

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 15594 - L2 Version 2
Chandra X-Ray Center

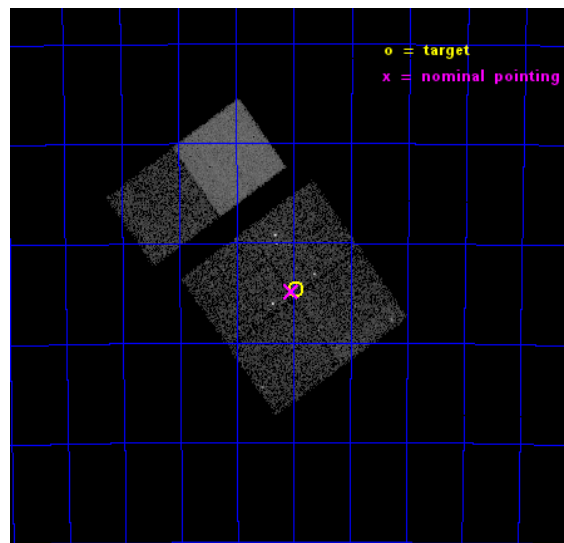
L2 Processing Date : Nov 30 2014

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1 Front

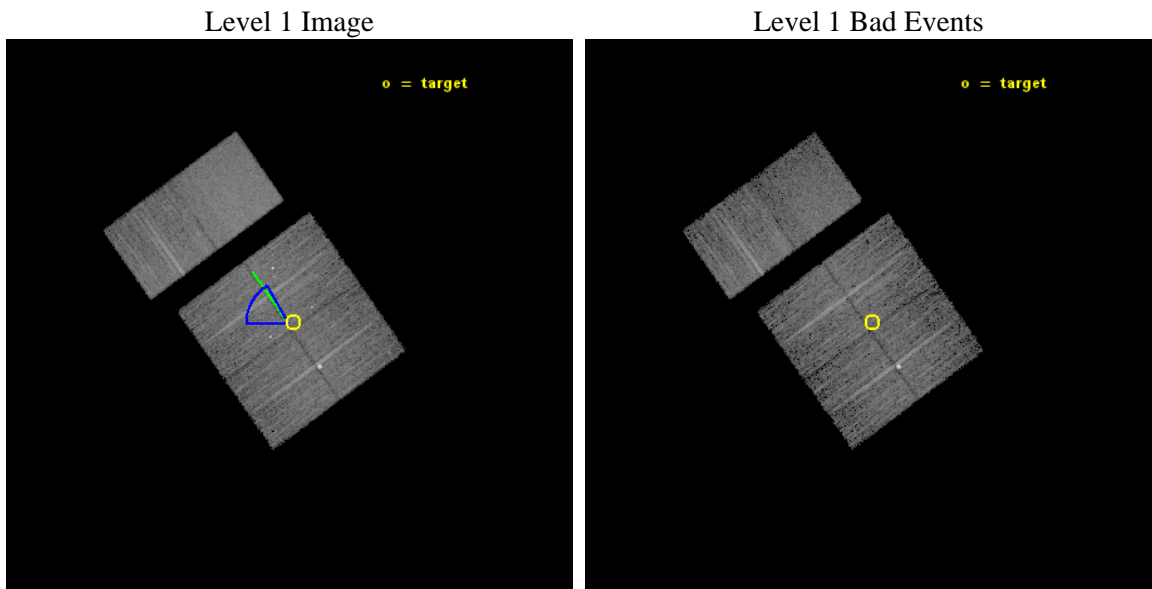
seq_num	401509	Sequence number
obs_id	15594	Observation id
title	Broad-band X-ray study of Ultraluminous X-ray sources with Chandra, XMM-Newton and NuSTAR	Proposal title
observer	Prof. Fiona Harrison	Principal investigator
object	NGC 1313	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.490833	Observer's specified target RA [deg]
dec_targ	-66.578639	Observer's specified target Dec [deg]
ra_nom	49.510177407999	Nominal RA [deg]
dec_nom	-66.581187061685	Nominal Dec [deg]
roll_nom	324.22643636415	Nominal Roll [deg]
revision	2	Processing version of data
ontime	9967.8242246509	Sum of GTIs [s]
livetime	9841.6056324152	Livetime [s]
ontime0	9967.701104641	Sum of GTIs [s]
ontime1	9967.7421446443	Sum of GTIs [s]
ontime2	9967.7831846476	Sum of GTIs [s]
ontime3	9967.8242246509	Sum of GTIs [s]
ontime6	9967.9063046575	Sum of GTIs [s]
ontime7	9967.8652646542	Sum of GTIs [s]
l2events	60015	Number of level 2 events



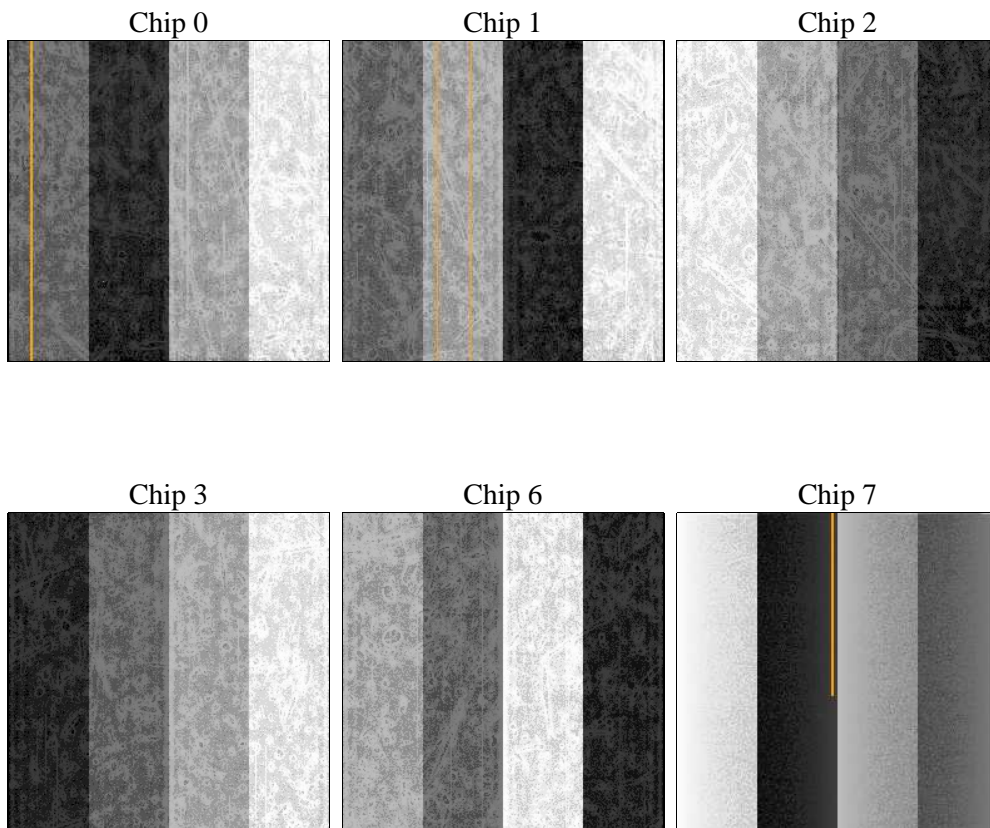
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	9967.8242246509	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	9967.701104641	Sum of GTIs [s]
date	2014-11-30T20:12:18	Date and time of file creation	ontime1	9967.7421446443	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	9967.7831846476	Sum of GTIs [s]
			ontime3	9967.8242246509	Sum of GTIs [s]
			ontime6	9967.9063046575	Sum of GTIs [s]
			ontime7	9967.8652646542	Sum of GTIs [s]
			l1events	334369	Number of level 1 events

