

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 13608 - L2 Version 2  
Chandra X-Ray Center

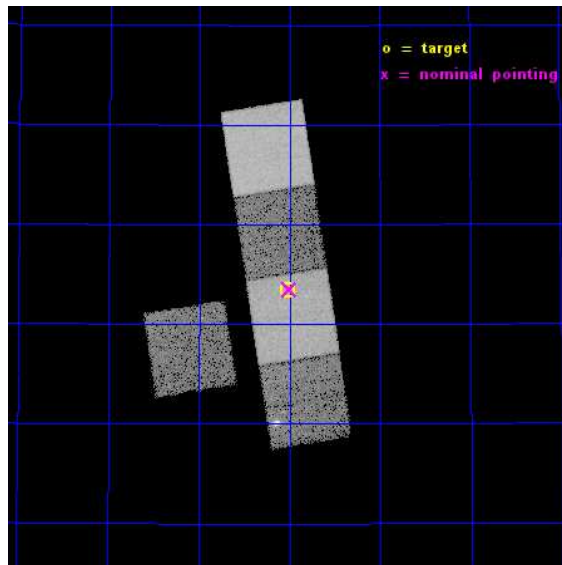
L2 Processing Date : Dec 1 2014

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# 1 Front

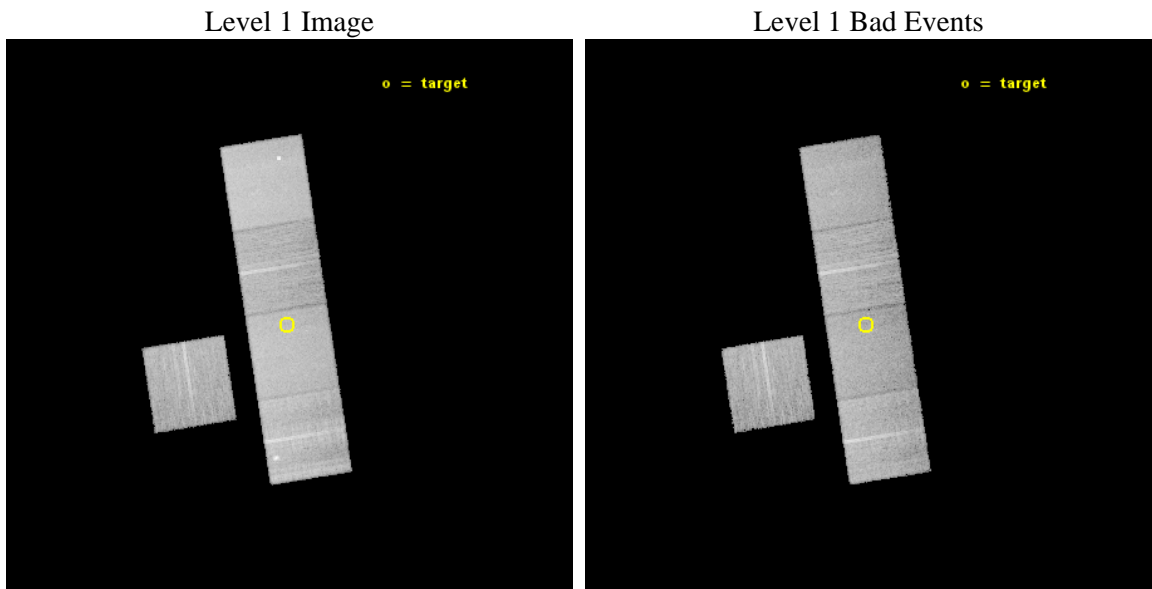
seq_num	200763	Sequence number
obs_id	13608	Observation id
title	Are Convective Dynamos Super-Saturated at High Rotation Velocities?	&#160
observer	Prof. Edo Berger	Principal investigator
object	NLTT40026	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	230.254167	Observer's specified target RA [deg]
dec_targ	50.889722	Observer's specified target Dec [deg]
ra_nom	230.25056942411	Nominal RA [deg]
dec_nom	50.89172273599	Nominal Dec [deg]
roll_nom	81.102972363836	Nominal Roll [deg]
revision	2	Processing version of data
ontime	19061.119710624	Sum of GTIs [s]
livetime	18812.072149013	Livetime [s]
ontime3	19060.996590614	Sum of GTIs [s]
ontime5	19061.078670621	Sum of GTIs [s]
ontime6	19057.89661026	Sum of GTIs [s]
ontime7	19061.119710624	Sum of GTIs [s]
ontime8	19060.955550611	Sum of GTIs [s]
l2events	174111	Number of level 2 events



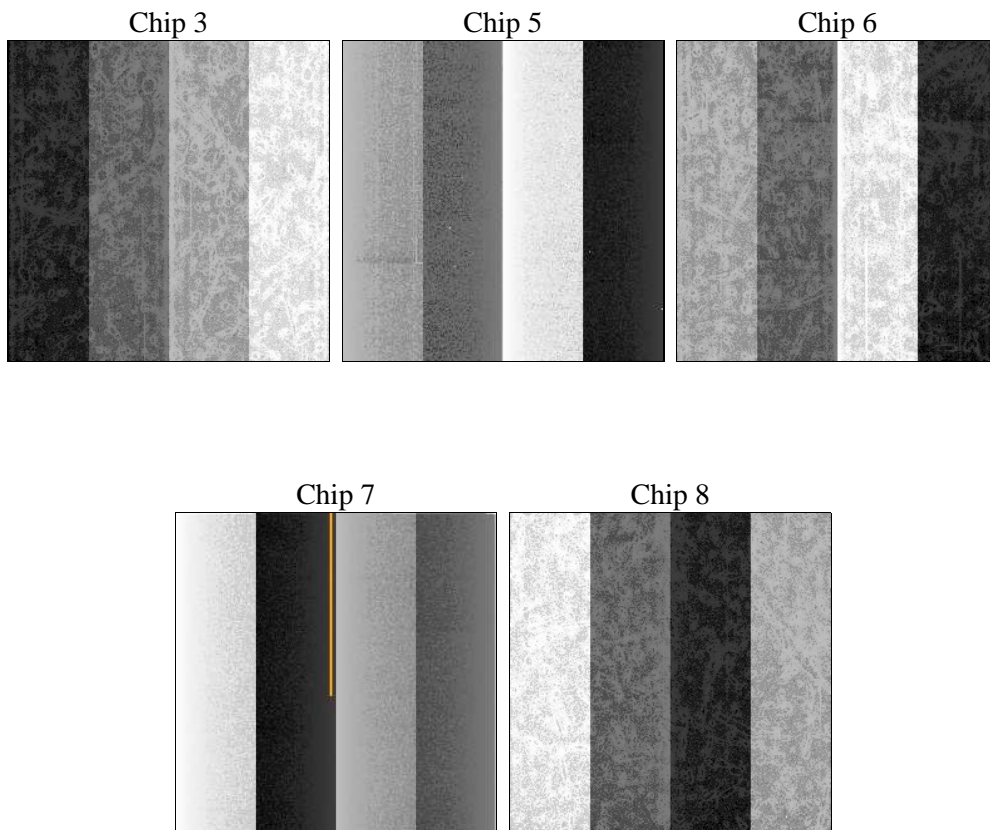
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	19000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	19061.119710624	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime3	19060.996590614	Sum of GTIs [s]
date	2014-12-01T13:45:11	Date and time of file creation	ontime5	19061.078670621	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	19057.89661026	Sum of GTIs [s]
			ontime7	19061.119710624	Sum of GTIs [s]
			ontime8	19060.955550611	Sum of GTIs [s]
			l1events	657431	Number of level 1 events

