

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 10554 - L2 Version 3
Chandra X-Ray Center

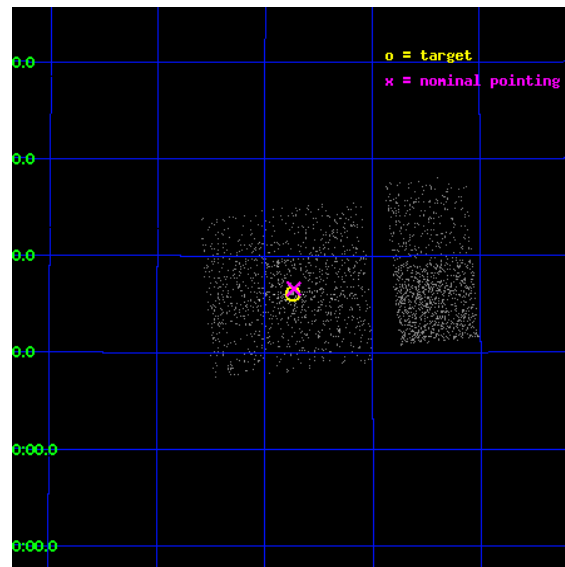
L2 Processing Date : Jun 8 2012

Contents

1	Front	2
2	OBI Primary	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	OBI Secondary	17
3.1	OBI	17
3.1.1	Images	17
3.1.2	Bias	17
3.1.3	Parameters	18
3.1.4	Events	18
A	Summary	19
A.1	Status	19
A.2	Comments	19

1 Front

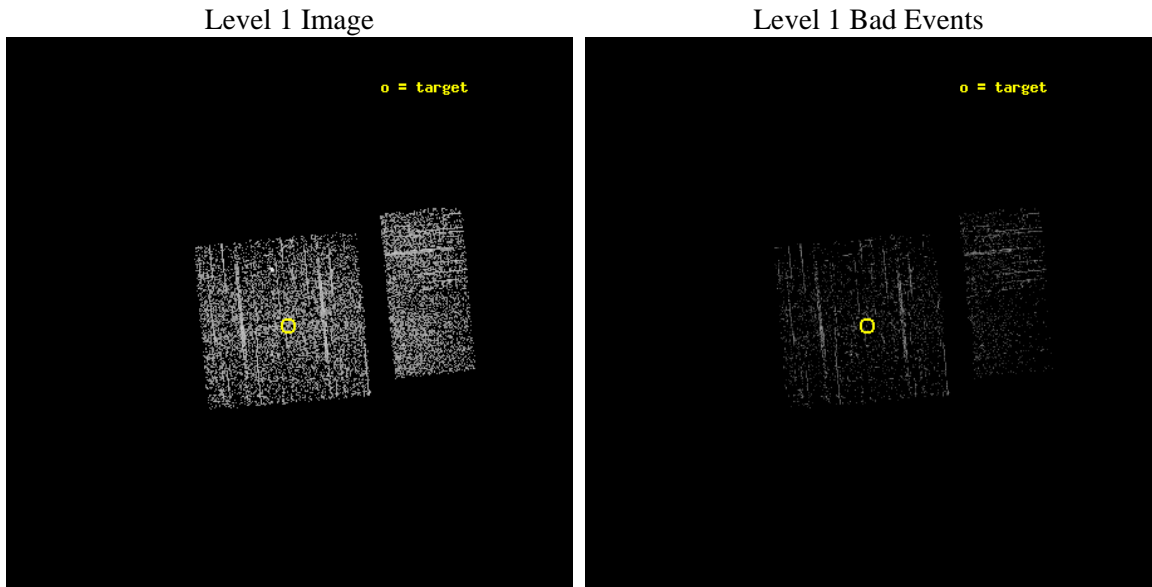
seq_num	600747	Sequence number
obs_id	10554	Observation id
title	Monitoring M31 for BHXNe	Proposal title
observer	Dr. Michael Garcia	Principal investigator
object	M31	Source name
dtcycle	0	
cycle	P	events are from which exps? P[rimary] S[econdar
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.682731202123	Nominal RA [deg]
dec_nom	41.276871734006	Nominal Dec [deg]
roll_nom	84.744385309217	Nominal Roll [deg]
revision	3	Processing version of data
ontime	952.7605702877	Sum of GTIs [s]
livetime	149.98749584731	Livetime [s]
ontime0	952.7605702877	Sum of GTIs [s]
ontime1	952.7605702877	Sum of GTIs [s]
ontime2	952.76055032015	Sum of GTIs [s]
ontime3	952.7605702877	Sum of GTIs [s]
ontime6	952.7605702877	Sum of GTIs [s]
ontime7	952.76054042578	Sum of GTIs [s]
l2events	2764	Number of level 2 events



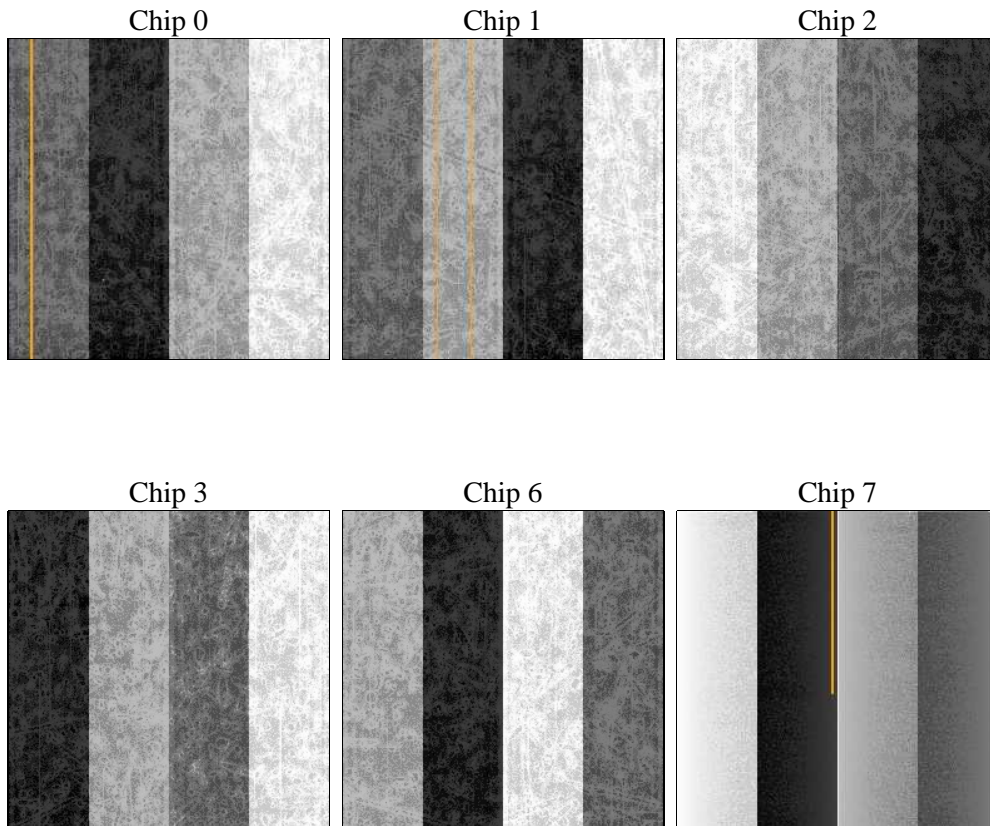
2 OBI Primary

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	8.4.5	Processing system revision	ontime	952.7605702877	Sum of GTIs [s]
caldsver	4.4.10	 	ontime0	952.7605702877	Sum of GTIs [s]
date	2012-06-08T13:23:31	Date and time of file creation	ontime1	952.7605702877	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	952.76055032015	Sum of GTIs [s]
			ontime3	952.7605702877	Sum of GTIs [s]
			ontime6	952.7605702877	Sum of GTIs [s]
			ontime7	952.76054042578	Sum of GTIs [s]
			l1events	24654	Number of level 1 events