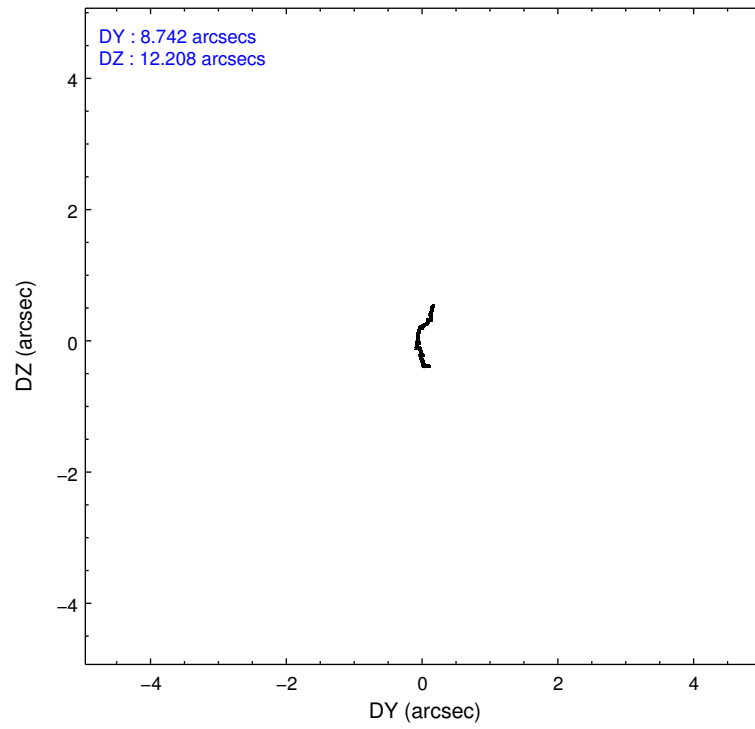
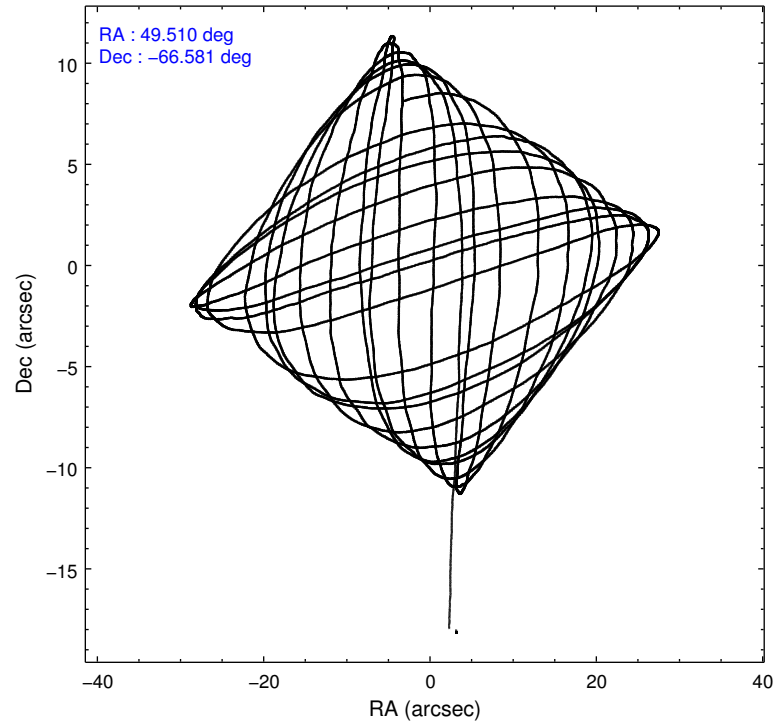
2.1.4 Events