### 2.1.4 Events

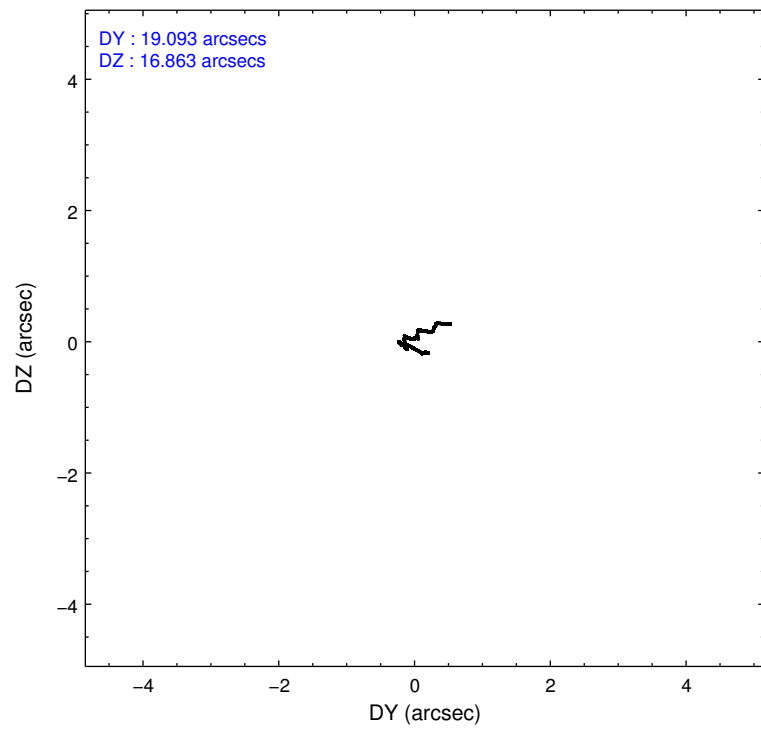
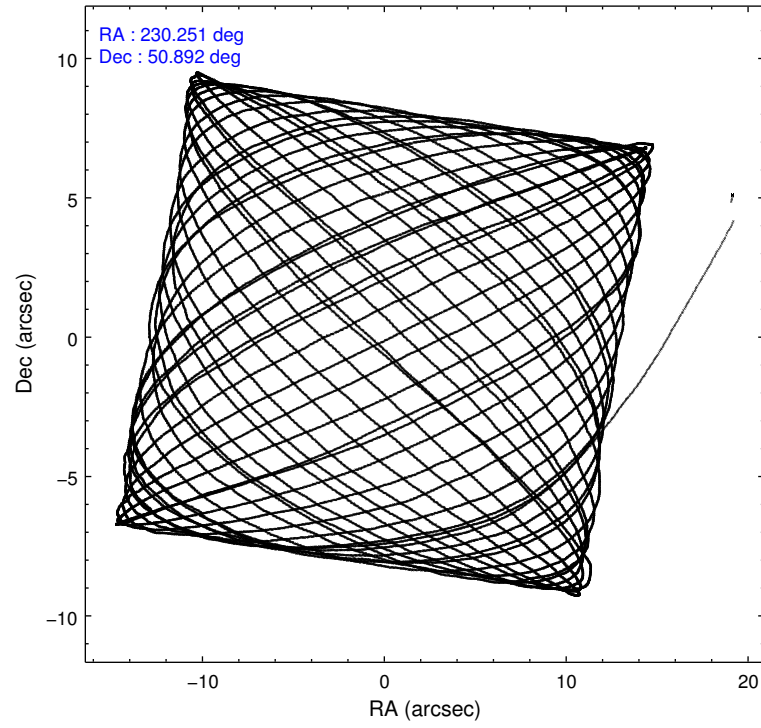
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	100154	171478	104486	140581	140732
rejected events	88721	89142	92086	79170	102231
rejected %	88%	51%	88%	56%	72%

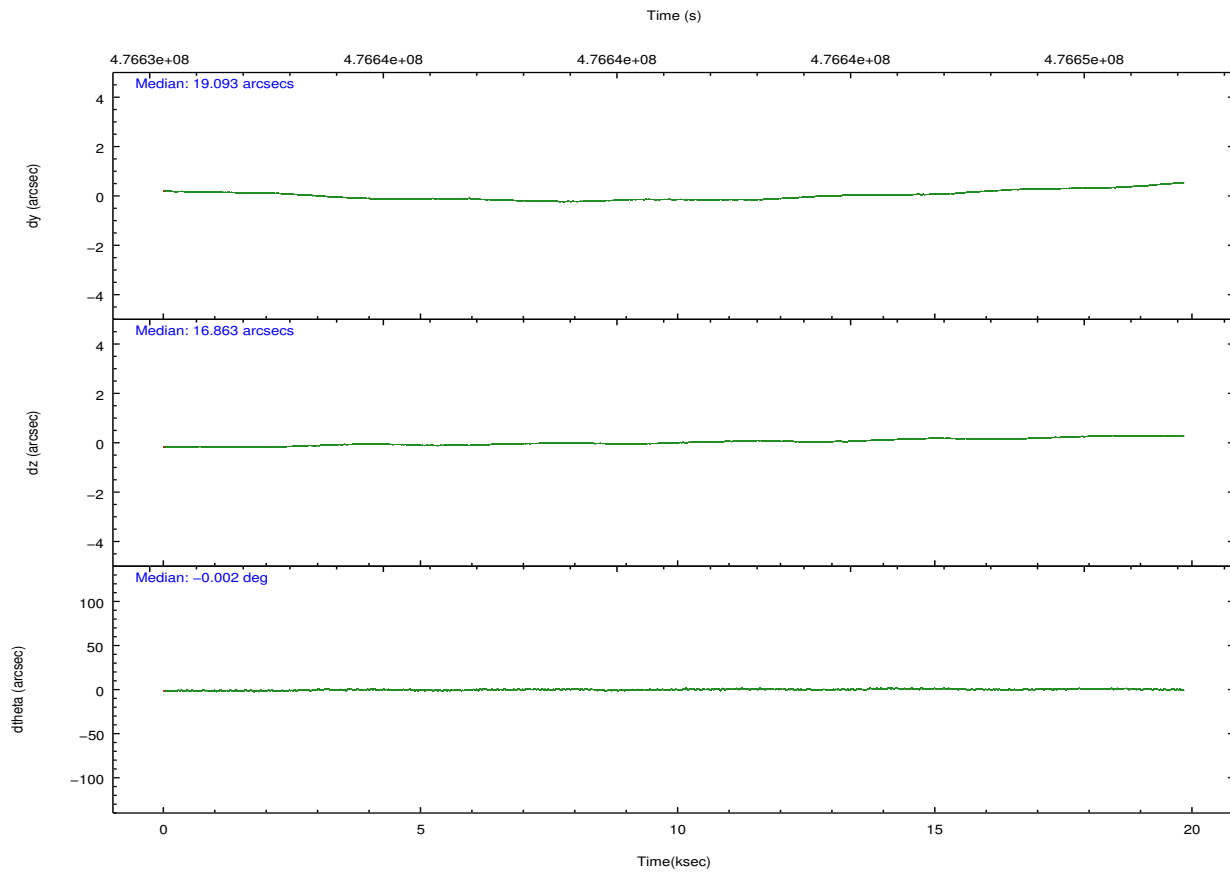
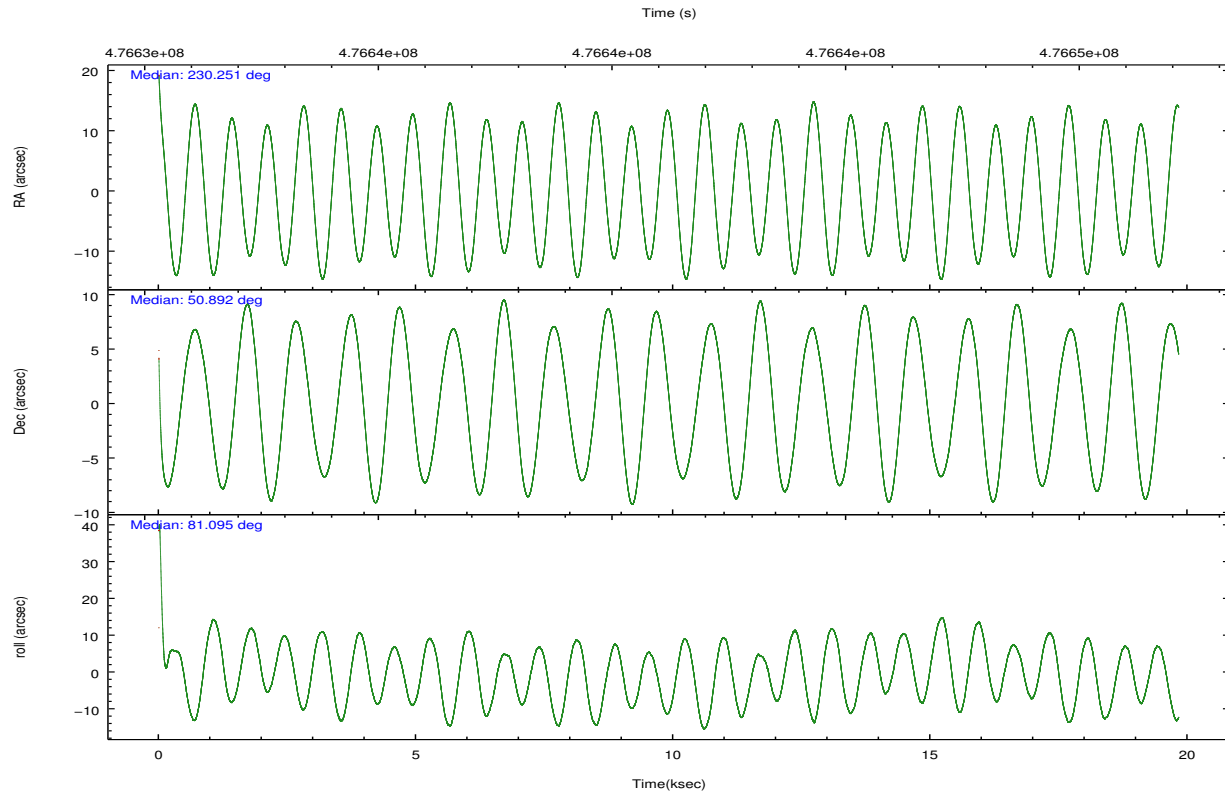
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	3959	6214	4074	5521	11934
	3%	3%	3%	3%	8%
grade 1 events	53	294	59	176	124
	0%	0%	0%	0%	0%
grade 2 events	2471	25332	2908	12627	9050
	2%	14%	2%	8%	6%
grade 3 events	1326	2920	1263	5238	3817
	1%	1%	1%	3%	2%
grade 4 events	1253	2932	1266	5158	3585
	1%	1%	1%	3%	2%
grade 5 events	5308	13140	5340	14601	7741
	5%	7%	5%	10%	5%
grade 6 events	2428	44957	2894	32880	10123
	2%	26%	2%	23%	7%
grade 7 events	83356	75689	86682	64380	94358
	83%	44%	82%	45%	67%

