

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 13496 - L2 Version 2
Chandra X-Ray Center

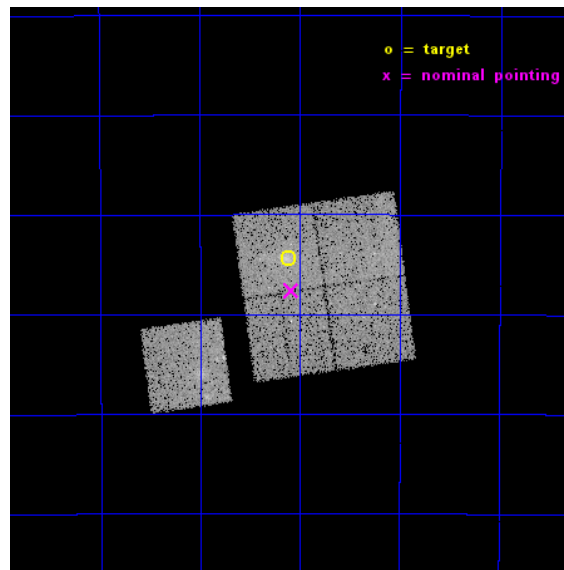
L2 Processing Date : Nov 30 2014

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1 Front

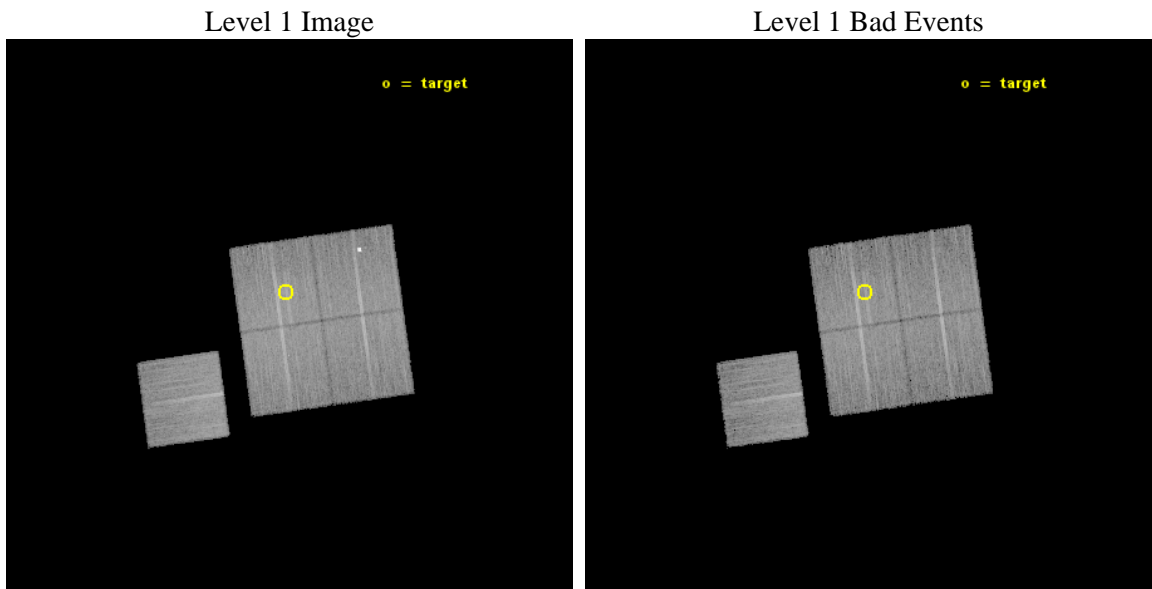
seq_num	801137	Sequence number
obs_id	13496	Observation id
title	Cosmology and Cluster Evolution from the 80 Most Massive Clusters in 2000 deg ² from the South Pole Telescope Survey	Proposal title
observer	Dr. Bradford Benson	Principal investigator
object	SPT-CLJ2335-4544	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	353.779	Observer's specified target RA [deg]
dec_targ	-45.7396	Observer's specified target Dec [deg]
ra_nom	353.77138100413	Nominal RA [deg]
dec_nom	-45.793755398039	Nominal Dec [deg]
roll_nom	262.05406280784	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20973.193985462	Sum of GTIs [s]
livetime	20699.163765801	Livetime [s]
ontime0	20973.070845544	Sum of GTIs [s]
ontime1	20973.111885548	Sum of GTIs [s]
ontime2	20973.152925551	Sum of GTIs [s]
ontime3	20973.193985462	Sum of GTIs [s]
ontime6	20973.029825449	Sum of GTIs [s]
l2events	59941	Number of level 2 events



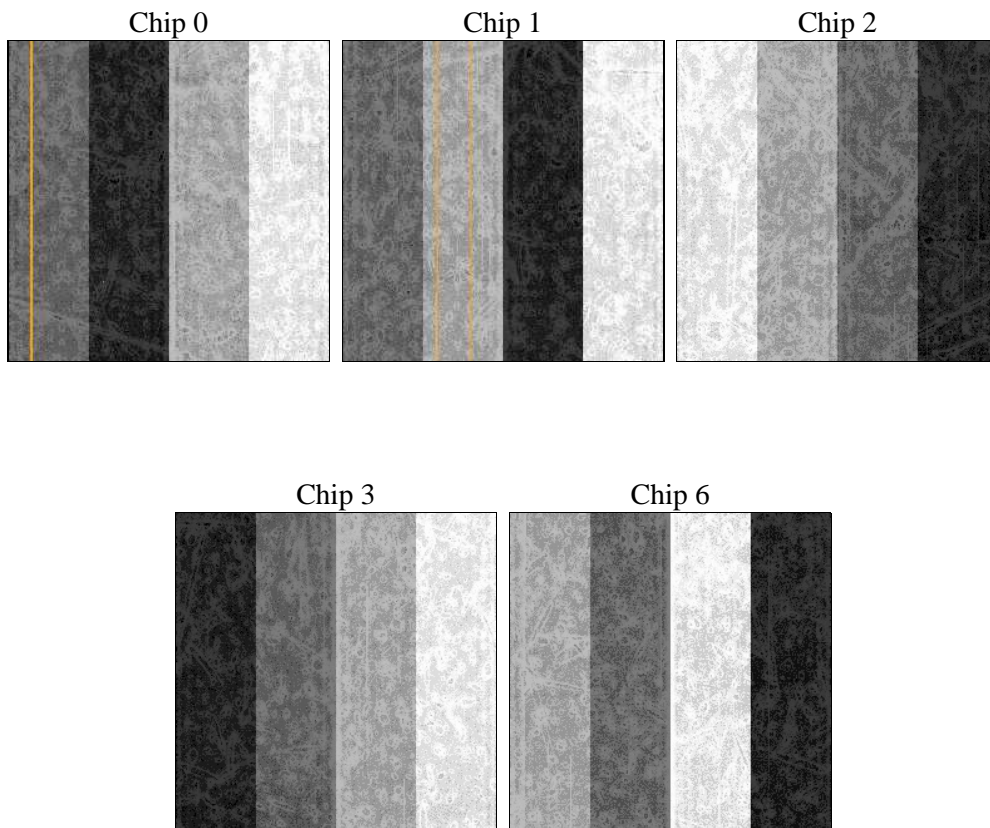
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	21200.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	20973.193985462	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	20973.070845544	Sum of GTIs [s]
date	2014-12-01T02:00:07	Date and time of file creation	ontime1	20973.111885548	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	20973.152925551	Sum of GTIs [s]
			ontime3	20973.193985462	Sum of GTIs [s]
			ontime6	20973.029825449	Sum of GTIs [s]
			l1events	559298	Number of level 1 events

