

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 929 - L2 Version 3  
Chandra X-Ray Center

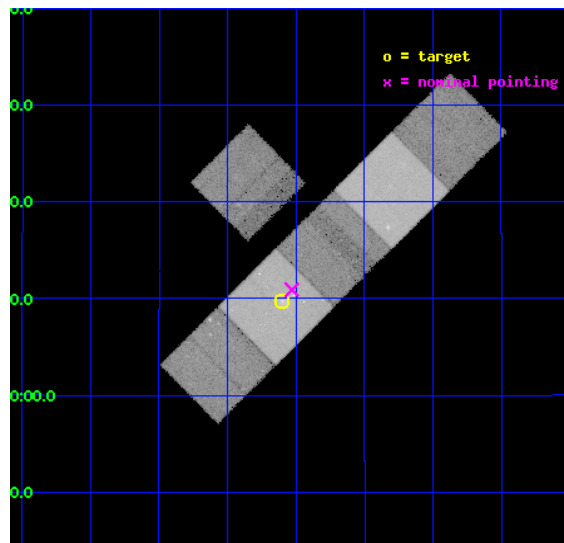
L2 Processing Date : Sep 1 2012

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# 1 Front

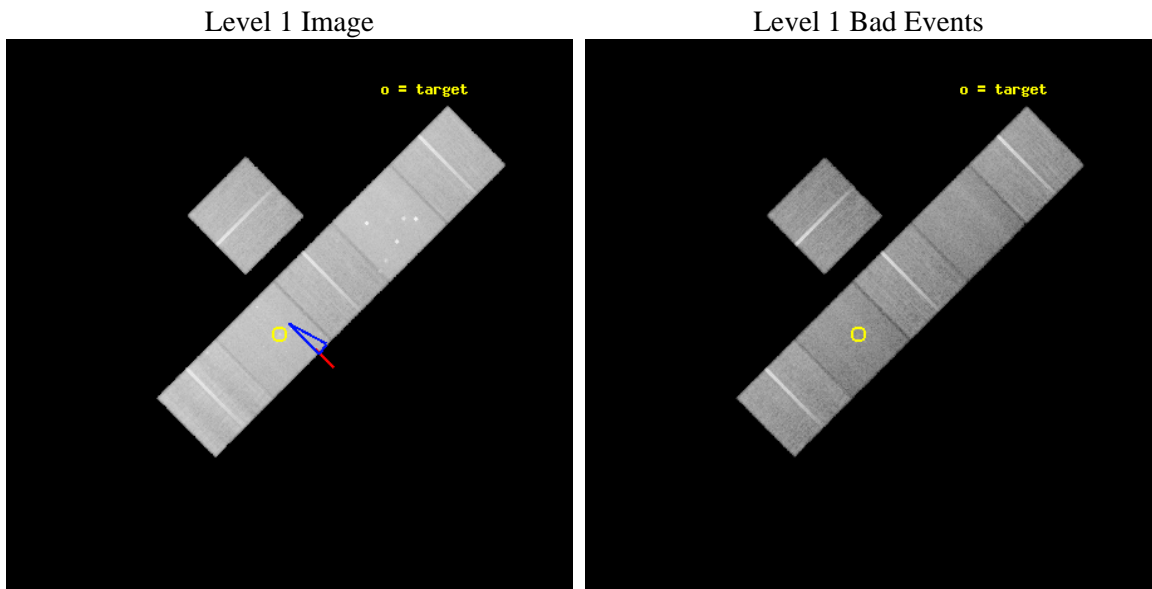
seq_num	800105	Sequence number
obs_id	929	Observation id
title	SPATIALLY RESOLVED X-RAY SPECTROSCOPY OF THE BEST LENSING CLUSTER OF GALAXIES CL0024+17	Proposal title
observer	Dr. Makoto Hattori	Principal investigator
object	CL 0024+17	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	6.650833	Observer's specified target RA [deg]
dec_targ	17.161944	Observer's specified target Dec [deg]
ra_nom	6.6325862446393	Nominal RA [deg]
dec_nom	17.181858124278	Nominal Dec [deg]
roll_nom	135.16201597689	Nominal Roll [deg]
revision	3	Processing version of data
ontime	40448.000037655	Sum of GTIs [s]
livetime	39935.823106317	Livetime [s]
ontime2	40444.75907743	Sum of GTIs [s]
ontime4	40444.75907743	Sum of GTIs [s]
ontime5	40448.000037655	Sum of GTIs [s]
ontime6	40444.75907743	Sum of GTIs [s]
ontime7	40448.000037655	Sum of GTIs [s]
ontime8	40448.000037655	Sum of GTIs [s]
l2events	425513	Number of level 2 events



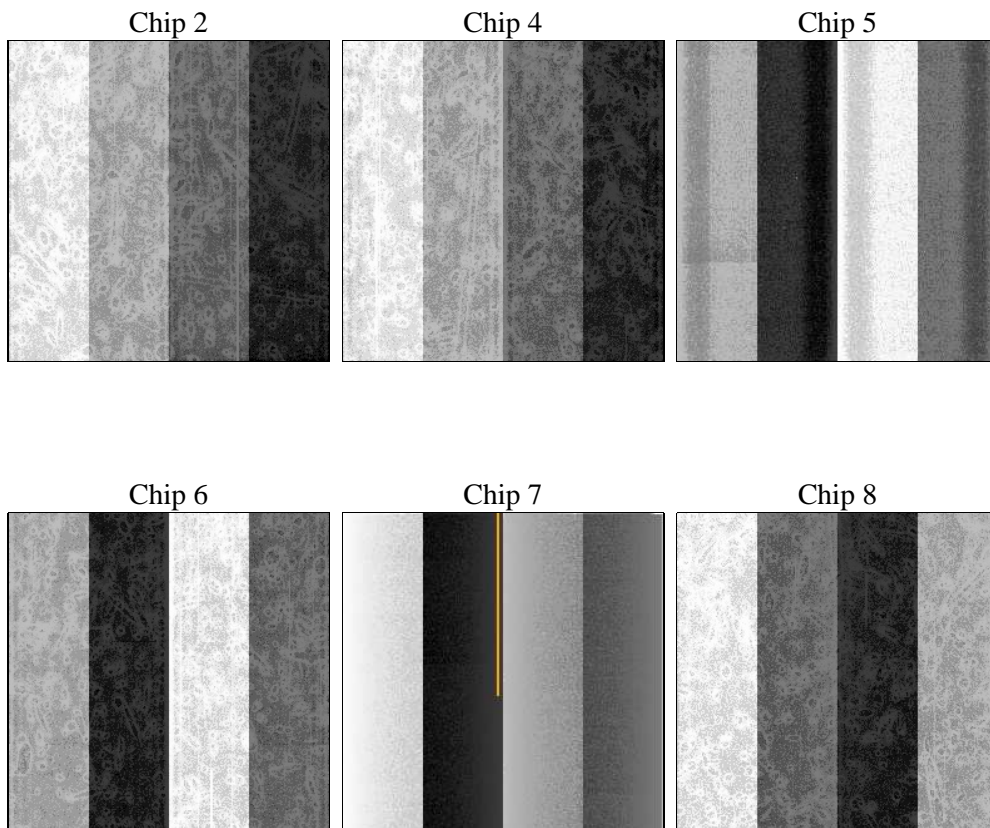
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	40500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	40448.000037655	Sum of GTIs [s]
caldbver	4.5.1.1	&#160	ontime2	40444.75907743	Sum of GTIs [s]
date	2012-09-01T15:55:54	Date and time of file creation	ontime4	40444.75907743	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	40448.000037655	Sum of GTIs [s]
			ontime6	40444.75907743	Sum of GTIs [s]
			ontime7	40448.000037655	Sum of GTIs [s]
			ontime8	40448.000037655	Sum of GTIs [s]
			l1events	1811853	Number of level 1 events