## 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	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	230.266718	230.2505694241148	CCD I2 on	N	N
[deg] Pointing Dec	50.866341	50.89172273599017	CCD I3 on	O1	Y
[deg] Pointing Roll	80.933780	81.10297236383606	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)	476632135.184000	476630505.17881	CCD S5 on	N	N
Observation start date	2013-02-07T13:47:48	2013-02-07T13:21:45	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	476651135.184000	476651785.71746	On-chip summing requested	N	N
Observation end date	2013-02-07T19:04:28	2013-02-07T19:16:25	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



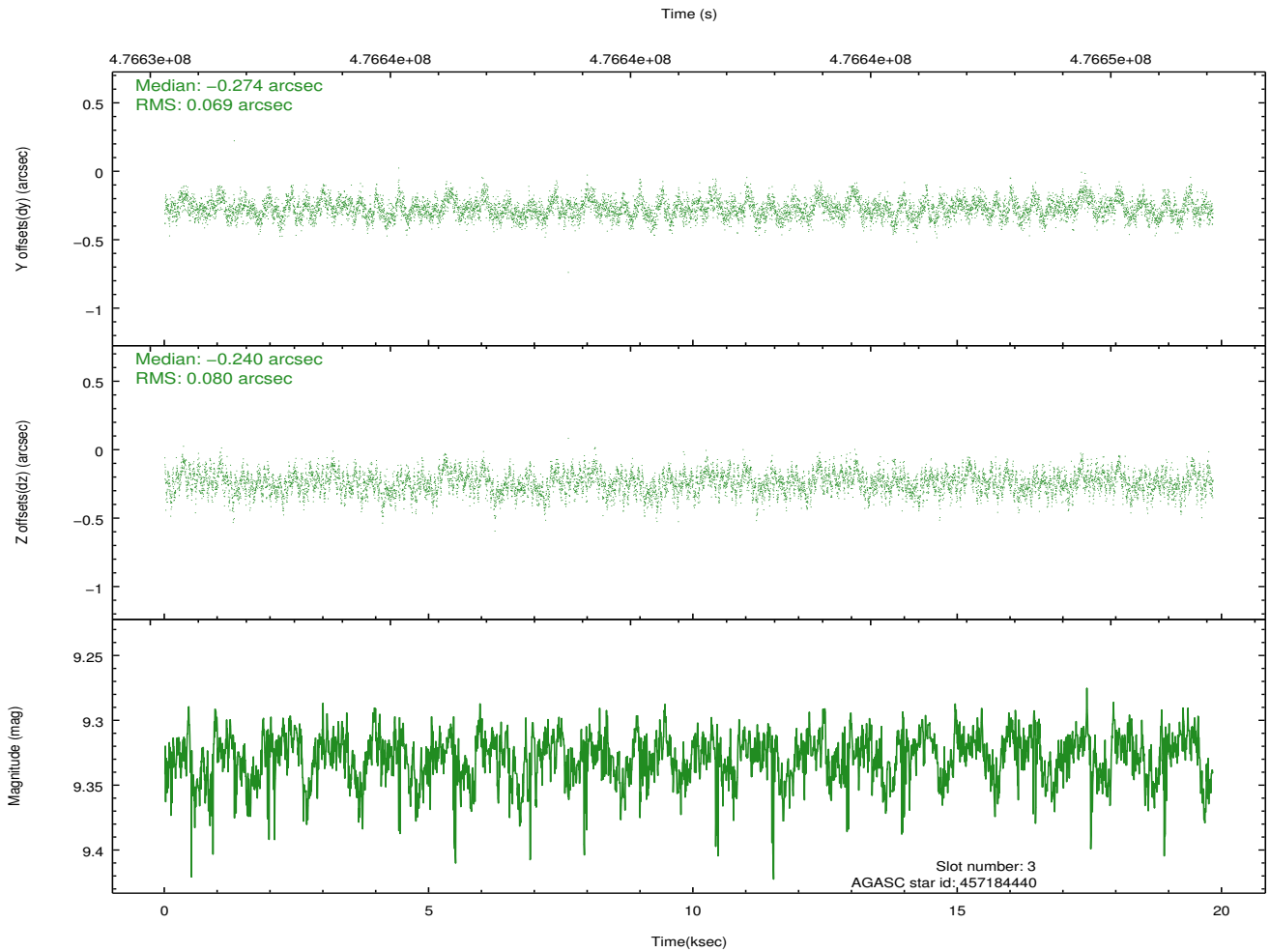
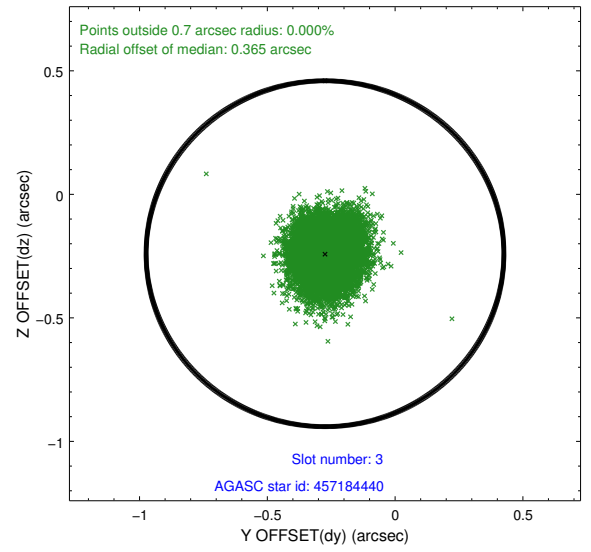
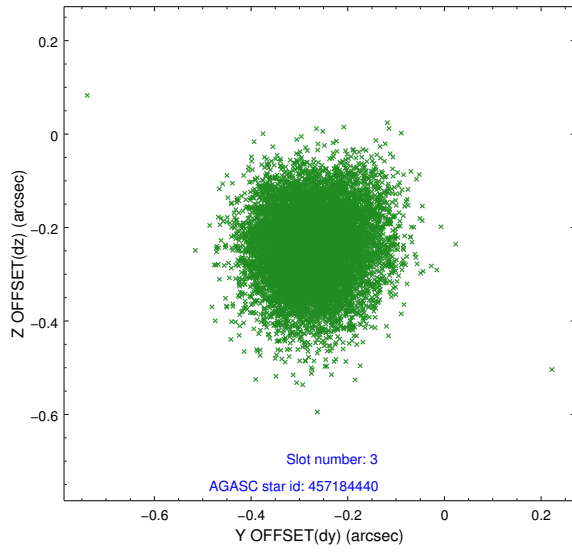