2.1.4 Events

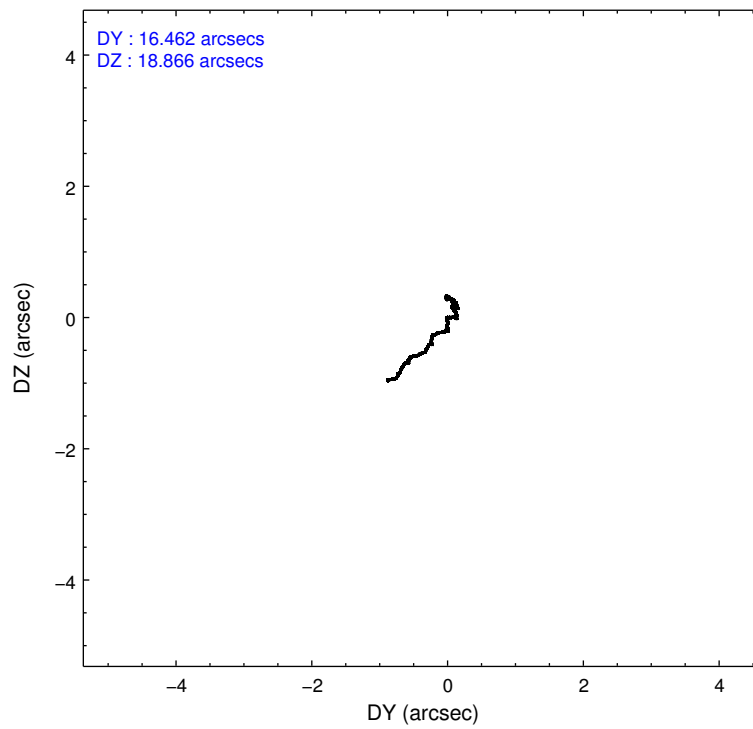
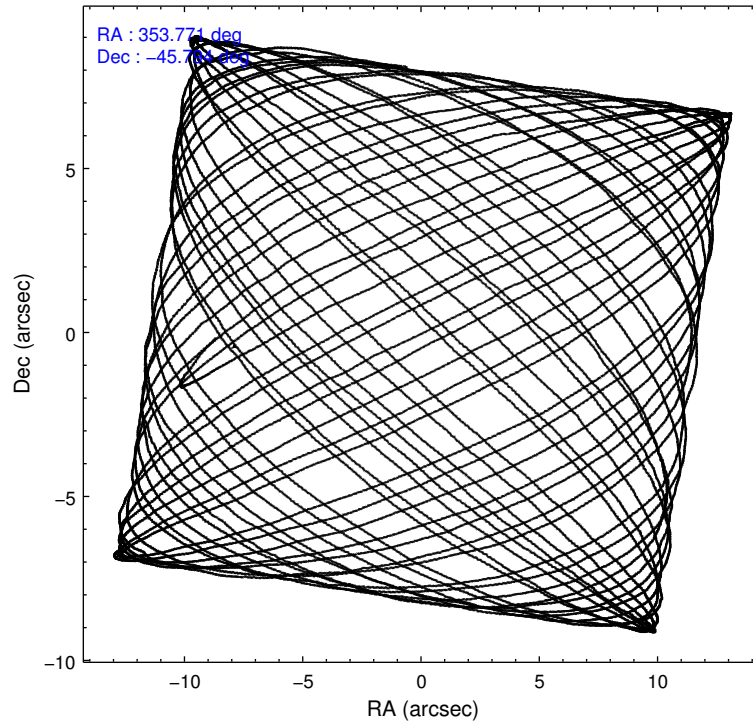
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	104852	112638	113338	113691	114779
rejected events	91551	90963	100319	99134	100226
rejected %	87%	80%	88%	87%	87%

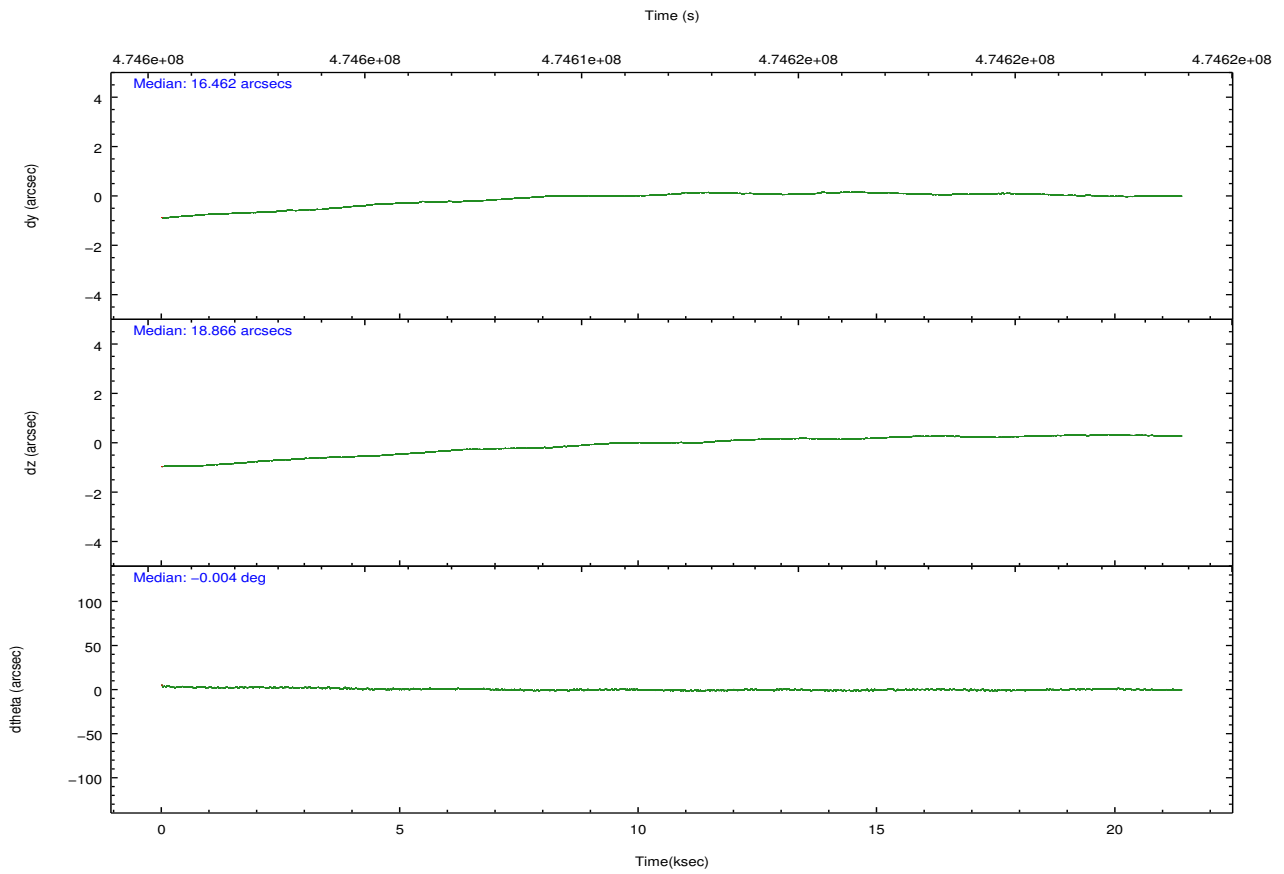
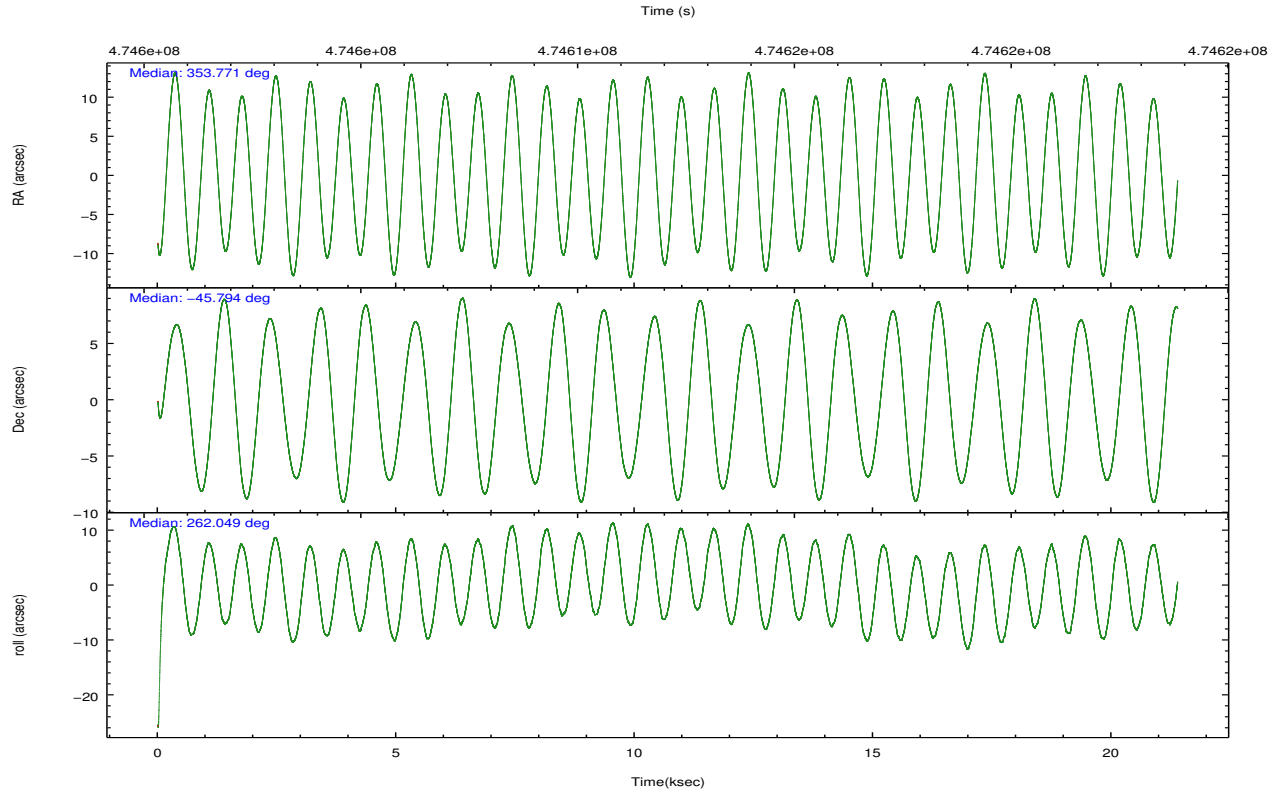
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	4672	12073	4607	5958	5361
	4%	10%	4%	5%	4%
grade 1 events	46	67	72	68	60
	0%	0%	0%	0%	0%
grade 2 events	3313	3621	3252	3060	3158
	3%	3%	2%	2%	2%
grade 3 events	1364	1473	1317	1395	1458
	1%	1%	1%	1%	1%
grade 4 events	1277	1397	1313	1432	1405
	1%	1%	1%	1%	1%
grade 5 events	5155	5565	4792	6094	5704
	4%	4%	4%	5%	4%
grade 6 events	2679	3117	2534	2717	3177
	2%	2%	2%	2%	2%
grade 7 events	86346	85325	95451	92967	94456
	82%	75%	84%	81%	82%

