

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 11777 - L2 Version 2
Chandra X-Ray Center

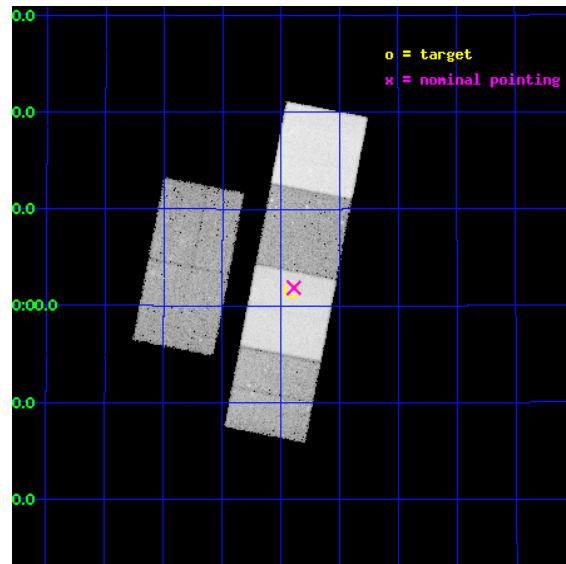
L2 Processing Date : Jun 19 2012

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1 Front

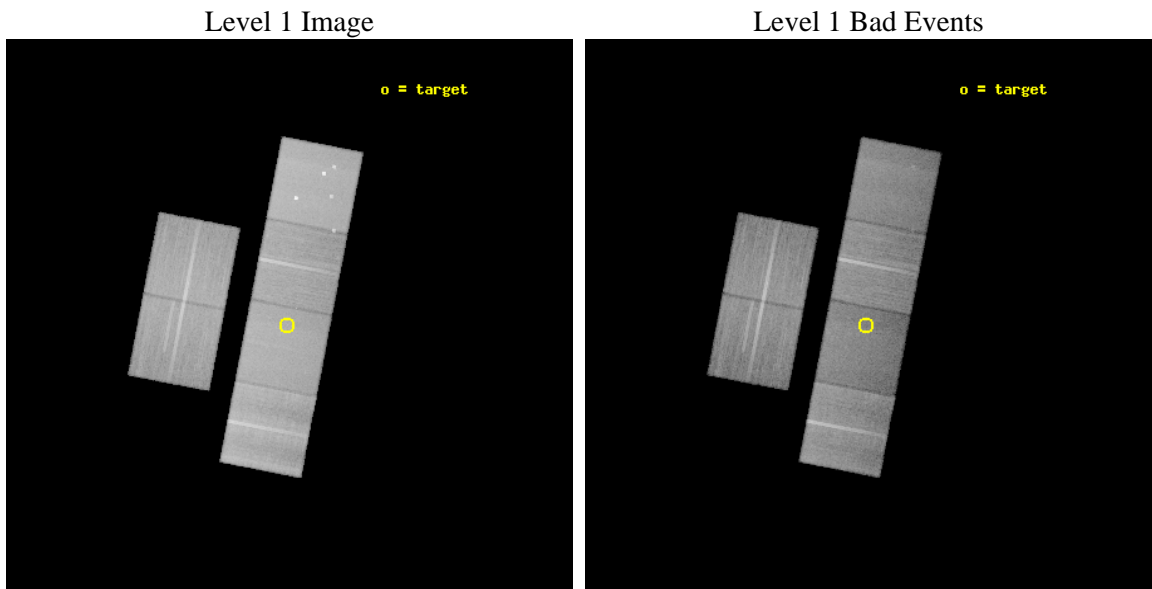
| | | |
|----------|--|---|
| seq_num | 900912 | Sequence number |
| obs_id | 11777 | Observation id |
| title | COMBH: Chandra Observations of M-sigma Black Holes | Proposal title |
| observer | Dr. Kayhan Gultekin | Principal investigator |
| object | NGC2778 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 138.101667 | Observer's specified target RA [deg] |
| dec_targ | 35.027528 | Observer's specified target Dec [deg] |
| ra_nom | 138.09766551872 | Nominal RA [deg] |
| dec_nom | 35.031091722455 | Nominal Dec [deg] |
| roll_nom | 100.94470232262 | Nominal Roll [deg] |
| revision | 2 | Processing version of data |
| ontime | 29554.72336477 | Sum of GTIs [s] |
| livetime | 29180.483661808 | Livetime [s] |
| ontime2 | 29554.764404774 | Sum of GTIs [s] |
| ontime3 | 29554.600244761 | Sum of GTIs [s] |
| ontime5 | 29554.682324767 | Sum of GTIs [s] |
| ontime6 | 29551.400244474 | Sum of GTIs [s] |
| ontime7 | 29554.72336477 | Sum of GTIs [s] |
| ontime8 | 29551.318114996 | Sum of GTIs [s] |
| l2events | 406152 | Number of level 2 events |



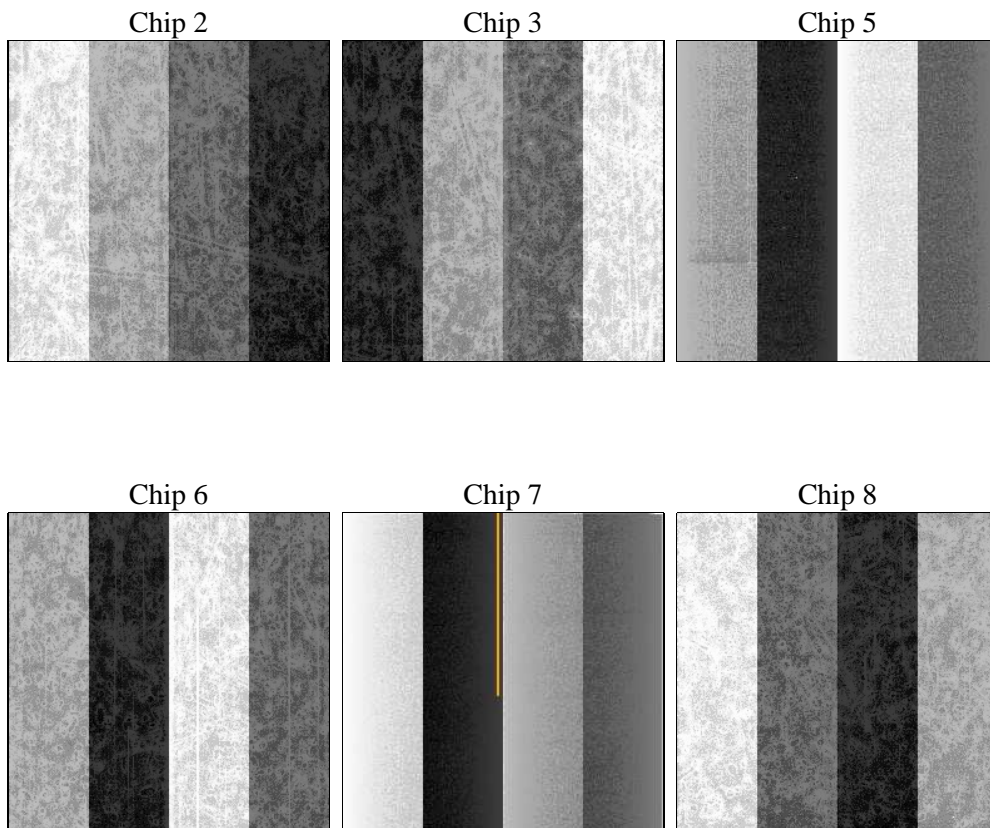
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 29800.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5 | Processing system revision | ontime | 29554.72336477 | Sum of GTIs [s] |
| caldsver | 4.4.10 | | ontime2 | 29554.764404774 | Sum of GTIs [s] |
| date | 2012-06-19T07:52:58 | Date and time of file creation | ontime3 | 29554.600244761 | Sum of GTIs [s] |
| revision | 2 | Processing version of data | ontime5 | 29554.682324767 | Sum of GTIs [s] |
| | | | ontime6 | 29551.400244474 | Sum of GTIs [s] |
| | | | ontime7 | 29554.72336477 | Sum of GTIs [s] |
| | | | ontime8 | 29551.318114996 | Sum of GTIs [s] |
| | | | l1events | 1814987 | Number of level 1 events |

