

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8984 - L2 Version 2  
Chandra X-Ray Center

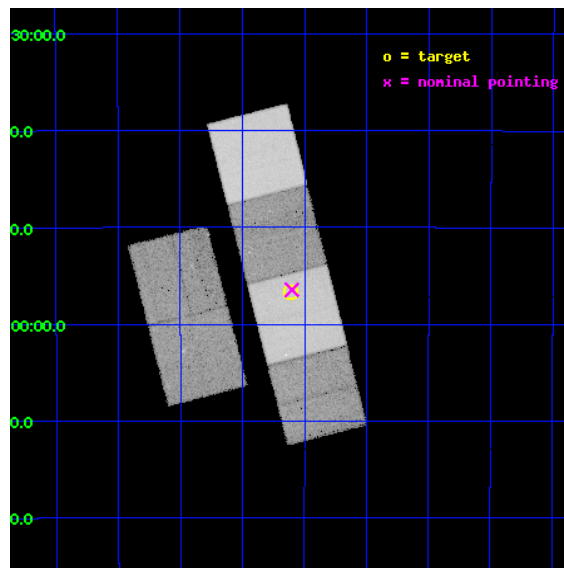
L2 Processing Date : May 13 2012

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# 1 Front

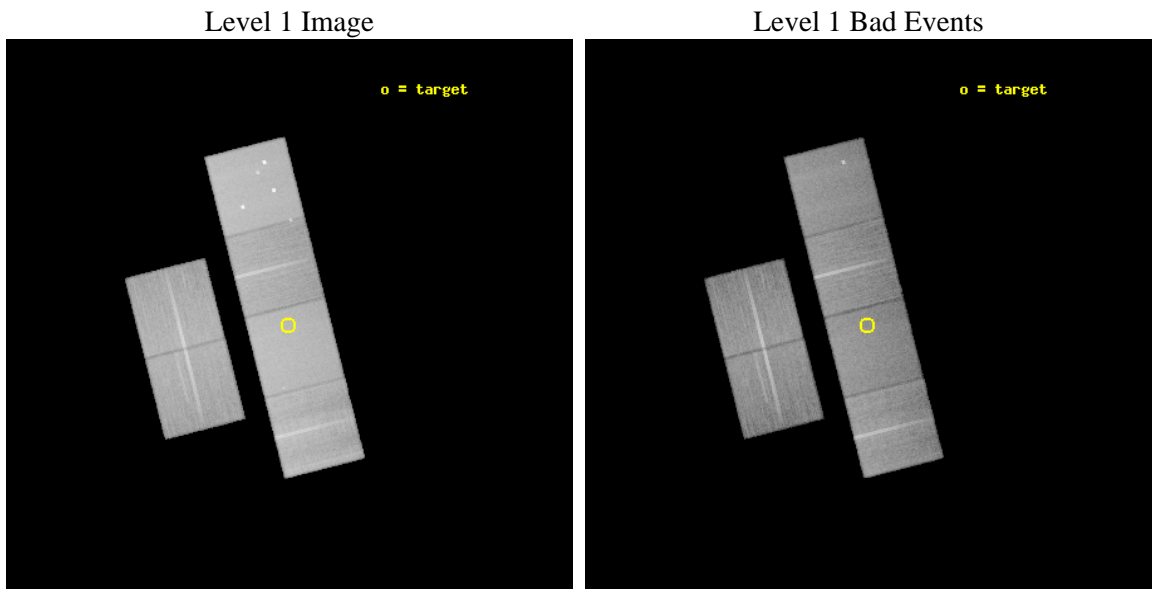
seq_num	400835	Sequence number
obs_id	8984	Observation id
title	Crustal cooling in quiescent neutron stars	Proposal title
observer	Dr Edward Cackett	Principal investigator
object	MXB 1659-29	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	255.527083	Observer's specified target RA [deg]
dec_targ	-29.945583	Observer's specified target Dec [deg]
ra_nom	255.52538987187	Nominal RA [deg]
dec_nom	-29.940951409633	Nominal Dec [deg]
roll_nom	75.785493753824	Nominal Roll [deg]
revision	2	Processing version of data
ontime	27951.99989593	Sum of GTIs [s]
livetime	27598.054842574	Livetime [s]
ontime2	27951.99989593	Sum of GTIs [s]
ontime3	27945.517875314	Sum of GTIs [s]
ontime5	27951.99989593	Sum of GTIs [s]
ontime6	27951.99989593	Sum of GTIs [s]
ontime7	27951.99989593	Sum of GTIs [s]
ontime8	27948.758885741	Sum of GTIs [s]
l2events	456145	Number of level 2 events



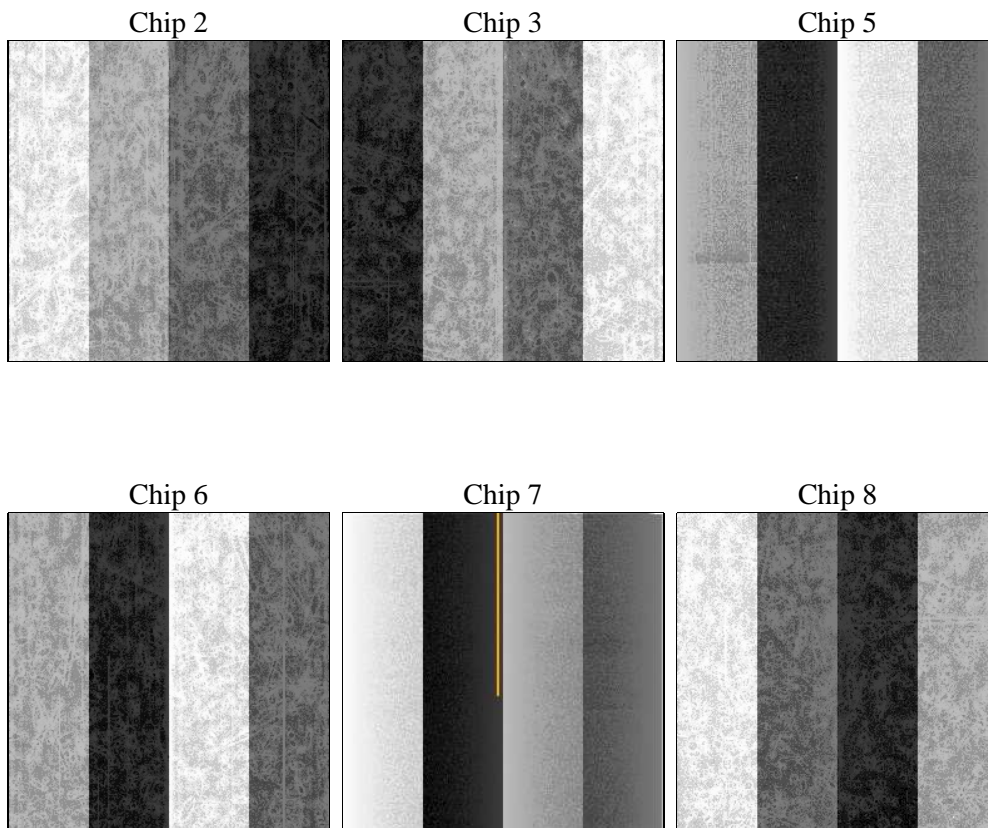
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	28000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	27951.99989593	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime2	27951.99989593	Sum of GTIs [s]
date	2012-05-13T14:17:39	Date and time of file creation	ontime3	27945.517875314	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	27951.99989593	Sum of GTIs [s]
			ontime6	27951.99989593	Sum of GTIs [s]
			ontime7	27951.99989593	Sum of GTIs [s]
			ontime8	27948.758885741	Sum of GTIs [s]
			l1events	1951357	Number of level 1 events