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	353.756452	353.771381004135	CCD I2 on	Y	Y
[deg] Pointing Dec	-45.768329	-45.79375539803852	CCD I3 on	Y	Y
[deg] Pointing Roll	261.834697	262.0540628078426	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)	474601577.184000	474600826.20681	CCD S5 on	N	N
Observation start date	2013-01-15T01:45:10	2013-01-15T01:33:46	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	474622777.184000	474623405.93303	On-chip summing requested	N	N
Observation end date	2013-01-15T07:38:30	2013-01-15T07:50:05	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



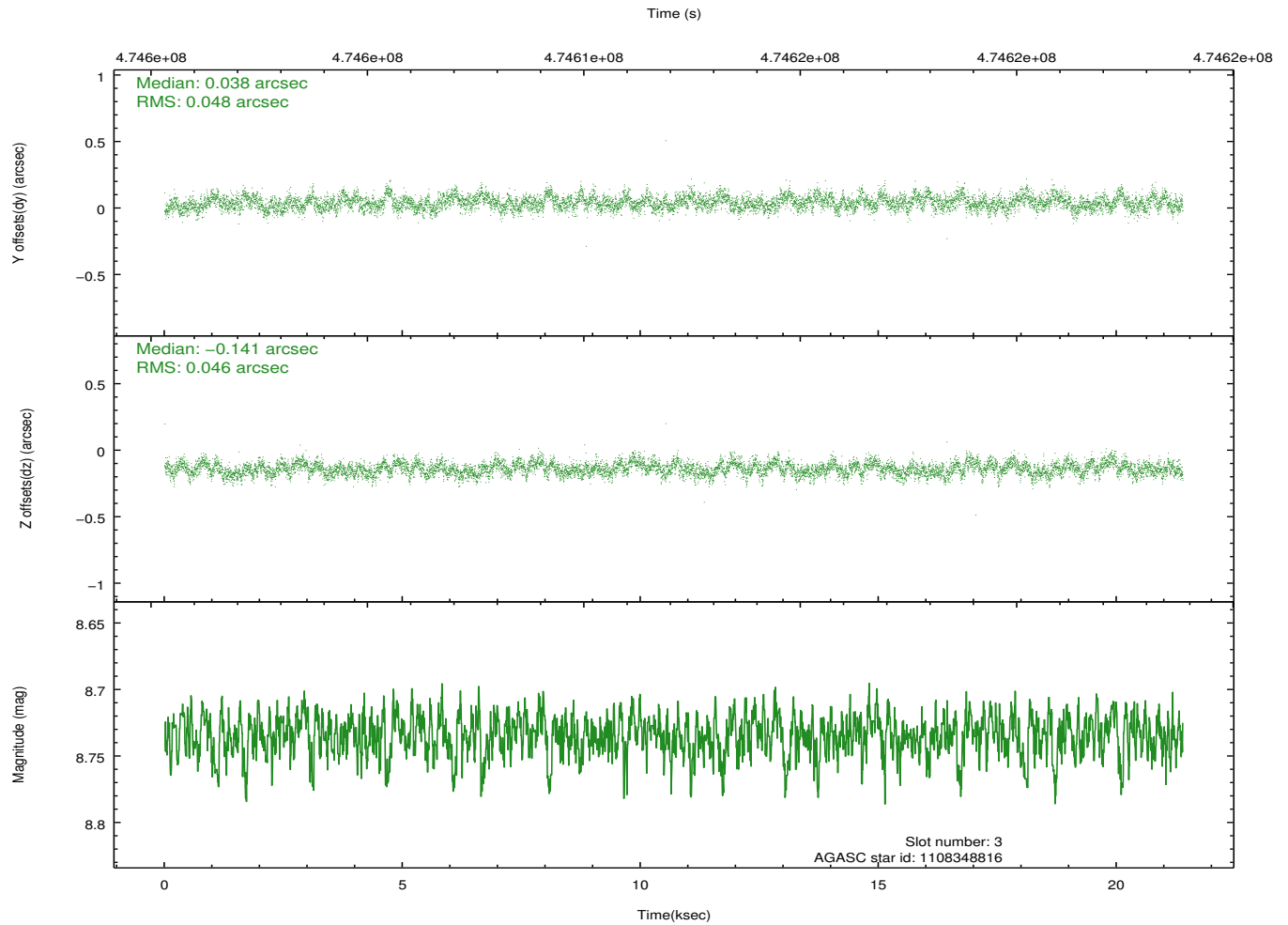
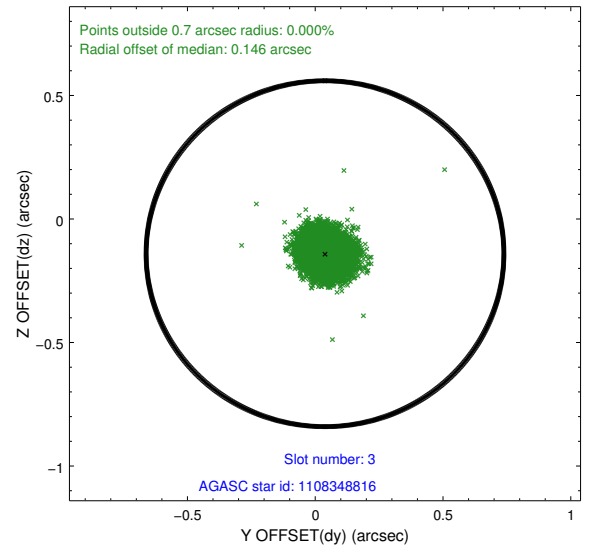
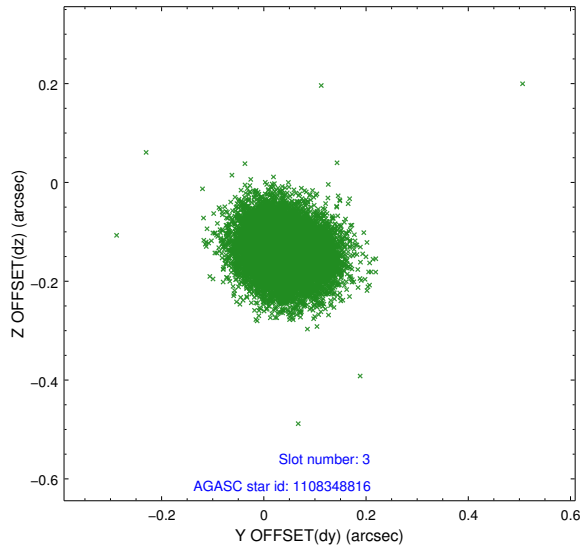