### Slot Statistics

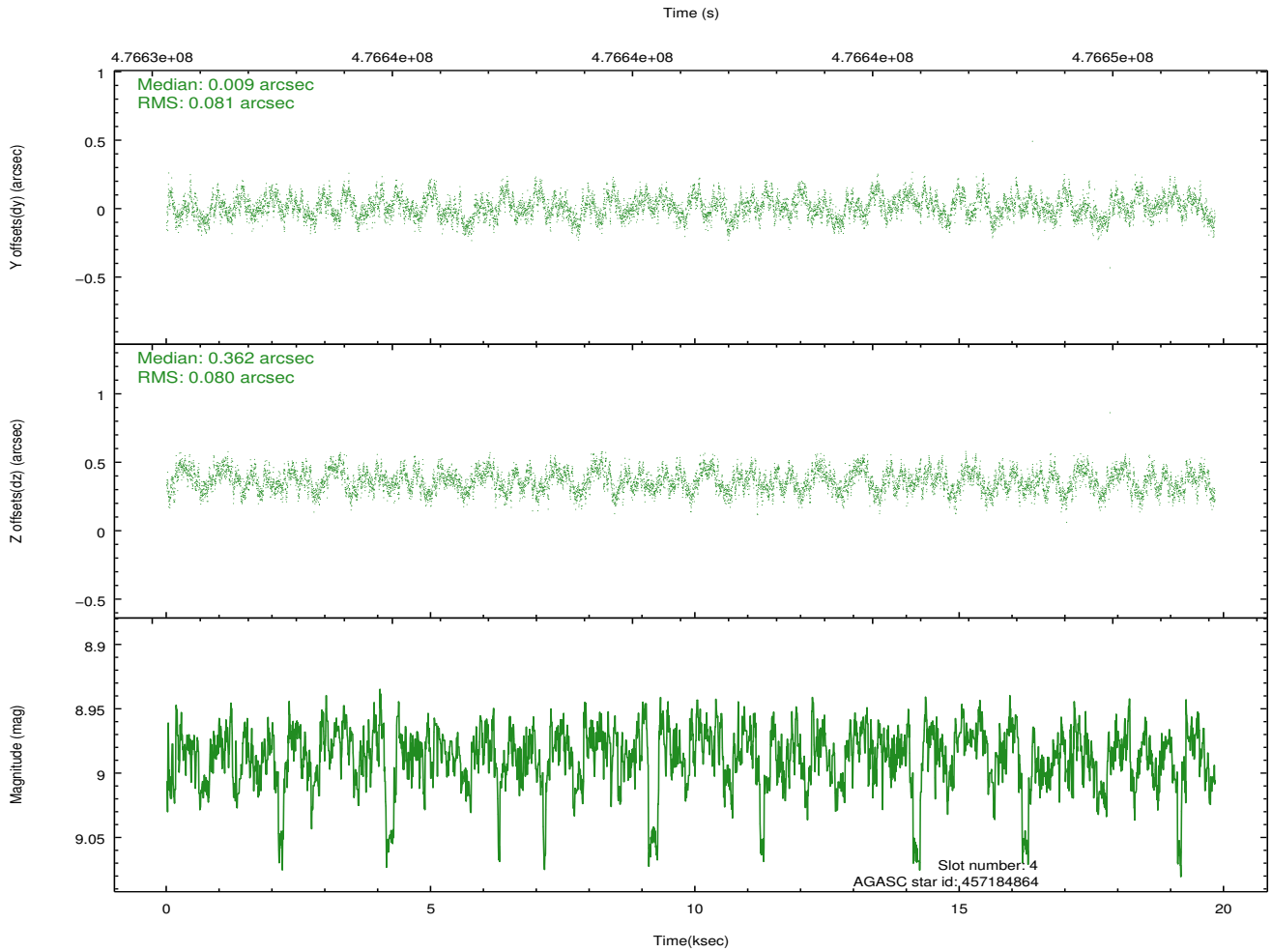
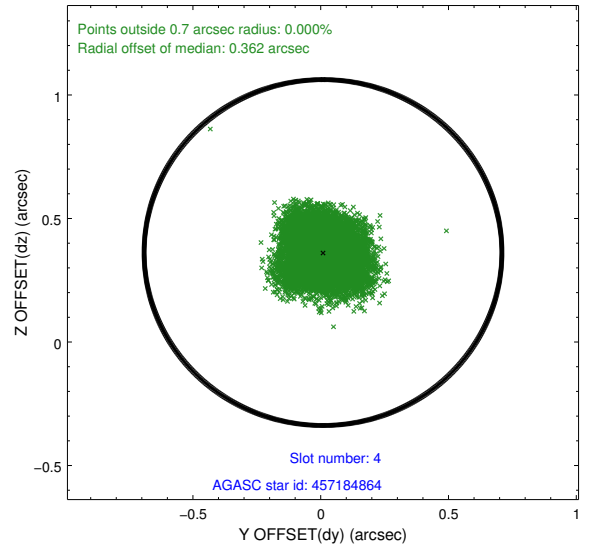
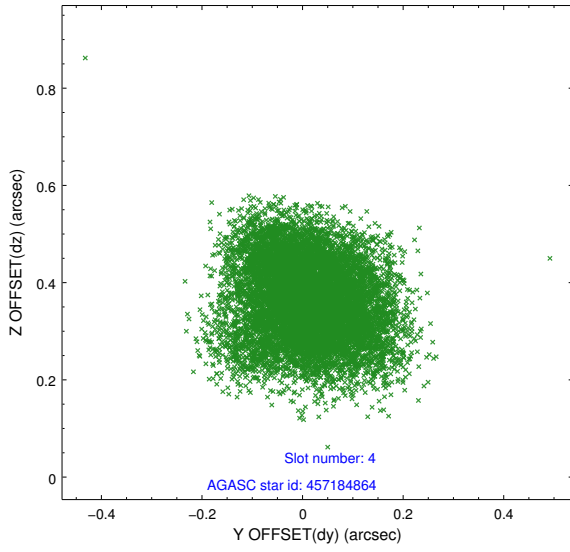
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.99	4836	-0.160	-0.114	0.006	0.010	0.000000	0.000000	-772.43	-1738.40
1	FID		ACIS-S-4	7.07	4836	0.193	0.075	0.007	0.011	0.000000	0.000000	2141.19	169.95
2	FID		ACIS-S-6	7.19	4837	-0.061	0.047	0.008	0.012	0.000000	0.000000	390.00	807.61
3	GUIDE	used	457184440	9.33	9641	-0.274	-0.240	0.114	0.181	230.030743	51.149792	924.33	687.03
4	GUIDE	used	457184864	8.99	9662	0.009	0.362	0.123	0.191	231.208678	51.210238	1571.26	-1899.99
5	GUIDE	used	457186024	9.44	9640	-0.298	-0.517	0.201	0.305	229.848685	51.438595	1889.07	1250.99
6	GUIDE	used	457189032	9.39	9632	0.202	0.293	0.121	0.195	230.763518	50.222392	-2103.37	-1493.92
7	GUIDE	used	457189064	9.82	9659	0.323	0.107	0.236	0.351	230.914299	50.275020	-1859.60	-1804.23

