

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 14931 - L2 Version 2
Chandra X-Ray Center

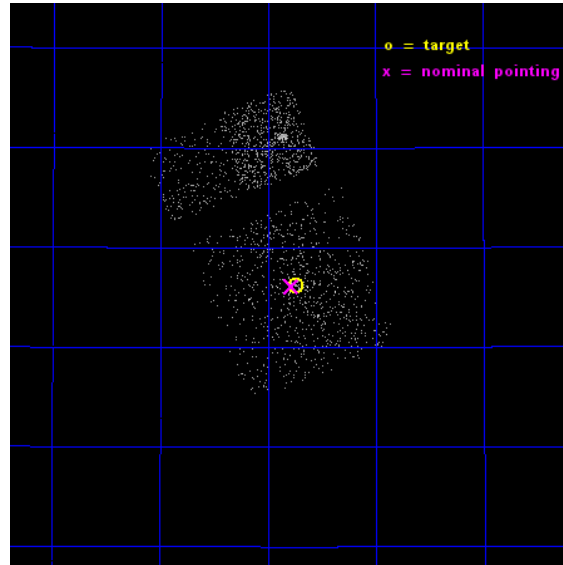
L2 Processing Date : Dec 1 2014

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1 Front

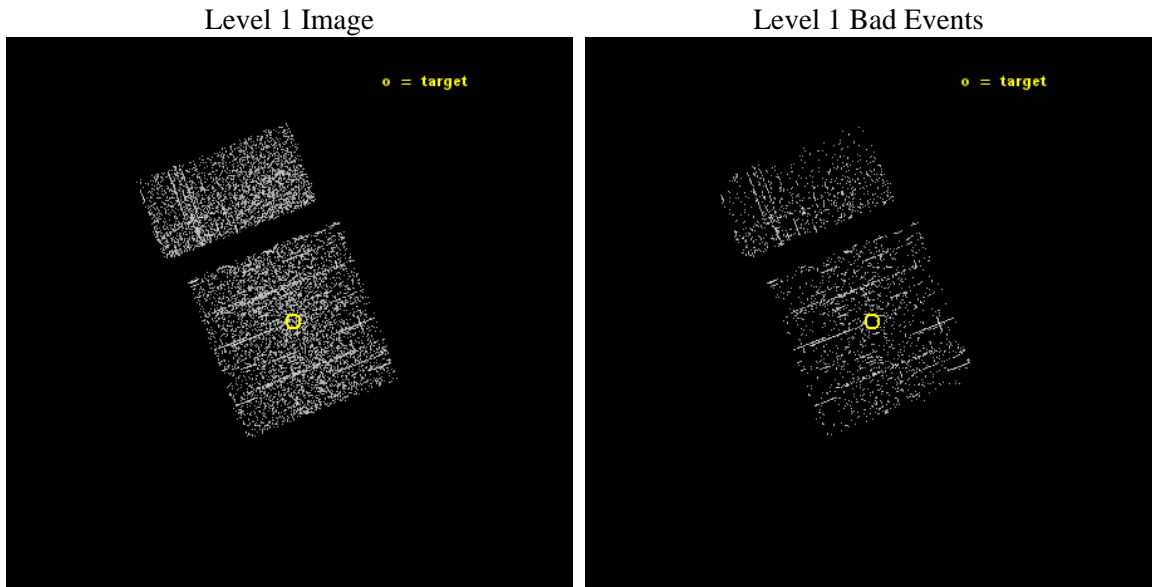
seq_num	601061	Sequence number
obs_id	14931	Observation id
title	Monitoring M31 for BHXNe	Proposal title
observer	Dr Robin Barnard	Principal investigator
object	M31 BHXN	Source name
dtcycle	0	
cycle	P	events are from which exps? P[rimary] S[econdar]
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.695726868685	Nominal RA [deg]
dec_nom	41.268535128191	Nominal Dec [deg]
roll_nom	339.20160318756	Nominal Roll [deg]
revision	2	Processing version of data
ontime	926.39430034161	Sum of GTIs [s]
livetime	145.83680896188	Livetime [s]
ontime0	926.39430034161	Sum of GTIs [s]
ontime1	926.39430034161	Sum of GTIs [s]
ontime2	926.39430034161	Sum of GTIs [s]
ontime3	926.39430034161	Sum of GTIs [s]
ontime6	926.36198246479	Sum of GTIs [s]
ontime7	926.39430034161	Sum of GTIs [s]
l2events	2022	Number of level 2 events



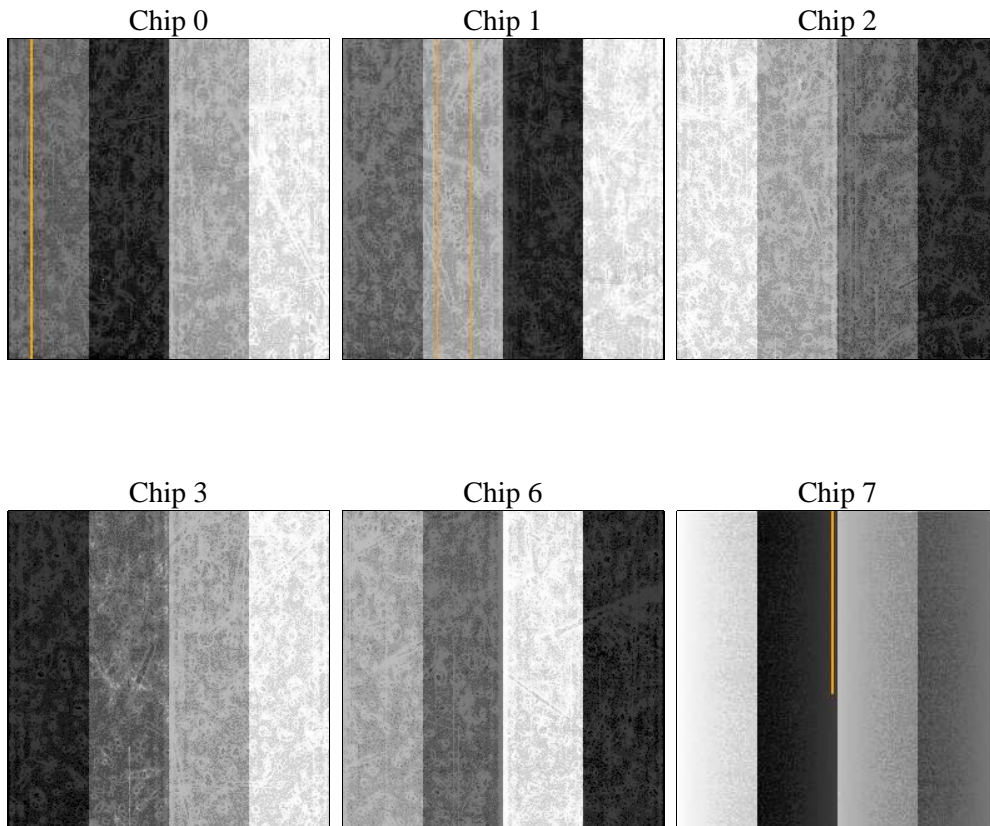
2 OBI Primary

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	926.39430034161	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	926.39430034161	Sum of GTIs [s]
date	2014-12-02T00:32:05	Date and time of file creation	ontime1	926.39430034161	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	926.39430034161	Sum of GTIs [s]
			ontime3	926.39430034161	Sum of GTIs [s]
			ontime6	926.36198246479	Sum of GTIs [s]
			ontime7	926.39430034161	Sum of GTIs [s]
			l1events	15102	Number of level 1 events