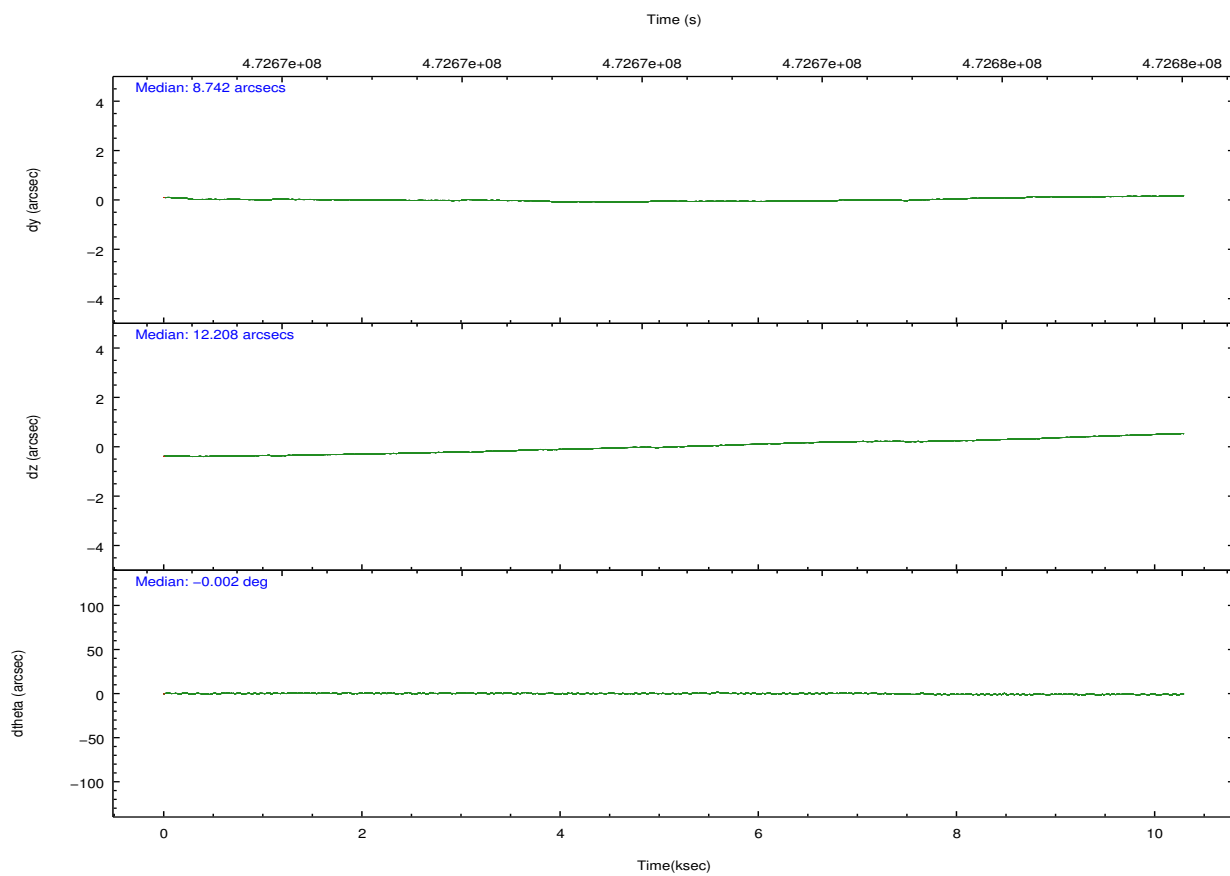
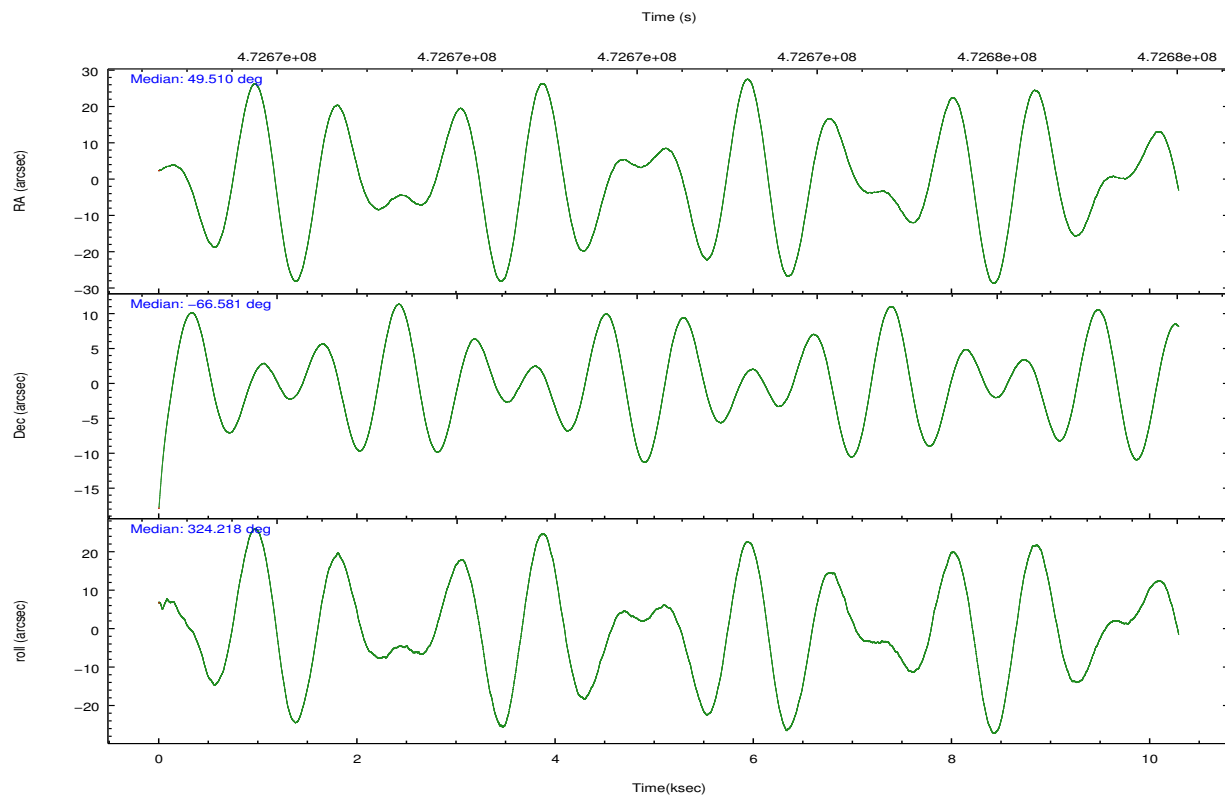
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	48930	50465	53020	54953	56294	70707	grade 0 events	2052	2343	2952	4676	2083	2566
rejected events	42985	43594	46020	46002	50009	40158		4%	4%	5%	8%	3%	3%
rejected %	87%	86%	86%	83%	88%	56%	grade 1 events	27	2988	57	87	22	79
								0%	5%	0%	0%	0%	0%
							grade 2 events	1410	1664	1534	1549	1470	6240
								2%	3%	2%	2%	2%	8%
							grade 3 events	673	664	681	714	597	2387
								1%	1%	1%	1%	1%	3%
							grade 4 events	588	678	663	732	625	2438
								1%	1%	1%	1%	1%	3%
							grade 5 events	2439	2481	2277	2773	2659	7152
								4%	4%	4%	5%	4%	10%
							grade 6 events	1229	1525	1176	1283	1513	16924
								2%	3%	2%	2%	2%	23%
							grade 7 events	40512	38122	43680	43139	47325	32921
								82%	75%	82%	78%	84%	46%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	49.441261	49.5101774079988	CCD I2 on	Y	Y
[deg] Pointing Dec	-66.578521	-66.58118706168494	CCD I3 on	Y	Y
[deg] Pointing Roll	323.954505	324.2264363641476	CCD S0 on	N	N
[deg] Roll angle	20.000000	20.000000	CCD S1 on	N	N
[deg] Roll tolerance	20.000000	20.000000	CCD S2 on	O1	Y
Roll constraint allows 180D rotation	N	N	CCD S3 on	O2	Y
[s] Window start time (MET)	470707267.184000	470707267.184000	CCD S4 on	N	N
[s] Window stop time (MET)	483753667.184000	483753667.184000	CCD S5 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	Number of optional ACIS chips dropped	0	0
[mm] SIM defocus	0	0.001439871863259334	On-chip summing requested	N	N
[mm] SIM translation stage pos	-233.592463	-233.5899487761303	Subarray requested	NONE	NONE
[mm] SIM translation stage offset	0	-0.002504226799430853	Alternating exposures requested	N	N
[s] Observation start time (MET)	472667494.184000	472666337.45254	[s] Primary exposure time	0.000000	3.2
Observation start date	2012-12-23T16:30:27	2012-12-23T16:12:17			
[s] Observation end time (MET)	472677494.184000	472678506.2532			
Observation end date	2012-12-23T19:17:07	2012-12-23T19:35:06			

