

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 3982 - L2 Version 3
Chandra X-Ray Center

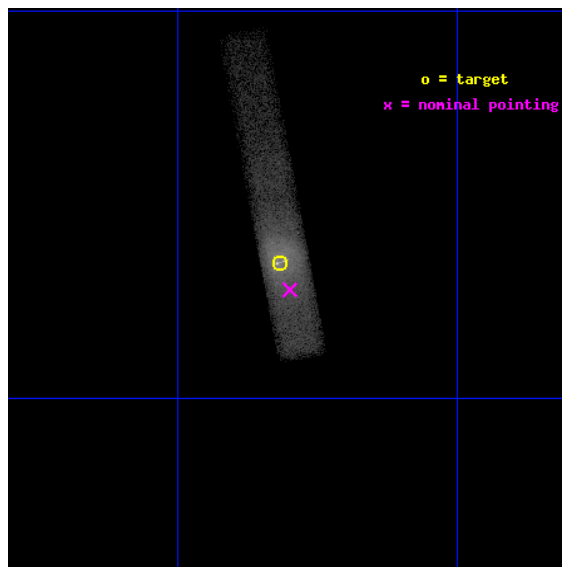
L2 Processing Date : Nov 3 2012

Contents

| | | |
|----------|-------------------------------|-----------|
| 1 | Front | 2 |
| 2 | OBI | 3 |
| 2.1 | OBI | 3 |
| 2.1.1 | Images | 3 |
| 2.1.2 | Bias | 3 |
| 2.1.3 | Parameters | 4 |
| 2.1.4 | Events | 4 |
| 2.2 | Compared Parameters | 5 |
| 2.3 | Aspect | 6 |
| 2.4 | Star Slots | 9 |
| 2.4.1 | Slot 3 | 9 |
| 2.4.2 | Slot 4 | 10 |
| 2.4.3 | Slot 5 | 11 |
| 2.4.4 | Slot 6 | 12 |
| 2.4.5 | Slot 7 | 13 |
| 2.5 | FID Slots | 14 |
| 2.5.1 | Slot 0 | 14 |
| 2.5.2 | Slot 1 | 15 |
| 2.5.3 | Slot 2 | 16 |
| A | Summary | 17 |
| A.1 | Status | 17 |
| A.2 | Comments | 17 |

1 Front

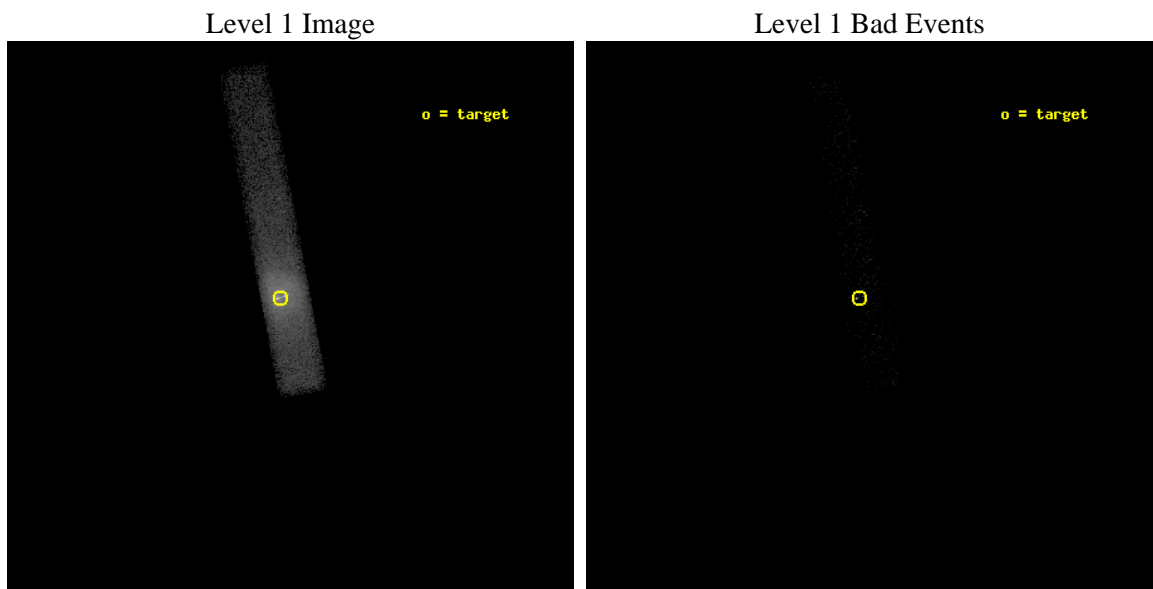
| | | |
|----------|----------------------------------------------|---------------------------------------------|
| seq_num | 700661 | Sequence number |
| obs_id | 3982 | Observation id |
| title | X-RAY VARIABILITY IN THE JET AND CORE OF M87 | Proposal title |
| observer | Dr. Daniel Harris | Principal investigator |
| object | M87 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 187.704167 | Observer's specified target RA [deg] |
| dec_targ | 12.391667 | Observer's specified target Dec [deg] |
| ra_nom | 187.7000186942 | Nominal RA [deg] |
| dec_nom | 12.37982858123 | Nominal Dec [deg] |
| roll_nom | 259.32402719298 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 5337.6000795066 | Sum of GTIs [s] |
| livetime | 4840.9215304795 | Livetime [s] |
| ontime7 | 5337.6000795066 | Sum of GTIs [s] |
| l2events | 57672 | Number of level 2 events |



2 OBI

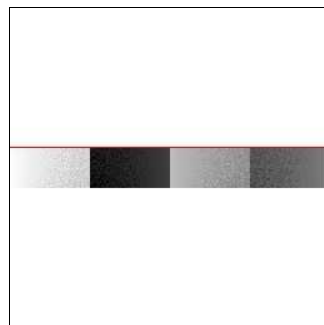
2.1 OBI

2.1.1 Images



2.1.2 Bias

Chip 7



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|-----------------------------------------|
| obi_num | 0 | Obi number | sched_exp_time | 5000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5 | Processing system revision | ontime | 5337.6000795066 | Sum of GTIs [s] |
| caldsver | 4.5.2 | | ontime7 | 5337.6000795066 | Sum of GTIs [s] |
| date | 2012-11-03T14:06:38 | Date and time of file creation | l1events | 64442 | Number of level 1 events |
| revision | 3 | Processing version of data | | | |