2.1.4 Events

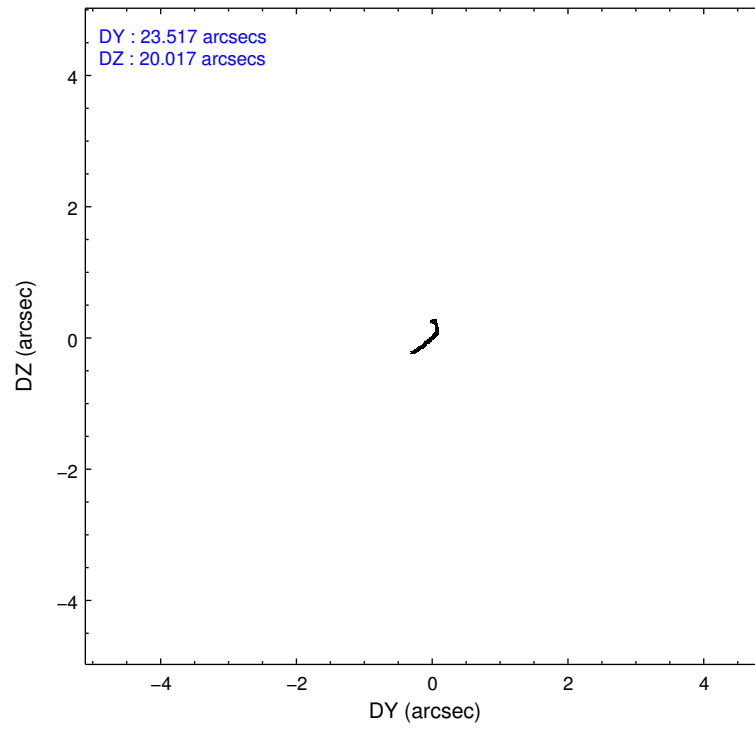
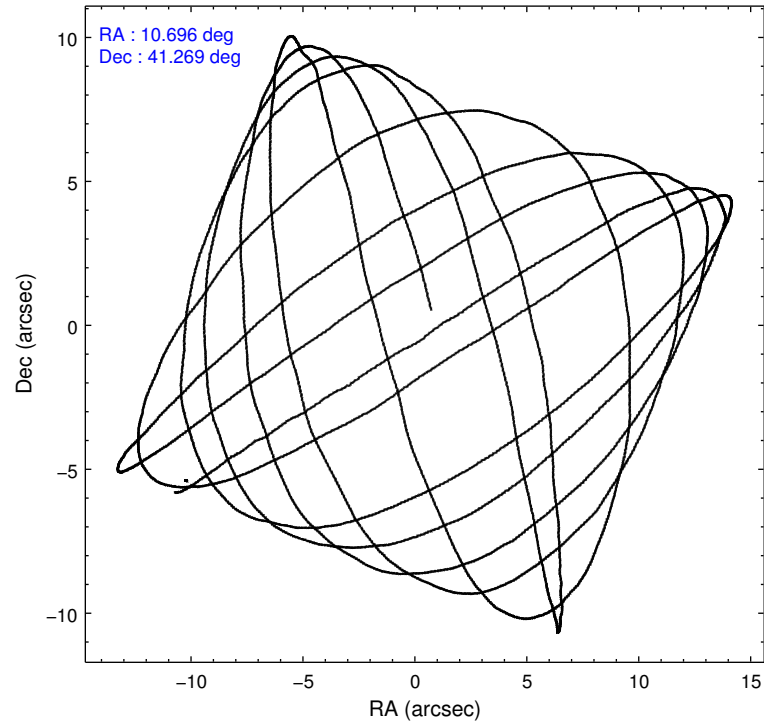
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	2182	2380	2722	2537	2563	2718
rejected events	1945	2014	2393	2206	2342	1906
rejected %	89%	84%	87%	86%	91%	70%

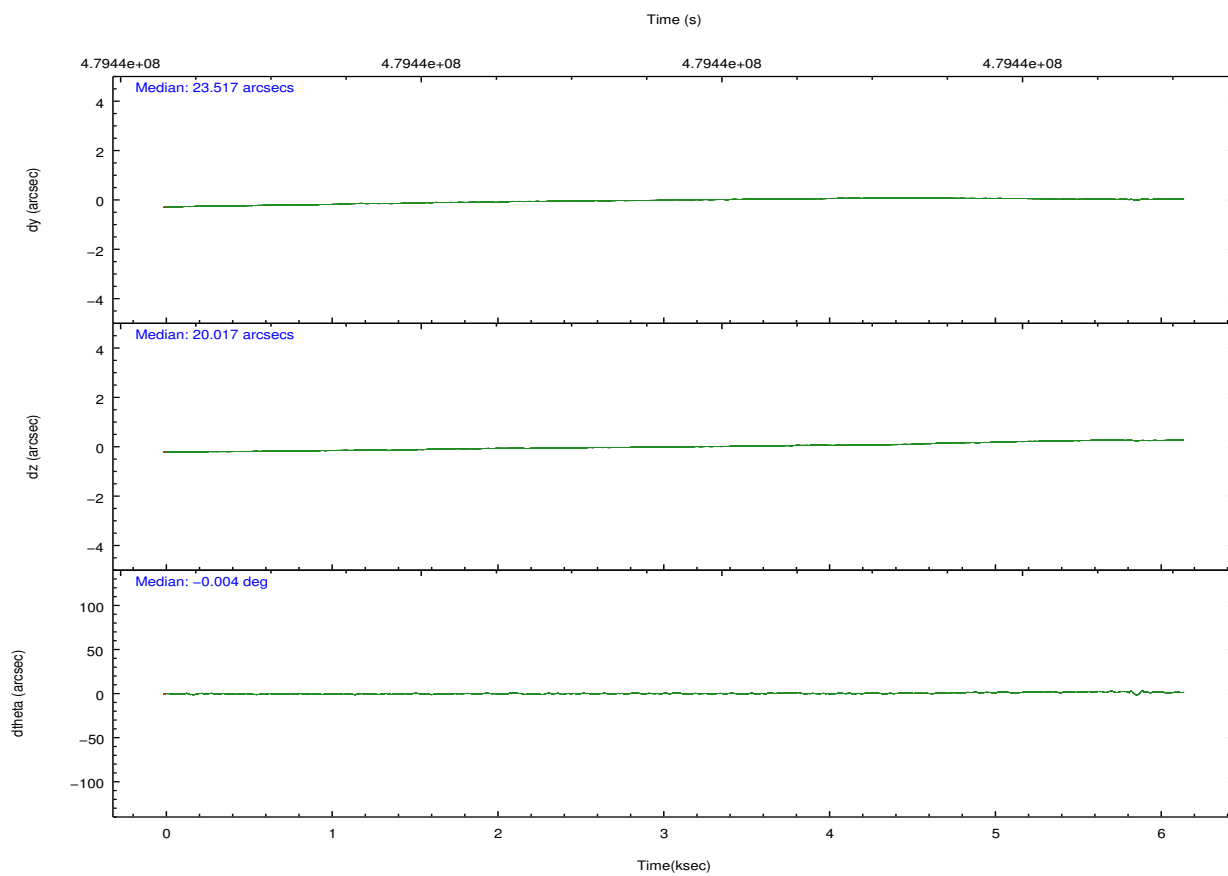
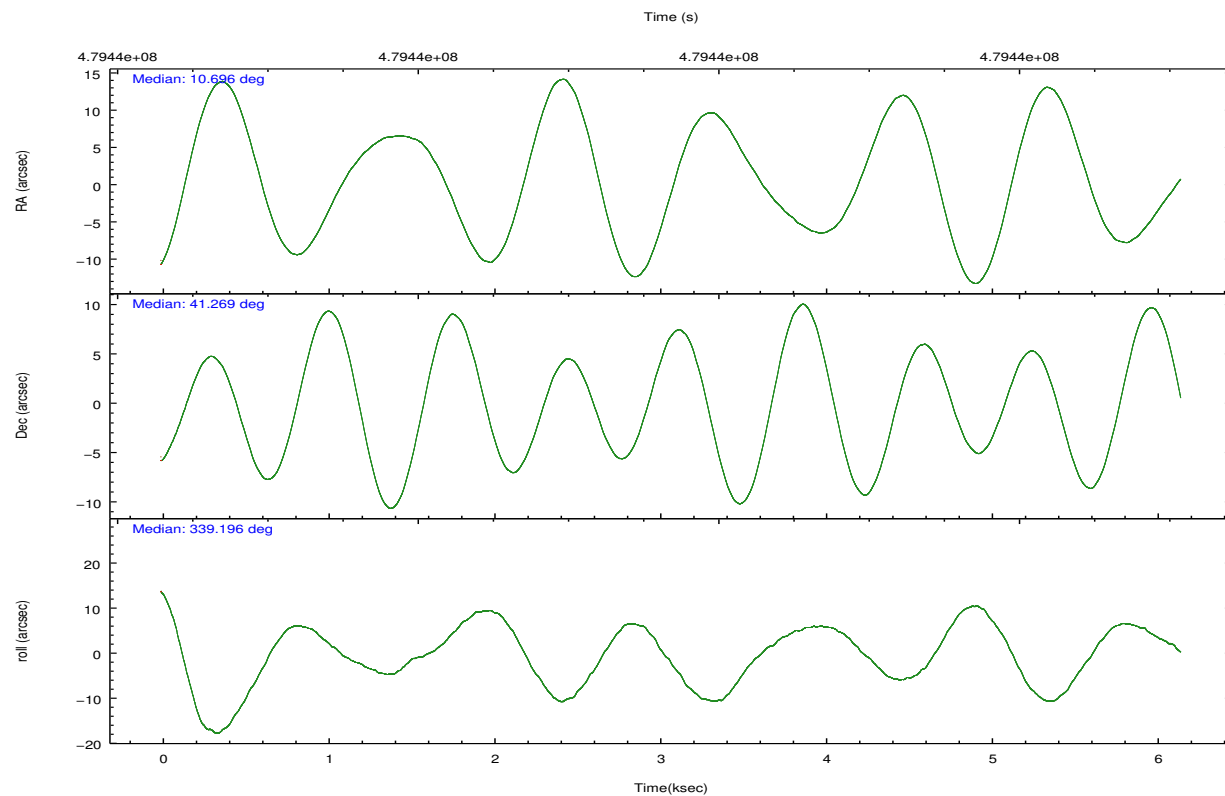
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	84	163	154	136	55	94
	3%	6%	5%	5%	2%	3%
grade 1 events	1	1	3	4	1	1
	0%	0%	0%	0%	0%	0%
grade 2 events	65	70	73	70	42	168
	2%	2%	2%	2%	1%	6%
grade 3 events	23	34	21	40	30	82
	1%	1%	0%	1%	1%	3%
grade 4 events	29	37	27	28	25	82
	1%	1%	0%	1%	0%	3%
grade 5 events	94	103	82	109	96	250
	4%	4%	3%	4%	3%	9%
grade 6 events	37	63	54	59	69	390
	1%	2%	1%	2%	2%	14%
grade 7 events	1849	1909	2308	2091	2245	1651
	84%	80%	84%	82%	87%	60%