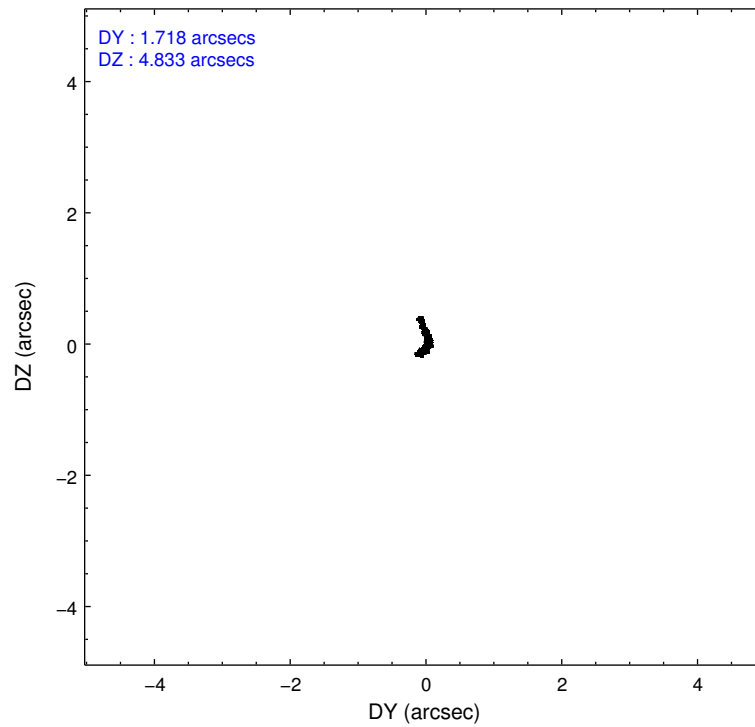
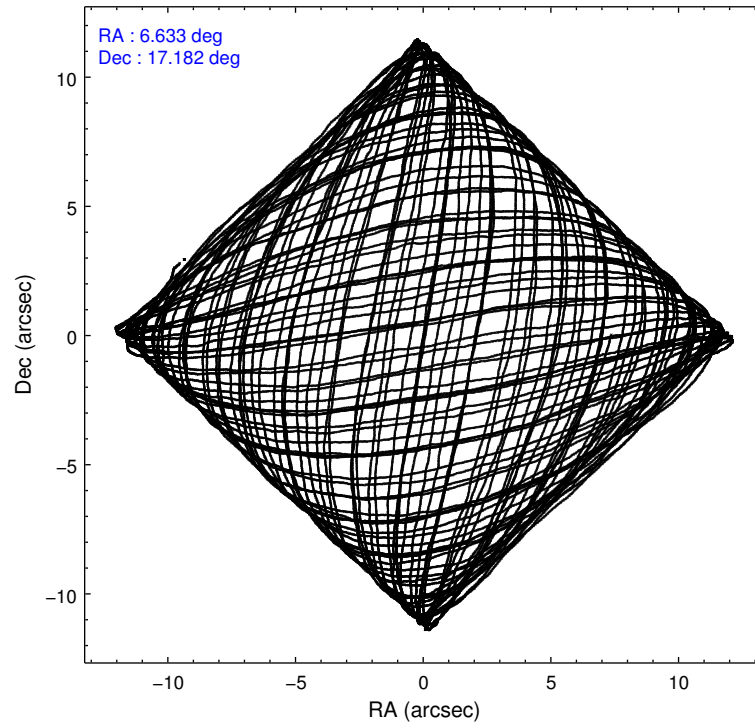
### 2.1.4 Events

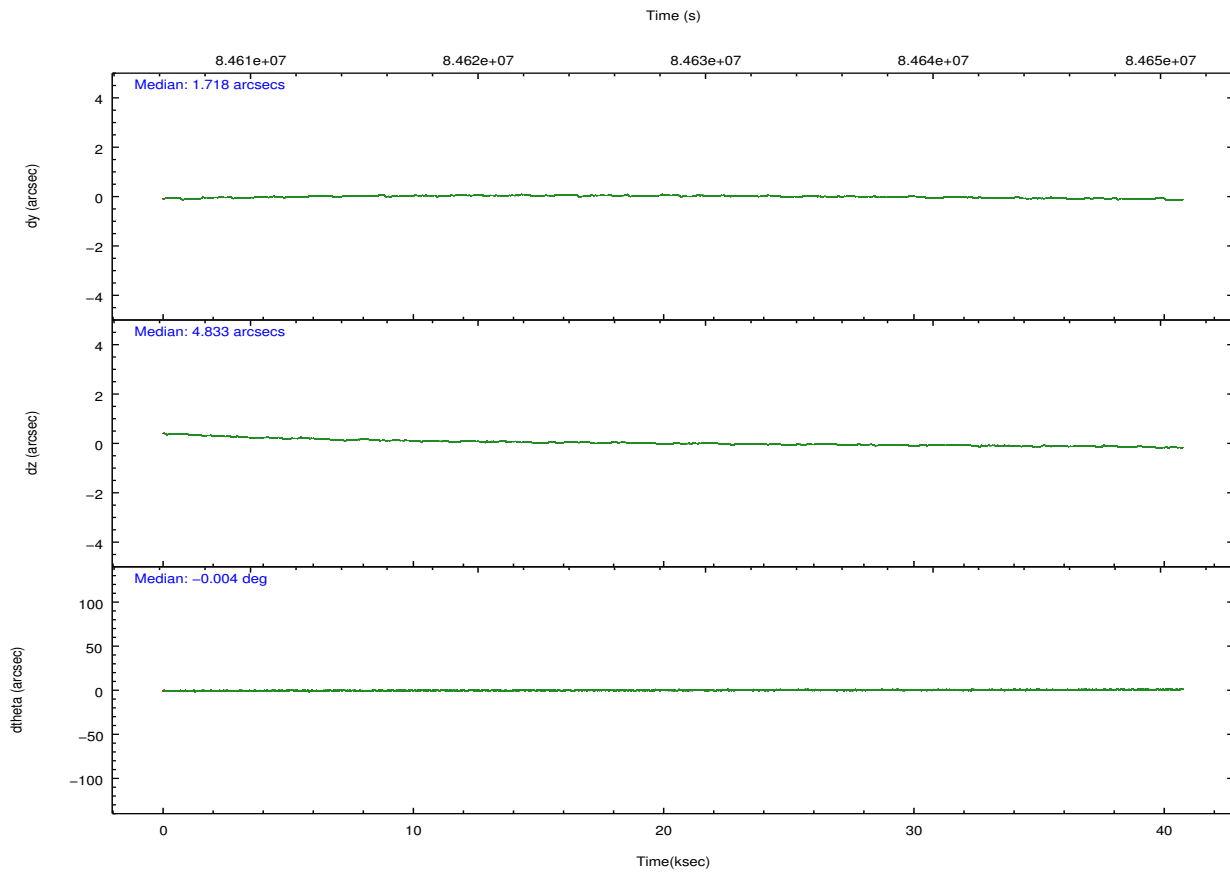
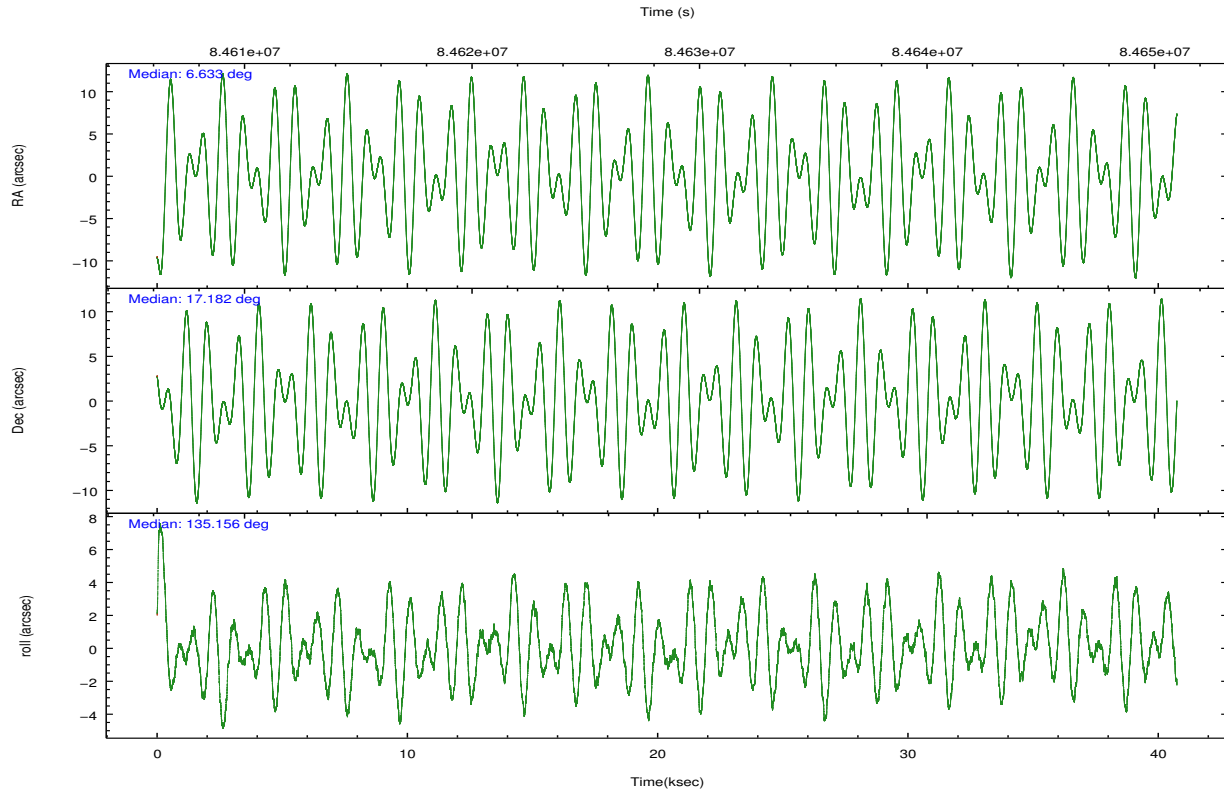
	ccd 2	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	252083	287621	344362	260169	312676	354942	grade 0 events	15116	17981	21933	16954	14925	39434
rejected events	216110	245028	180493	220946	172968	251133		5%	6%	6%	6%	4%	11%
rejected %	85%	85%	52%	84%	55%	70%	grade 1 events	112	170	477	134	286	319
								0%	0%	0%	0%	0%	0%
							grade 2 events	8636	11799	45815	9353	27981	19200
								3%	4%	13%	3%	8%	5%
							grade 3 events	2676	2942	7902	2909	12805	13388
								1%	1%	2%	1%	4%	3%
							grade 4 events	2956	2832	7498	2929	12666	11989
								1%	0%	2%	1%	4%	3%
							grade 5 events	7808	8175	25685	9869	28829	12696
								3%	2%	7%	3%	9%	3%
							grade 6 events	6598	7046	80740	7085	71359	19817
								2%	2%	23%	2%	22%	5%
							grade 7 events	208181	236676	154312	210936	143825	238099
								82%	82%	44%	81%	45%	67%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-245678	ACIS-245678	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	6.660330	6.632586244639253	Subarray requested	NONE	NONE
[deg] Pointing Dec	17.175024	17.18185812427764	Alternating exposures requested	N	N
[deg] Pointing Roll	134.997197	135.1620159768889	[s] Primary exposure time	0.000000	3.2
[deg] Roll angle	127.000000	127.000000			
[deg] Roll tolerance	8.000000	8.000000			
Roll constraint allows 180D rotation	N	N			
[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)	84608447.184000	84607464.00613999			
Observation start date	2000-09-06T06:19:43	2000-09-06T06:04:24			
[s] Observation end time (MET)	84648947.184000	84649793.43272901			
Observation end date	2000-09-06T17:34:43	2000-09-06T17:49:53			
Read mode	TIMED	TIMED			