2.1.4 Events

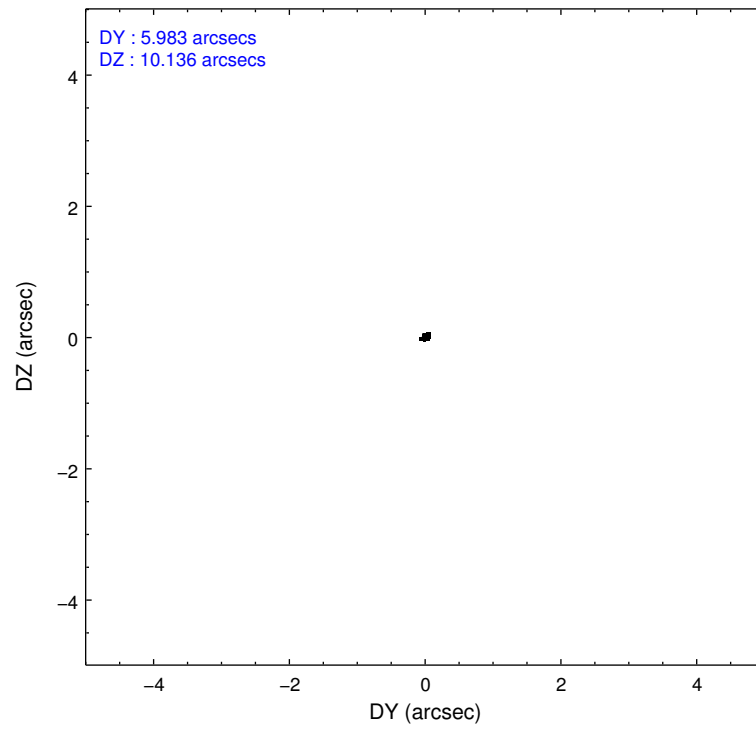
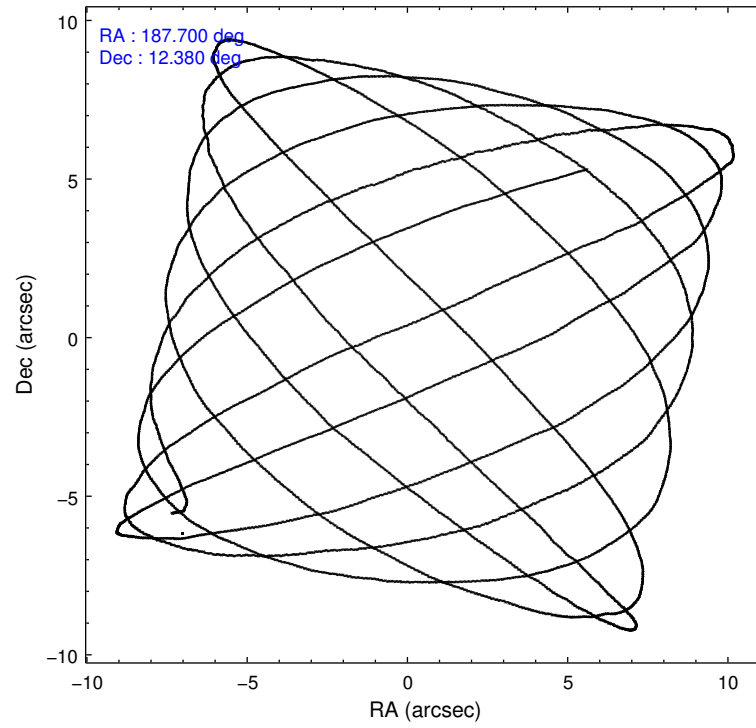
| | |
|-----------------|--------------|
| | ccd 7 |
| level 1 events | 64442 |
| rejected events | 6196 |
| rejected % | 9% |

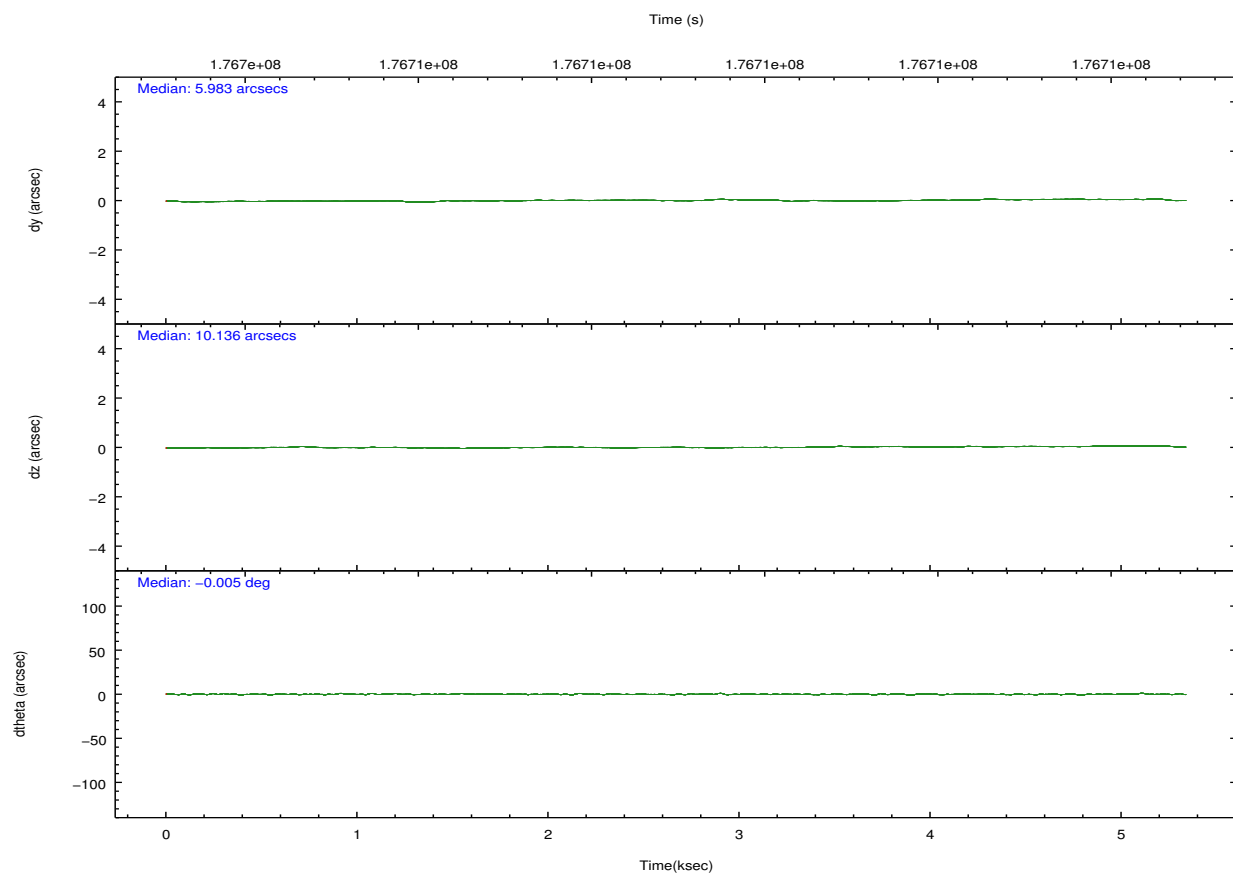
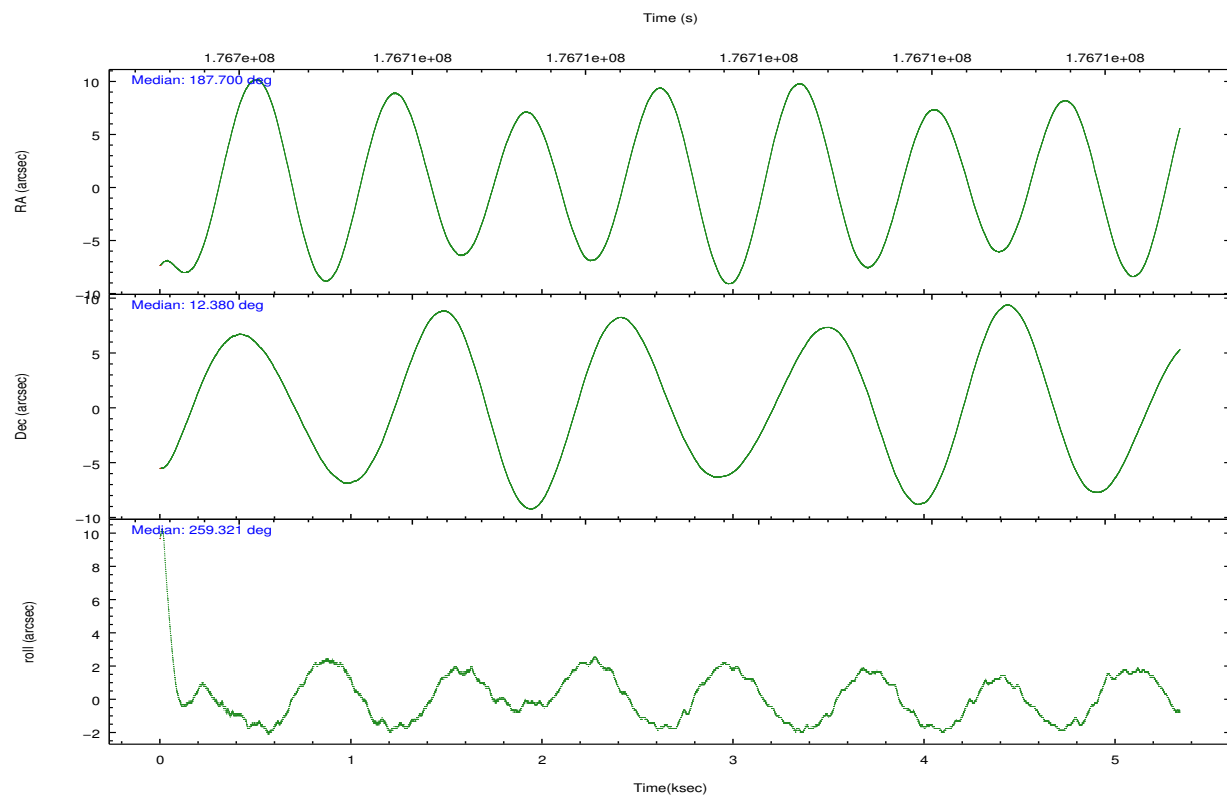
| | |
|----------------|--------------|
| | ccd 7 |
| grade 0 events | 19384 |
| | 30% |
| grade 1 events | 154 |
| | 0% |
| grade 2 events | 15419 |
| | 23% |
| grade 3 events | 7006 |
| | 10% |
| grade 4 events | 6810 |
| | 10% |
| grade 5 events | 1212 |
| | 1% |
| grade 6 events | 11291 |
| | 17% |
| grade 7 events | 3166 |
| | 4% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-7 | ACIS-7 | 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 | 187.690524 | 187.7000186941957 | Subarray requested | CUSTOM | 1/8 |
| [deg] Pointing Dec | 12.405414 | 12.37982858122957 | Subarray start row | 449 | 449 |
| [deg] Pointing Roll | 259.169424 | 259.3240271929759 | Subarray row count | 128 | 128 |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | Alternating exposures requested | N | N |
| [mm] SIM defocus | 0 | 0.001444936568705701 | [s] Primary exposure time | 0.000000 | 0.4 |
| [mm] SIM translation stage pos | -190.132523 | -190.1400660498719 | | | |
| [mm] SIM translation stage offset | 0 | 0.00754346686406393 | | | |
| [s] Observation start time (MET) | 176705156.184000 | 176704117.97999 | | | |
| Observation start date | 2003-08-08T04:44:52 | 2003-08-08T04:28:37 | | | |
| [s] Observation end time (MET) | 176710156.184000 | 176711057.23029 | | | |
| Observation end date | 2003-08-08T06:08:12 | 2003-08-08T06:24:17 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