2.1.4 Events

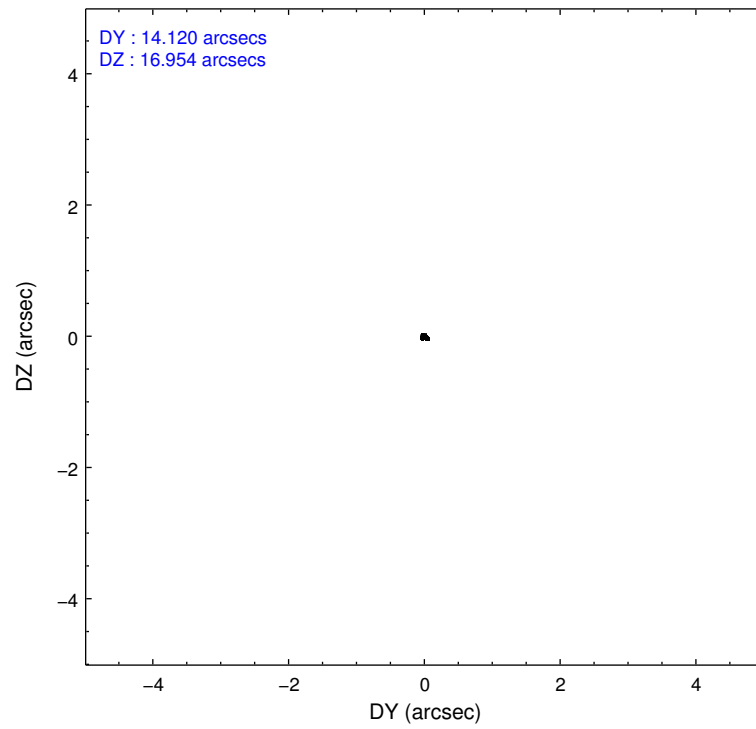
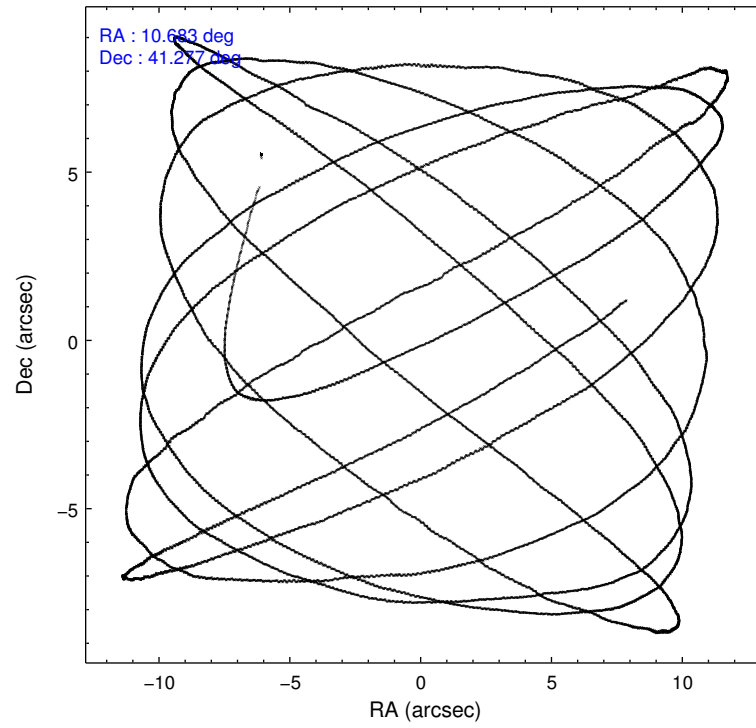
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	4068	4082	4175	4128	4769	3432
rejected events	3421	3617	3796	3598	4438	2371
rejected %	84%	88%	90%	87%	93%	69%

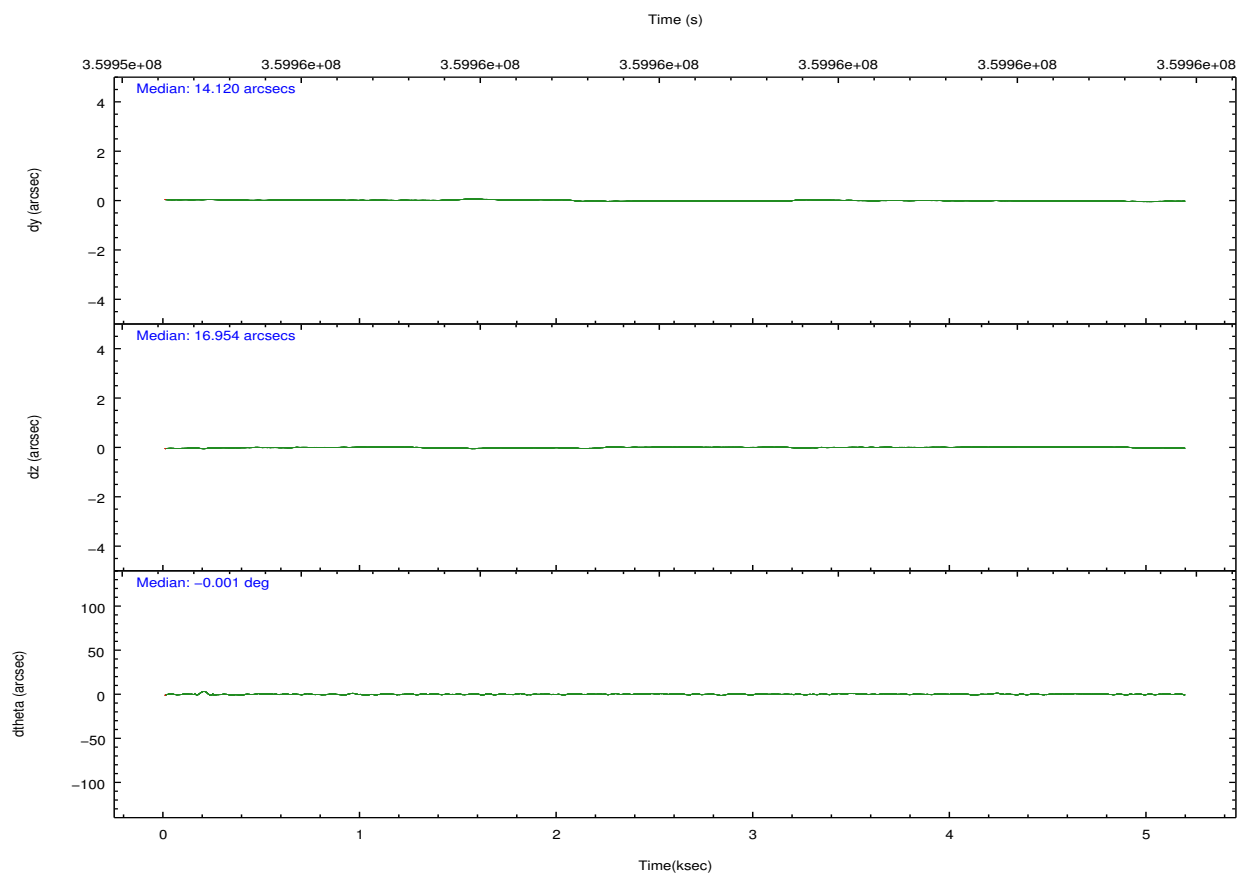
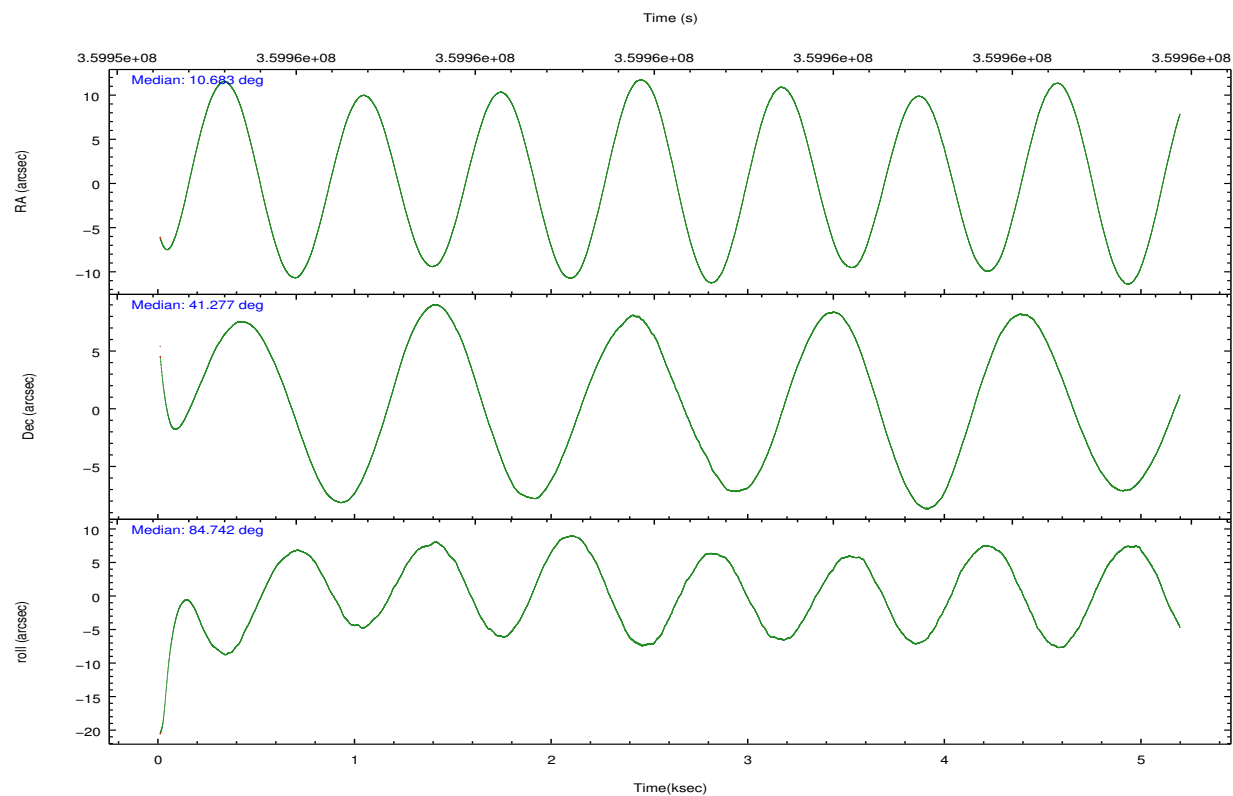
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	144	183	121	258	89	97
	3%	4%	2%	6%	1%	2%
grade 1 events	1	1	1	3	2	4
	0%	0%	0%	0%	0%	0%
grade 2 events	89	114	96	102	80	242
	2%	2%	2%	2%	1%	7%
grade 3 events	49	56	53	50	44	101
	1%	1%	1%	1%	0%	2%
grade 4 events	300	40	45	55	43	101
	7%	0%	1%	1%	0%	2%
grade 5 events	124	127	135	165	171	324
	3%	3%	3%	3%	3%	9%
grade 6 events	69	76	67	71	79	533
	1%	1%	1%	1%	1%	15%
grade 7 events	3292	3485	3657	3424	4261	2030
	80%	85%	87%	82%	89%	59%

