

V&V Reference Report

L2 ASCDS Version : 10.2.1

Observation 16591 - L2 Version 2
Chandra X-Ray Center

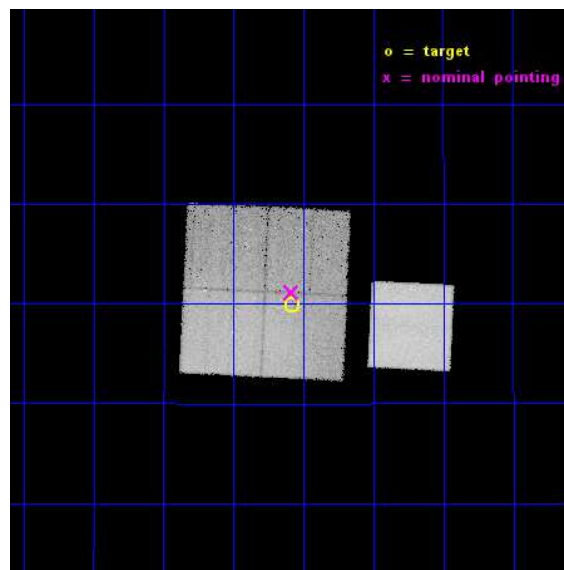
L2 Processing Date : Dec 10 2014

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1 Front

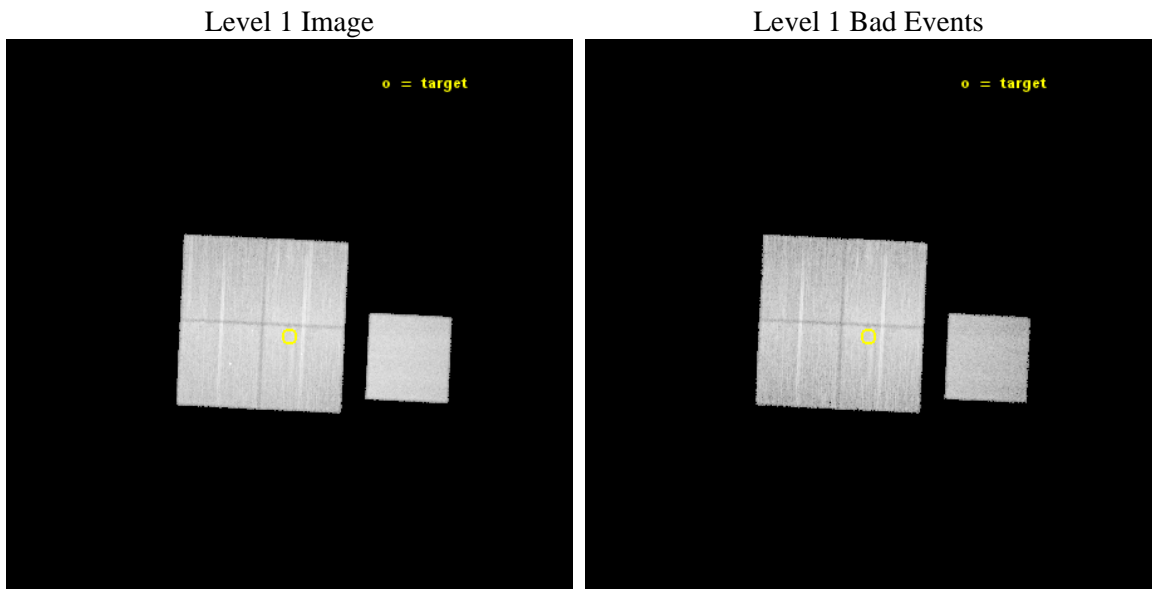
seq_num	801305	Sequence number
obs_id	16591	Observation id
title	Resolving the nearest cold front in the sky: the cleanest experimental tool to study detailed ICM physics	Proposal title
observer	Dr. Norbert Werner	Principal investigator
object	Virgo cold front	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	187.52067	Observer's specified target RA [deg]
dec_targ	12.664798	Observer's specified target Dec [deg]
ra_nom	187.52148934911	Nominal RA [deg]
dec_nom	12.685912868937	Nominal Dec [deg]
roll_nom	92.708515805479	Nominal Roll [deg]
revision	2	Processing version of data
ontime	23786.300182939	Sum of GTIs [s]
livetime	23475.514659829	Livetime [s]
ontime0	23779.922802389	Sum of GTIs [s]
ontime1	23783.104852676	Sum of GTIs [s]
ontime2	23776.863832414	Sum of GTIs [s]
ontime3	23786.300182939	Sum of GTIs [s]
ontime7	23786.300182939	Sum of GTIs [s]
l2events	223008	Number of level 2 events



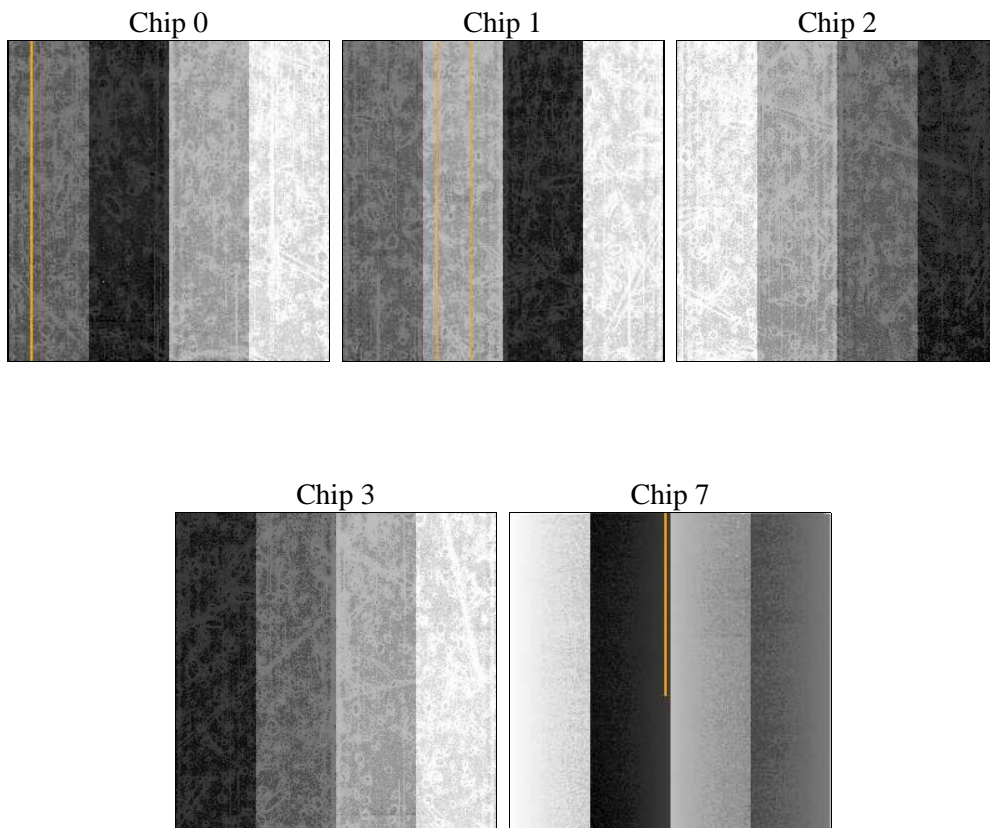
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	23717.135000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	23786.300182939	Sum of GTIs [s]
caldbver	4.6.4	 	ontime0	23779.922802389	Sum of GTIs [s]
date	2014-12-10T11:59:36	Date and time of file creation	ontime1	23783.104852676	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	23776.863832414	Sum of GTIs [s]
			ontime3	23786.300182939	Sum of GTIs [s]
			ontime7	23786.300182939	Sum of GTIs [s]
			l1events	864394	Number of level 1 events

