

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 14448 - L2 Version 2
Chandra X-Ray Center

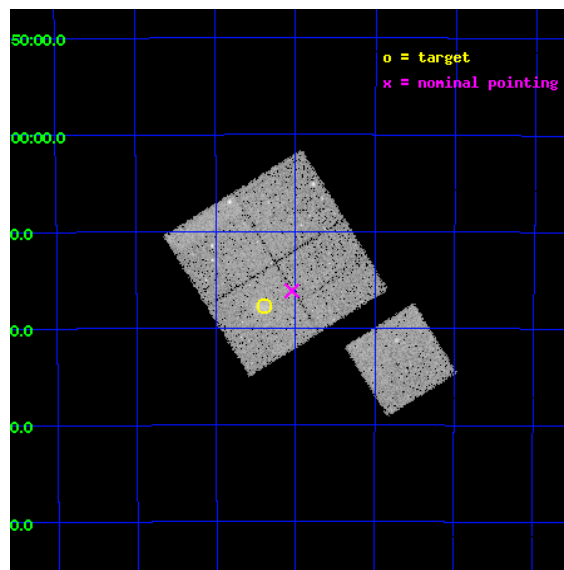
L2 Processing Date : Jun 29 2012

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1 Front

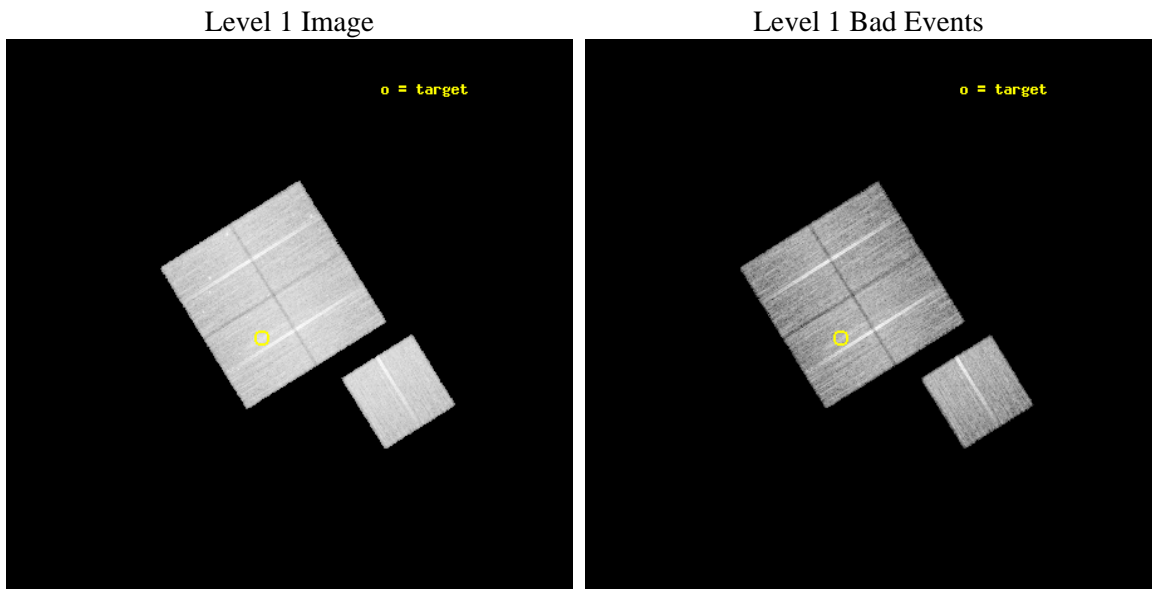
seq_num	801122	Sequence number
obs_id	14448	Observation id
title	Cosmology and Cluster Evolution from the 80 Most Massive Clusters in 2000 deg ² from the South Pole Telescope Survey	Proposal title
observer	Dr Bradford Benson	Principal investigator
object	SPT-CLJ0256-5617	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	44.096667	Observer's specified target RA [deg]
dec_targ	-56.296194	Observer's specified target Dec [deg]
ra_nom	44.011274317797	Nominal RA [deg]
dec_nom	-56.269405593362	Nominal Dec [deg]
roll_nom	148.13766139851	Nominal Roll [deg]
revision	2	Processing version of data
ontime	25974.859179616	Sum of GTIs [s]
livetime	25635.478522021	Livetime [s]
ontime0	25974.859219551	Sum of GTIs [s]
ontime1	25974.859199584	Sum of GTIs [s]
ontime2	25978.000199795	Sum of GTIs [s]
ontime3	25974.859179616	Sum of GTIs [s]
ontime6	25978.000199795	Sum of GTIs [s]
l2events	76697	Number of level 2 events



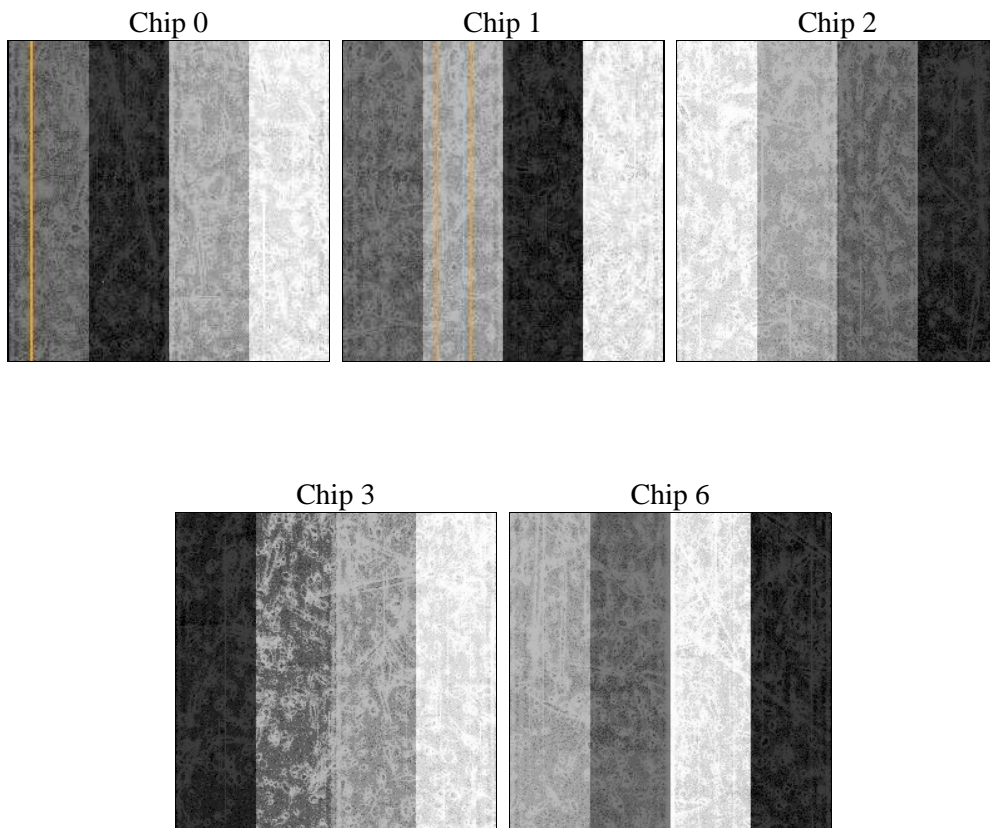
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25900.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	25974.859179616	Sum of GTIs [s]
caldbver	4.5.0	 	ontime0	25974.859219551	Sum of GTIs [s]
date	2012-06-29T16:00:28	Date and time of file creation	ontime1	25974.859199584	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	25978.000199795	Sum of GTIs [s]
			ontime3	25974.859179616	Sum of GTIs [s]
			ontime6	25978.000199795	Sum of GTIs [s]
			l1events	722810	Number of level 1 events

