

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 13614 - L2 Version 2  
Chandra X-Ray Center

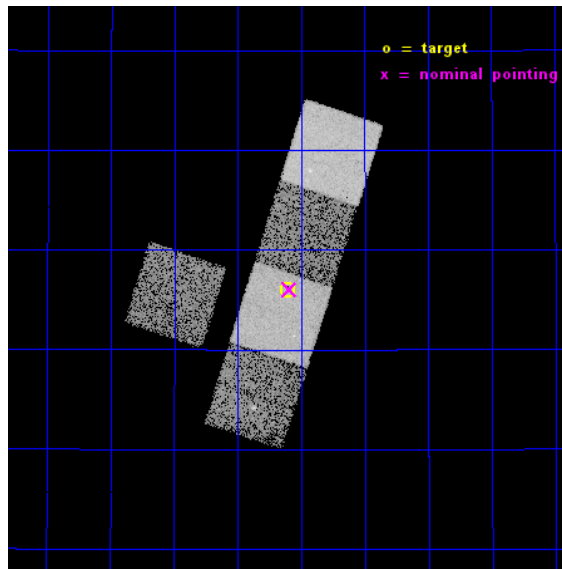
L2 Processing Date : Nov 28 2014

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# 1 Front

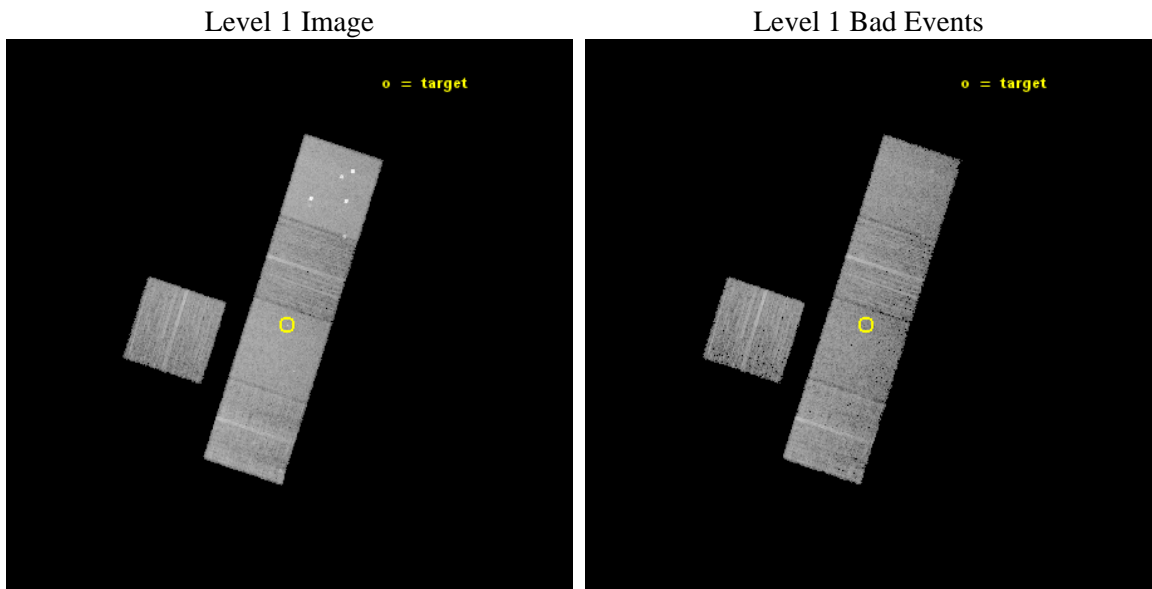
seq_num	200768	Sequence number
obs_id	13614	Observation id
title	The X-ray puzzle of late B and early A stars	Proposal title
observer	Dr. Jan Robrade	Principal investigator
object	HD 25823	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	61.651667	Observer's specified target RA [deg]
dec_targ	27.599917	Observer's specified target Dec [deg]
ra_nom	61.648306397159	Nominal RA [deg]
dec_nom	27.600705984266	Nominal Dec [deg]
roll_nom	108.03970784937	Nominal Roll [deg]
revision	2	Processing version of data
ontime	12063.890751779	Sum of GTIs [s]
livetime	11906.2671378	Livetime [s]
ontime3	12063.767631769	Sum of GTIs [s]
ontime5	12063.849711776	Sum of GTIs [s]
ontime6	12063.808671772	Sum of GTIs [s]
ontime7	12063.890751779	Sum of GTIs [s]
ontime8	12063.726591766	Sum of GTIs [s]
l2events	100165	Number of level 2 events



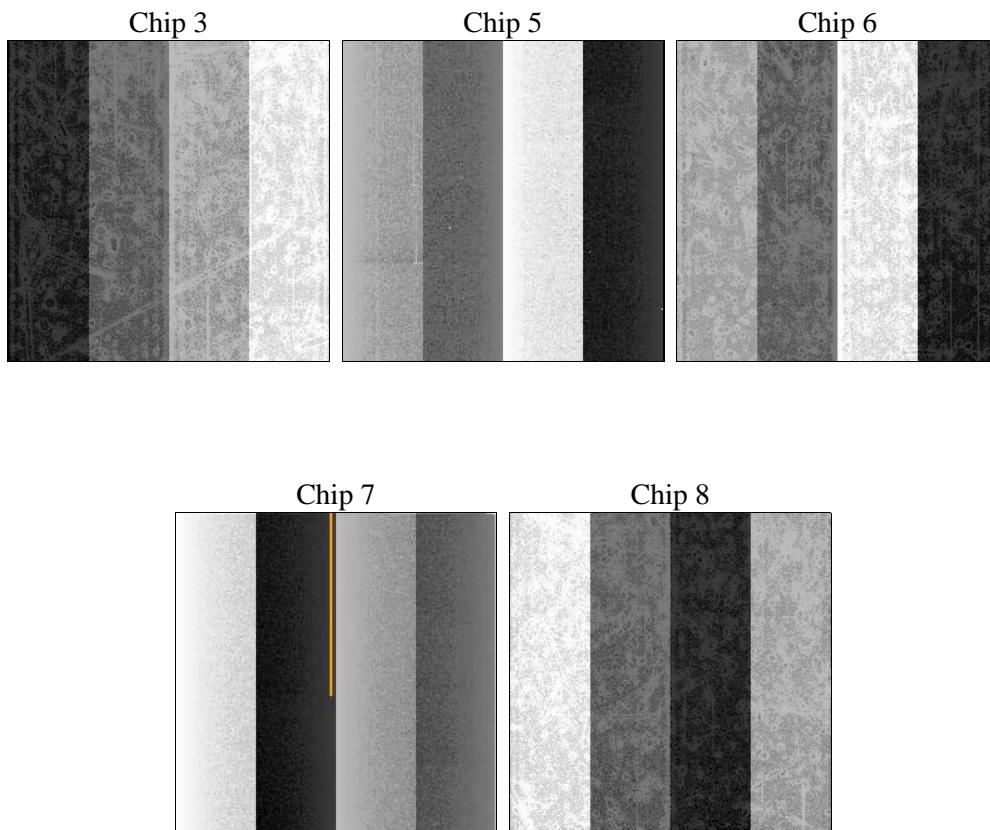
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	12000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	12063.890751779	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime3	12063.767631769	Sum of GTIs [s]
date	2014-11-28T10:15:18	Date and time of file creation	ontime5	12063.849711776	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	12063.808671772	Sum of GTIs [s]
			ontime7	12063.890751779	Sum of GTIs [s]
			ontime8	12063.726591766	Sum of GTIs [s]
			l1events	392104	Number of level 1 events

