

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13130 - L2 Version 2  
Chandra X-Ray Center

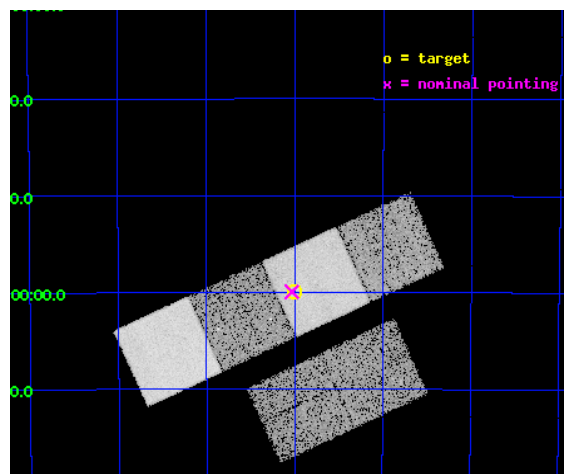
L2 Processing Date : Feb 2 2012

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# 1 Front

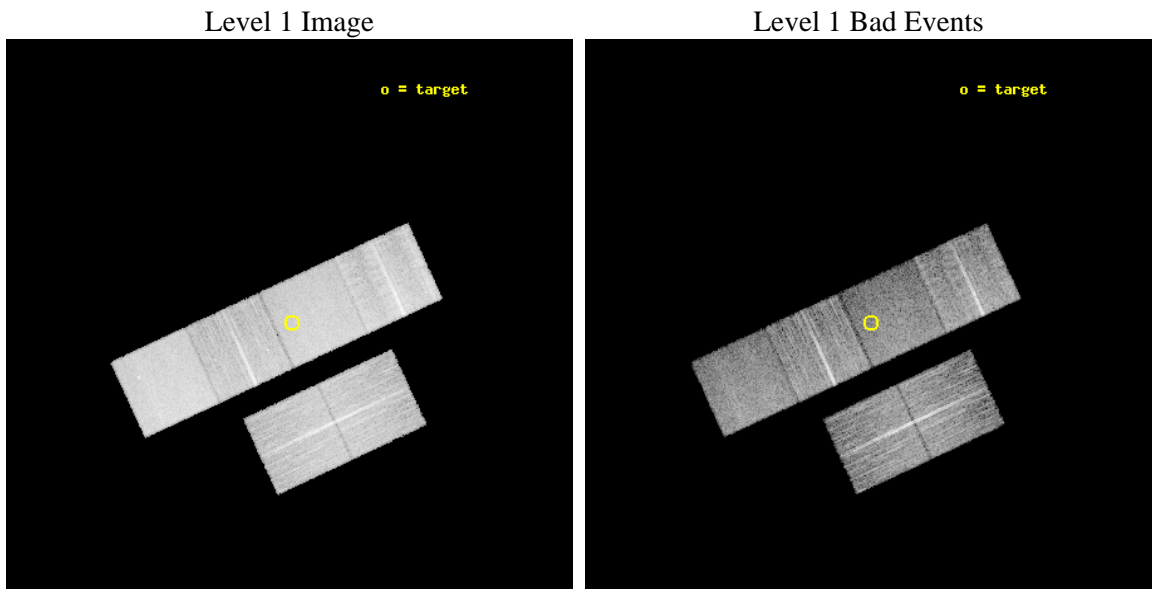
seq_num	900956	Sequence number
obs_id	13130	Observation id
title	Properties of the Warm-Hot Intergalactic Medium Using X-ray/SZ Cross-Correlation	Proposal title
observer	Dr. Massimiliano Galeazzi	Principal investigator
object	Blanco Cosmological Survey	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	79.25	Observer's specified target RA [deg]
dec_targ	-52.0	Observer's specified target Dec [deg]
ra_nom	79.257750839586	Nominal RA [deg]
dec_nom	-51.999381896227	Nominal Dec [deg]
roll_nom	335.16276040285	Nominal Roll [deg]
revision	2	Processing version of data
ontime	12550.399953306	Sum of GTIs [s]
livetime	12391.479232153	Livetime [s]
ontime2	12543.918002367	Sum of GTIs [s]
ontime3	12543.917942762	Sum of GTIs [s]
ontime5	12550.399953306	Sum of GTIs [s]
ontime6	12547.159012556	Sum of GTIs [s]
ontime7	12550.399953306	Sum of GTIs [s]
ontime8	12550.399953306	Sum of GTIs [s]
l2events	147939	Number of level 2 events



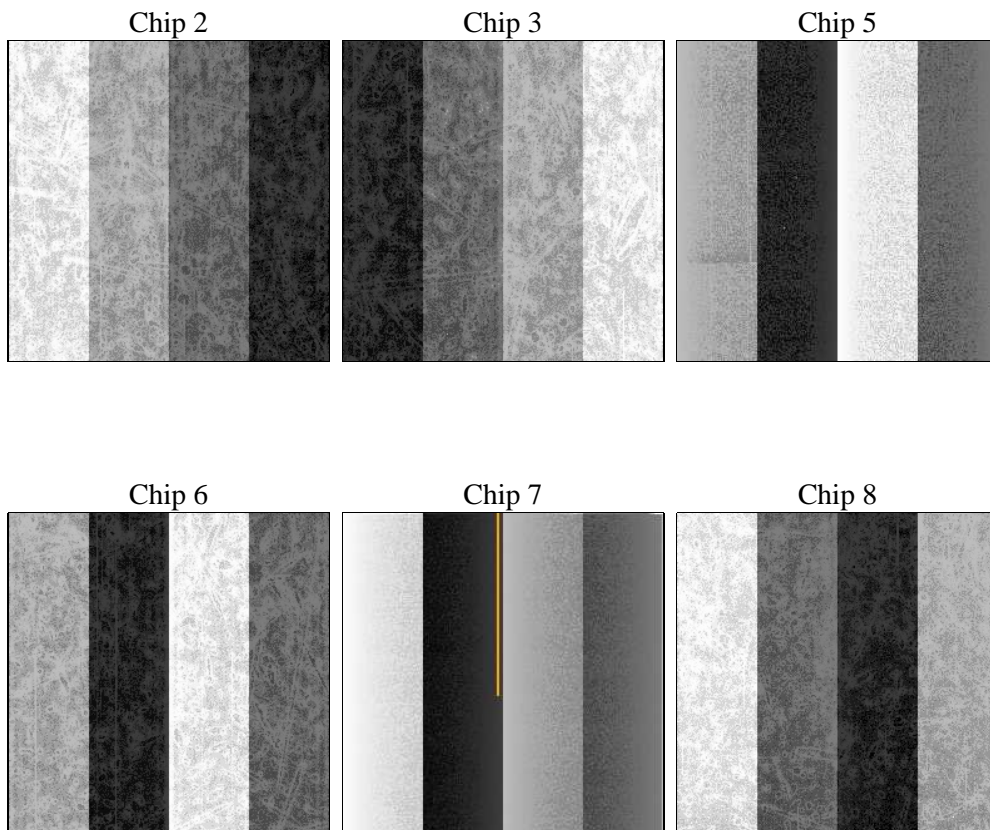
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	12500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	12550.399953306	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime2	12543.918002367	Sum of GTIs [s]
date	2012-02-02T03:55:59	Date and time of file creation	ontime3	12543.917942762	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	12550.399953306	Sum of GTIs [s]
			ontime6	12547.159012556	Sum of GTIs [s]
			ontime7	12550.399953306	Sum of GTIs [s]
			ontime8	12550.399953306	Sum of GTIs [s]
			l1events	628407	Number of level 1 events