2.1.4 Events

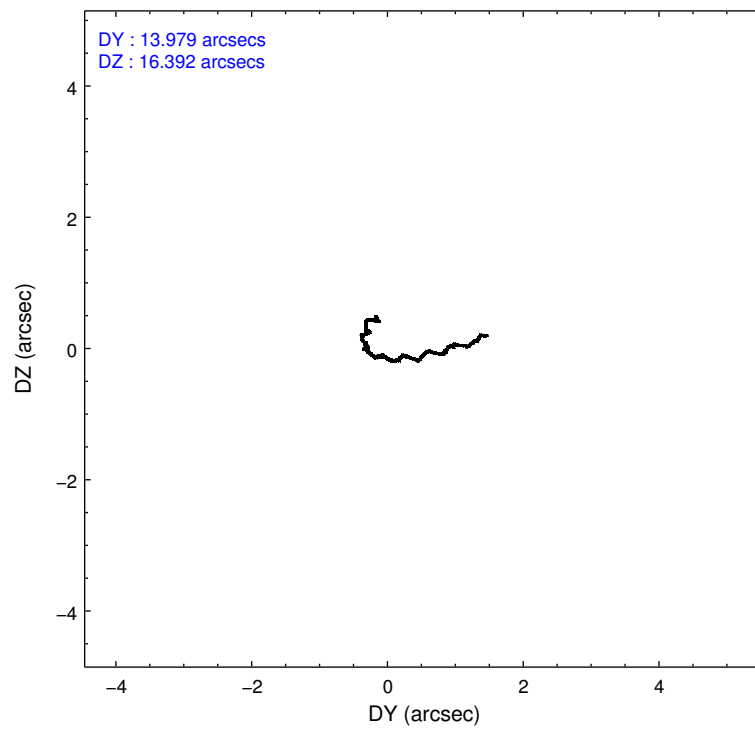
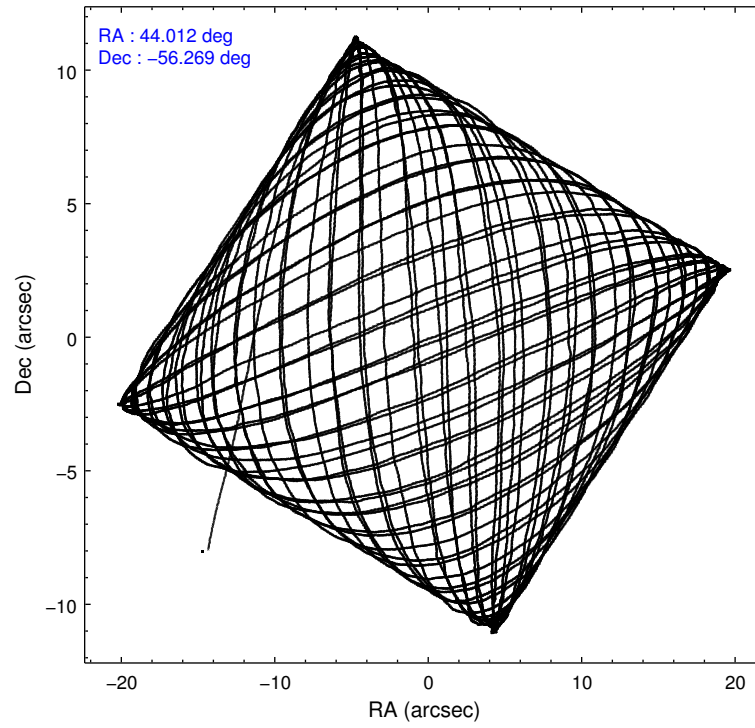
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	135015	137651	146646	151307	152191
rejected events	117375	117436	129443	133363	134654
rejected %	86%	85%	88%	88%	88%

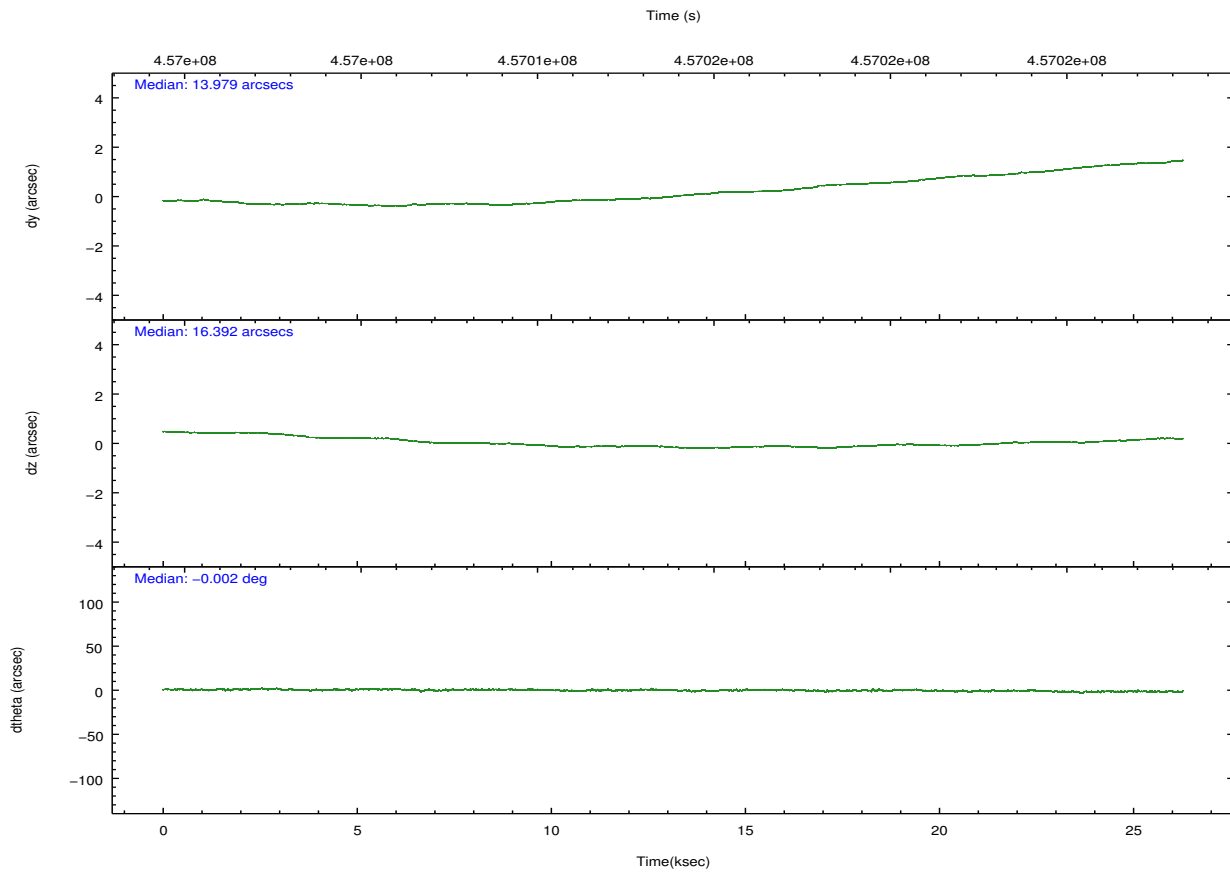
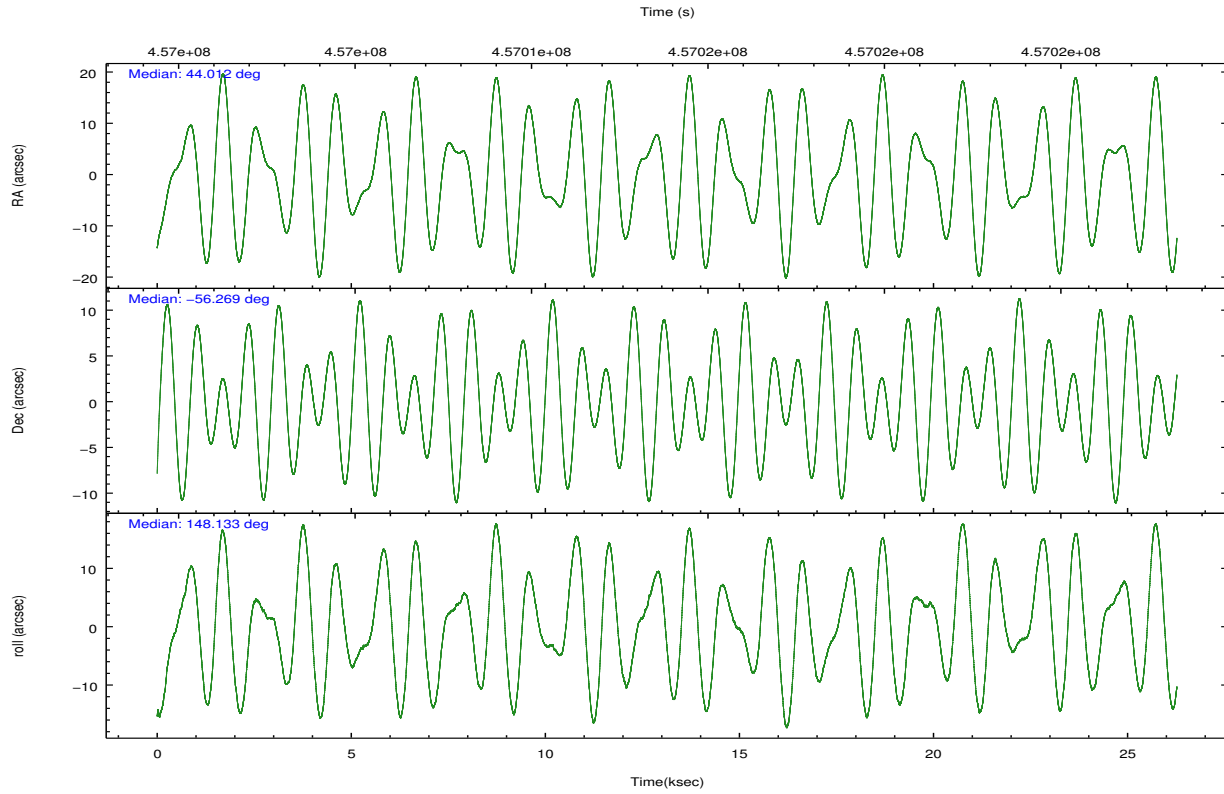
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	6307	7508	6085	7213	6074
	4%	5%	4%	4%	3%
grade 1 events	91	90	97	110	74
	0%	0%	0%	0%	0%
grade 2 events	4444	4762	4119	3753	4006
	3%	3%	2%	2%	2%
grade 3 events	1843	1932	1789	1808	1742
	1%	1%	1%	1%	1%
grade 4 events	1692	1939	1784	1807	1798
	1%	1%	1%	1%	1%
grade 5 events	6593	7211	6271	7489	7166
	4%	5%	4%	4%	4%
grade 6 events	3357	4077	3431	3367	3917
	2%	2%	2%	2%	2%
grade 7 events	110688	110132	123070	125760	127414
	81%	80%	83%	83%	83%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	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	44.060799	44.011274317797	CCD I2 on	Y	Y
[deg] Pointing Dec	-56.270189	-56.26940559336229	CCD I3 on	Y	Y
[deg] Pointing Roll	147.970157	148.1376613985068	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	O1	Y
[mm] SIM translation stage pos	-225.842463	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.75	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	457001075.184000	457000041.35029	CCD S5 on	N	N
Observation start date	2012-06-25T08:43:29	2012-06-25T08:27:21	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	457026975.184000	457027776.31427	On-chip summing requested	N	N
Observation end date	2012-06-25T15:55:09	2012-06-25T16:09:36	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



