

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 13299 - L2 Version 1
Chandra X-Ray Center

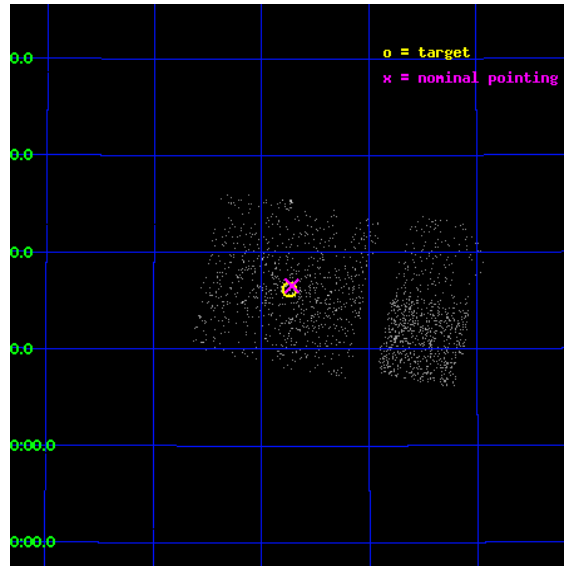
L2 Processing Date : Jun 22 2012

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1 Front

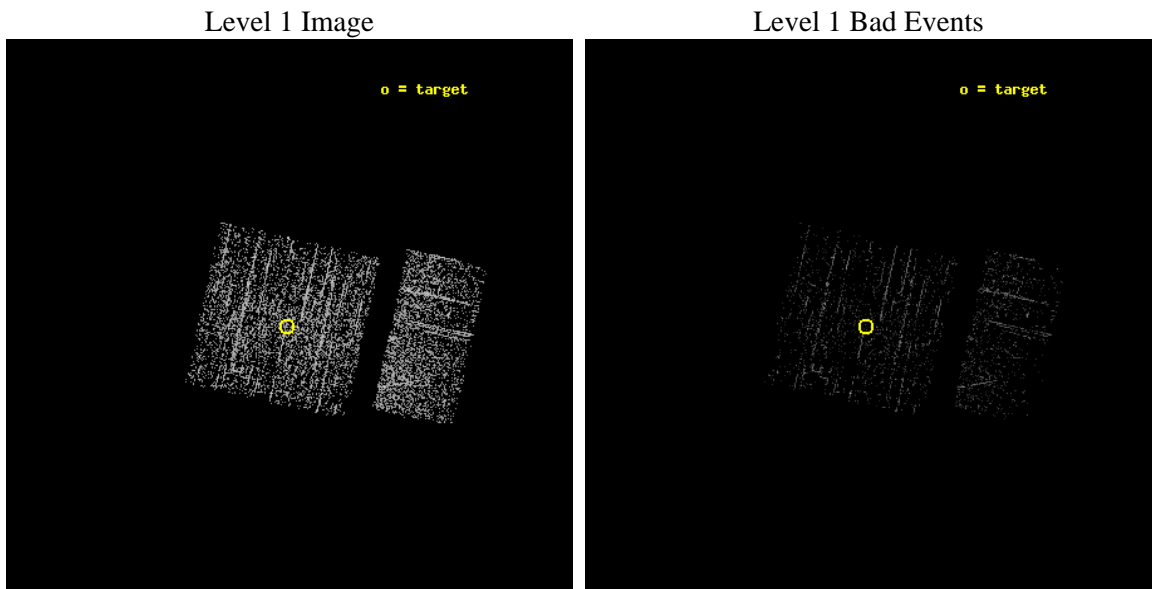
seq_num	600987	Sequence number
obs_id	13299	Observation id
title	Black Hole X-ray Novae in M31	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	M31	Source name
dtcycle	0	
cycle	P	events are from which exps? P[rimary] S[econdar
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.679660250157	Nominal RA [deg]
dec_nom	41.275924447929	Nominal Dec [deg]
roll_nom	102.36330548029	Nominal Roll [deg]
revision	1	Processing version of data
ontime	925.79330456257	Sum of GTIs [s]
livetime	145.7421977293	Livetime [s]
ontime0	925.79330456257	Sum of GTIs [s]
ontime1	925.79330456257	Sum of GTIs [s]
ontime2	925.79330456257	Sum of GTIs [s]
ontime3	925.79330456257	Sum of GTIs [s]
ontime6	925.79330456257	Sum of GTIs [s]
ontime7	925.79330456257	Sum of GTIs [s]
l2events	2106	Number of level 2 events