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	10.659645	10.6957268686852	CCD I2 on	Y	Y
[deg] Pointing Dec	41.263965	41.26853512819069	CCD I3 on	Y	Y
[deg] Pointing Roll	339.016726	339.2016031875553	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	-233.592463	-233.5874344608287	CCD S3 on	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	479437743.184000	479436302.40552	CCD S5 on	N	N
Observation start date	2013-03-12T01:07:56	2013-03-12T00:45:02	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	479442743.184000	479443579.90591	On-chip summing requested	N	N
Observation end date	2013-03-12T02:31:16	2013-03-12T02:46:19	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	Y	Y
			[s] Primary exposure time	0.600000	0.6
			[s] Secondary exposure time	0.000000	3.2
			Duty cycle	5	5

2.3 Aspect



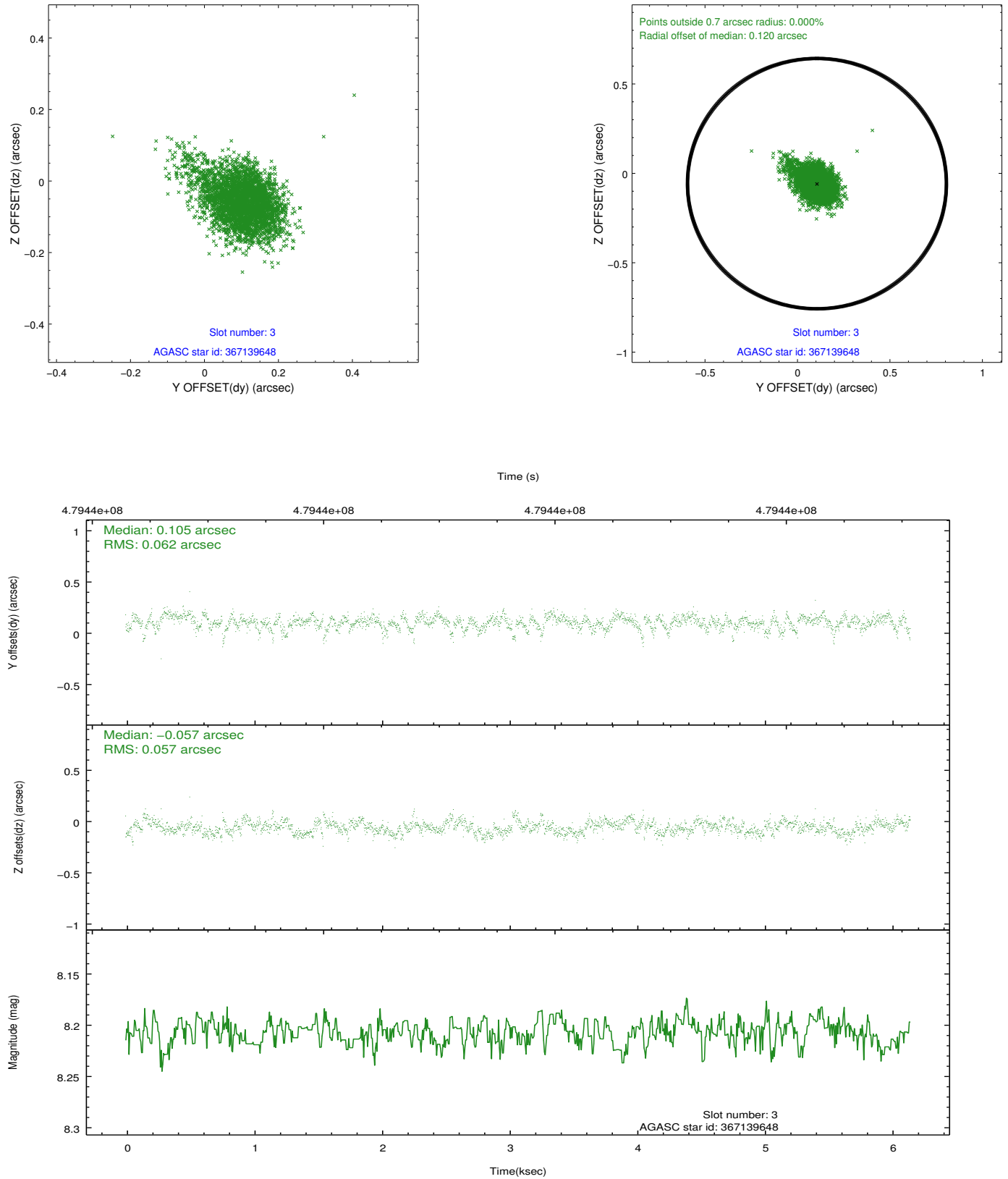


Slot Statistics

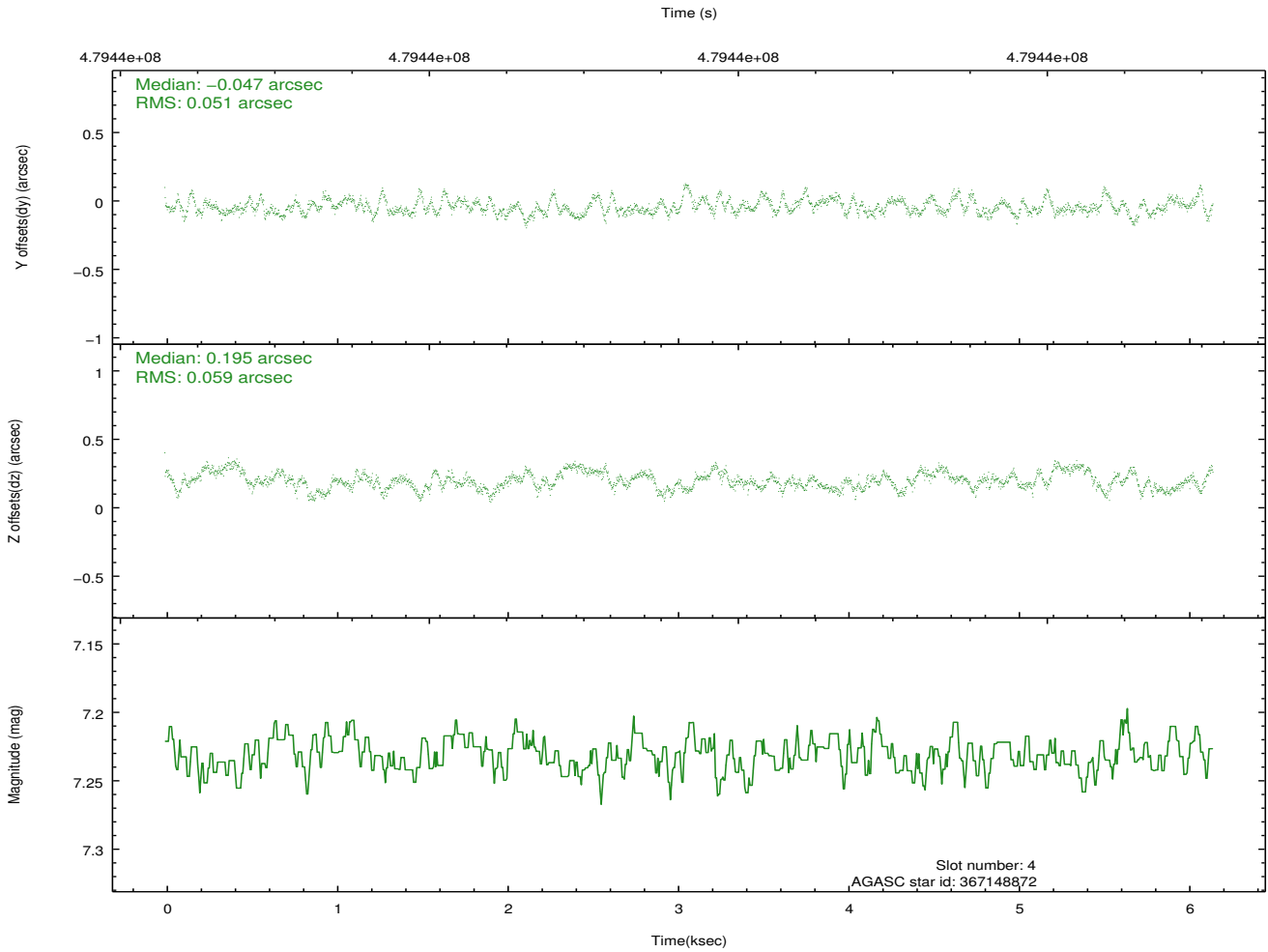