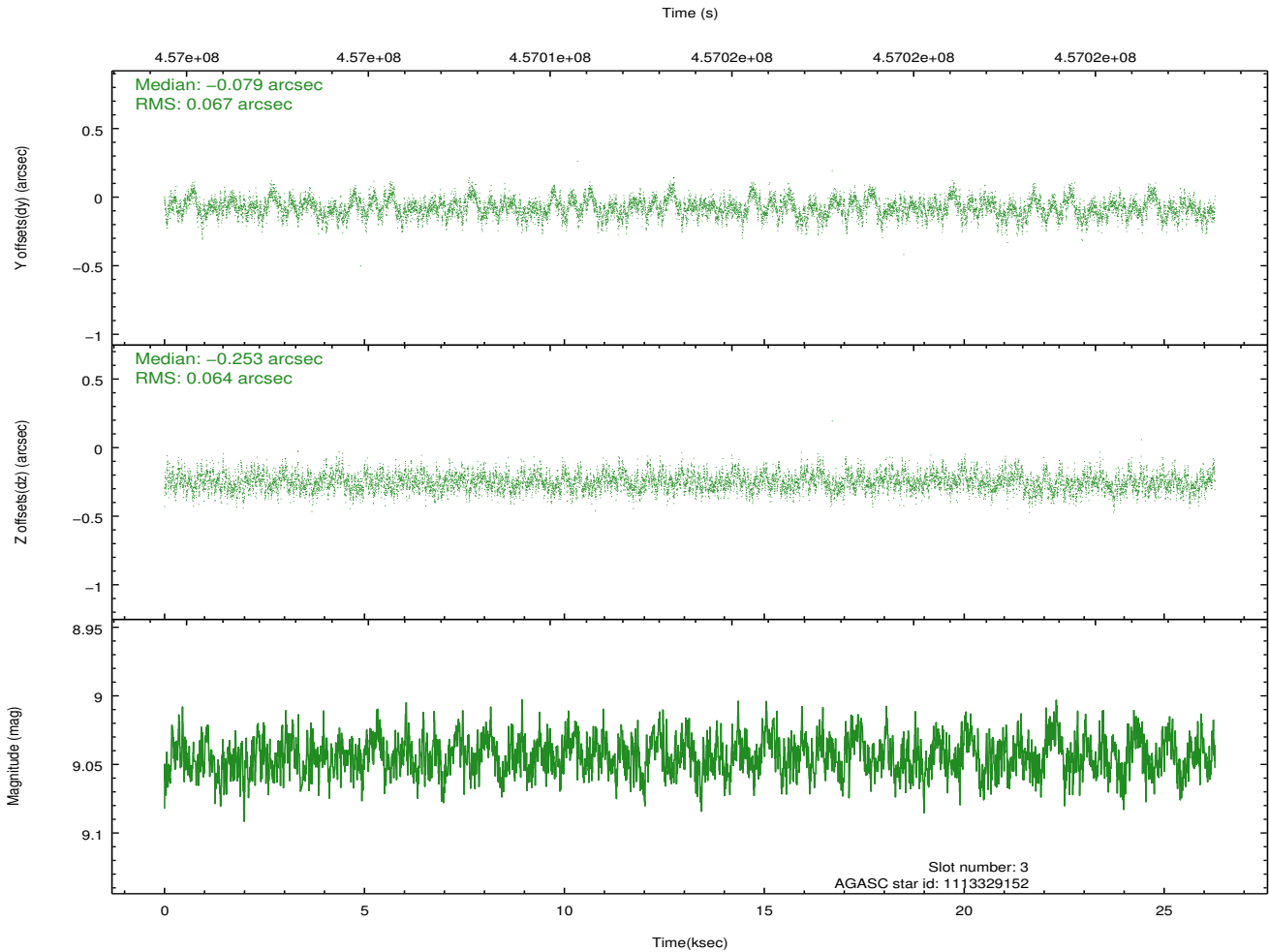
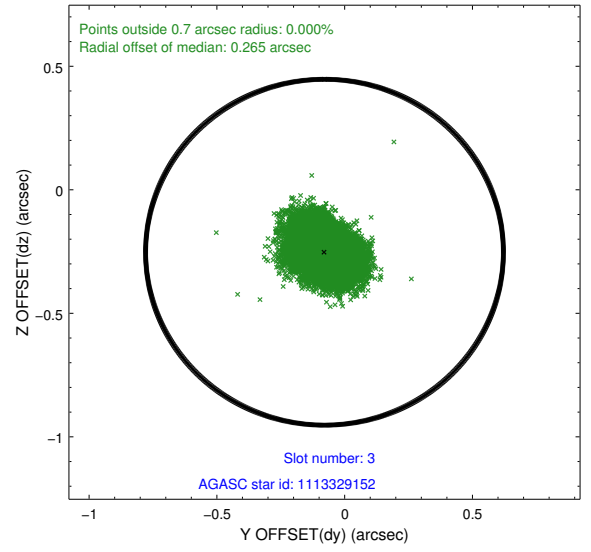
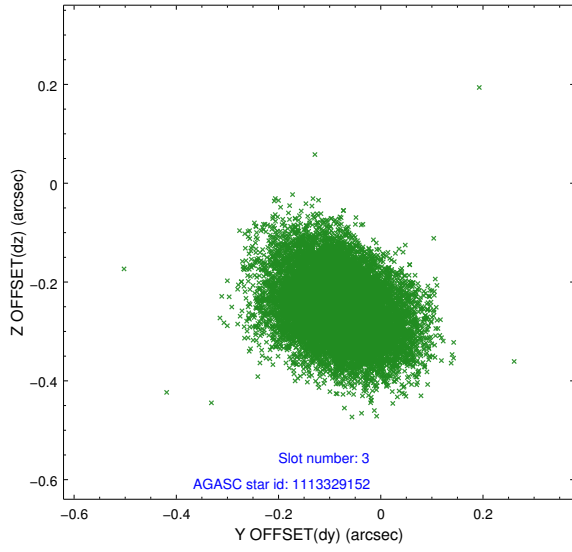