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	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	10.698205	10.68273120212281	CCD I2 on	Y	Y
[deg] Pointing Dec	41.251945	41.2768717340059	CCD I3 on	Y	Y
[deg] Pointing Roll	84.525549	84.74438530921684	CCD S0 on	N	N
[s] Window start time (MET)	359596866.184000	359596866.184000	CCD S1 on	N	N
[s] Window stop time (MET)	360201606.184000	360201606.184000	CCD S2 on	O2	Y
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S3 on	O1	Y
[mm] SIM defocus	0	0.001439871863259334	CCD S4 on	N	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S5 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	359954694.184000	359953643.73336	On-chip summing requested	N	N
Observation start date	2009-05-29T03:23:48	2009-05-29T03:07:23	Subarray requested	NONE	NONE
[s] Observation end time (MET)	359959694.184000	359960696.75871	Alternating exposures requested	Y	Y
Observation end date	2009-05-29T04:47:08	2009-05-29T05:04:56	[s] Primary exposure time	0.600000	0.6
Read mode	TIMED	TIMED	[s] Secondary exposure time	0.000000	3.2
			Duty cycle	5	5

2.3 Aspect



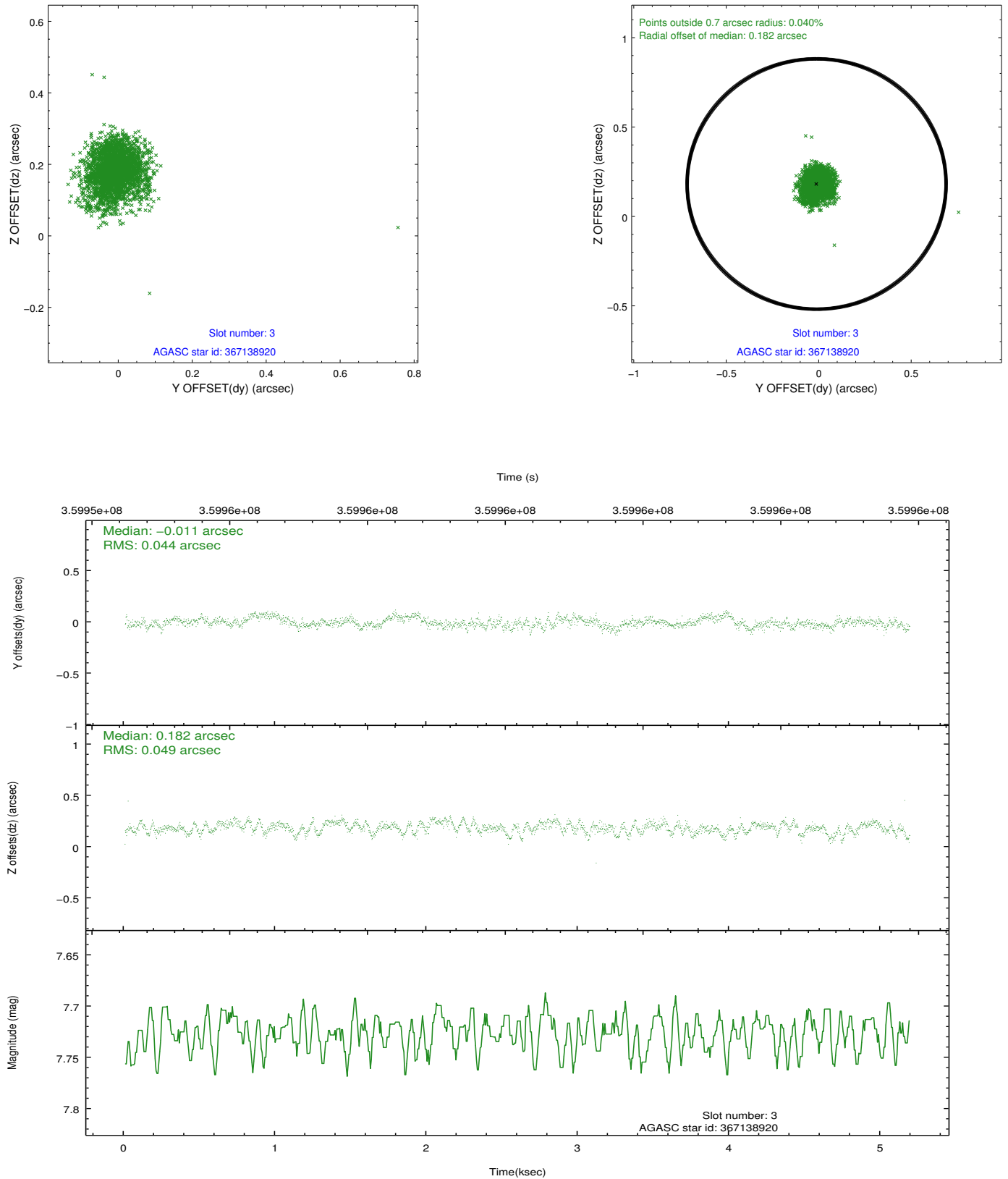


Slot Statistics

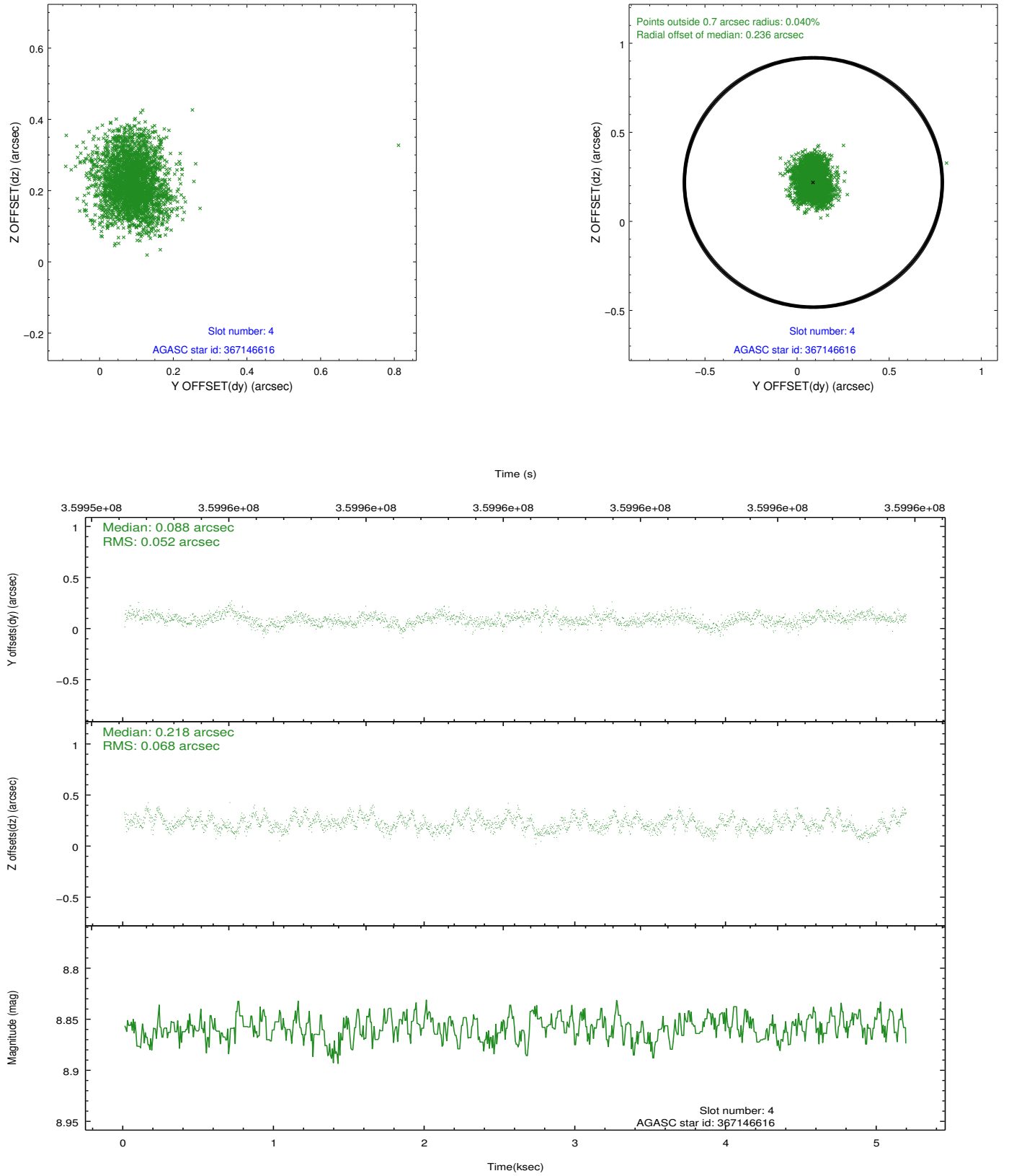
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.00	1266	0.067	-0.024	0.012	0.018	0.000000	0.000000	925.41	-840.64
1	FID	ACIS-I-5	7.00	1266	-0.214	0.072	0.009	0.016	0.000000	0.000000	-1822.30	1056.40
2	FID	ACIS-I-6	7.00	1266	0.056	0.023	0.009	0.015	0.000000	0.000000	389.72	1702.14
3	GUIDE	367138920	7.73	2530	-0.011	0.182	0.068	0.111	11.513485	40.808909	-1365.46	-2363.10
4	GUIDE	367146616	8.86	2527	0.088	0.218	0.089	0.145	11.418645	41.190163	-27.17	-1963.77
5	GUIDE	367148872	7.21	2531	0.035	-0.231	0.077	0.122	10.505940	40.688258	-2069.73	328.10
6	GUIDE	367663272	9.28	2531	-0.036	-0.282	0.094	0.158	10.656279	41.699429	1591.93	266.72
7	GUIDE	367674552	8.84	2530	-0.083	0.113	0.076	0.125	11.016238	41.570845	1226.95	-742.63