## 2.3 Aspect



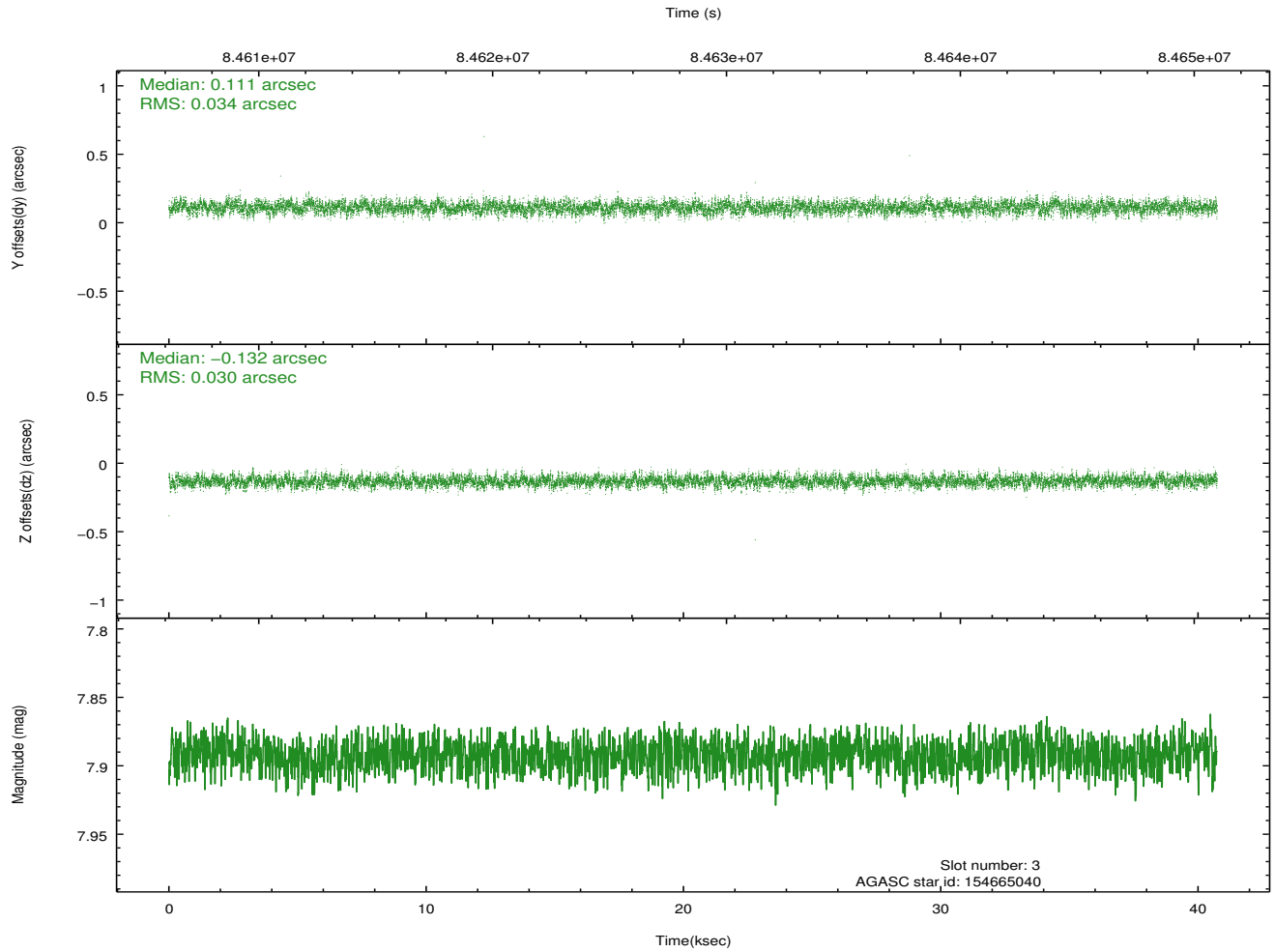
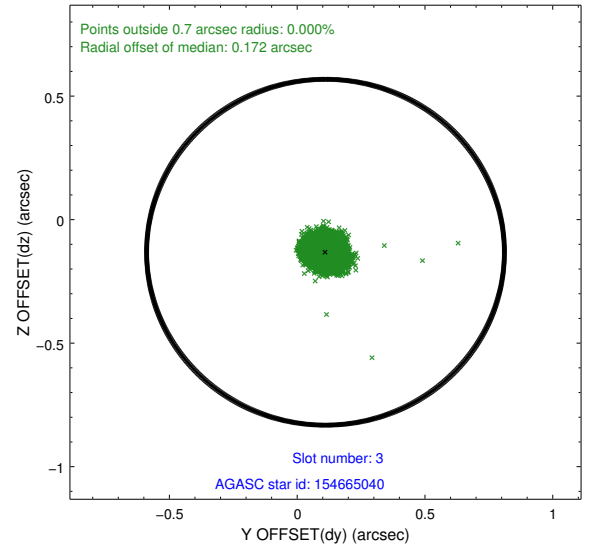
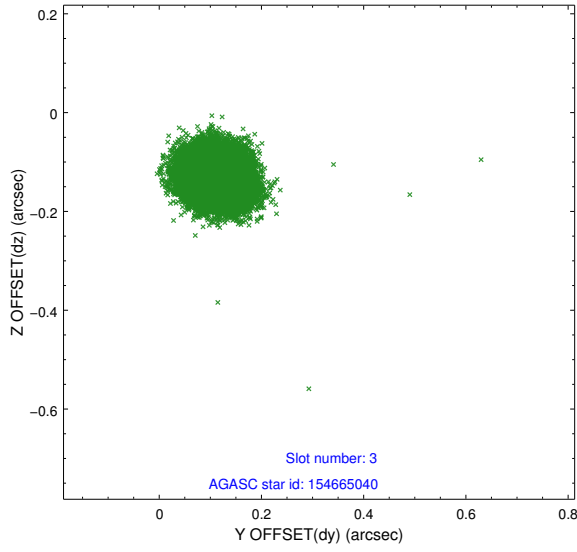