2.1.4 Events

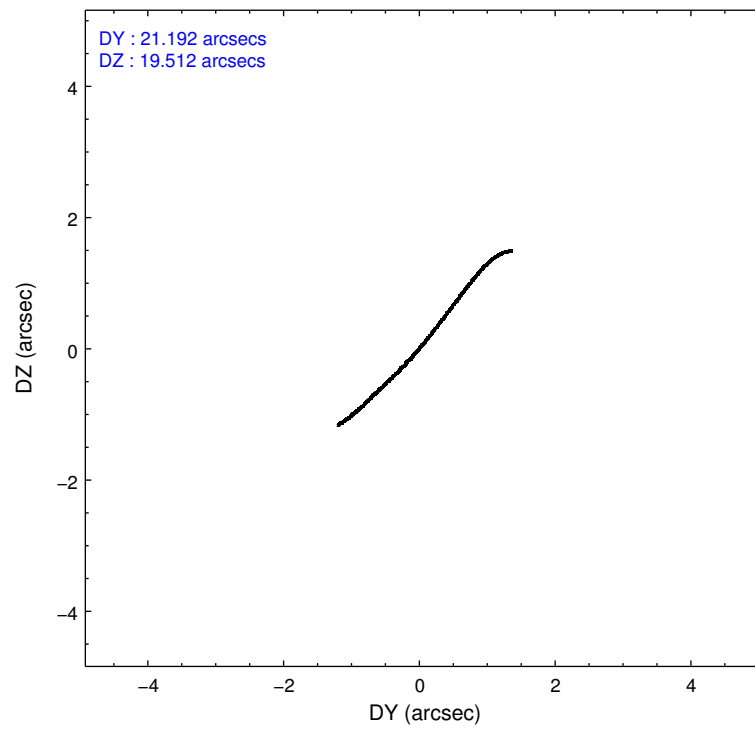
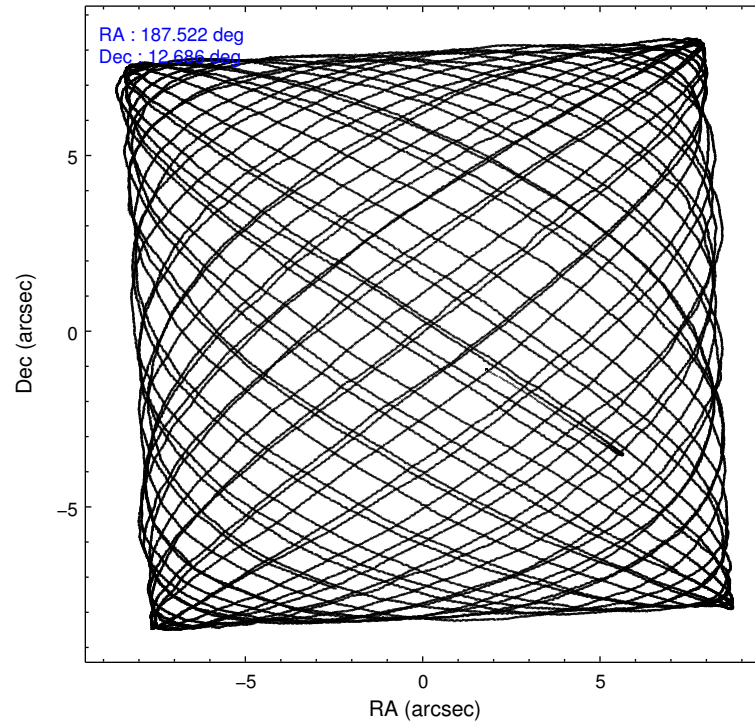
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	145914	178771	178326	179432	181951
rejected events	113949	121720	145388	139822	91992
rejected %	78%	68%	81%	77%	50%

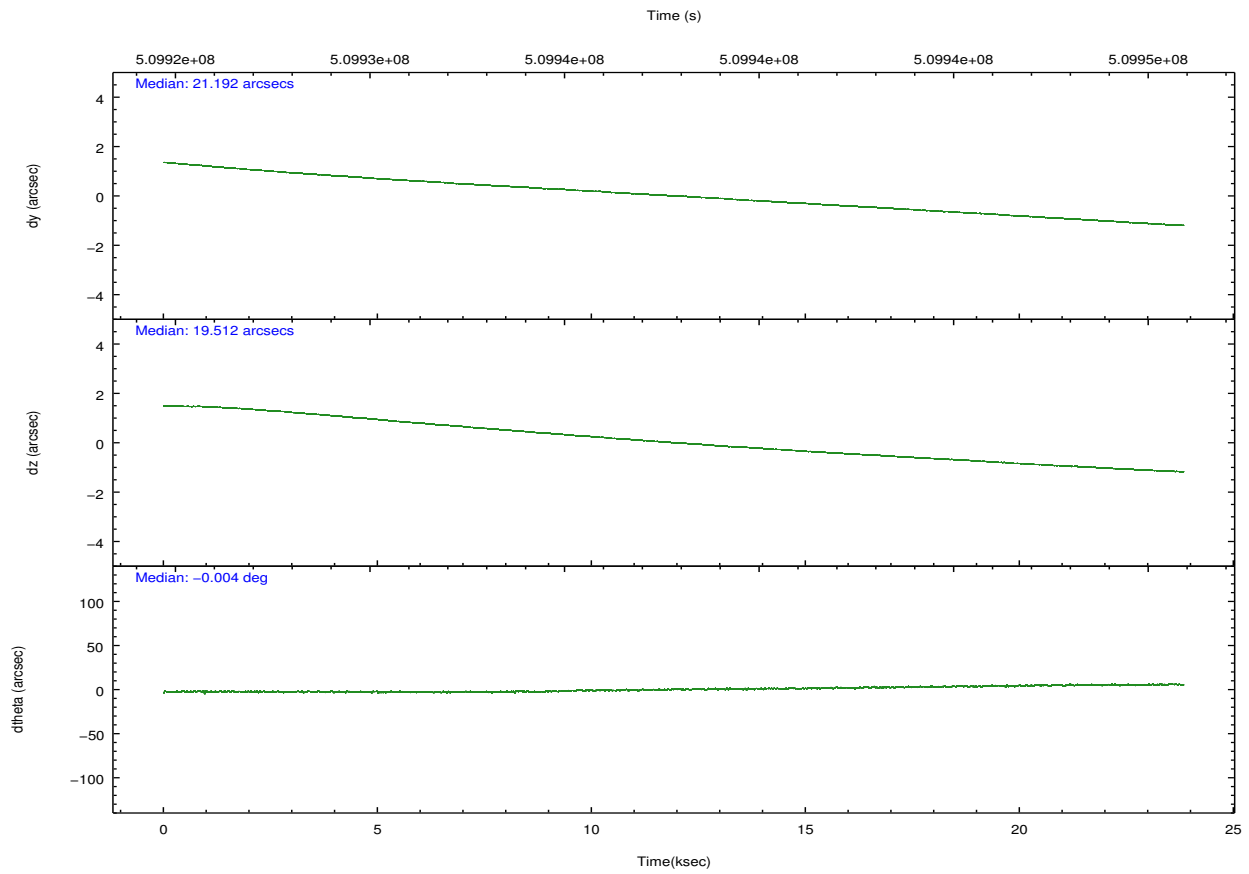
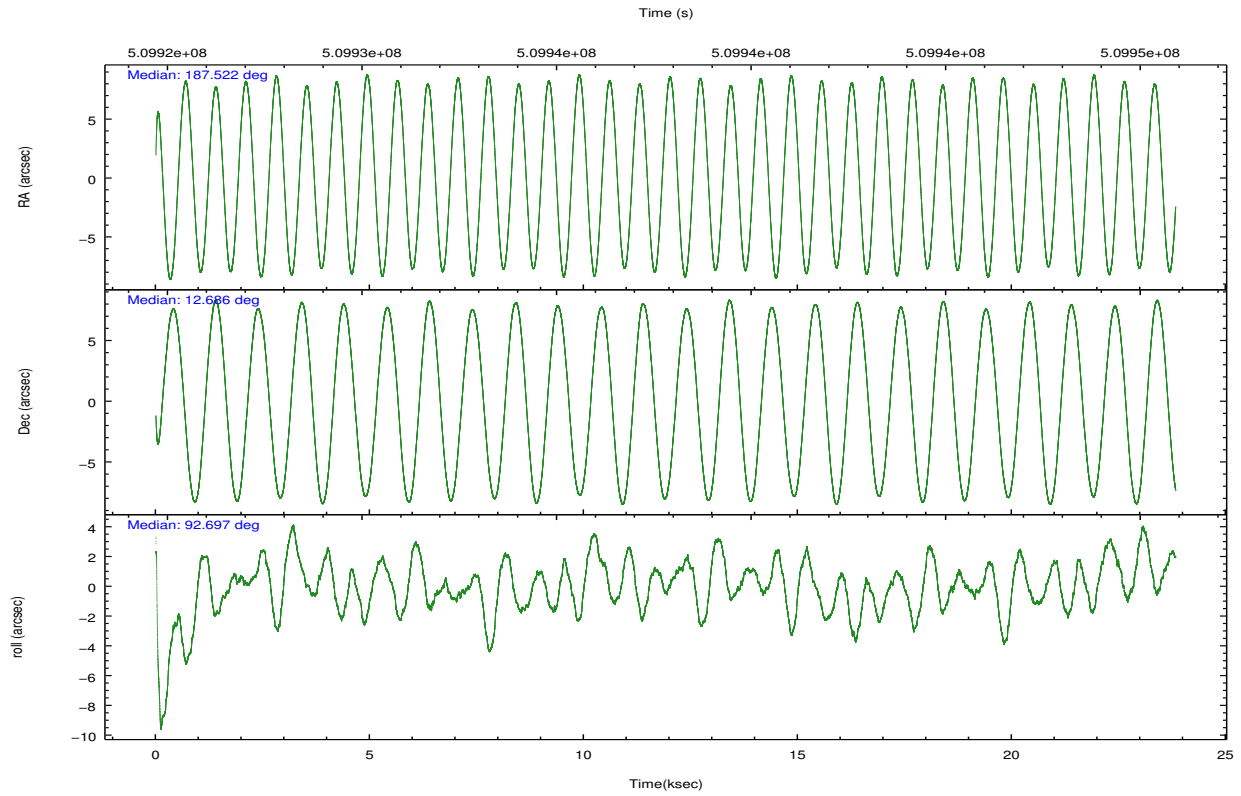
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	17685	38296	17619	25358	11044
	12%	21%	9%	14%	6%
grade 1 events	146	167	149	153	329
	0%	0%	0%	0%	0%
grade 2 events	7013	8941	7540	6166	21378
	4%	5%	4%	3%	11%
grade 3 events	1881	2739	1719	2262	8049
	1%	1%	0%	1%	4%
grade 4 events	1877	2647	2431	2246	7957
	1%	1%	1%	1%	4%
grade 5 events	5381	5605	5038	5985	16368
	3%	3%	2%	3%	8%
grade 6 events	3513	4435	3633	3582	41541
	2%	2%	2%	1%	22%
grade 7 events	108418	115941	140197	133680	75285
	74%	64%	78%	74%	41%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	187.536834	187.5214893491099	CCD I2 on	Y	Y
[deg] Pointing Dec	12.662822	12.6859128689374	CCD I3 on	Y	Y
[deg] Pointing Roll	92.496454	92.70851580547867	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	N	N
[mm] SIM translation stage pos	-227.592463	-227.5958210972112	CCD S3 on	O1	Y
[mm] SIM translation stage offset	-6	-5.996631905718488	CCD S4 on	N	N
[s] Observation start time (MET)	509926011.184000	509924793.25668	CCD S5 on	N	N
Observation start date	2014-02-27T22:05:44	2014-02-27T21:46:33	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	509949728.184000	509949963.67056	On-chip summing requested	N	N
Observation end date	2014-02-28T04:41:01	2014-02-28T04:46:03	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect





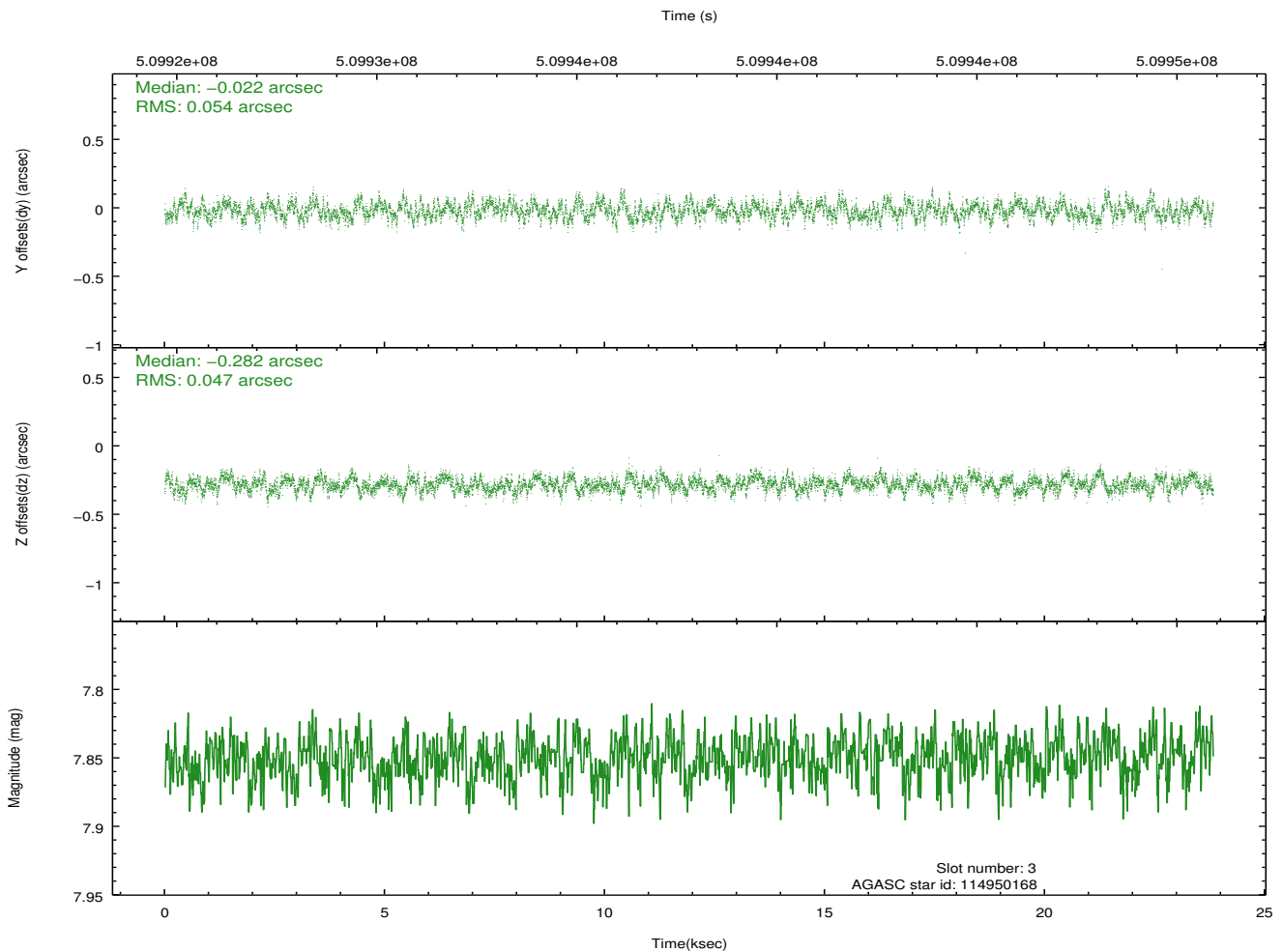
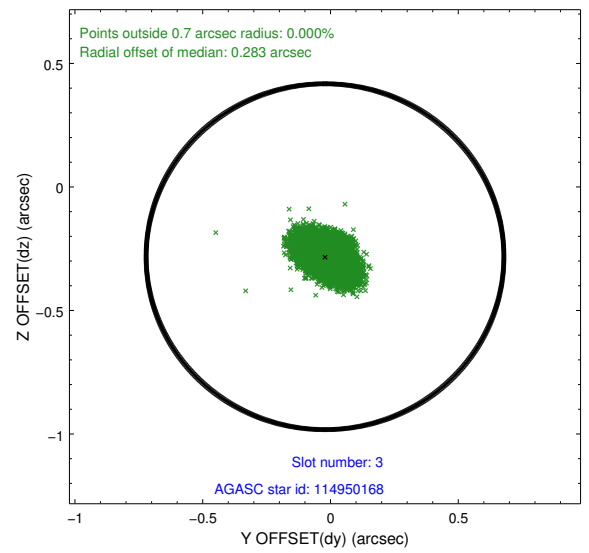
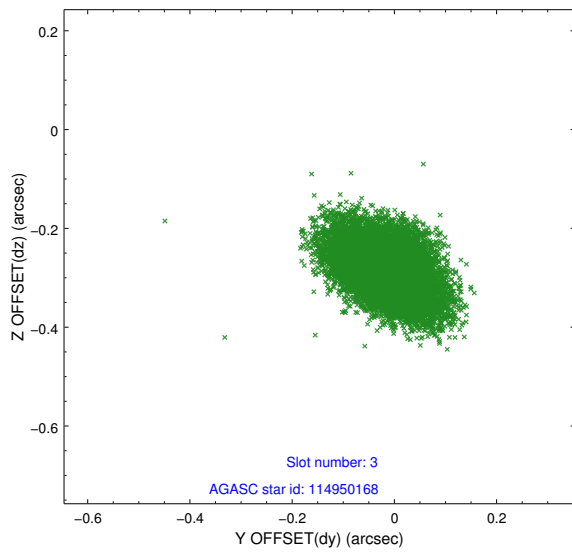
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.15	5811	0.096	-0.052	0.022	0.031	0.000000	0.000000	918.10	-966.42
1	FID		ACIS-I-5	7.14	5812	-0.310	0.071	0.018	0.024	0.000000	0.000000	-1830.41	931.01
2	FID		ACIS-I-6	7.16	5812	0.121	0.050	0.015	0.041	0.000000	0.000000	383.44	1575.73
3	GUIDE	used	114950168	7.85	11623	-0.022	-0.282	0.075	0.125	187.143398	12.117441	-1900.64	1468.75
4	GUIDE	used	114952824	8.58	11621	-0.029	0.125	0.084	0.131	187.703904	12.486727	-658.72	-557.95
5	GUIDE	used	114954440	9.17	11620	-0.028	-0.473	0.096	0.157	186.915066	12.219118	-1498.81	2253.41
6	GUIDE	used	114955056	8.32	11623	0.055	1.011	0.102	0.154	187.914001	12.127854	-1980.58	-1241.03
7	GUIDE	used	114957008	8.24	11619	0.020	-0.382	0.071	0.119	186.894794	12.099160	-1926.77	2346.66