## 2.4 Star Slots

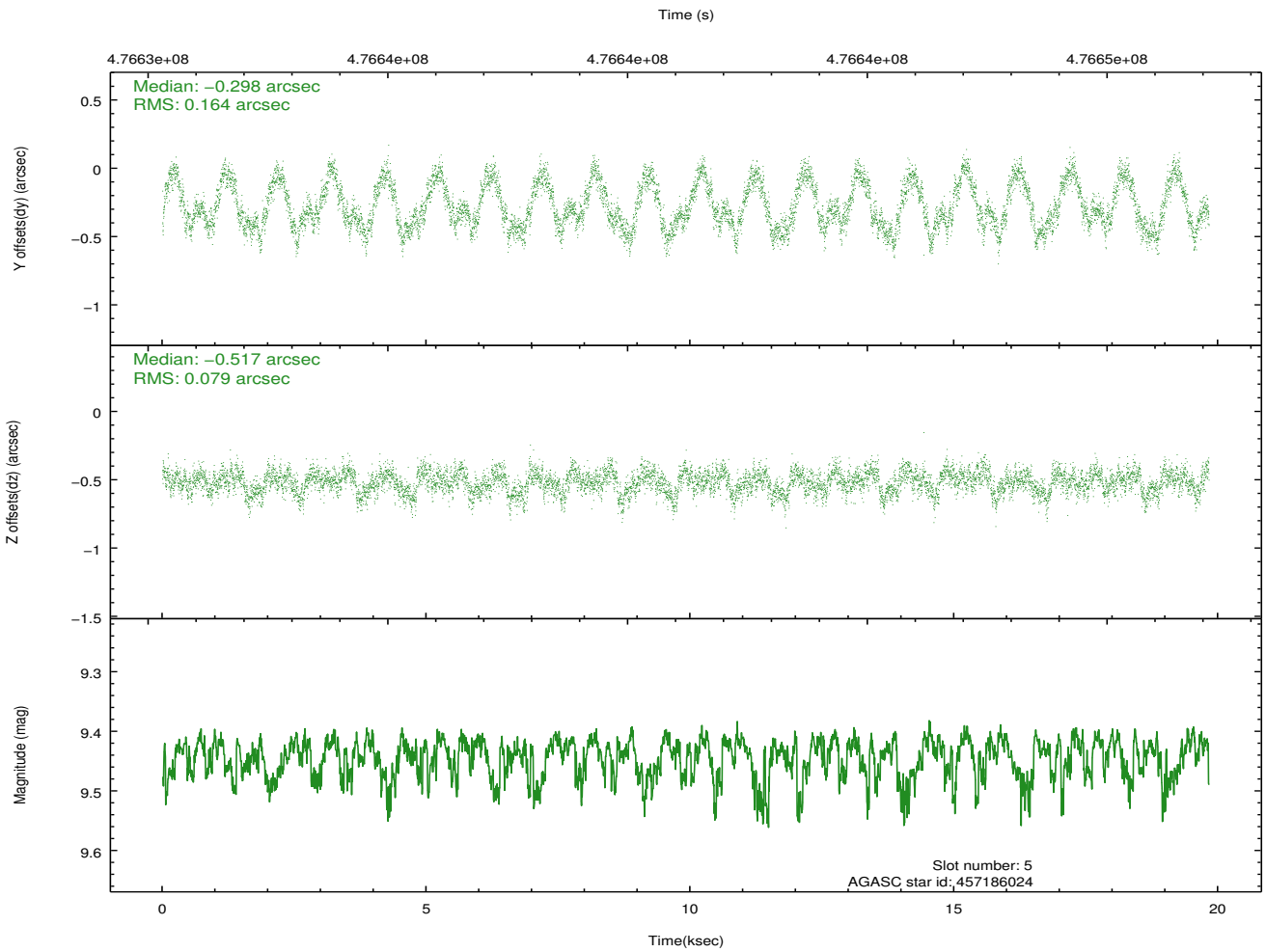
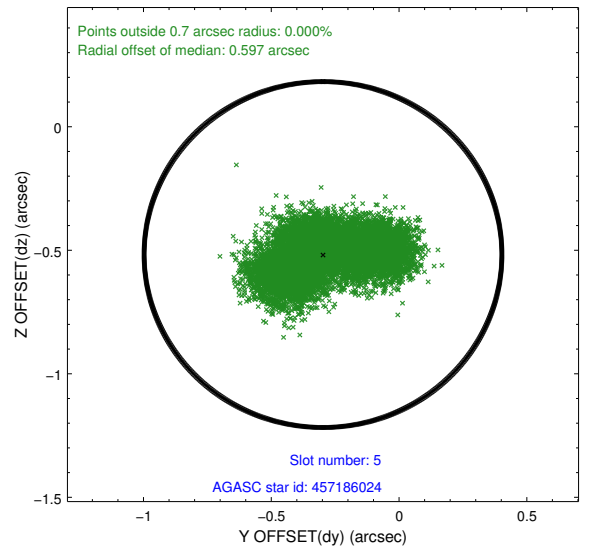
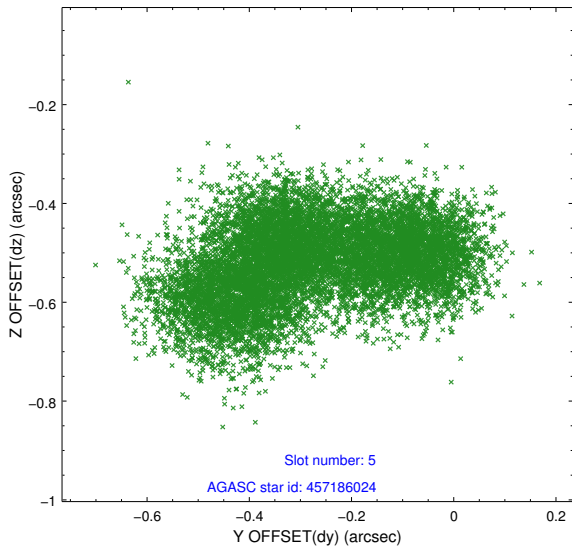
### 2.4.1 Slot 3



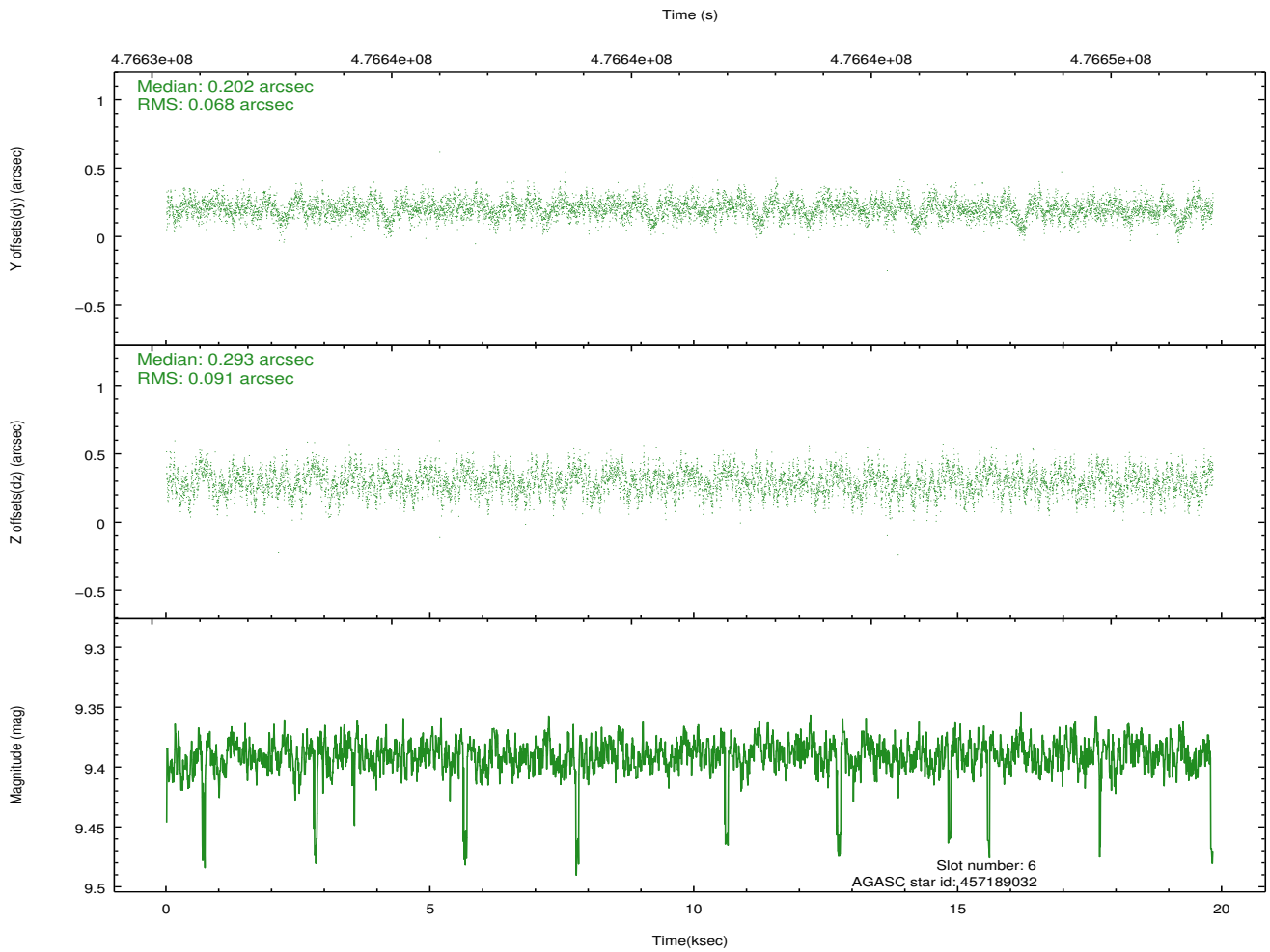
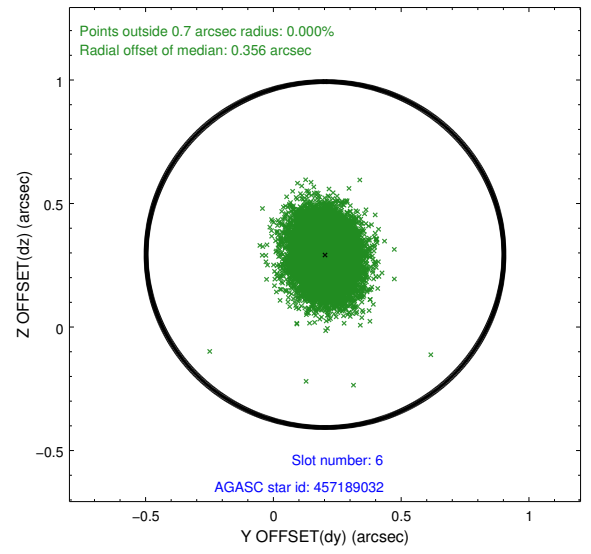
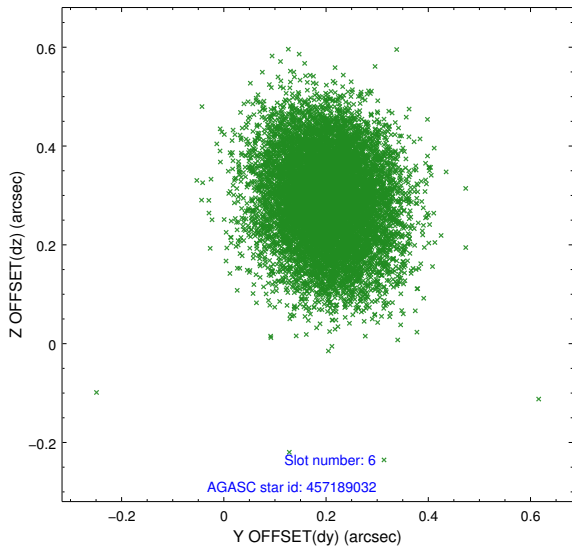
### 2.4.2 Slot 4