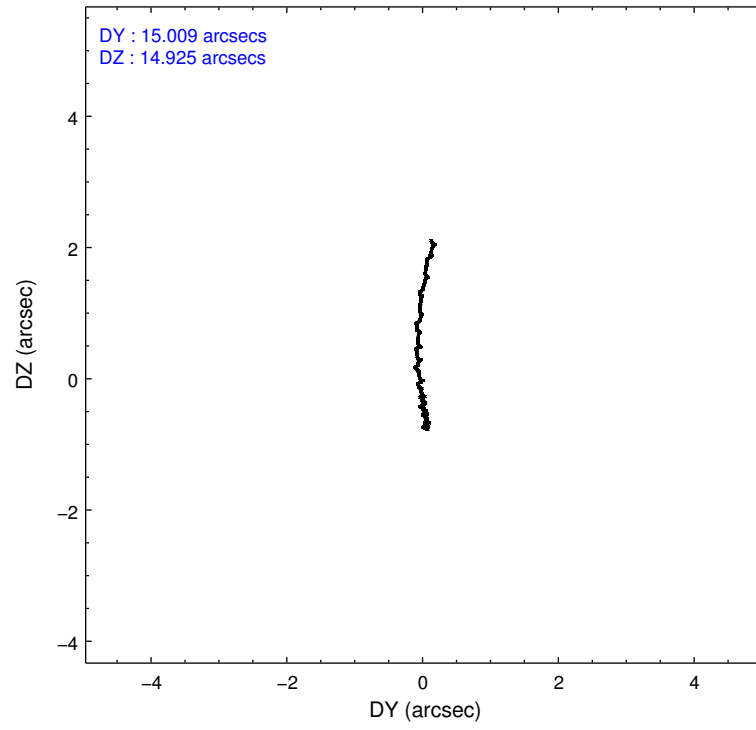
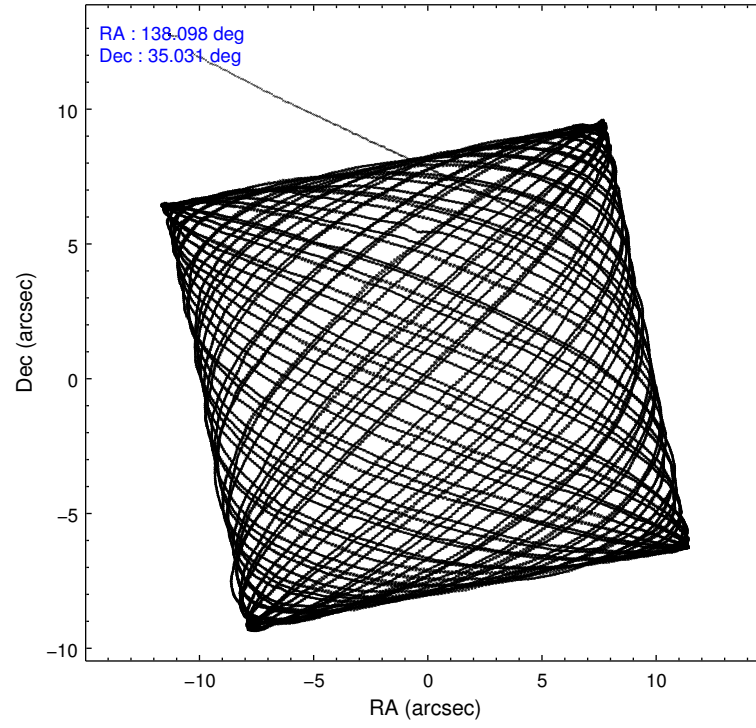
2.1.4 Events

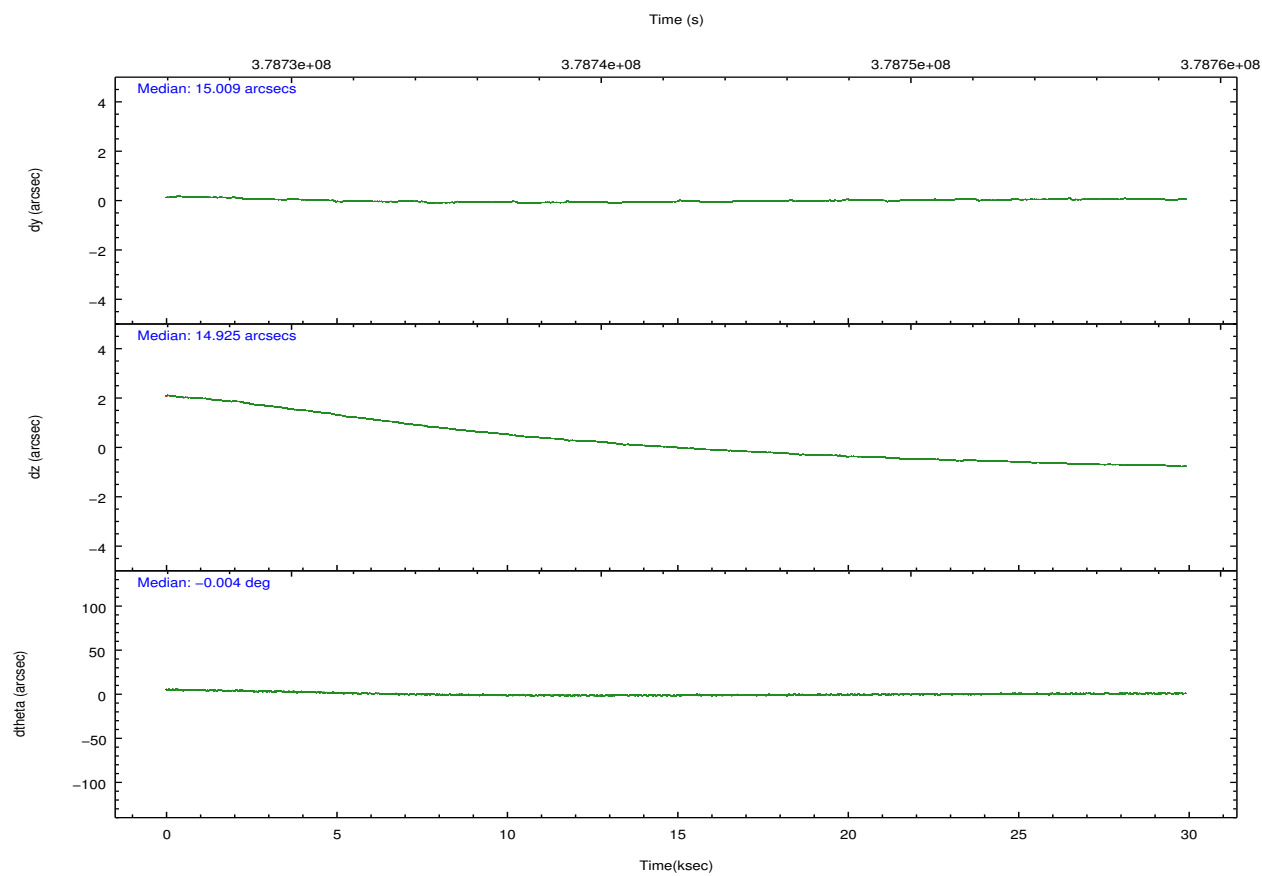
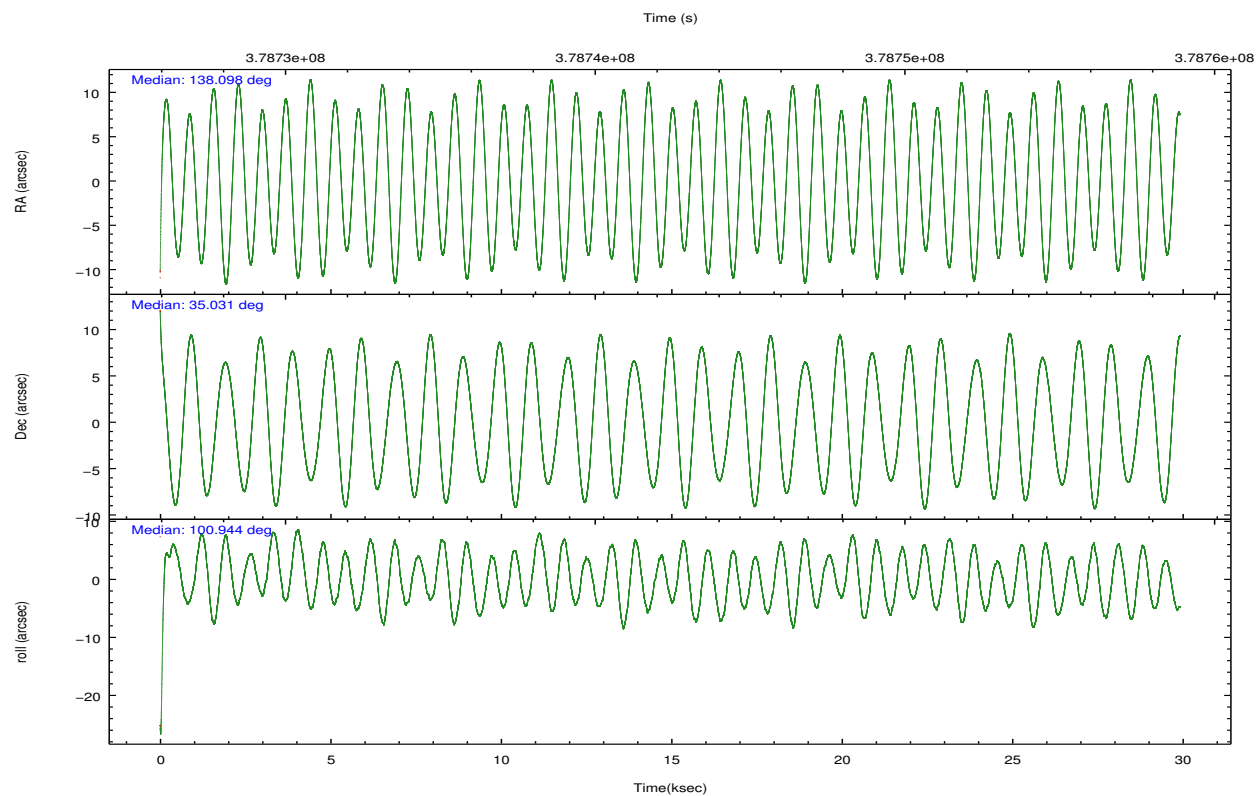
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|--------|--------|
| level 1 events | 275313 | 250028 | 385843 | 263522 | 303182 | 337099 | grade 0 events | 9365 | 8736 | 26591 | 10136 | 12724 | 24305 |
| rejected events | 248624 | 225335 | 190032 | 235171 | 165104 | 252778 | | 3% | 3% | 6% | 3% | 4% | 7% |
| rejected % | 90% | 90% | 49% | 89% | 54% | 74% | grade 1 events | 152 | 156 | 849 | 118 | 423 | 315 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 6637 | 5492 | 56548 | 6276 | 28385 | 20334 |
| | | | | | | | | 2% | 2% | 14% | 2% | 9% | 6% |
| | | | | | | | grade 3 events | 2783 | 2659 | 7306 | 2971 | 12673 | 9044 |
| | | | | | | | | 1% | 1% | 1% | 1% | 4% | 2% |
| | | | | | | | grade 4 events | 2815 | 2760 | 6981 | 2898 | 12495 | 8184 |
| | | | | | | | | 1% | 1% | 1% | 1% | 4% | 2% |
| | | | | | | | grade 5 events | 9432 | 10568 | 28965 | 10984 | 31843 | 16021 |
| | | | | | | | | 3% | 4% | 7% | 4% | 10% | 4% |
| | | | | | | | grade 6 events | 5092 | 5049 | 98409 | 6074 | 71824 | 22462 |
| | | | | | | | | 1% | 2% | 25% | 2% | 23% | 6% |
| | | | | | | | grade 7 events | 239037 | 214608 | 160194 | 224065 | 132815 | 236434 |
| | | | | | | | | 86% | 85% | 41% | 85% | 43% | 70% |