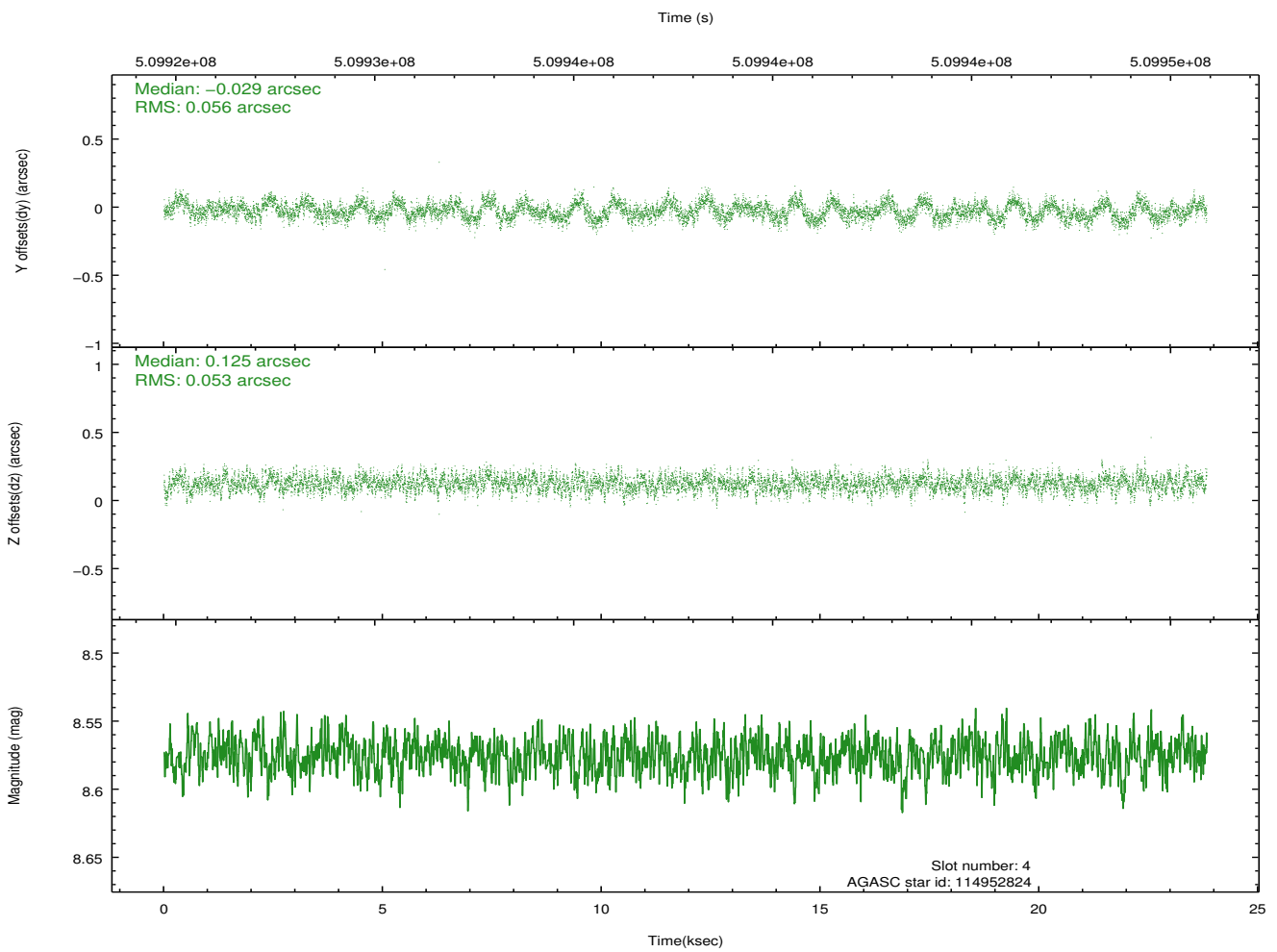
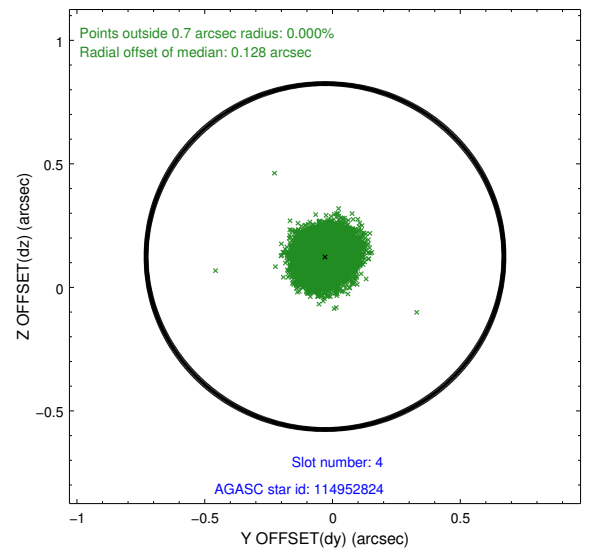
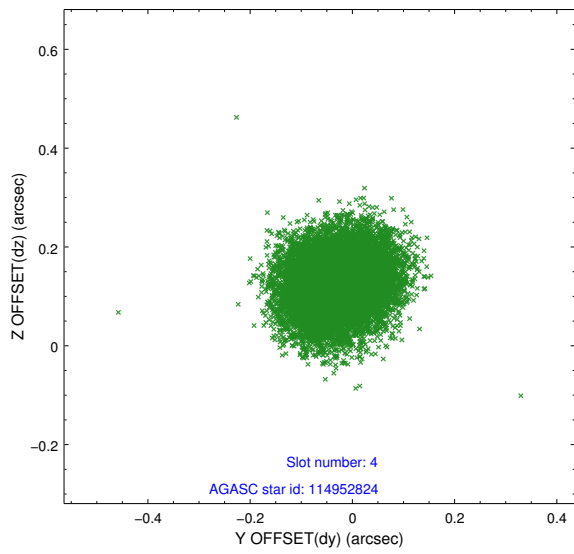
∞