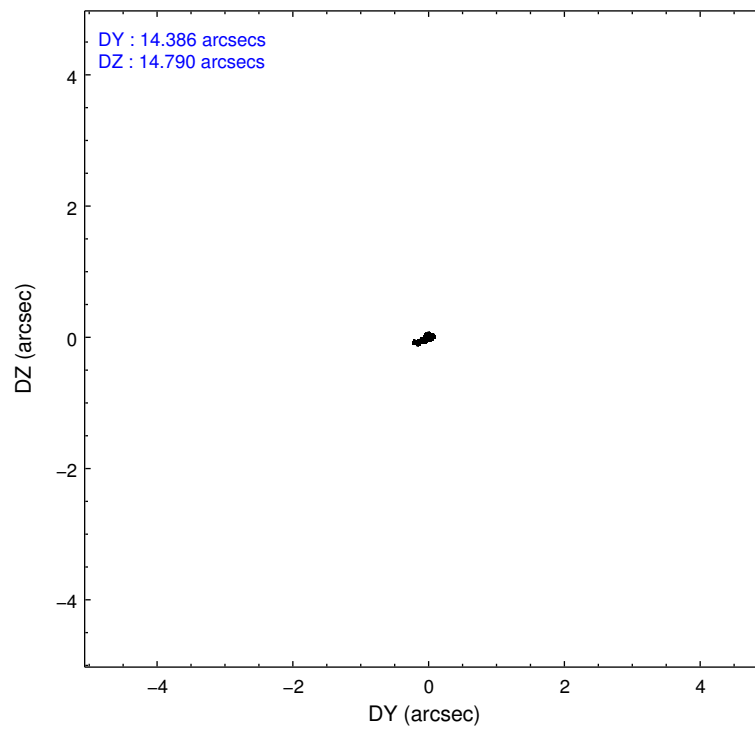
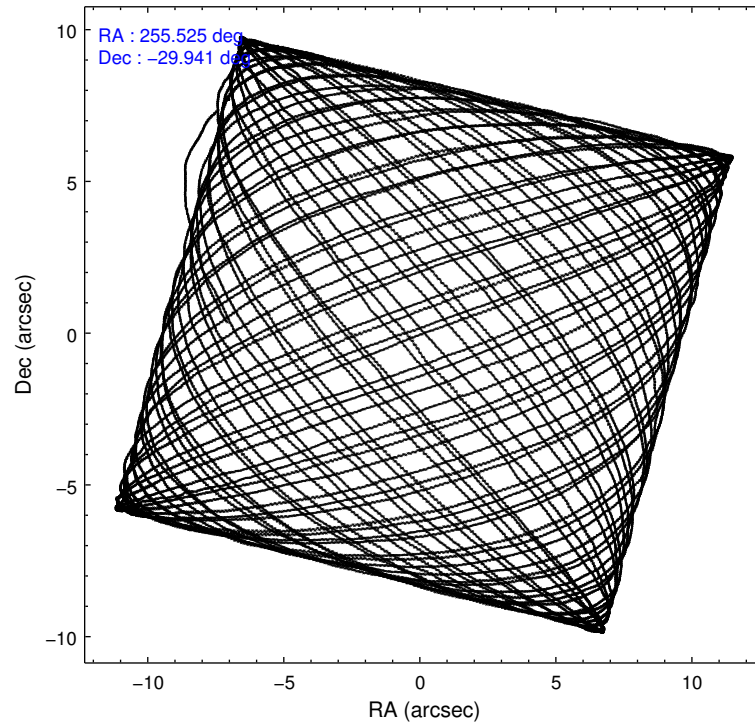
### 2.1.4 Events

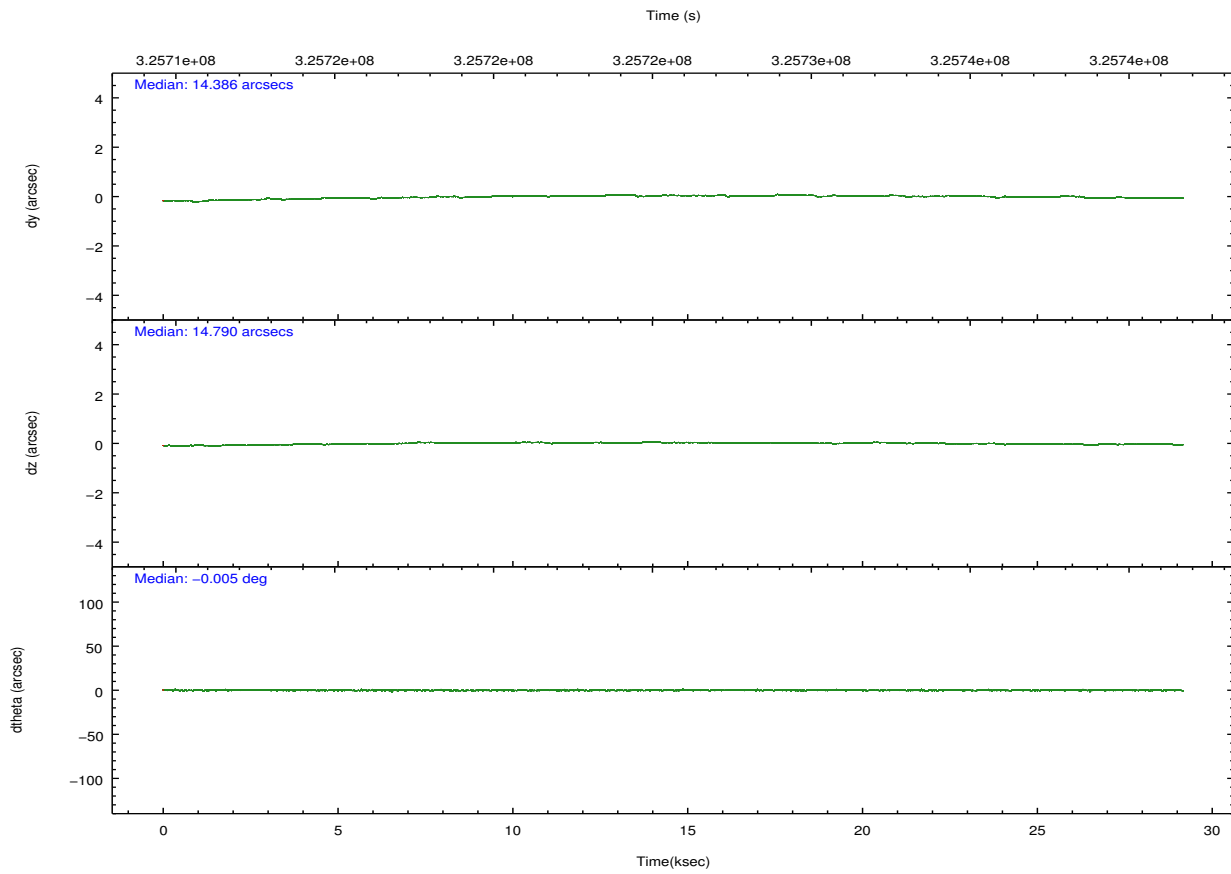
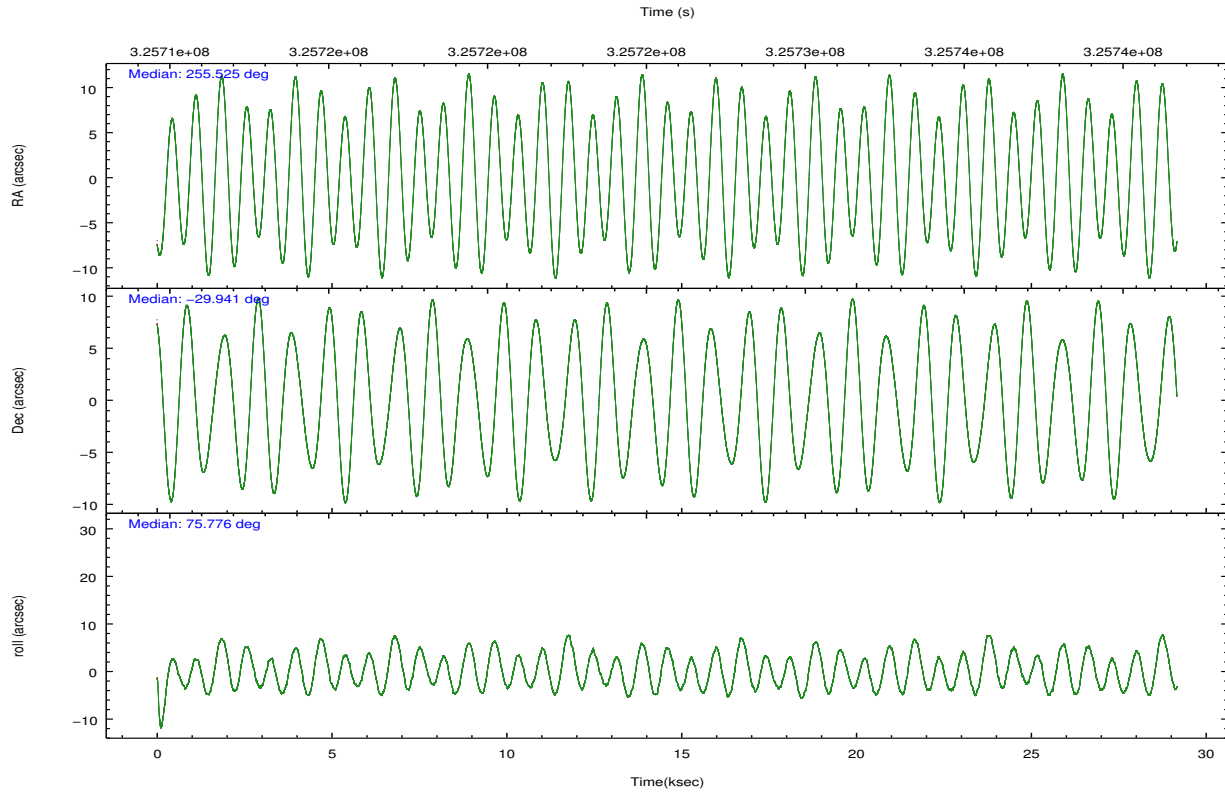
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	278823	260172	426399	272544	373664	339755	grade 0 events	14498	15052	24013	14867	14575	25438
rejected events	245889	227060	225891	237601	216067	260741		5%	5%	5%	5%	3%	7%
rejected %	88%	87%	52%	87%	57%	76%	grade 1 events	189	210	625	151	391	269
								0%	0%	0%	0%	0%	0%
							grade 2 events	7179	6355	60964	7319	32357	18074
								2%	2%	14%	2%	8%	5%
							grade 3 events	2893	3006	6984	3040	13543	7862
								1%	1%	1%	1%	3%	2%
							grade 4 events	2932	3084	6824	3069	13567	7339
								1%	1%	1%	1%	3%	2%
							grade 5 events	10960	12596	30279	13015	34756	17219
								3%	4%	7%	4%	9%	5%
							grade 6 events	5435	5617	101743	6652	83567	20310
								1%	2%	23%	2%	22%	5%
							grade 7 events	234737	214252	194967	224431	180908	243244
								84%	82%	45%	82%	48%	71%