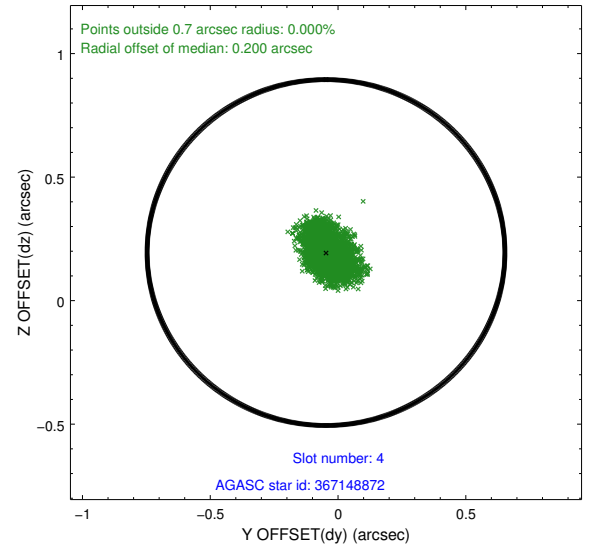
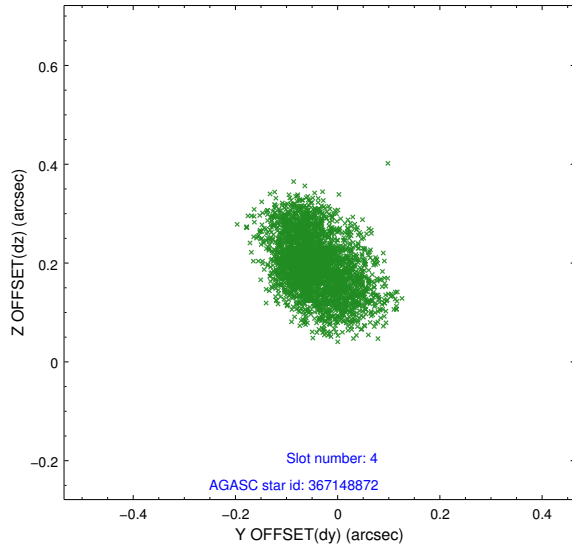
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.03	1501	0.044	0.007	0.010	0.018	0.000000	0.000000	915.83	-843.72
1	FID		ACIS-I-5	7.02	1501	-0.274	0.035	0.007	0.011	0.000000	0.000000	-1832.14	1053.22
2	FID		ACIS-I-6	7.02	1501	0.139	0.029	0.008	0.014	0.000000	0.000000	380.32	1698.88
3	GUIDE	used	367139648	8.21	3000	0.105	-0.057	0.085	0.151	11.021290	40.433909	1996.09	-2433.30
4	GUIDE	used	367148872	7.23	3001	-0.047	0.195	0.084	0.134	10.505940	40.688258	351.83	-2086.44
5	GUIDE	used	367657896	8.98	2988	0.108	-0.157	0.126	0.194	11.197765	41.313576	1293.72	691.28
6	GUIDE	used	367663272	9.29	2988	0.032	0.077	0.118	0.193	10.656279	41.699429	-569.77	1459.84
7	GUIDE	used	367674552	8.84	2995	-0.202	-0.055	0.092	0.148	11.016238	41.570845	500.61	1377.67

2.4 Star Slots

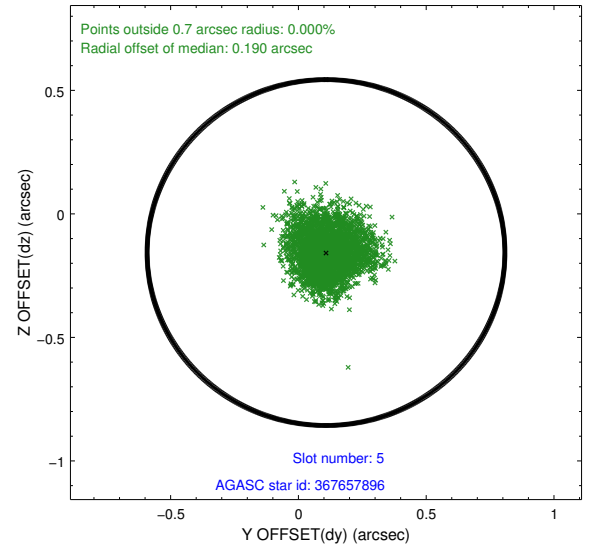
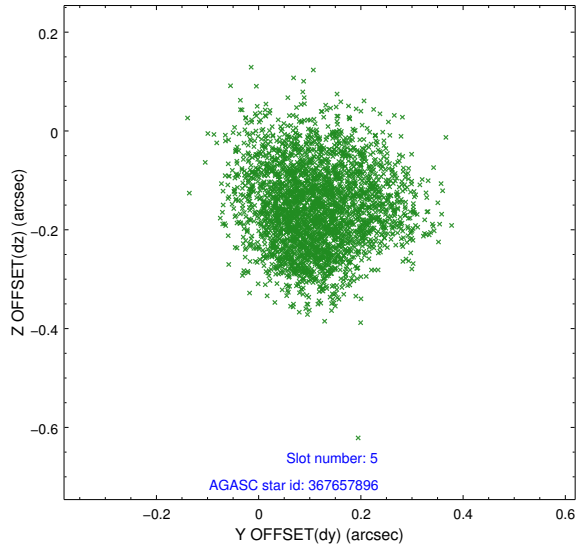
2.4.1 Slot 3