### Slot Statistics

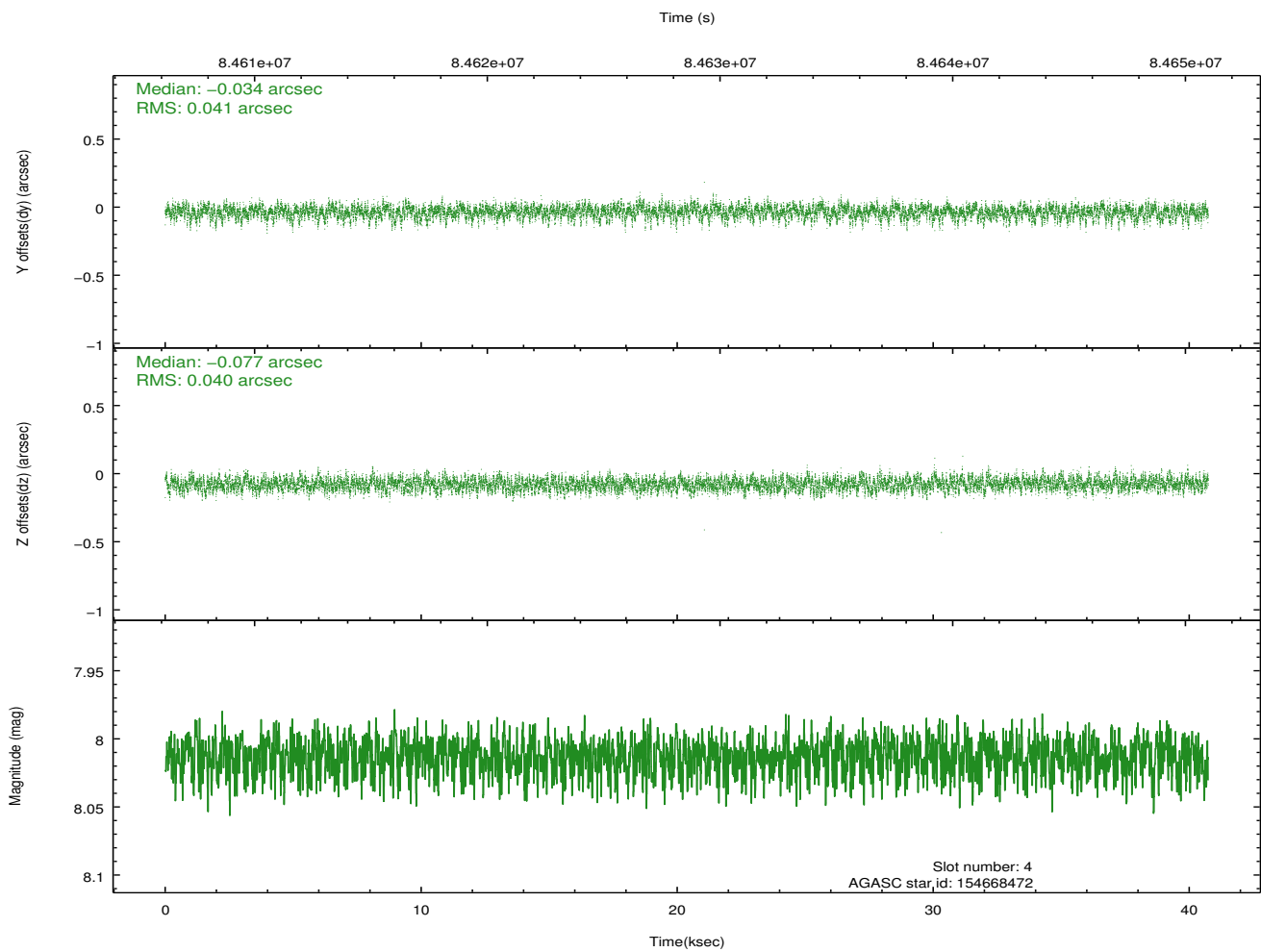
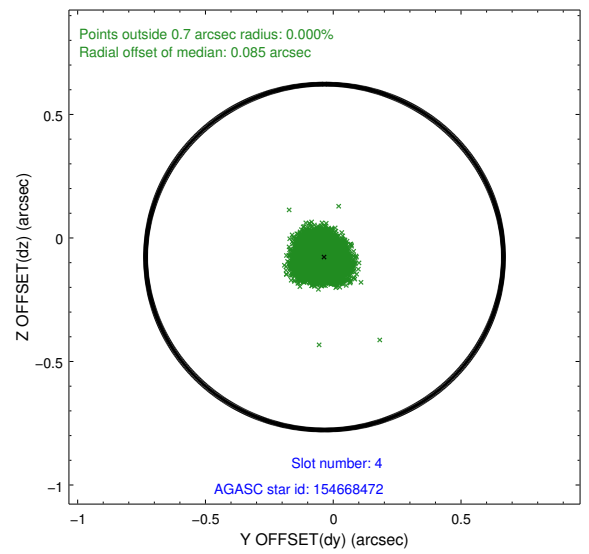
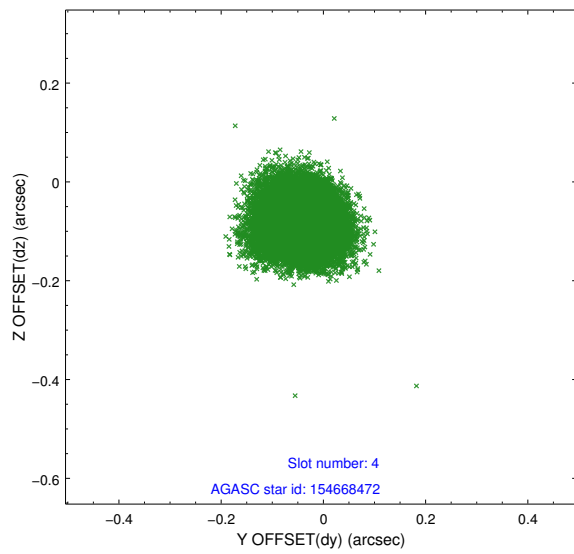
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	9938	-0.032	-0.005	0.007	0.011	0.000000	0.000000	-754.34	-1725.92
1	FID	ACIS-S-4	7.21	9937	-0.011	0.017	0.005	0.010	0.000000	0.000000	2158.94	182.58
2	FID	ACIS-S-5	7.24	9937	0.012	-0.003	0.007	0.012	0.000000	0.000000	-1807.13	176.23
3	GUIDE	154665040	7.89	19872	0.111	-0.132	0.048	0.077	7.031910	16.716005	-2072.95	261.76
4	GUIDE	154668472	8.01	19875	-0.034	-0.077	0.061	0.099	6.295897	16.991914	422.04	1352.99
5	GUIDE	154668976	8.83	19871	-0.020	-0.055	0.068	0.109	6.151479	16.979813	743.84	1734.81
6	GUIDE	155064272	8.83	19801	-0.058	0.110	0.073	0.118	6.749584	17.903503	1639.13	-2069.76
7	GUIDE	154666064	9.37	19868	0.002	0.157	0.084	0.133	7.584121	17.247387	-2055.43	-2435.21