## 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	255.534405	255.5253898718664	CCD I2 on	O1	Y
[deg] Pointing Dec	-29.967161	-29.94095140963298	CCD I3 on	O2	Y
[deg] Pointing Roll	75.633365	75.78549375382427	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)	325712236.184000	325710786.67232	CCD S5 on	N	N
Observation start date	2008-04-27T19:36:11	2008-04-27T19:13:06	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	325740236.184000	325741179.4613	On-chip summing requested	N	N
Observation end date	2008-04-28T03:22:51	2008-04-28T03:39:39	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



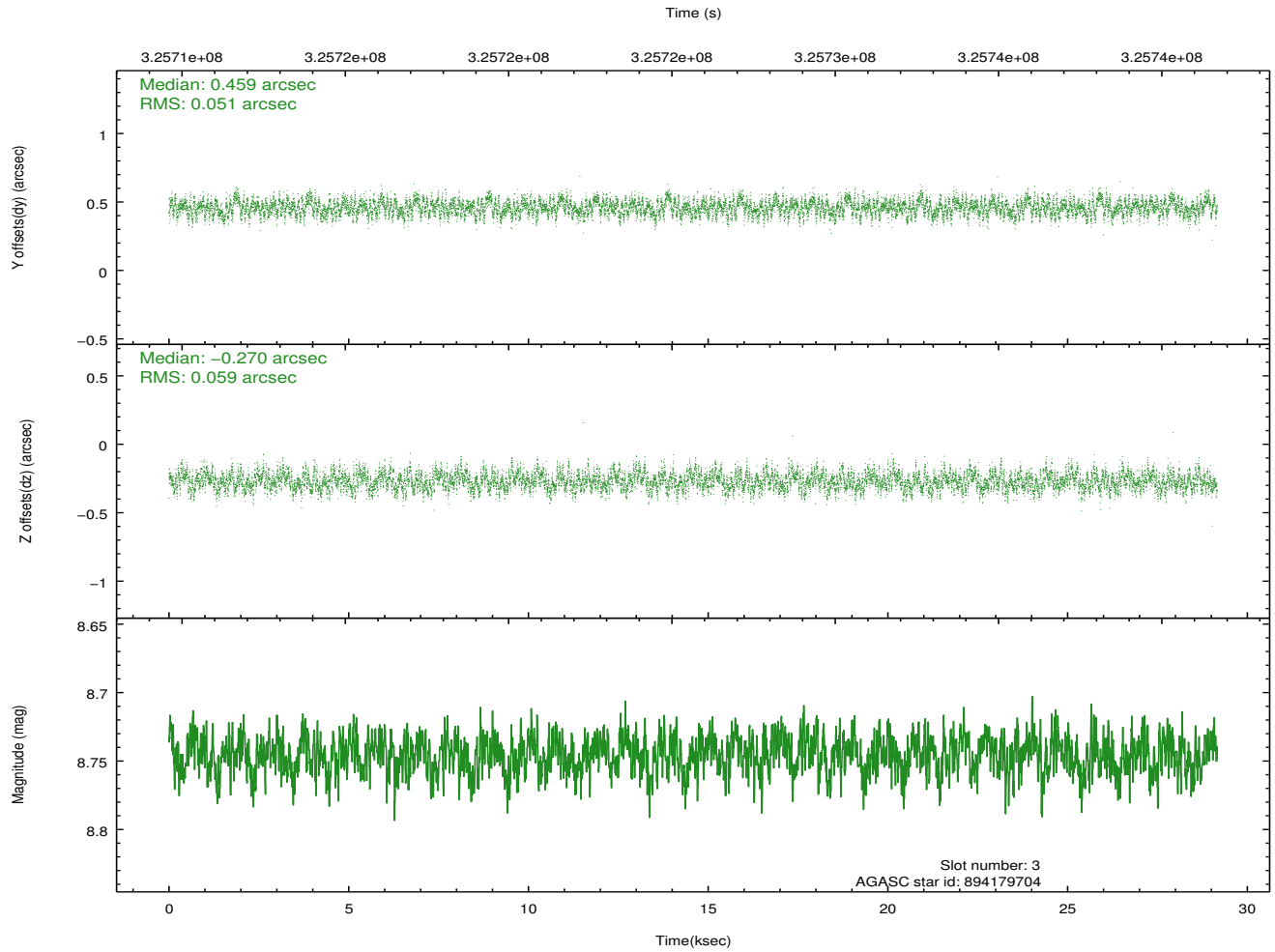
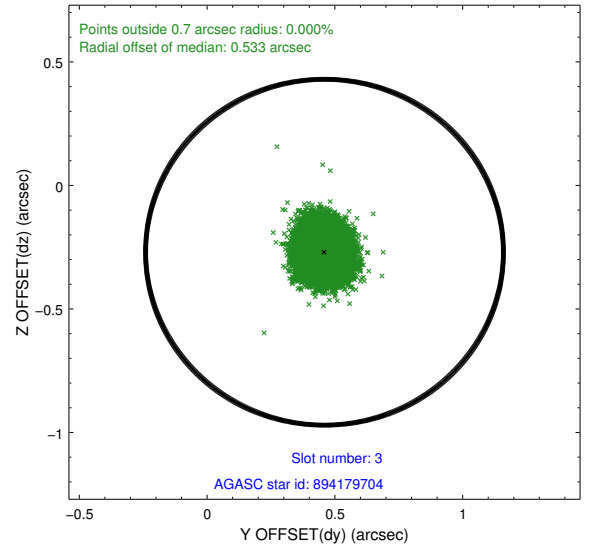
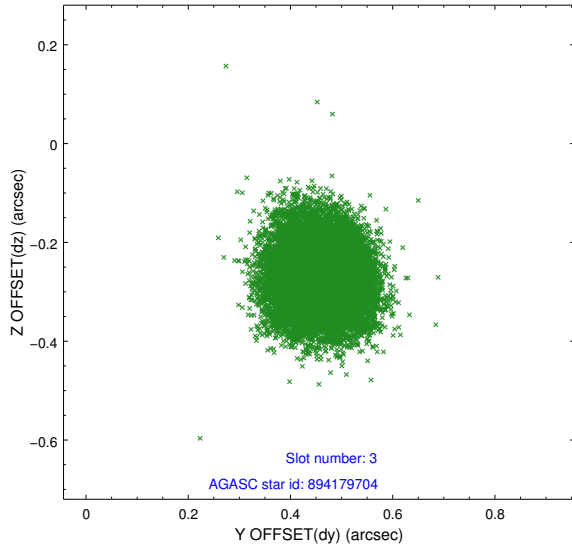