Slot Statistics

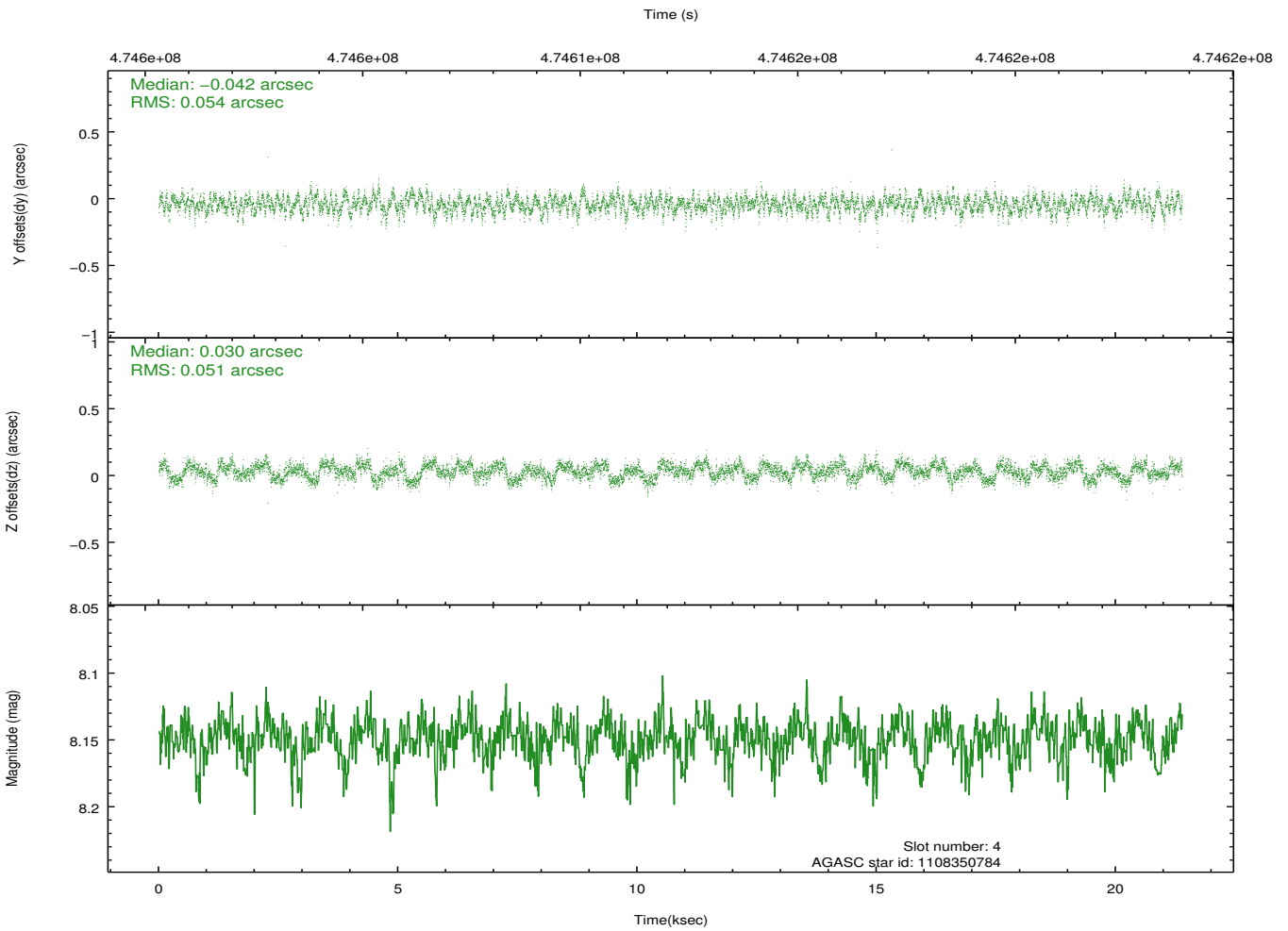
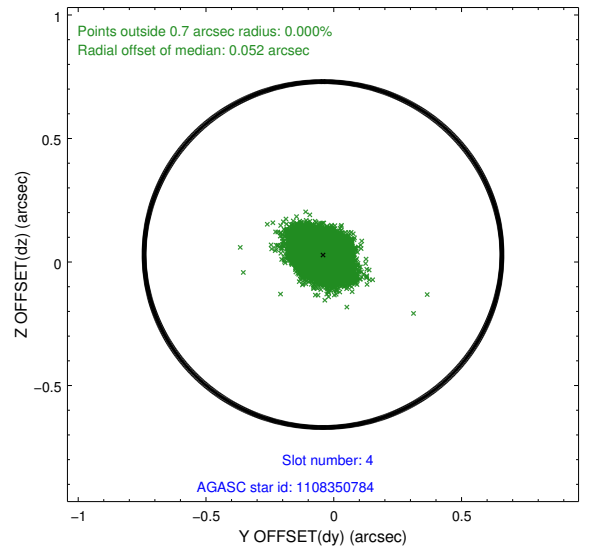
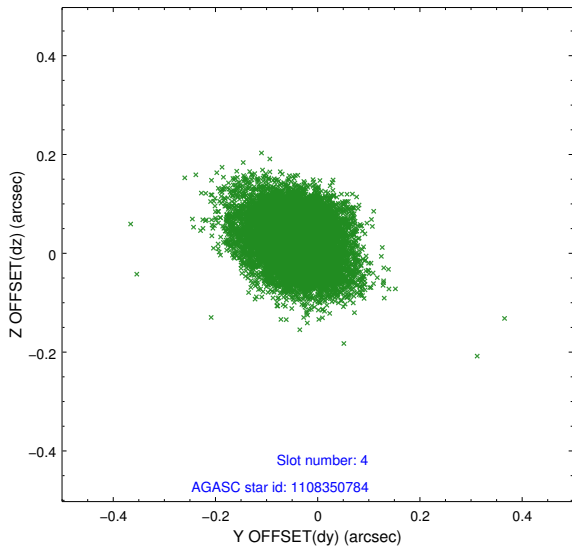
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.08	5217	0.121	-0.080	0.011	0.017	0.000000	0.000000	923.11	-1001.57
1	FID		ACIS-I-5	7.07	5217	-0.271	0.102	0.009	0.020	0.000000	0.000000	-1825.38	895.87
2	FID		ACIS-I-6	7.07	5217	0.060	0.049	0.013	0.025	0.000000	0.000000	388.31	1540.60
3	GUIDE	used	1108348816	8.73	10432	0.038	-0.141	0.071	0.113	354.046953	-46.391378	2119.36	1033.71
4	GUIDE	used	1108350784	8.15	10432	-0.042	0.030	0.079	0.127	354.683529	-45.251703	-2161.02	2064.06
5	GUIDE	used	1108351008	7.31	10431	-0.061	0.093	0.065	0.100	353.169262	-45.121444	-2087.96	-1805.78
6	GUIDE	used	1108352936	6.40	10434	-0.118	-0.132	0.046	0.071	354.458272	-45.568782	-954.63	1649.49
7	GUIDE	used	1108354192	8.56	10426	0.181	0.150	0.073	0.116	352.968441	-45.520220	-591.13	-2092.44