2.4 Star Slots

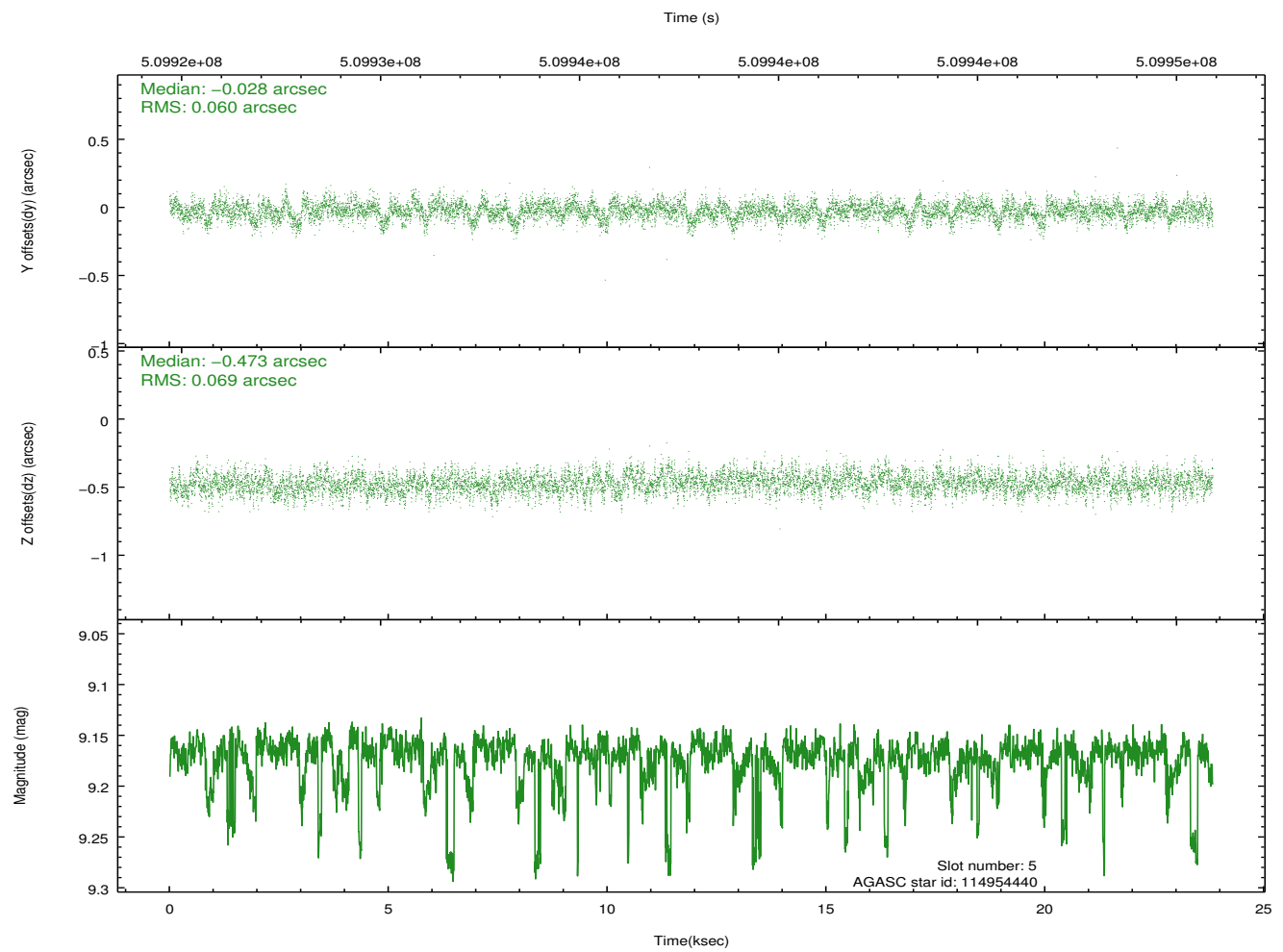
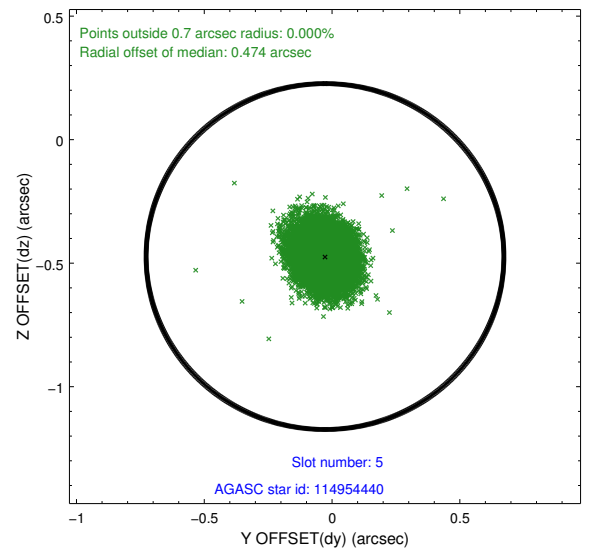
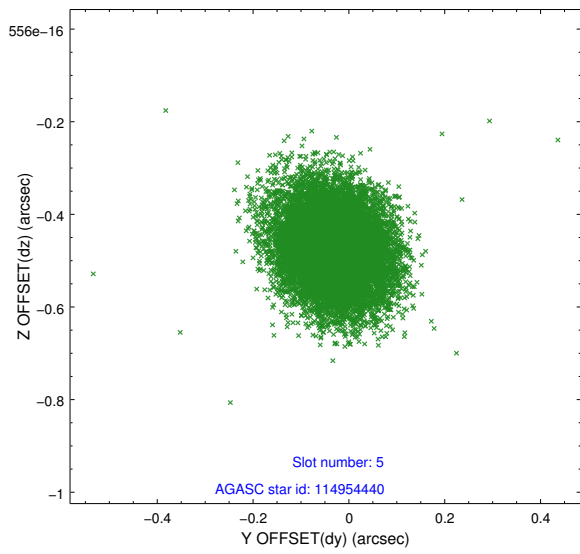
2.4.1 Slot 3



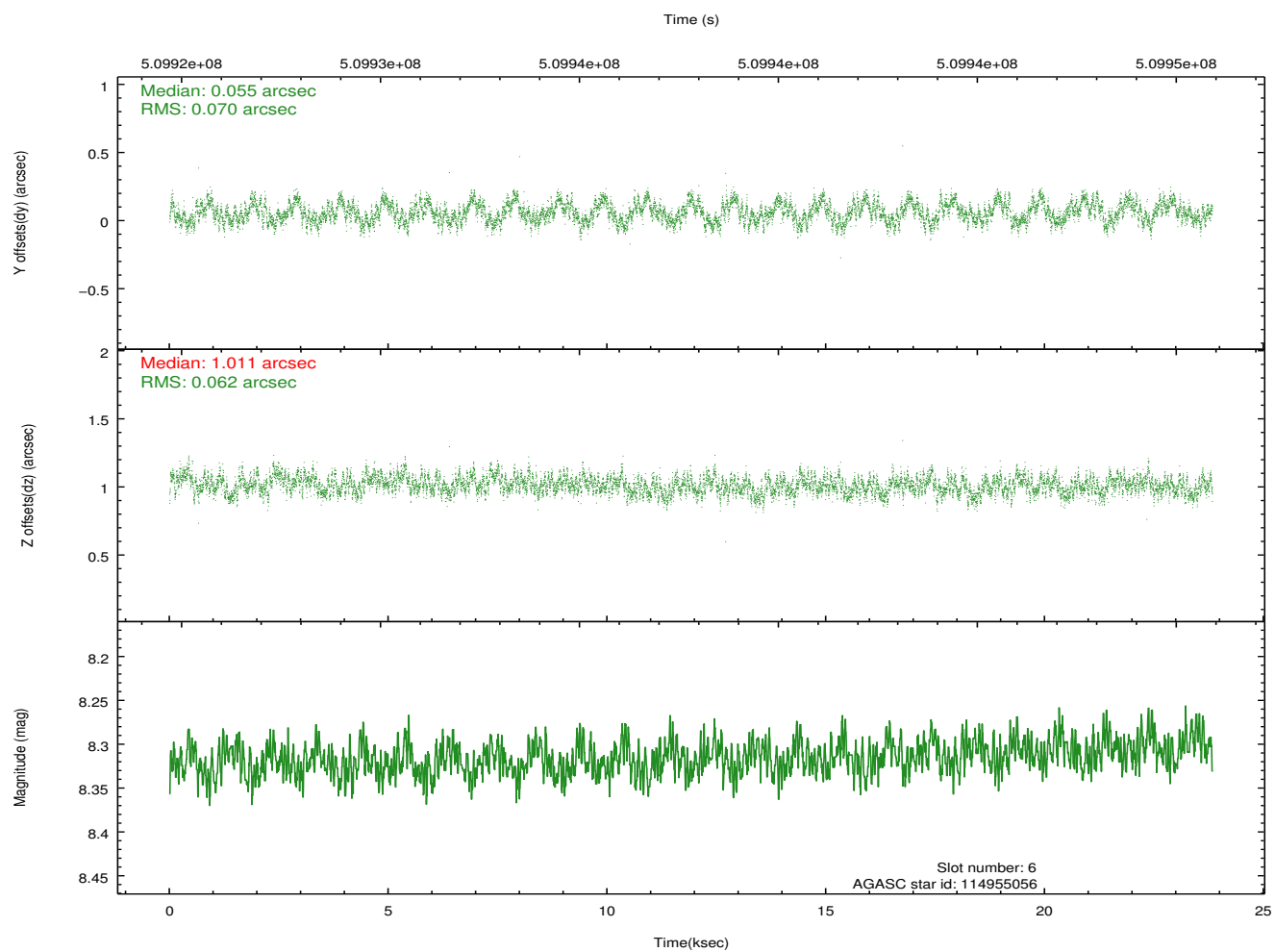
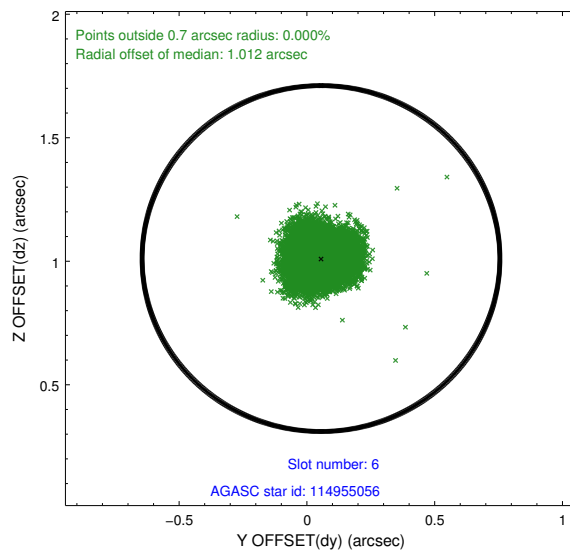
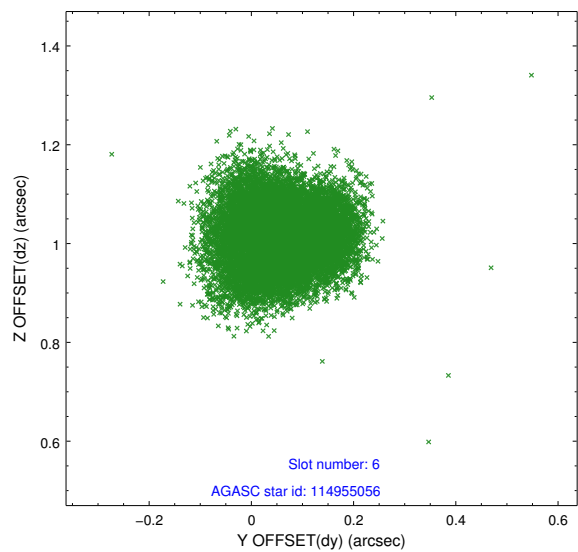
2.4.2 Slot 4