### 2.1.4 Events

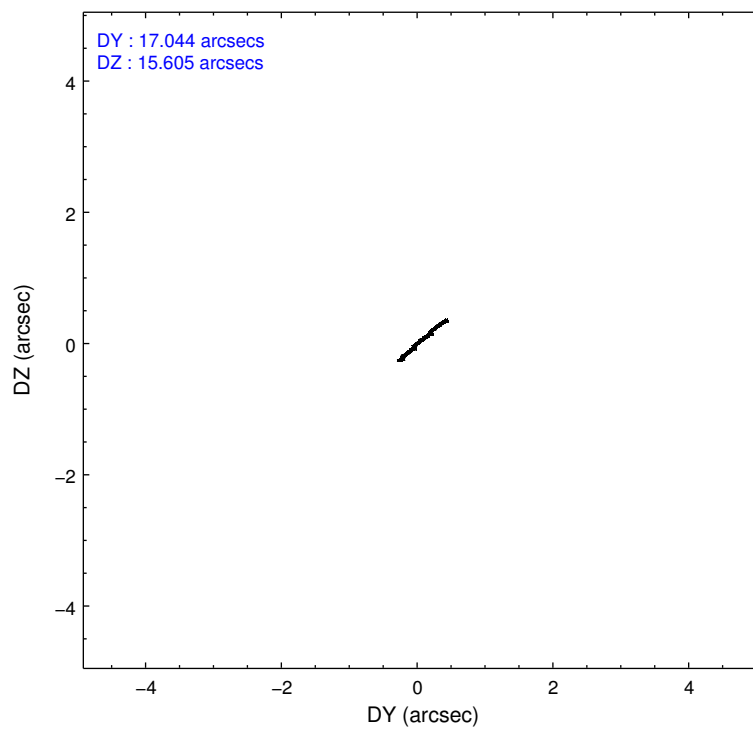
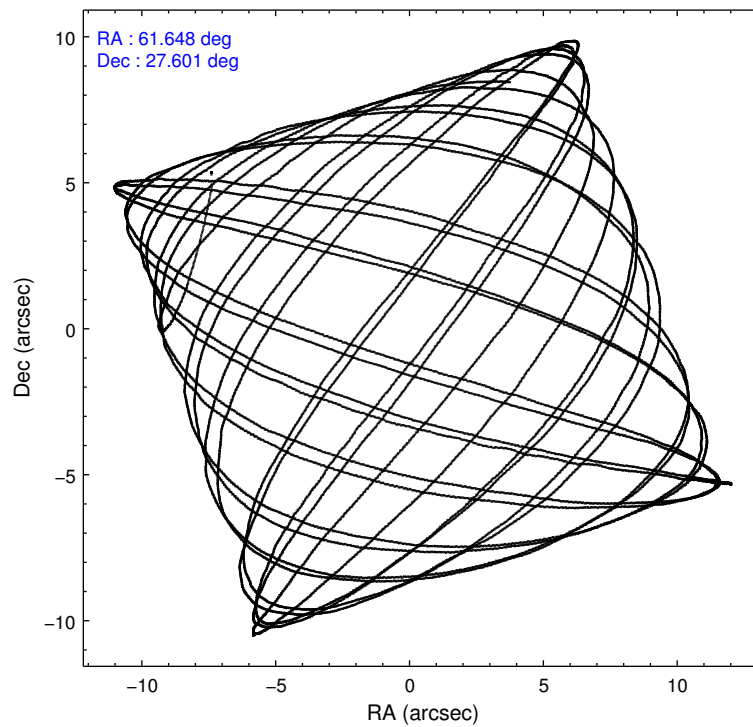
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	59371	110164	60113	82845	79611
rejected events	52736	51998	52736	47024	59120
rejected %	88%	47%	87%	56%	74%

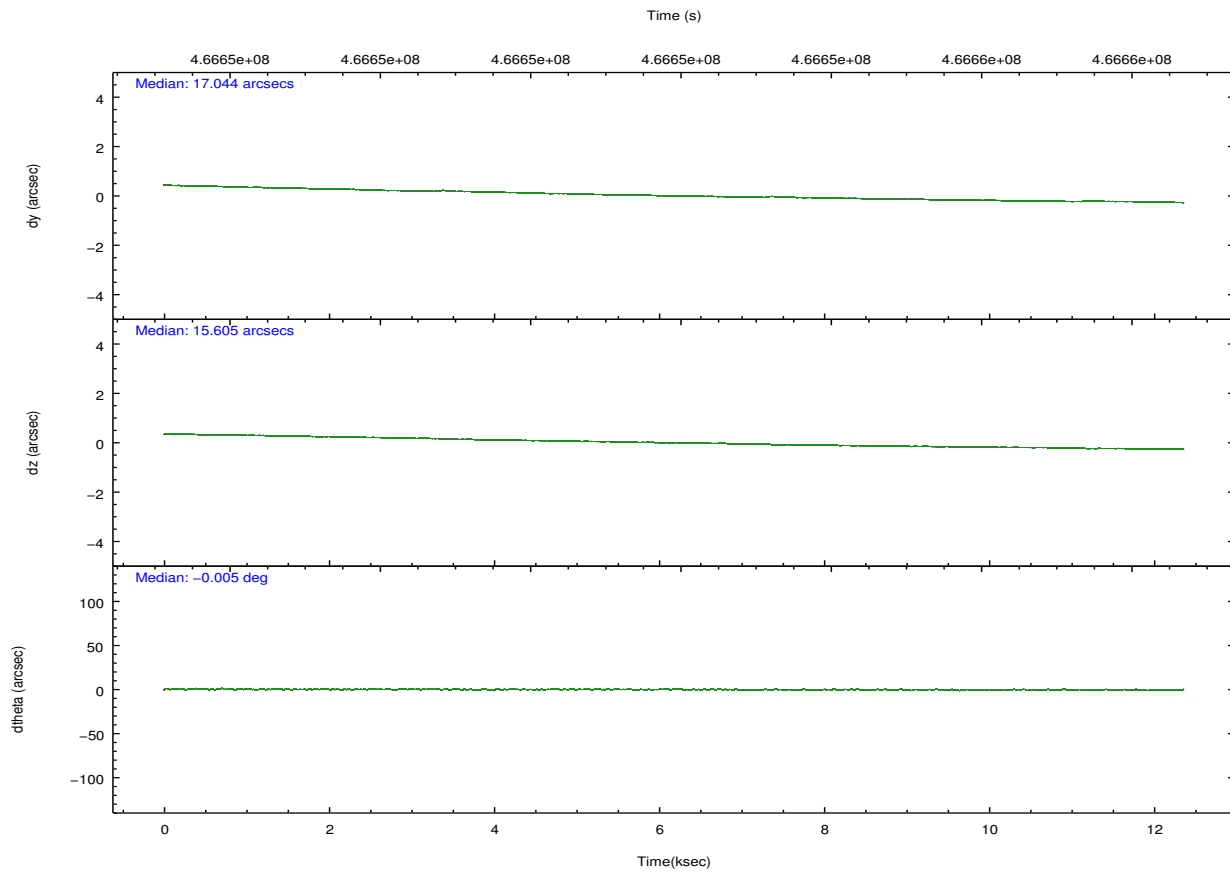
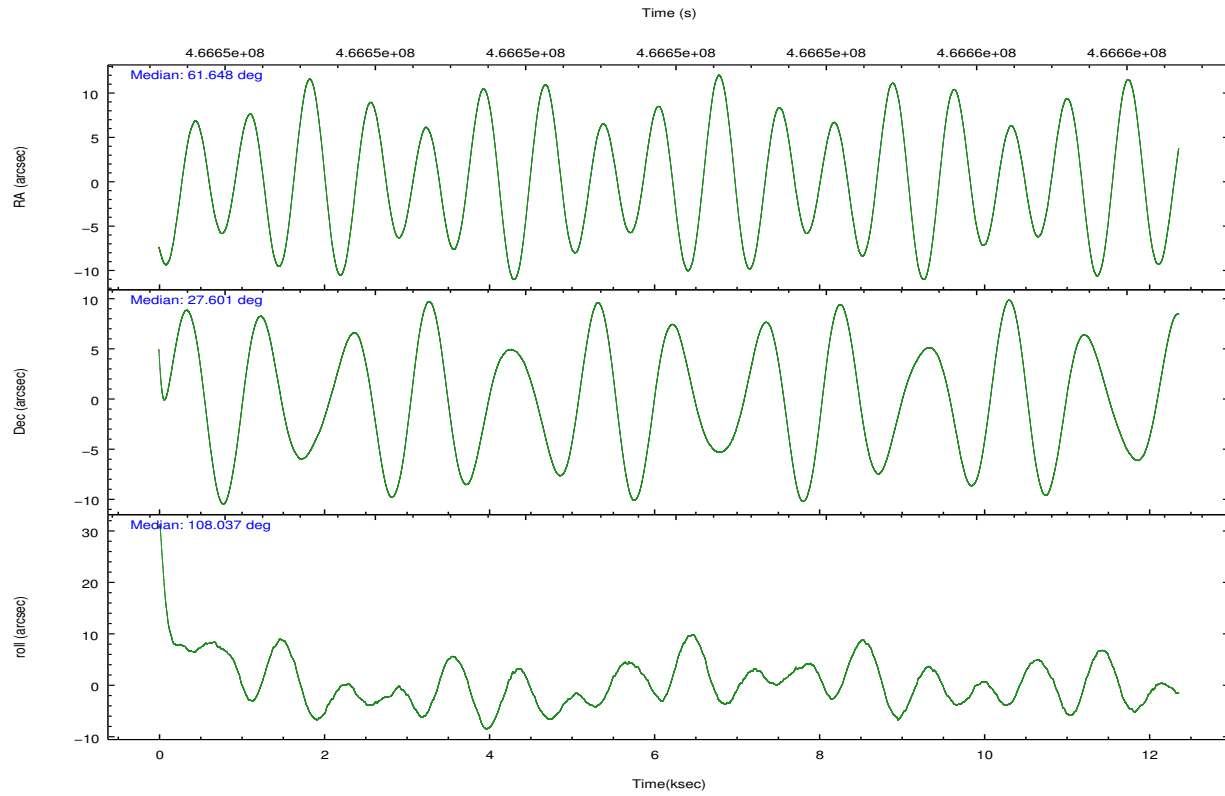
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	2211	12363	2548	3243	5753
	3%	11%	4%	3%	7%
grade 1 events	31	296	23	110	62
	0%	0%	0%	0%	0%
grade 2 events	1537	16265	1665	7362	4852
	2%	14%	2%	8%	6%
grade 3 events	697	1718	745	3056	2137
	1%	1%	1%	3%	2%
grade 4 events	719	1726	764	2906	1995
	1%	1%	1%	3%	2%
grade 5 events	3174	7374	3166	8743	4520
	5%	6%	5%	10%	5%
grade 6 events	1472	26113	1658	19263	5755
	2%	23%	2%	23%	7%
grade 7 events	49530	44309	49544	38162	54537
	83%	40%	82%	46%	68%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-35678	ACIS-35678	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	61.671583	61.64830639715927	CCD I2 on	N	N
[deg] Pointing Dec	27.582667	27.60070598426569	CCD I3 on	O2	Y
[deg] Pointing Roll	107.872285	108.0397078493671	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	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)	466646079.184000	466645052.52874	CCD S5 on	N	N
Observation start date	2012-10-14T23:53:32	2012-10-14T23:37:32	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	466658079.184000	466658974.07948	On-chip summing requested	N	N
Observation end date	2012-10-15T03:13:32	2012-10-15T03:29:34	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