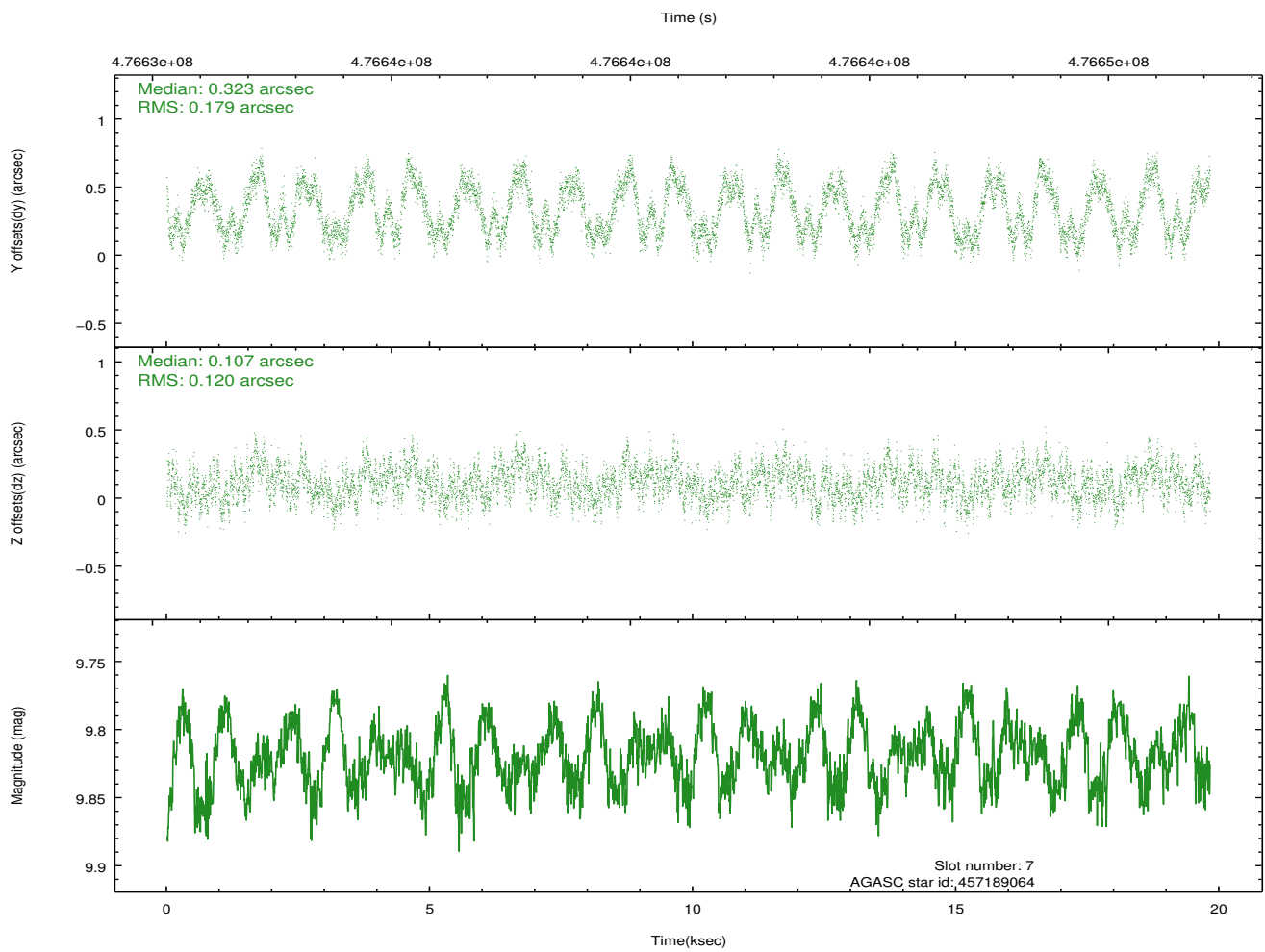
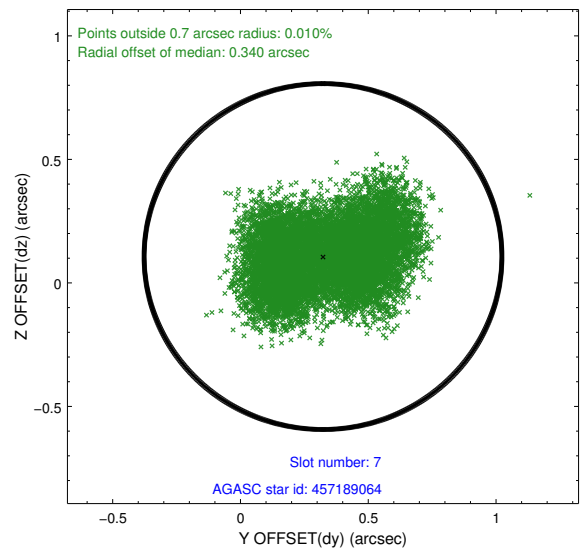
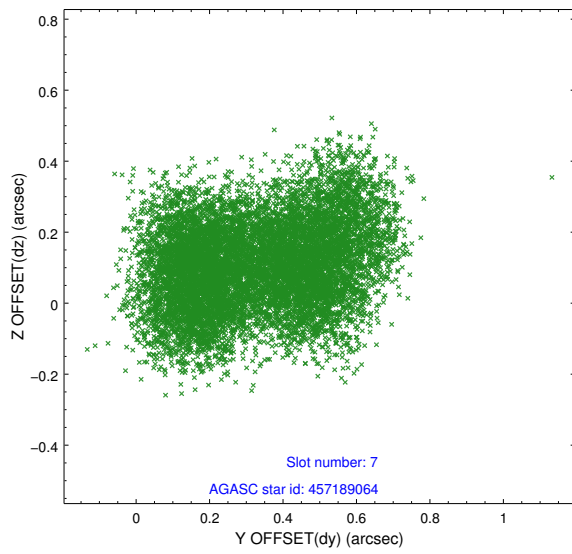
### 2.4.3 Slot 5