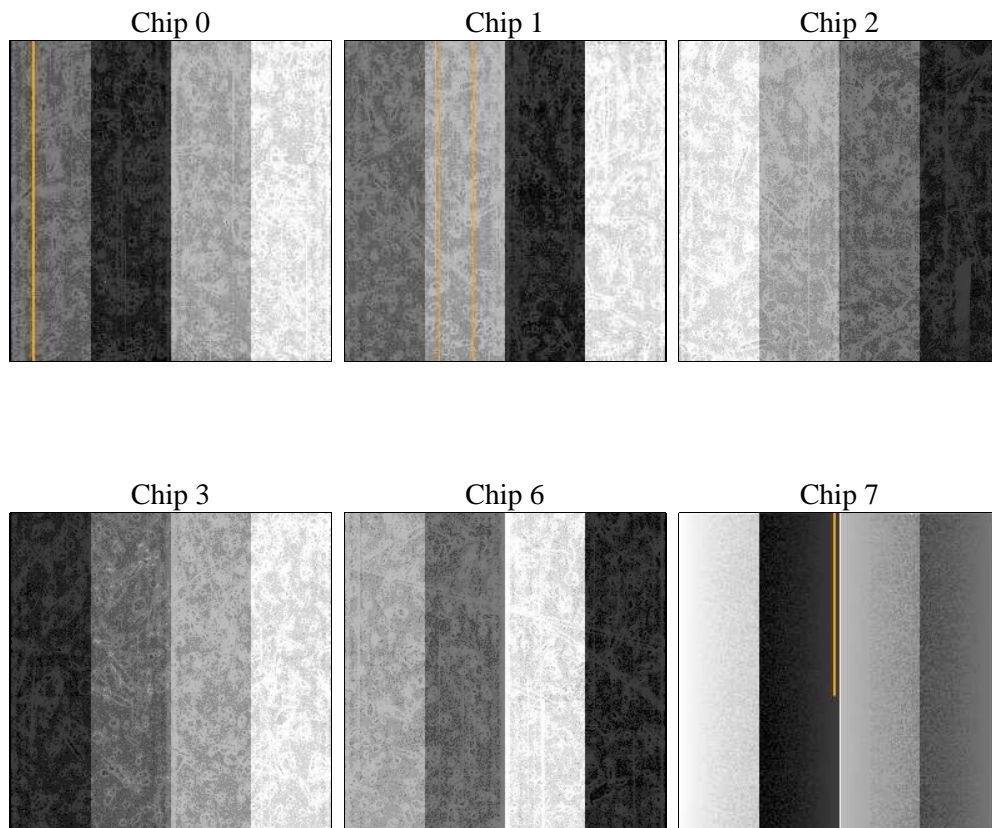
2 OBI Primary

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5006.312000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	925.79330456257	Sum of GTIs [s]
caldsver	4.4.10	 	ontime0	925.79330456257	Sum of GTIs [s]
date	2012-06-22T13:58:15	Date and time of file creation	ontime1	925.79330456257	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	925.79330456257	Sum of GTIs [s]
			ontime3	925.79330456257	Sum of GTIs [s]
			ontime6	925.79330456257	Sum of GTIs [s]
			ontime7	925.79330456257	Sum of GTIs [s]
			l1events	15946	Number of level 1 events