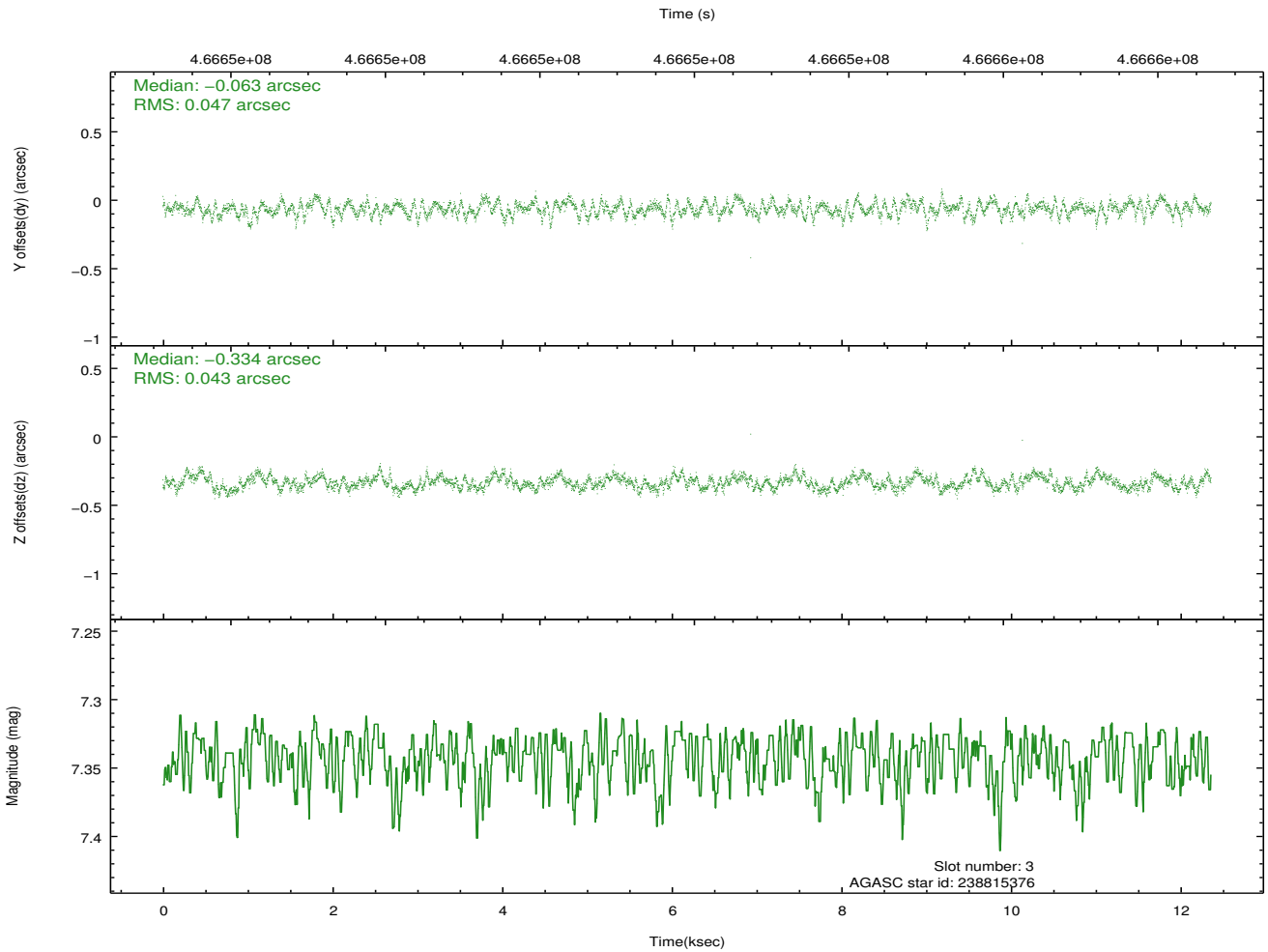
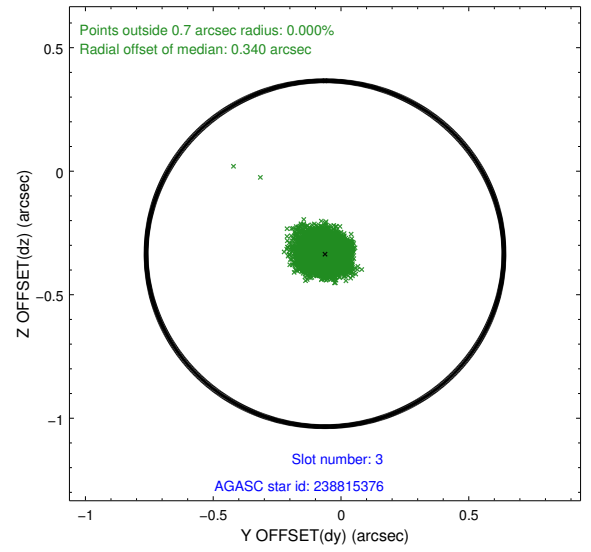
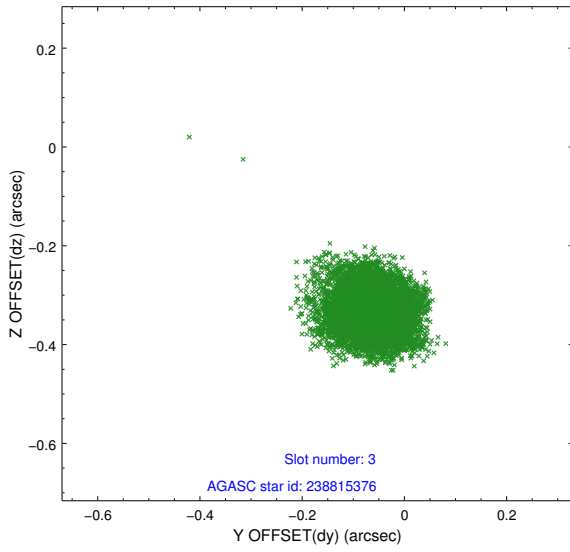


