

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22015 - L2 Version 1
Chandra X-Ray Center

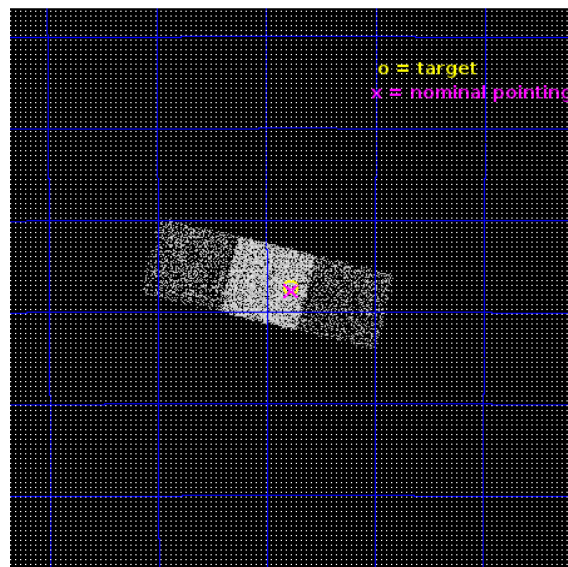
L2 Processing Date : May 11 2019

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1 Front

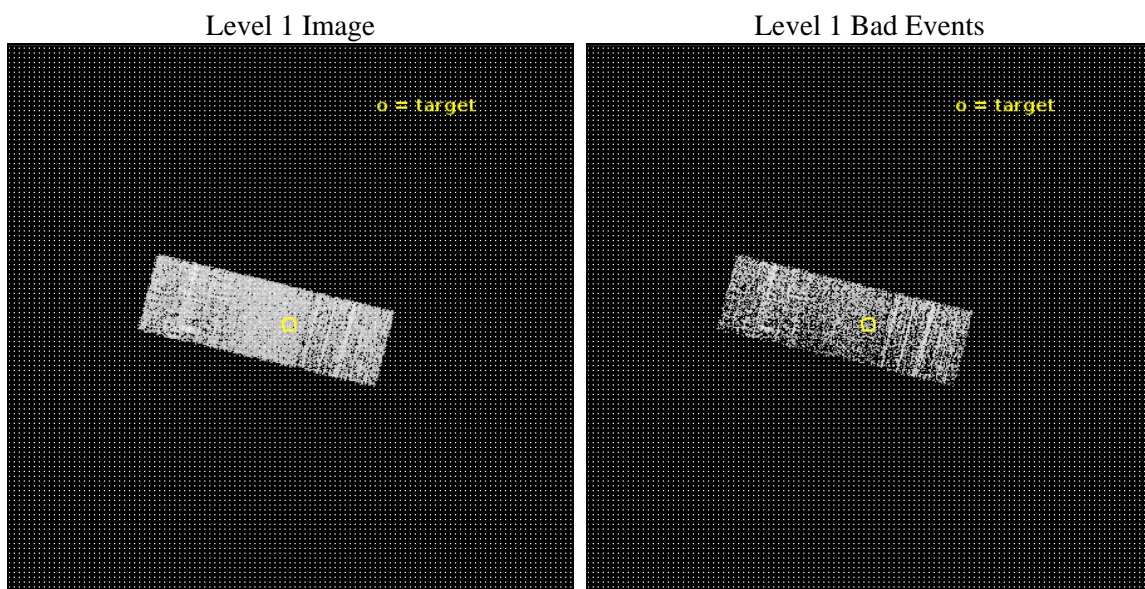
| | | |
|----------|---|---|
| seq_num | 703835 | Sequence number |
| obs_id | 22015 | Observation id |
| title | Timely Assessment of the X-ray Flux of Newly Discovered Quadruply Lensed Quasars | Proposal title |
| observer | David Pooley | Principal investigator |
| object | DES J0420-4037 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 65.195 | Observer's specified target RA [deg] |
| dec_targ | -40.624083 | Observer's specified target Dec [deg] |
| ra_nom | 65.192449740644 | Nominal RA [deg] |
| dec_nom | -40.62852685714 | Nominal Dec [deg] |
| roll_nom | 194.15460400735 | Nominal Roll [deg] |
| revision | 1 | Processing version of data |
| ontime | 1608.7702143192 | Sum of GTIs [s] |
| livetime | 1587.7504471097 | Livetime [s] |
| ontime6 | 1608.7291743755 | Sum of GTIs [s] |
| ontime7 | 1608.7702143192 | Sum of GTIs [s] |
| ontime8 | 1608.6881343126 | Sum of GTIs [s] |
| l2events | 8881 | Number of level 2 events |



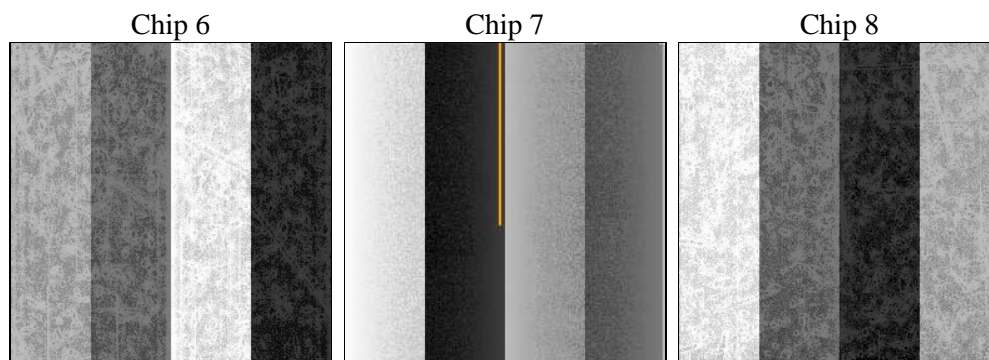
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 1500.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.7.1 | Processing system revision | ontime | 1608.7702143192 | Sum of GTIs [s] |
| caldsver | 4.8.2 | | ontime6 | 1608.7291743755 | Sum of GTIs [s] |
| date | 2019-05-11T05:50:36 | Date and time of file creation | ontime7 | 1608.7702143192 | Sum of GTIs [s] |
| revision | 1 | Processing version of data | ontime8 | 1608.6881343126 | Sum of GTIs [s] |
| | | | l1events | 43713 | Number of level 1 events |

2.1.4 Events

| | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|
| level 1 events | 12912 | 15181 | 15620 |
| rejected events | 11610 | 8692 | 11674 |
| rejected % | 89% | 57% | 74% |