2.1.4 Events

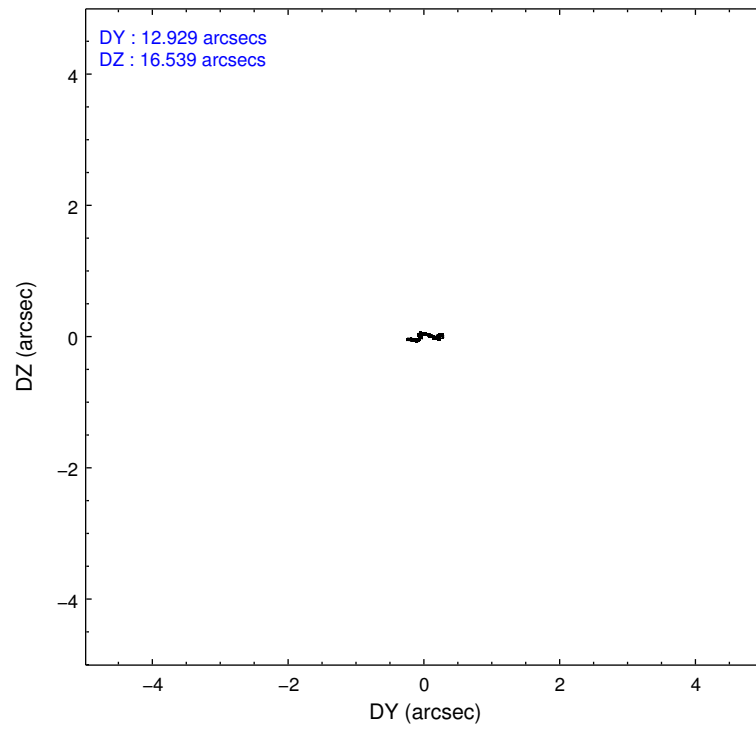
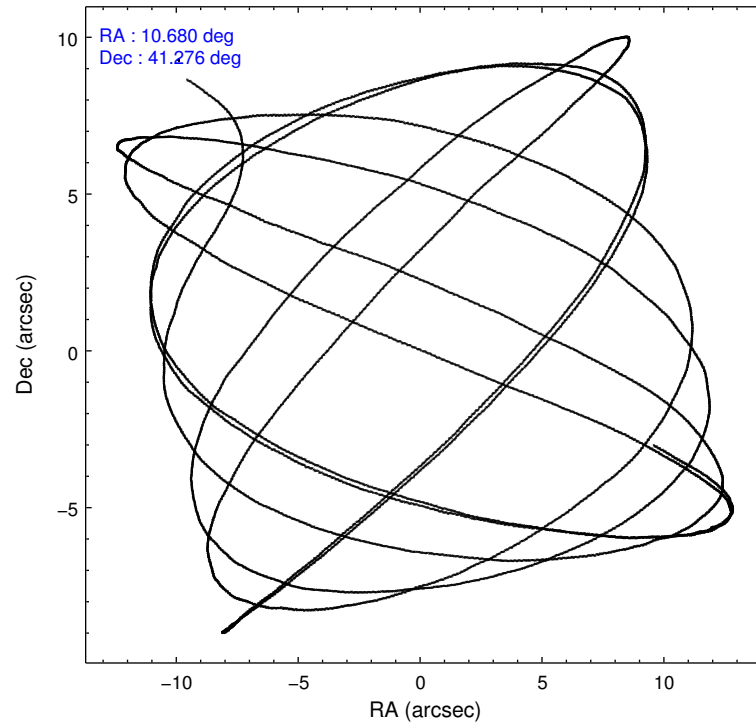
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	2377	2400	2898	2759	2815	2697
rejected events	2050	2076	2594	2280	2634	1924
rejected %	86%	86%	89%	82%	93%	71%