Slot Statistics

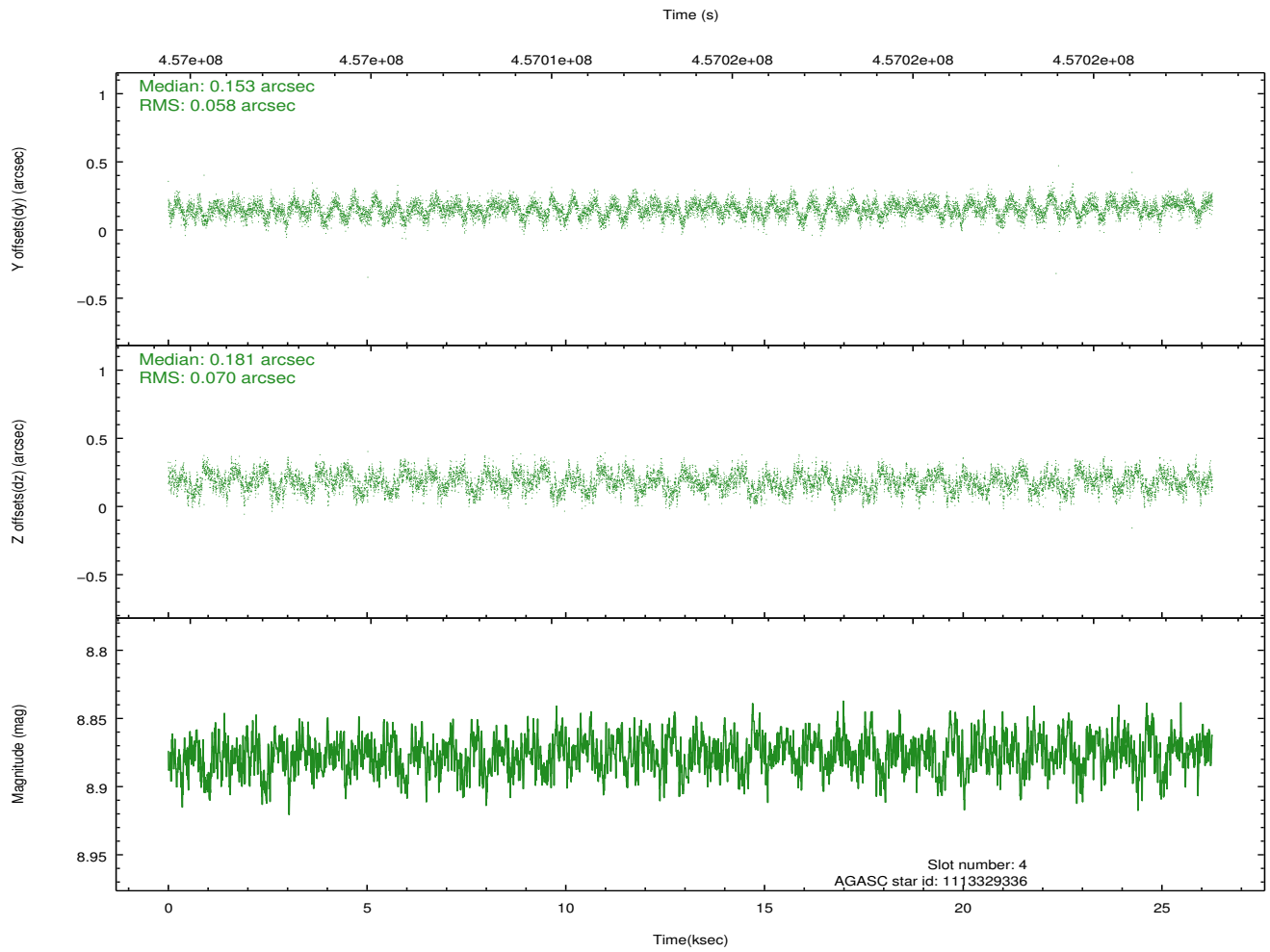
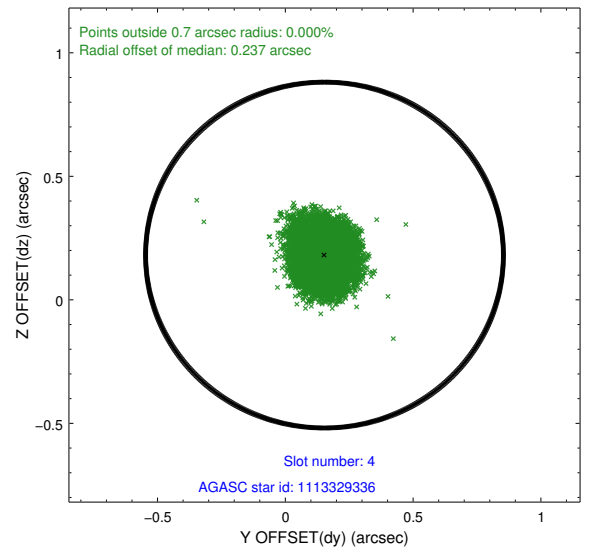
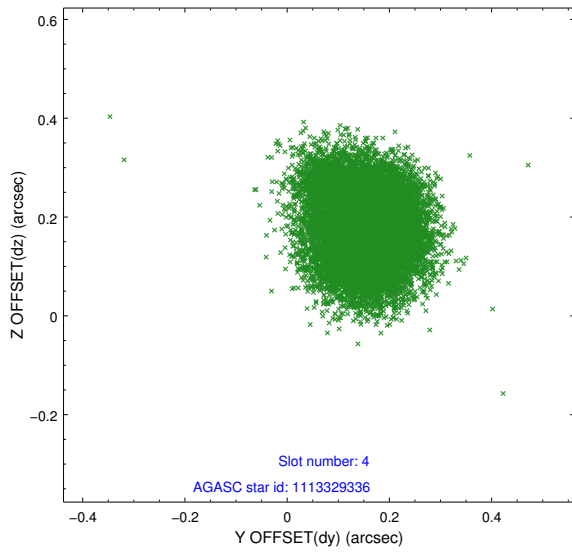
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.04	6408	0.164	-0.131	0.009	0.016	0.000000	0.000000	925.29	-999.28
1	FID	ACIS-I-5	7.03	6408	-0.320	0.126	0.009	0.016	0.000000	0.000000	-1823.25	898.38
2	FID	ACIS-I-6	7.05	6408	0.066	0.077	0.010	0.019	0.000000	0.000000	390.62	1542.96
3	GUIDE	1113329152	9.04	12809	-0.079	-0.253	0.099	0.160	43.526986	-56.796285	-114.55	2167.22
4	GUIDE	1113329336	8.88	12810	0.153	0.181	0.098	0.153	44.262299	-56.192088	-192.29	-451.65
5	GUIDE	1113330056	6.89	12816	-0.093	0.104	0.075	0.121	43.582945	-55.879212	1562.85	-679.16
6	GUIDE	1113336232	9.64	12771	0.037	-0.087	0.183	0.285	42.971246	-56.223989	1927.37	1030.80
7	GUIDE	1113462744	9.64	12800	-0.015	0.055	0.134	0.209	44.836673	-56.800948	-2314.29	816.29