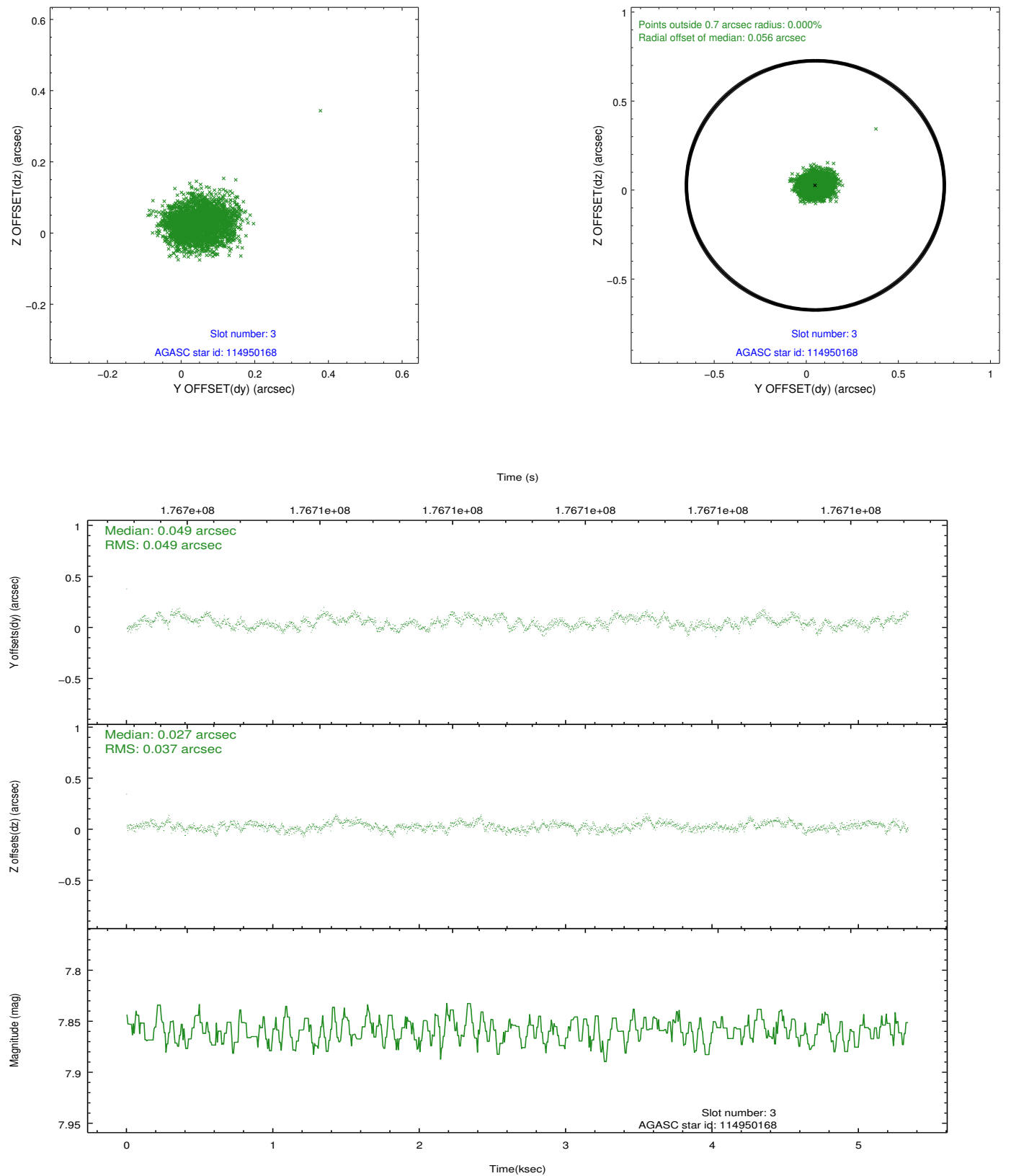


Slot Statistics

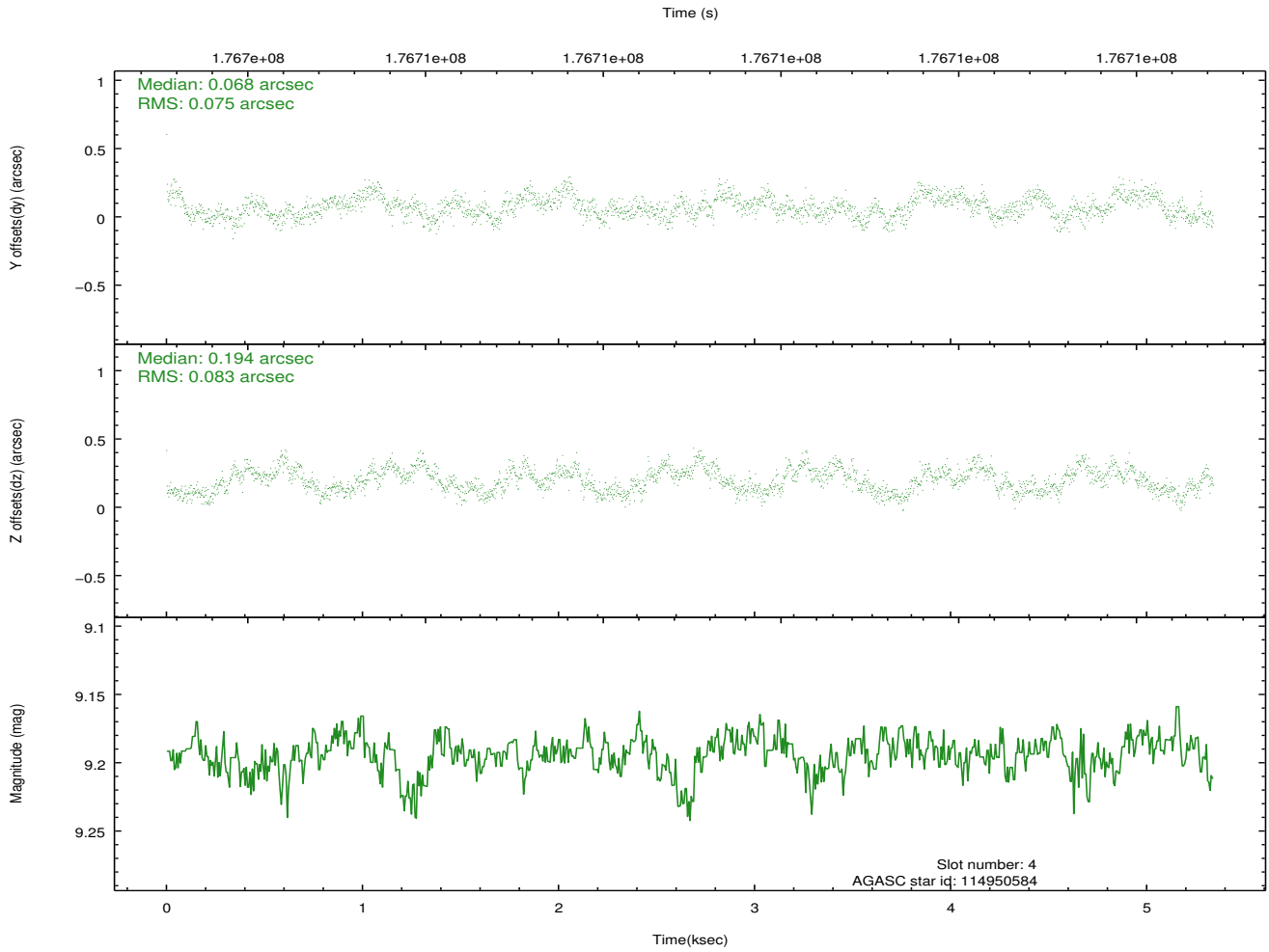
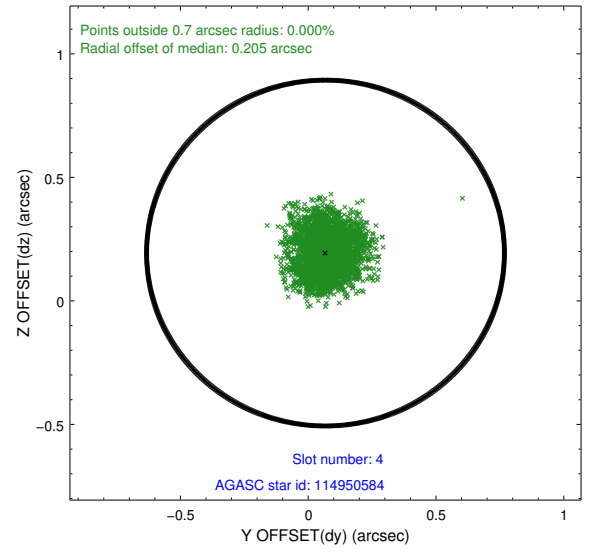
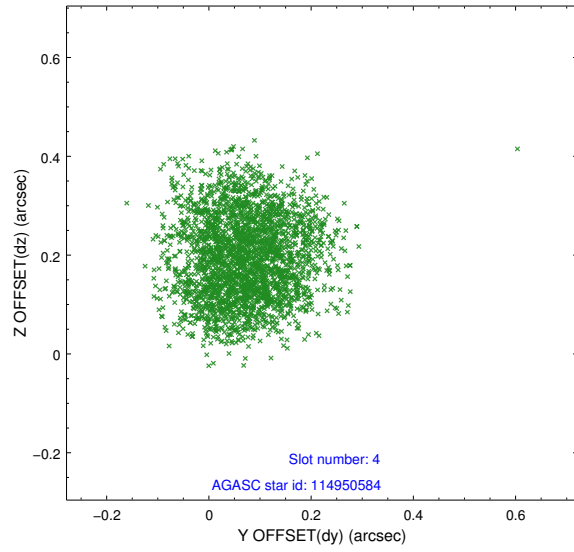
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | ACIS-S-2 | 7.10 | 1303 | -0.067 | -0.030 | 0.007 | 0.011 | 0.000000 | 0.000000 | -758.75 | -1731.44 |
| 1 | FID | ACIS-S-4 | 7.20 | 1302 | 0.086 | 0.040 | 0.006 | 0.011 | 0.000000 | 0.000000 | 2154.14 | 175.99 |
| 2 | FID | ACIS-S-5 | 7.23 | 1303 | -0.051 | -0.001 | 0.006 | 0.011 | 0.000000 | 0.000000 | -1810.15 | 170.85 |
| 3 | GUIDE | 114950168 | 7.86 | 2604 | 0.049 | 0.027 | 0.066 | 0.101 | 187.143398 | 12.117441 | 1378.76 | -1696.48 |
| 4 | GUIDE | 114950584 | 9.19 | 2602 | 0.068 | 0.194 | 0.124 | 0.185 | 187.487323 | 11.827248 | 2179.60 | -312.21 |
| 5 | GUIDE | 114952792 | 9.50 | 2602 | 0.009 | -0.059 | 0.092 | 0.153 | 187.070263 | 12.344747 | 623.45 | -2101.88 |
| 6 | GUIDE | 114955056 | 8.32 | 2605 | 0.137 | -0.065 | 0.066 | 0.108 | 187.914001 | 12.127854 | 833.98 | 959.83 |
| 7 | GUIDE | 115348424 | 9.51 | 2604 | -0.265 | -0.100 | 0.094 | 0.150 | 187.199498 | 13.087929 | -2090.81 | -2152.61 |