2.4 Star Slots

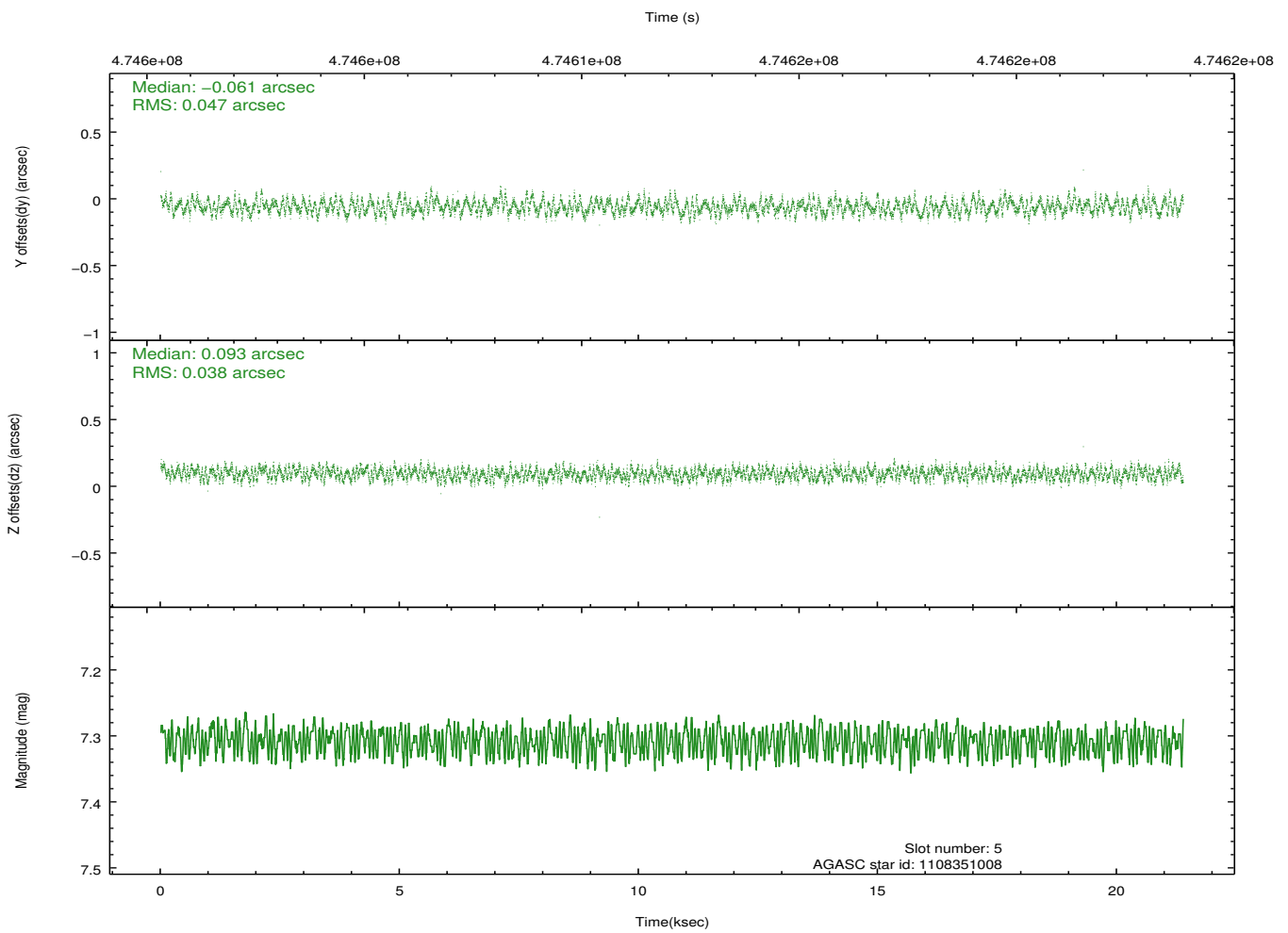
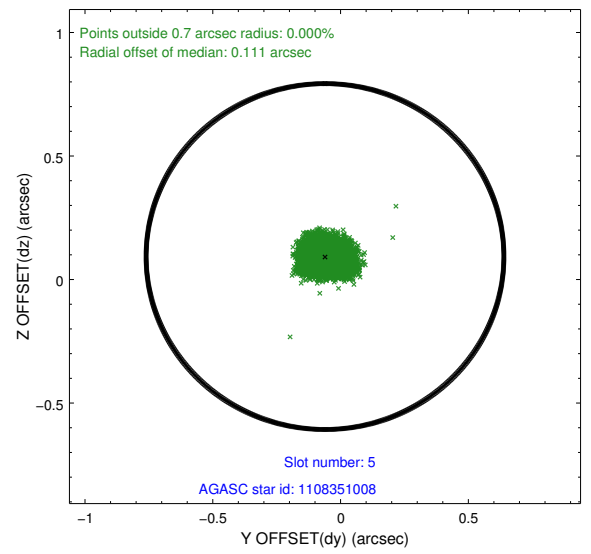
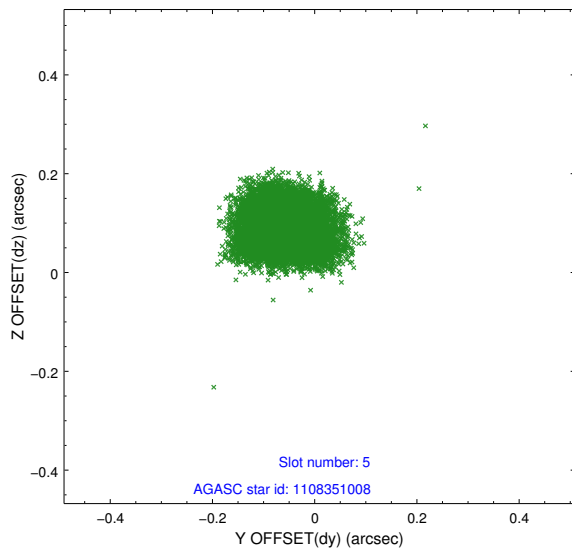
2.4.1 Slot 3



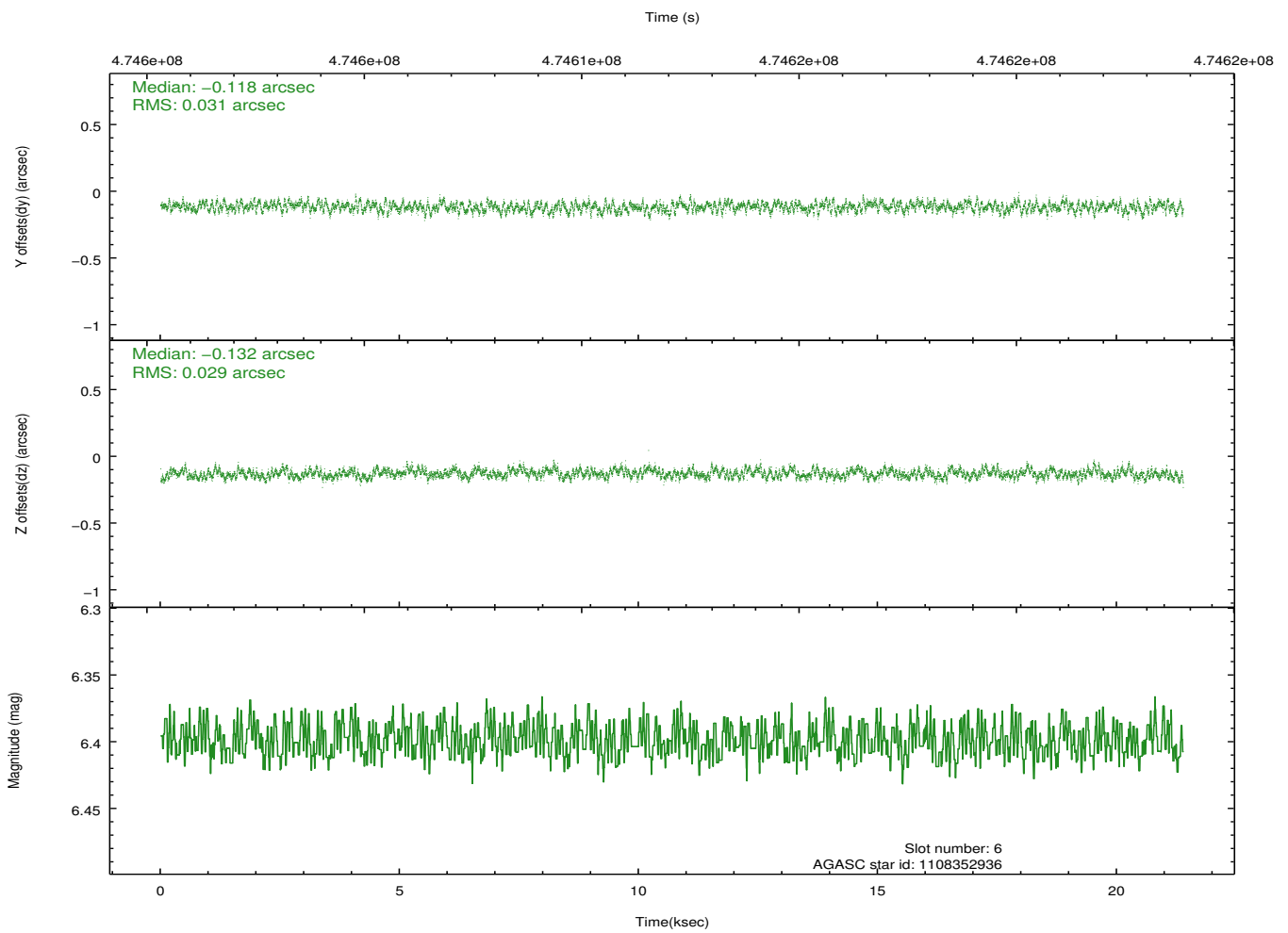
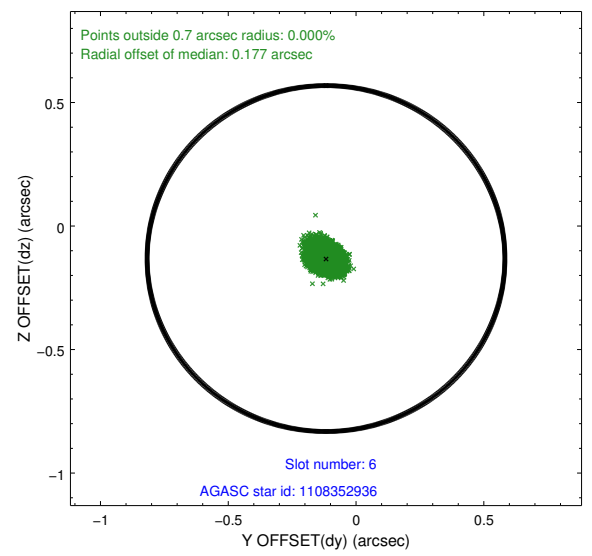
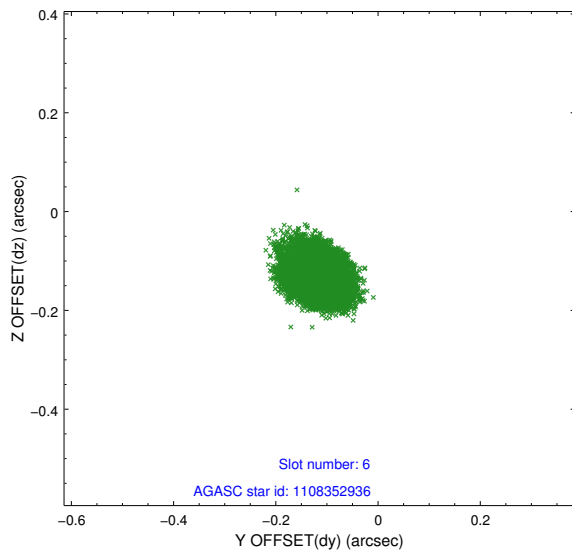
2.4.2 Slot 4