2.4 Star Slots

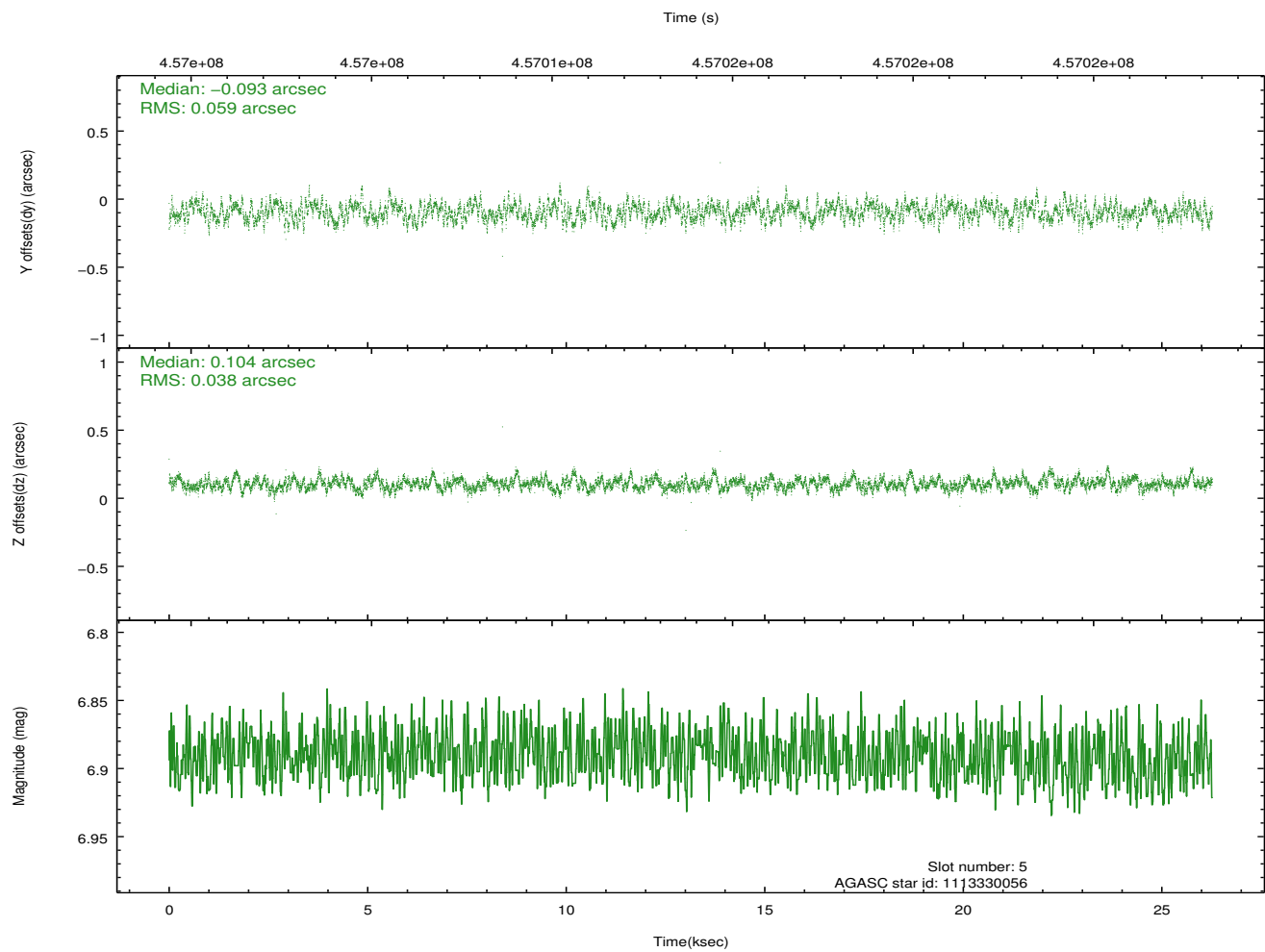
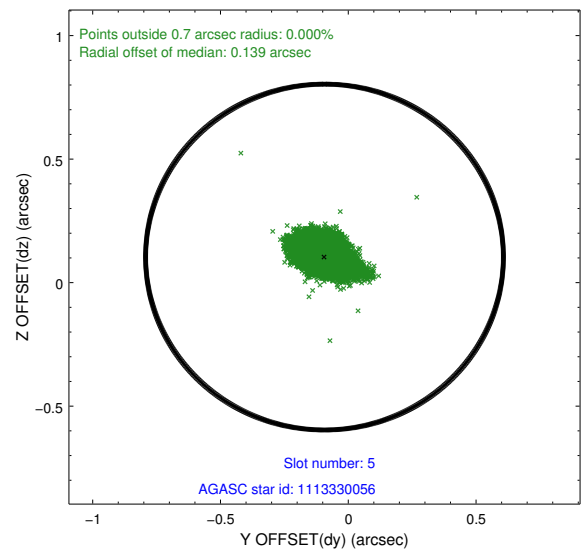
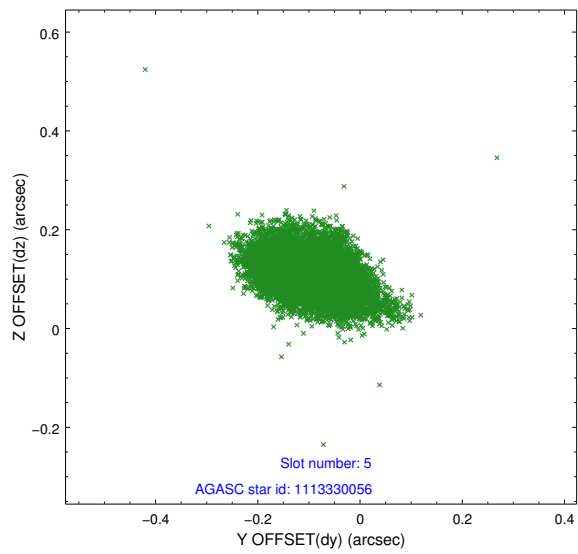
2.4.1 Slot 3



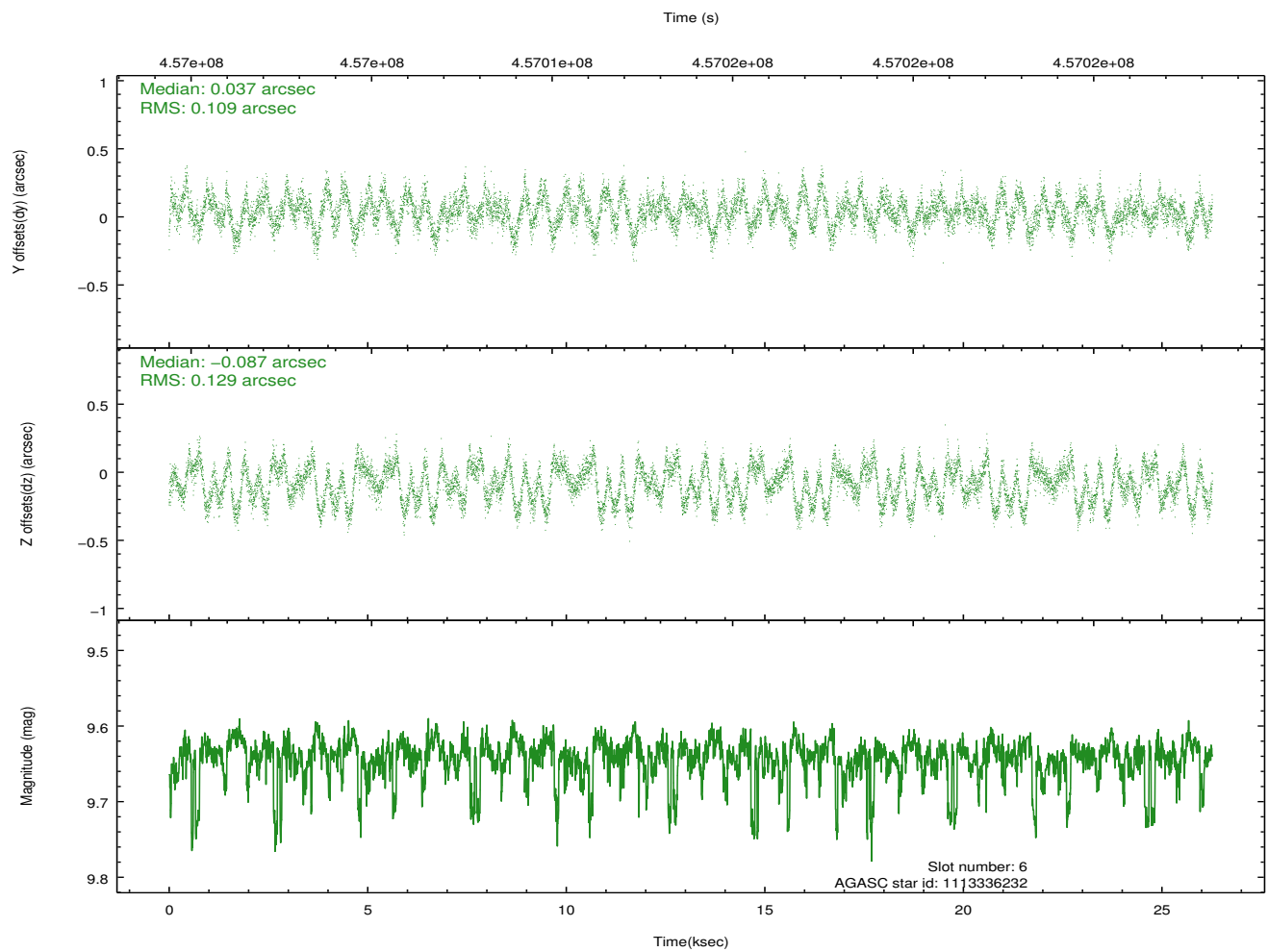
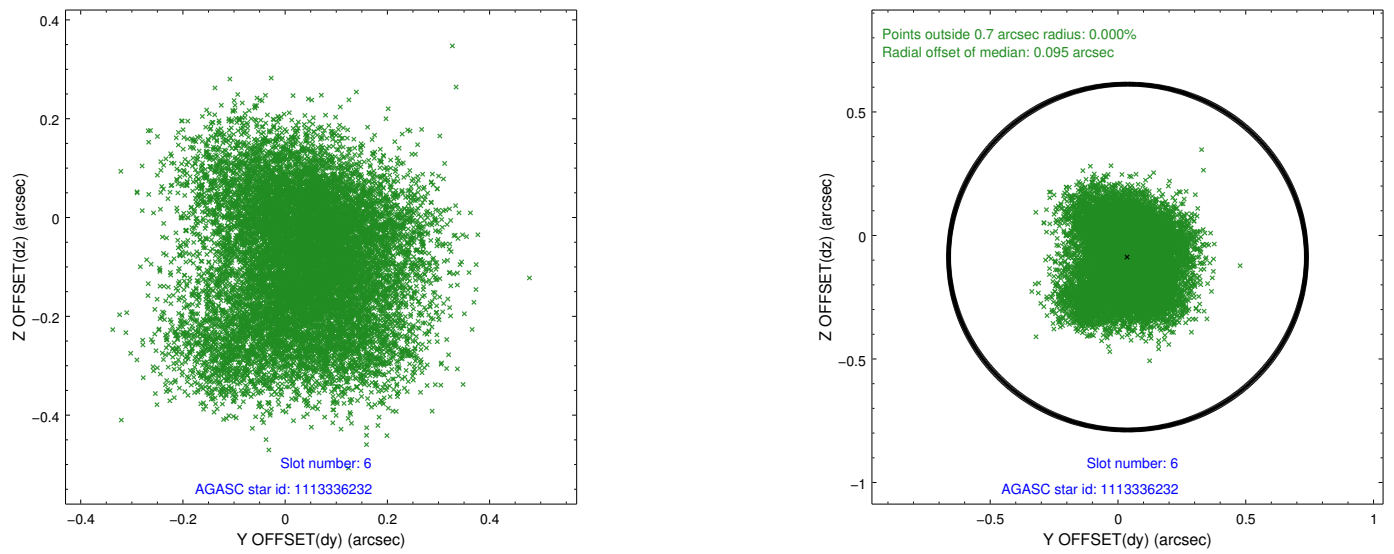
2.4.2 Slot 4