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 | FAINT | FAINT | CCD I0 on | N | N |
| Observation mode | POINTING | POINTING | CCD I1 on | N | N |
| [deg] Pointing RA | 138.119878 | 138.0976655187172 | CCD I2 on | O1 | Y |
| [deg] Pointing Dec | 35.010690 | 35.03109172245507 | CCD I3 on | O2 | Y |
| [deg] Pointing Roll | 100.775342 | 100.944702322618 | CCD S0 on | N | N |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | CCD S1 on | Y | Y |
| [mm] SIM defocus | 0 | 0.001444936568705701 | CCD S2 on | Y | Y |
| [mm] SIM translation stage pos | -190.132523 | -190.1400660498719 | CCD S3 on | Y | Y |
| [mm] SIM translation stage offset | 0 | 0.00754346686406393 | CCD S4 on | Y | Y |
| [s] Observation start time (MET) | 378727560.184000 | 378726313.13847 | CCD S5 on | N | N |
| Observation start date | 2010-01-01T10:04:54 | 2010-01-01T09:45:13 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation end time (MET) | 378757360.184000 | 378758335.16509 | On-chip summing requested | N | N |
| Observation end date | 2010-01-01T18:21:34 | 2010-01-01T18:38:55 | Subarray requested | NONE | NONE |
| Read mode | TIMED | TIMED | Alternating exposures requested | N | N |
| | | | [s] Primary exposure time | 0.000000 | 3.2 |

