V&V Scientist | Joy Nichols |
| V&V Date (YYYY-MM-DD) | 2012.09.19 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 6.123 |

A.2 Comments

Phase Constraint: PERIOD 93.415 H AND ZERO-PHASE JD2451854.747524
REQUESTED PHASE = 0.70 to .79 ACTUAL PHASE = 0.7728 TO .7911.