### 2.4.4 Slot 6

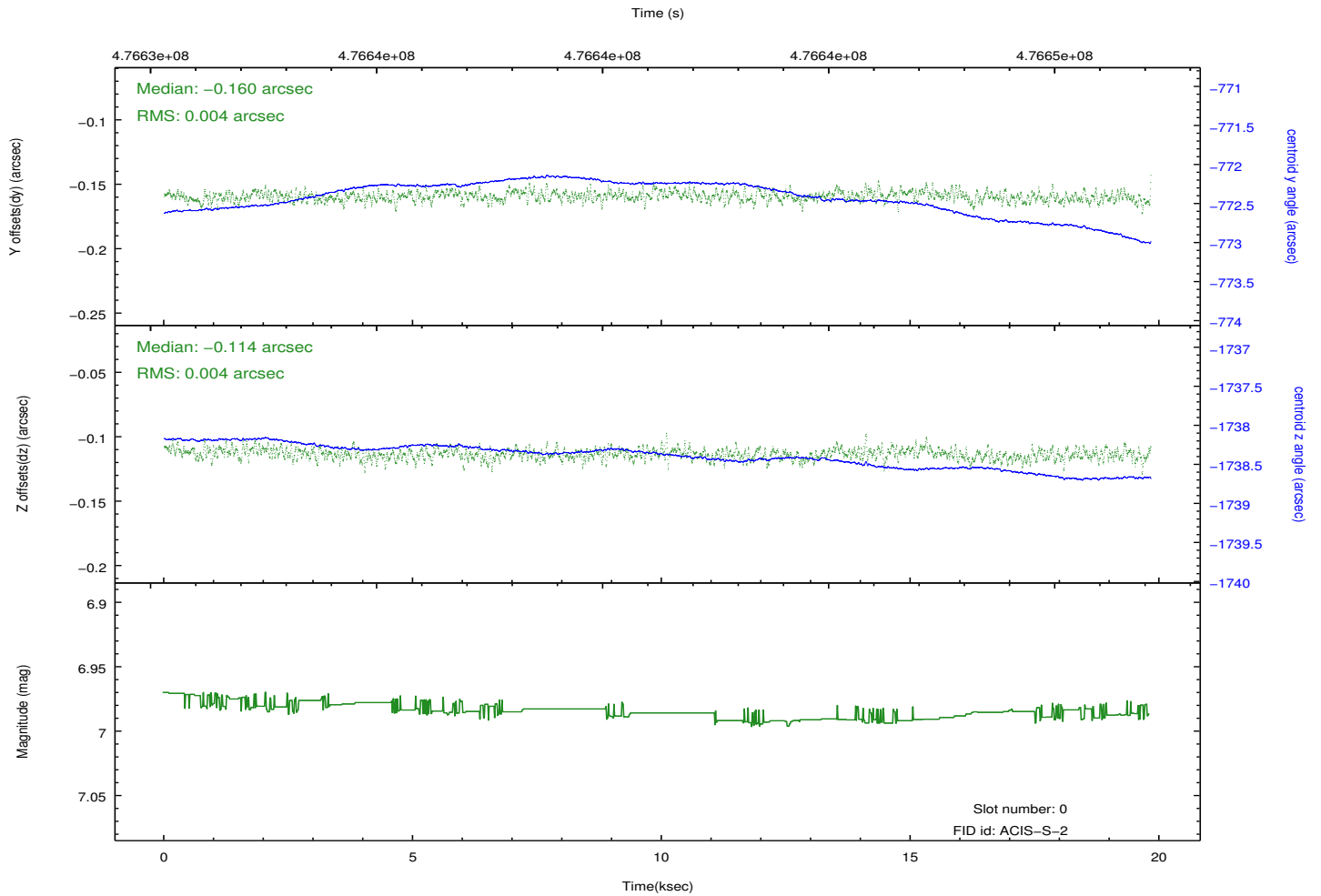
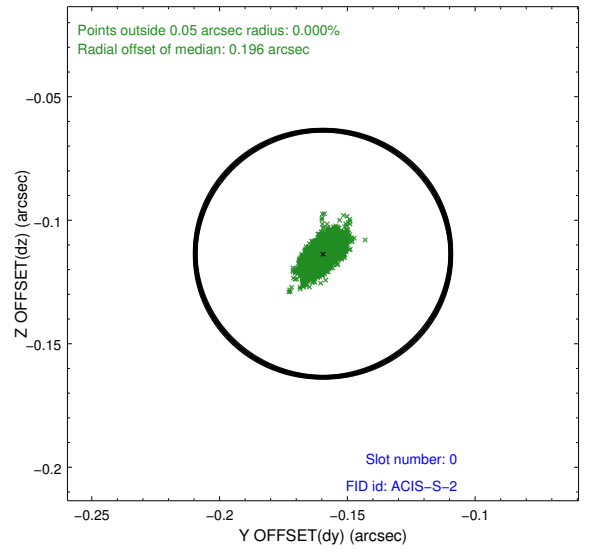
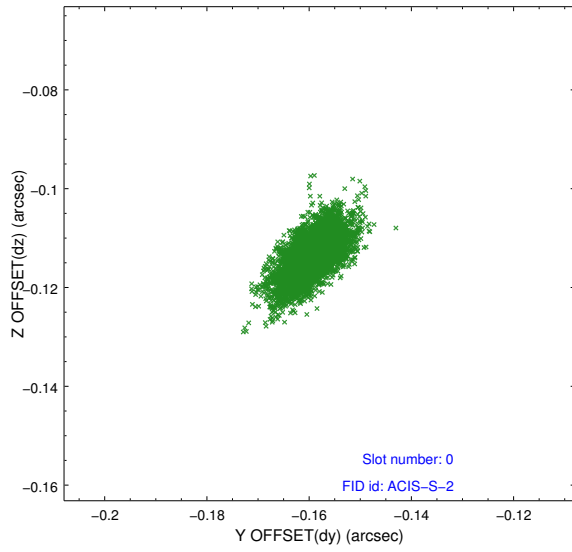


## 2.4.5 Slot 7

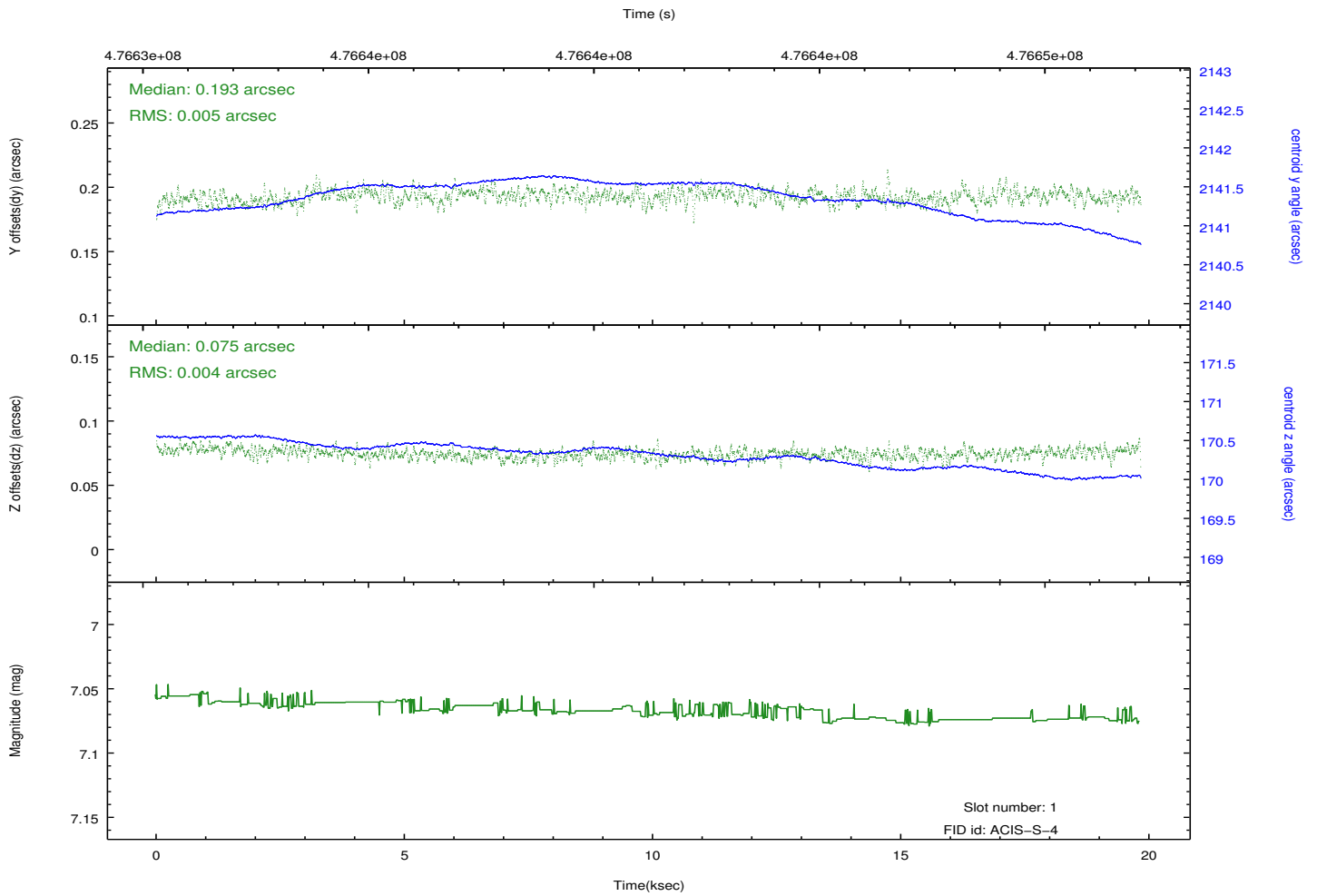
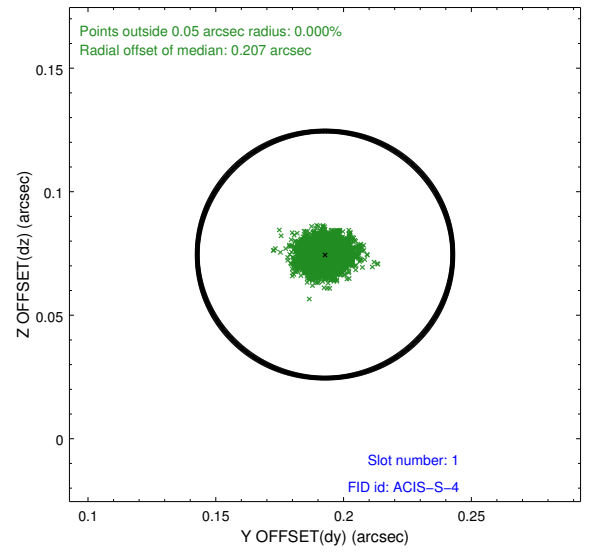
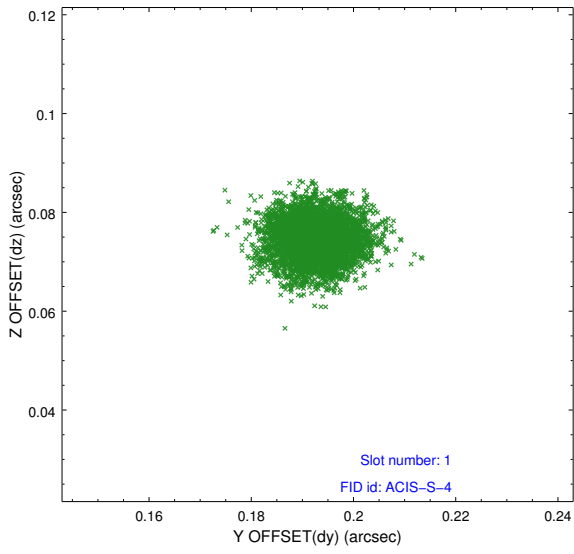