### Slot Statistics

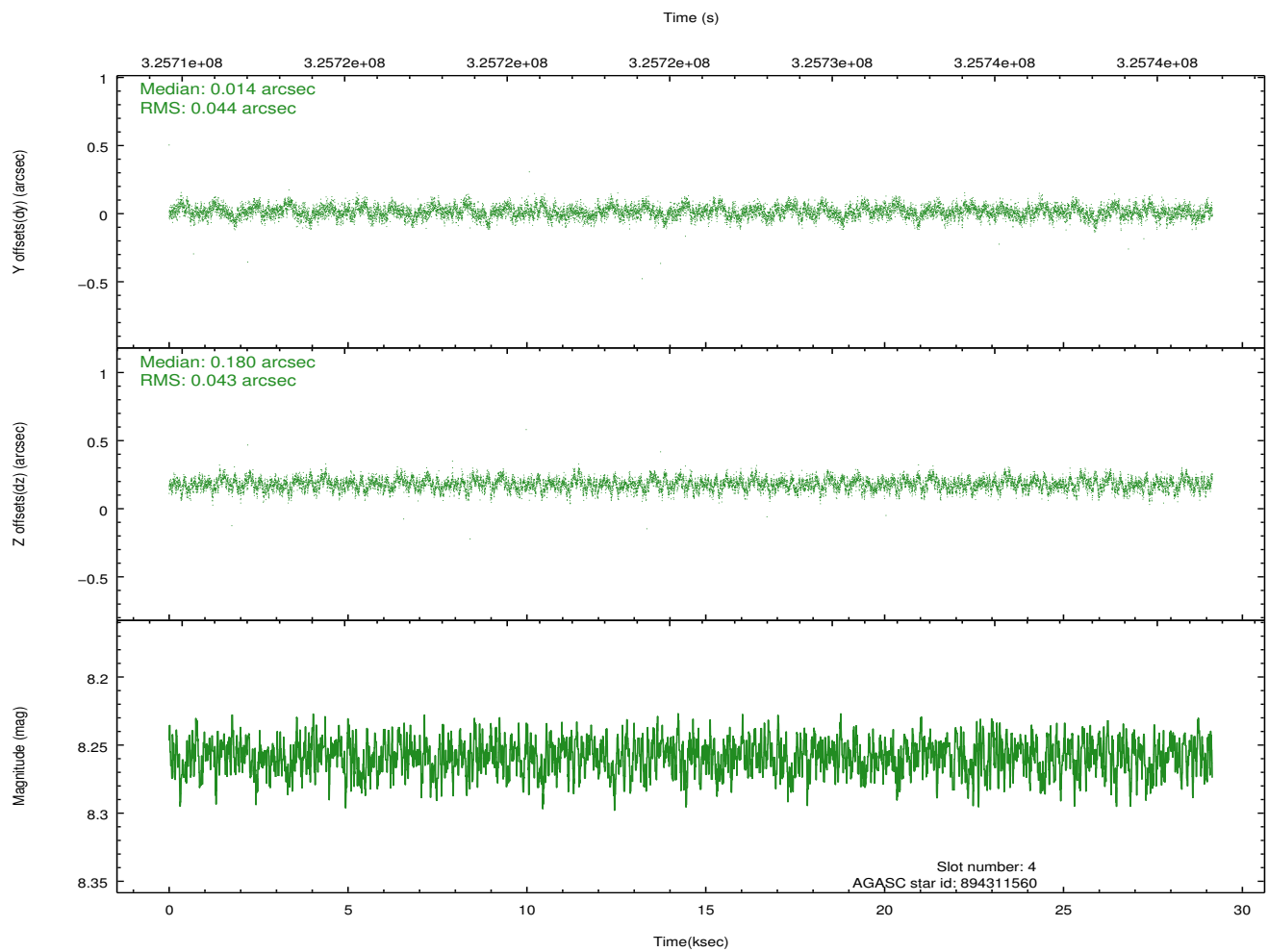
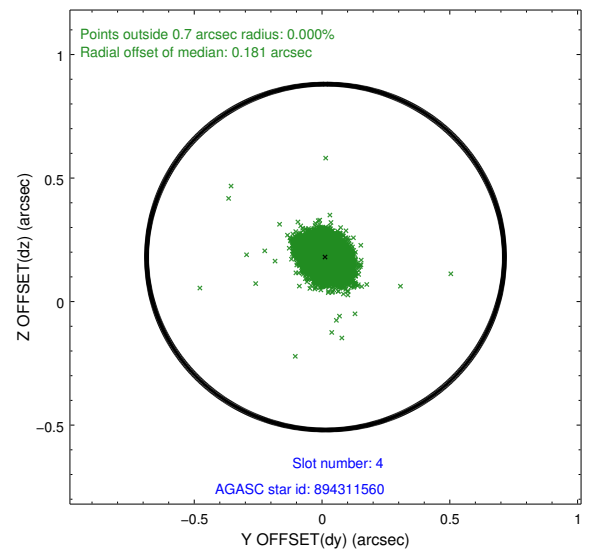
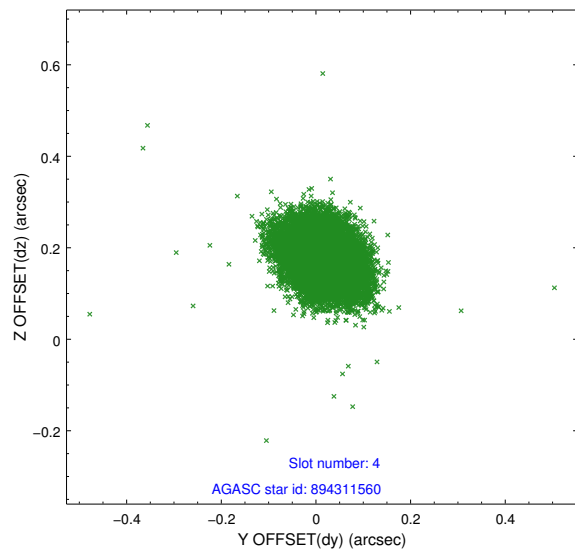
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.91	7114	-0.078	-0.022	0.007	0.012	0.000000	0.000000	-767.37	-1736.19
1	FID	ACIS-S-4	7.00	7112	0.177	0.043	0.007	0.012	0.000000	0.000000	2146.10	172.31
2	FID	ACIS-S-5	7.03	7114	-0.130	-0.013	0.007	0.012	0.000000	0.000000	-1820.19	165.97
3	GUIDE	894179704	8.75	14222	0.459	-0.270	0.085	0.133	254.813840	-29.808957	-13.67	2319.75
4	GUIDE	894311560	8.26	14219	0.014	0.180	0.064	0.106	255.968048	-29.561250	1750.08	-952.85
5	GUIDE	894312440	8.36	14216	0.052	0.279	0.080	0.126	256.267206	-29.720309	1422.69	-2000.25
6	GUIDE	964693496	8.84	14220	-0.772	-0.158	0.067	0.112	255.191226	-30.516598	-2182.66	539.26
7	GUIDE	964697232	9.17	14216	0.246	-0.035	0.089	0.143	254.697519	-30.172036	-1370.47	2337.63