2.3 Aspect



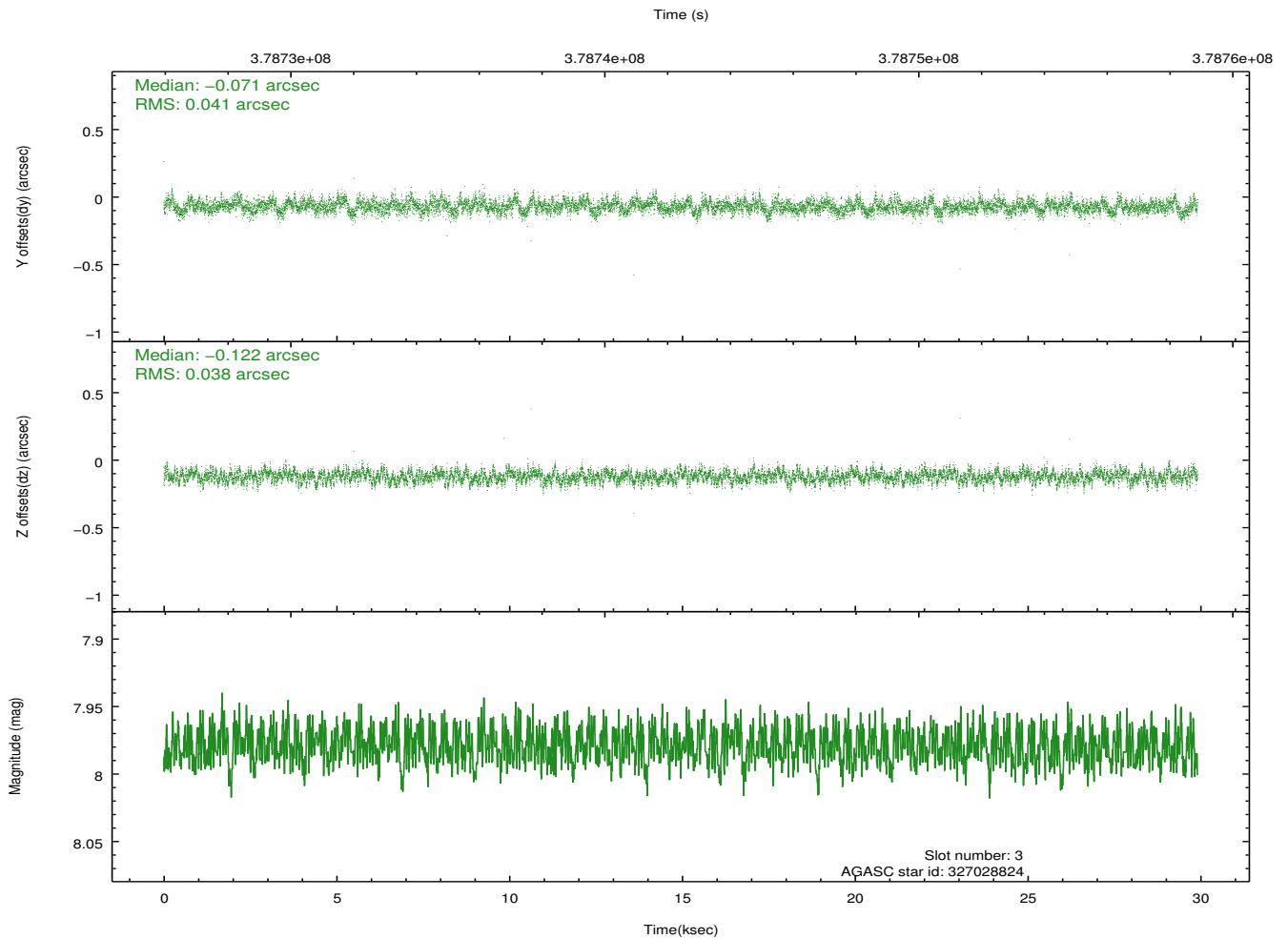
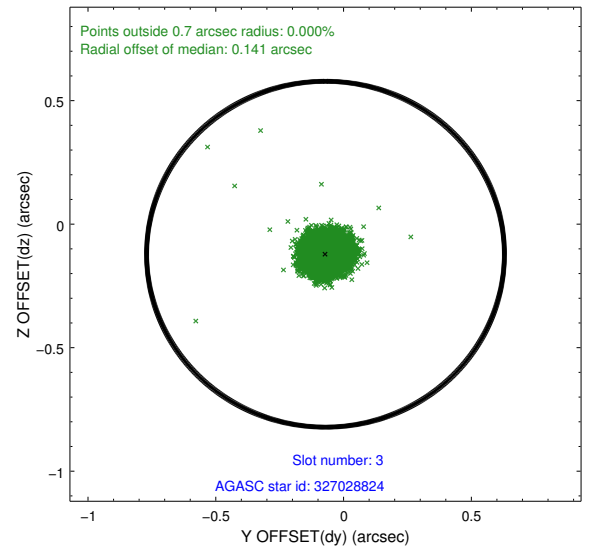
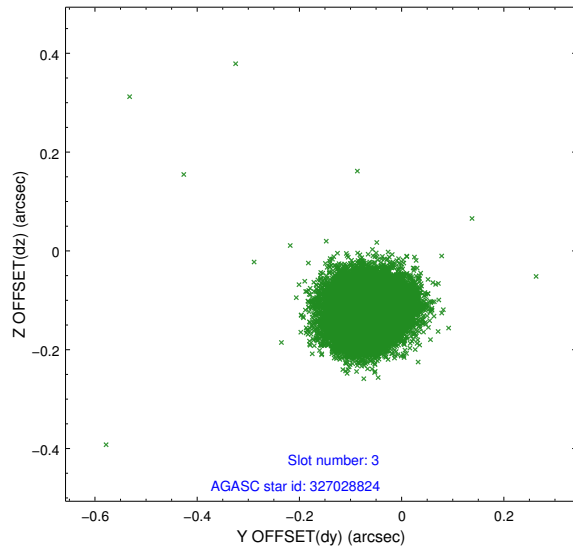


Slot Statistics

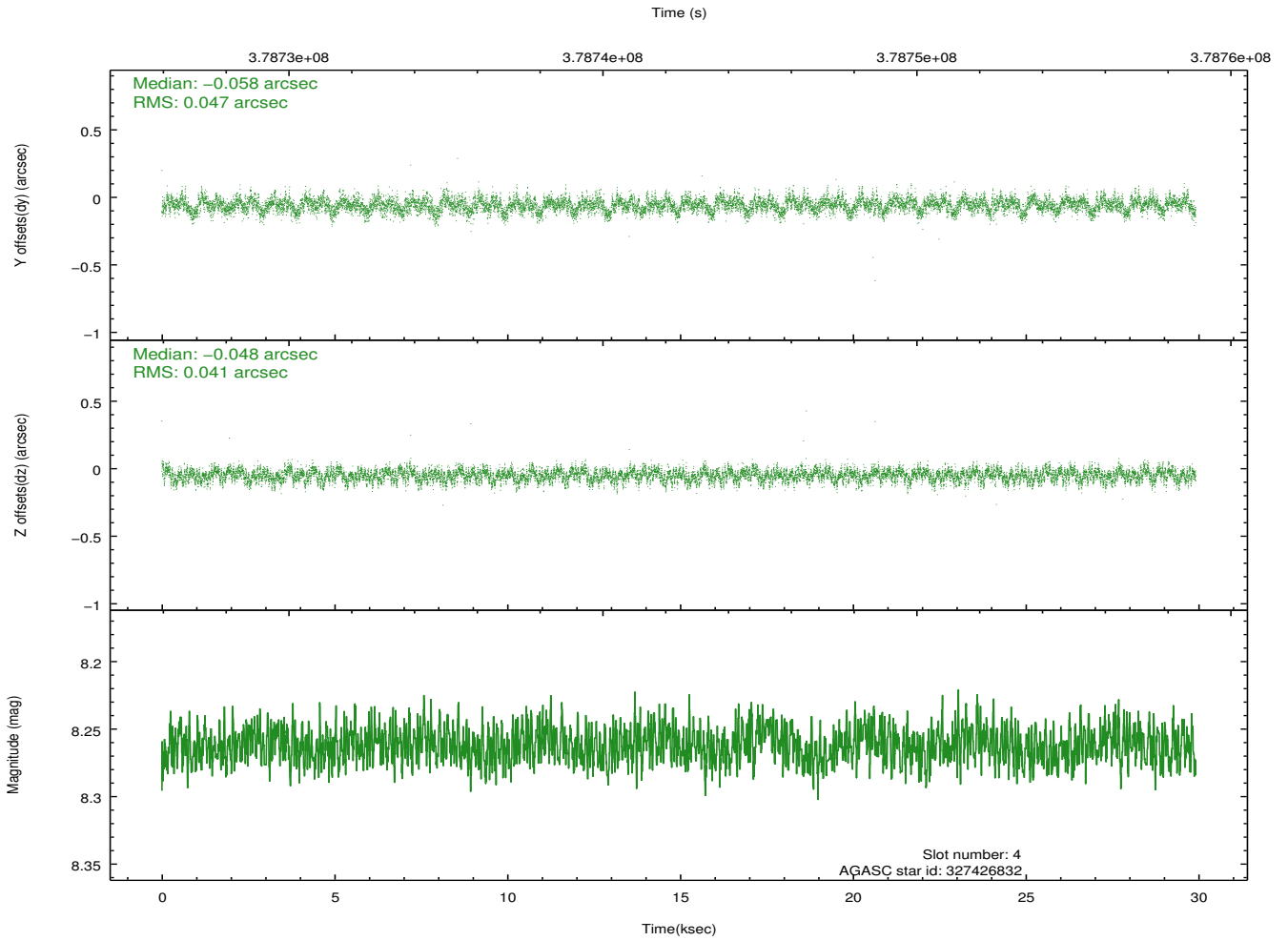
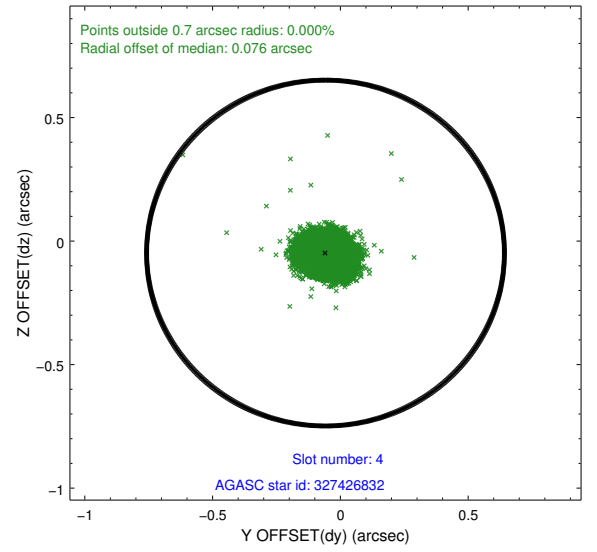
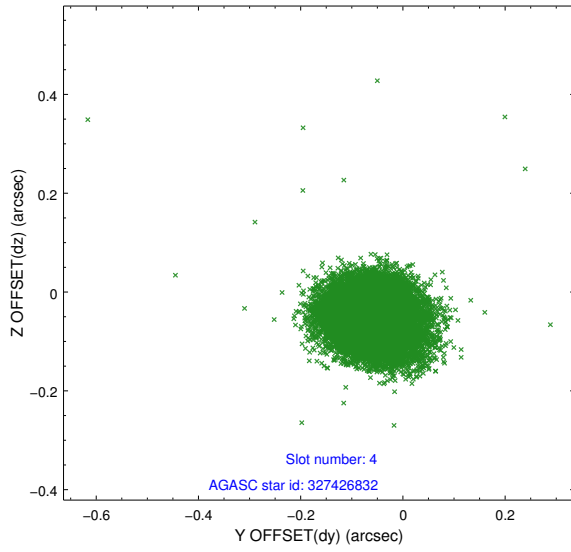
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | ACIS-S-2 | 6.89 | 7297 | -0.085 | -0.026 | 0.016 | 0.023 | 0.000000 | 0.000000 | -768.06 | -1736.60 |
| 1 | FID | ACIS-S-4 | 6.98 | 7295 | 0.186 | 0.049 | 0.010 | 0.017 | 0.000000 | 0.000000 | 2145.45 | 171.89 |
| 2 | FID | ACIS-S-5 | 7.01 | 7295 | -0.134 | -0.012 | 0.012 | 0.018 | 0.000000 | 0.000000 | -1820.86 | 165.58 |
| 3 | GUIDE | 327028824 | 7.98 | 14592 | -0.071 | -0.122 | 0.059 | 0.095 | 137.886233 | 34.726760 | -874.08 | 869.98 |
| 4 | GUIDE | 327426832 | 8.26 | 14586 | -0.058 | -0.048 | 0.066 | 0.106 | 137.535680 | 35.412785 | 1747.31 | 1412.73 |
| 5 | GUIDE | 327428696 | 7.02 | 14588 | -0.125 | -0.100 | 0.066 | 0.105 | 137.979969 | 35.482110 | 1743.98 | 85.64 |
| 6 | GUIDE | 327549584 | 8.97 | 14570 | 0.124 | 0.314 | 0.085 | 0.139 | 138.355585 | 35.106012 | 208.48 | -745.89 |
| 7 | GUIDE | 327026168 | 9.47 | 14579 | 0.132 | -0.047 | 0.102 | 0.163 | 137.640028 | 34.611234 | -1143.64 | 1665.28 |