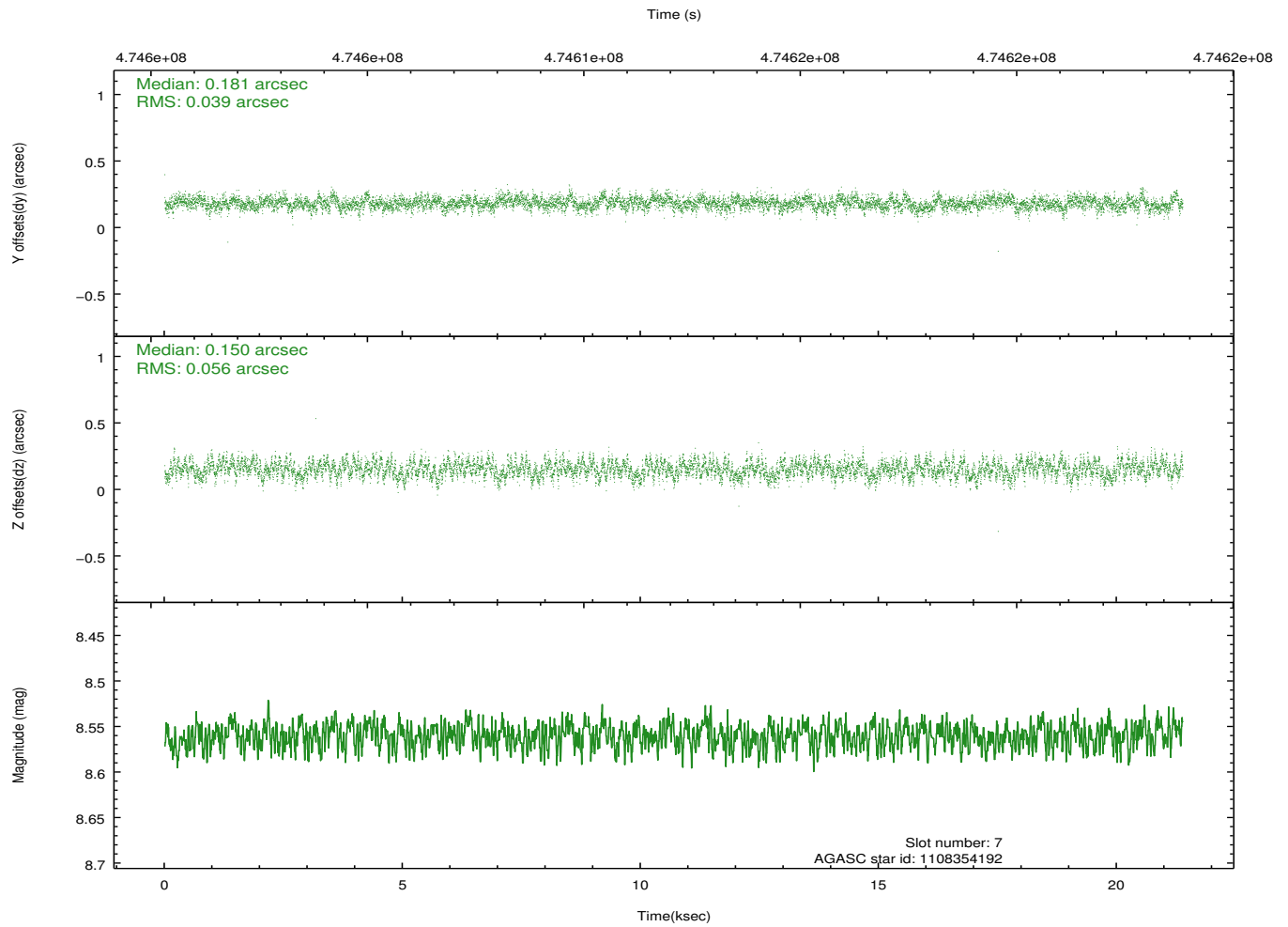
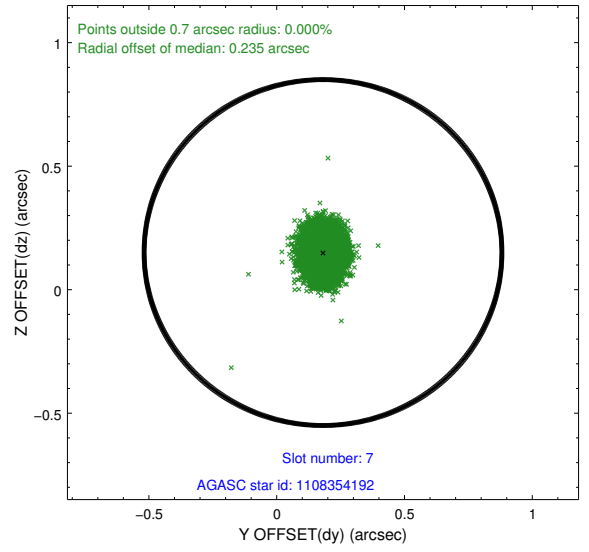
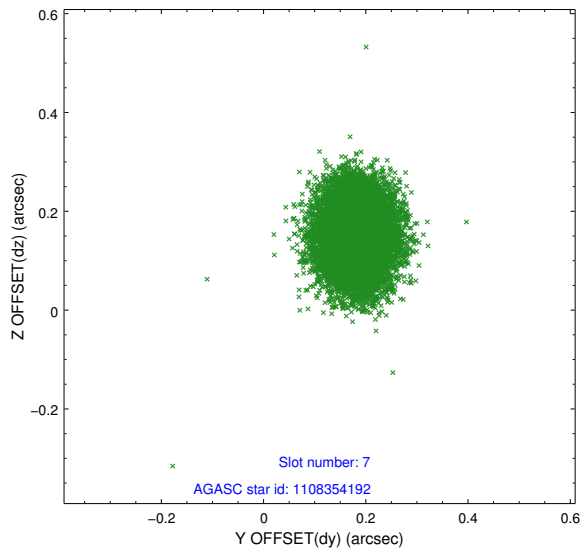
2.4.3 Slot 5