2.4 Star Slots

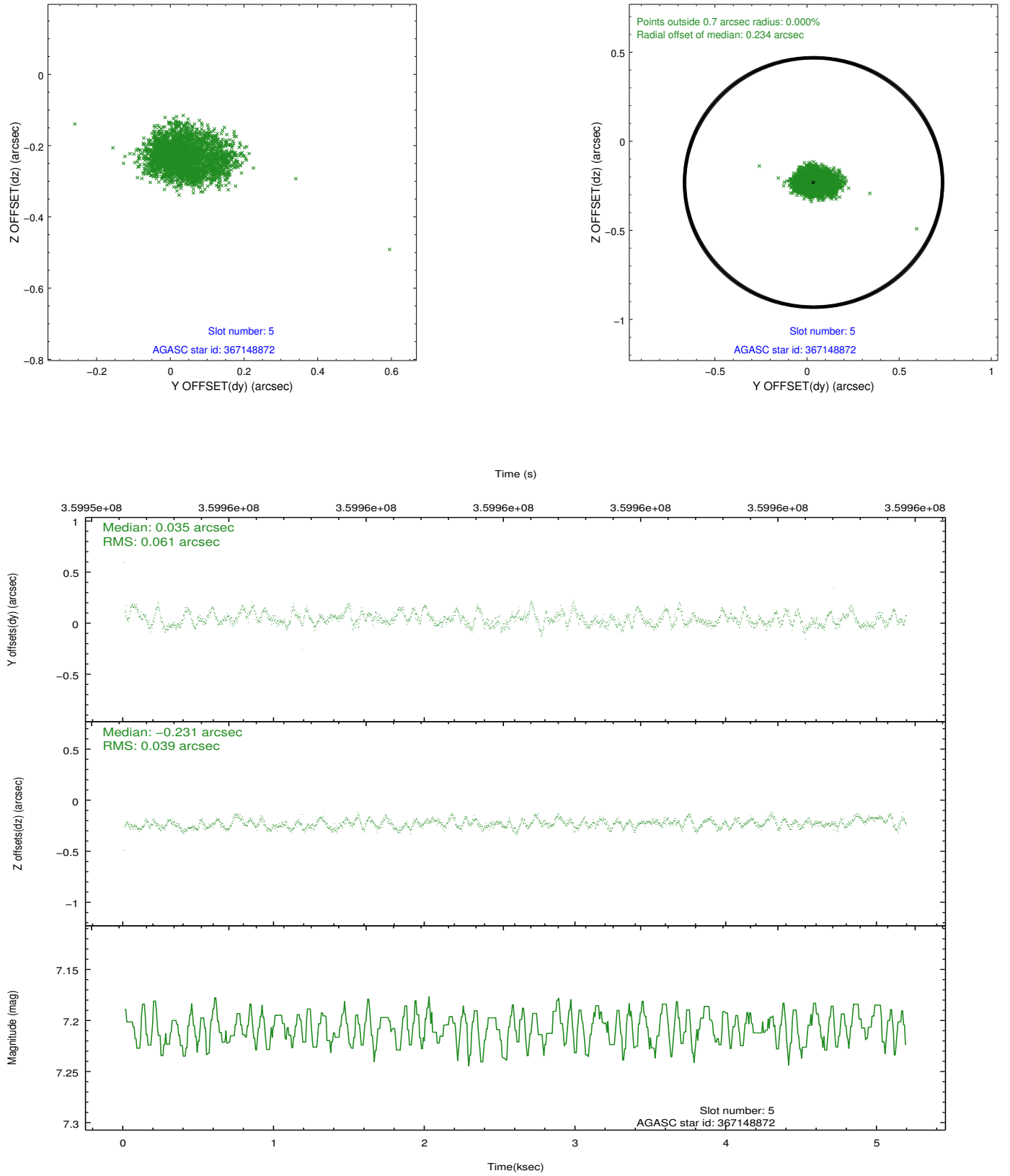
2.4.1 Slot 3



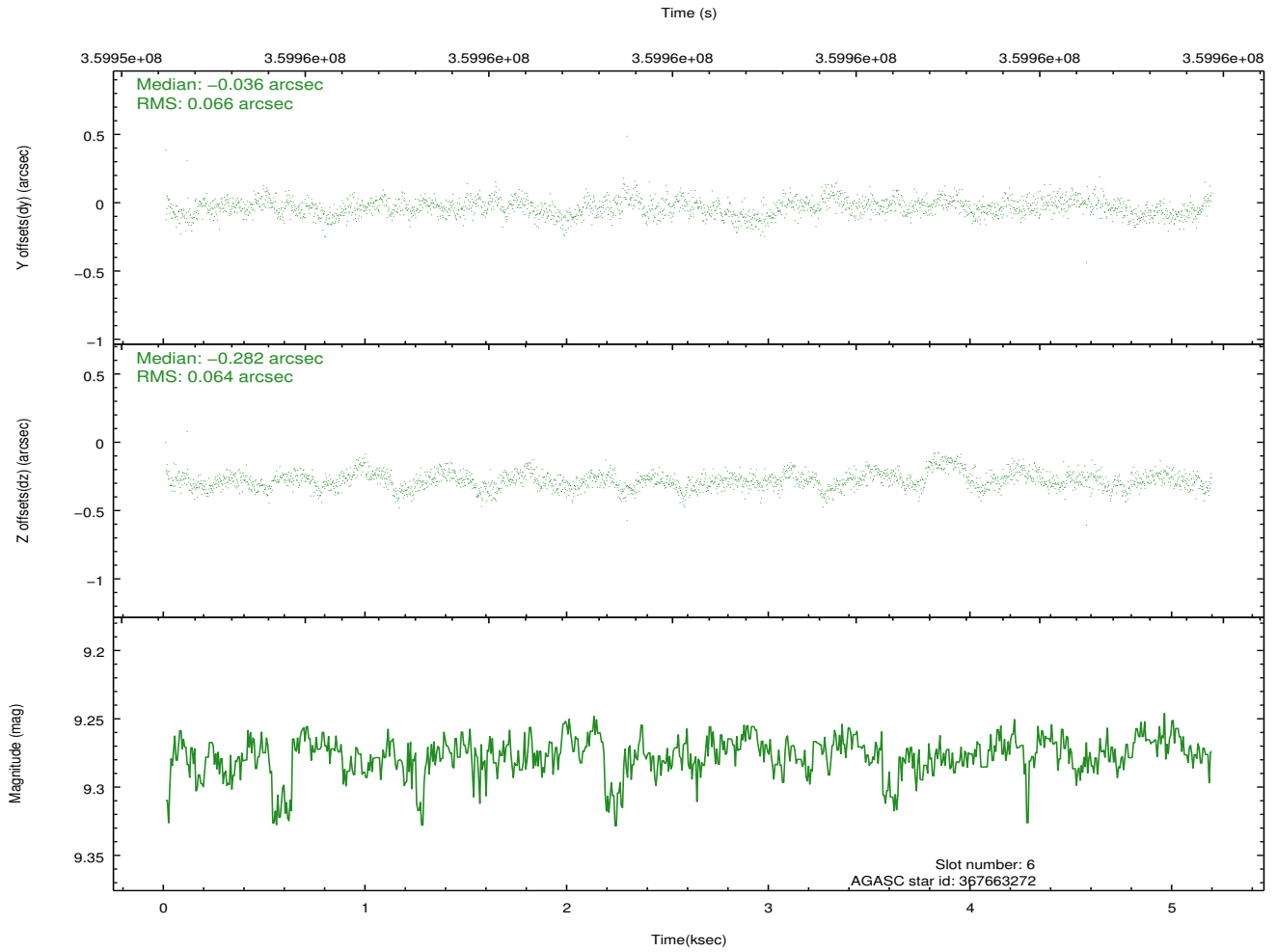
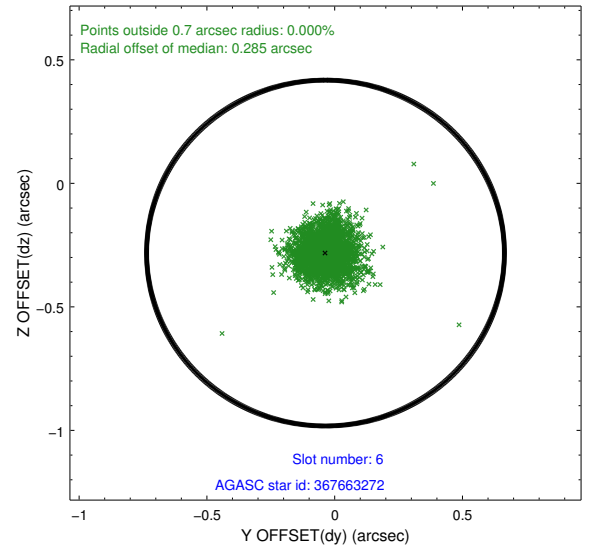
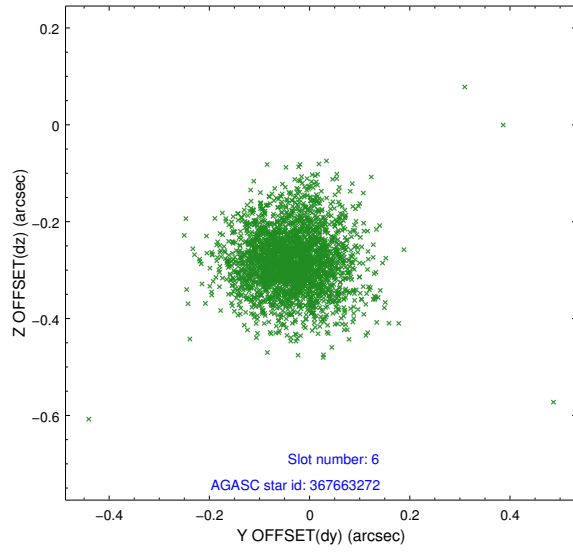
2.4.2 Slot 4