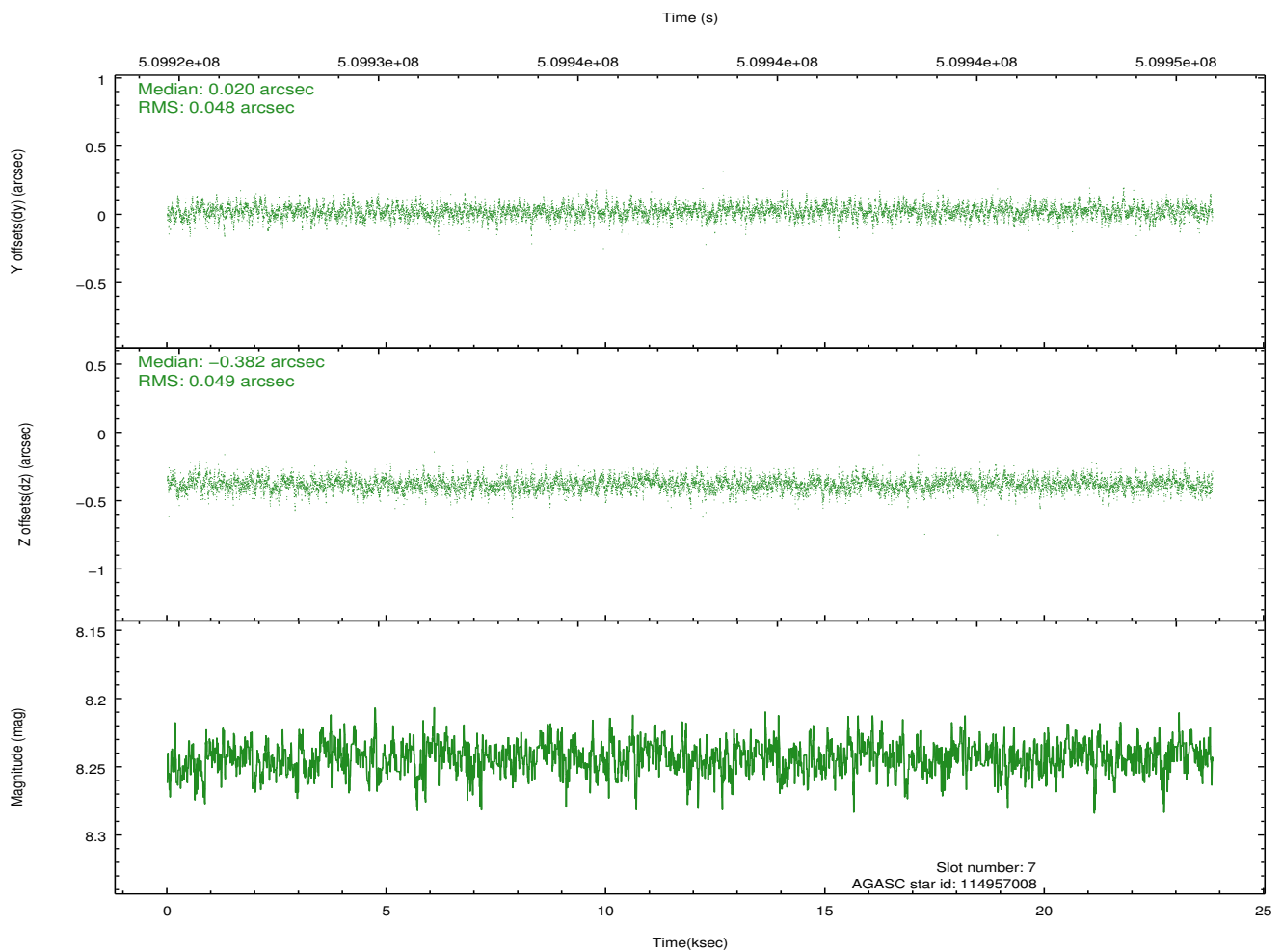
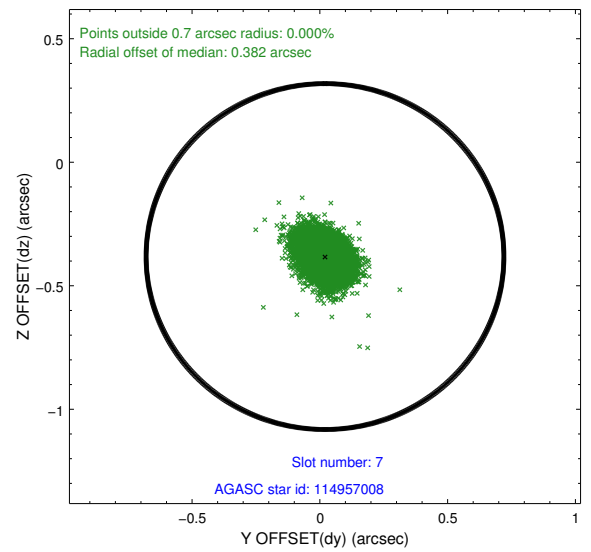
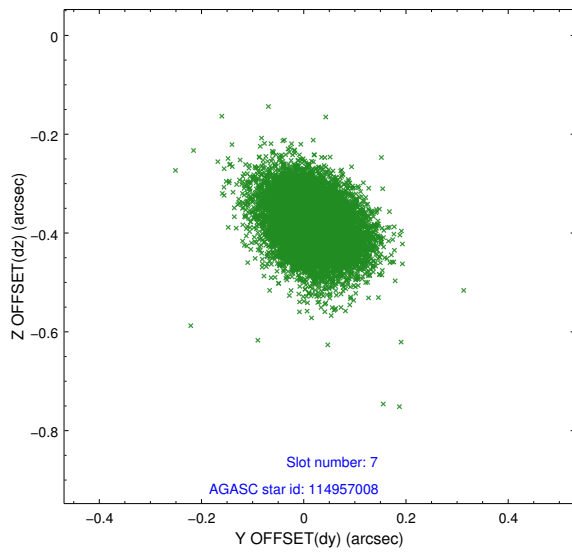
2.4.3 Slot 5