2.4.4 Slot 6

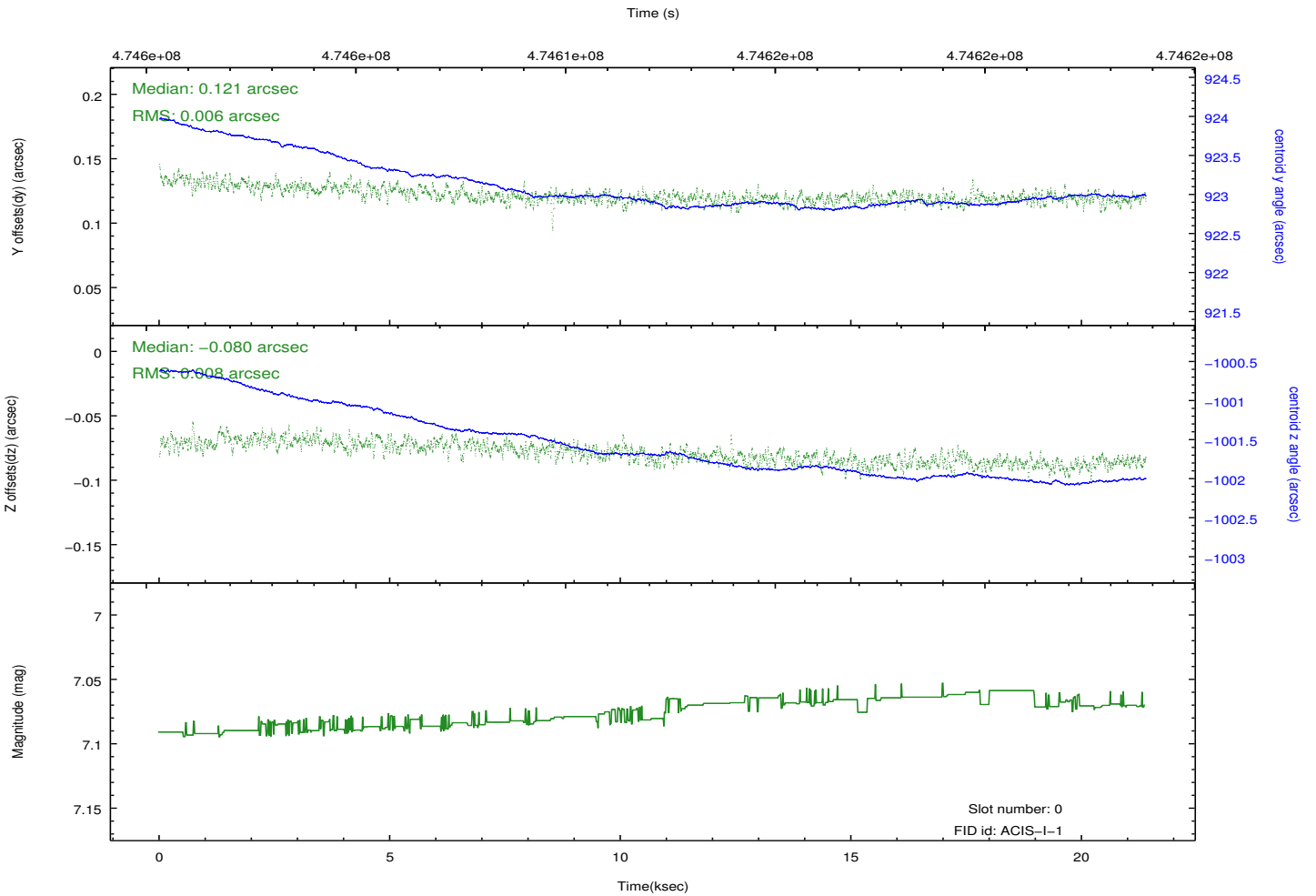
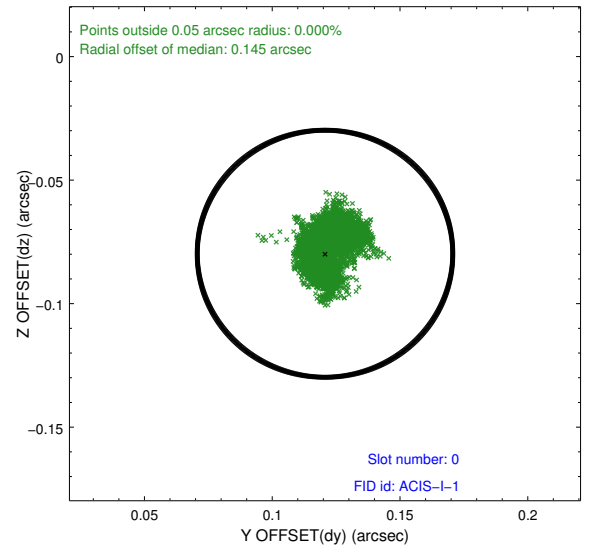
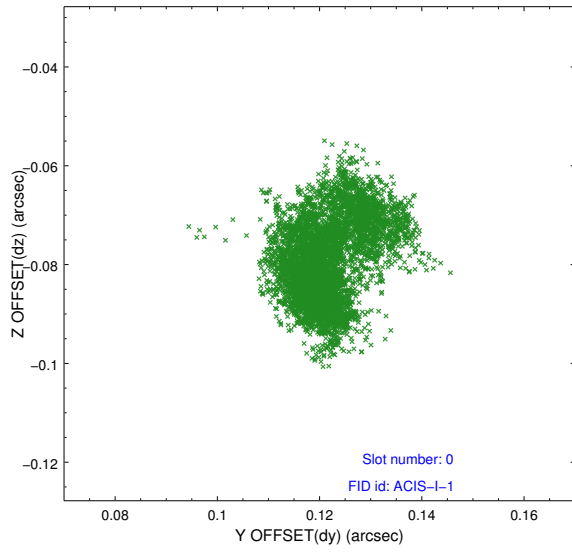


2.4.5 Slot 7

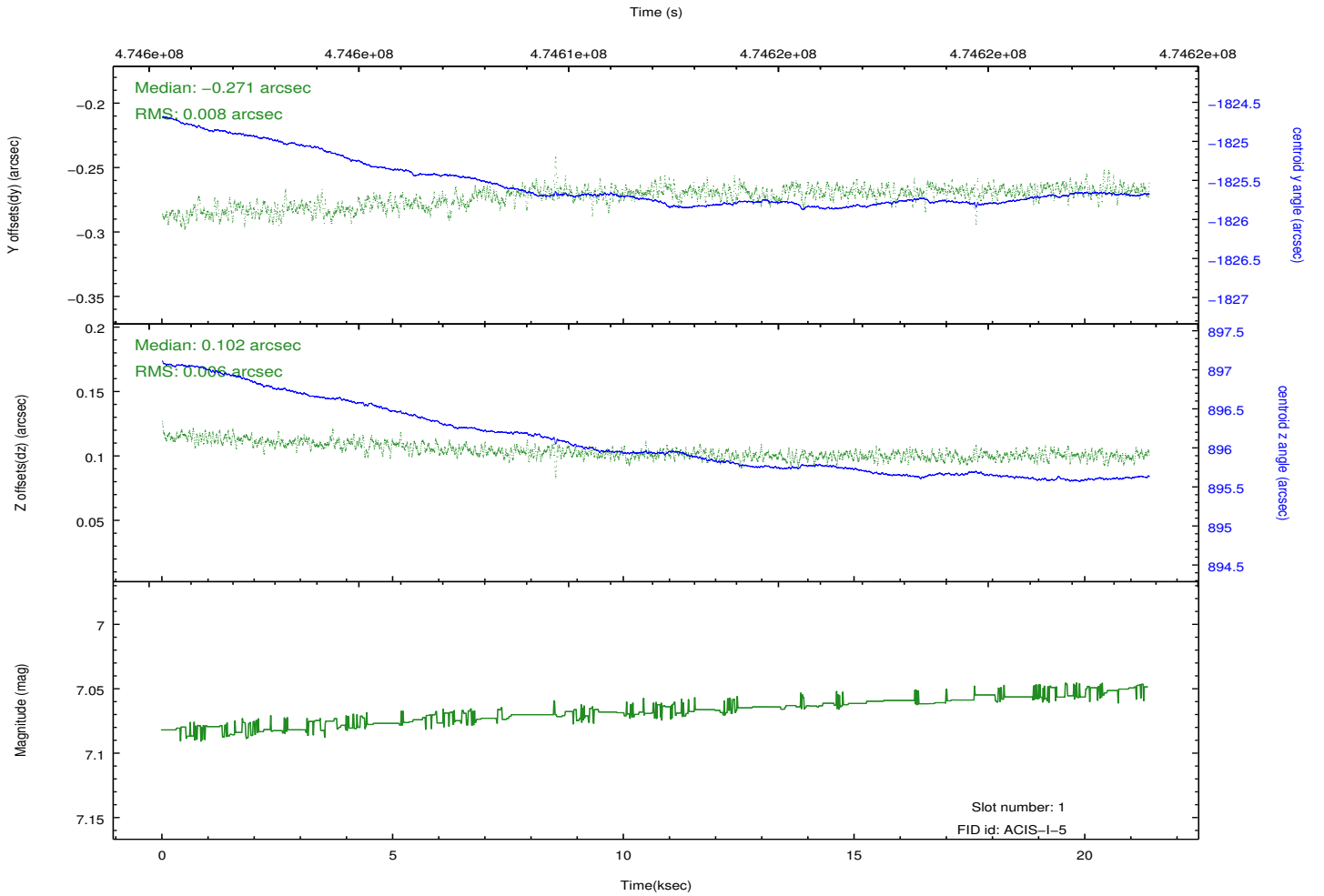
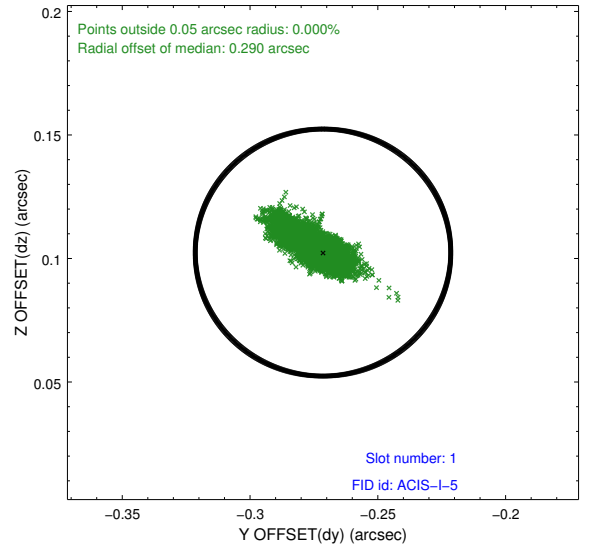
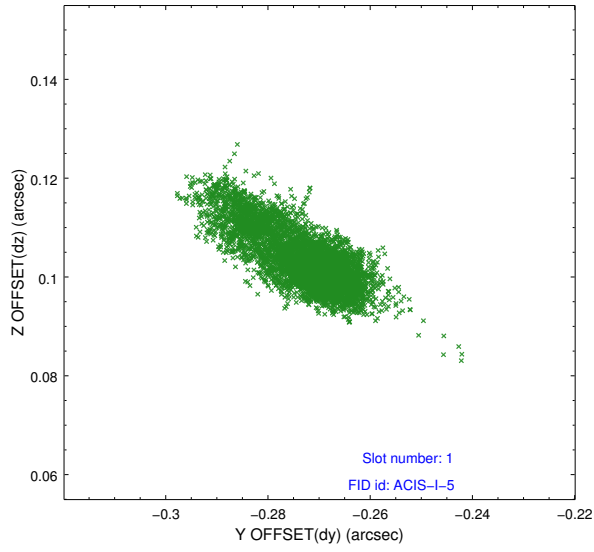