2.4 Star Slots

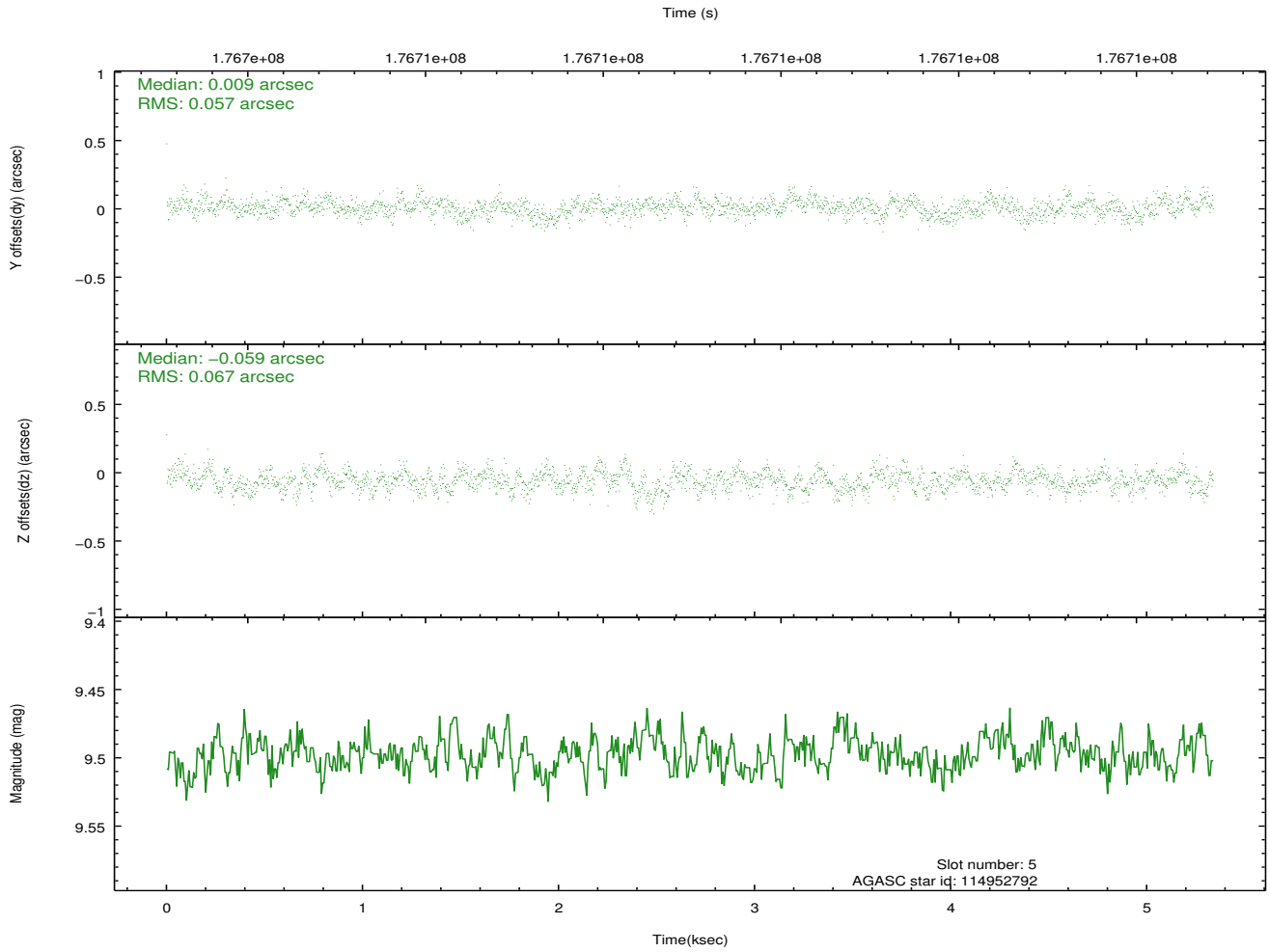
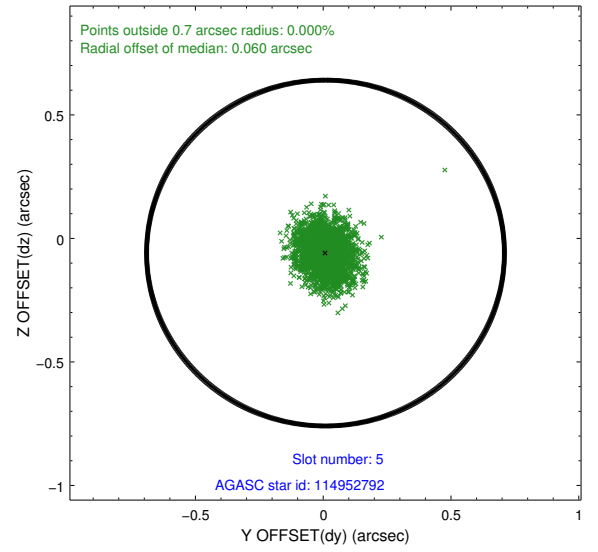
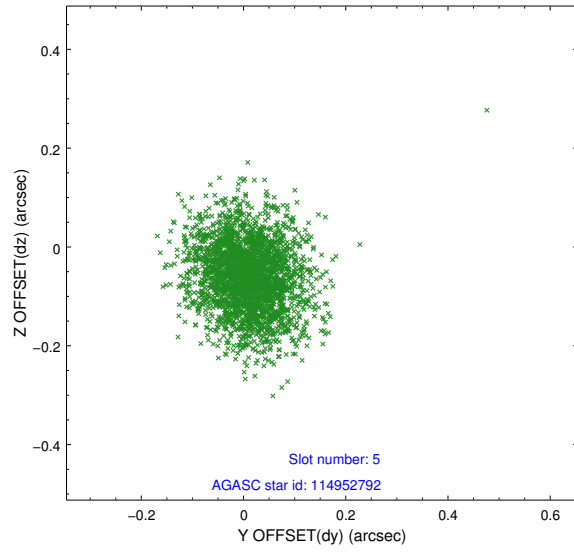
2.4.1 Slot 3