2.4.4 Slot 6

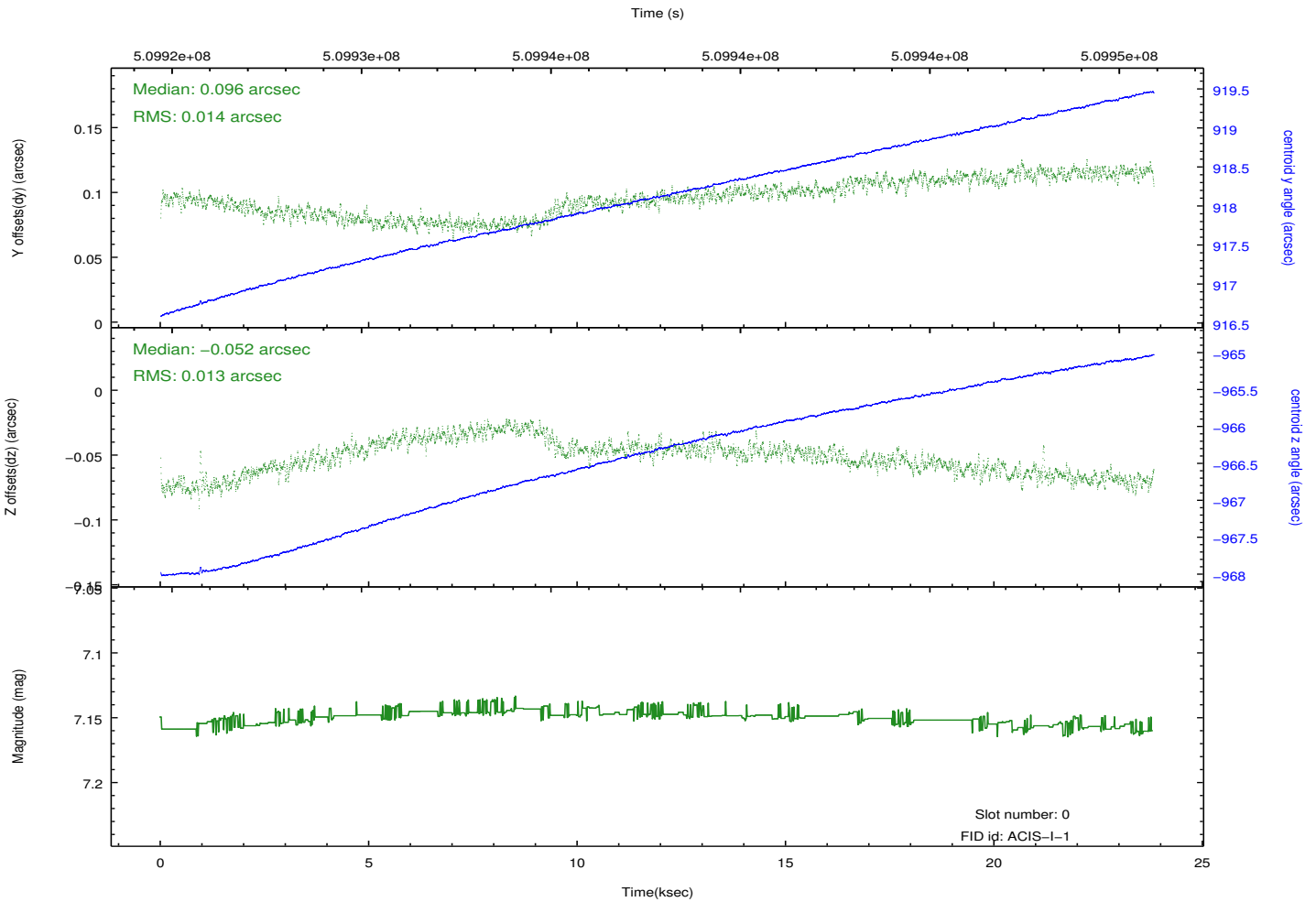
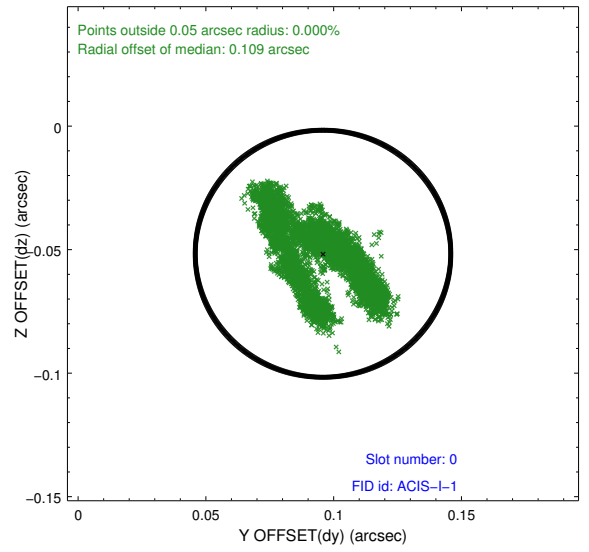
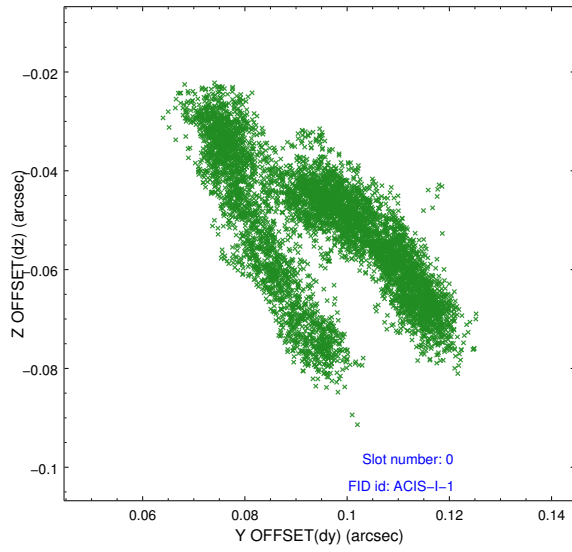


2.4.5 Slot 7

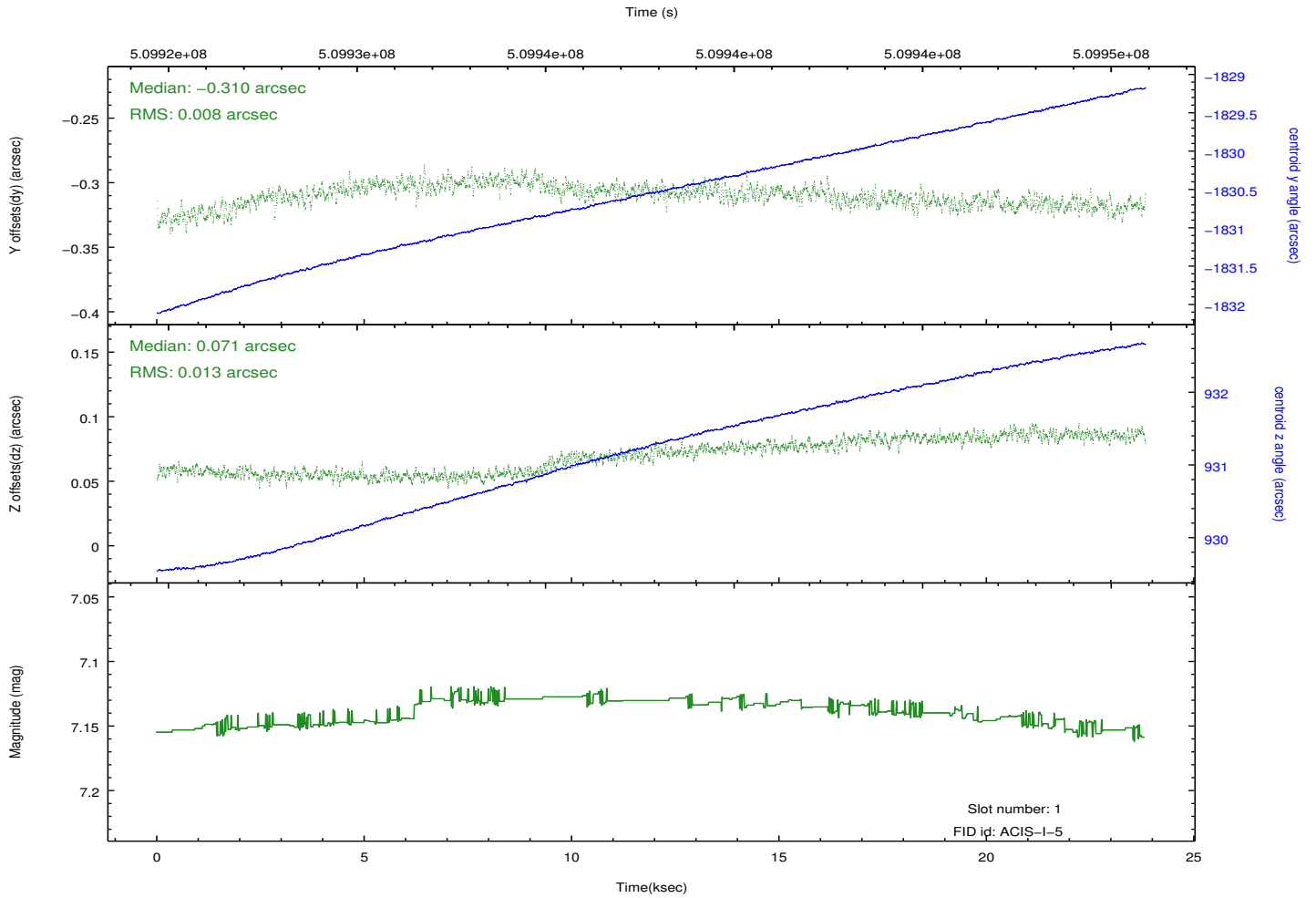
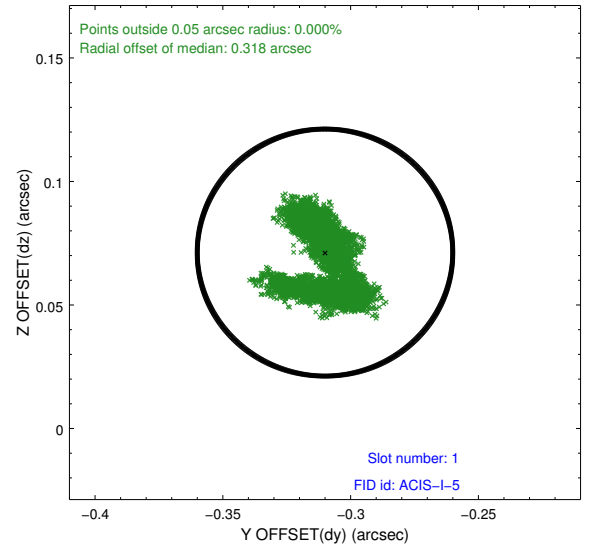
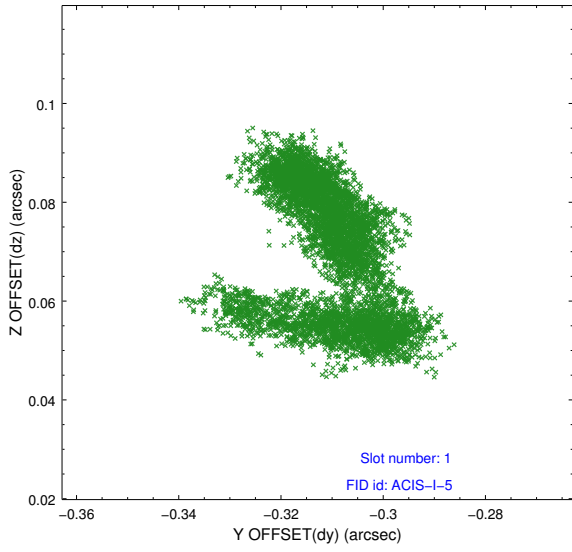