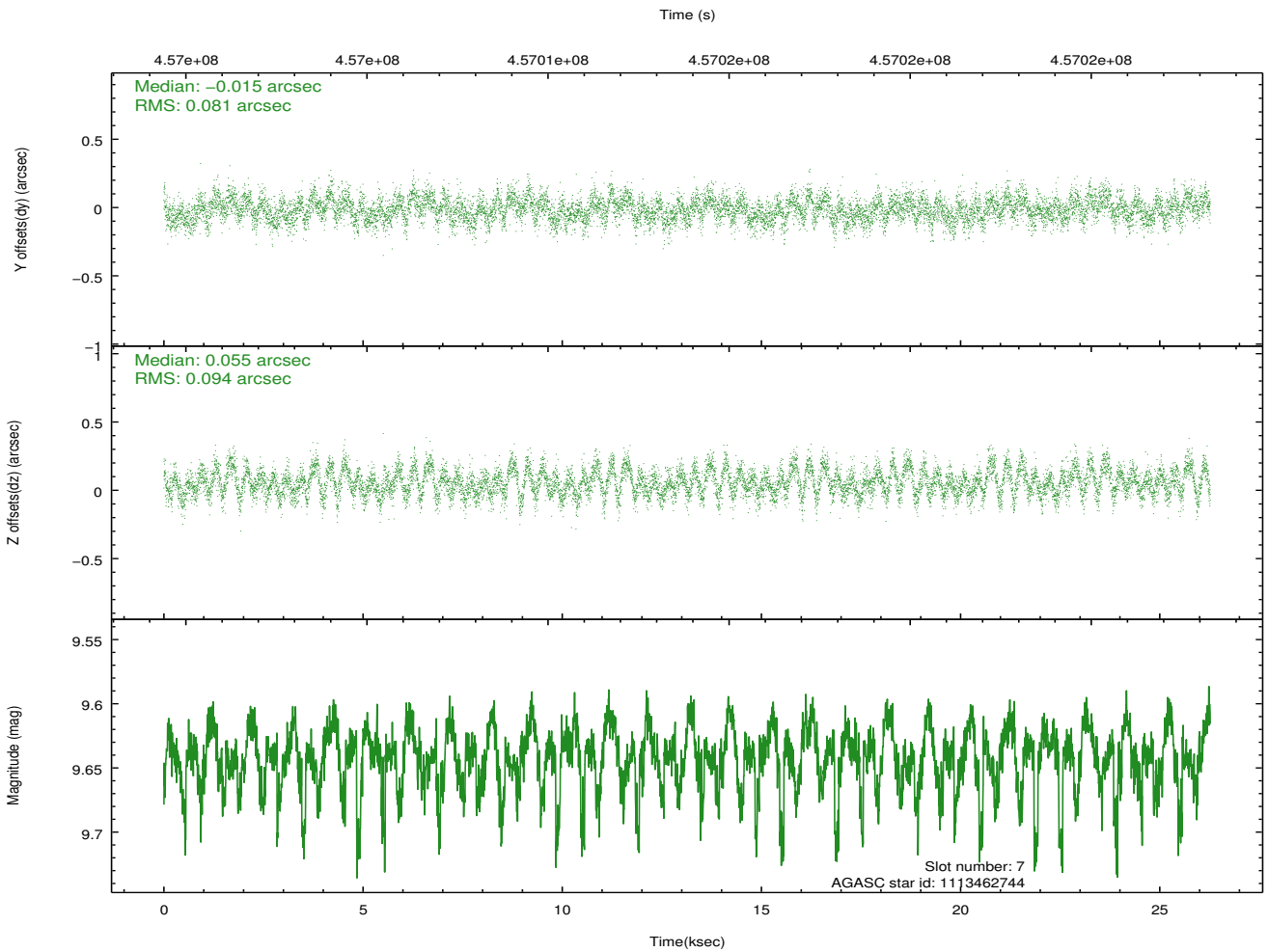
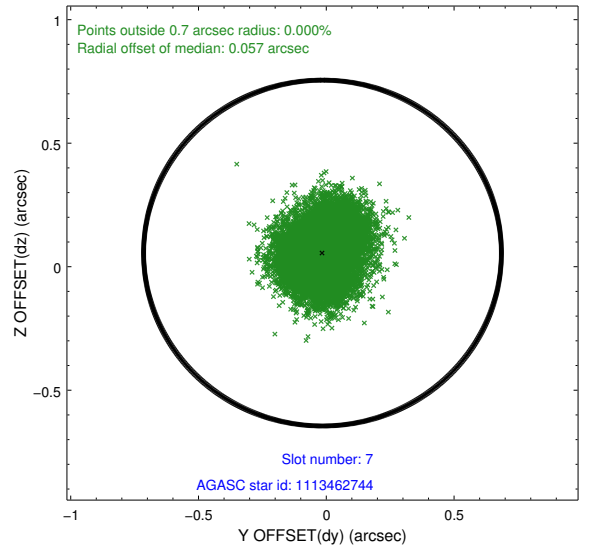
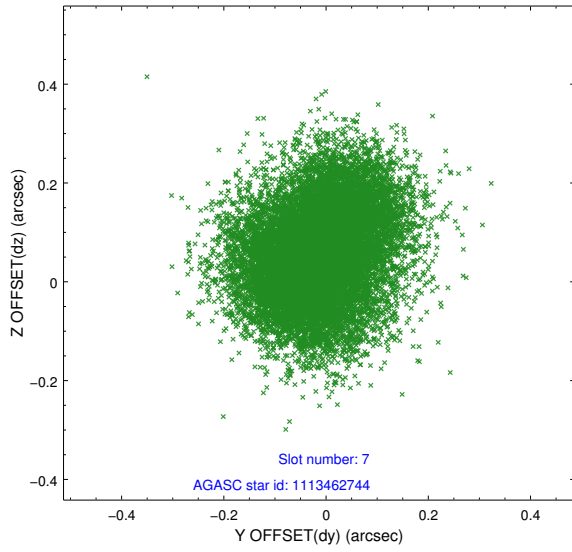
2.4.3 Slot 5