## 2.4 Star Slots

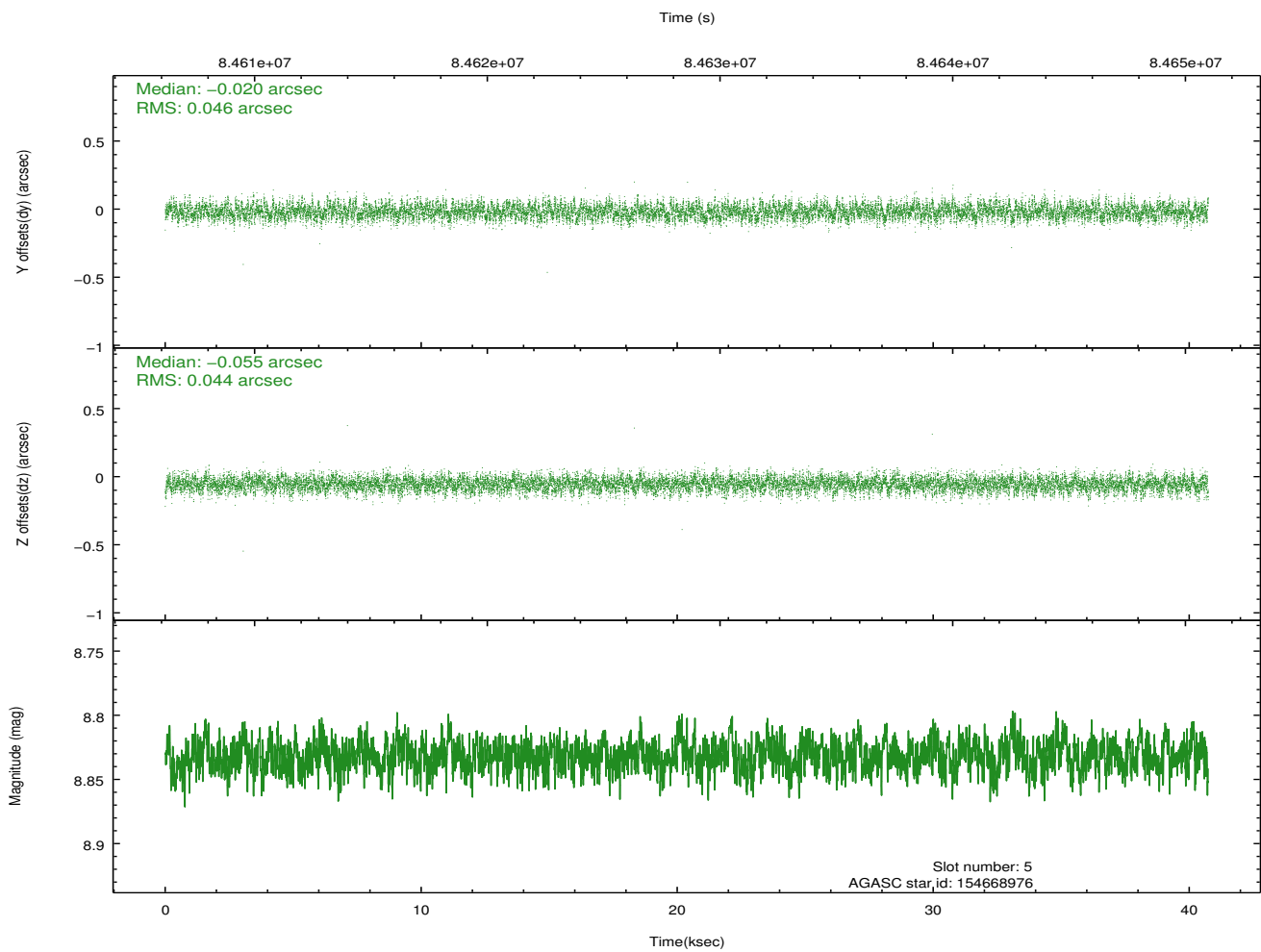
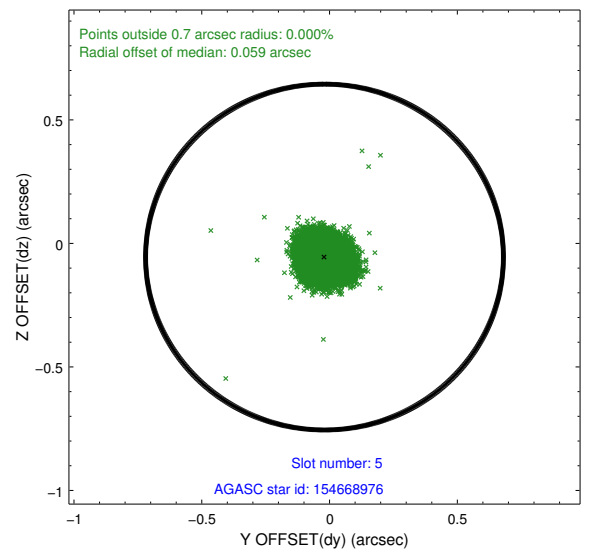
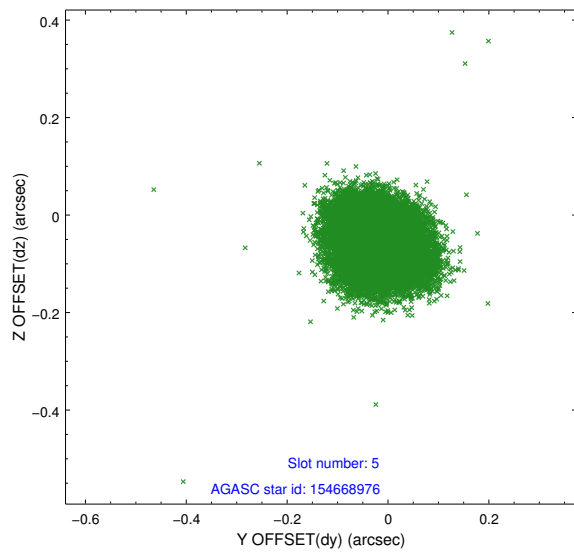
### 2.4.1 Slot 3



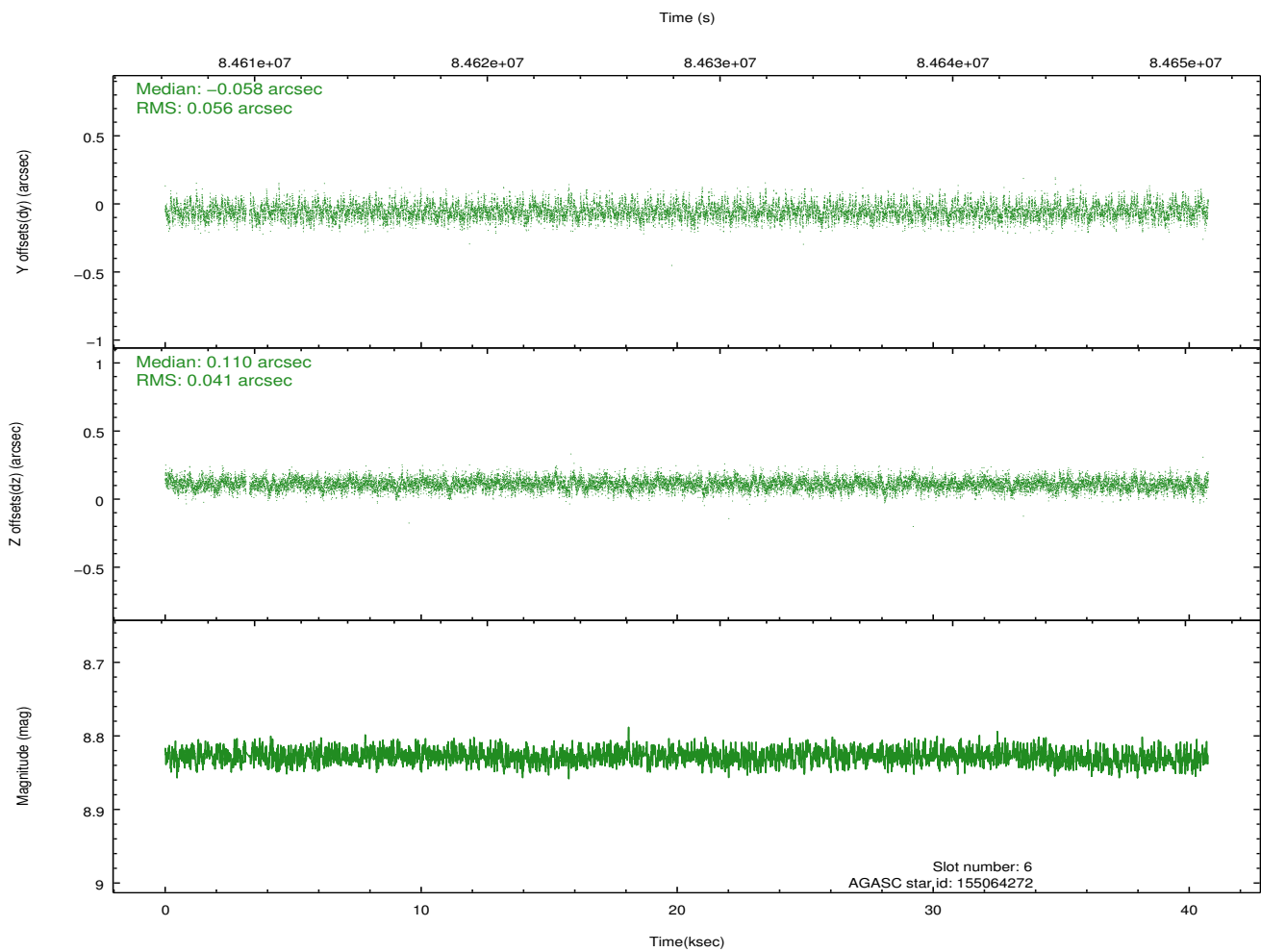
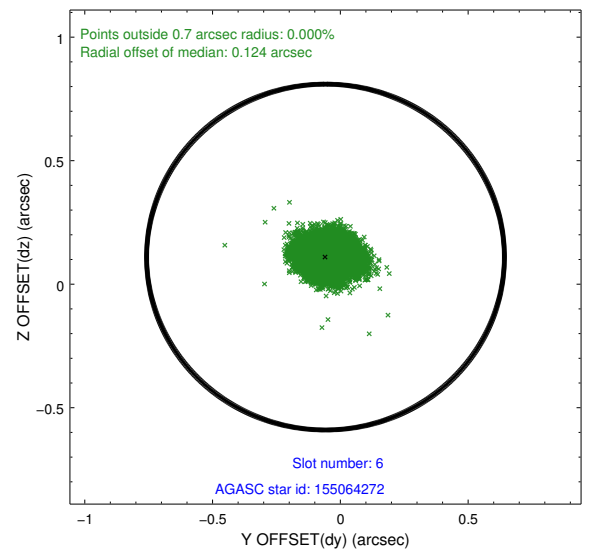
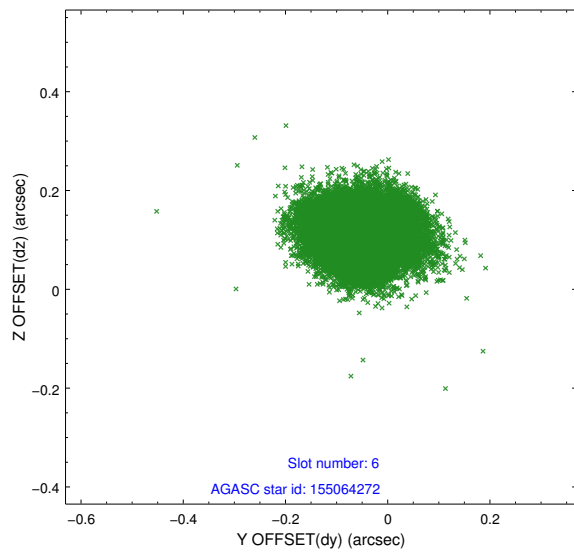
## 2.4.2 Slot 4