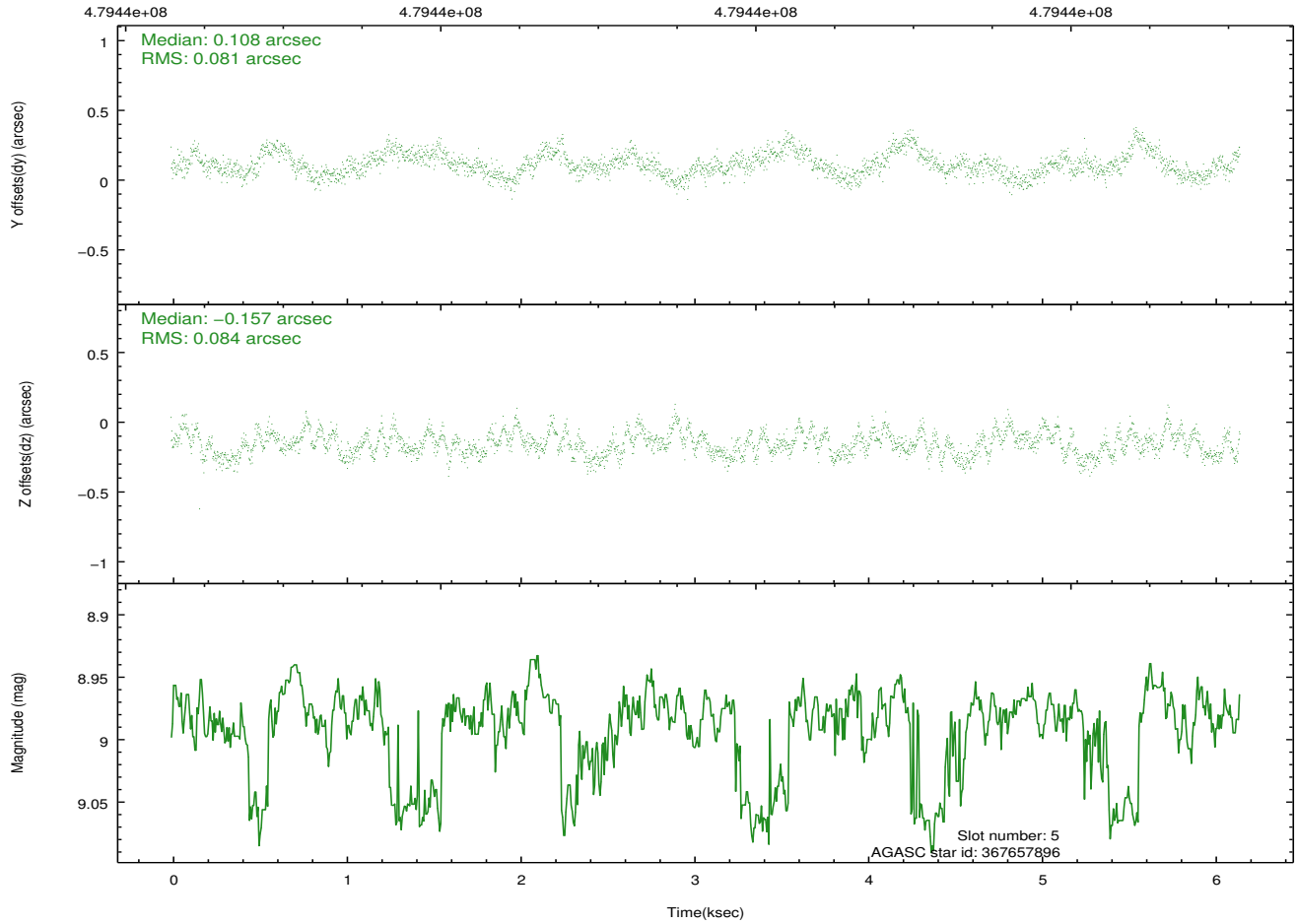
2.4.2 Slot 4



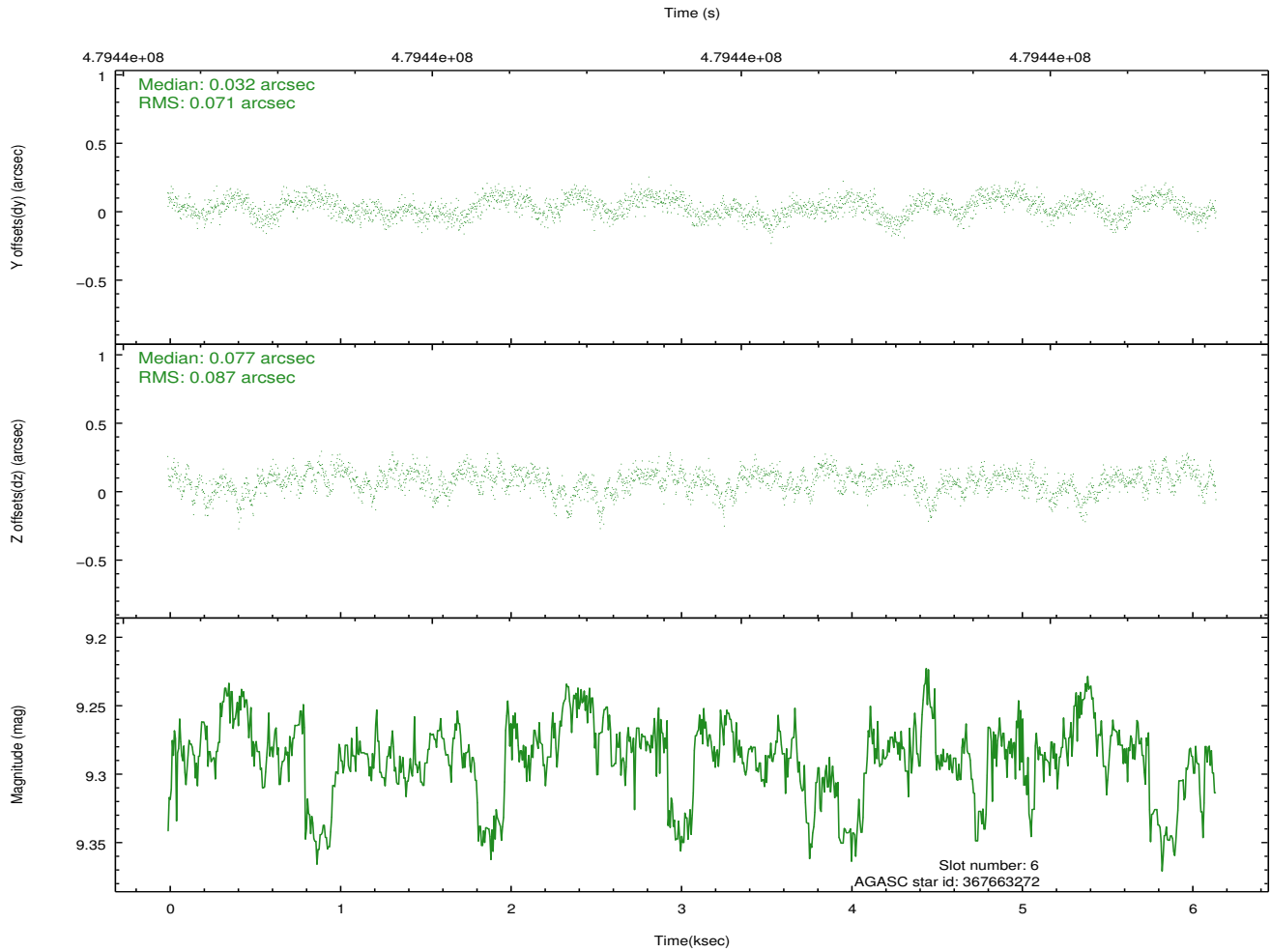
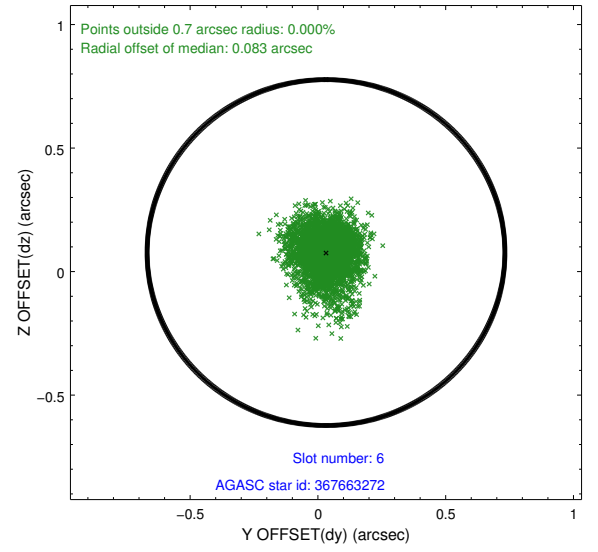
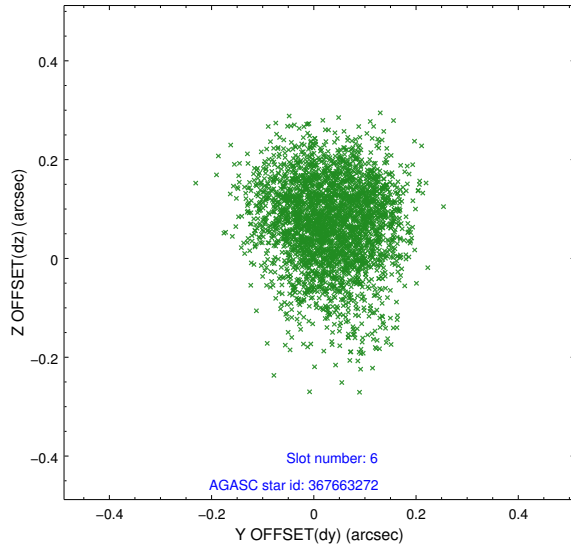
2.4.3 Slot 5