2.5 FID Slots

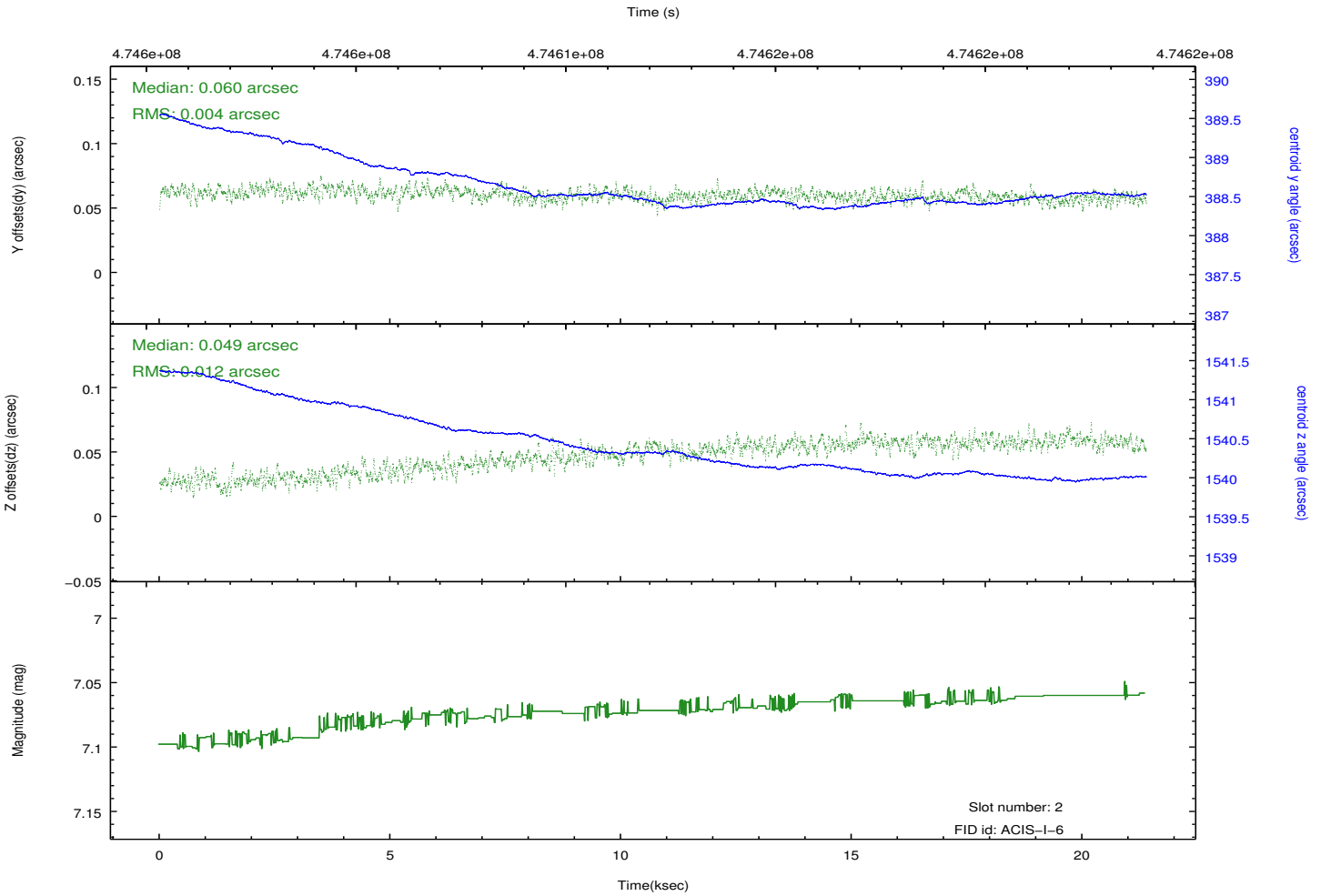
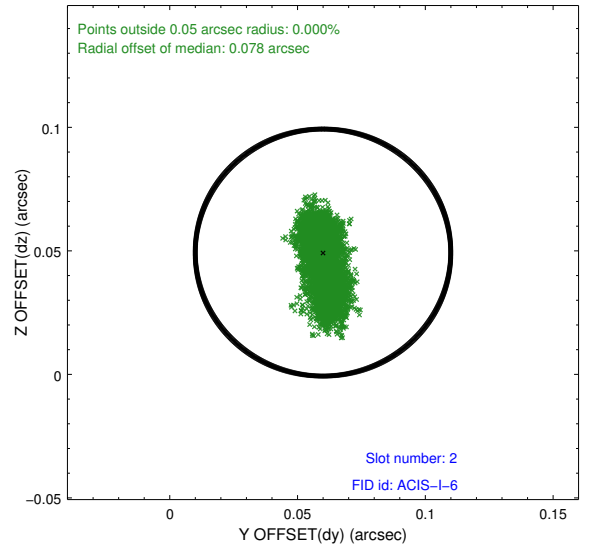
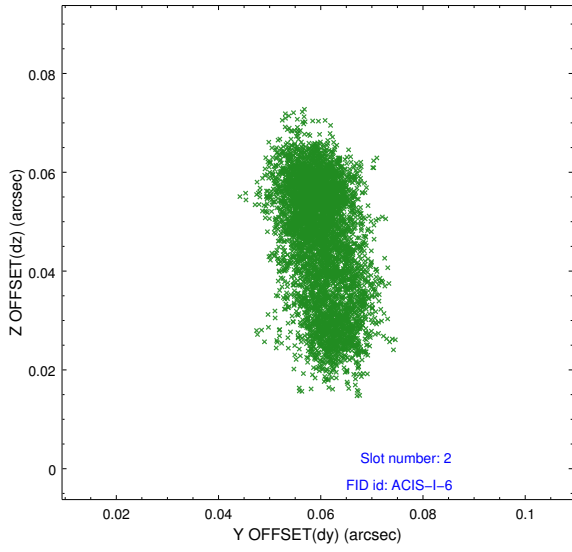
2.5.1 Slot 0



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)	2014.12.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.973193985462

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.