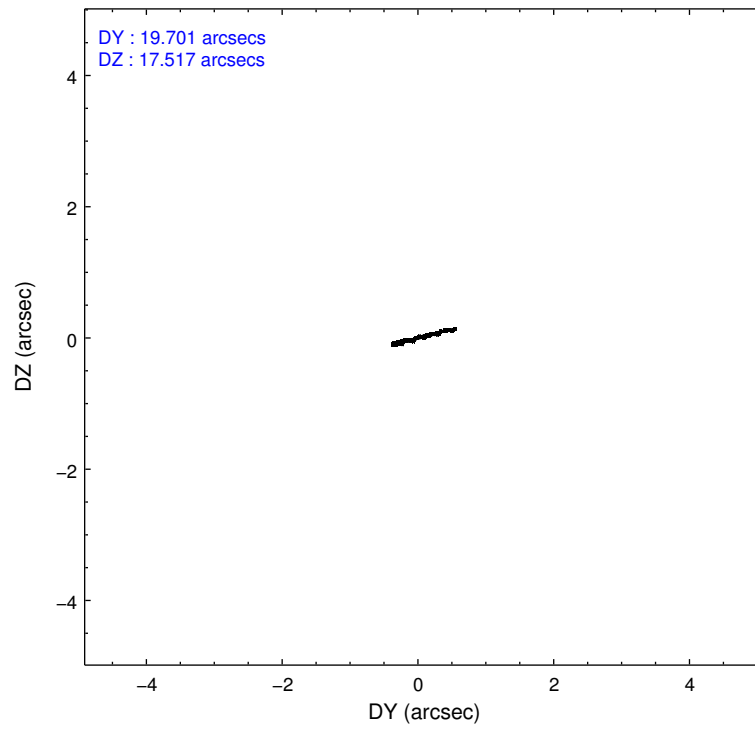
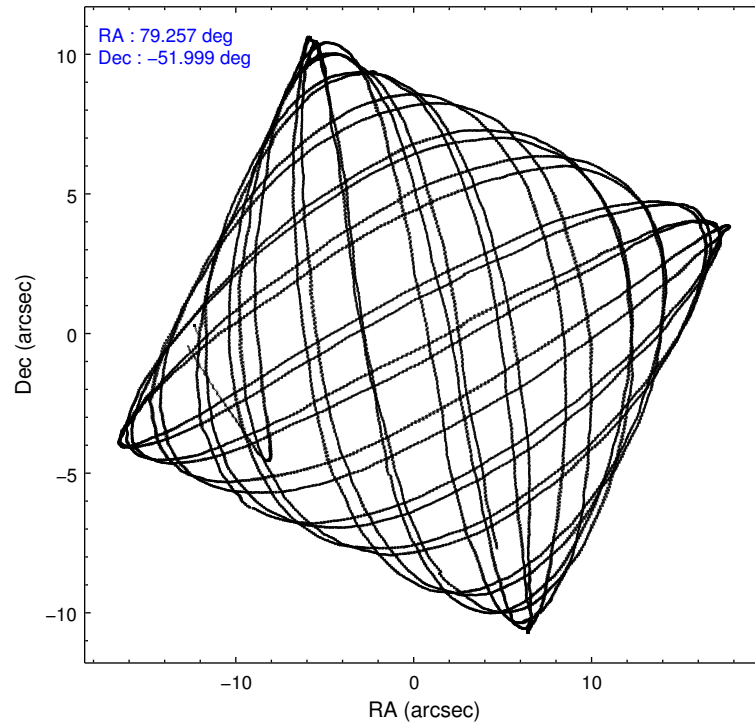
### 2.1.4 Events

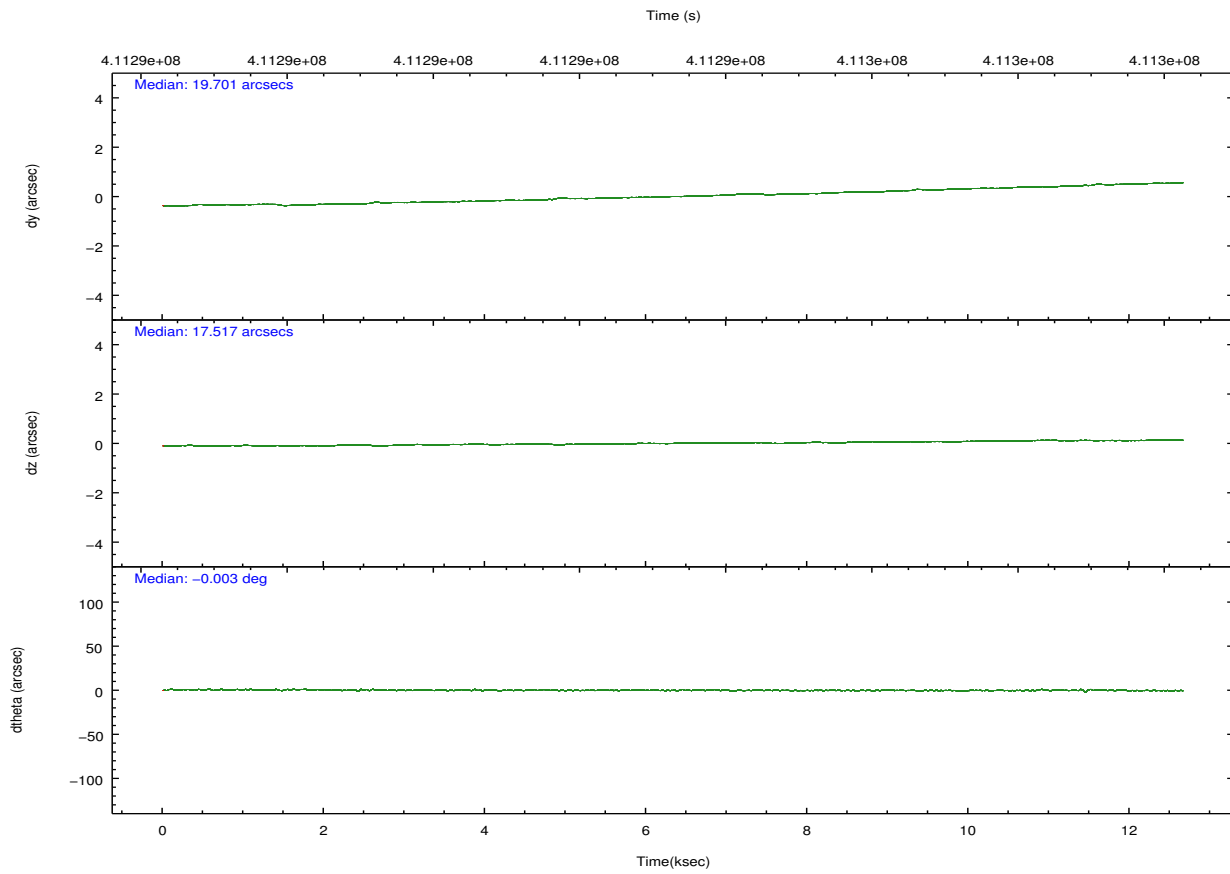
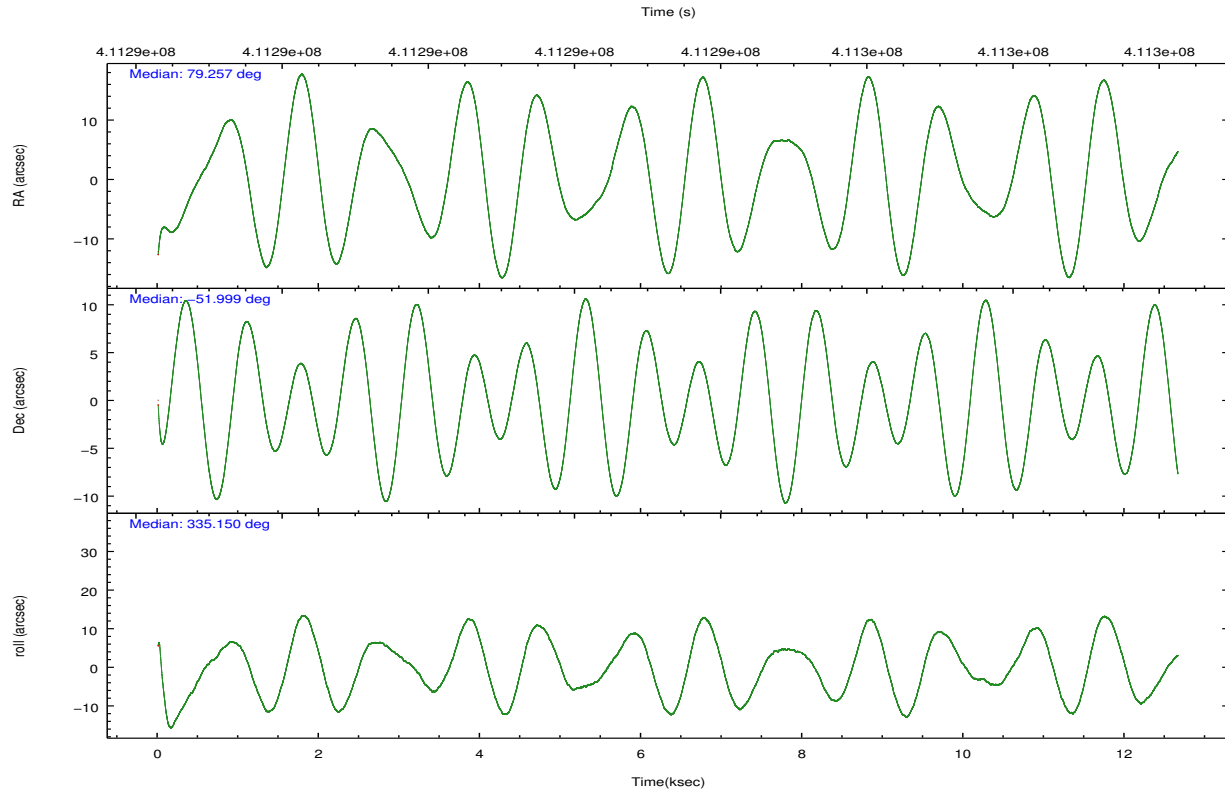
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	90961	87808	133549	89883	110891	115315	grade 0 events	3373	3181	4325	3694	4500	8911
rejected events	81272	78785	68730	79633	60653	85339		3%	3%	3%	4%	4%	7%
rejected %	89%	89%	51%	88%	54%	74%	grade 1 events	66	55	236	48	117	112
								0%	0%	0%	0%	0%	0%
							grade 2 events	2438	1901	19934	2274	10508	7116
								2%	2%	14%	2%	9%	6%
							grade 3 events	1013	962	2500	1052	4492	3062
								1%	1%	1%	1%	4%	2%
							grade 4 events	989	1022	2434	1036	4326	2753
								1%	1%	1%	1%	3%	2%
							grade 5 events	3594	4118	10241	4212	11668	6035
								3%	4%	7%	4%	10%	5%
							grade 6 events	1878	1961	35653	2197	26422	8160
								2%	2%	26%	2%	23%	7%
							grade 7 events	77610	74608	58226	75370	48858	79166
								85%	84%	43%	83%	44%	68%