2.4.4 Slot 6

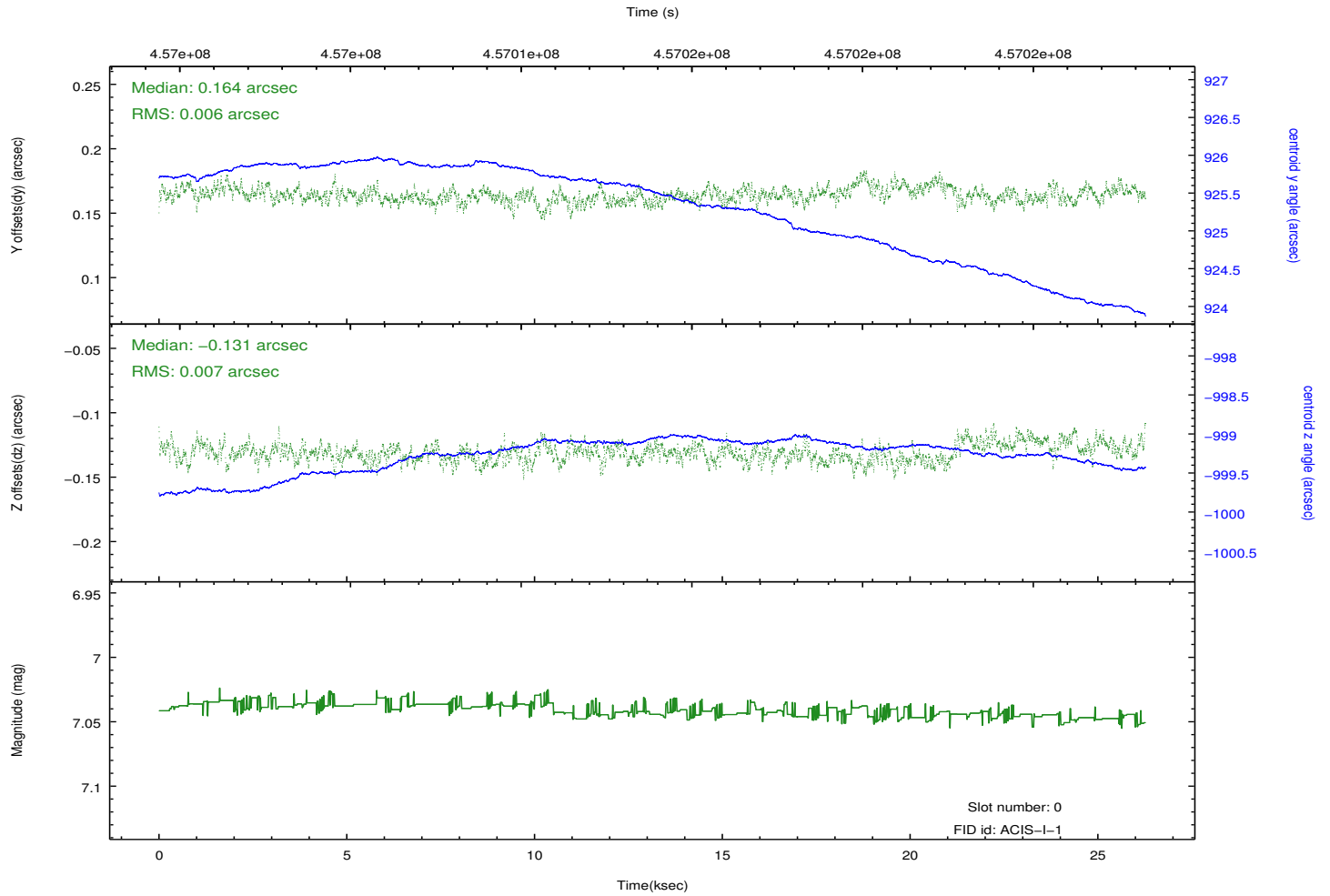
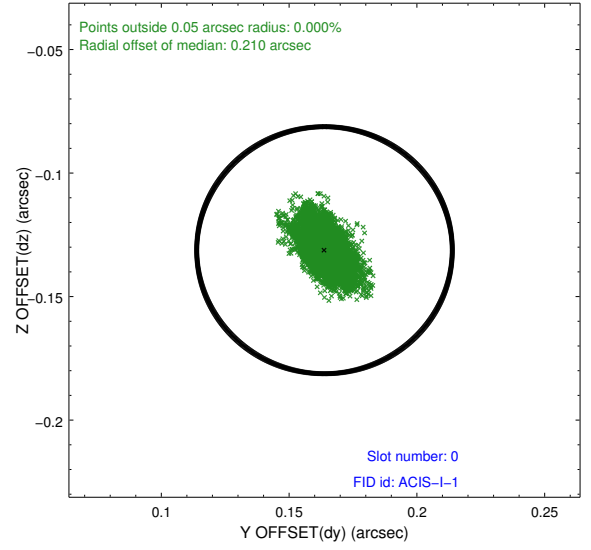
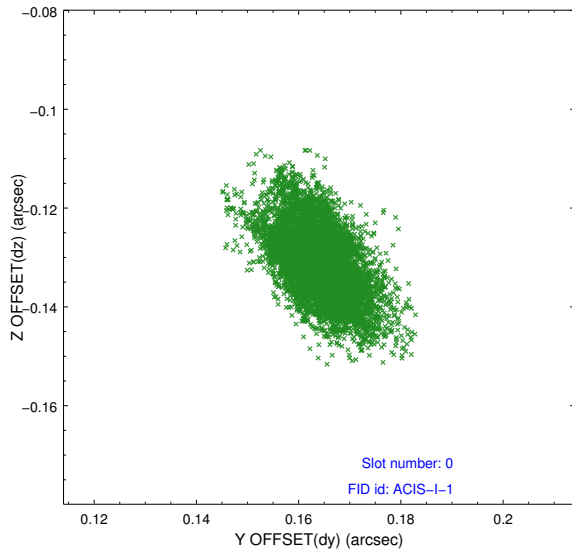


2.4.5 Slot 7

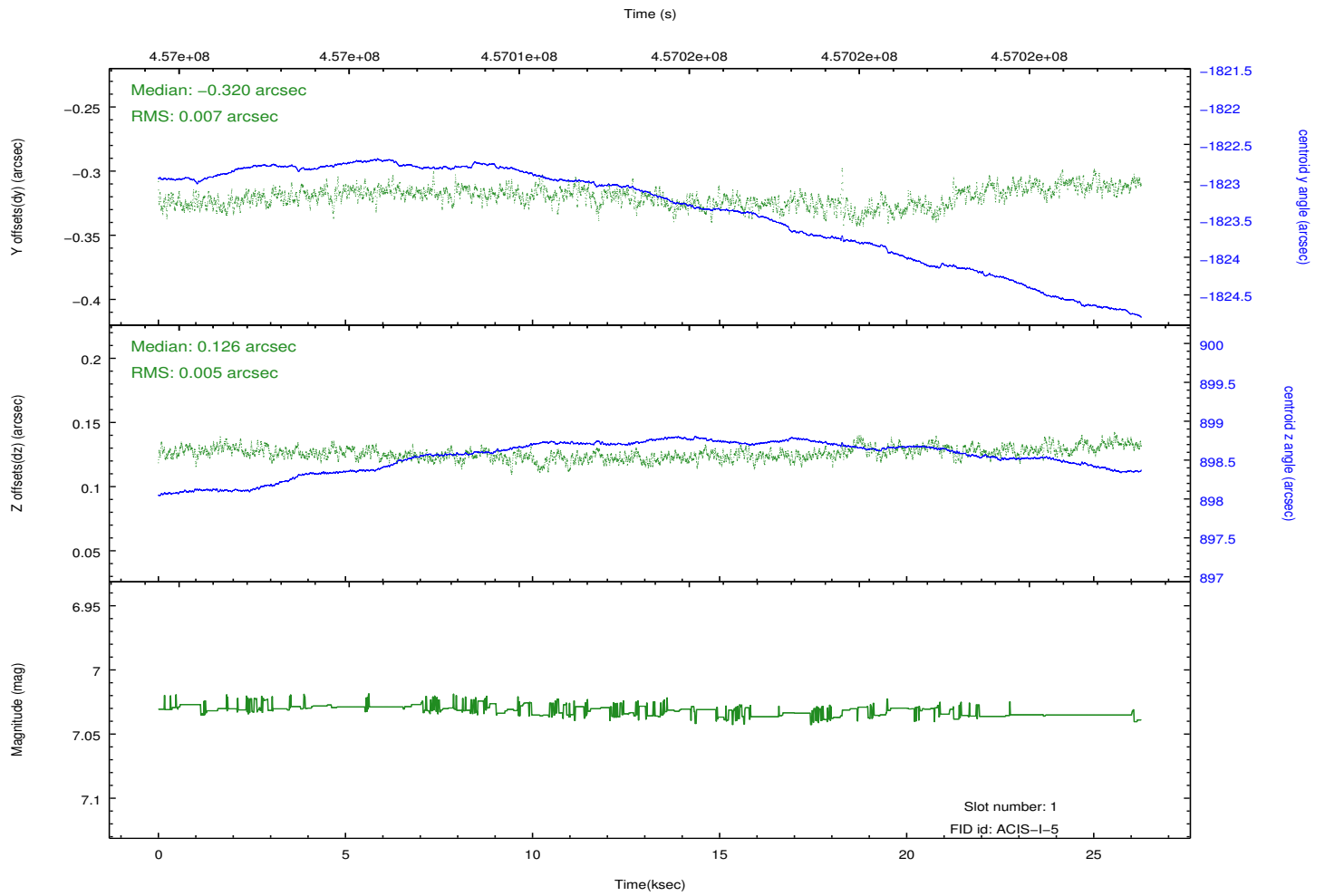
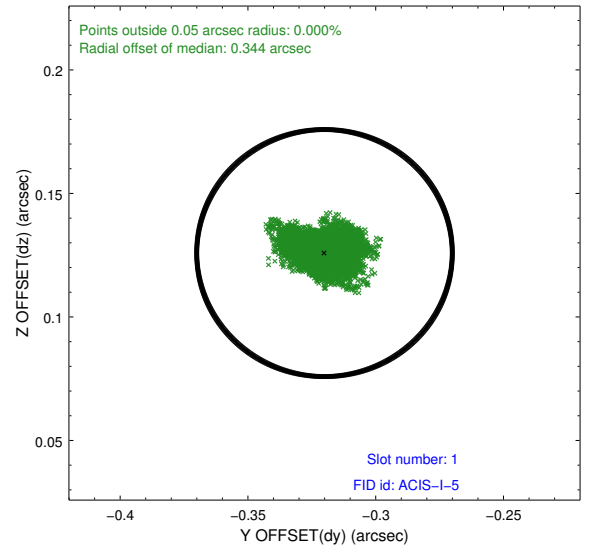
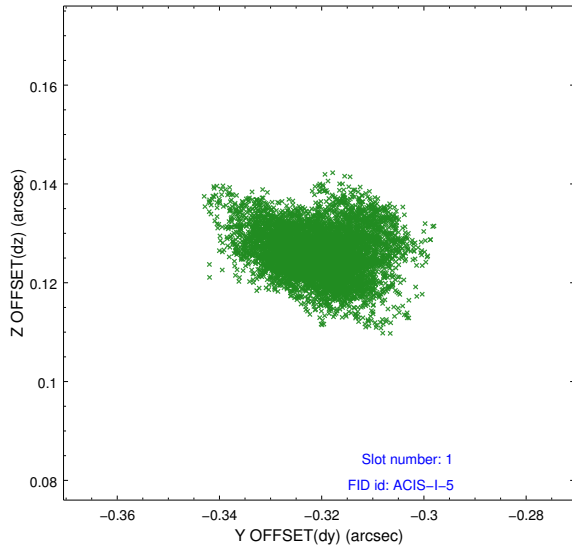