2.5 FID Slots

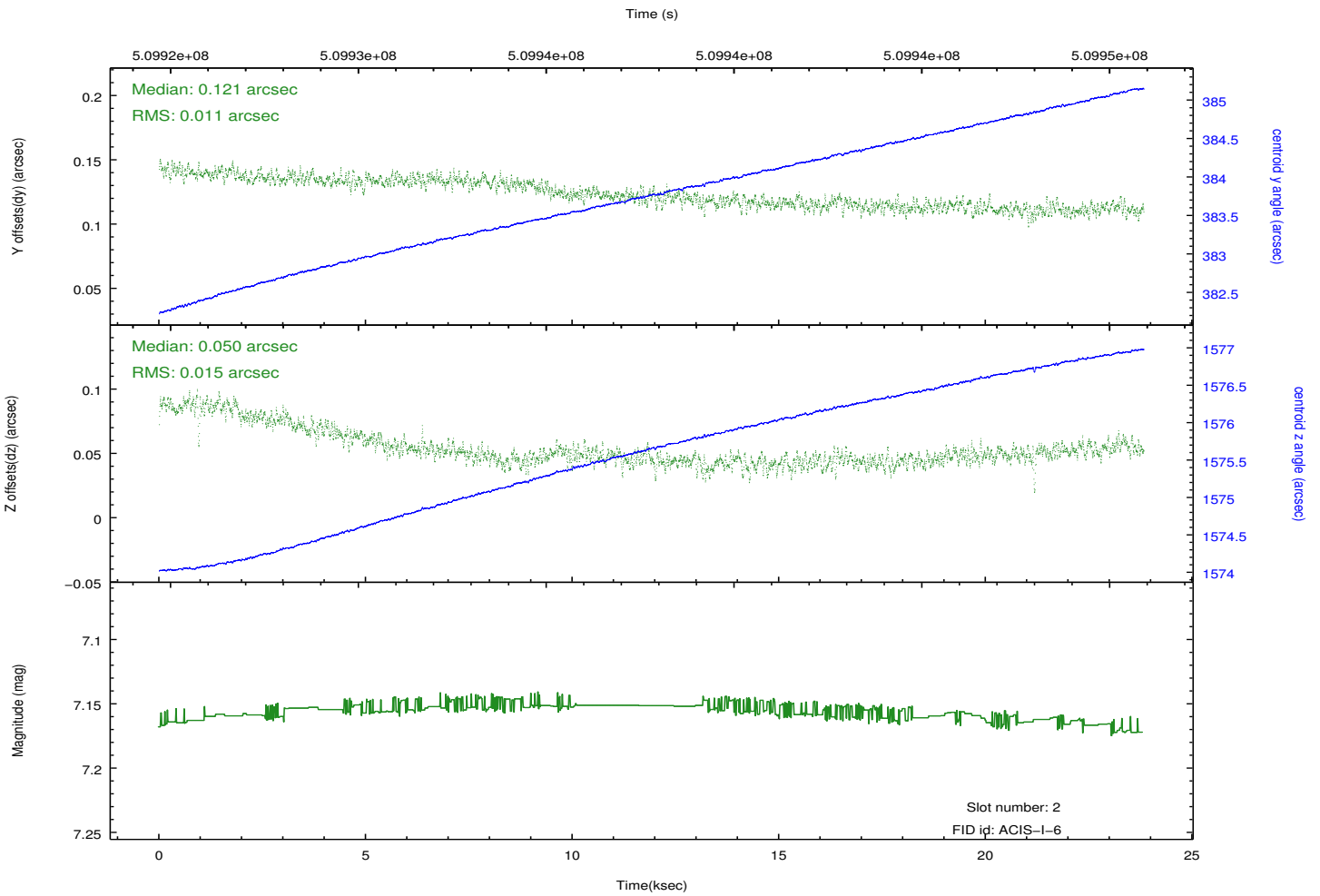
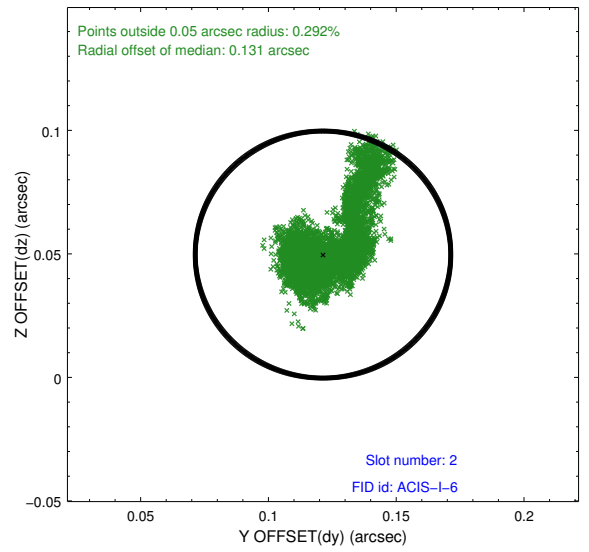
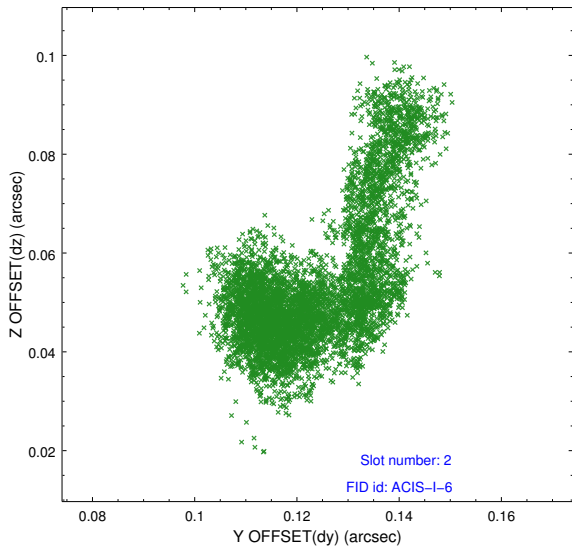
2.5.1 Slot 0



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)	2014.12.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	23.786300182939

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.