## 2.4 Star Slots

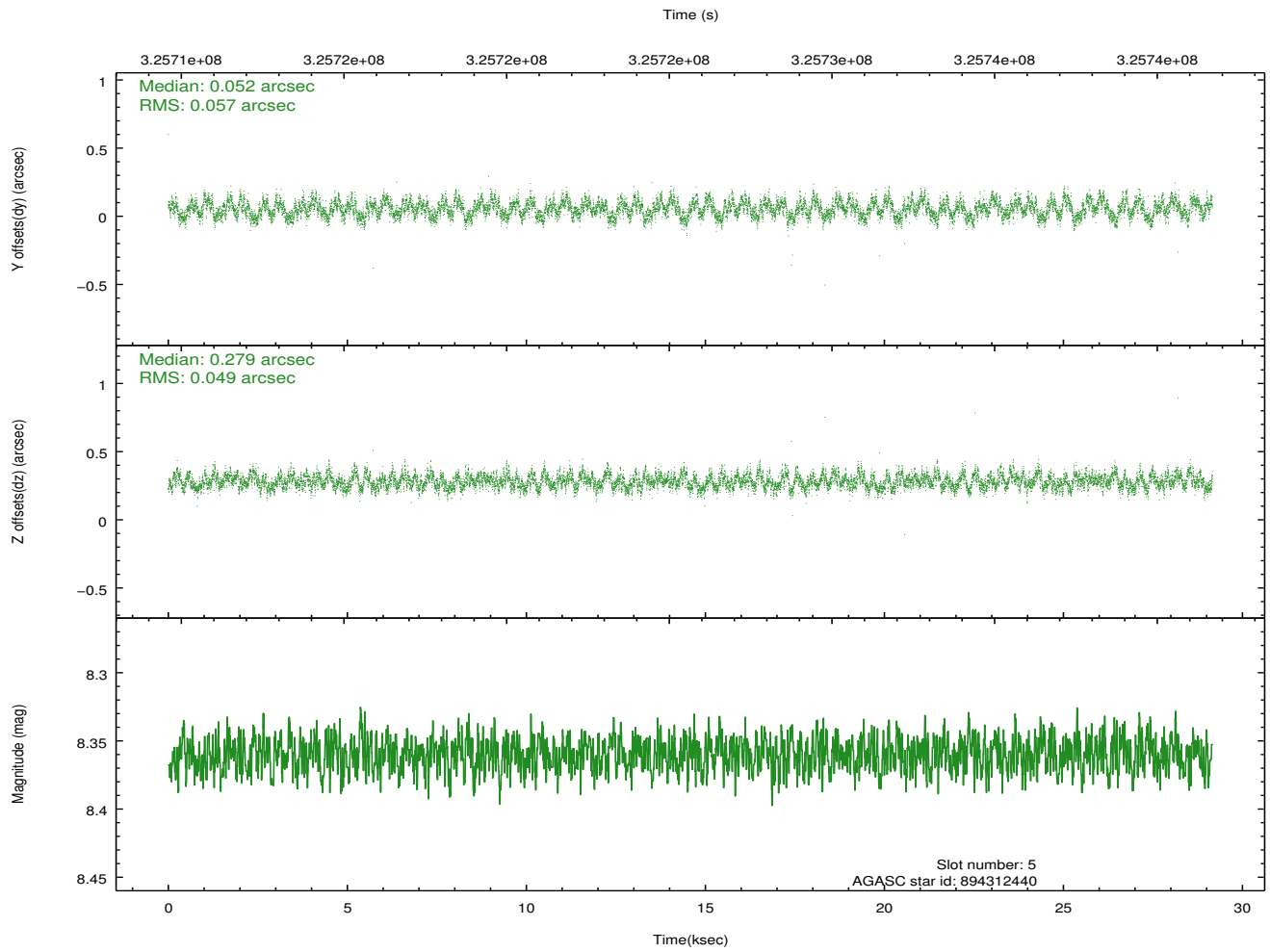
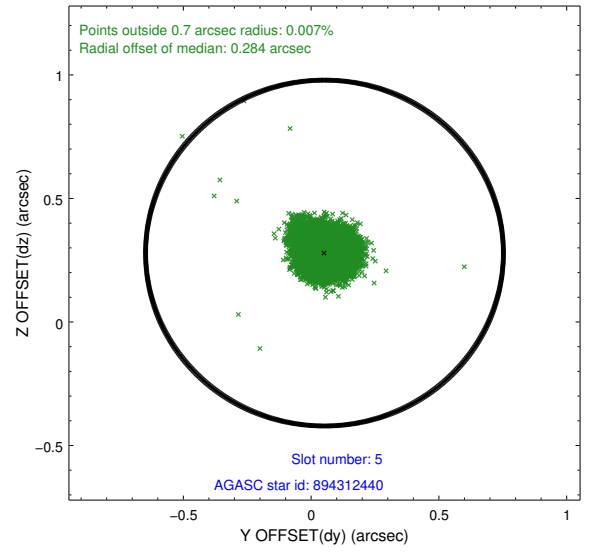
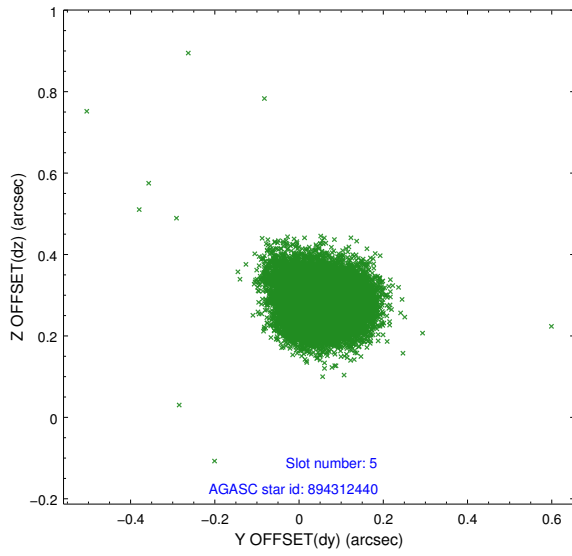
### 2.4.1 Slot 3



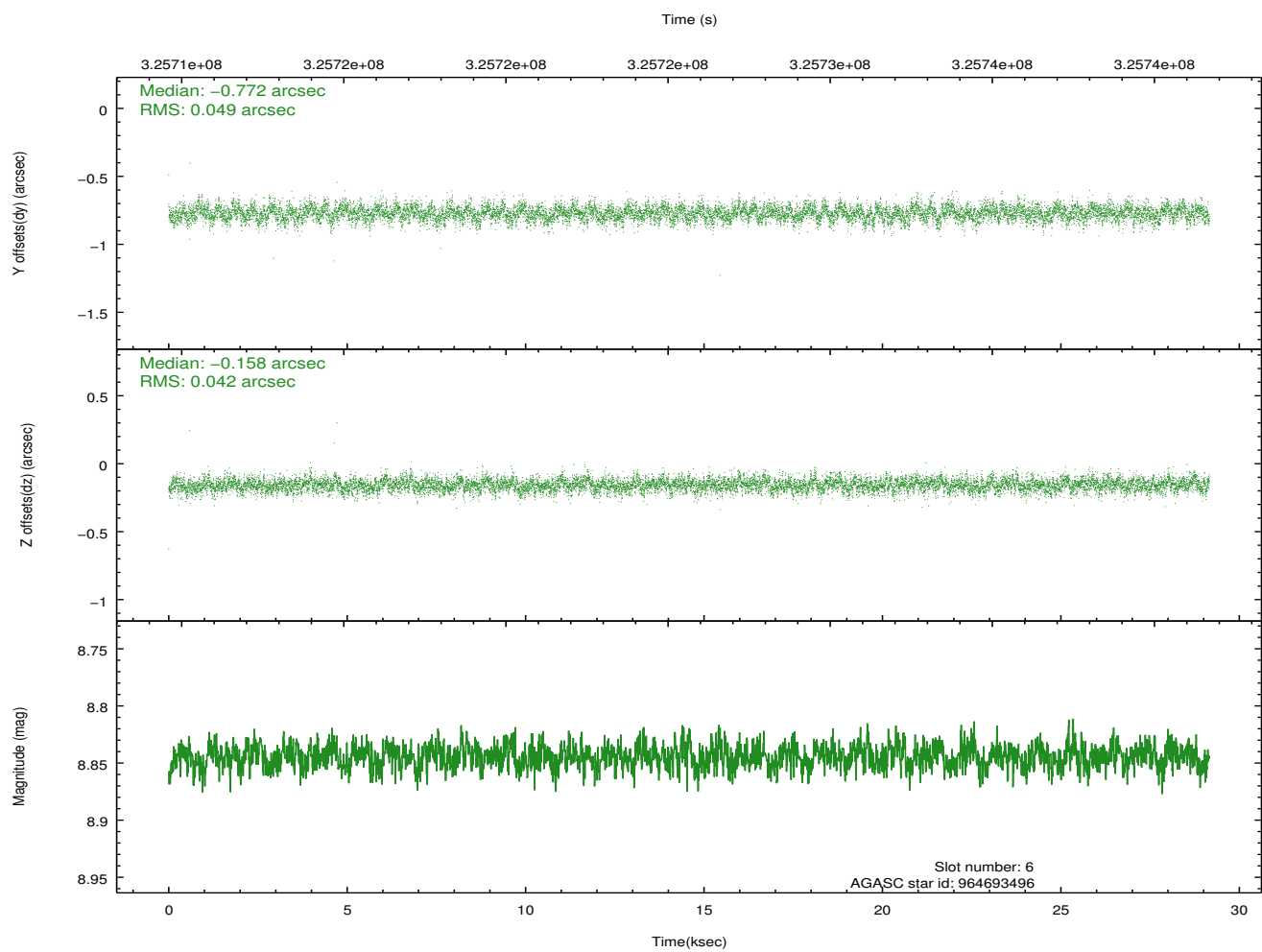
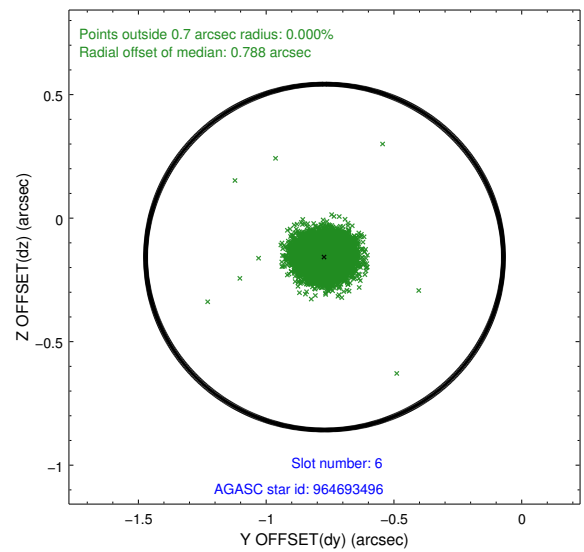
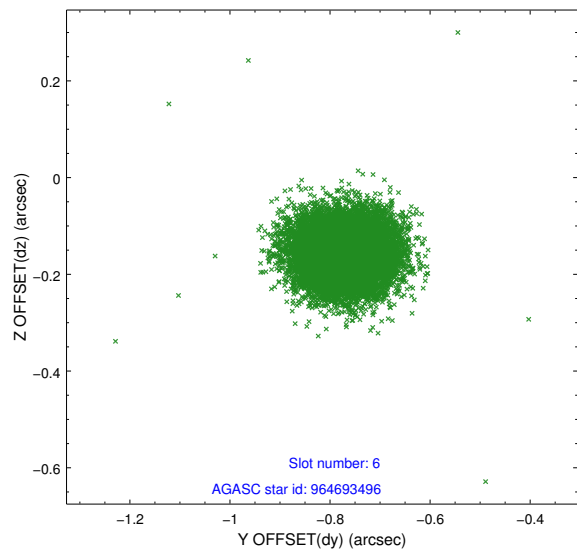
## 2.4.2 Slot 4