### Slot Statistics

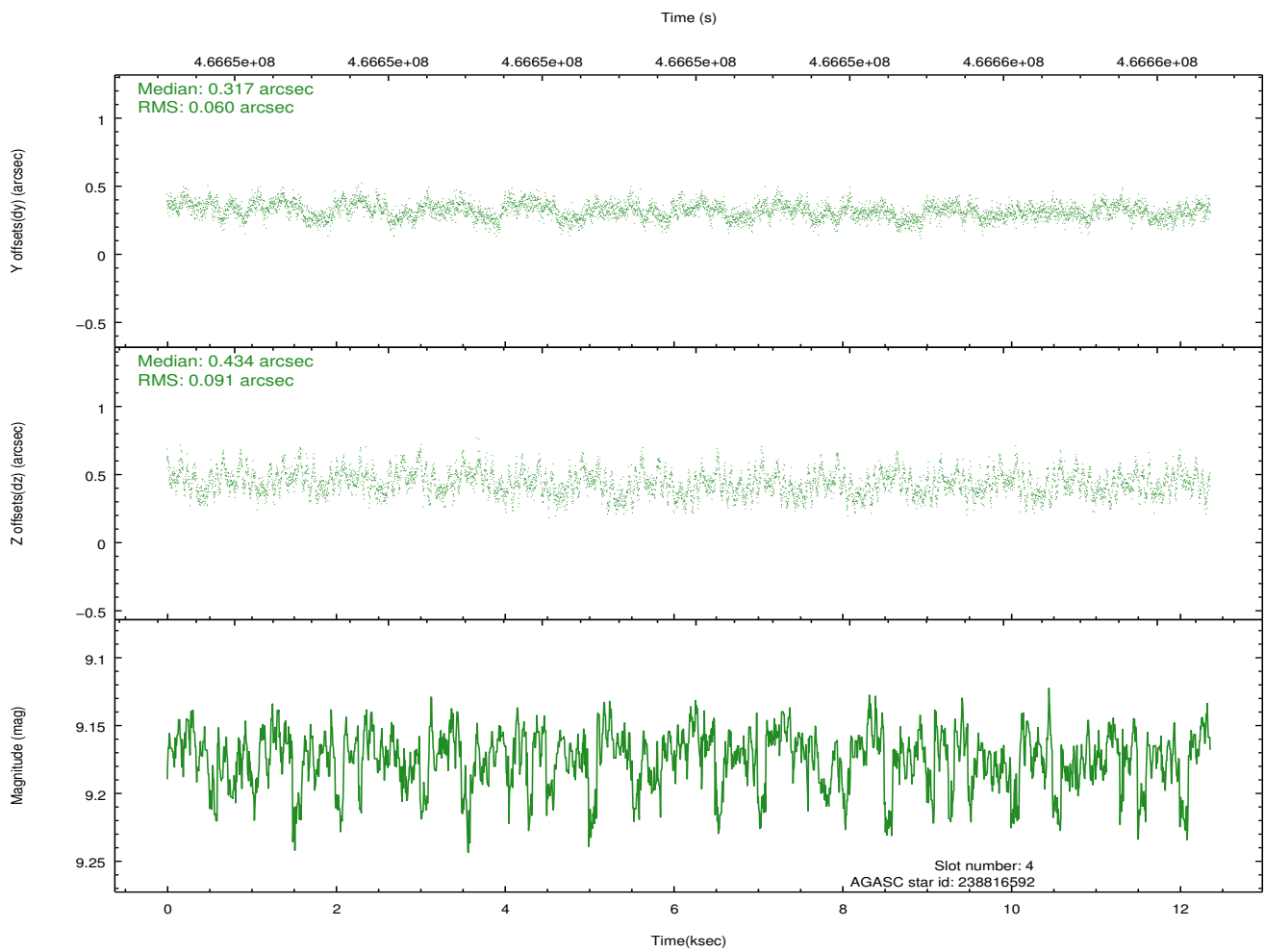
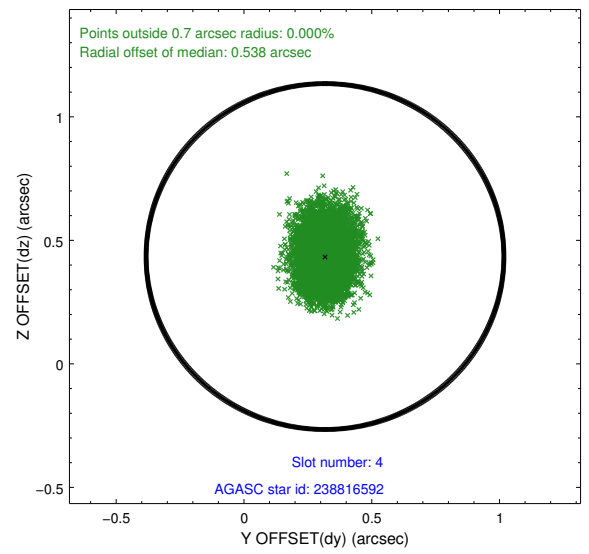
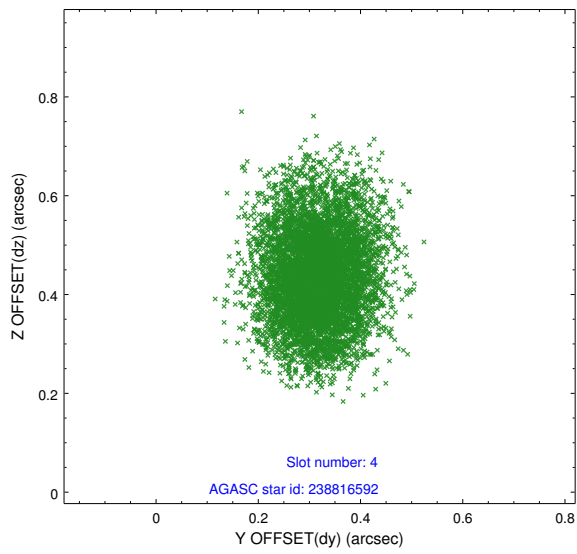
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.01	3015	-0.117	-0.006	0.008	0.013	0.000000	0.000000	-770.20	-1736.98
1	FID		ACIS-S-4	7.10	3015	0.245	0.058	0.007	0.012	0.000000	0.000000	2143.23	171.18
2	FID		ACIS-S-5	7.13	3015	-0.160	-0.044	0.008	0.014	0.000000	0.000000	-1822.60	165.17
3	GUIDE	used	238815376	7.34	6029	-0.063	-0.334	0.068	0.106	61.682300	27.522160	-217.91	33.76
4	GUIDE	used	238816592	9.17	6025	0.317	0.434	0.115	0.189	62.450623	27.402885	-1372.36	-2173.29
5	GUIDE	used	238826440	8.99	6024	-0.519	-0.449	0.086	0.137	60.991496	27.709140	1103.39	1920.45
6	GUIDE	used	238830008	8.64	6028	-0.090	-0.029	0.080	0.127	61.370031	27.879637	1312.48	585.06
7	GUIDE	used	238820952	8.16	6029	0.356	0.374	0.054	0.089	62.058258	27.008704	-2344.97	-546.89