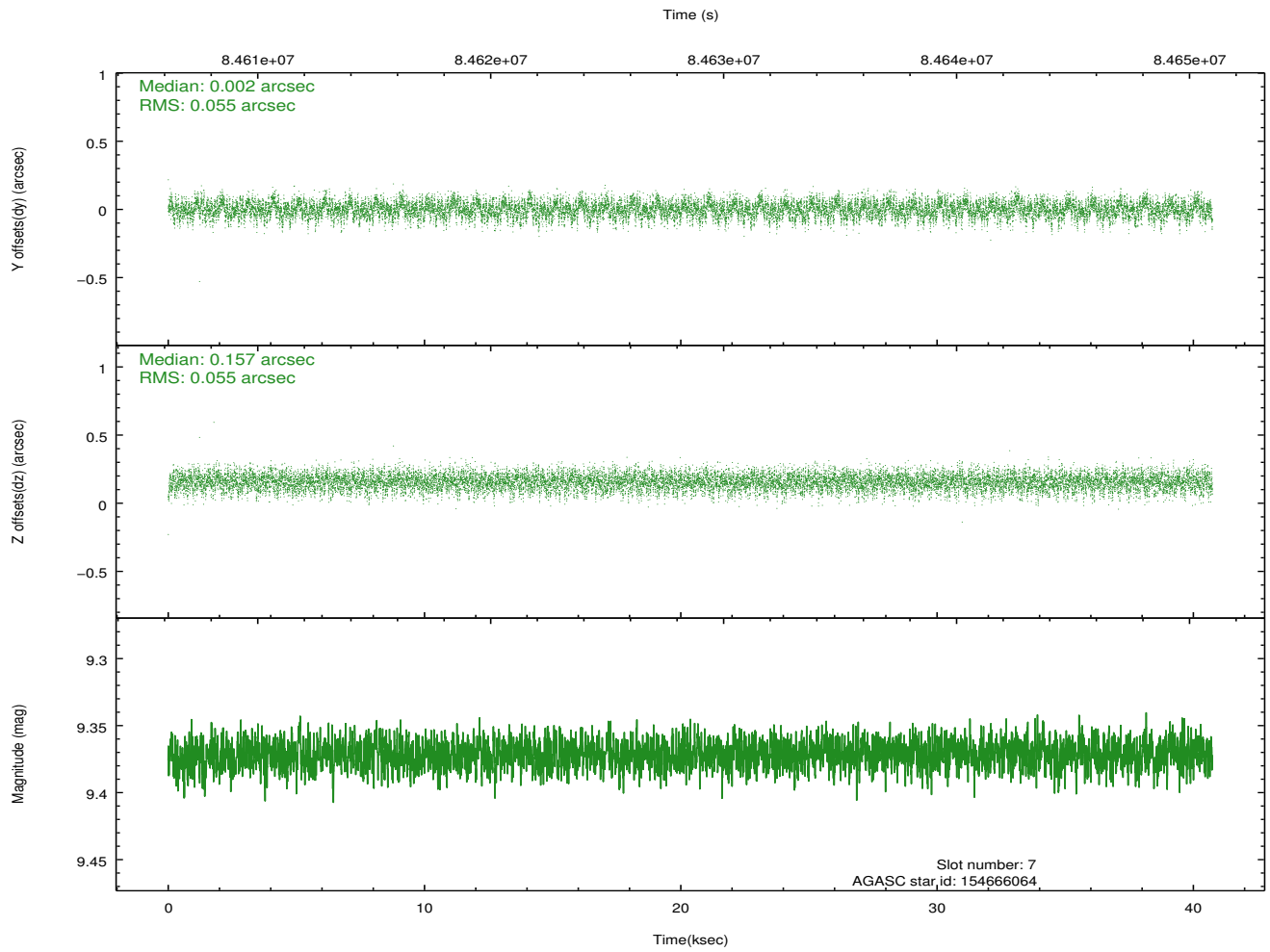
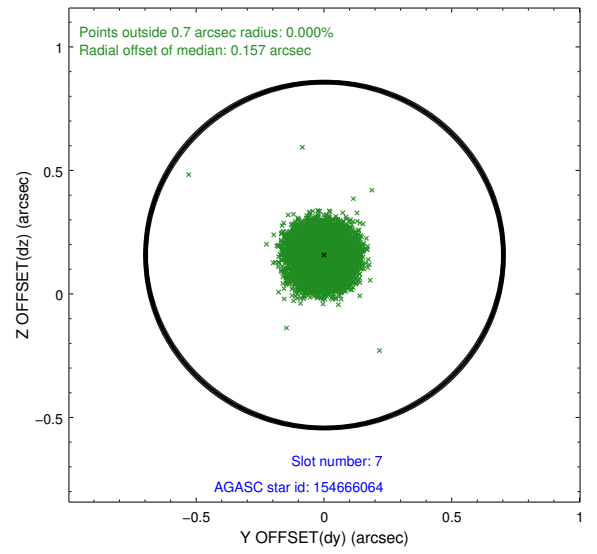
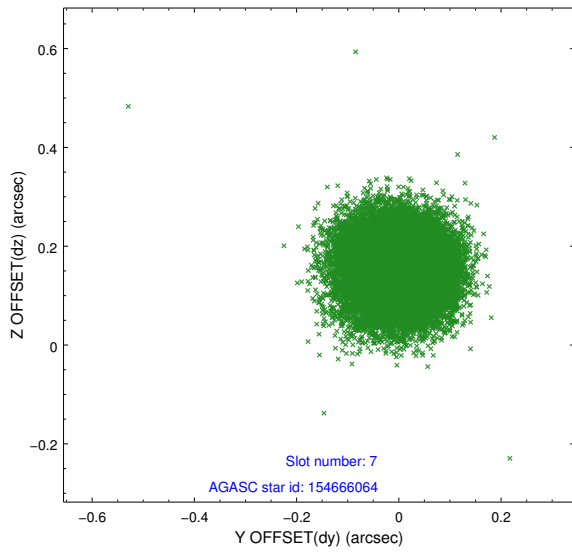
### 2.4.3 Slot 5