2.4 Star Slots

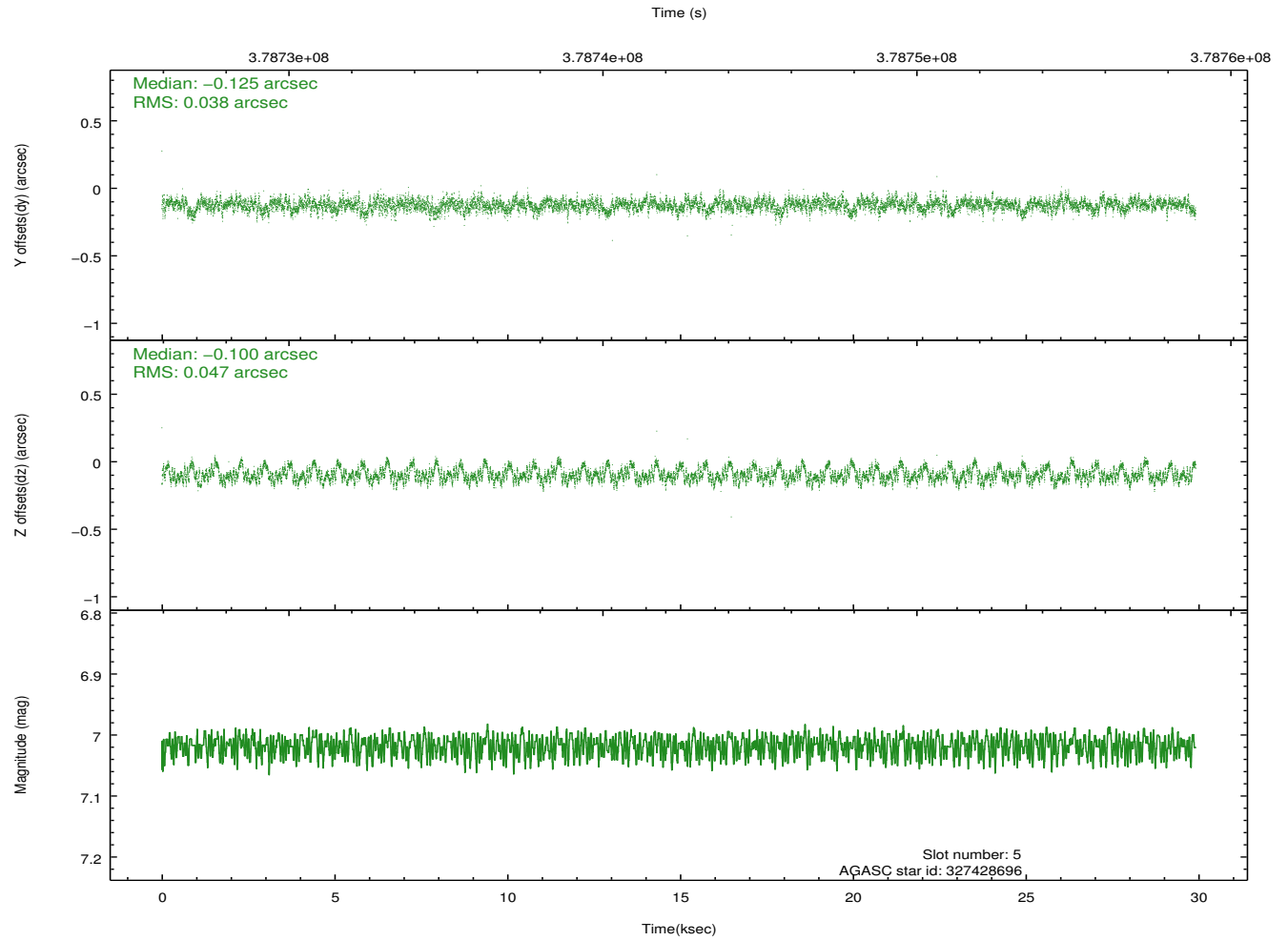
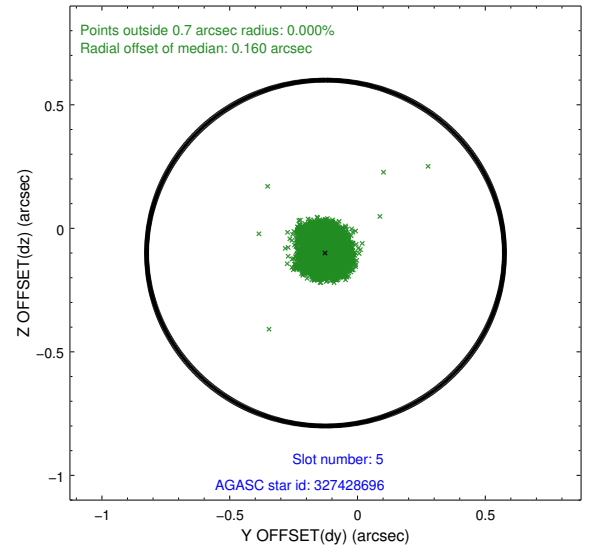
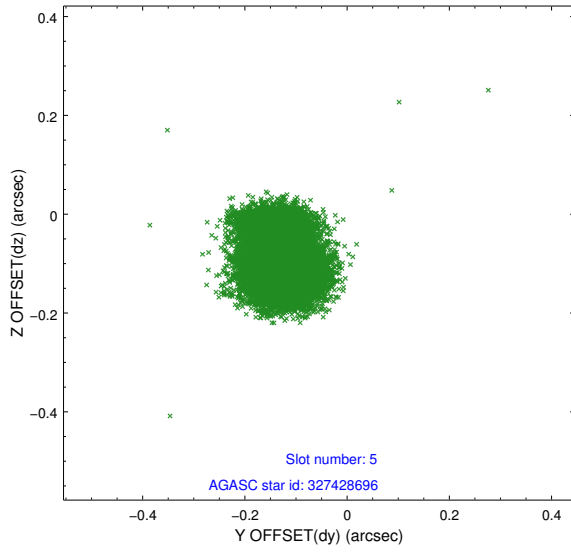
2.4.1 Slot 3