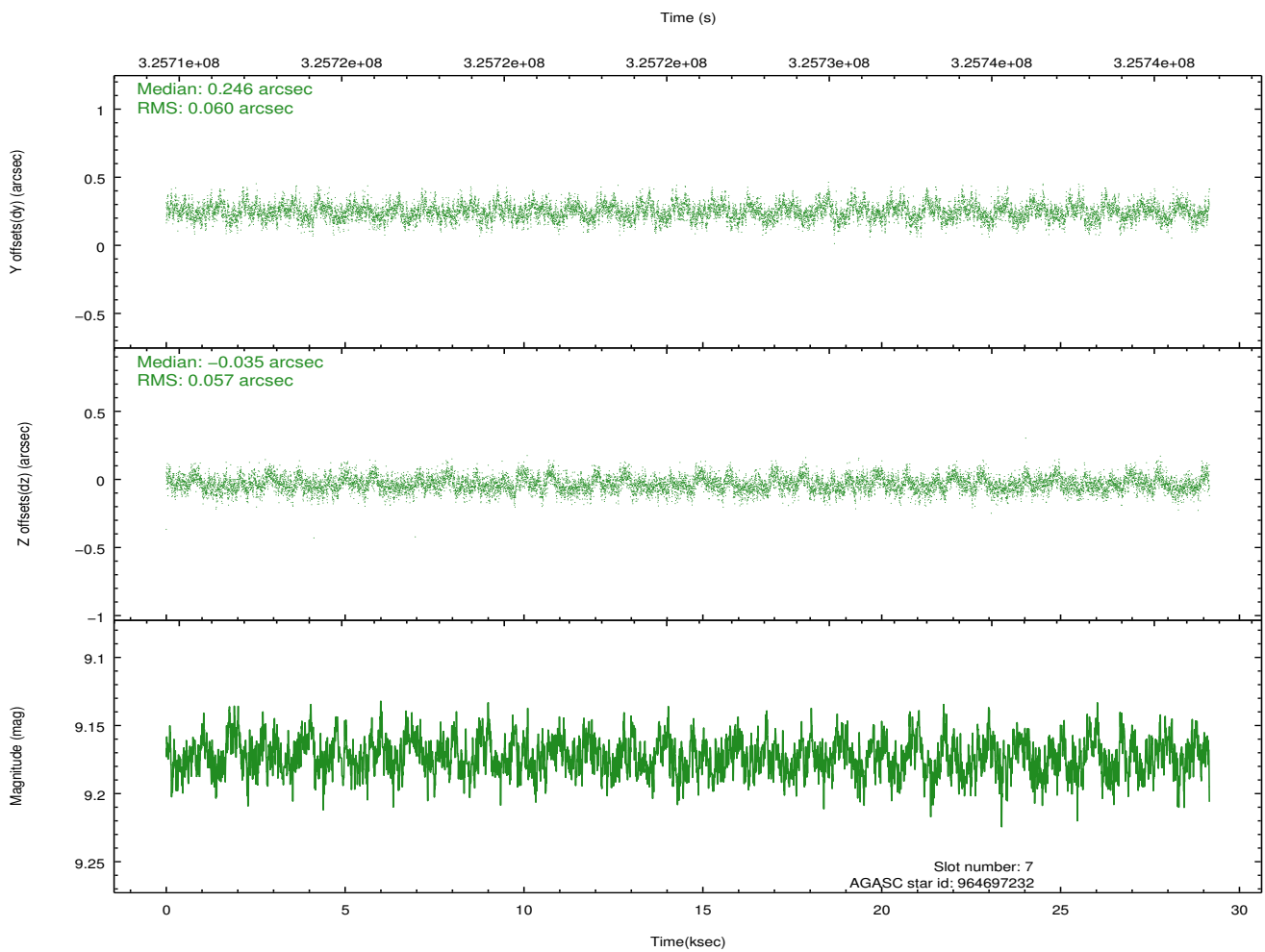
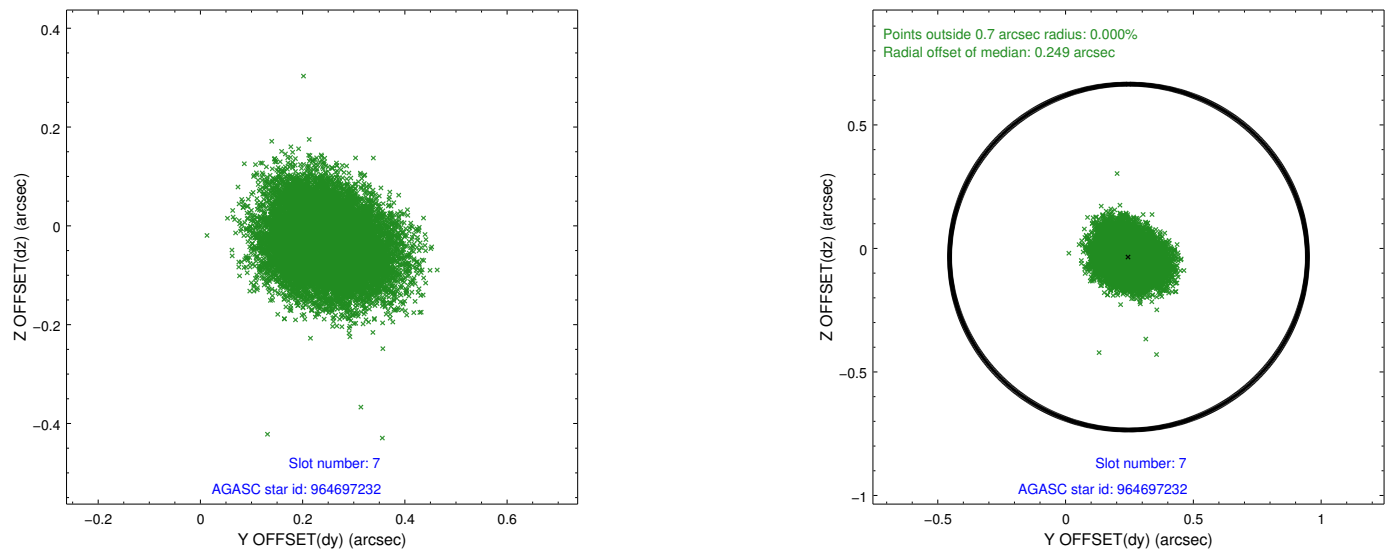
### 2.4.3 Slot 5