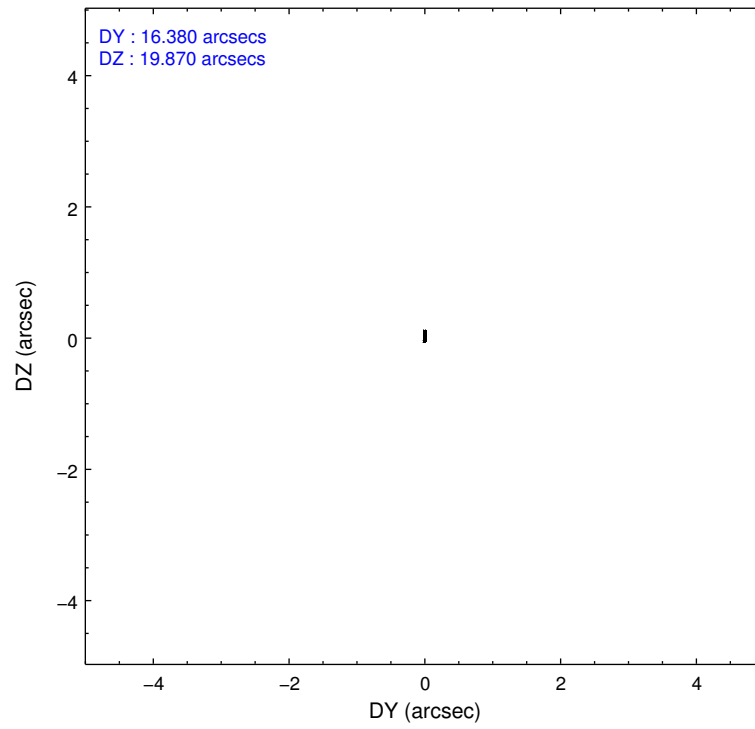
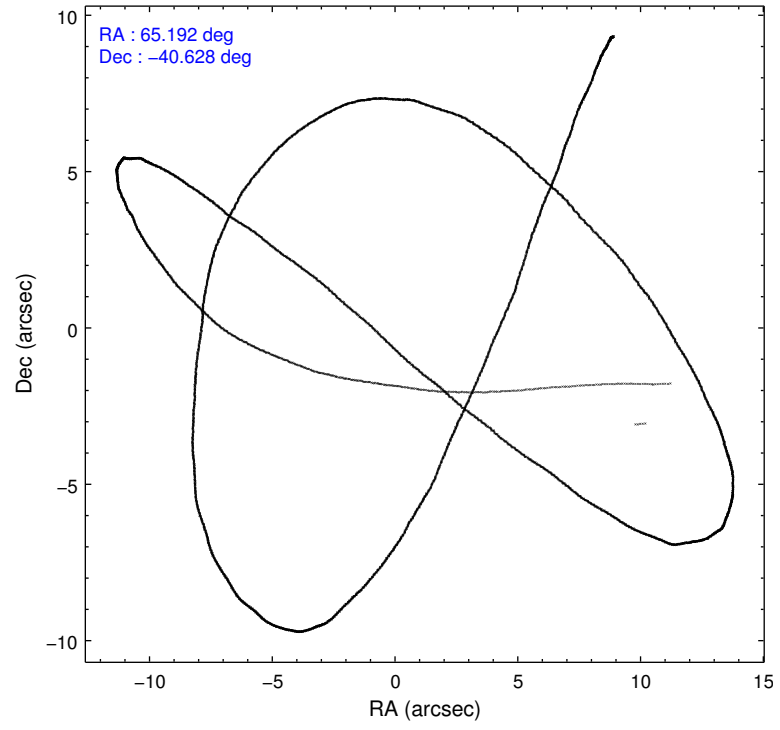
| | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|
| grade 0 events | 341 | 537 | 1079 |
| | 2% | 3% | 6% |
| grade 1 events | 3 | 22 | 8 |
| | 0% | 0% | 0% |
| grade 2 events | 400 | 1328 | 989 |
| | 3% | 8% | 6% |
| grade 3 events | 90 | 509 | 419 |
| | 0% | 3% | 2% |
| grade 4 events | 110 | 481 | 357 |
| | 0% | 3% | 2% |
| grade 5 events | 395 | 1440 | 755 |
| | 3% | 9% | 4% |
| grade 6 events | 364 | 3657 | 1102 |
| | 2% | 24% | 7% |
| grade 7 events | 11209 | 7207 | 10911 |
| | 86% | 47% | 69% |

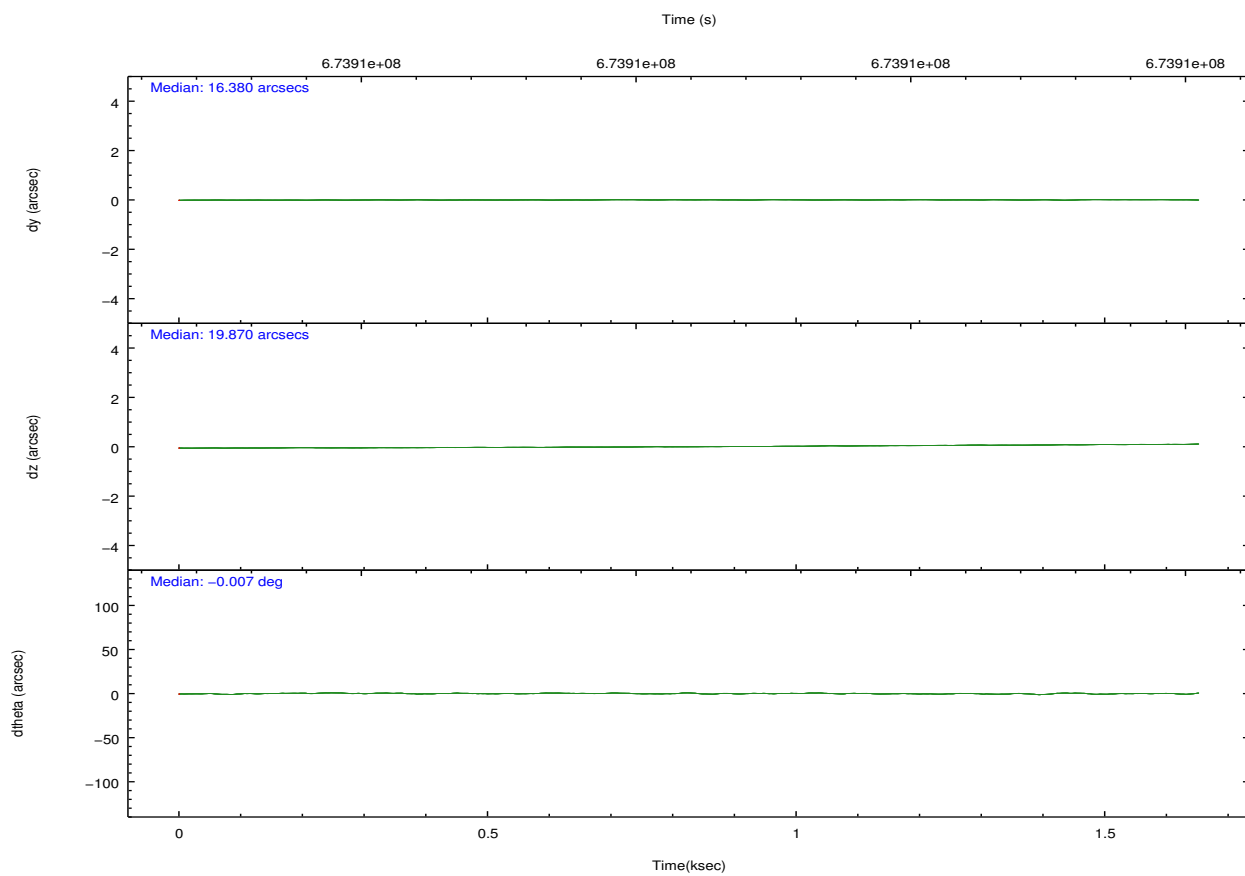
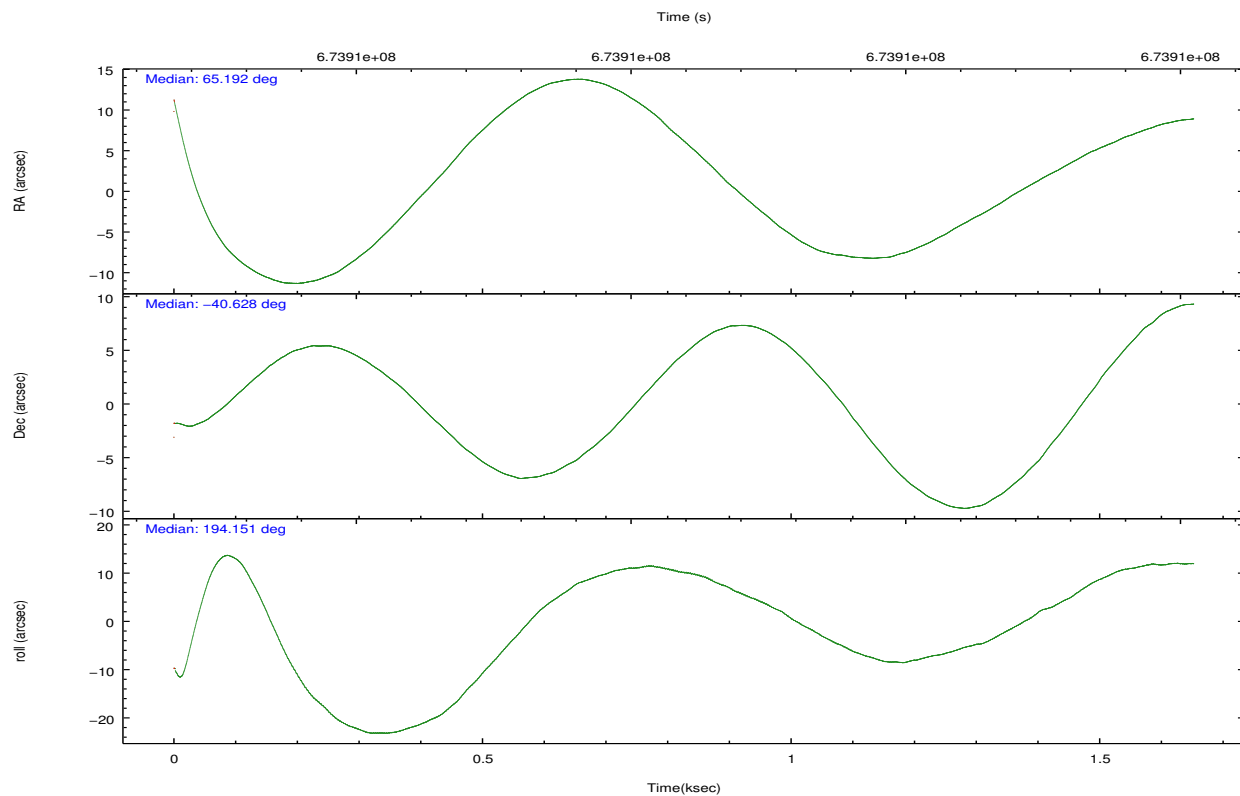
2.2 Compared Parameters

| Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|
| Instrument | ACIS | ACIS |
| Detector | ACIS-678 | ACIS-678 |
| Grating | NONE | NONE |
| Data mode | VFAINT | VFAINT |
| Observation mode | POINTING | POINTING |
| [deg] Pointing RA | 65.218307 | 65.19244974064365 |
| [deg] Pointing Dec | -40.609245 | -40.62852685713966 |
| [deg] Pointing Roll | 194.015171 | 194.1546040073525 |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 |
| [mm] SIM defocus | 0 | 0.001444936568705701 |
| [mm] SIM translation stage pos | -190.132523 | -190.1400660498719 |
| [mm] SIM translation stage offset | 0 | 0.00754346686406393 |
| [s] Observation start time (MET) | 673911413.184000 | 673910130.62069 |
| Observation start date | 2019-05-10T21:35:44 | 2019-05-10T21:15:30 |
| [s] Observation end time (MET) | 673912913.184000 | 673913546.9458899 |
| Observation end date | 2019-05-10T22:00:44 | 2019-05-10T22:12:26 |
| Read mode | TIMED | TIMED |

| Parameter | Planned | Actual |
|---------------------------------------|-----------|---------|
| Obspar format version number | 7 | 7 |
| Obspar file type | PREDICTED | ACTUAL |
| Obspar update status | NONE | UPDATED |
| CCD I0 on | N | N |
| CCD I1 on | N | N |
| CCD I2 on | N | N |
| CCD I3 on | N | N |
| CCD S0 on | N | N |
| CCD S1 on | N | N |
| CCD S2 on | O2 | Y |
| CCD S3 on | Y | Y |
| CCD S4 on | O1 | Y |
| CCD S5 on | N | N |
| Number of optional ACIS chips dropped | 0 | 0 |
| On-chip summing requested | N | N |
| Subarray requested | NONE | NONE |
| Alternating exposures requested | N | N |
| [s] Primary exposure time | 0.000000 | 3.1 |