## 2.4 Star Slots

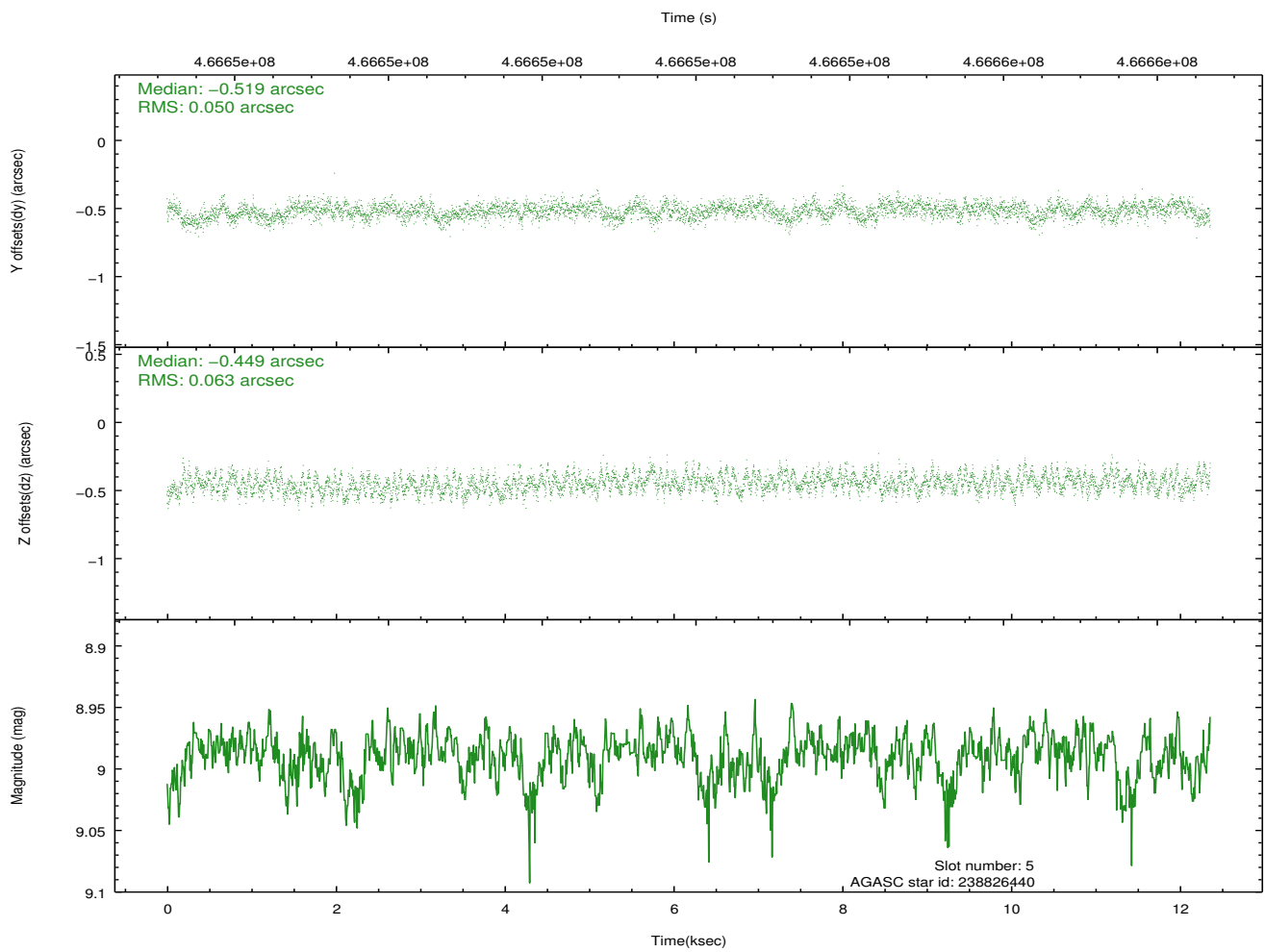
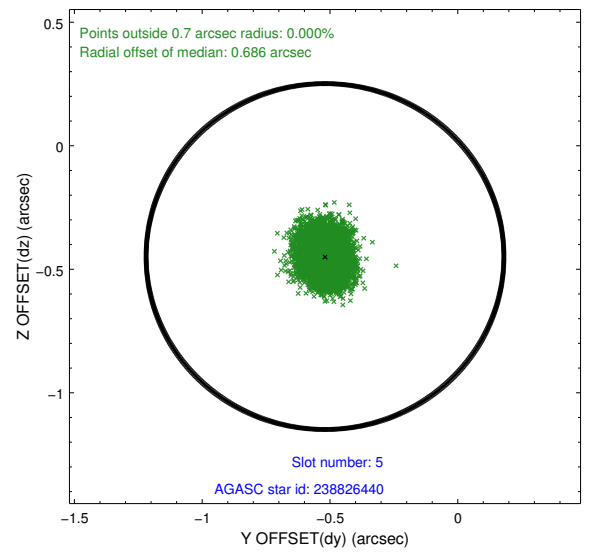
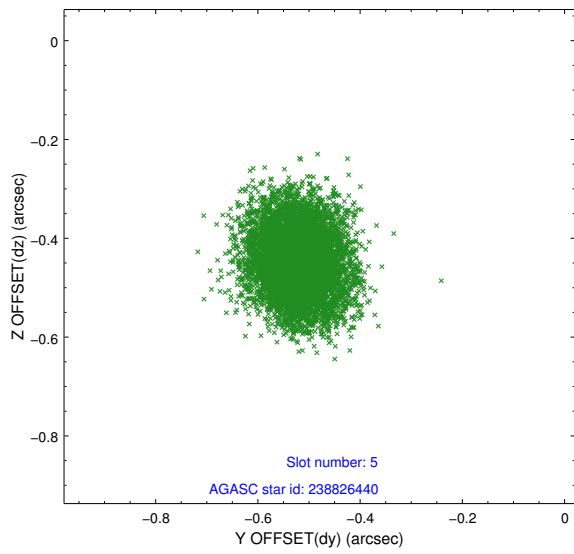
### 2.4.1 Slot 3



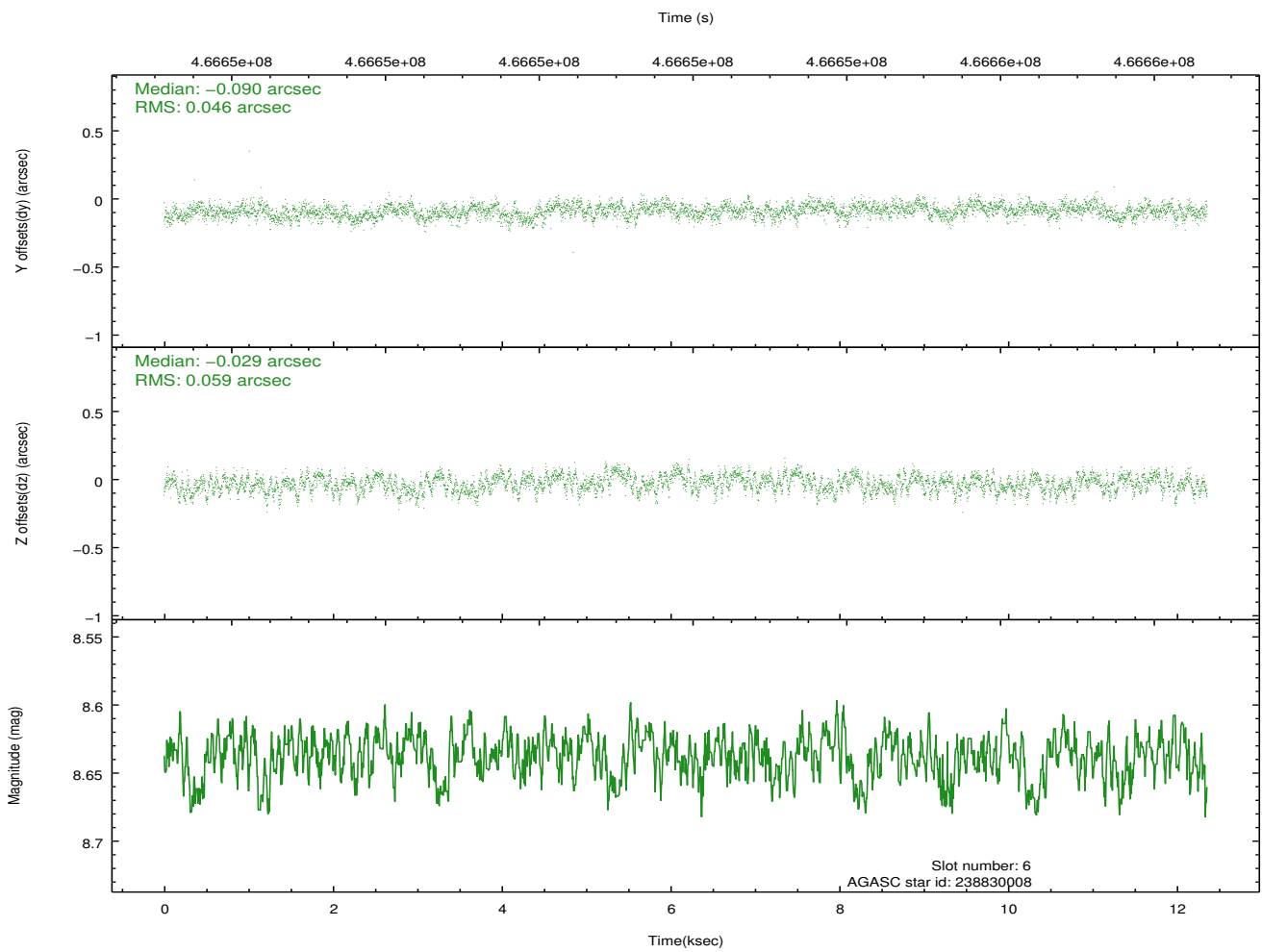
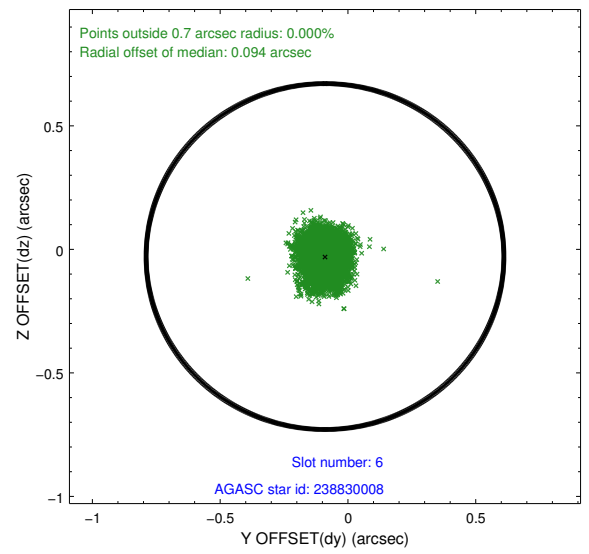
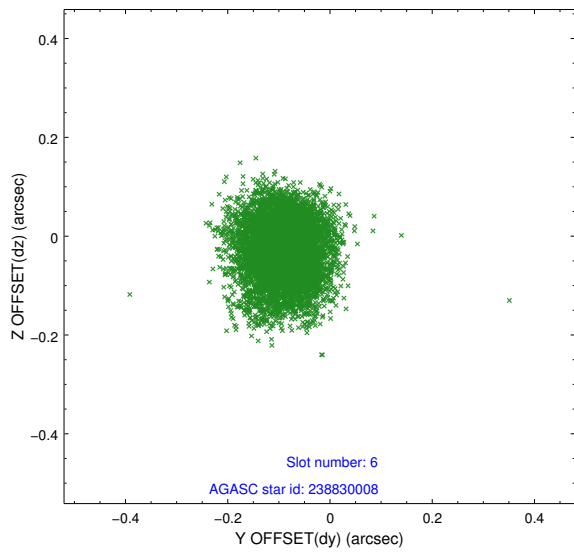
## 2.4.2 Slot 4