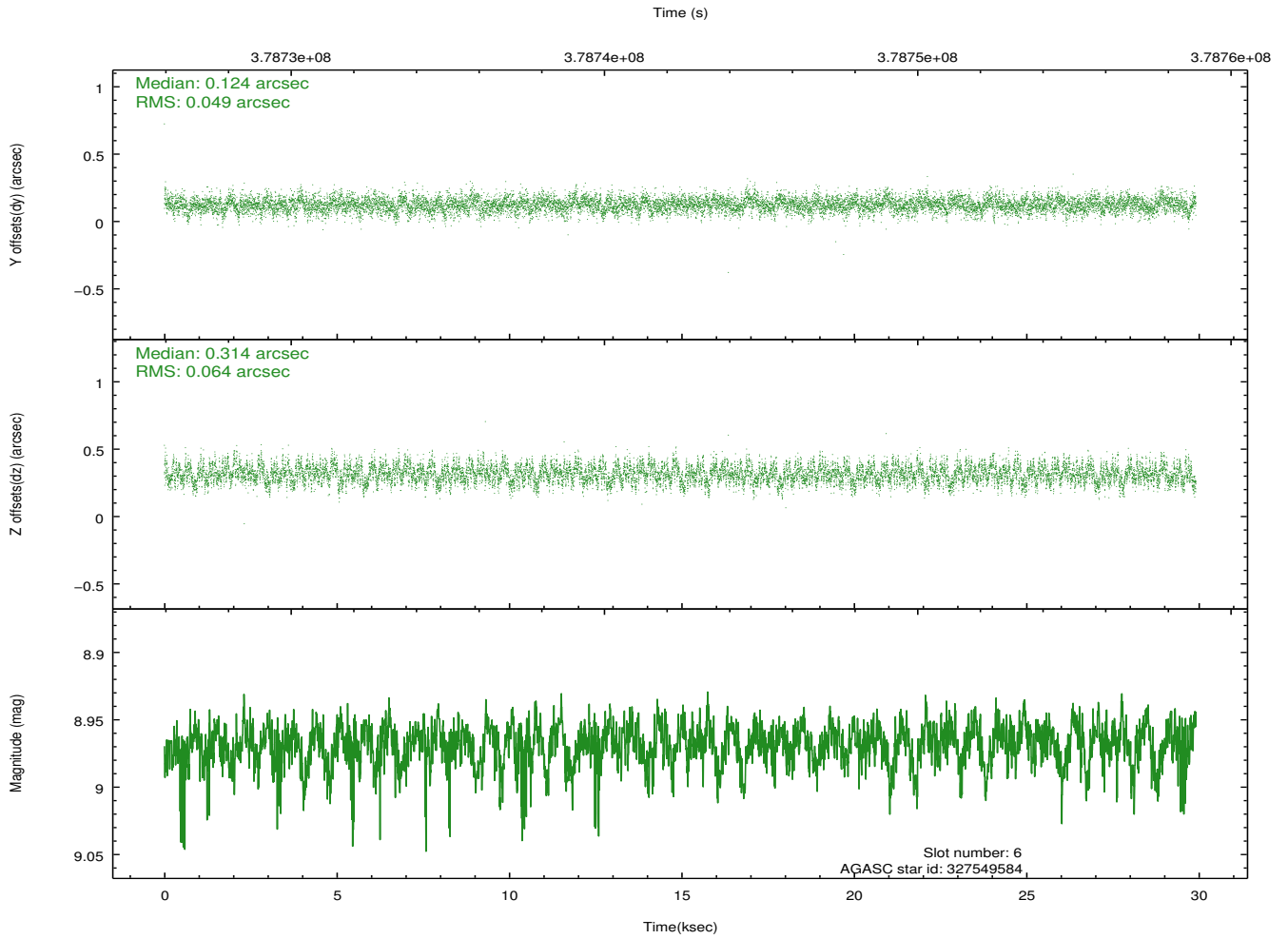
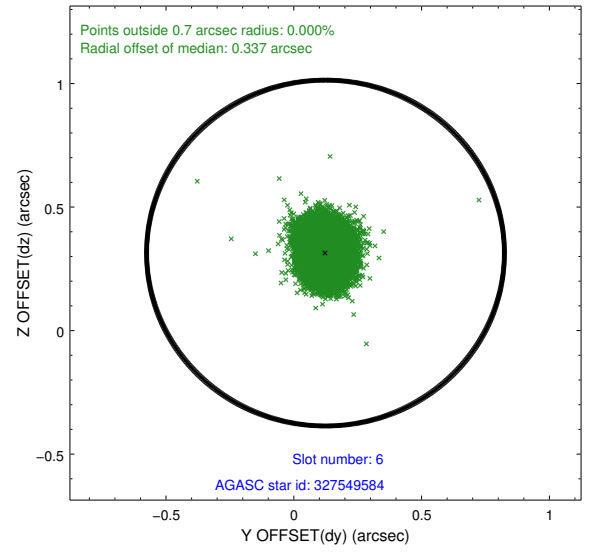
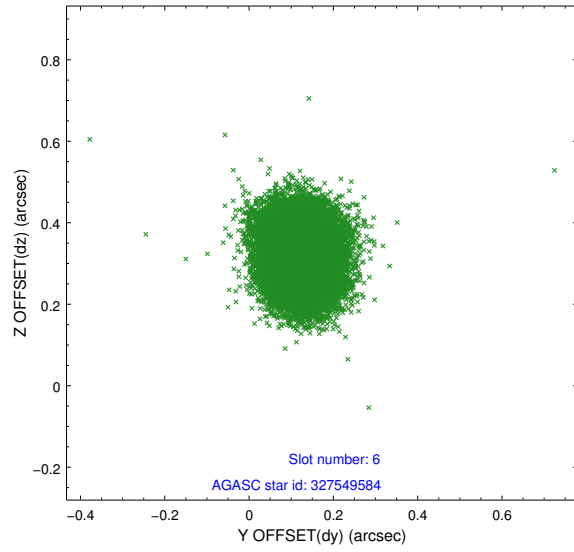
2.4.2 Slot 4