2.3 Aspect



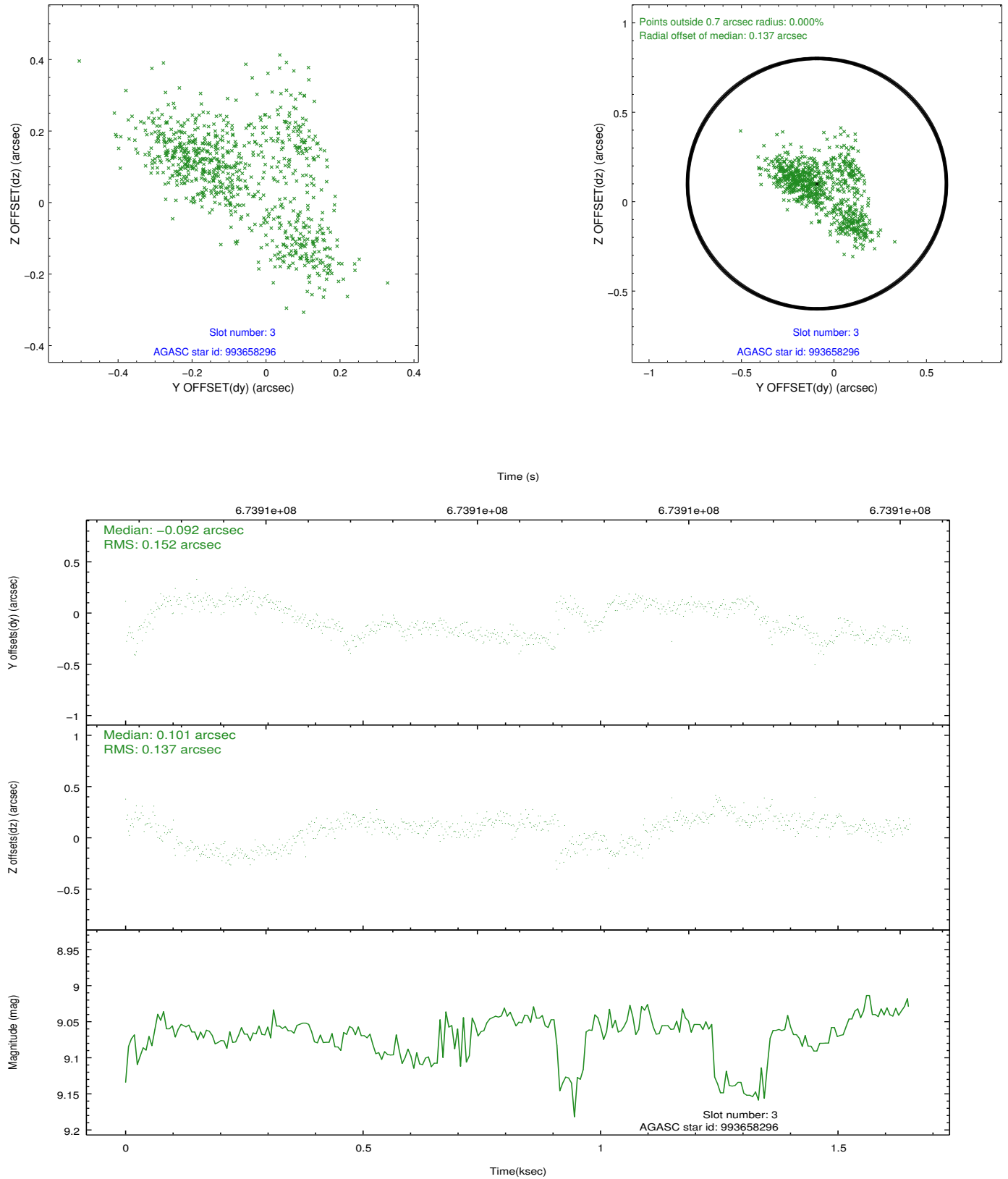


Slot Statistics

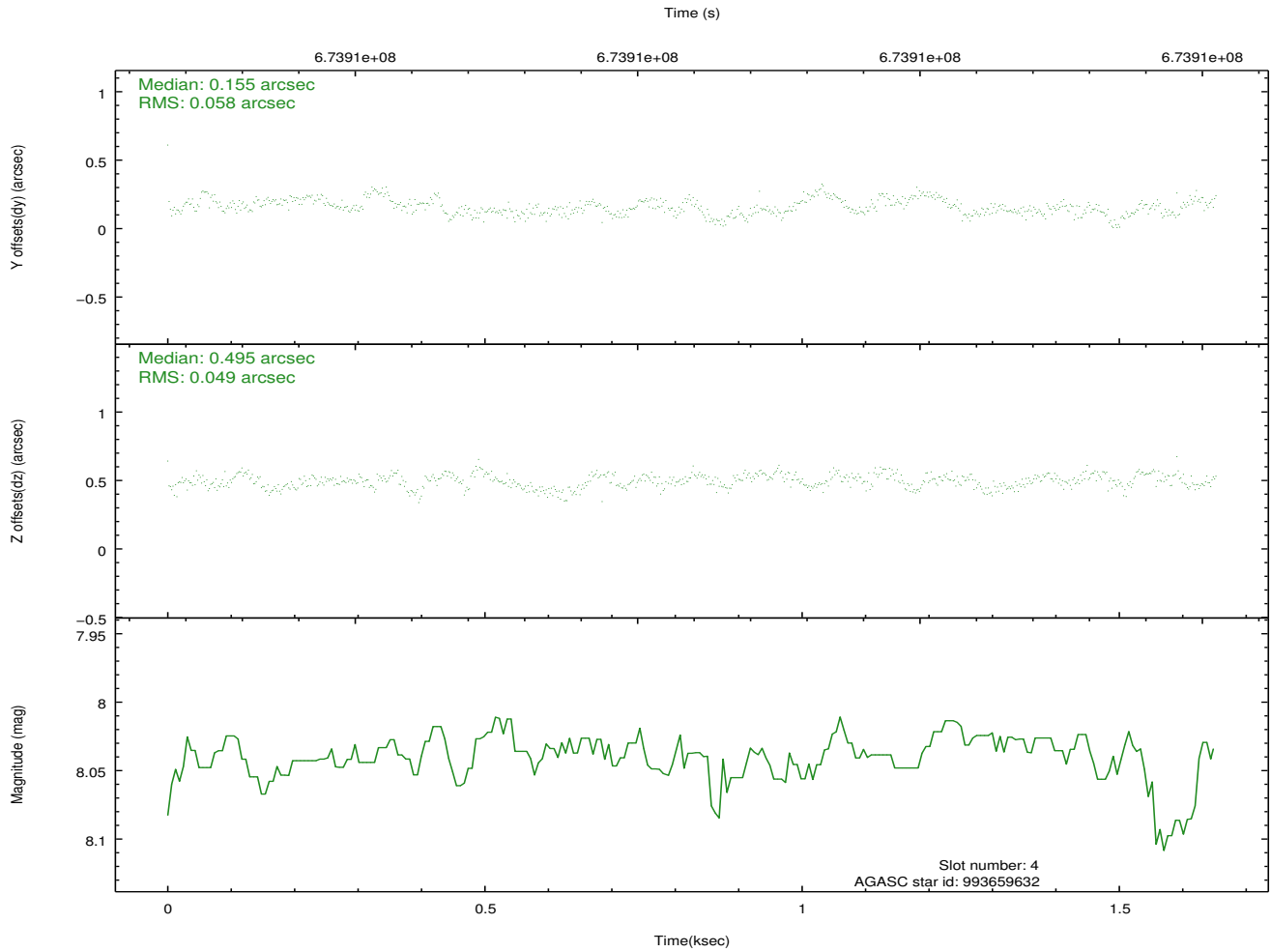
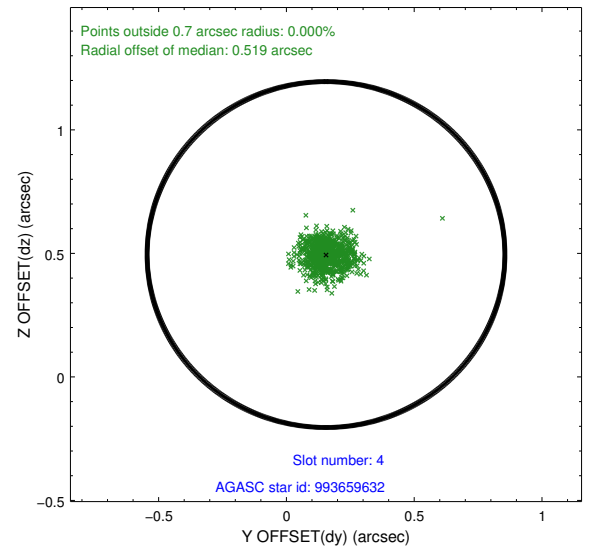
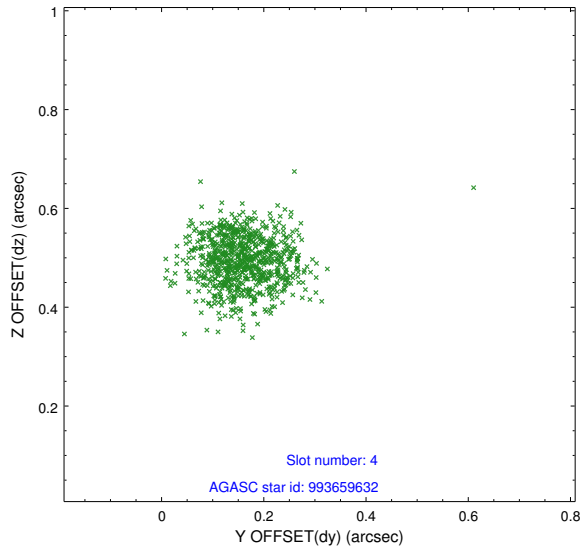
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|-----------|------|-------|----------|--------|--------|-------|-------|-----------|------------|----------|-------|
| 0 | FID | | ACIS-S-2 | 7.17 | 404 | 1.000 | -0.364 | -0.256 | 0.008 | 0.011 | 0.000000 | 0.000000 | -769.67 | -1741 |
| 1 | FID | | ACIS-S-4 | 7.31 | 404 | 1.000 | 0.876 | 0.244 | 0.005 | 0.010 | 0.000000 | 0.000000 | 2142.93 | 163 |
| 2 | FID | | ACIS-S-5 | 7.25 | 404 | 1.000 | -0.543 | 0.021 | 0.008 | 0.014 | 0.000000 | 0.000000 | -1817.67 | 161 |
| 3 | GUIDE | used | 993658296 | 9.06 | 805 | 1.000 | -0.092 | 0.101 | 0.217 | 0.357 | 66.096976 | -40.827476 | -2129.95 | 1353 |
| 4 | GUIDE | used | 993659632 | 8.04 | 806 | 1.000 | 0.155 | 0.495 | 0.080 | 0.126 | 65.900487 | -40.395301 | -2002.03 | -284 |
| 5 | GUIDE | used | 993659672 | 9.33 | 804 | 1.000 | -0.007 | -0.024 | 0.169 | 0.286 | 65.630113 | -40.782303 | -940.40 | 878 |
| 6 | GUIDE | used | 993659688 | 8.73 | 807 | 1.000 | 0.350 | 0.201 | 0.280 | 0.442 | 64.409269 | -40.078777 | 1701.01 | -2380 |
| 7 | GUIDE | used | 993660904 | 9.51 | 806 | 1.000 | -0.429 | -0.759 | 0.204 | 0.310 | 64.854337 | -41.342118 | 1595.33 | 2320 |