2.3 Aspect



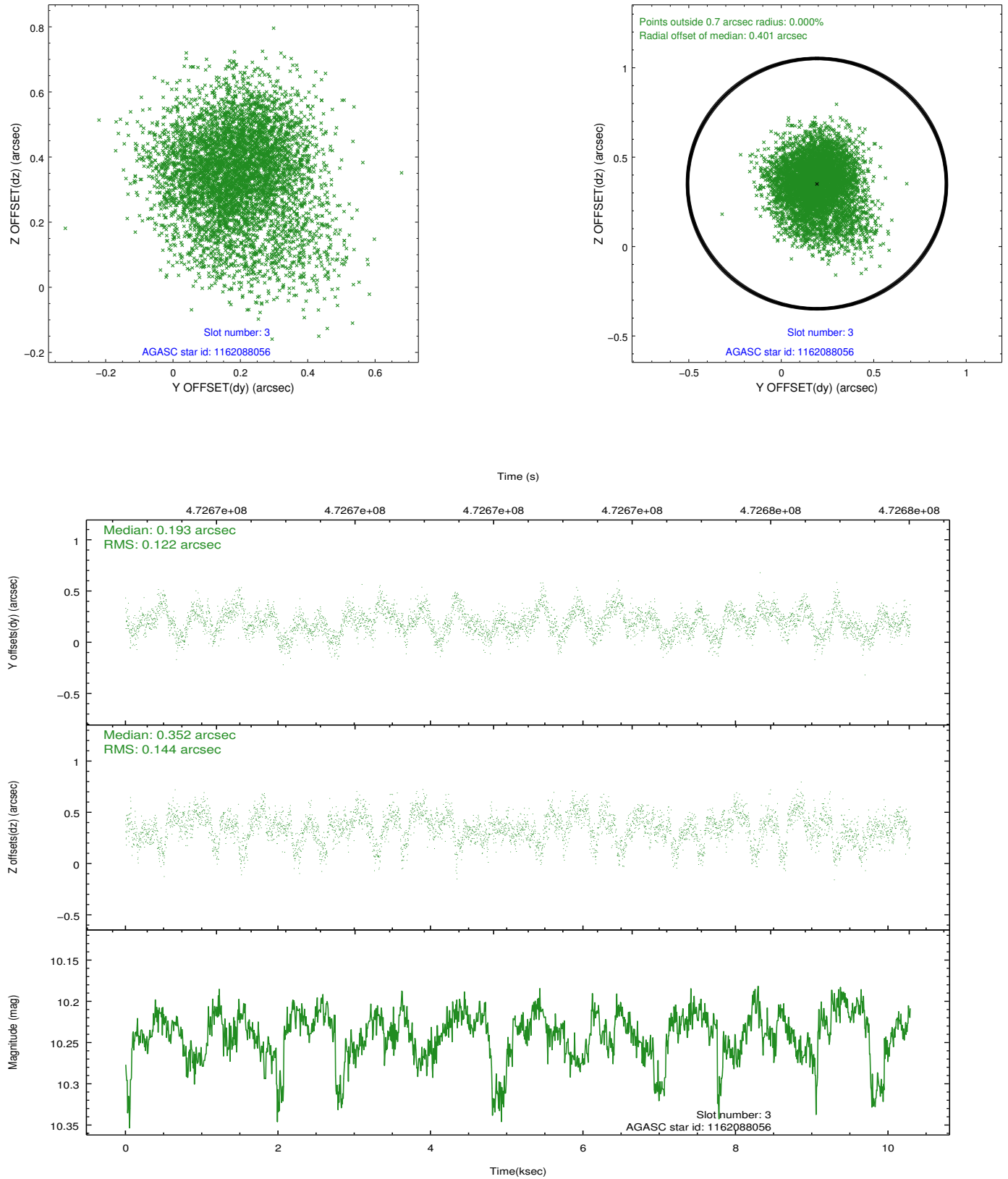


Slot Statistics

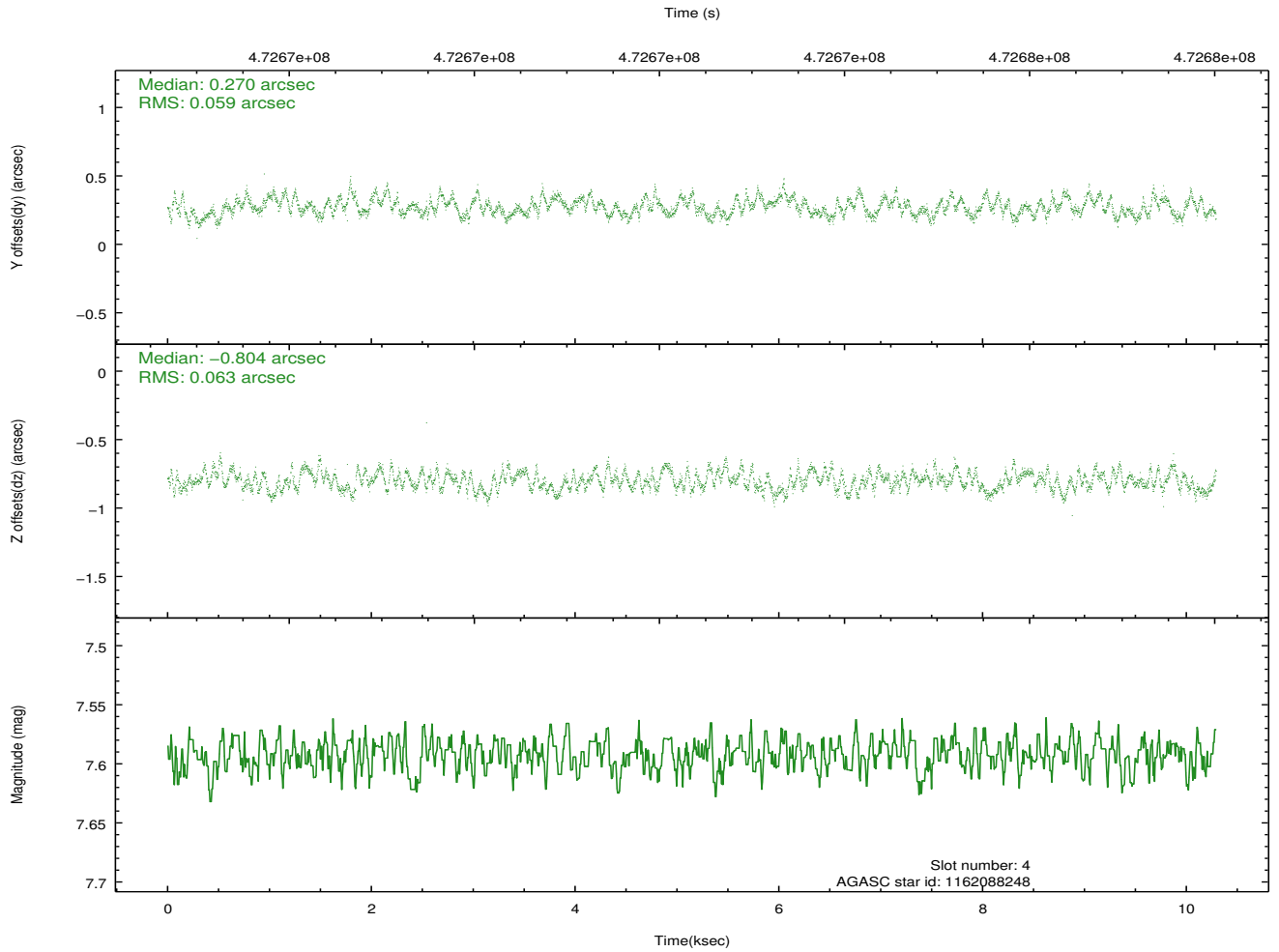
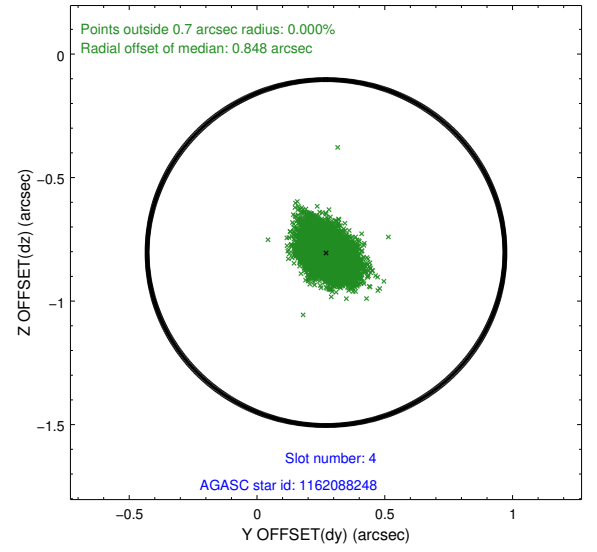
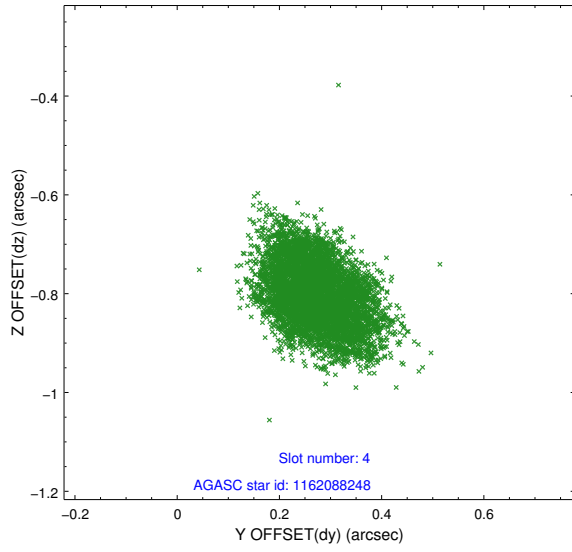
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.22	2511	0.091	-0.083	0.013	0.025	0.000000	0.000000	930.97	-835.78
1	FID		ACIS-I-5	7.20	2510	-0.230	0.081	0.006	0.011	0.000000	0.000000	-1817.17	1061.63
2	FID		ACIS-I-6	7.19	2510	0.048	0.072	0.013	0.023	0.000000	0.000000	395.92	1706.69
3	GUIDE	used	1162088056	10.24	5018	0.193	0.352	0.203	0.328	48.729349	-66.949806	-20.62	-1675.40
4	GUIDE	used	1162088248	7.59	5019	0.270	-0.804	0.093	0.146	49.751966	-65.888113	-1092.07	2276.41
5	GUIDE	used	1162089104	9.58	5016	-0.291	0.246	0.133	0.208	48.422126	-66.410699	-1535.57	-384.52
6	GUIDE	used	1162090824	9.26	5018	-0.009	0.189	0.115	0.183	48.677982	-66.885202	-218.34	-1532.58
7	GUIDE	used	1162094224	9.72	4981	-0.159	0.026	0.127	0.208	49.638584	-66.701903	489.03	-194.28