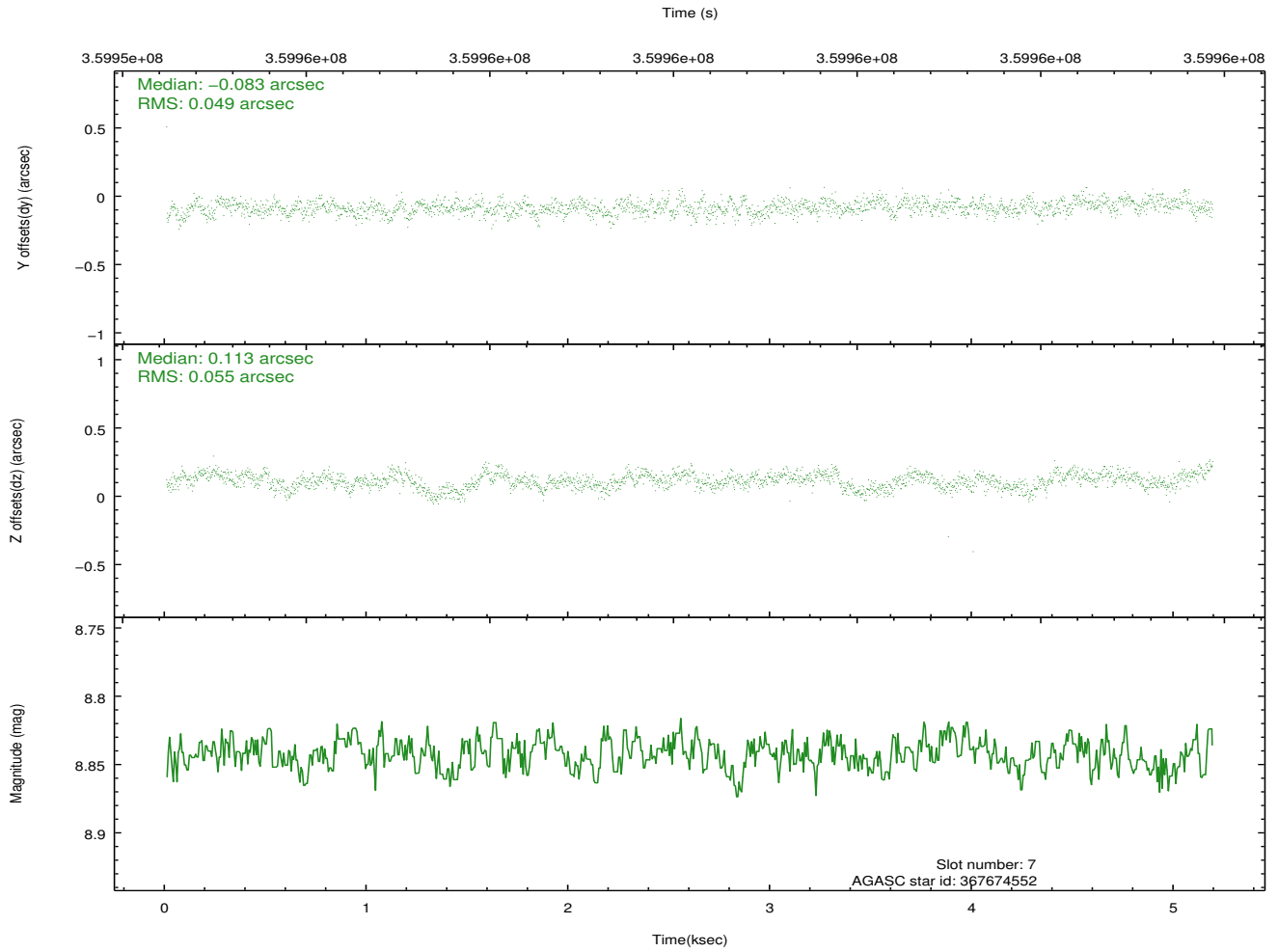
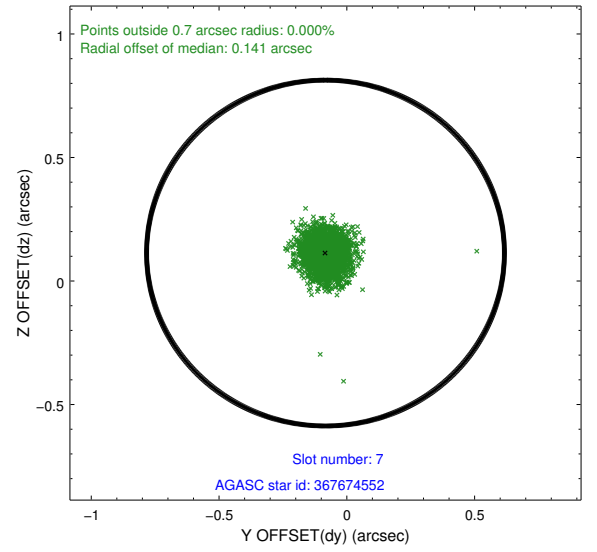
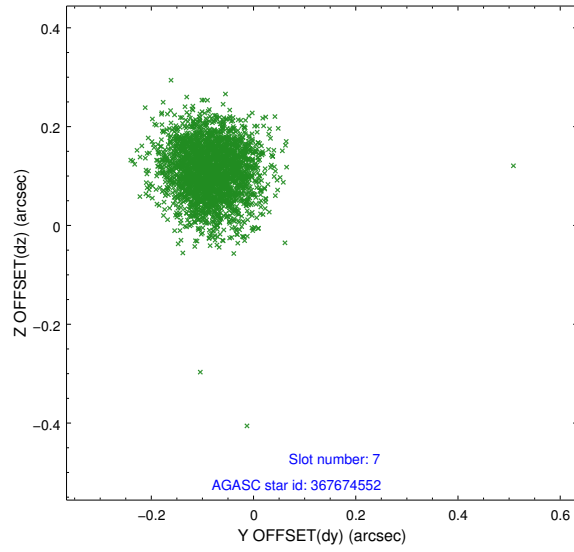
2.4.3 Slot 5