## 2.4.4 Slot 6

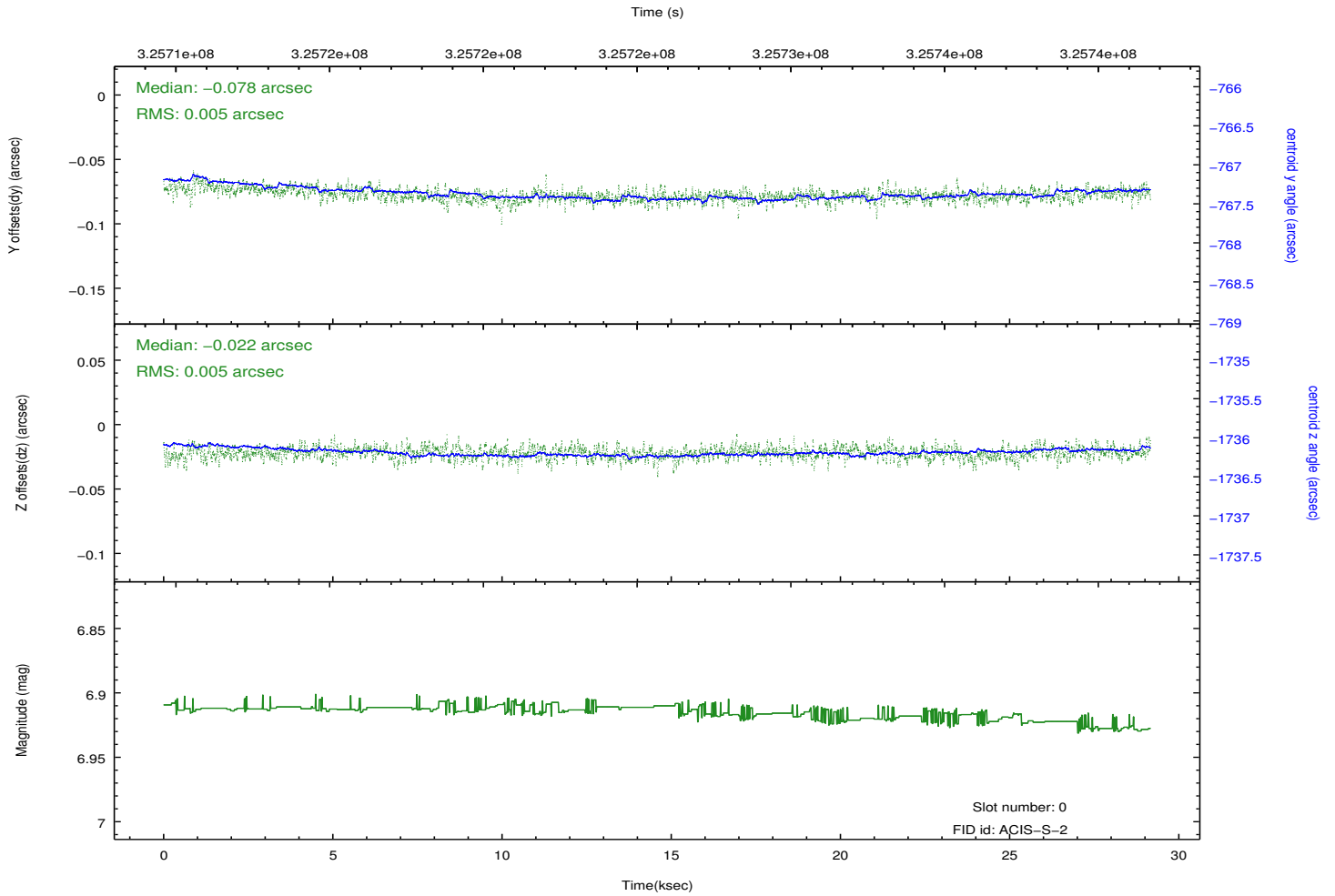
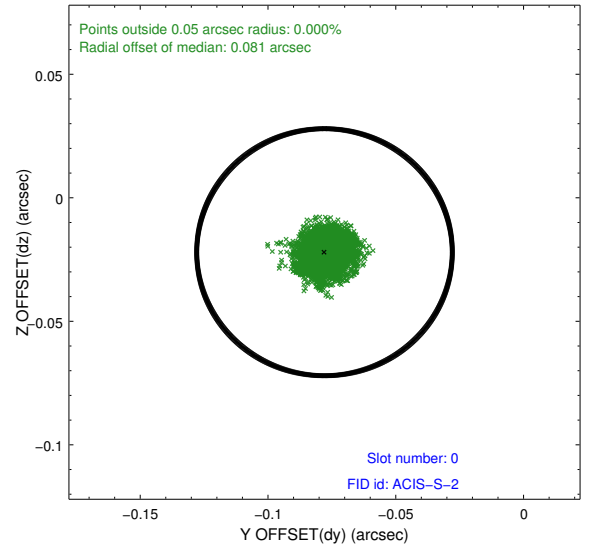
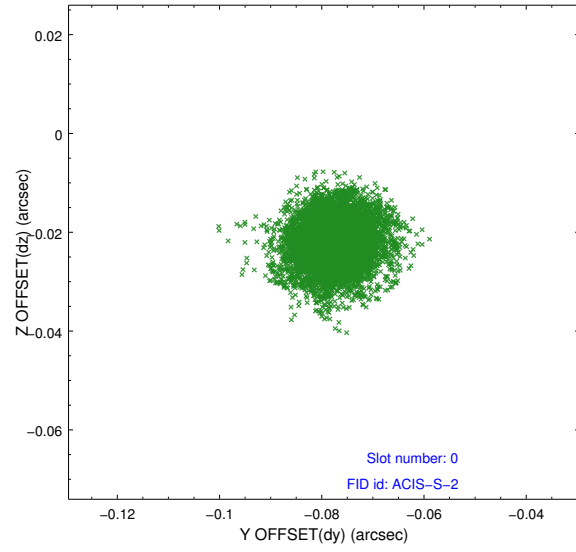


## 2.4.5 Slot 7

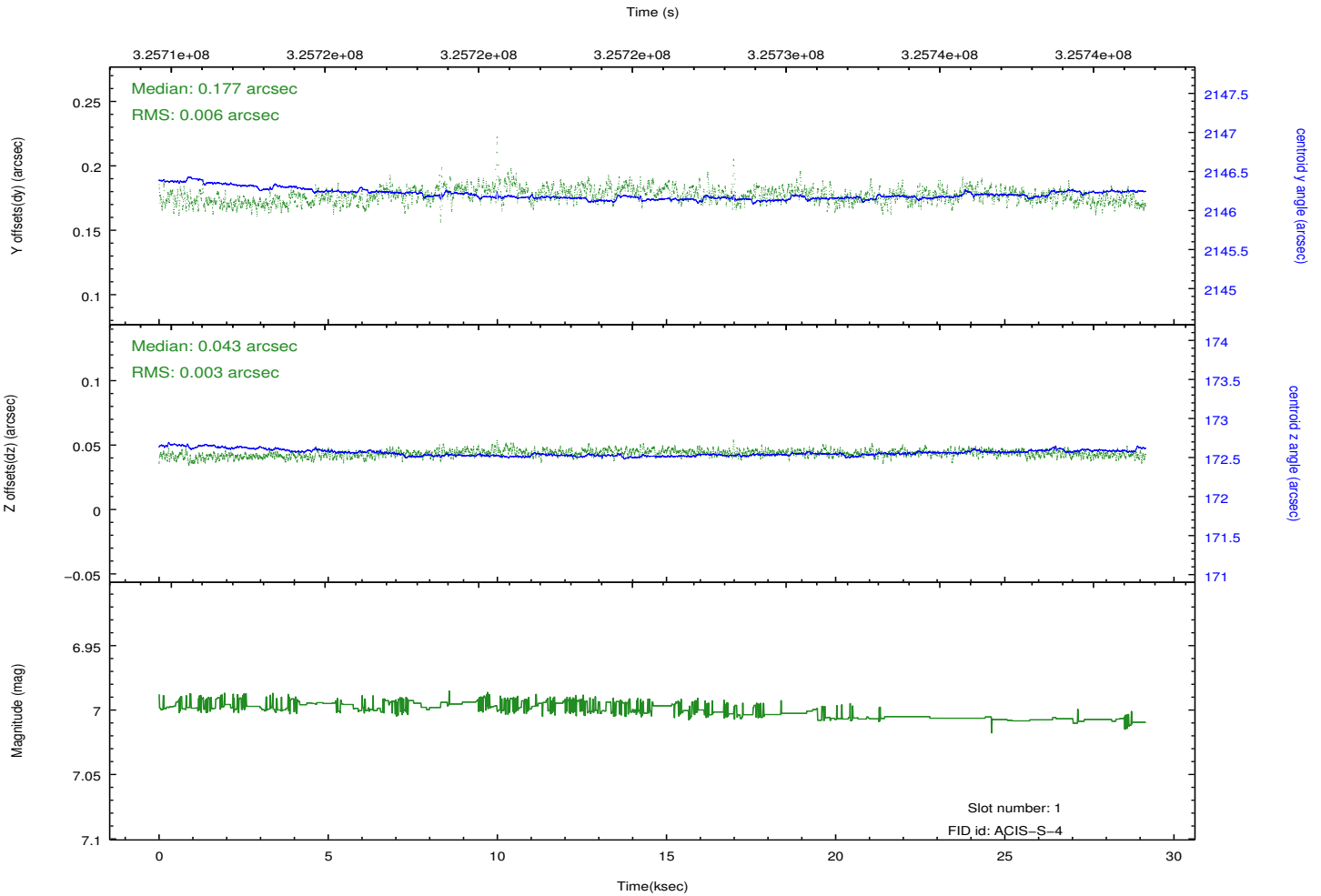
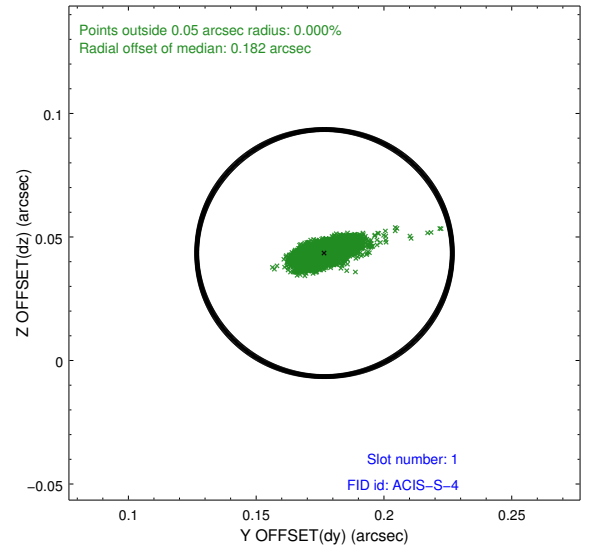
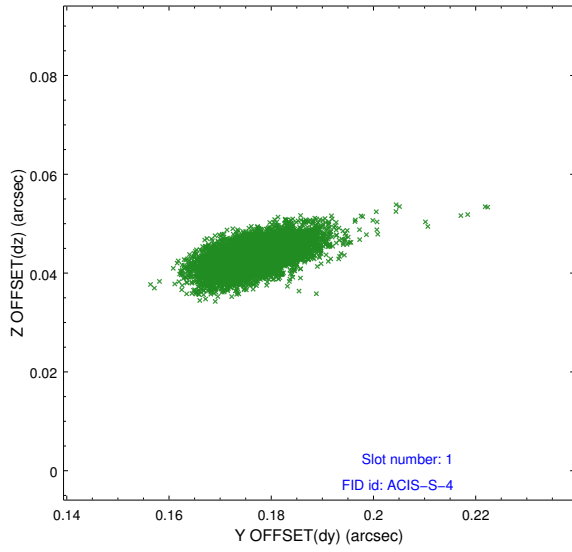