## 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	79.213640	79.25775083958625	CCD I2 on	O1	Y
[deg] Pointing Dec	-52.002241	-51.99938189622681	CCD I3 on	Y	Y
[deg] Pointing Roll	334.971354	335.1627604028486	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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	411287114.184000	411285773.43978	CCD S5 on	N	N
Observation start date	2011-01-13T06:24:08	2011-01-13T06:02:53	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	411299614.184000	411300905.00306	On-chip summing requested	N	N
Observation end date	2011-01-13T09:52:28	2011-01-13T10:15:05	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





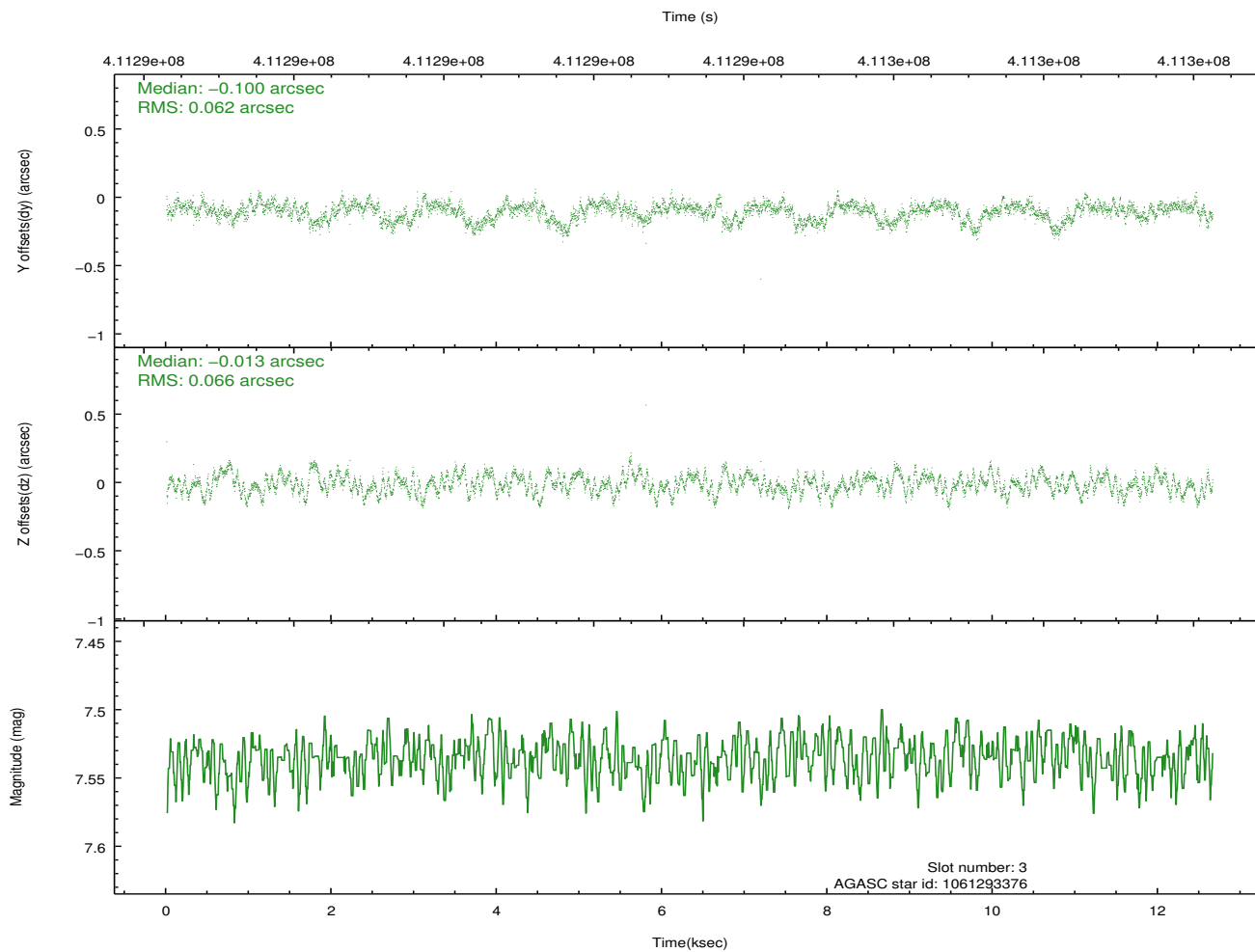
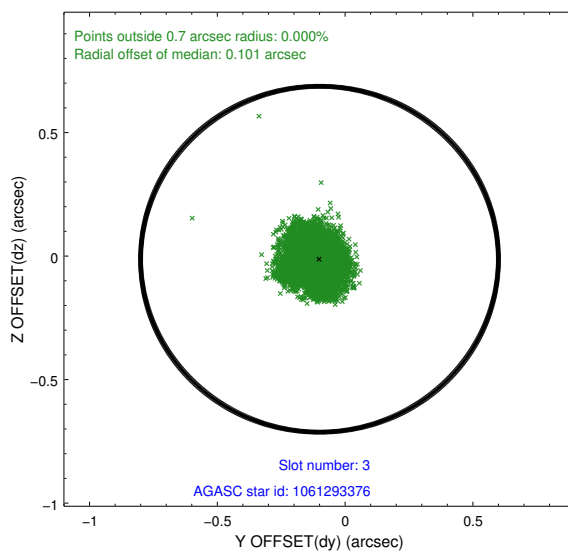
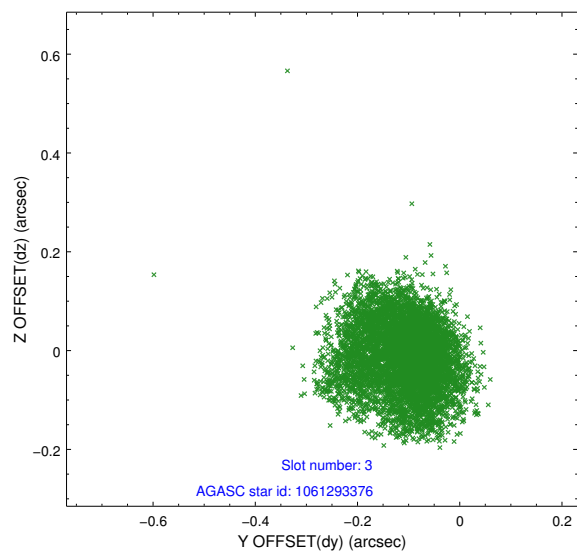
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.95	3088	-0.083	-0.043	0.007	0.012	0.000000	0.000000	-772.95	-1738.94
1	FID	ACIS-S-4	7.03	3088	0.218	0.052	0.009	0.024	0.000000	0.000000	2140.49	169.17
2	FID	ACIS-S-5	7.06	3088	-0.165	-0.000	0.011	0.023	0.000000	0.000000	-1825.34	163.31
3	GUIDE	1061293376	7.53	6173	-0.100	-0.013	0.098	0.154	79.729126	-51.579452	402.81	1863.57
4	GUIDE	1061296568	8.35	6168	0.001	0.167	0.066	0.107	79.123429	-51.476040	-984.48	1630.66
5	GUIDE	1061297288	8.43	6175	-0.128	-0.015	0.080	0.126	79.226530	-52.452693	712.36	-1456.98
6	GUIDE	1115554592	9.52	6128	0.121	0.085	0.178	0.267	79.560833	-52.777038	1867.36	-2208.88
7	GUIDE	1061293080	8.32	6173	0.114	-0.217	0.085	0.136	79.617415	-51.426985	-52.94	2255.37