2.4 Star Slots

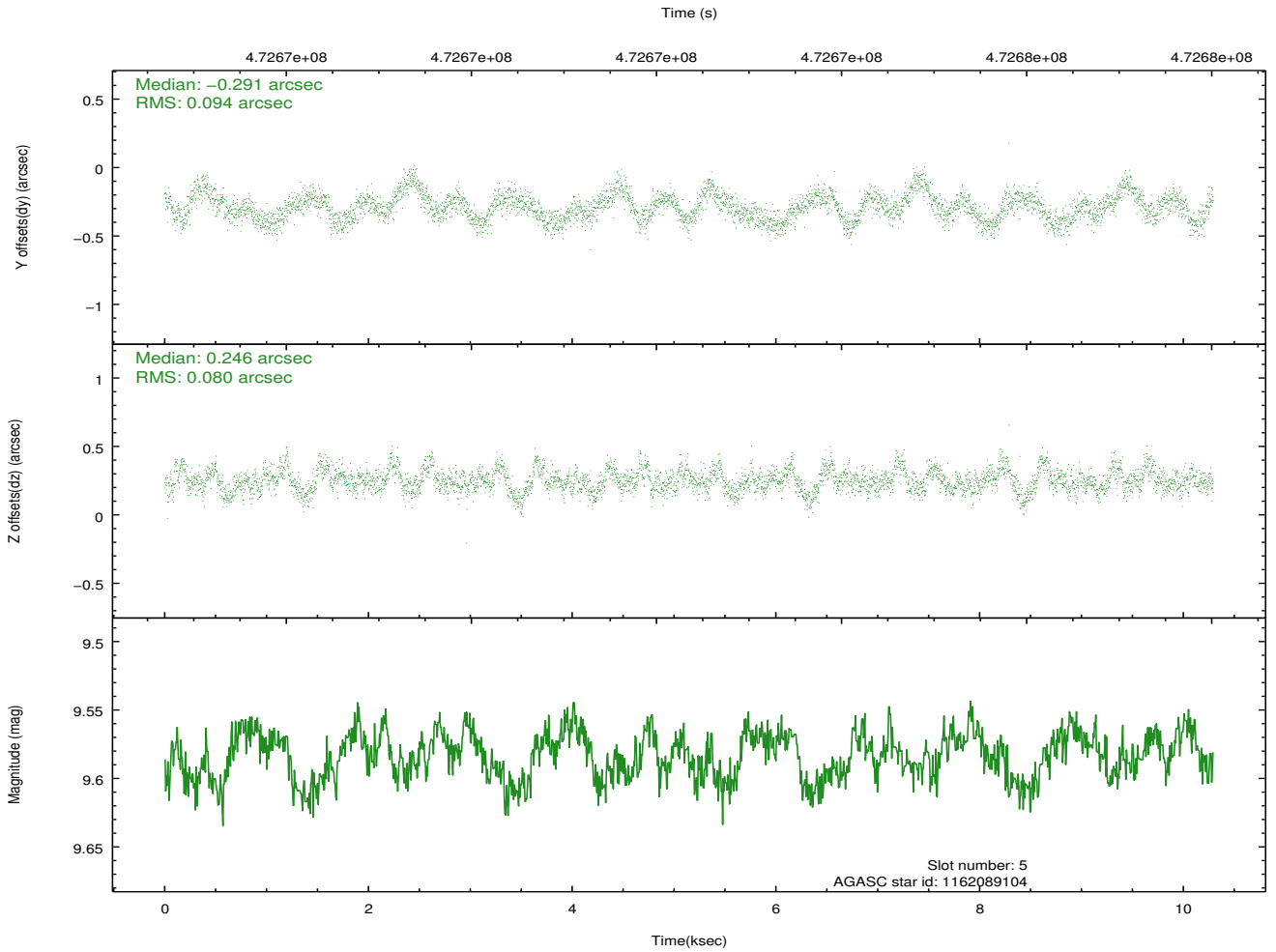
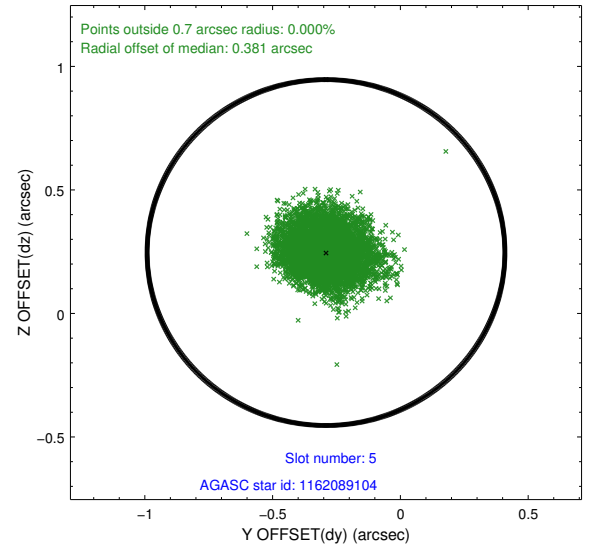
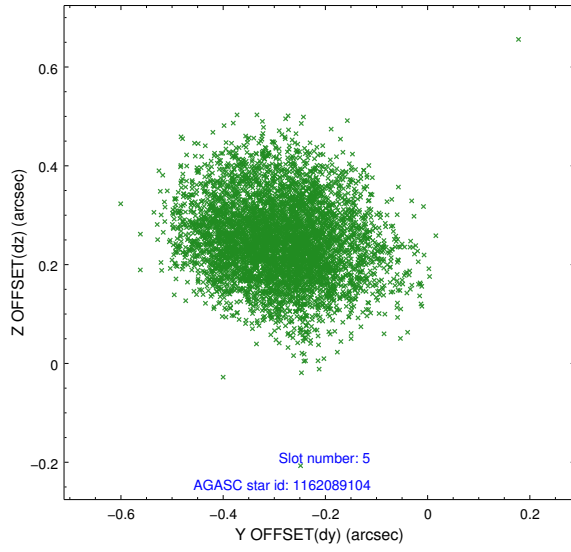
2.4.1 Slot 3