2.4 Star Slots

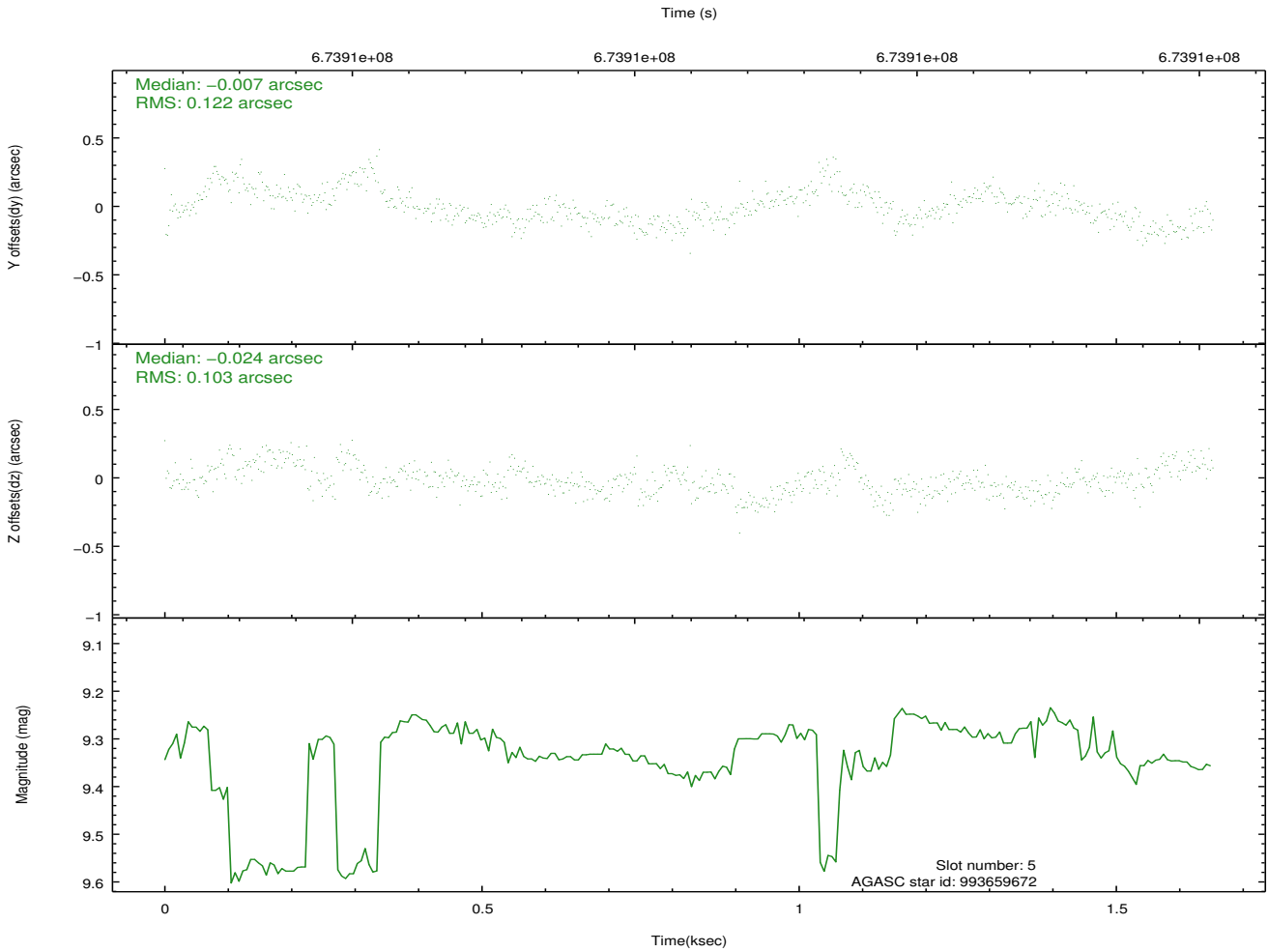
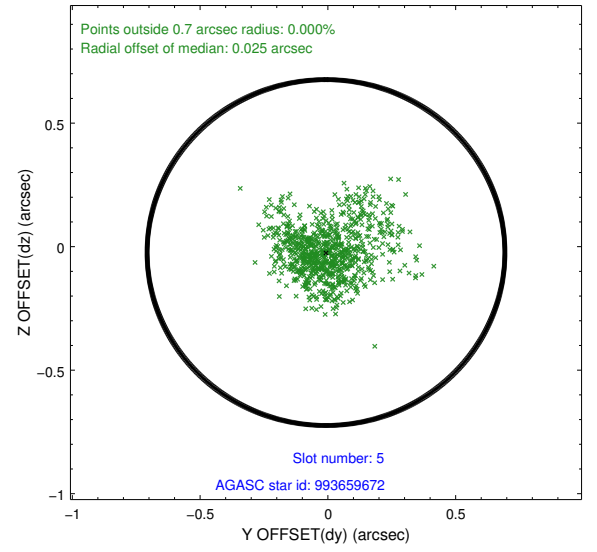
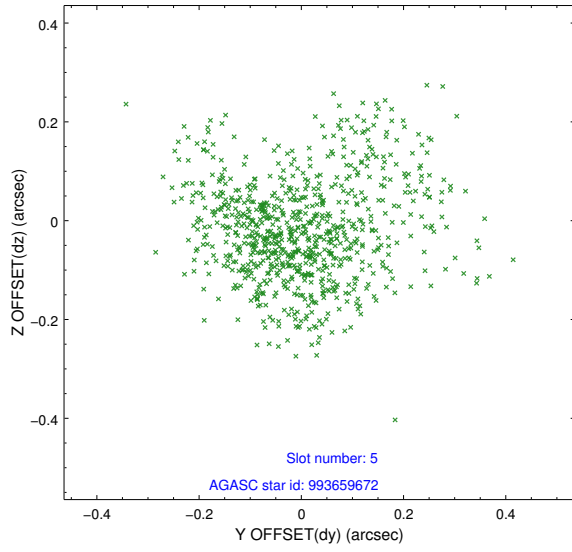
2.4.1 Slot 3