## 2.4.4 Slot 6

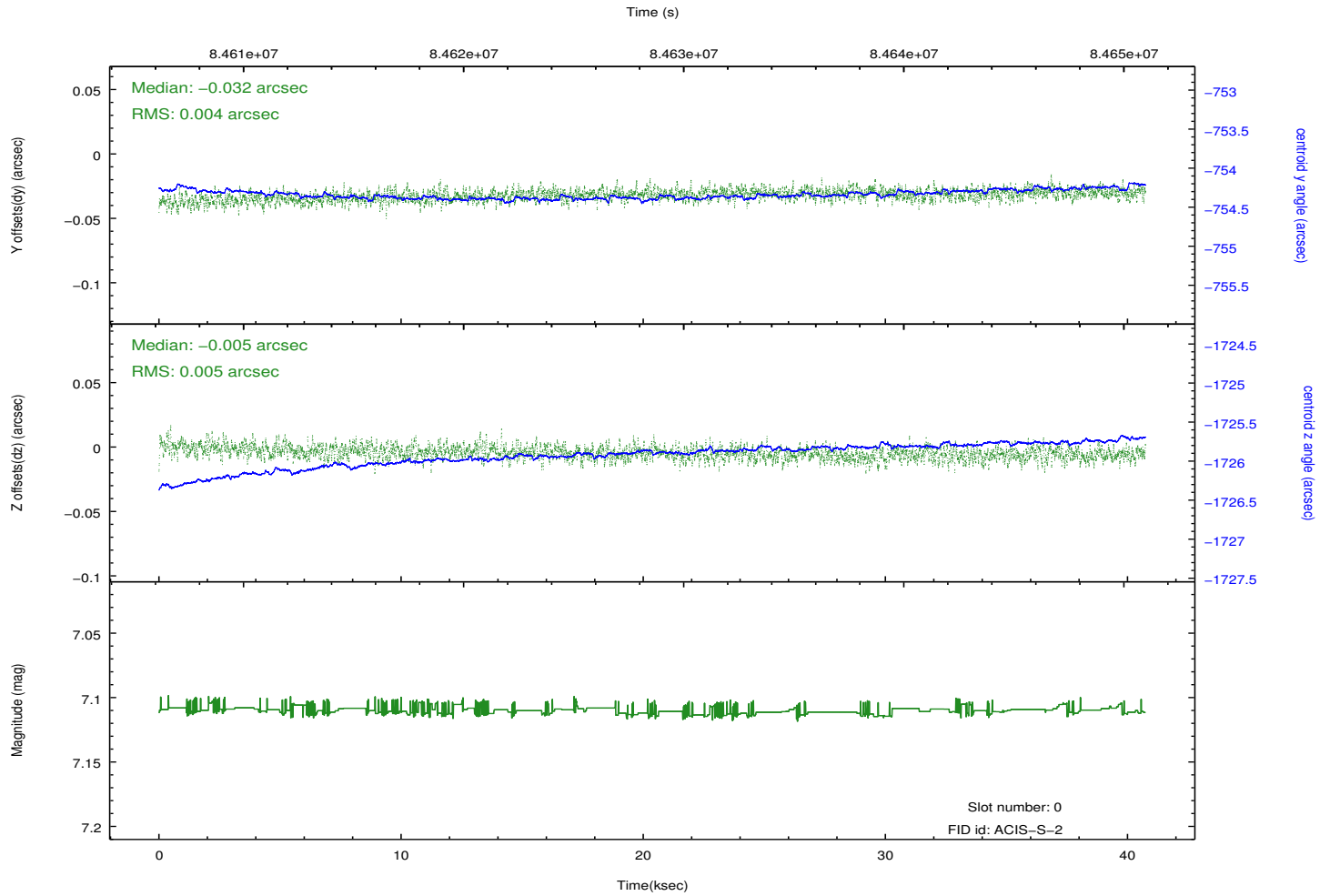
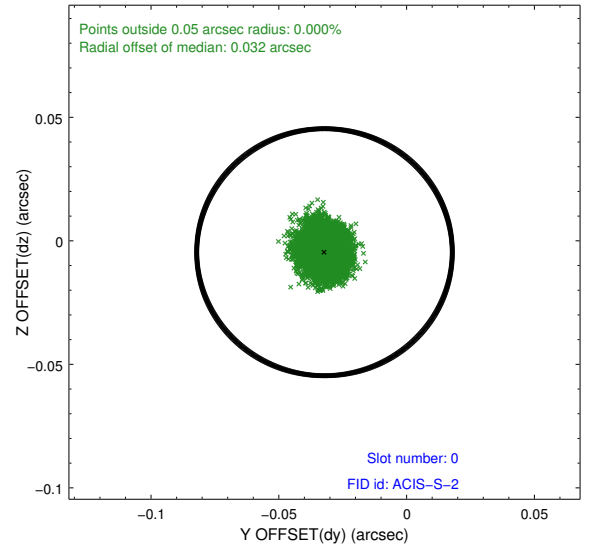
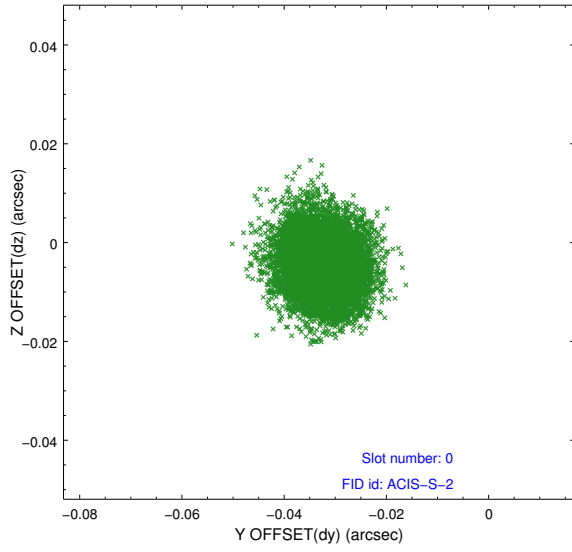


## 2.4.5 Slot 7

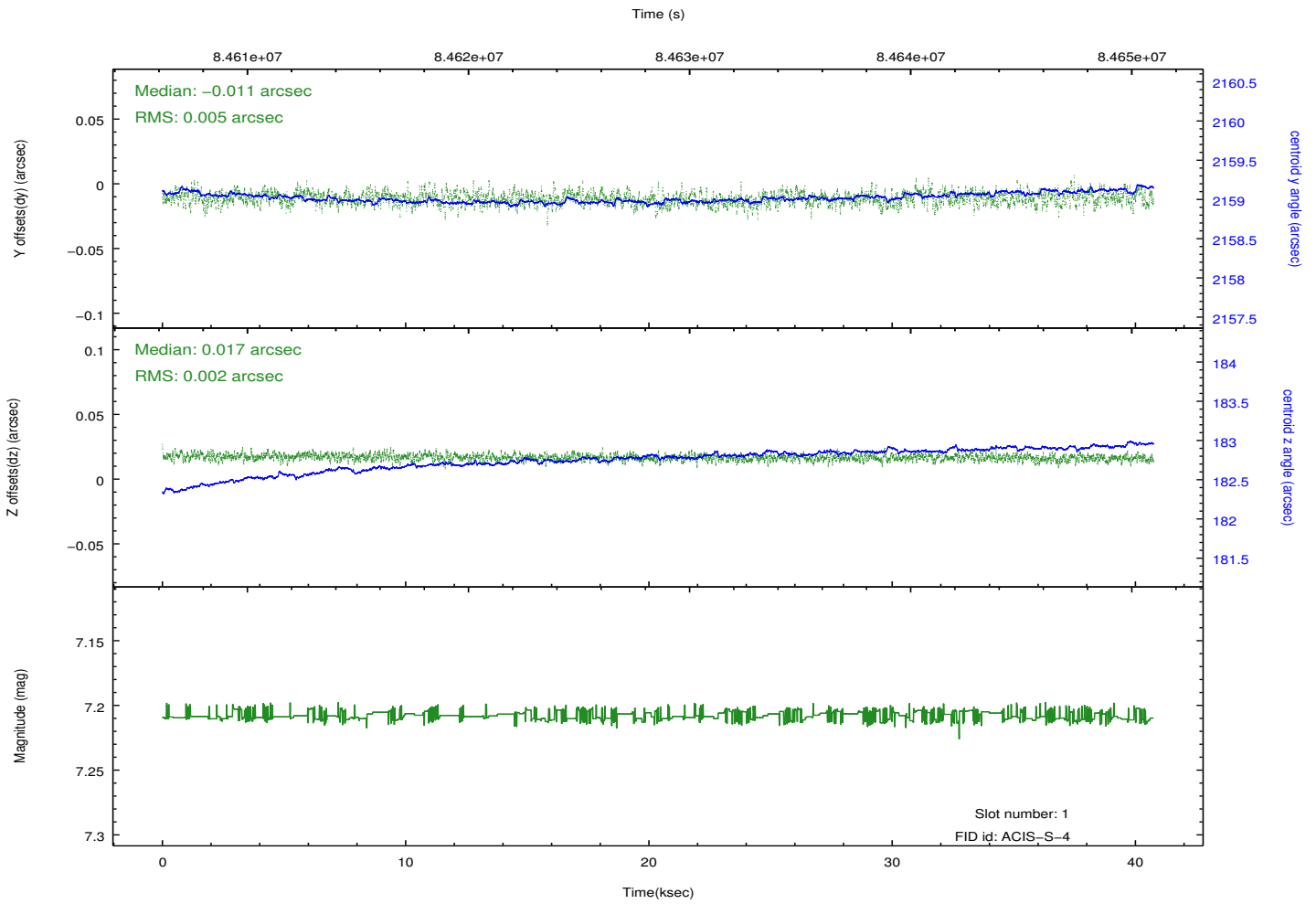
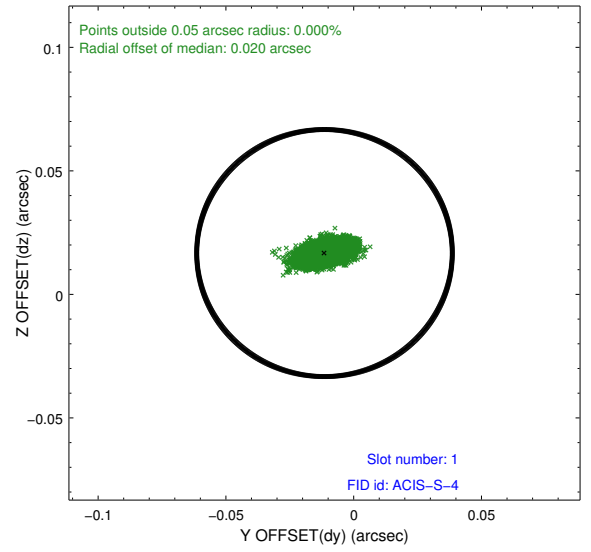
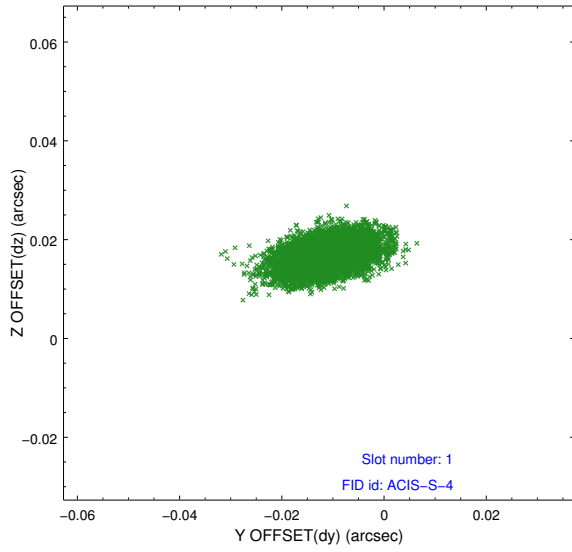