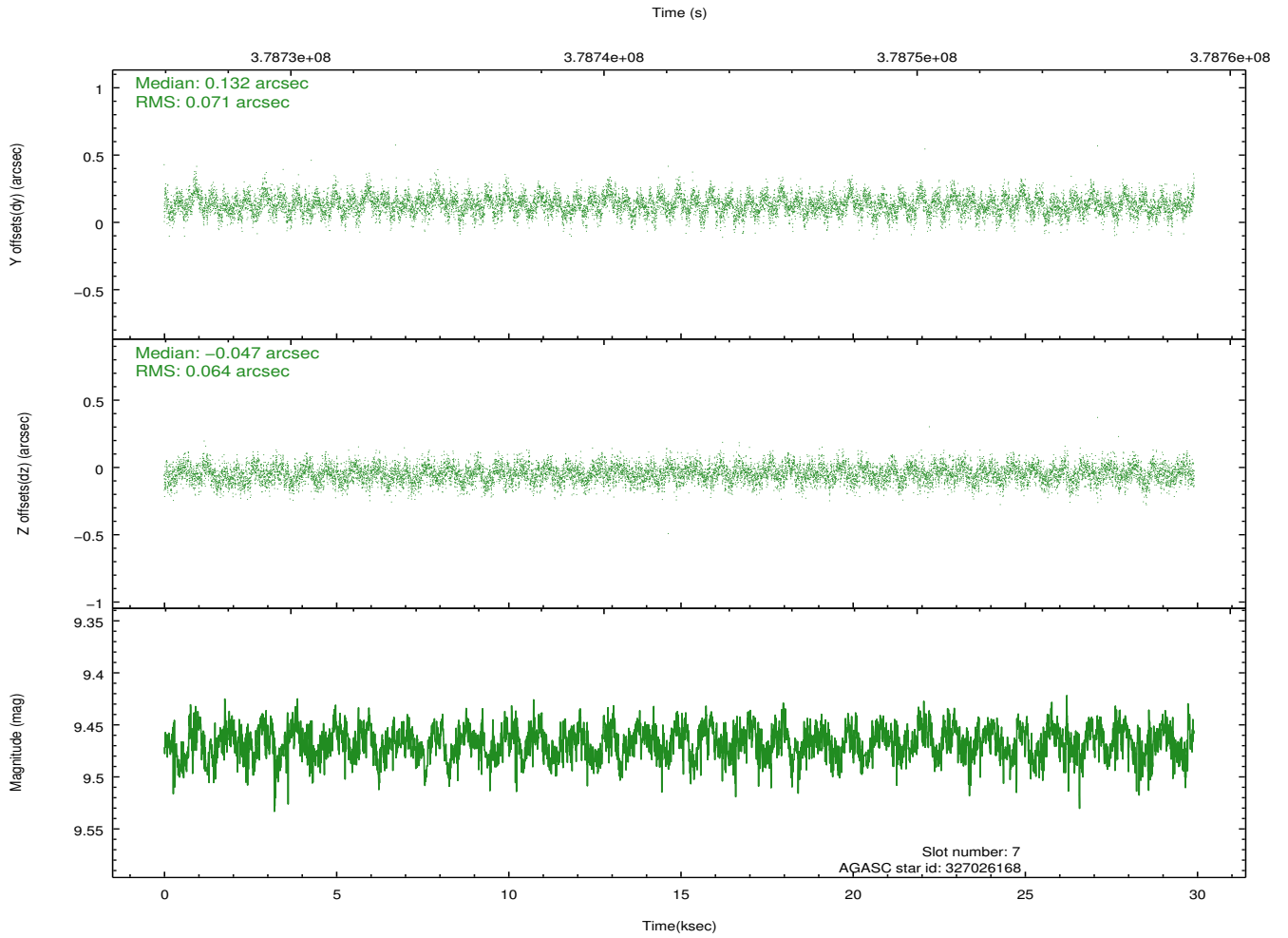
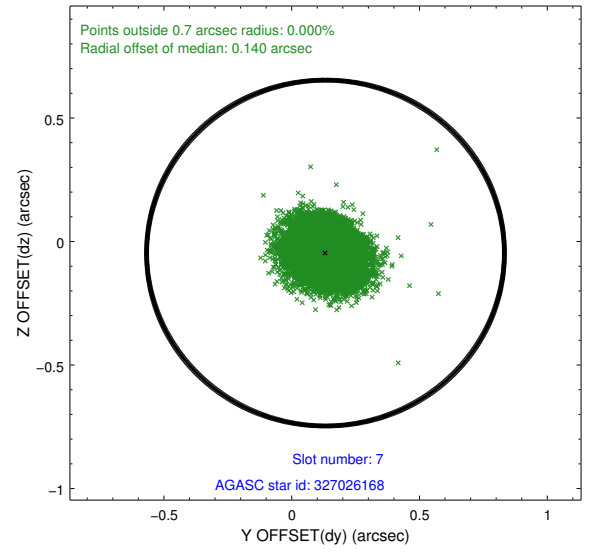
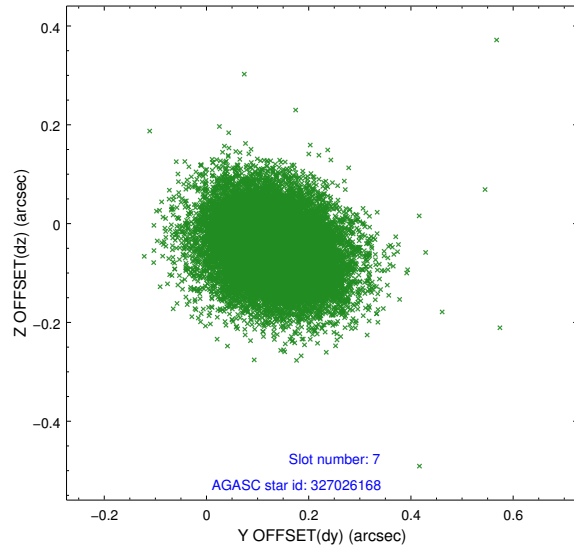
2.4.3 Slot 5