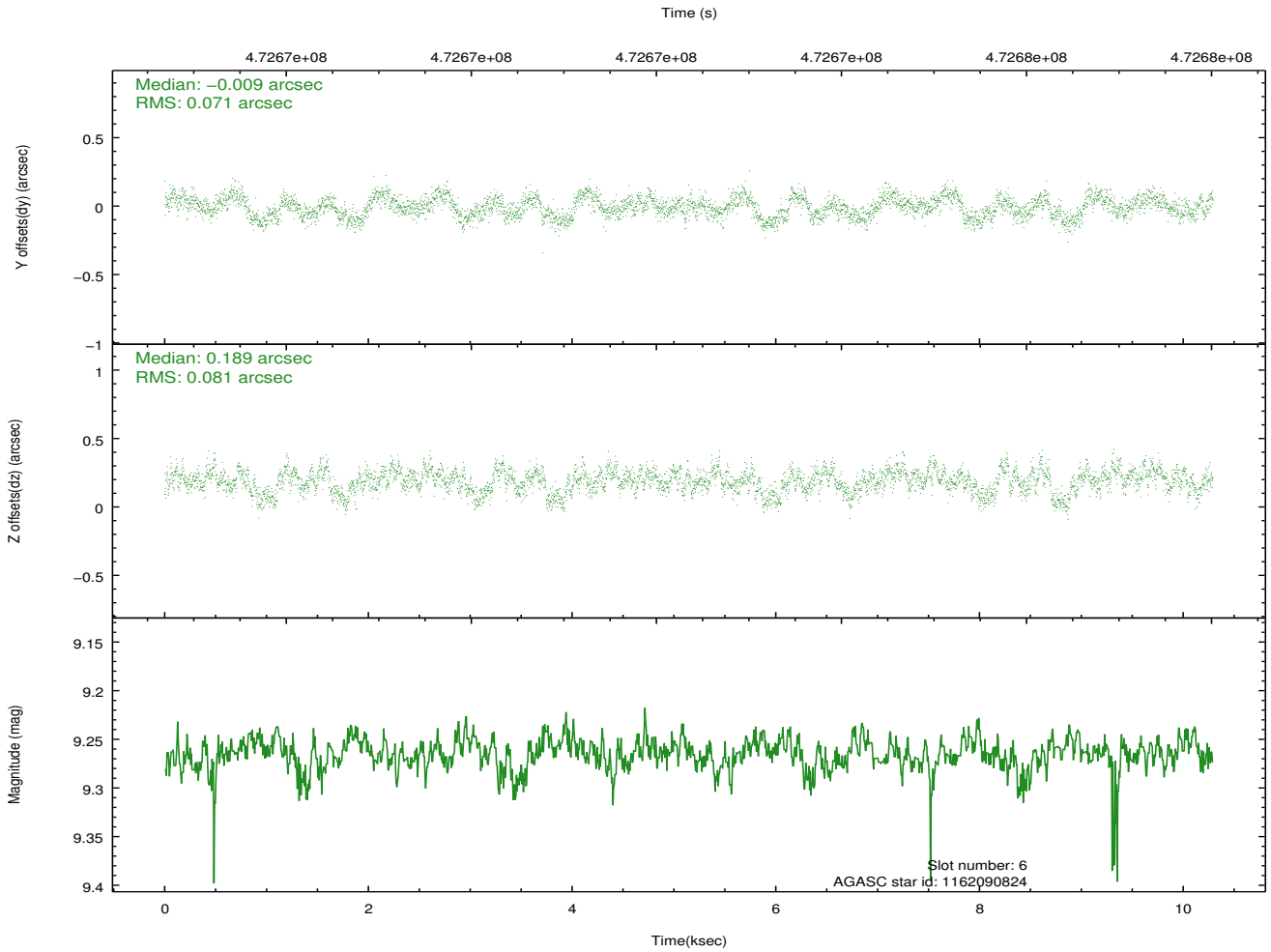
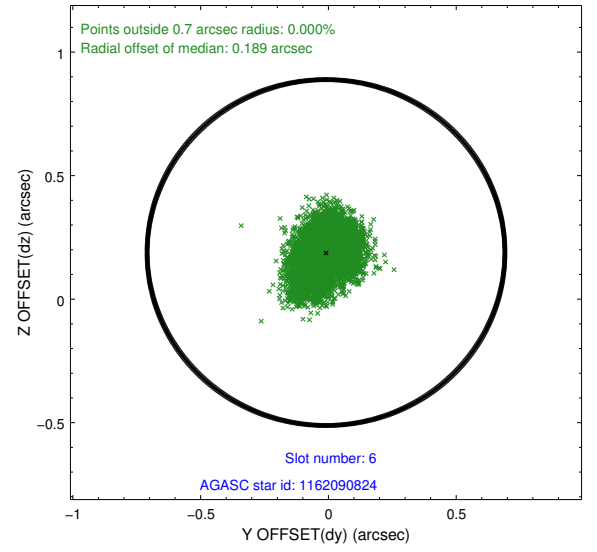
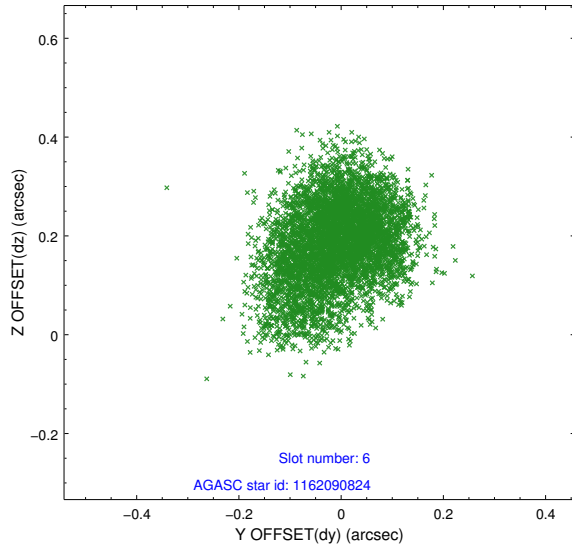
2.4.2 Slot 4