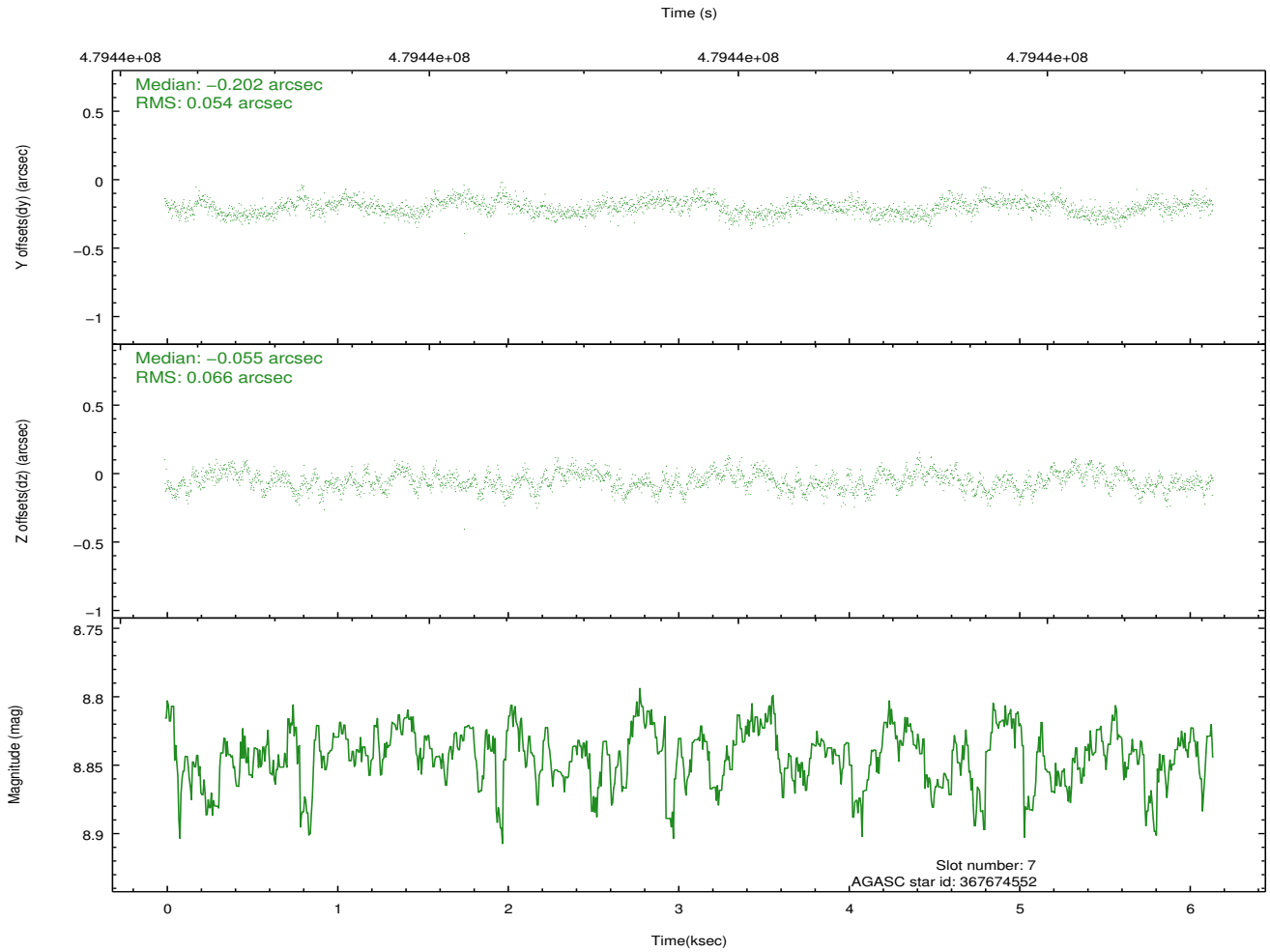
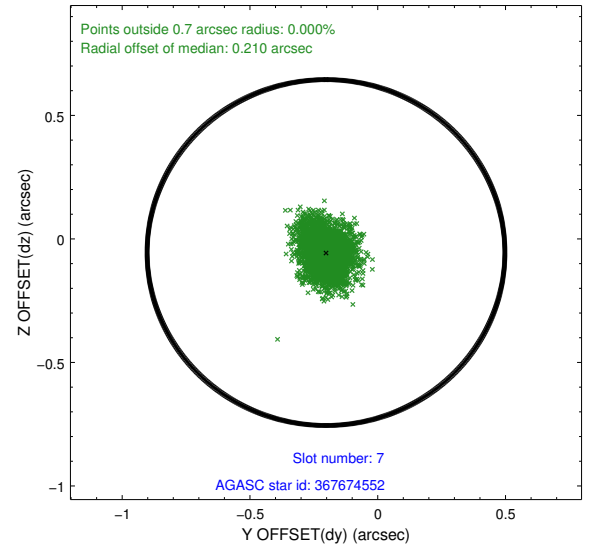
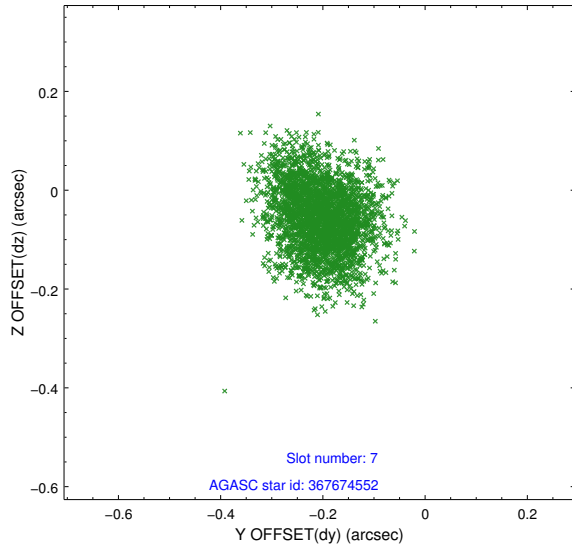
Time (s)