2.4.4 Slot 6

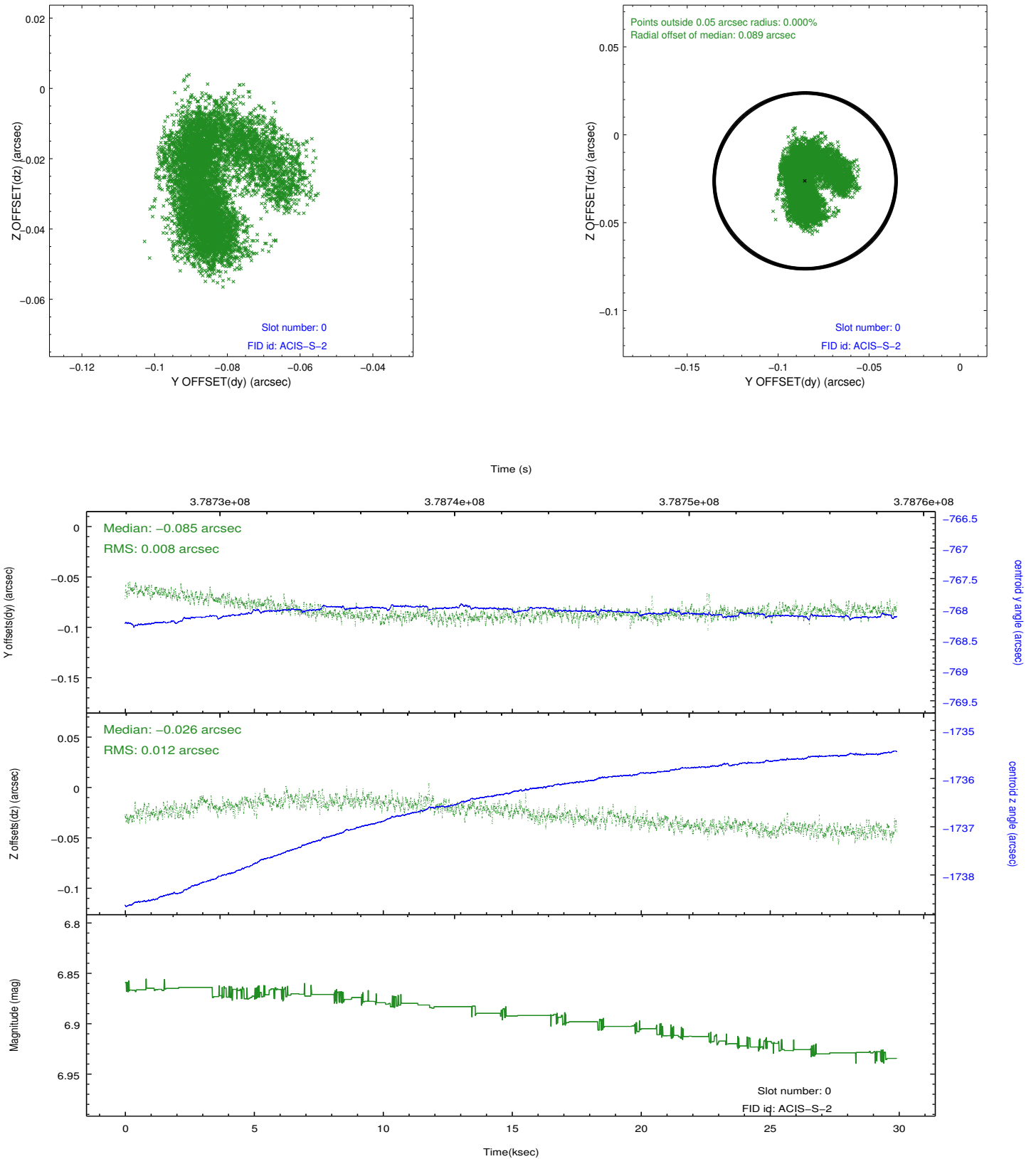


2.4.5 Slot 7

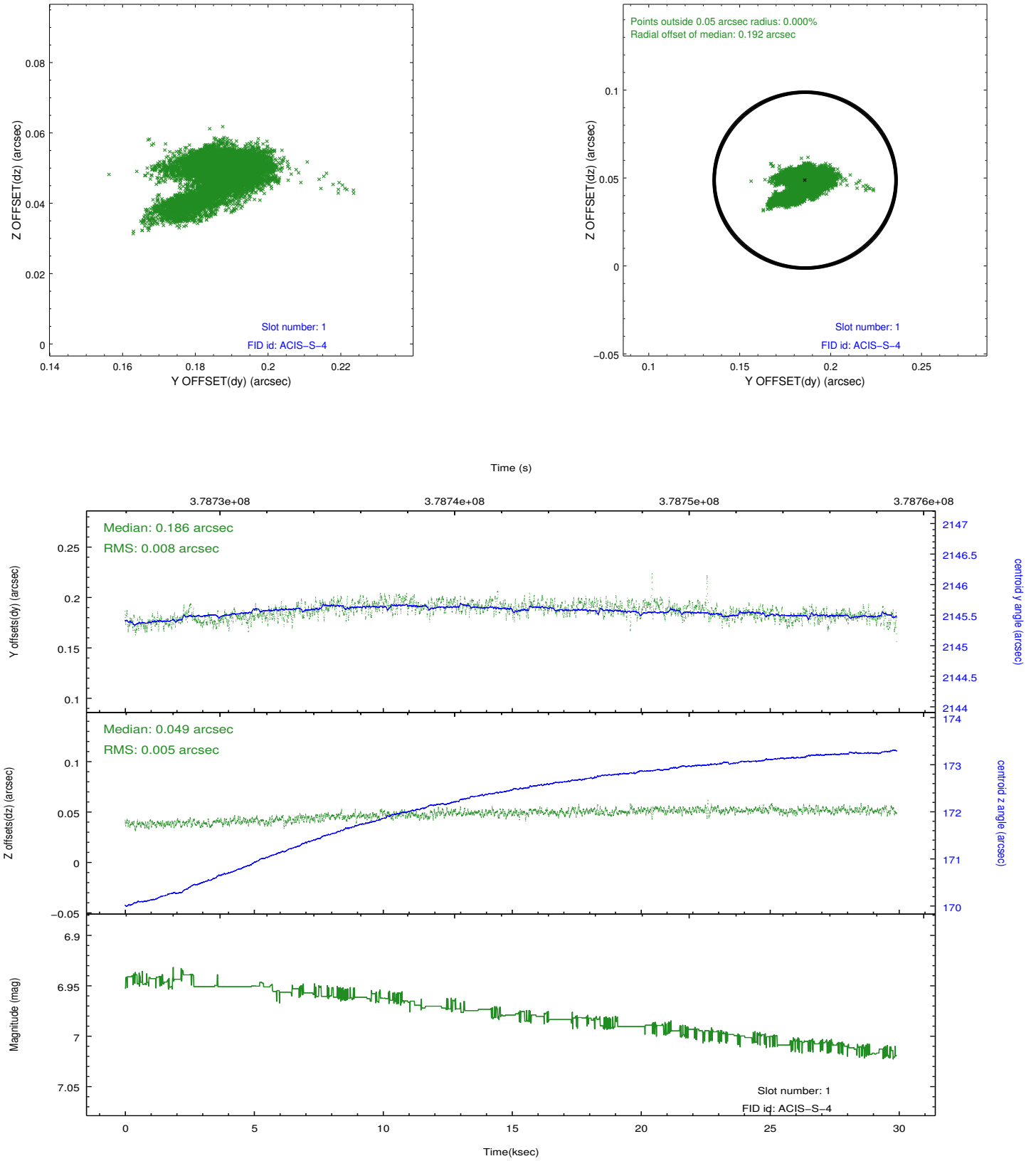


2.5 FID Slots

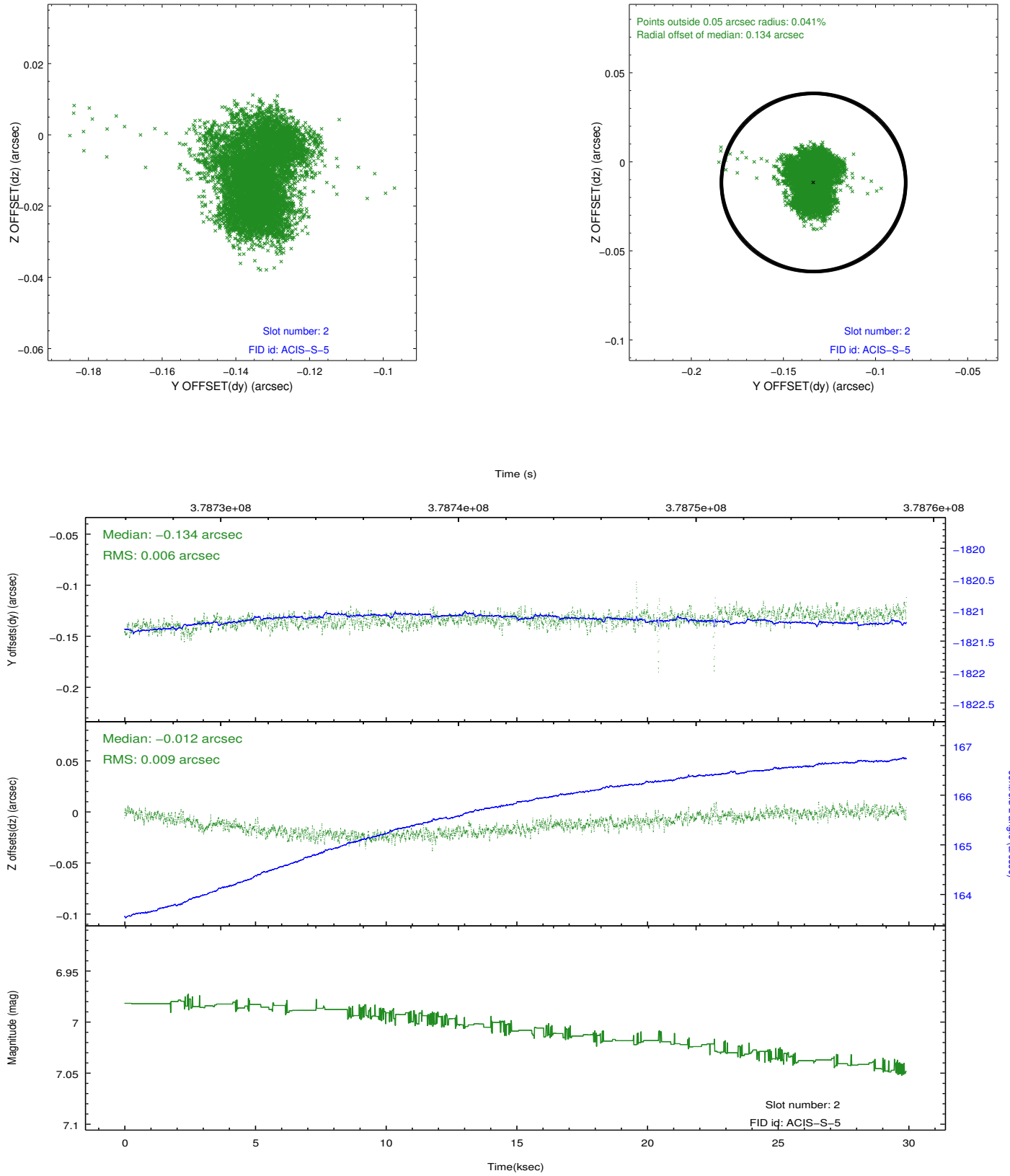
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|-----------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2012.06.25 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 29.554723368466 |

A.2 Comments

Joint Proposal: NRAO