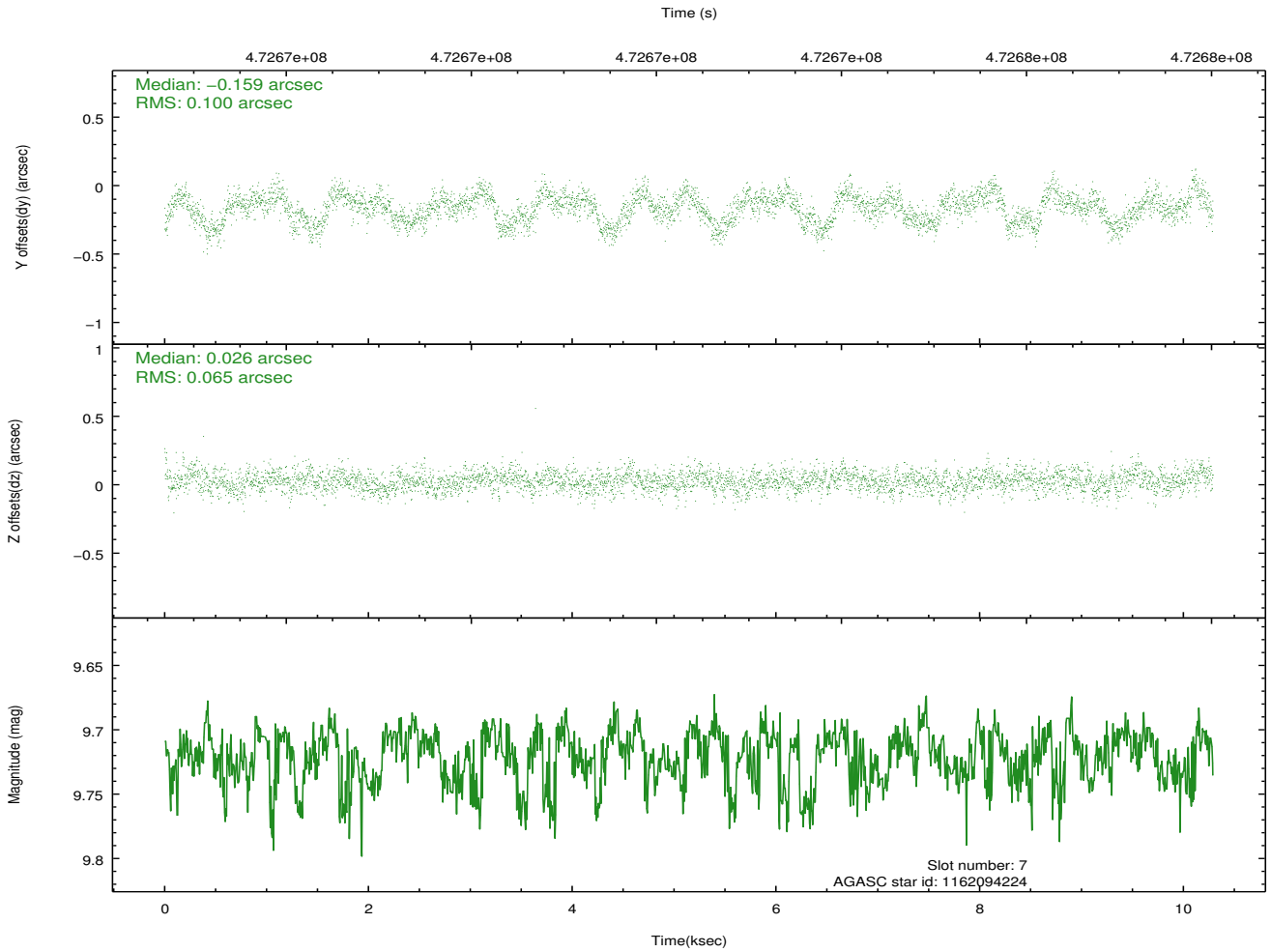
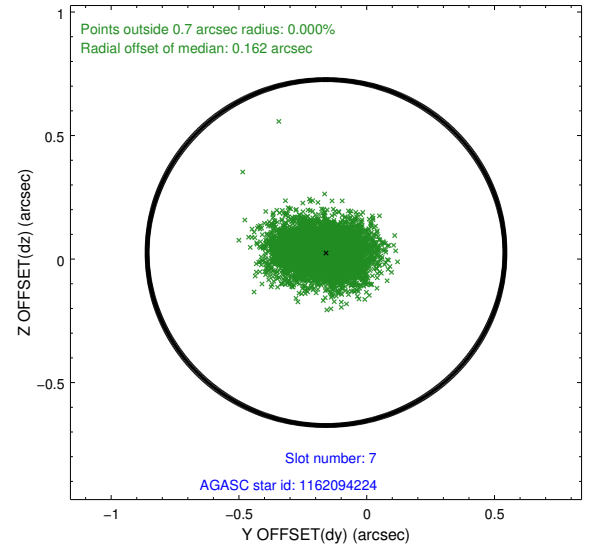
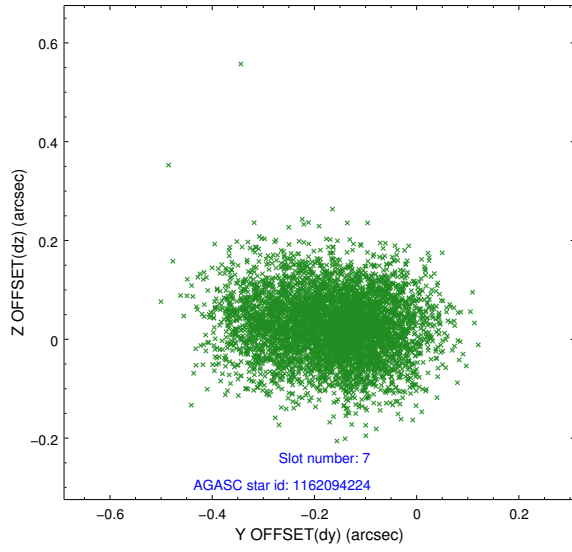
2.4.3 Slot 5