## 2.5 FID Slots

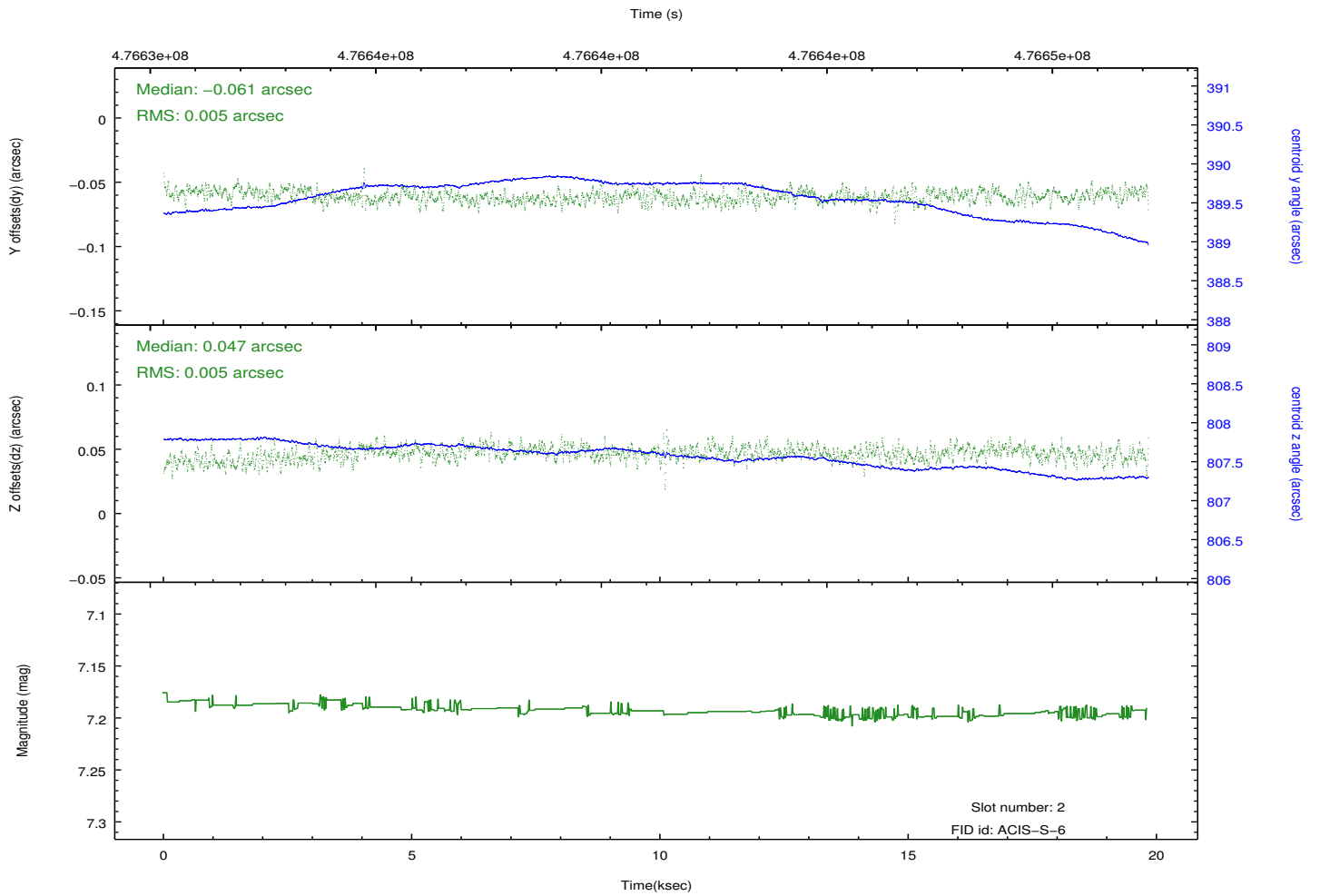
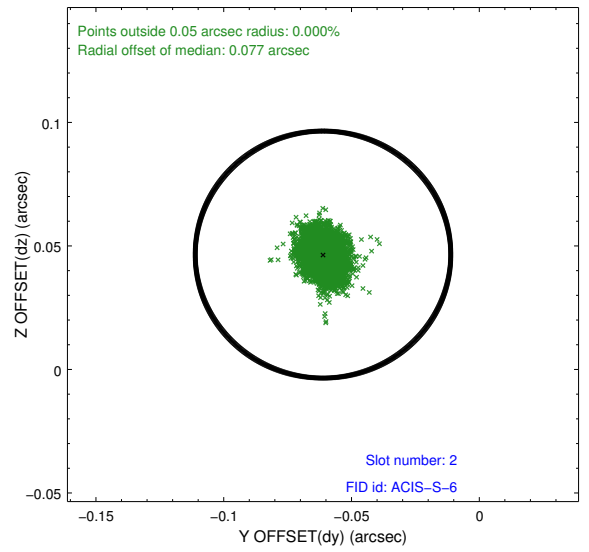
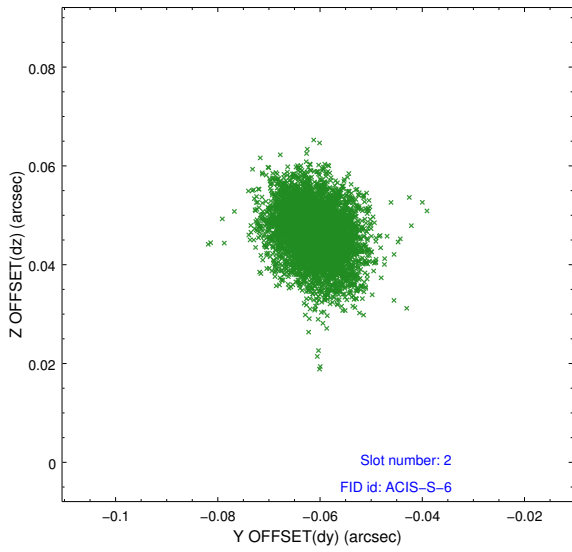
### 2.5.1 Slot 0



## 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)	2014.12.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.061119710624

## 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.