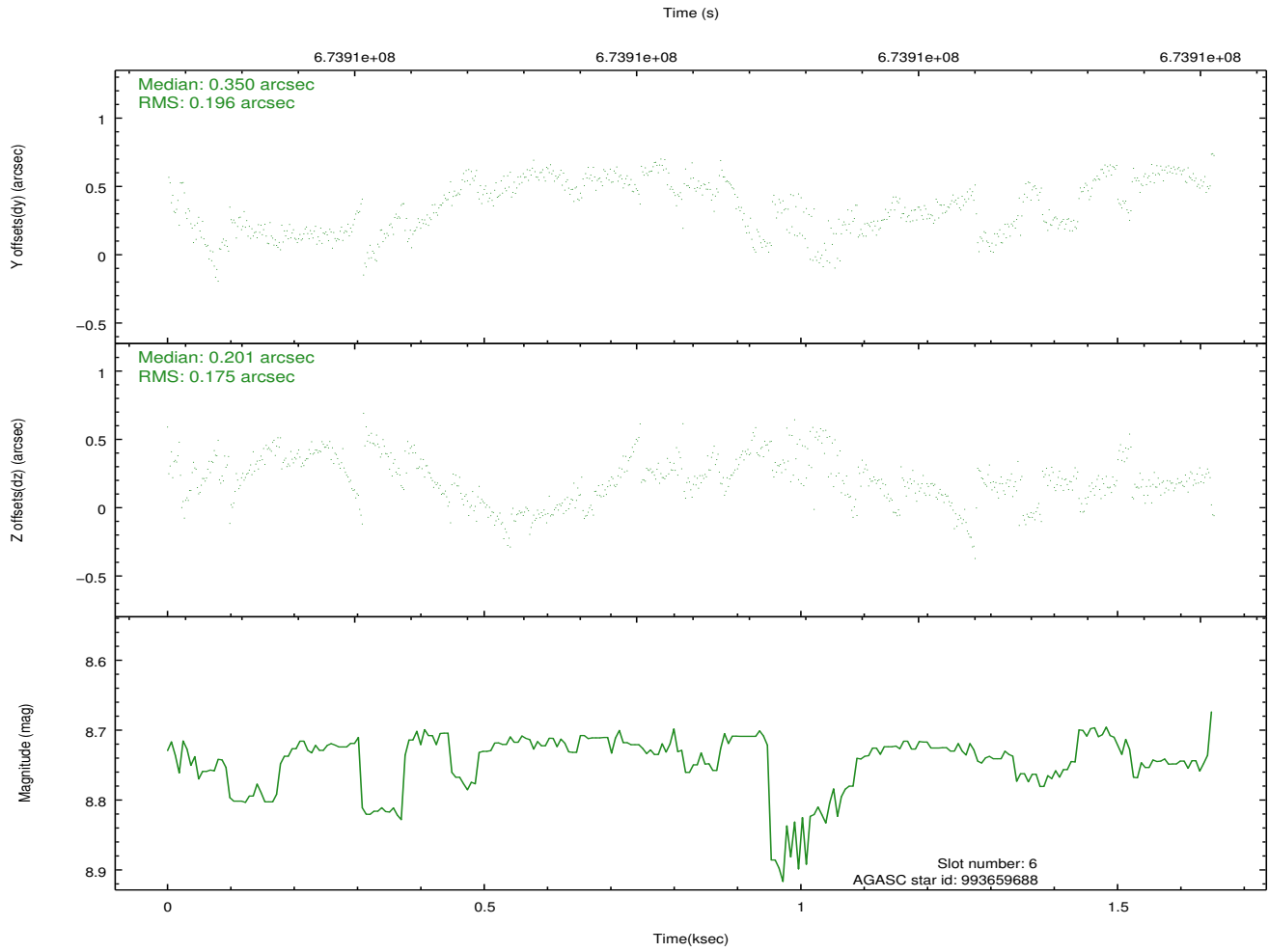
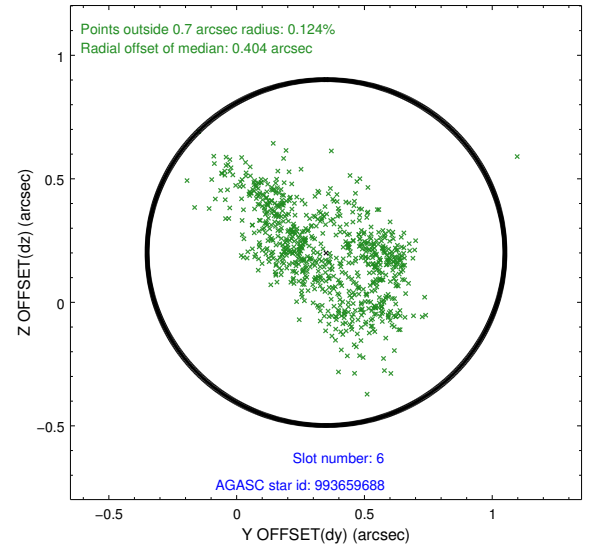
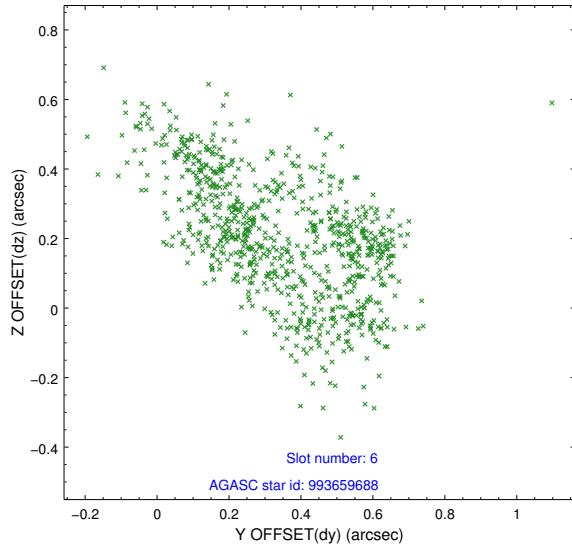
2.4.2 Slot 4



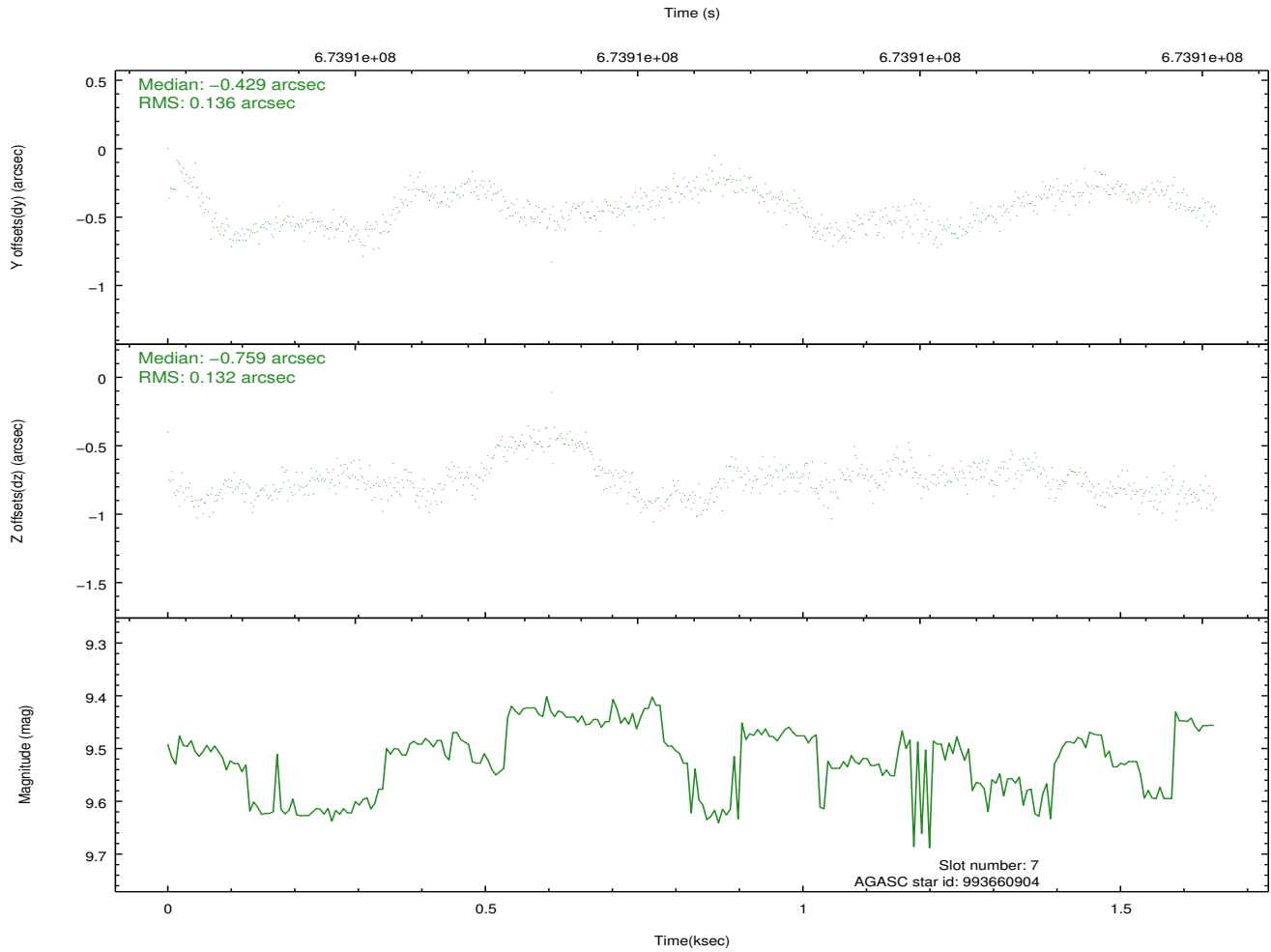
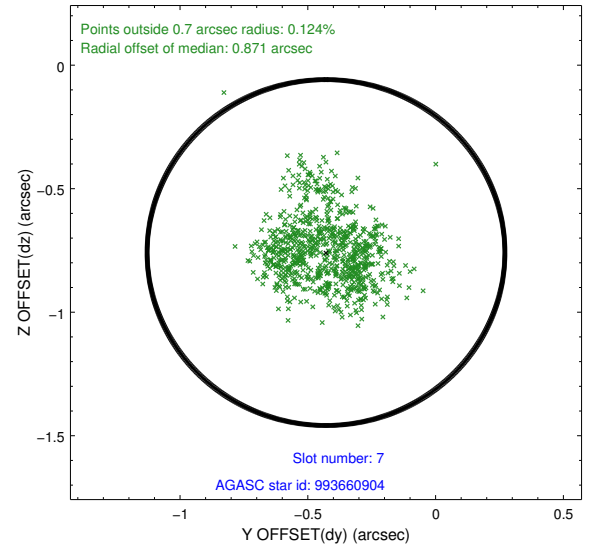
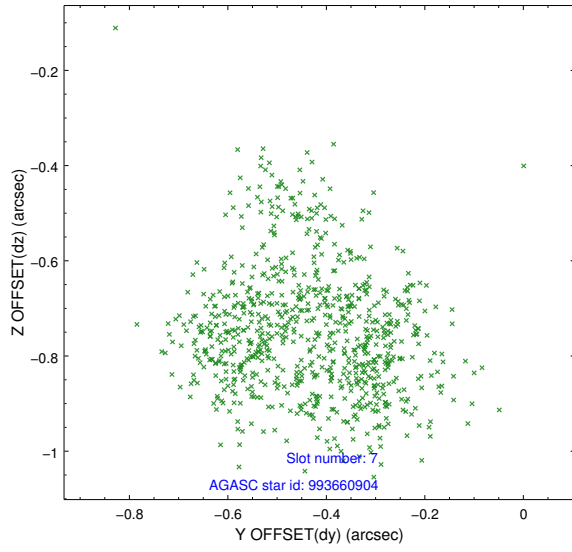
2.4.3 Slot 5