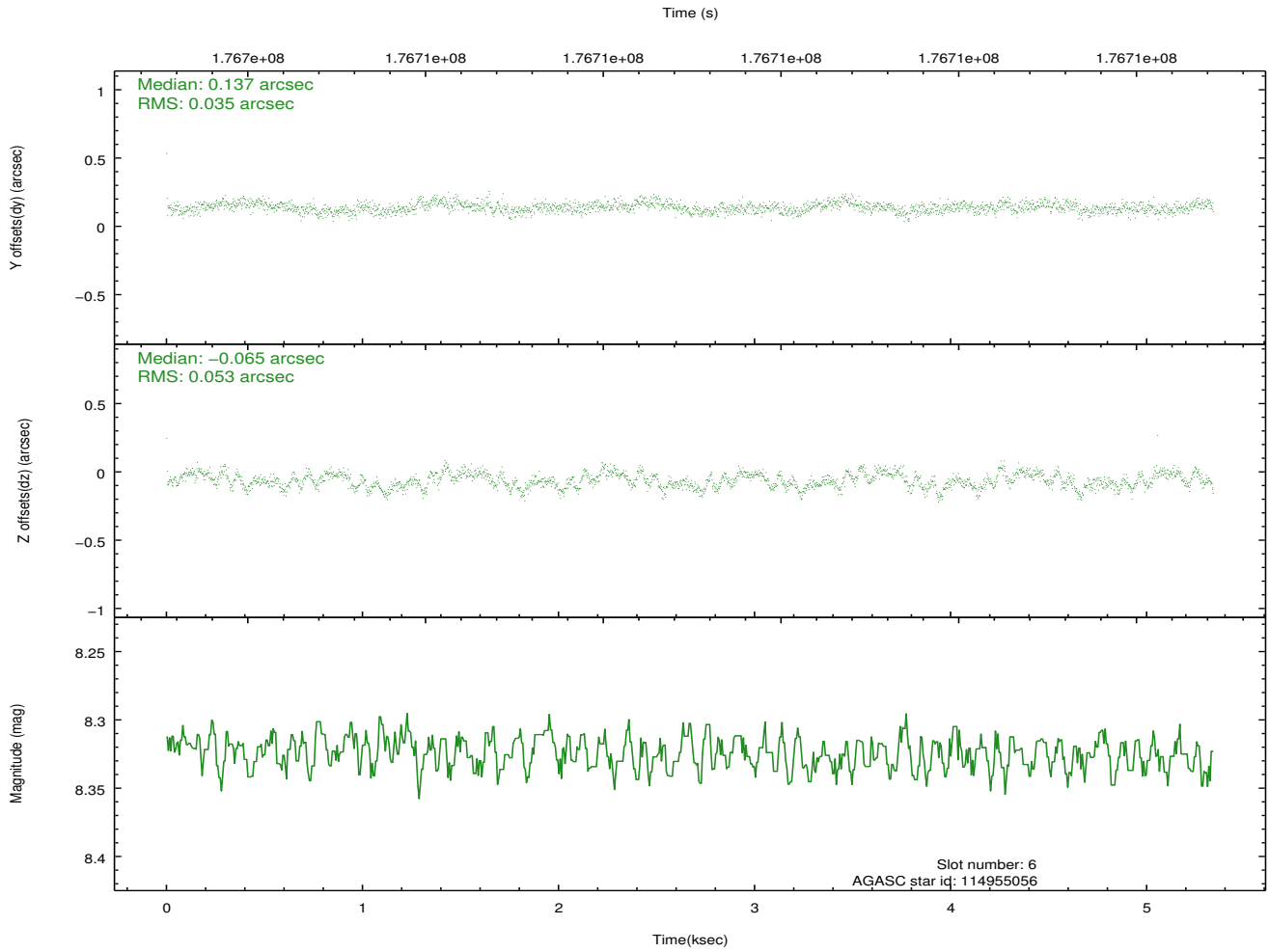
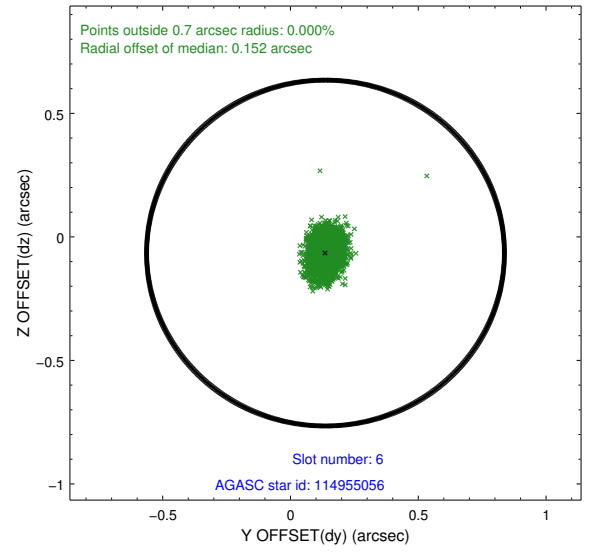
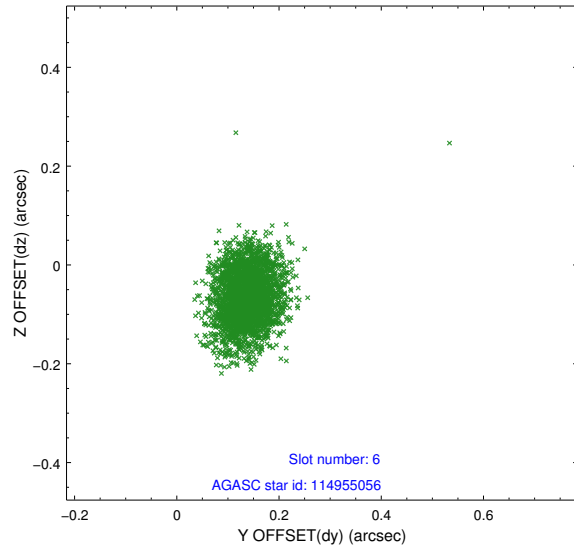
2.4.2 Slot 4