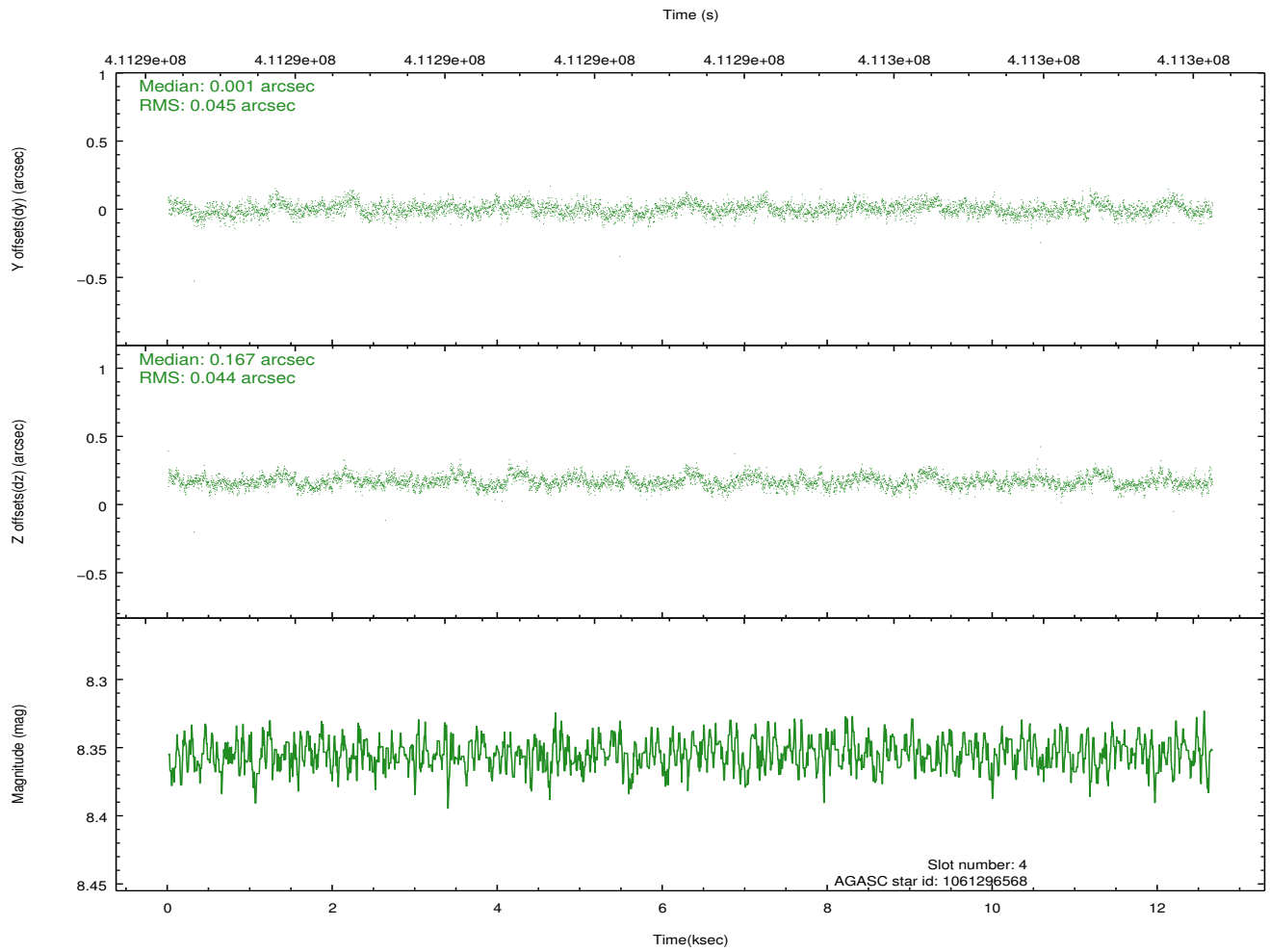
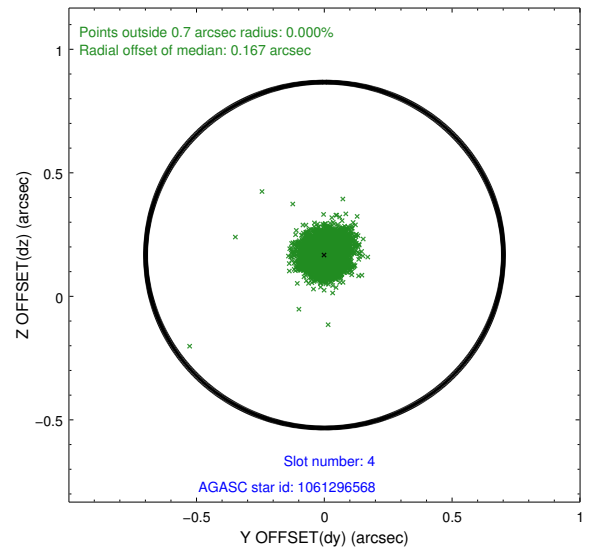
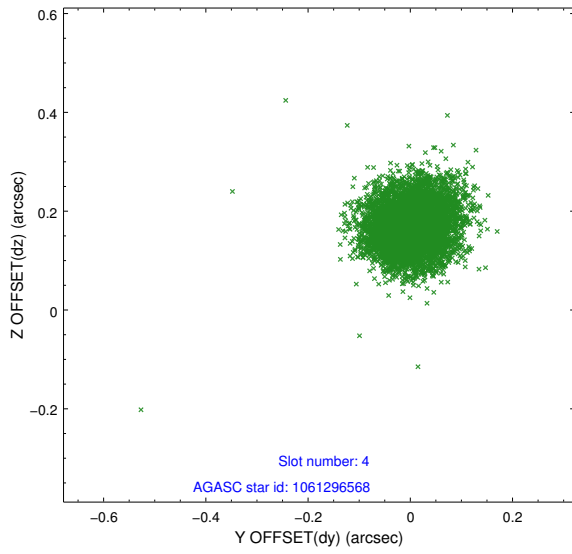
∞