## 2.5 FID Slots

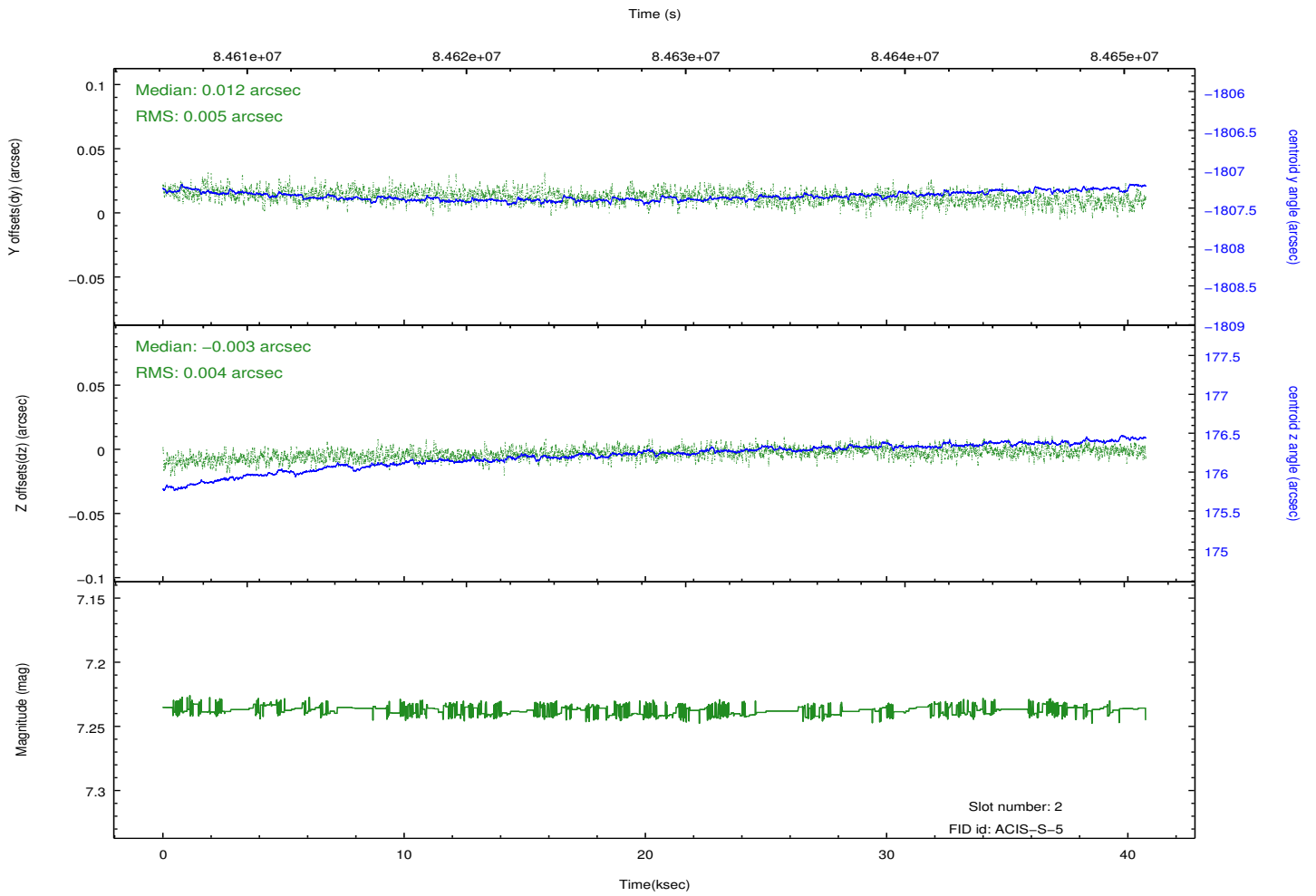
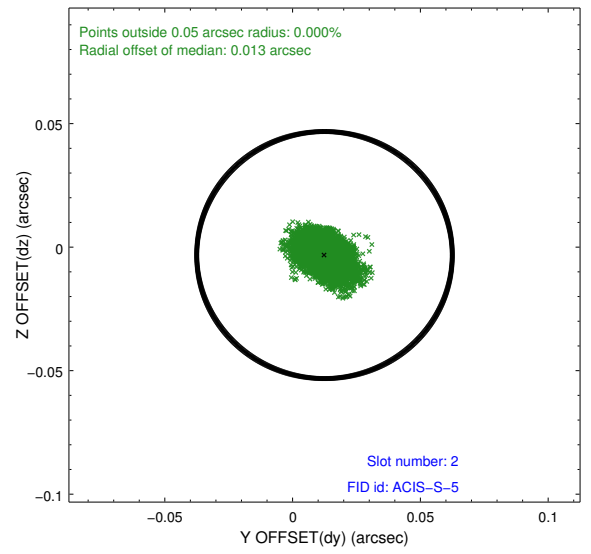
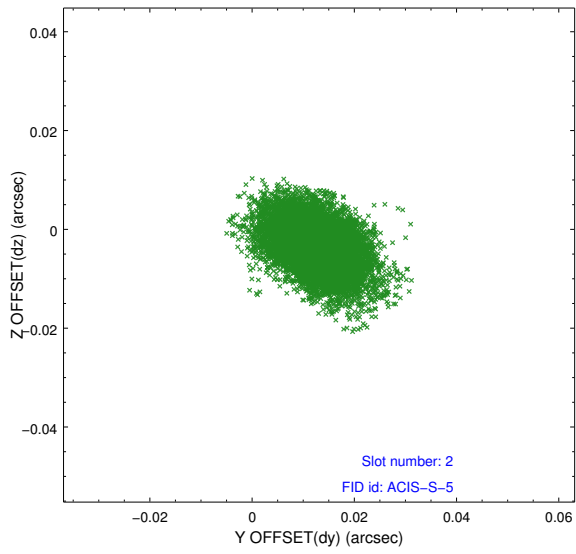
### 2.5.1 Slot 0



## 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)	2012.09.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.345

## A.2 Comments

Obsid 929 is an observation of a lensed cluster CL0024+17. It was referred to CDO for review because the roll tolerance was exceeded by 8.4 arcmin. The roll constraint was imposed to place another lensed cluster on S0. Since the main science involves CL0024+17, this observation does not need to be repeated.

==

Charge time for this observation remains at previous value of 40.345 ksec.