2.5 FID Slots

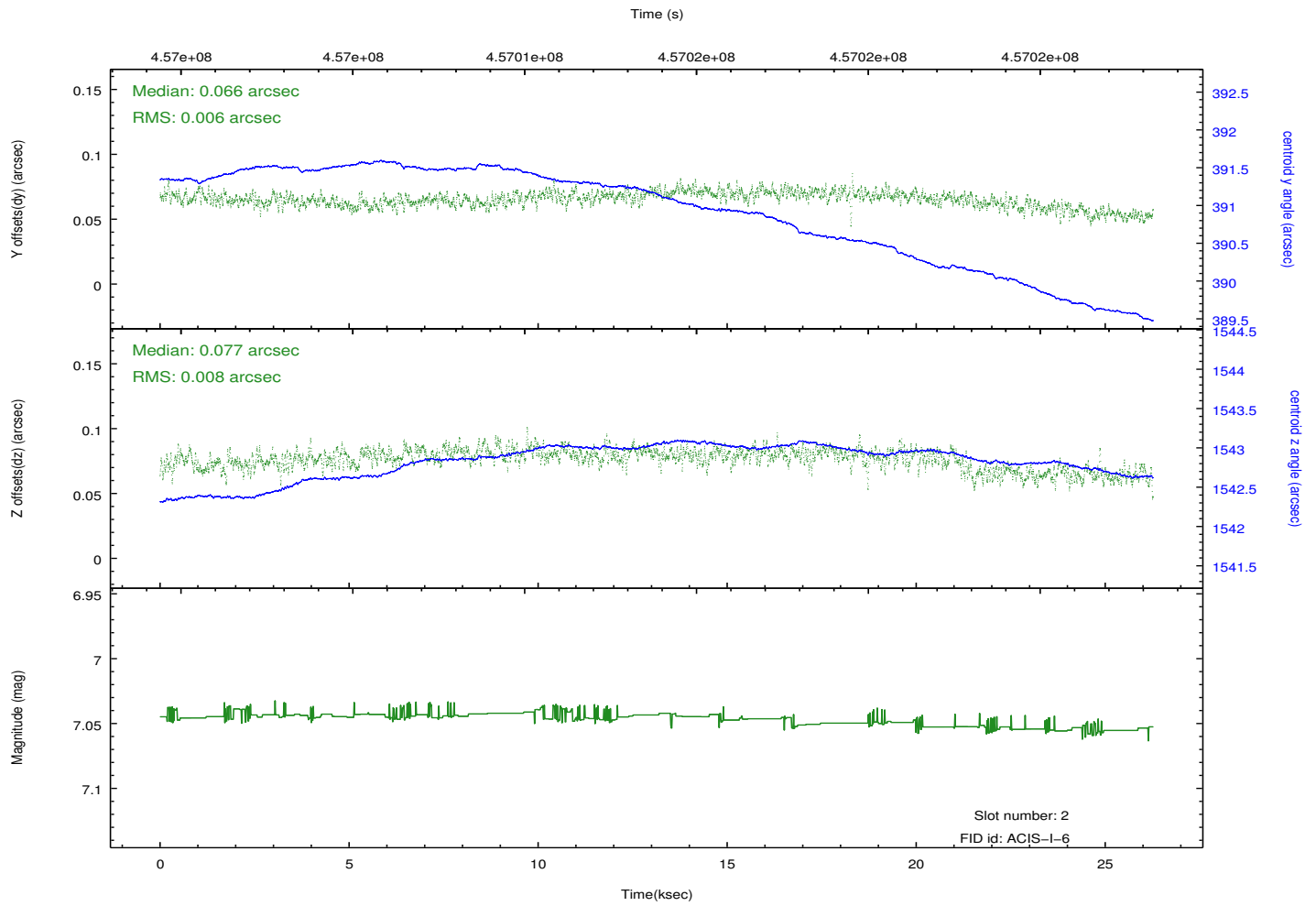
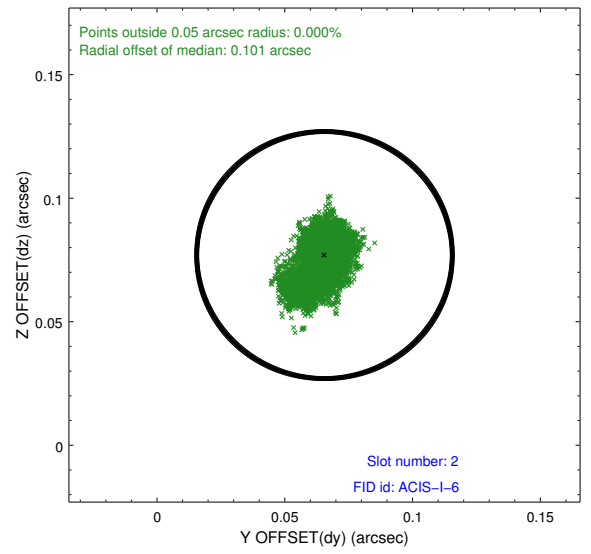
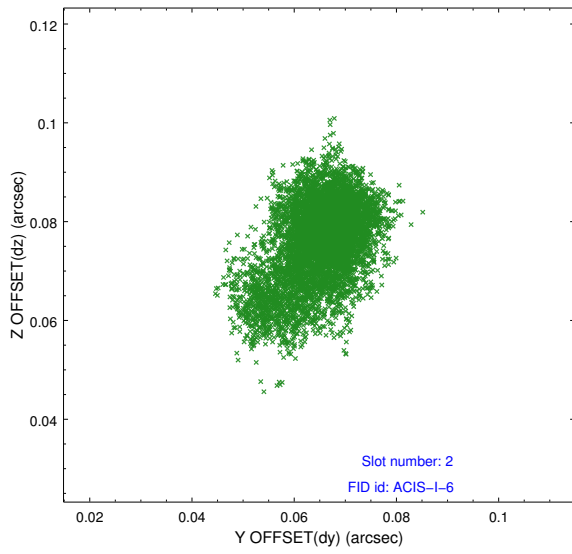
2.5.1 Slot 0



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)	2012.07.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.974859179616

A.2 Comments

A spatial region of the original bias map for CCD = 3 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 3 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:
(44.26500, -56.30696), (44.26798, -56.30430), (44.22051, -56.28805), (44.21753, -56.29072)