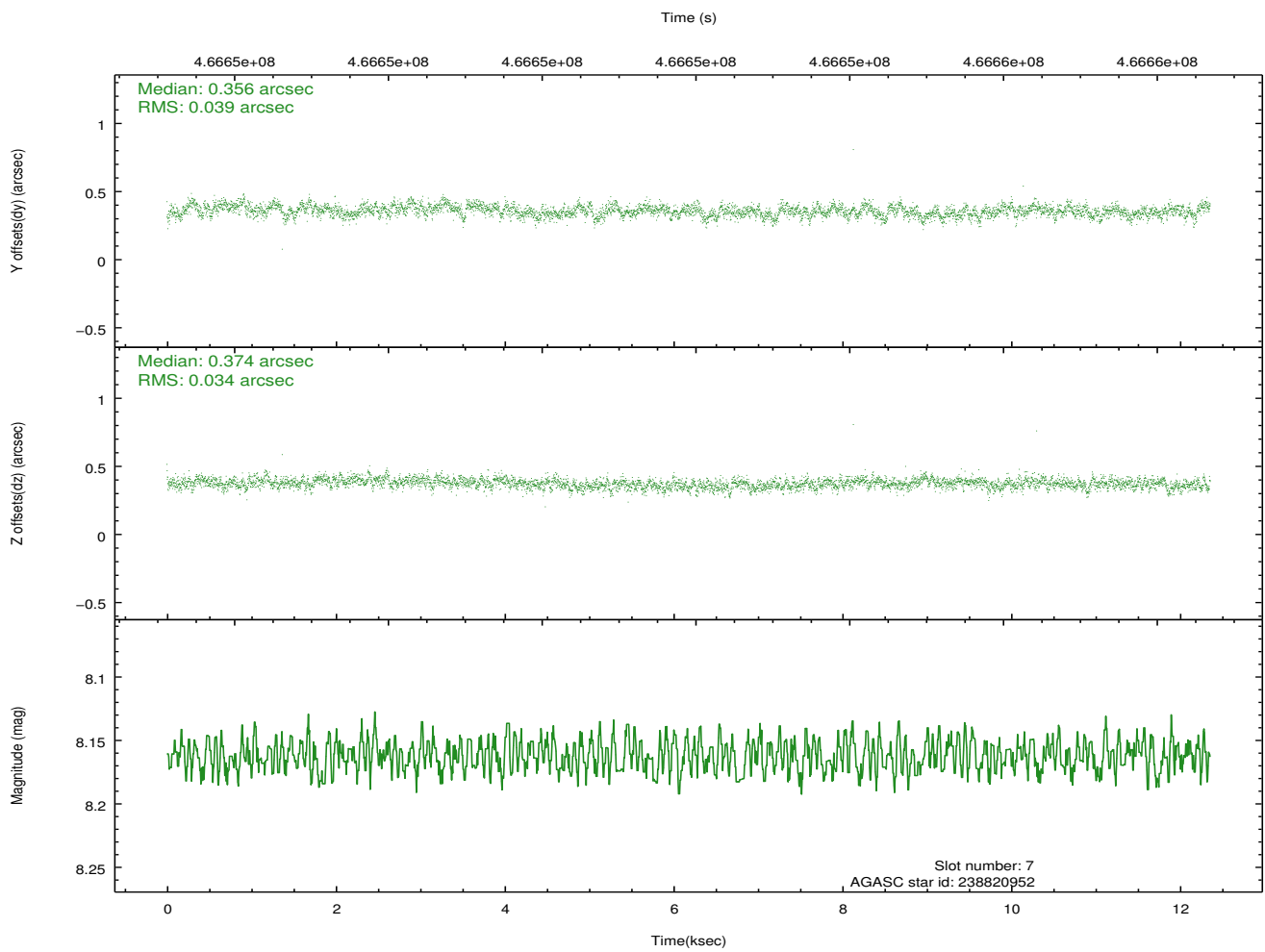
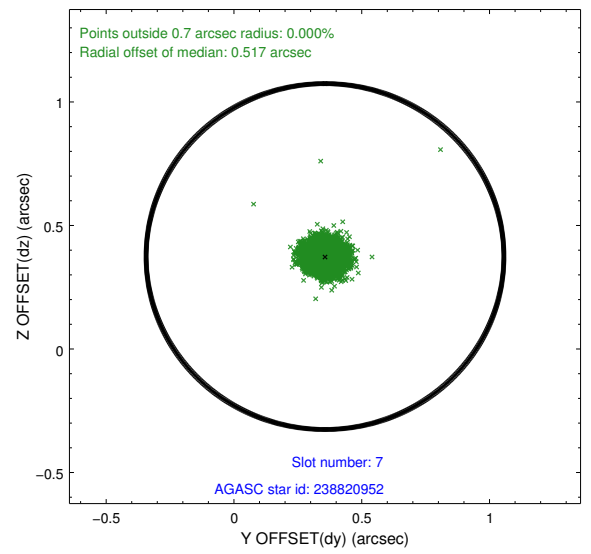
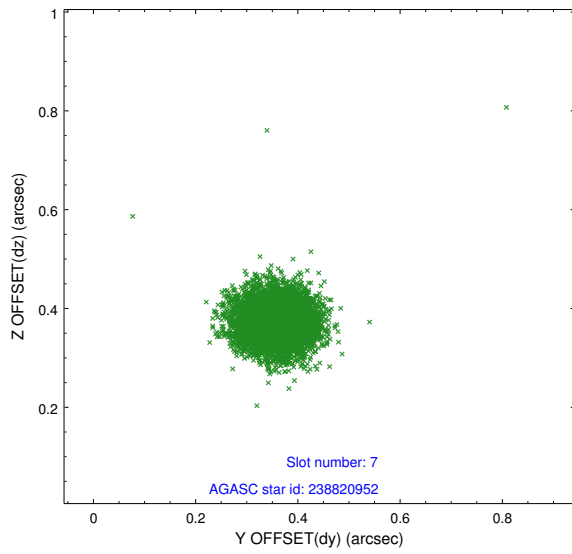
### 2.4.3 Slot 5