## 2.4 Star Slots

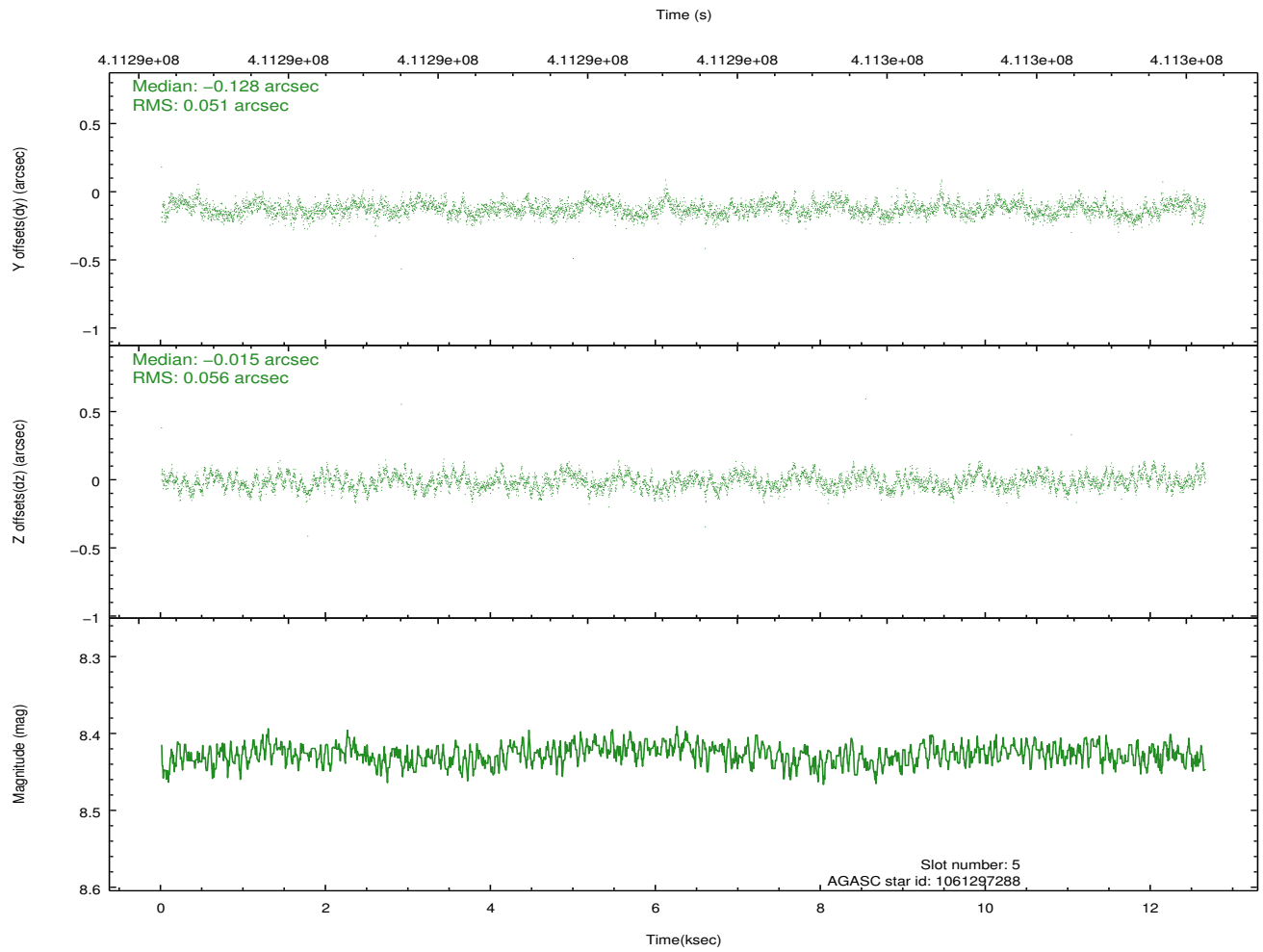
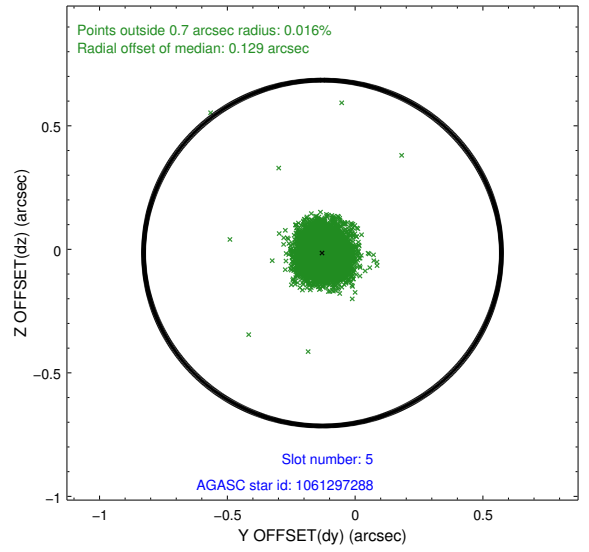
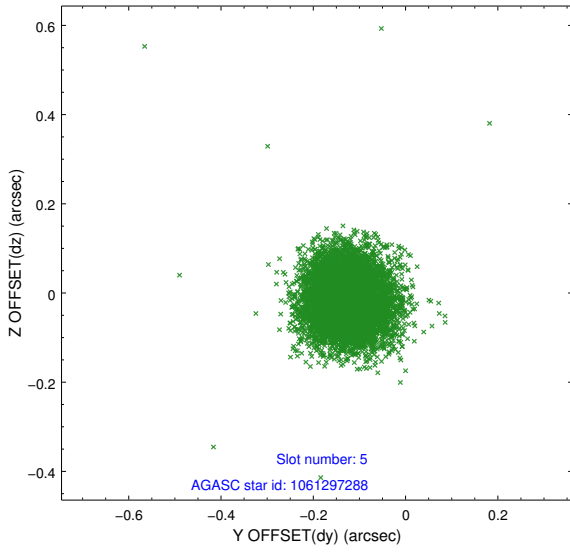
### 2.4.1 Slot 3



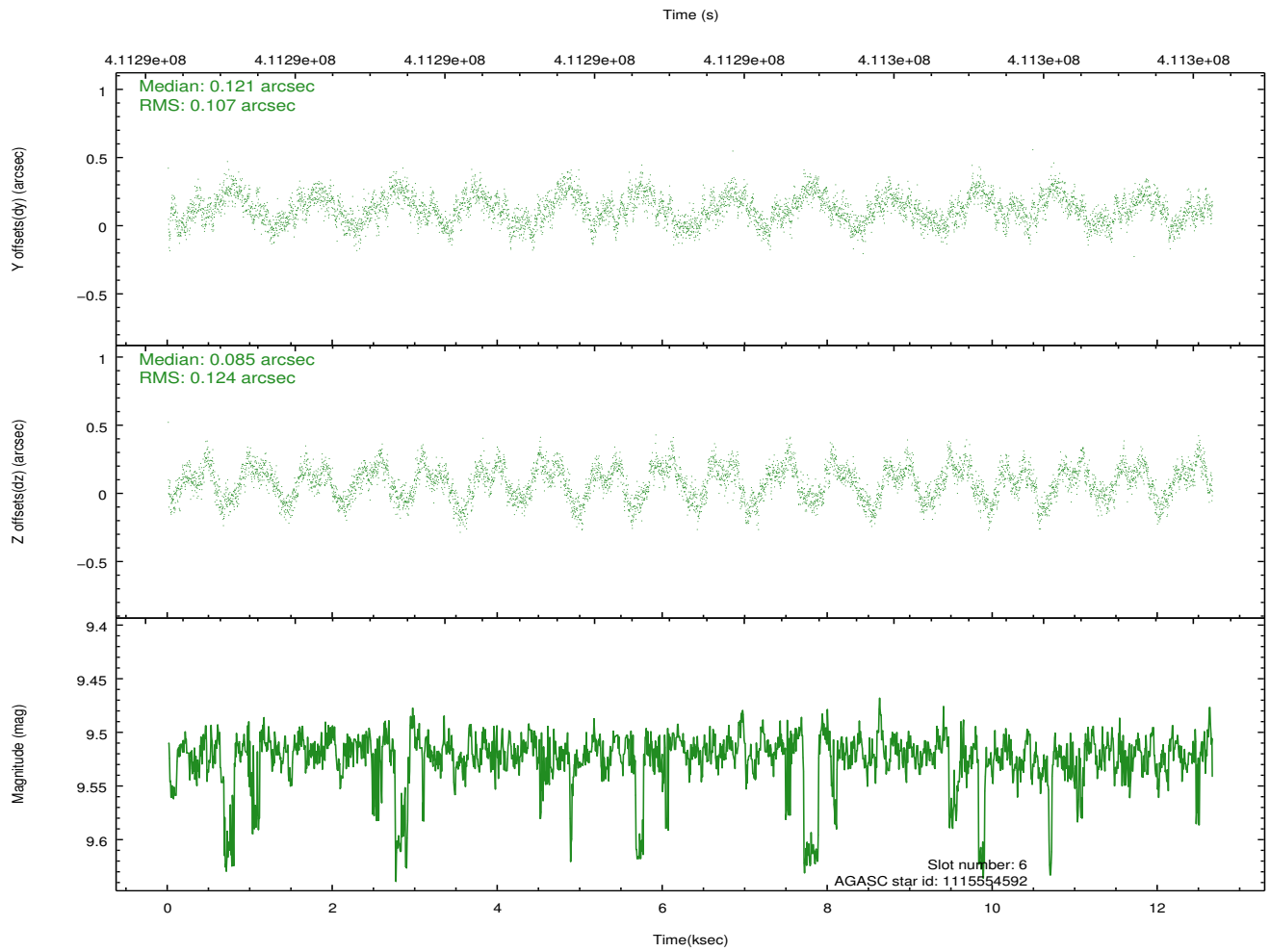
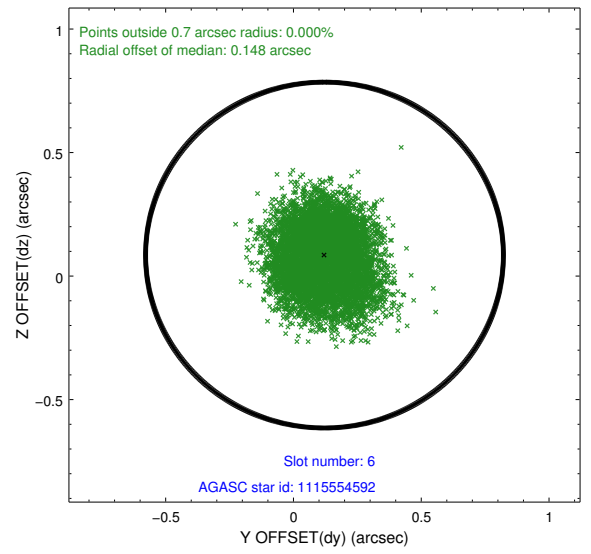
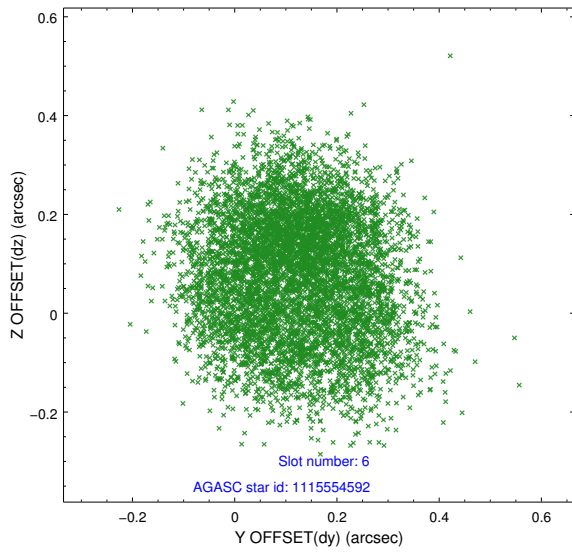
## 2.4.2 Slot 4