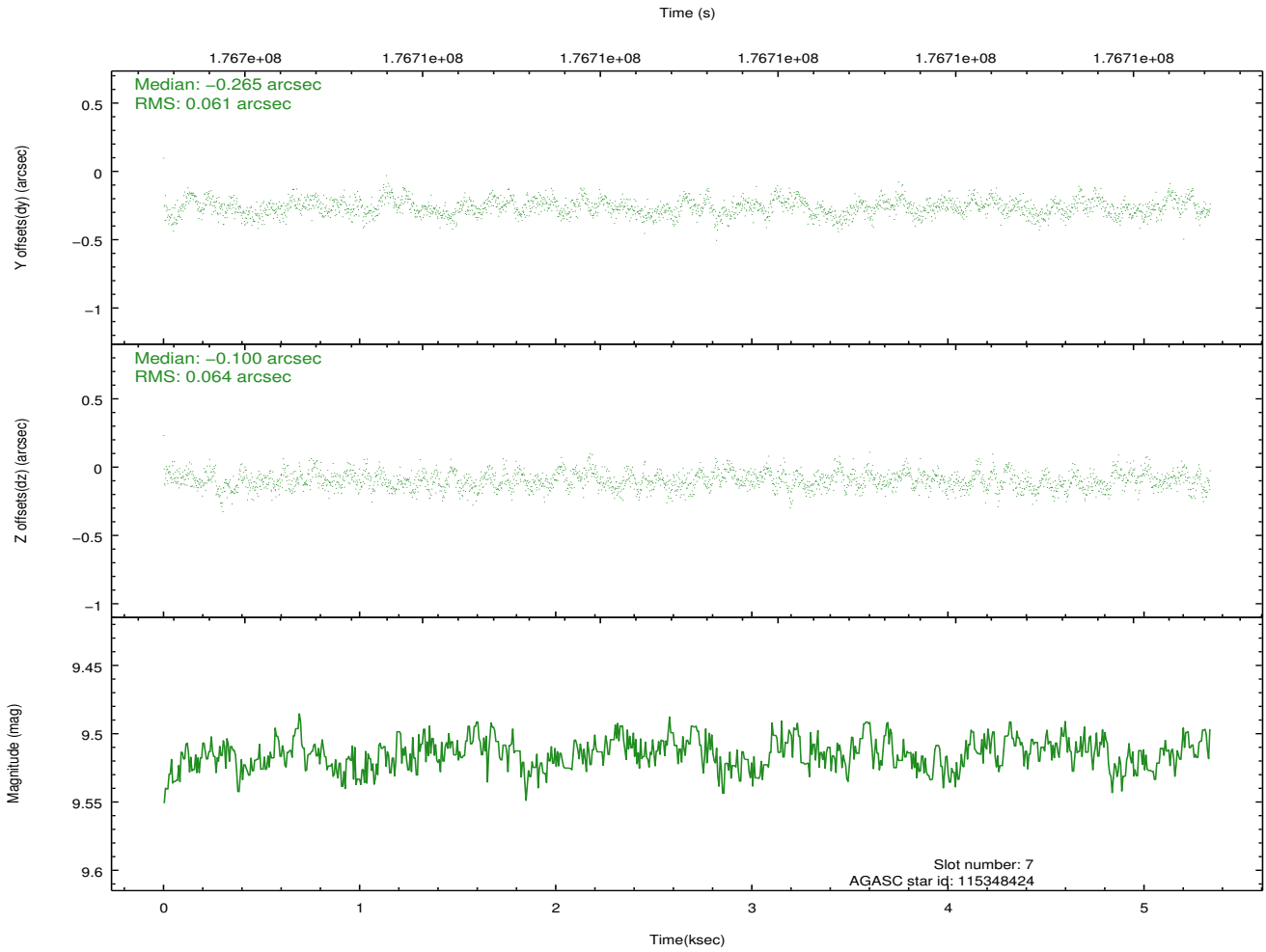
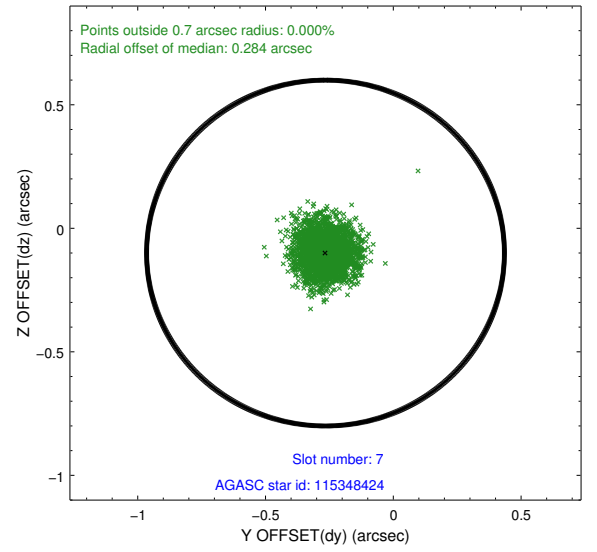
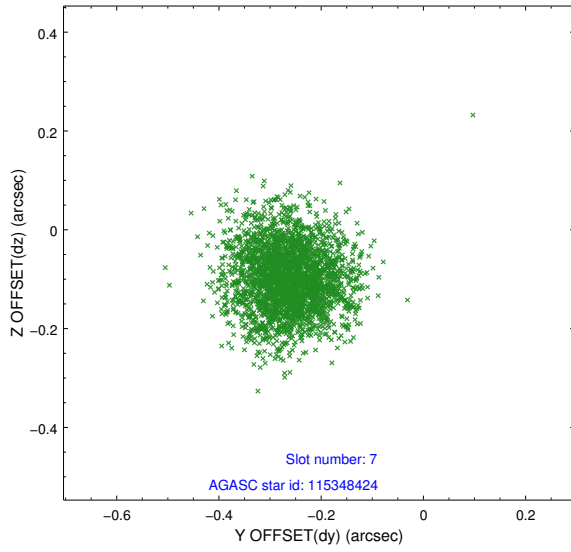
2.4.3 Slot 5