2.4.4 Slot 6

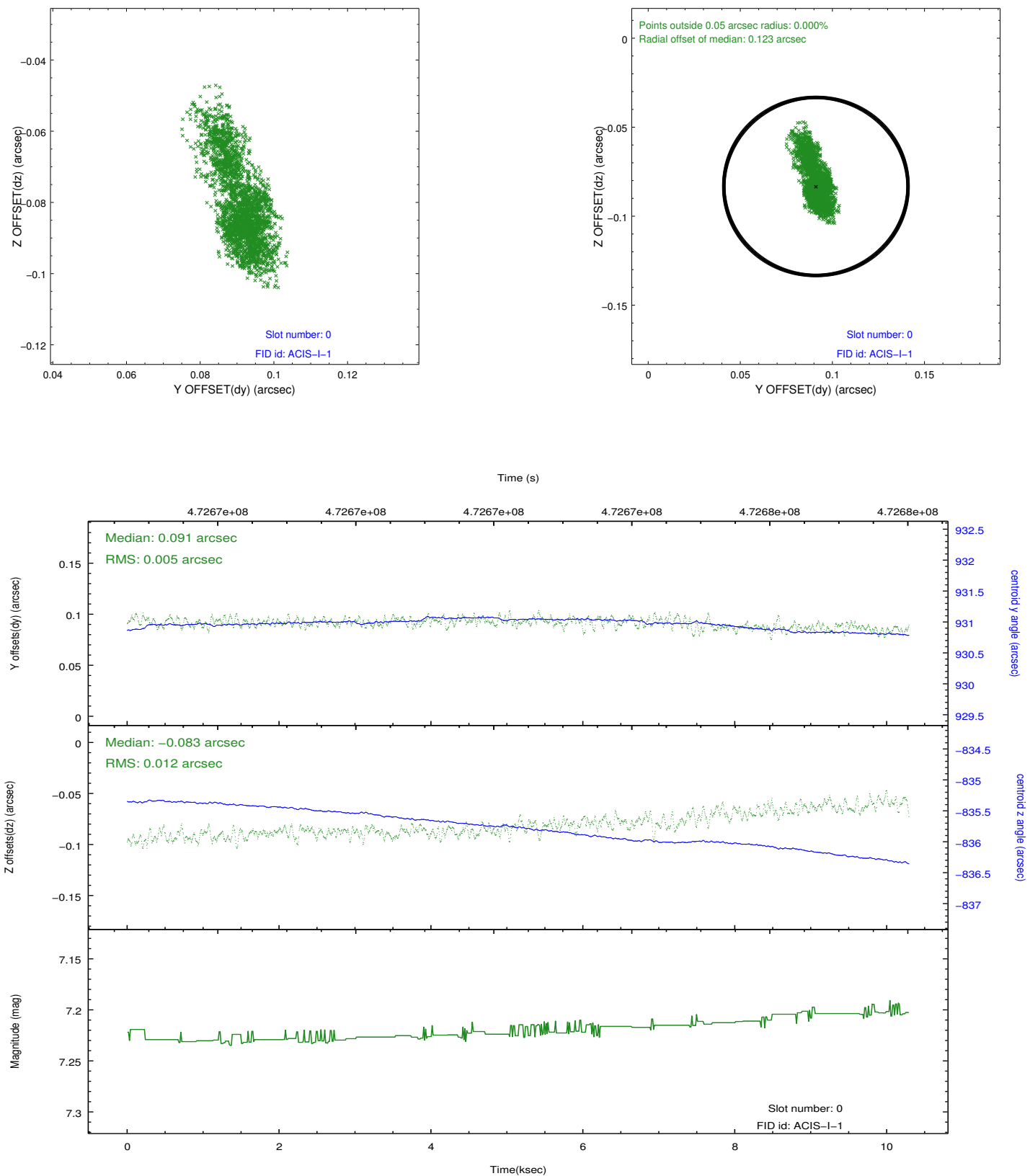


2.4.5 Slot 7

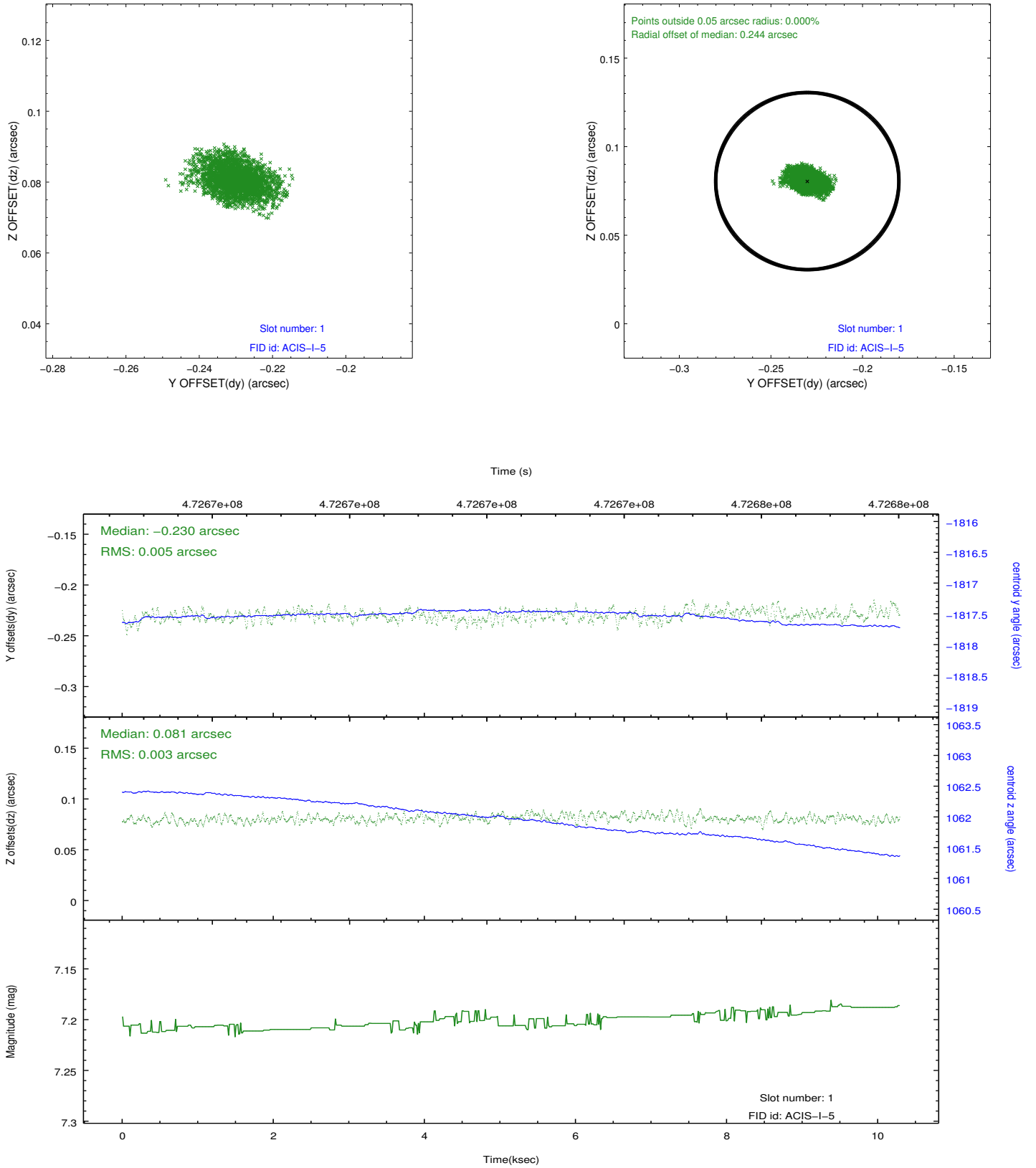


2.5 FID Slots

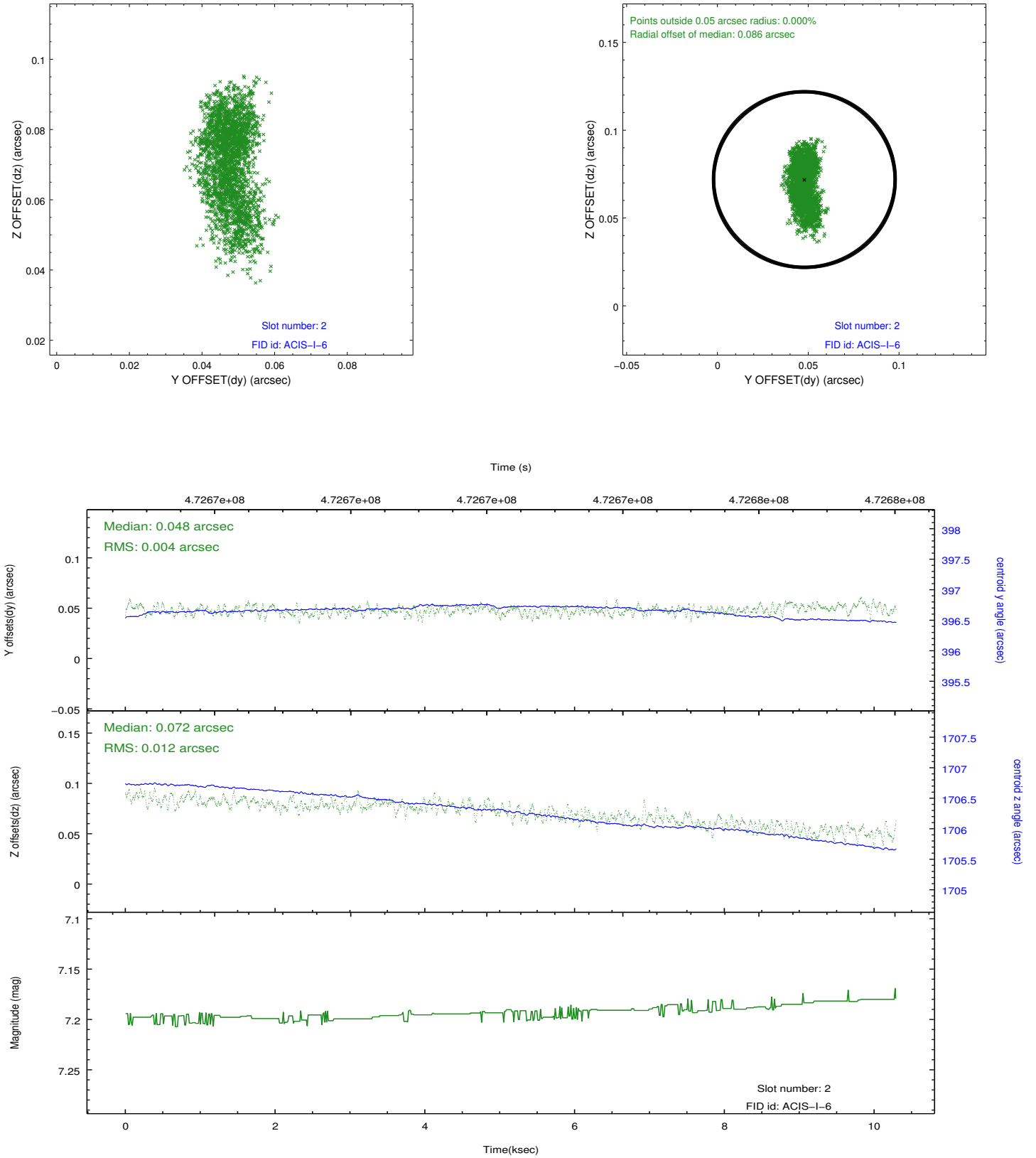
2.5.1 Slot 0



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)	2014.12.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.9678242246509

A.2 Comments

Window and roll preferences met.

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.