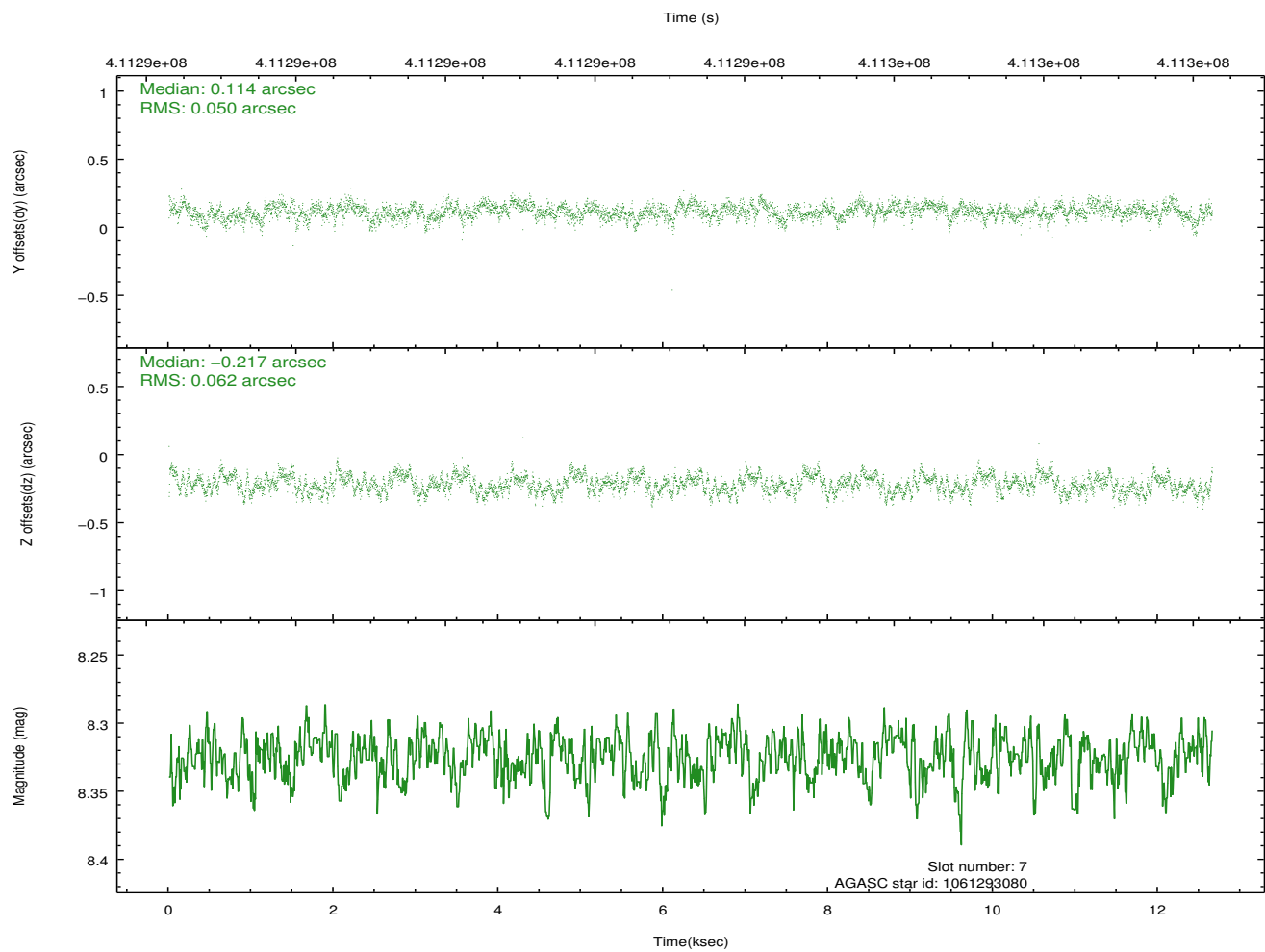
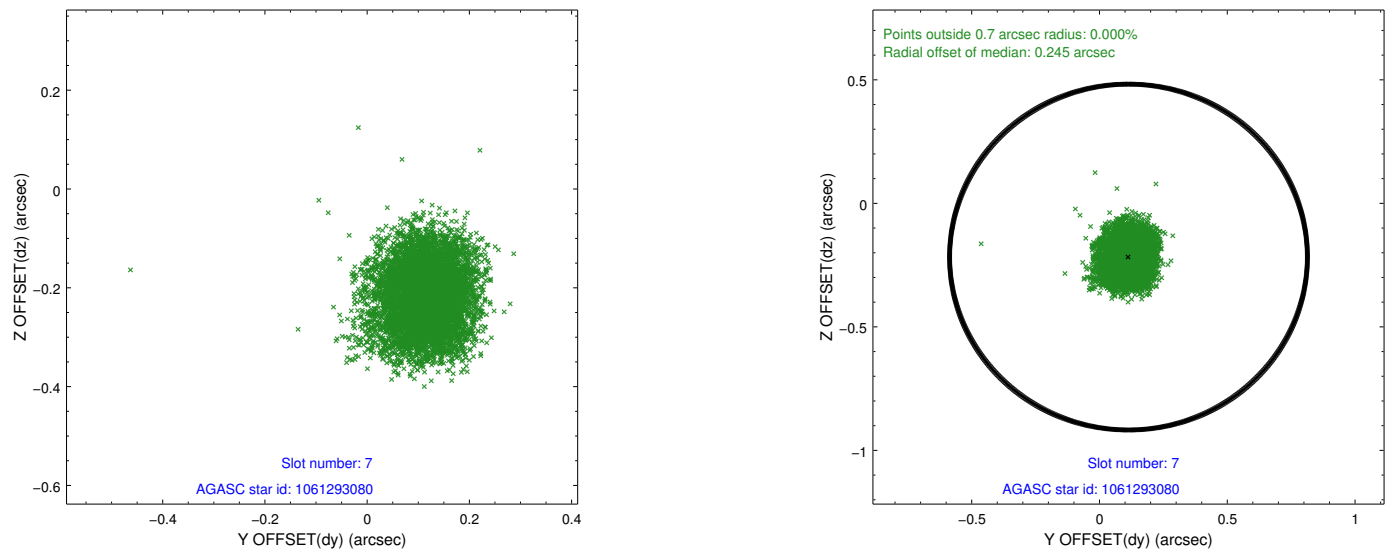
### 2.4.3 Slot 5