2.4.4 Slot 6

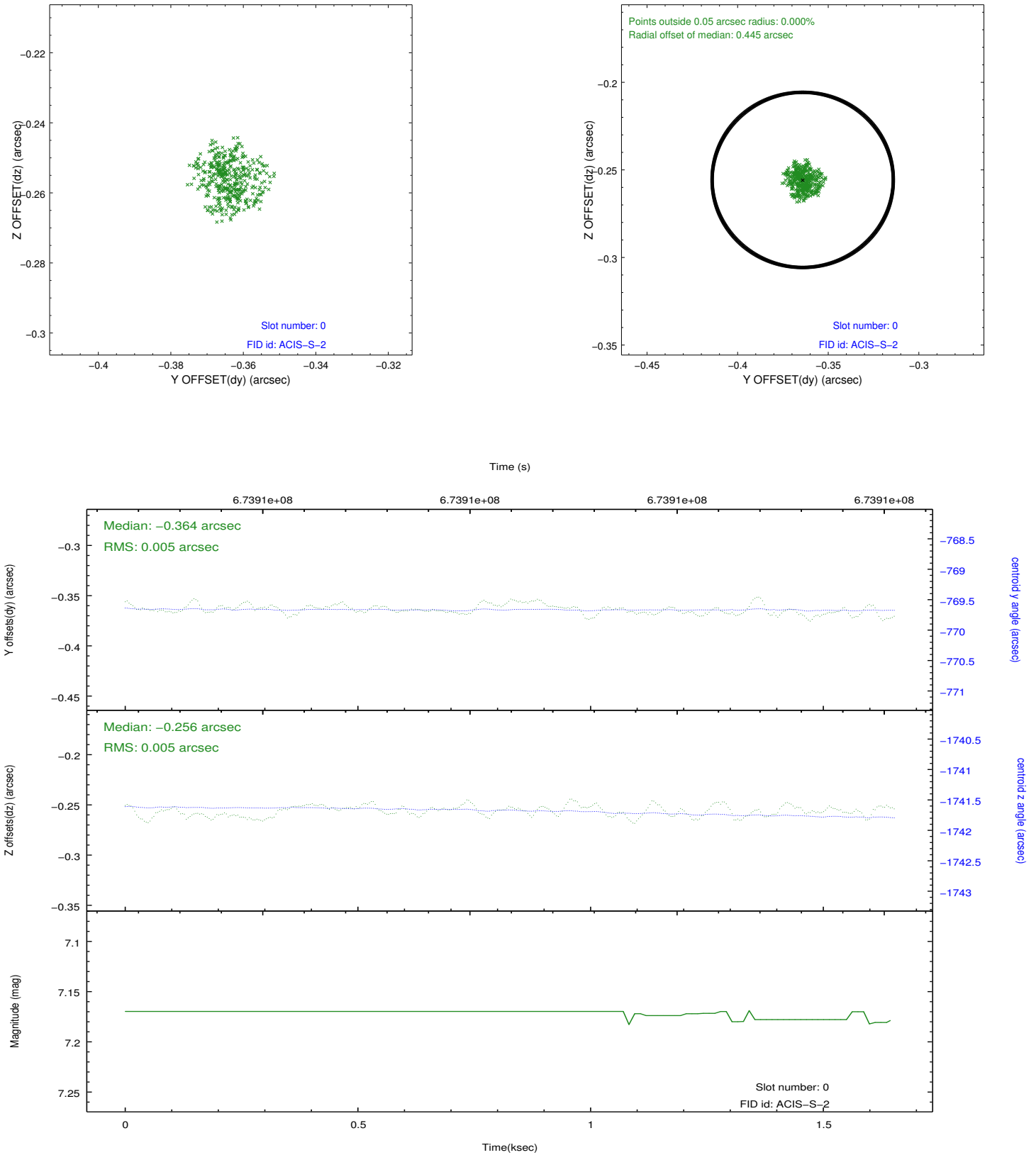


2.4.5 Slot 7

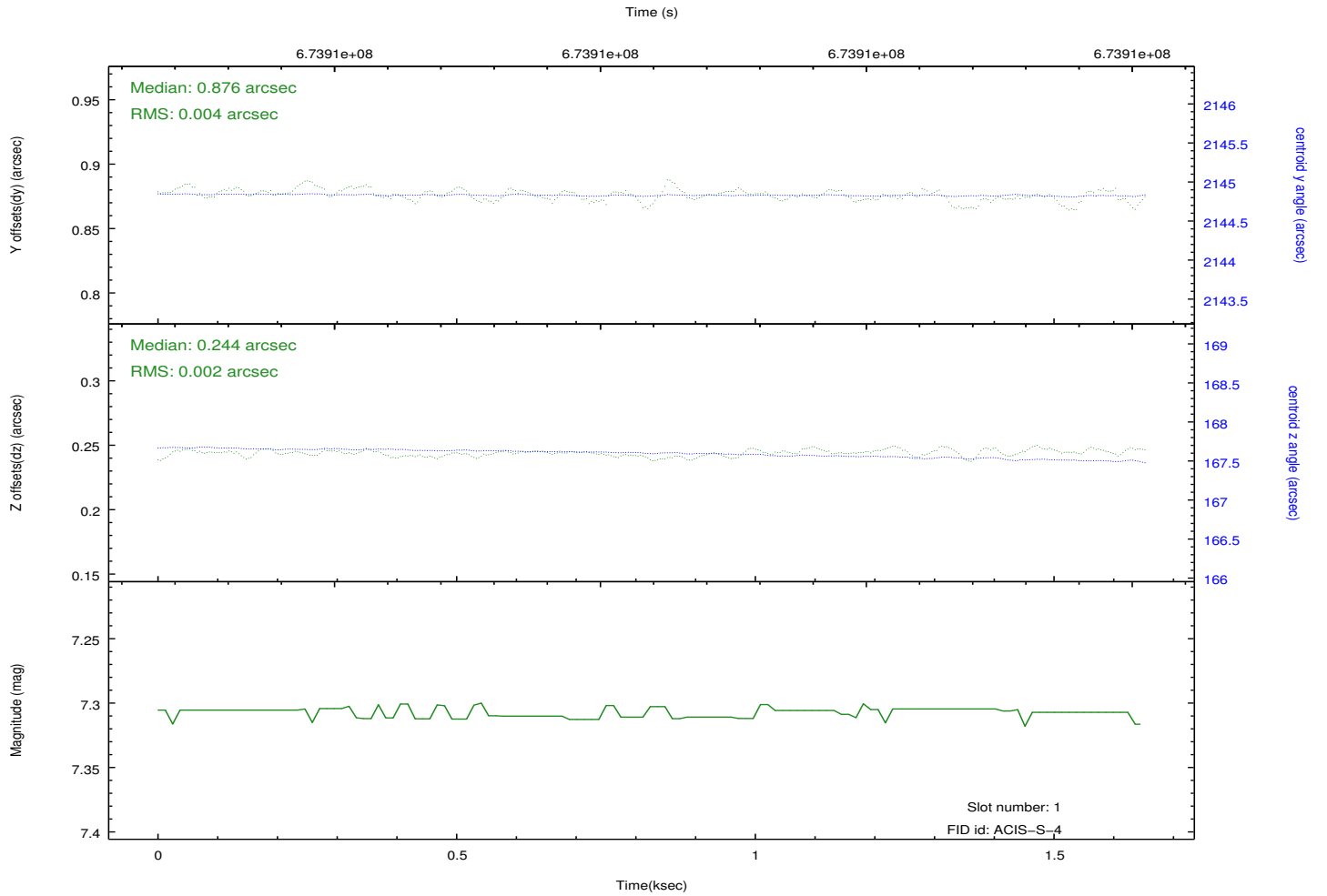
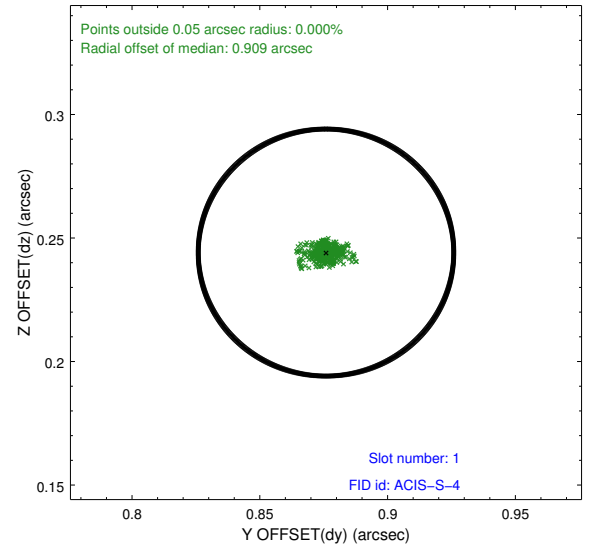
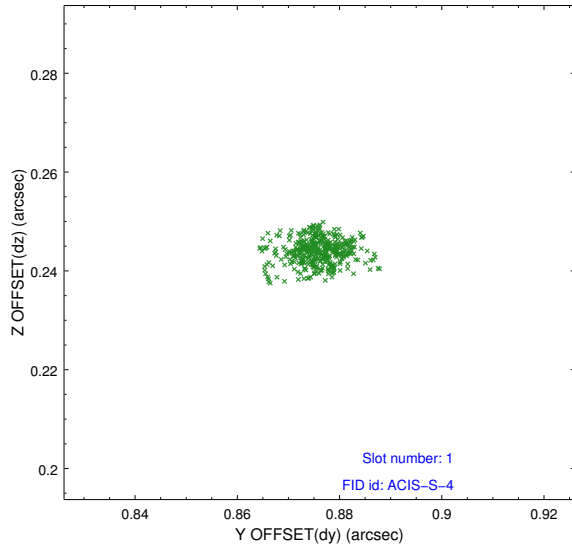


2.5 FID Slots