## 2.5 FID Slots

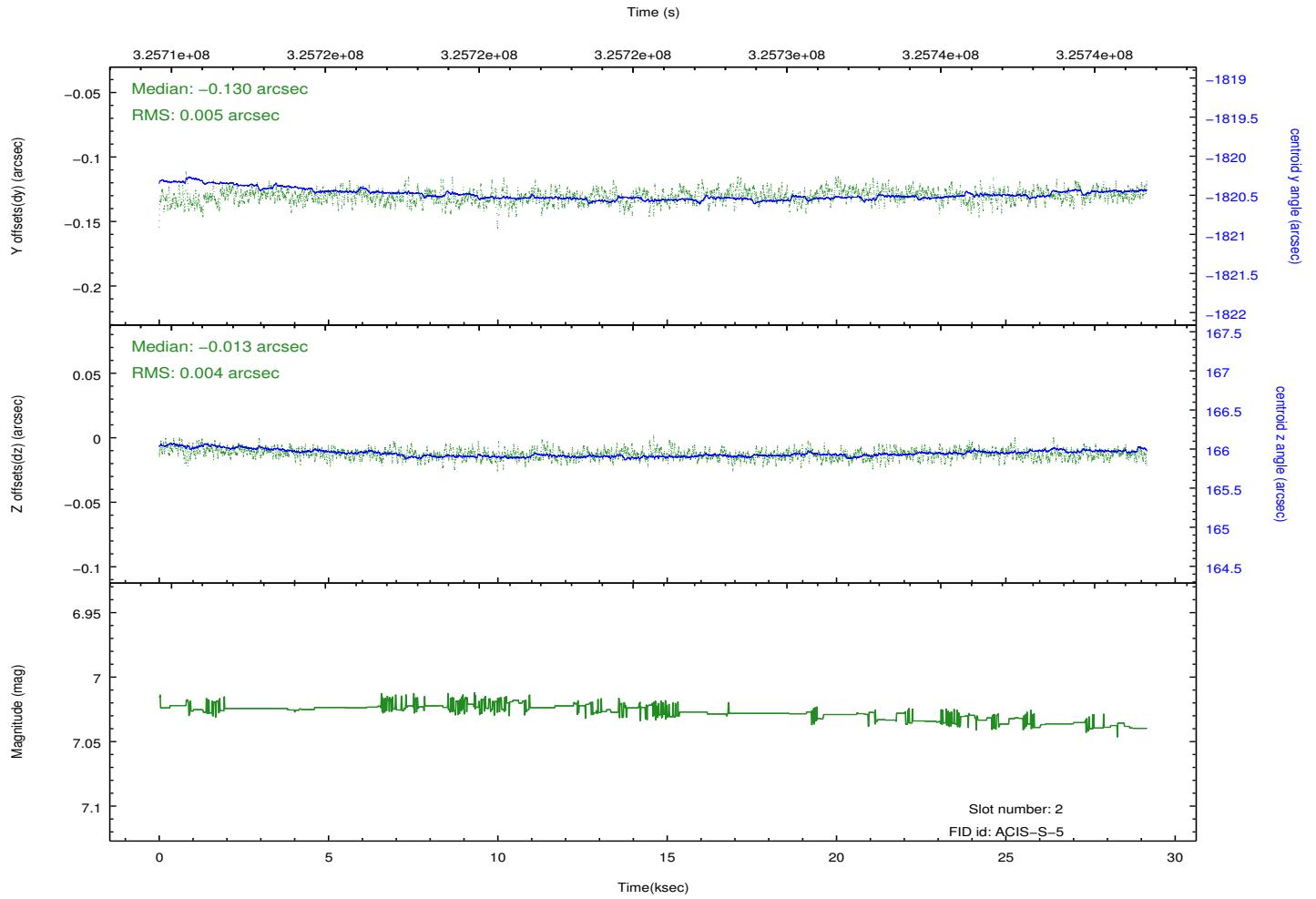
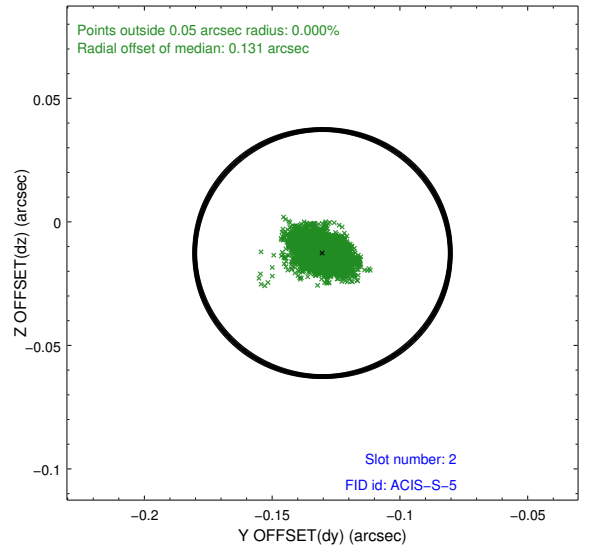
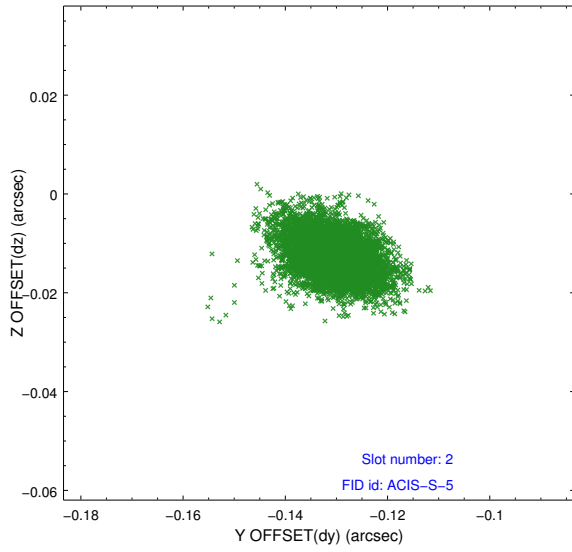
### 2.5.1 Slot 0



## 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)	2012.05.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.9519998

### A.2 Comments