2.4.4 Slot 6

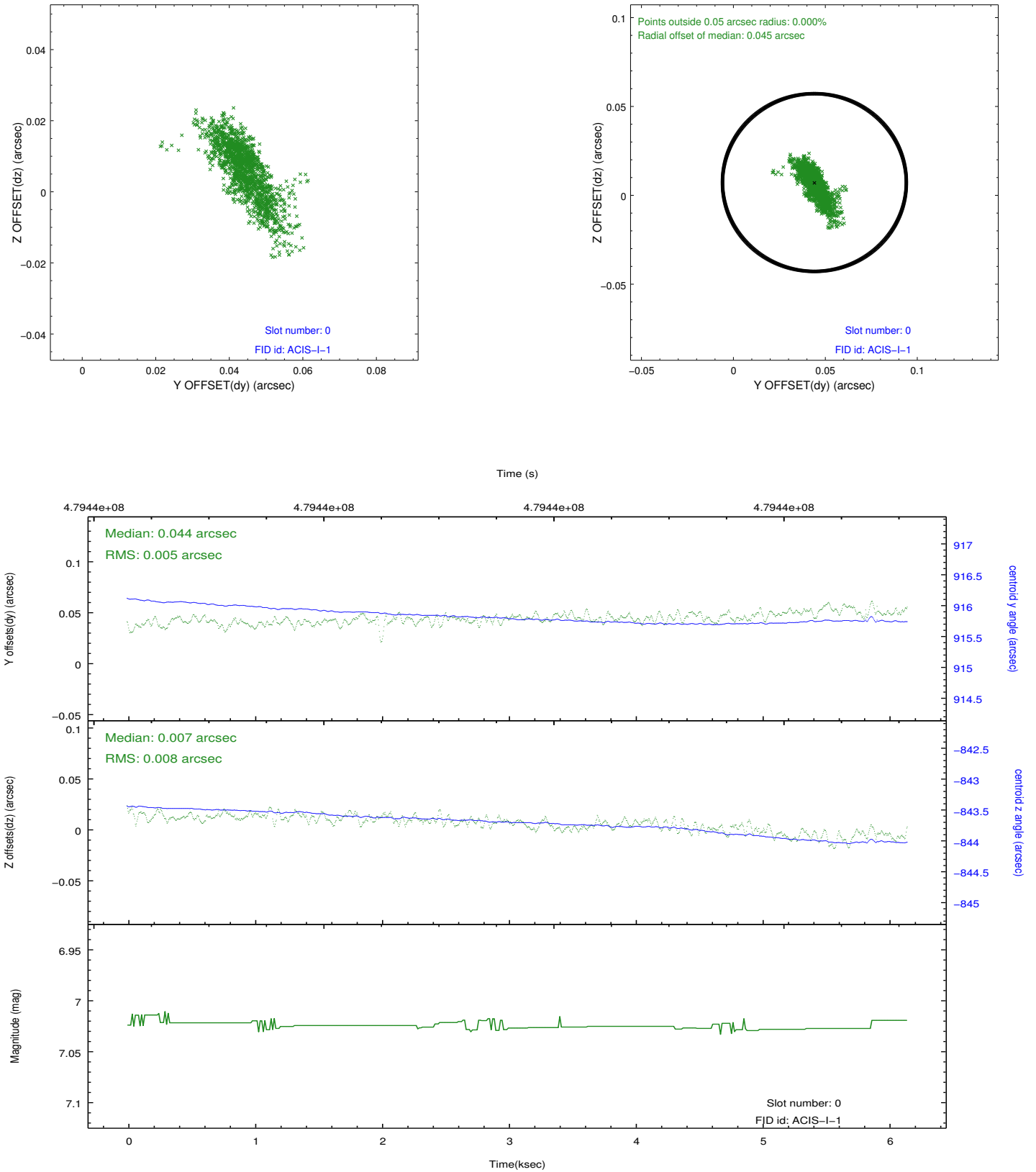


2.4.5 Slot 7

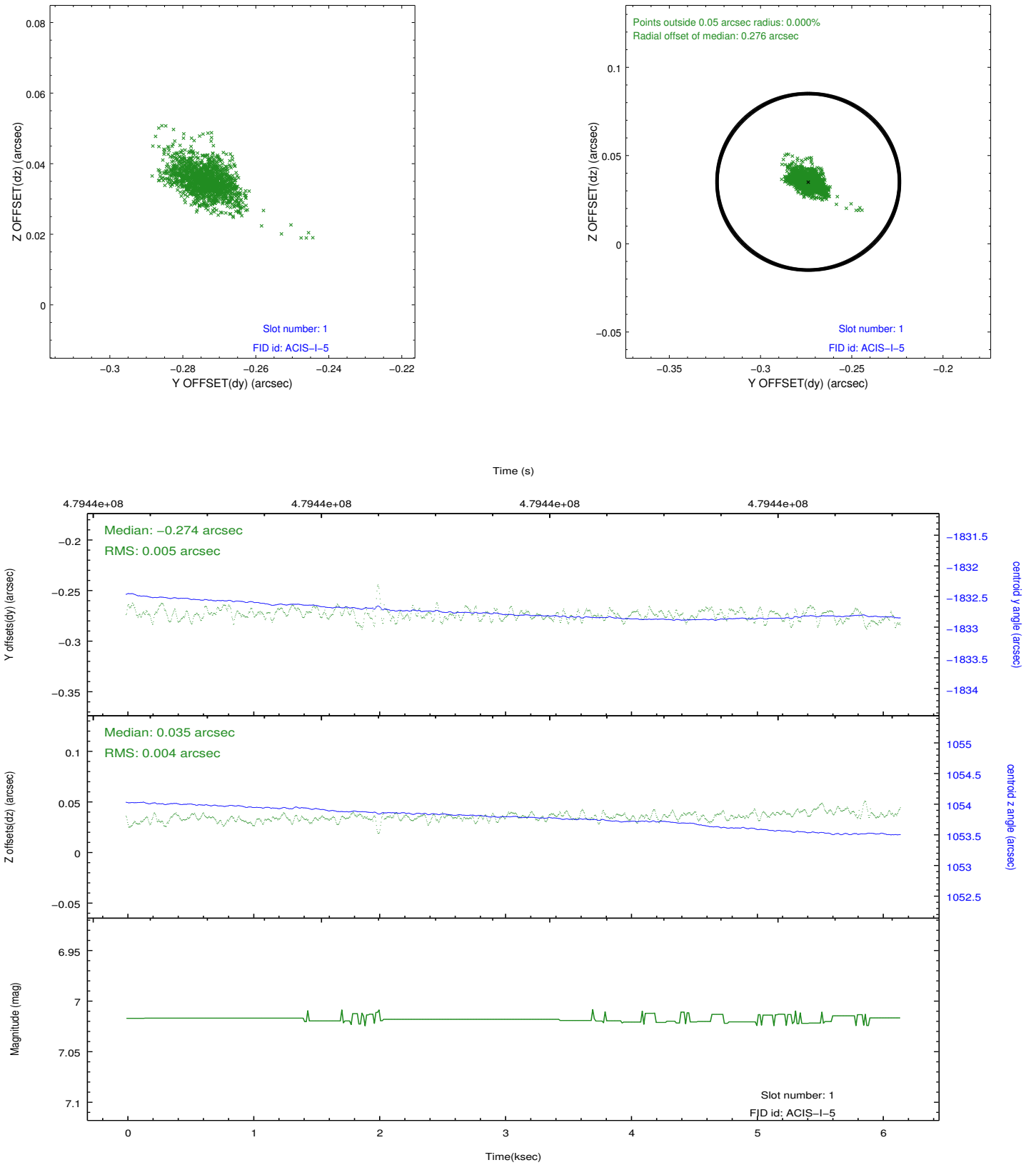


2.5 FID Slots

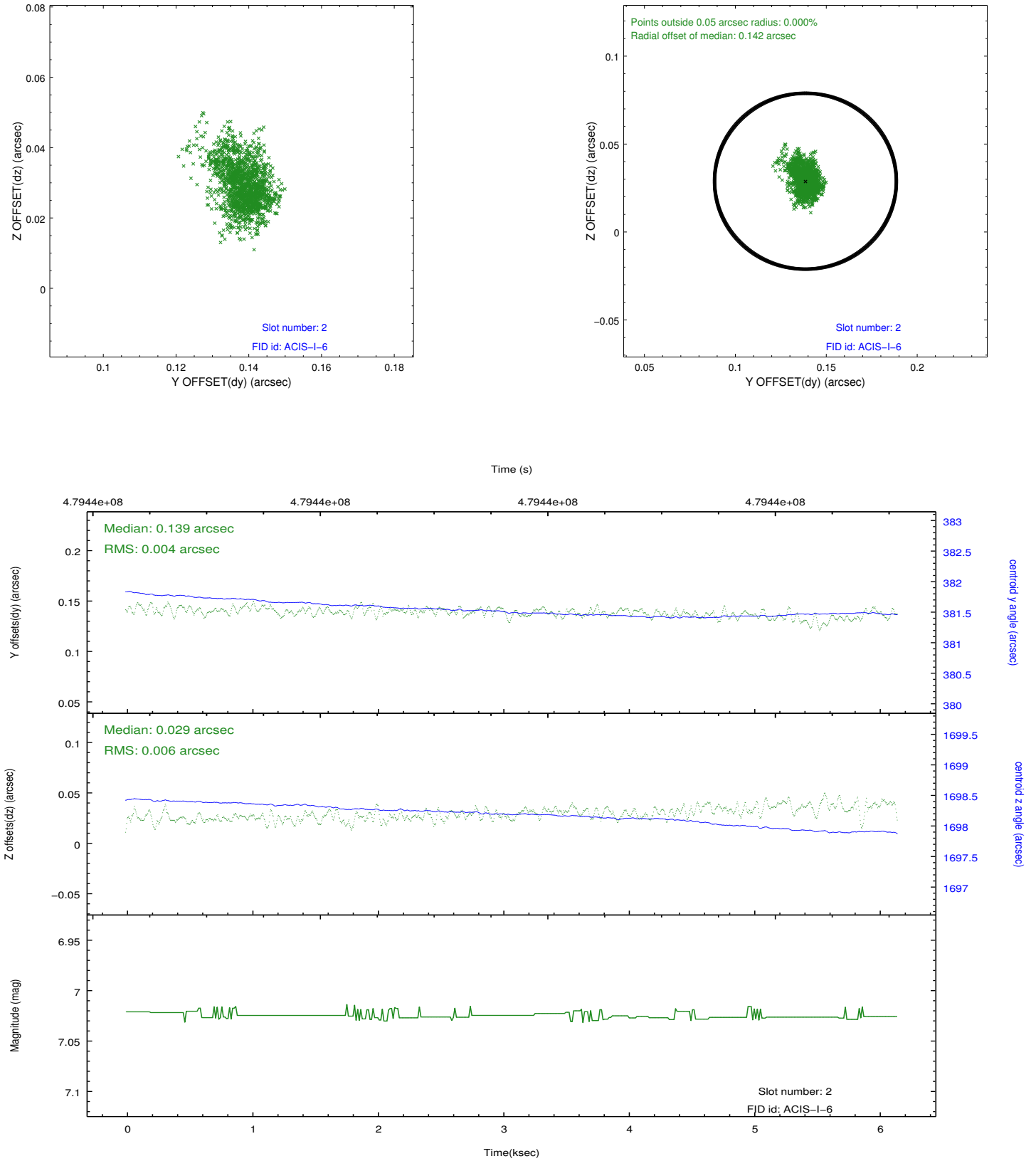
2.5.1 Slot 0



2.5.2 Slot 1



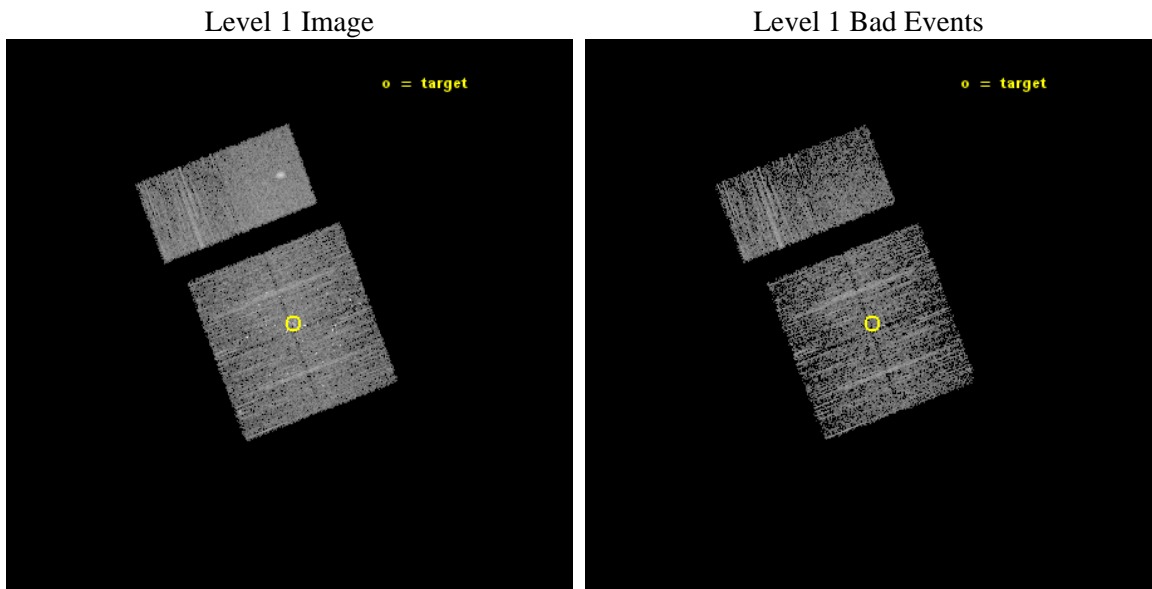
2.5.3 Slot 2



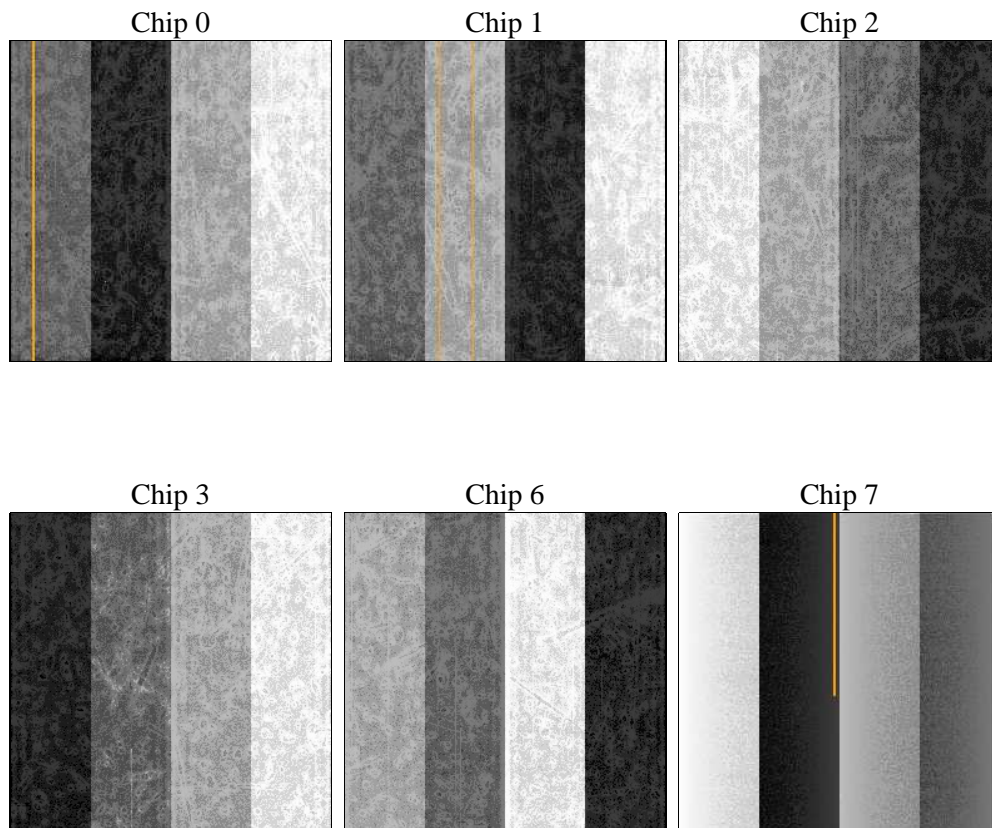
3 OBI Secondary

3.1 OBI

3.1.1 Images



3.1.2 Bias



3.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	3957.6487683058	Sum of GTIs [s]
caldsver	4.6.4	 	ontime0	3957.6491466165	Sum of GTIs [s]
date	2014-12-02T00:33:01	Date and time of file creation	ontime1	3957.6488777995	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	3957.648699224	Sum of GTIs [s]
			ontime3	3957.6487683058	Sum of GTIs [s]
			ontime6	3957.6487883329	Sum of GTIs [s]
			ontime7	3957.648768425	Sum of GTIs [s]
			l1events	146279	Number of level 1 events

3.1.4 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	20771	22596	23824	24361	23908	30819	grade 0 events	1540	2934	3075	3164	1066	1579
rejected events	17398	17441	18676	19049	21082	16345		7%	12%	12%	12%	4%	5%
rejected %	83%	77%	78%	78%	88%	53%	grade 1 events	20	41	41	84	8	35
								0%	0%	0%	0%	0%	0%
							grade 2 events	710	902	871	814	609	3060
								3%	3%	3%	3%	2%	9%
							grade 3 events	325	334	303	354	277	1275
								1%	1%	1%	1%	1%	4%
							grade 4 events	272	344	318	360	279	1344
								1%	1%	1%	1%	1%	4%
							grade 5 events	1016	1010	1025	1164	1166	3097
								4%	4%	4%	4%	4%	10%
							grade 6 events	532	658	584	625	596	7231
								2%	2%	2%	2%	2%	23%
							grade 7 events	16356	16373	17607	17796	19907	13198
								78%	72%	73%	73%	83%	42%

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.88404306864741

A.2 Comments

Joint proposal with HST.

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.