## 2.4.4 Slot 6

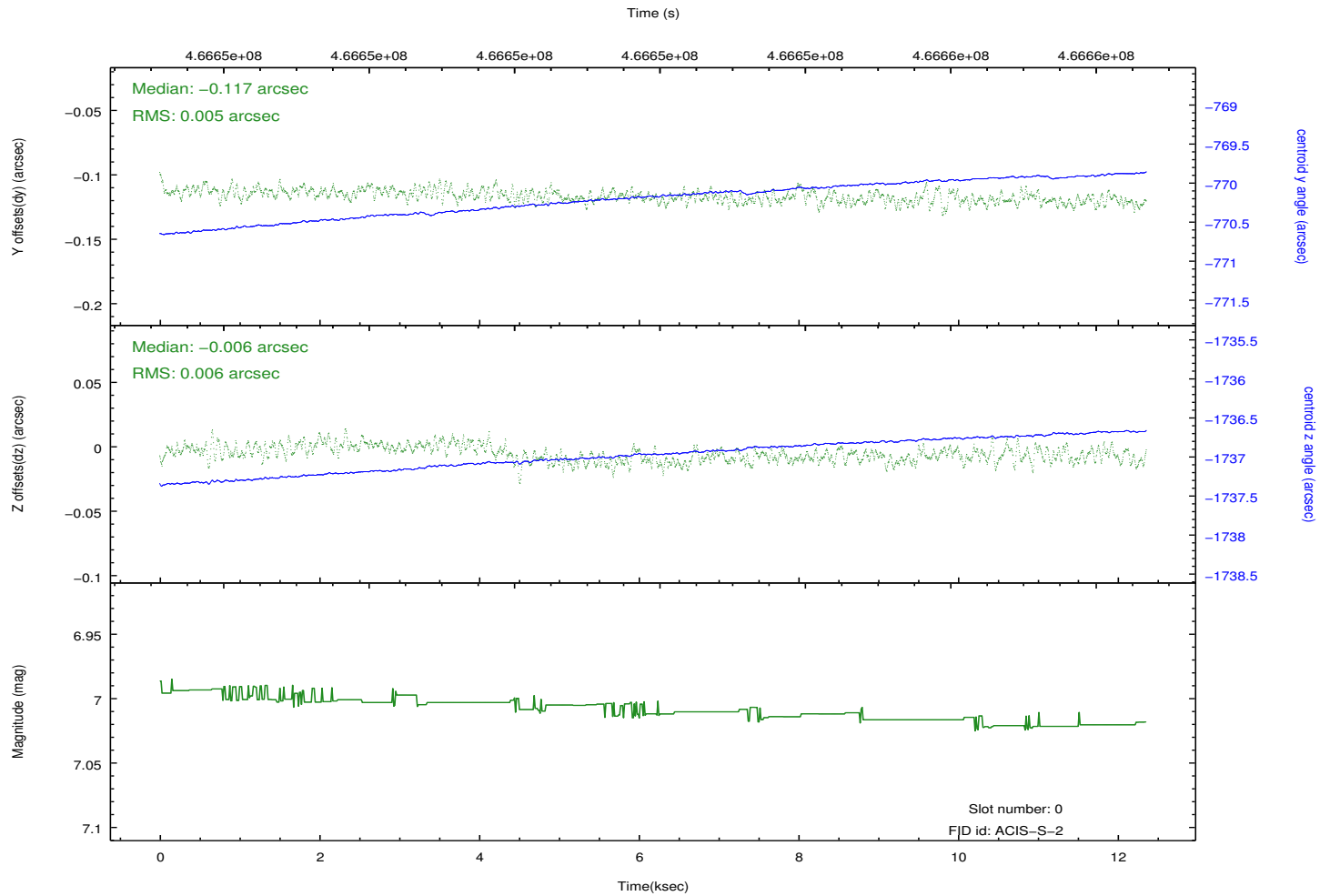
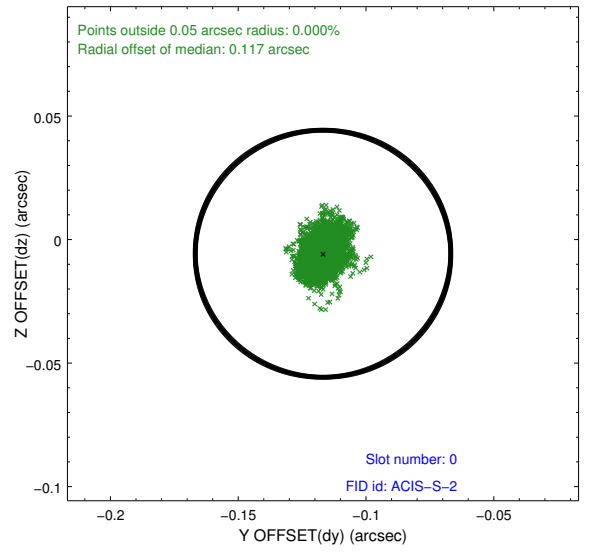
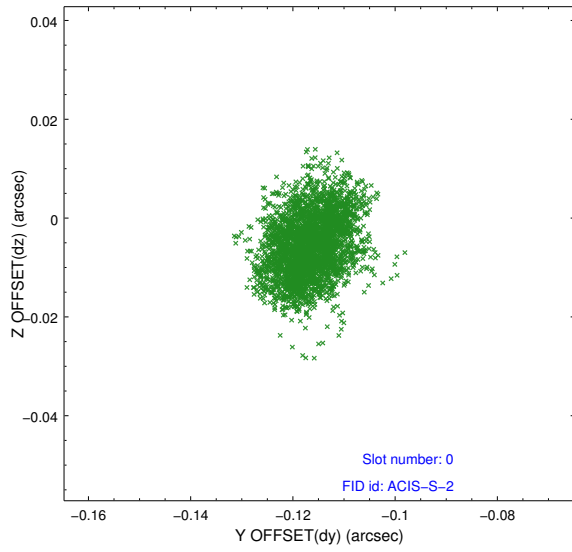


## 2.4.5 Slot 7

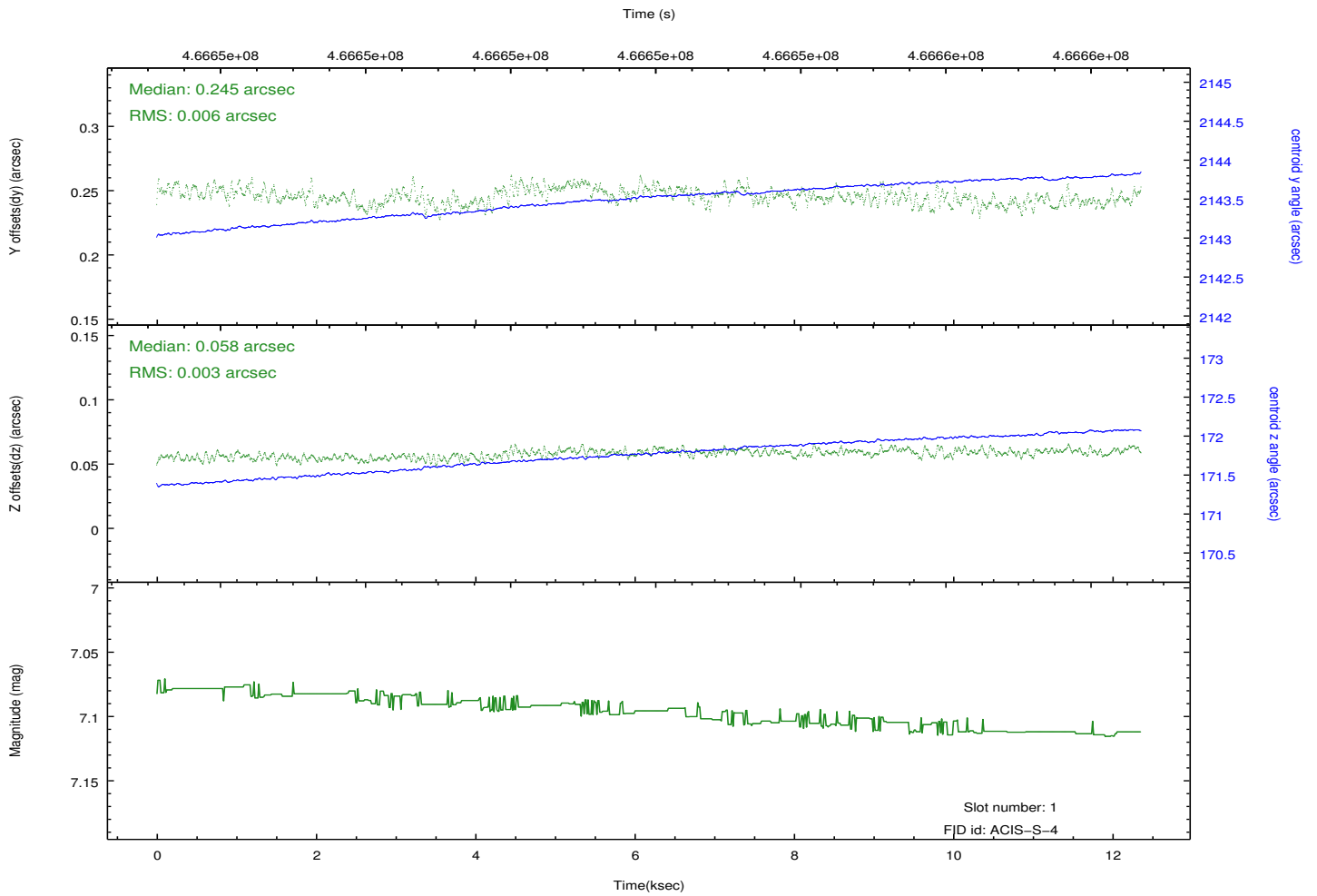
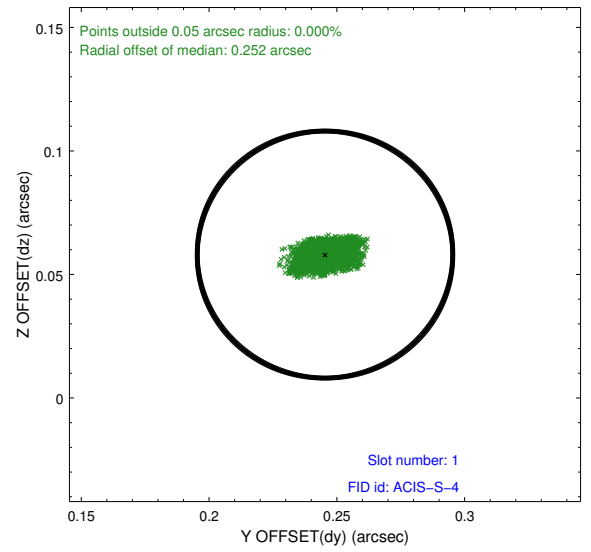
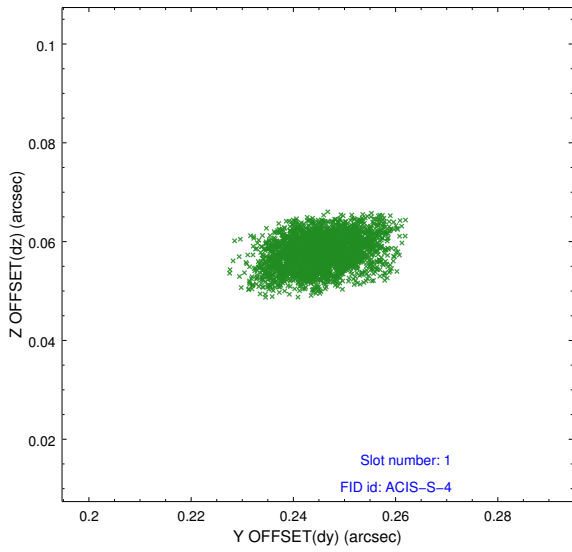