2.4.4 Slot 6

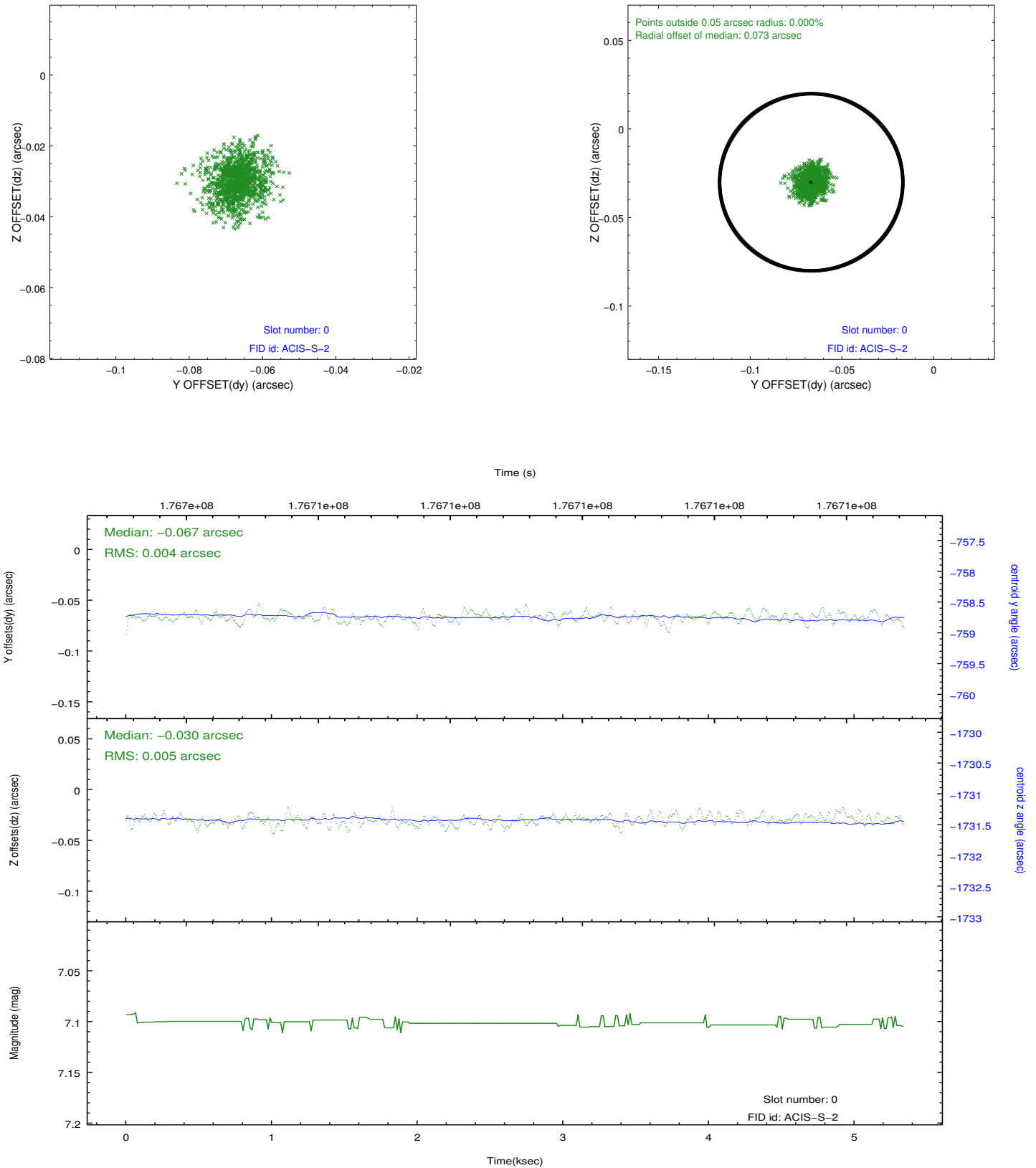


2.4.5 Slot 7

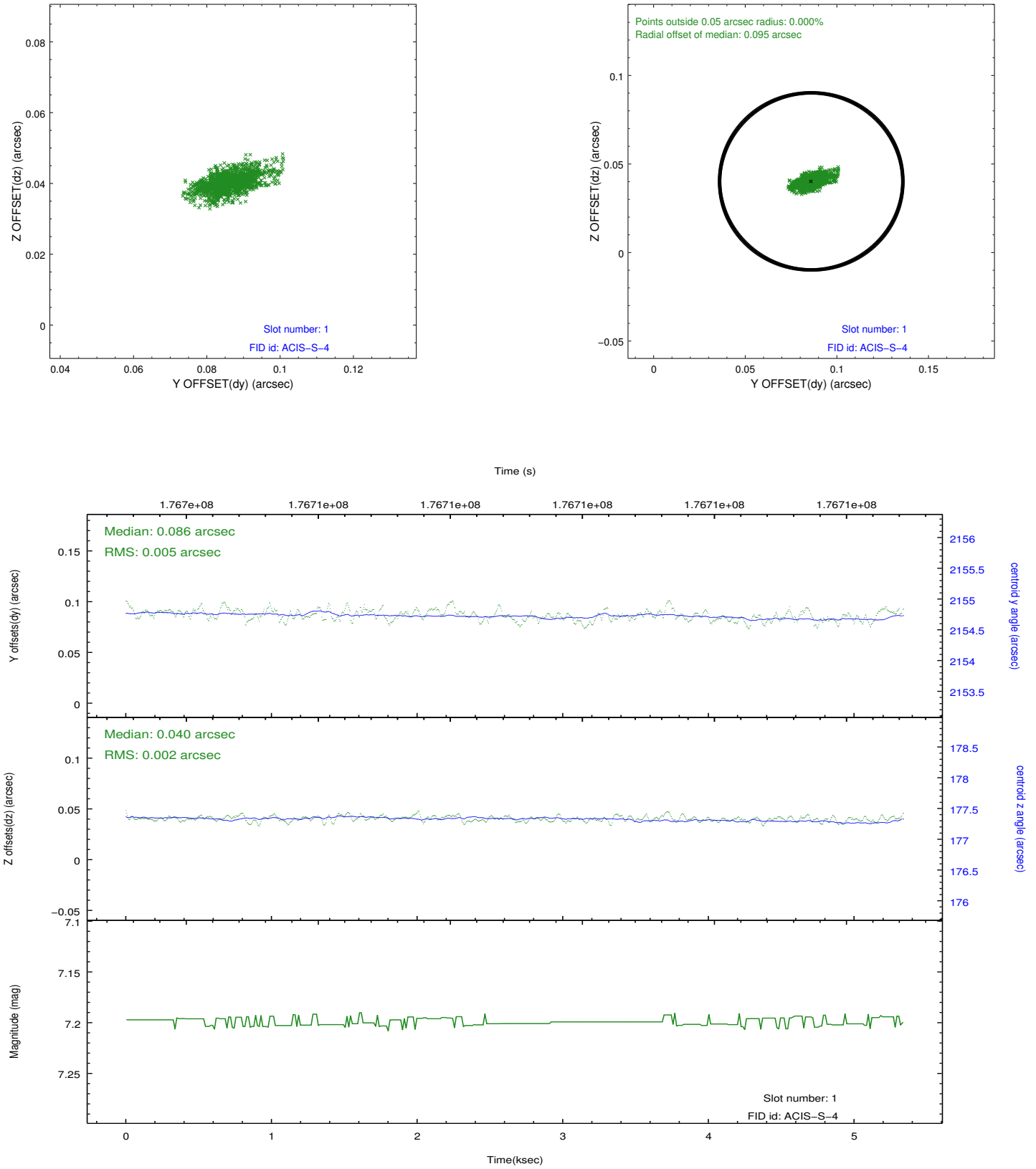


2.5 FID Slots

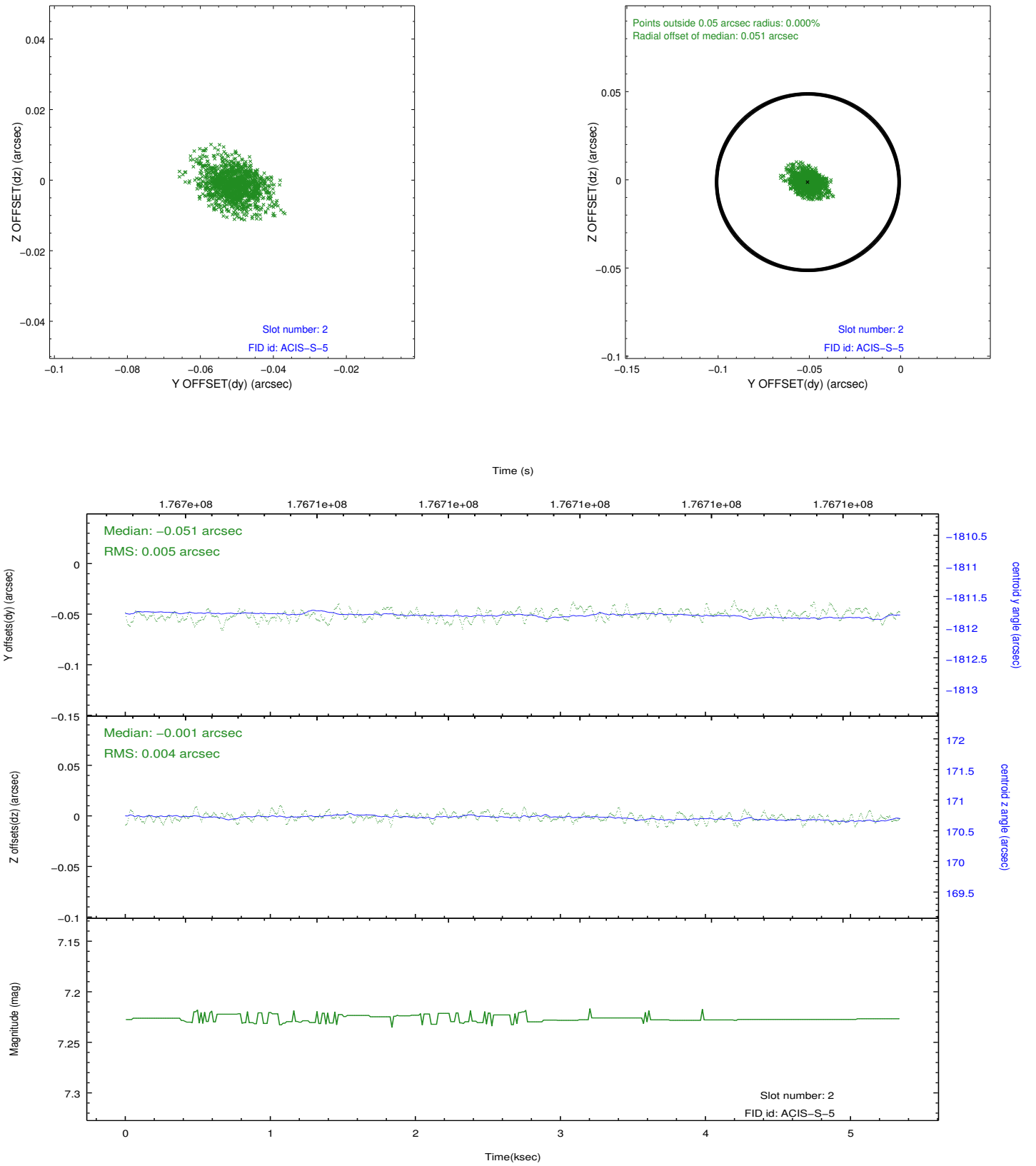
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|---------------|
| V&V Scientist | Beth Sundheim |
| V&V Date (YYYY-MM-DD) | 2012.11.27 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 5.337 |

A.2 Comments