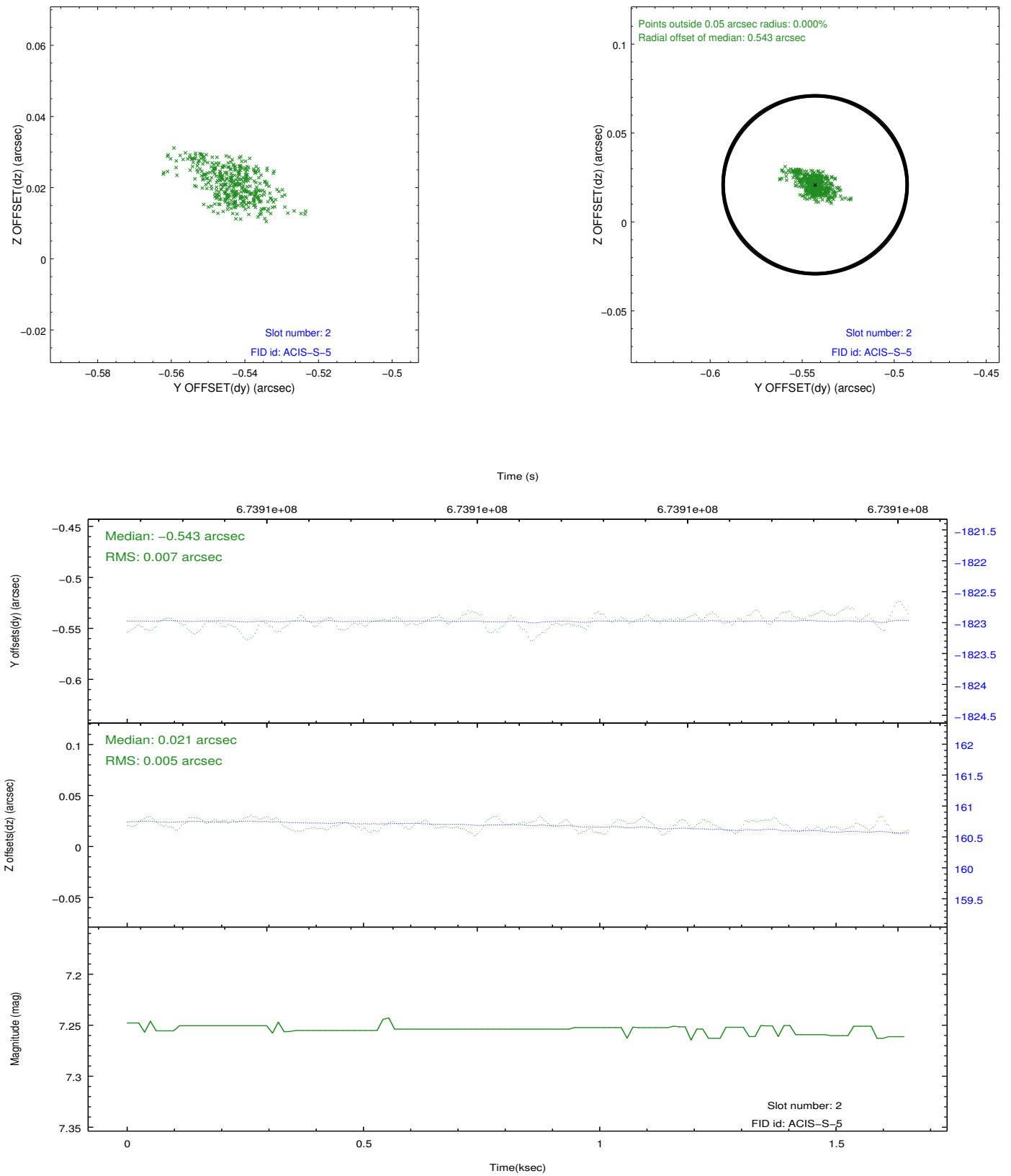
2.5.1 Slot 0



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) | 2019.05.14 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 1.6087702143192 |

A.2 Comments