### 2.4.4 Slot 6

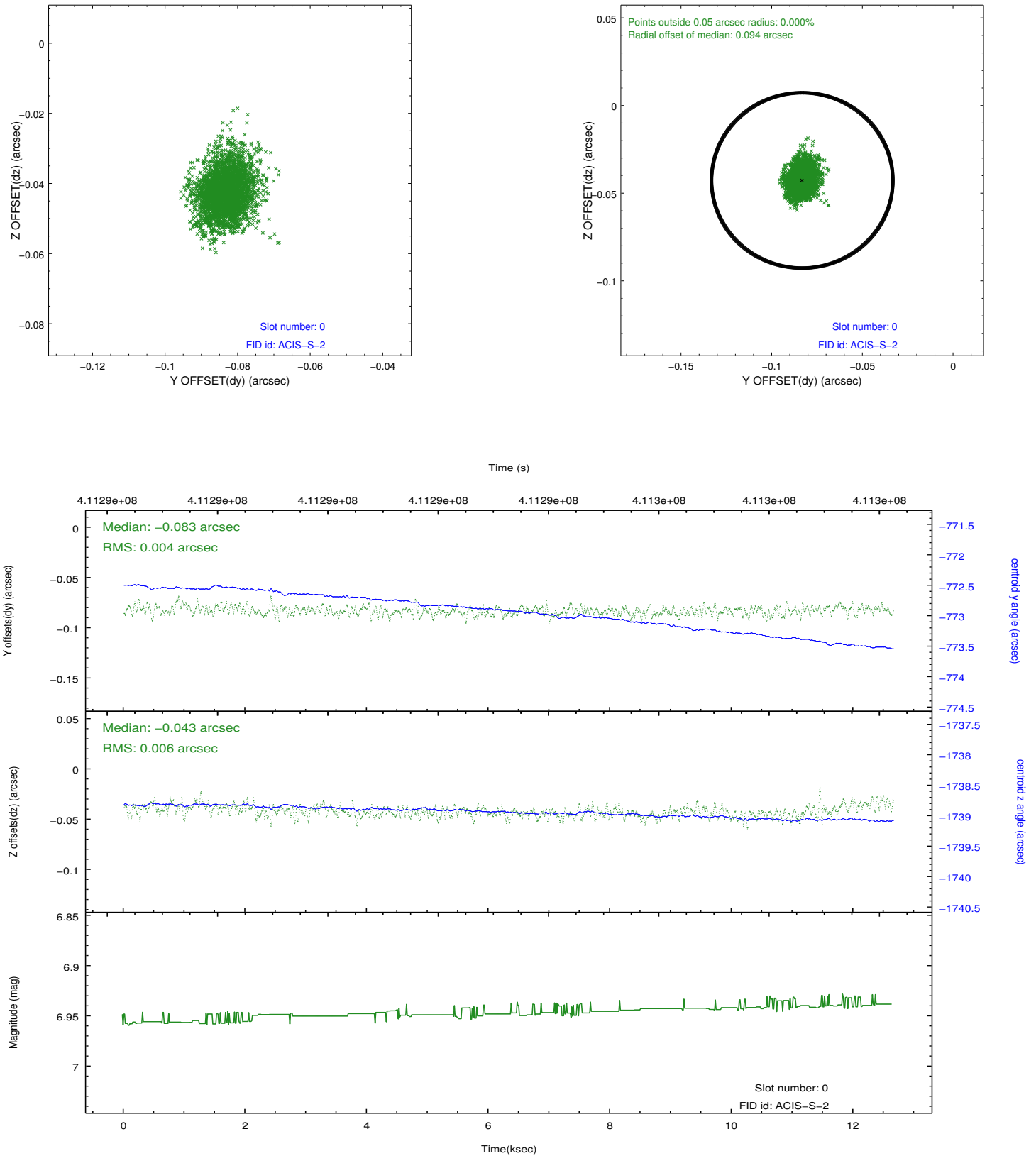


## 2.4.5 Slot 7

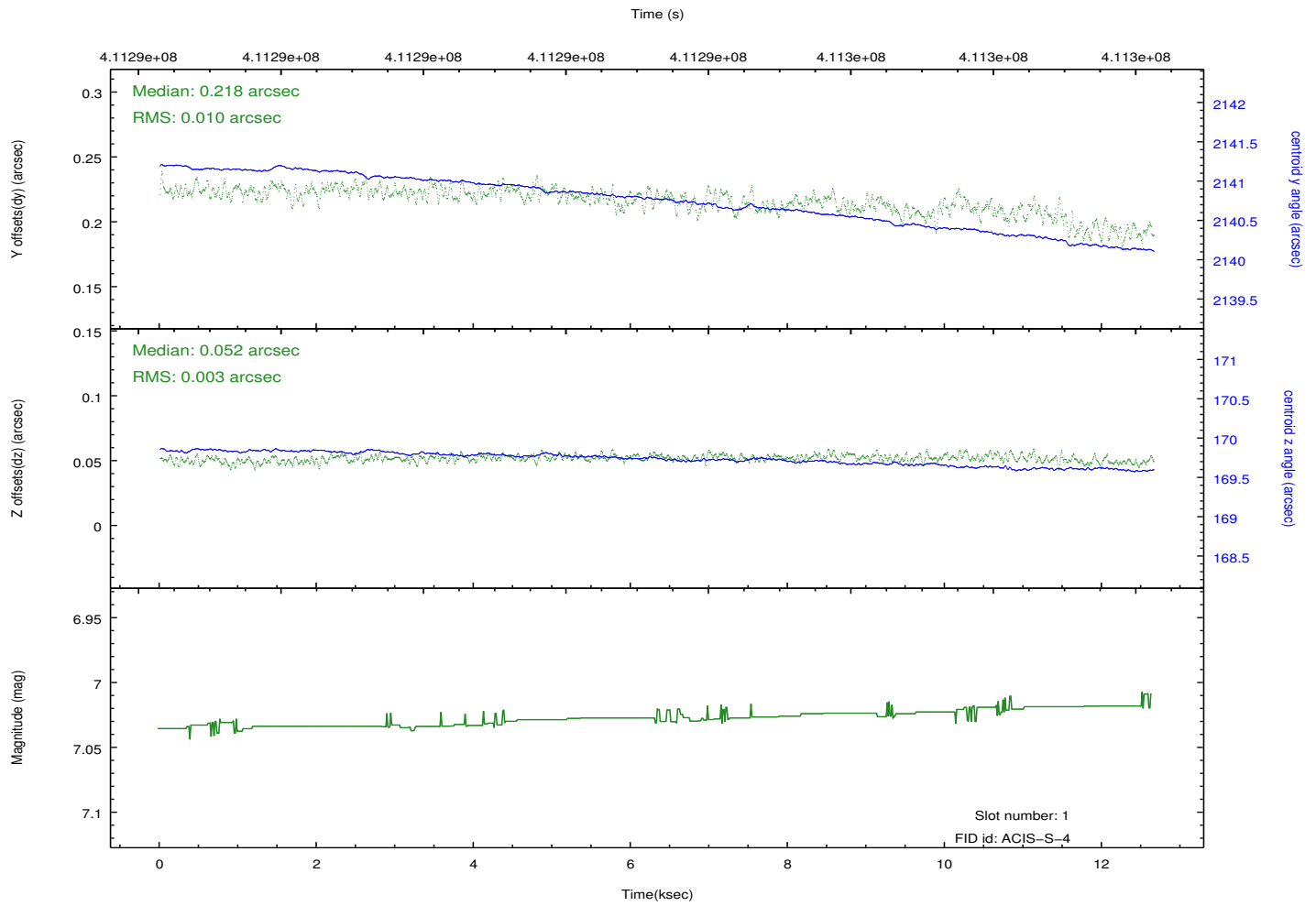
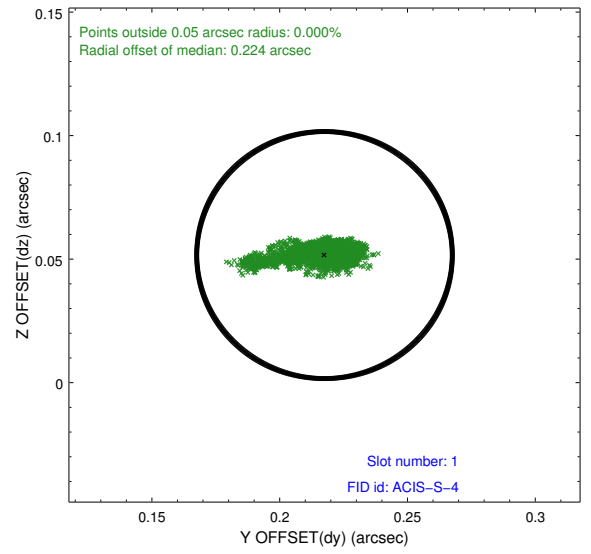
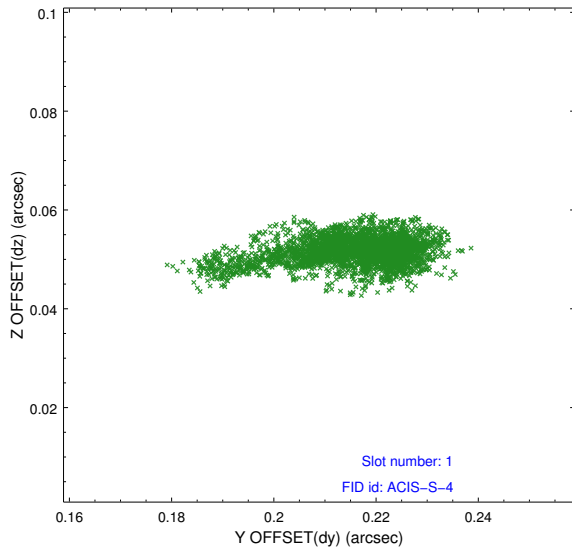