## 2.5 FID Slots

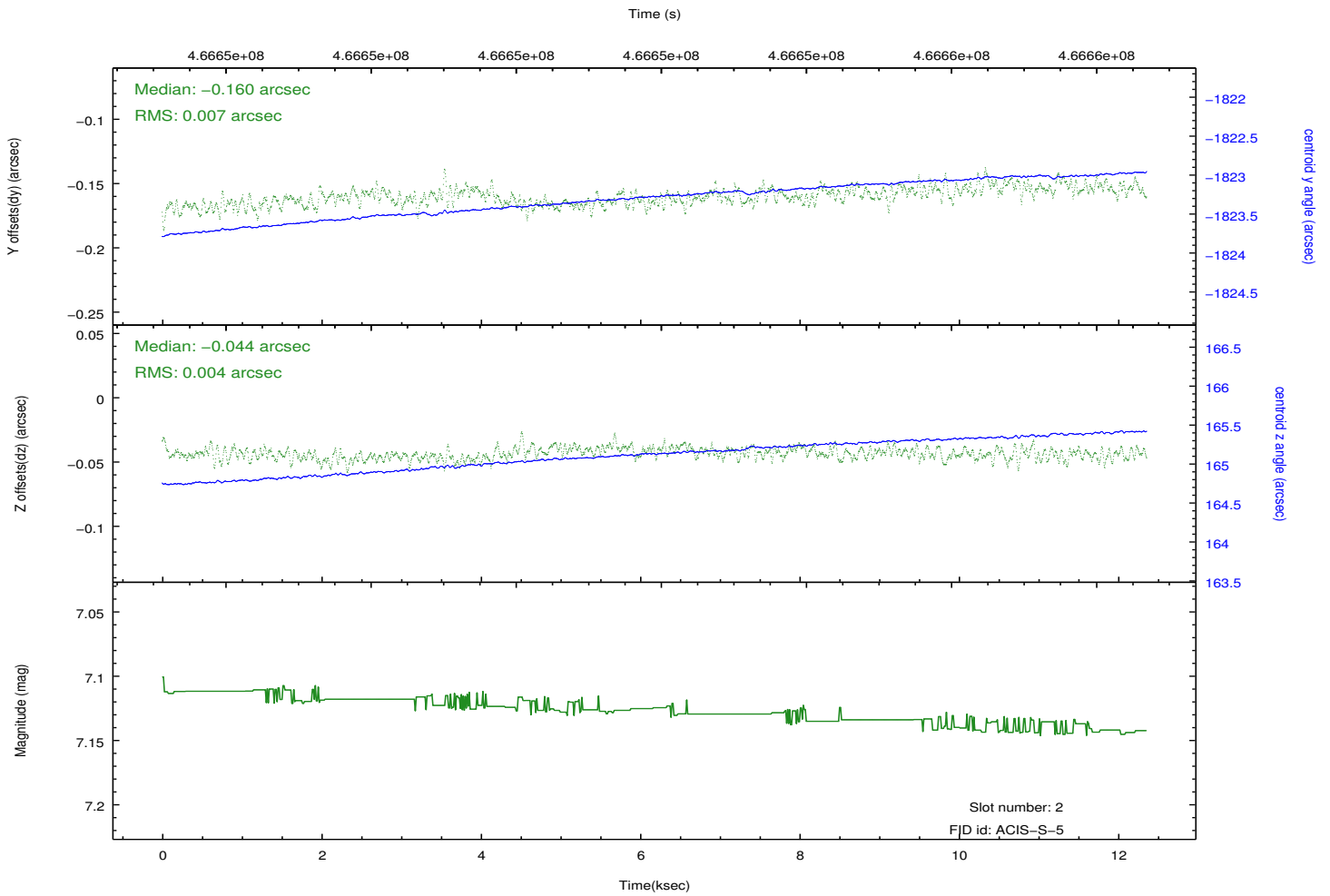
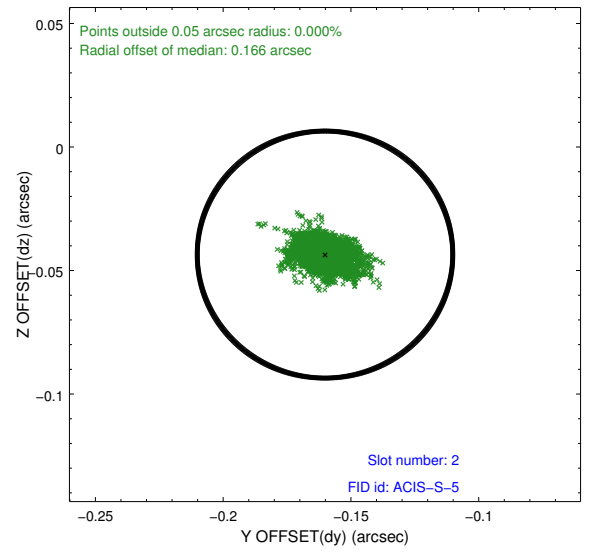
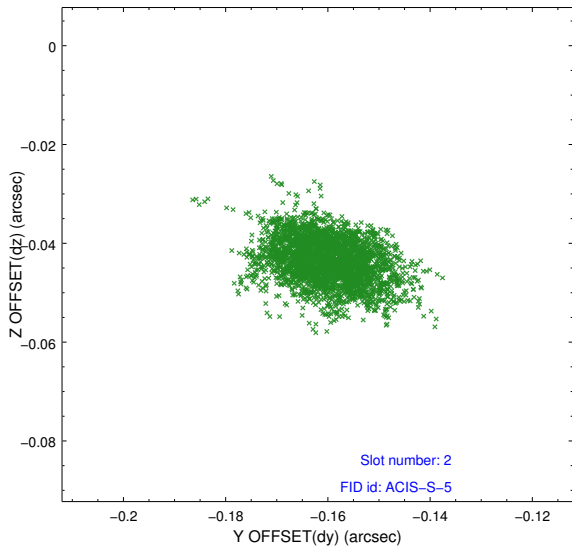
### 2.5.1 Slot 0



## 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)	2014.12.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	12.063890751779

## A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.