2.4.4 Slot 6

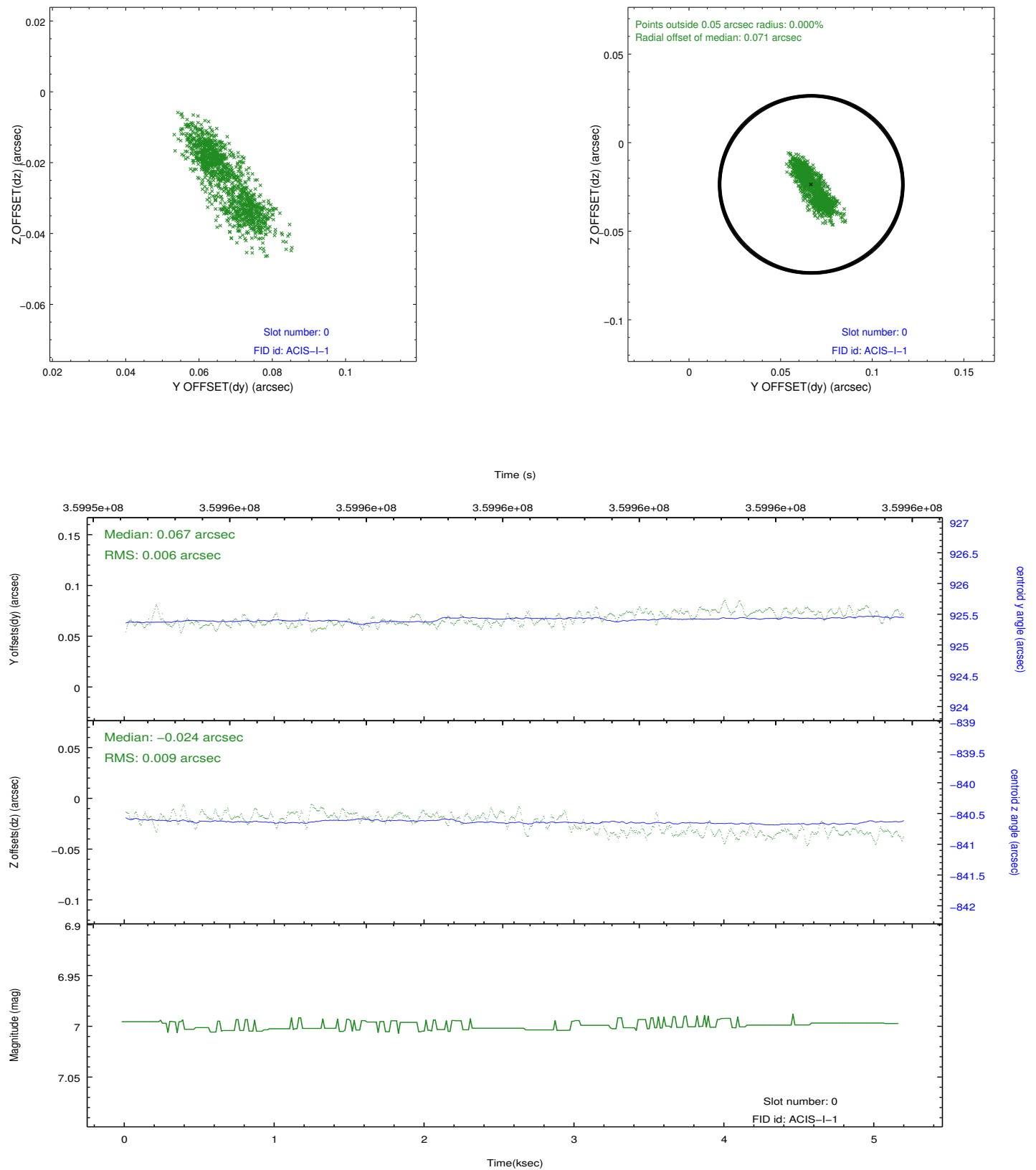


2.4.5 Slot 7

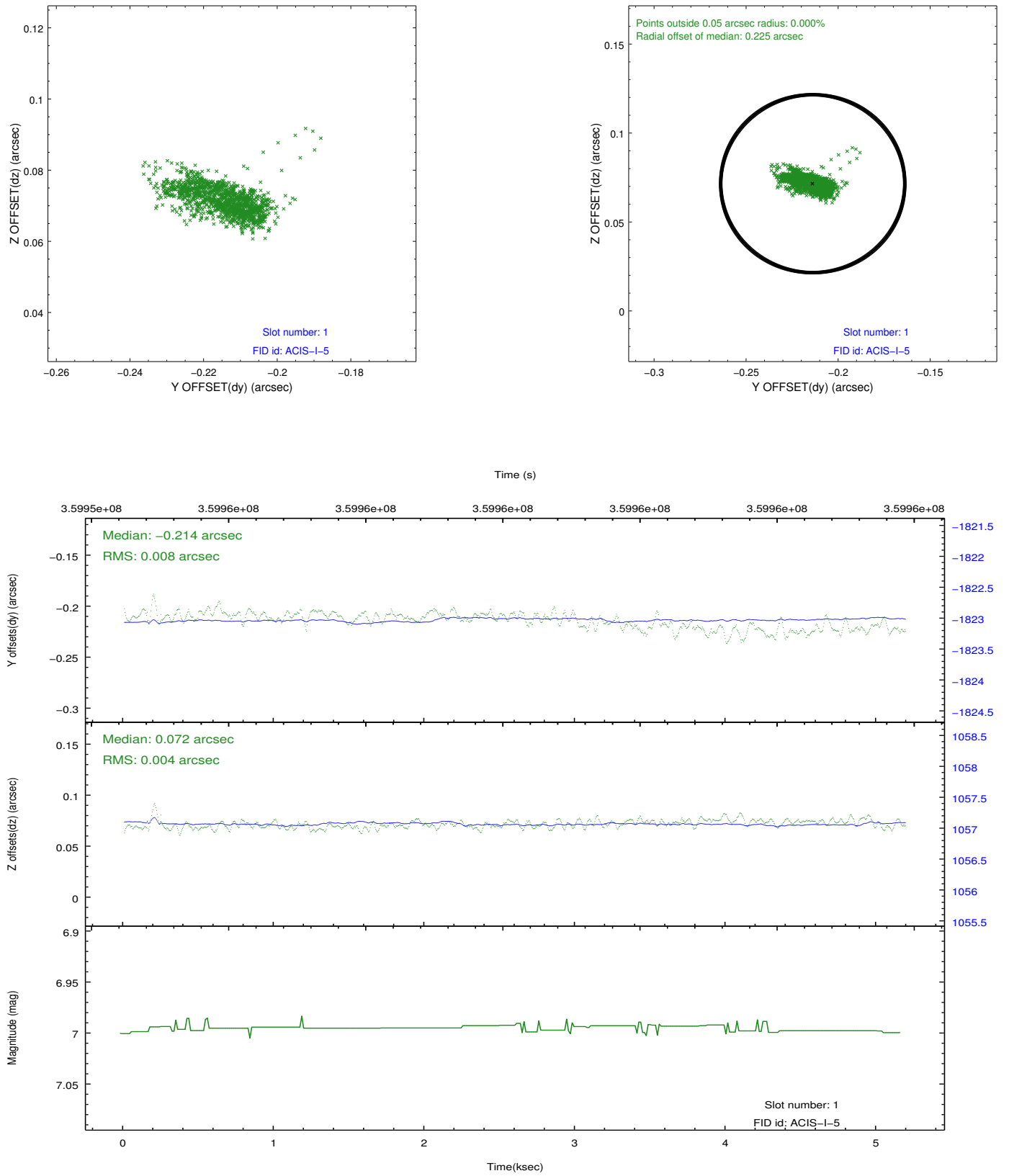


2.5 FID Slots

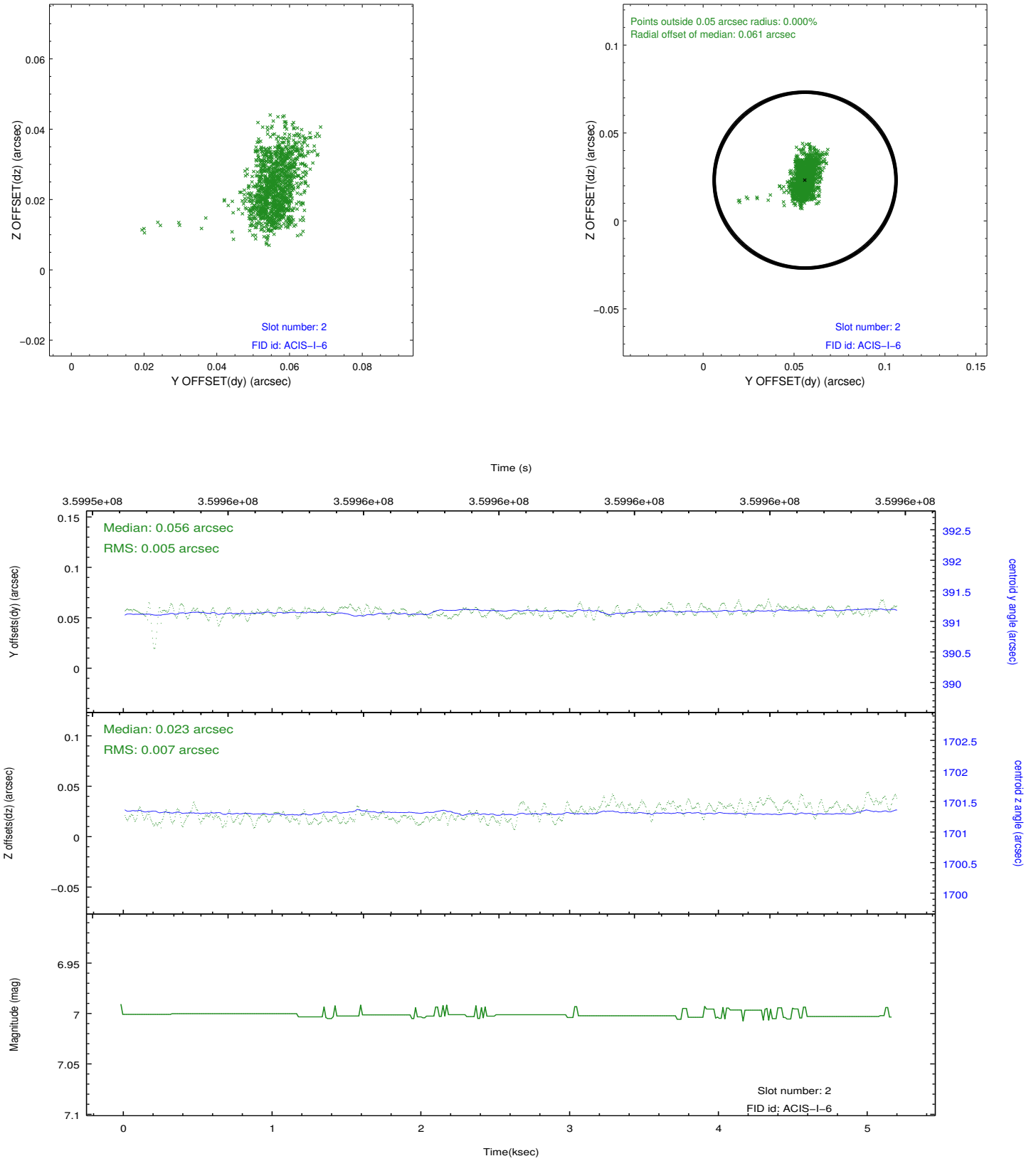
2.5.1 Slot 0



2.5.2 Slot 1



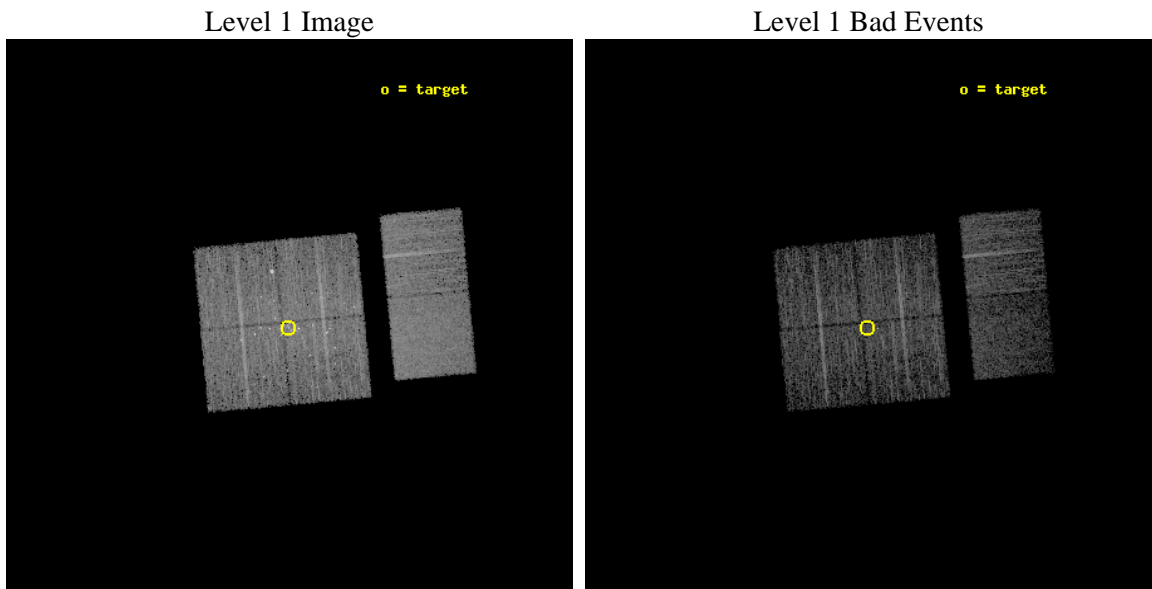
2.5.3 Slot 2



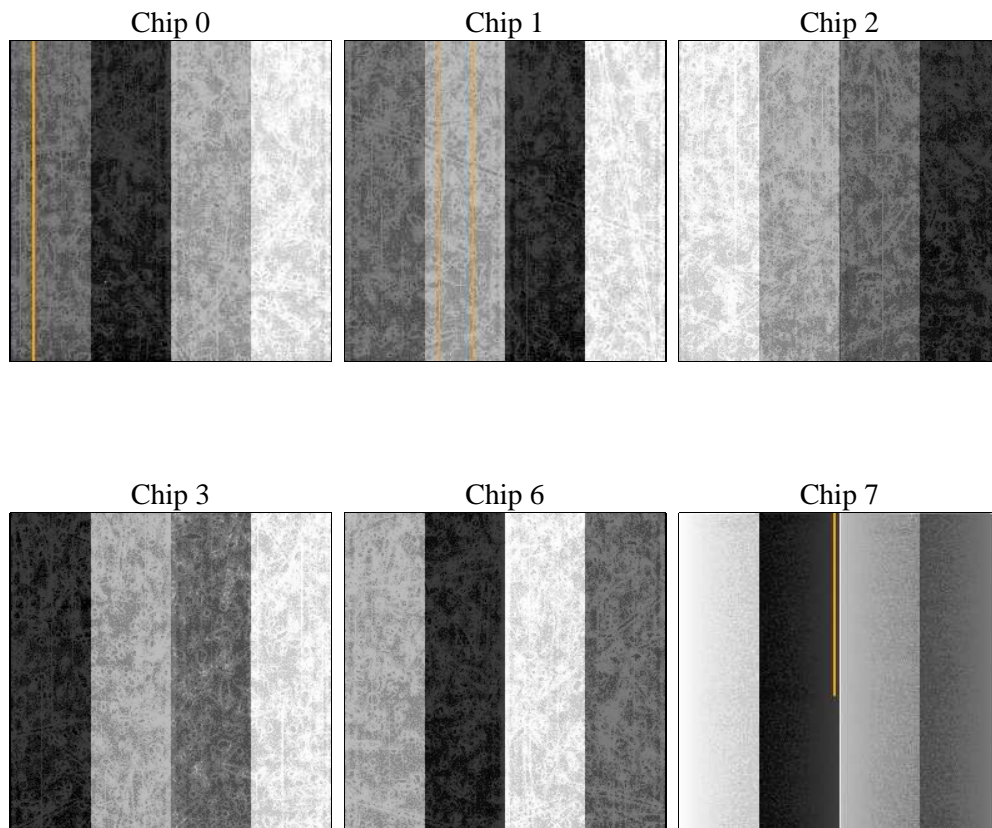
3 OBI Secondary

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	8.4.5	Processing system revision	ontime	4087.3590689301	Sum of GTIs [s]
caldsver	4.4.10	 	ontime0	4087.3590095043	Sum of GTIs [s]
date	2012-06-08T13:24:32	Date and time of file creation	ontime1	4087.3590996861	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	4087.3592174649	Sum of GTIs [s]
			ontime3	4087.3590689301	Sum of GTIs [s]
			ontime6	4087.3592687249	Sum of GTIs [s]
			ontime7	4087.3589407206	Sum of GTIs [s]
			l1events	227550	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	37478	35707	37971	39783	36325	40286	grade 0 events	2685	3891	2389	5093	1333	1672
rejected events	30870	28643	33055	31481	32526	21993		7%	10%	6%	12%	3%	4%
rejected %	82%	80%	87%	79%	89%	54%	grade 1 events	45	52	33	146	15	51
								0%	0%	0%	0%	0%	0%
							grade 2 events	1073	1202	1010	1296	860	3730
								2%	3%	2%	3%	2%	9%
							grade 3 events	462	516	408	552	364	1707
								1%	1%	1%	1%	1%	4%
							grade 4 events	1603	556	433	537	391	1651
								4%	1%	1%	1%	1%	4%
							grade 5 events	1314	1360	1206	1494	1422	4318
								3%	3%	3%	3%	3%	10%
							grade 6 events	795	903	681	830	854	9540
								2%	2%	1%	2%	2%	23%
							grade 7 events	29501	27227	31811	29835	31086	17617
								78%	76%	83%	74%	85%	43%

A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.06.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.04013247

A.2 Comments

Joint proposal with HST. Time constraint met.

=====

A spatial region of the original bias map for CCD = 2 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 = 2 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:
(10.64628,41.42258),(10.64266,41.42282),(10.63700,41.37639),(10.64062,41.37615)