## 2.5 FID Slots

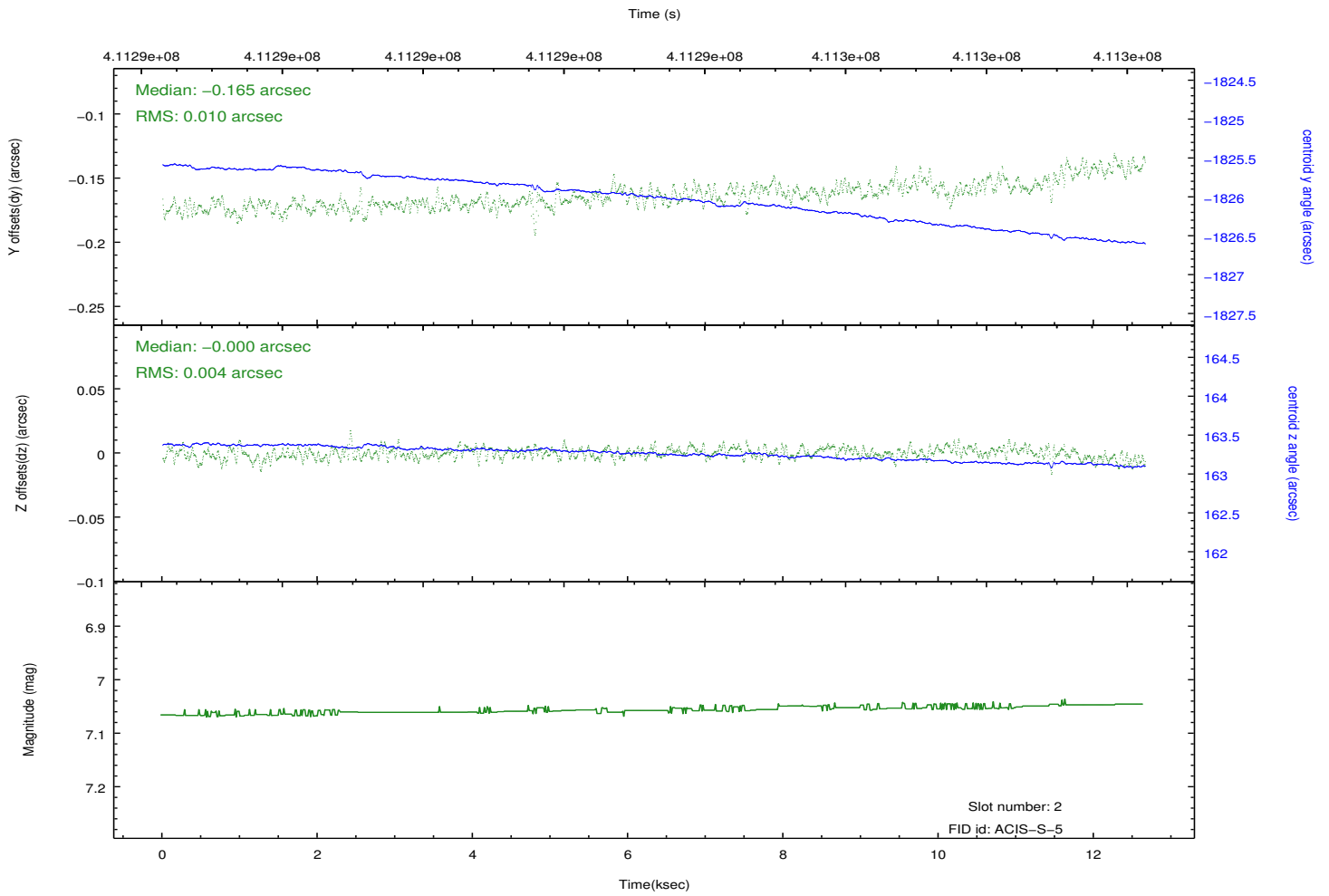
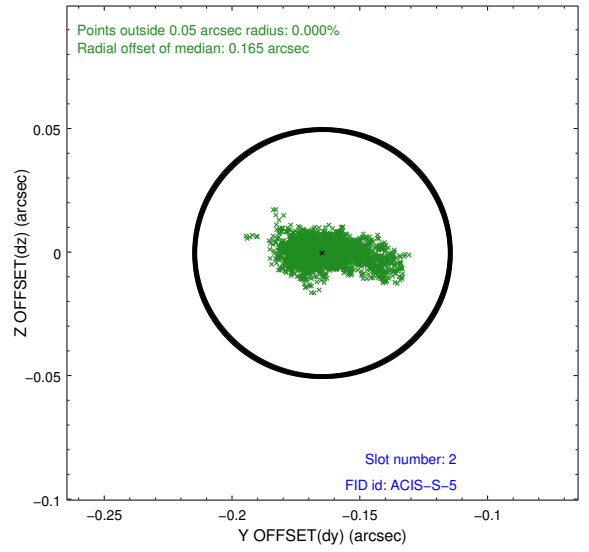
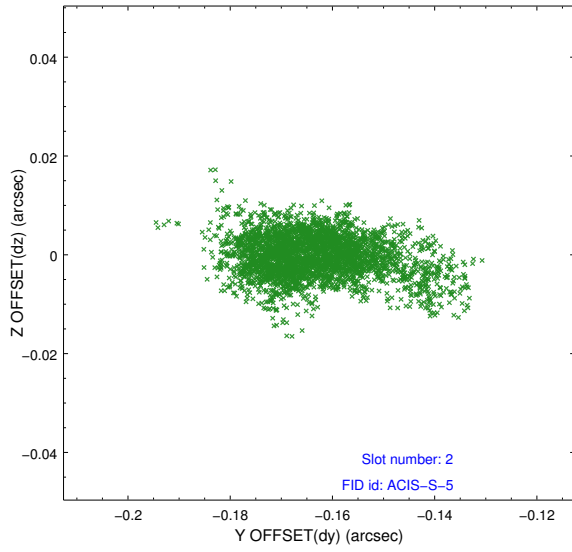
### 2.5.1 Slot 0



## 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)	2012.02.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	12.550399953306

## A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.