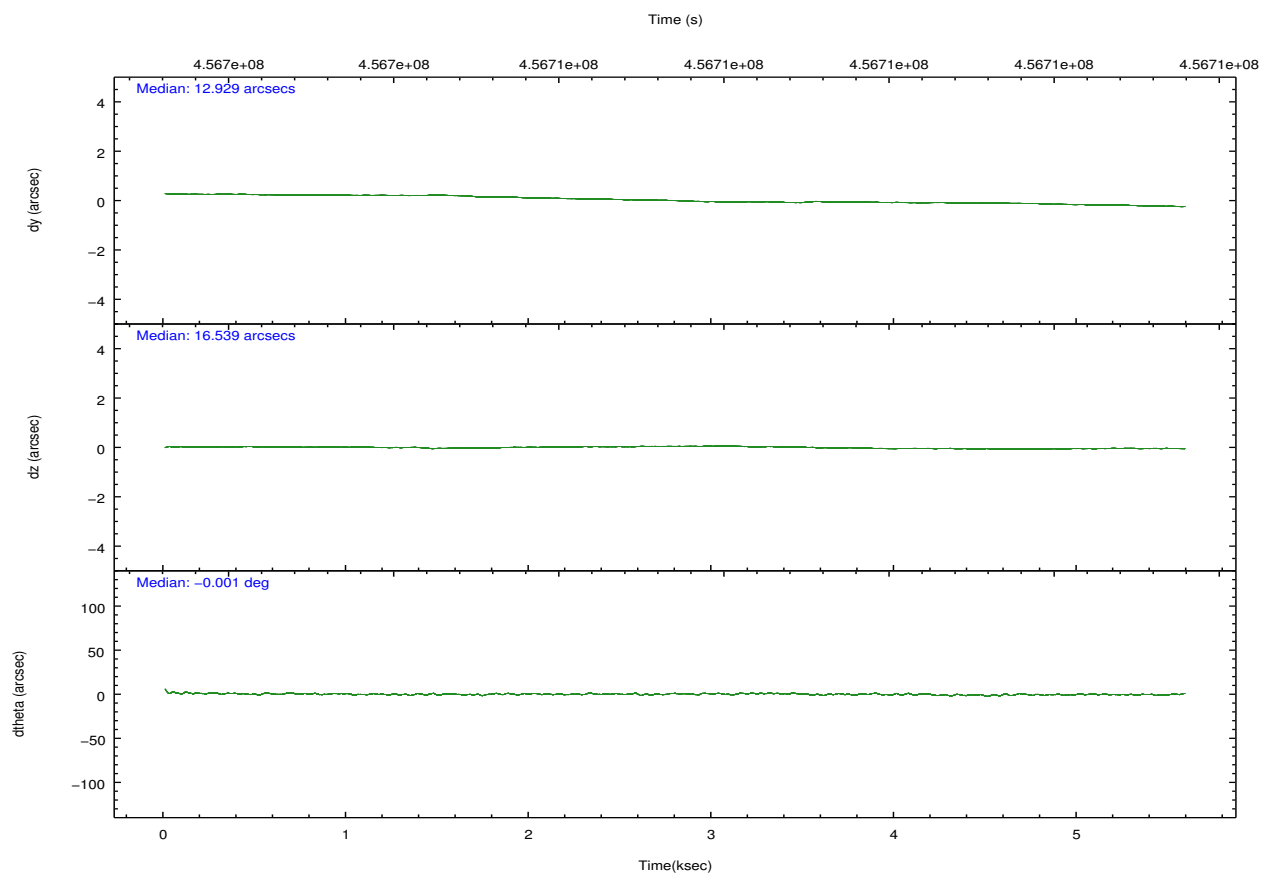
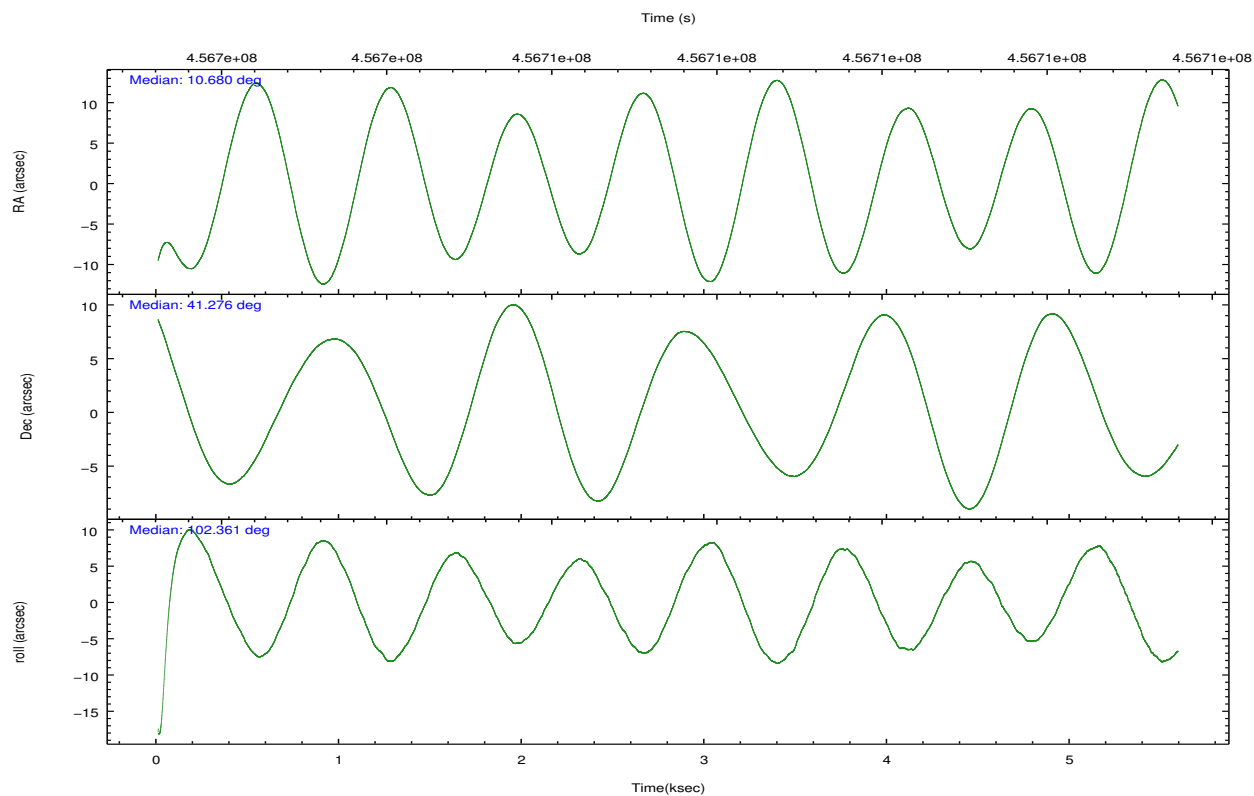
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	142	136	125	234	43	78
	5%	5%	4%	8%	1%	2%
grade 1 events	2	1	3	2	0	4
	0%	0%	0%	0%	0%	0%
grade 2 events	71	67	72	93	59	173
	2%	2%	2%	3%	2%	6%
grade 3 events	27	38	33	41	20	81
	1%	1%	1%	1%	0%	3%
grade 4 events	31	36	27	34	19	59
	1%	1%	0%	1%	0%	2%
grade 5 events	89	106	85	107	107	218
	3%	4%	2%	3%	3%	8%
grade 6 events	62	48	47	85	43	393
	2%	2%	1%	3%	1%	14%
grade 7 events	1953	1968	2506	2163	2524	1691
	82%	82%	86%	78%	89%	62%

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	10.704435	10.67966025015699	CCD I2 on	Y	Y
[deg] Pointing Dec	41.255742	41.27592444792877	CCD I3 on	Y	Y
[deg] Pointing Roll	102.138334	102.363305480295	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)	456704494.184000	456703335.09696	CCD S5 on	N	N
Observation start date	2012-06-21T22:20:28	2012-06-21T22:02:15	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	456709500.184000	456709737.2473	On-chip summing requested	N	N
Observation end date	2012-06-21T23:43:54	2012-06-21T23:48:57	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



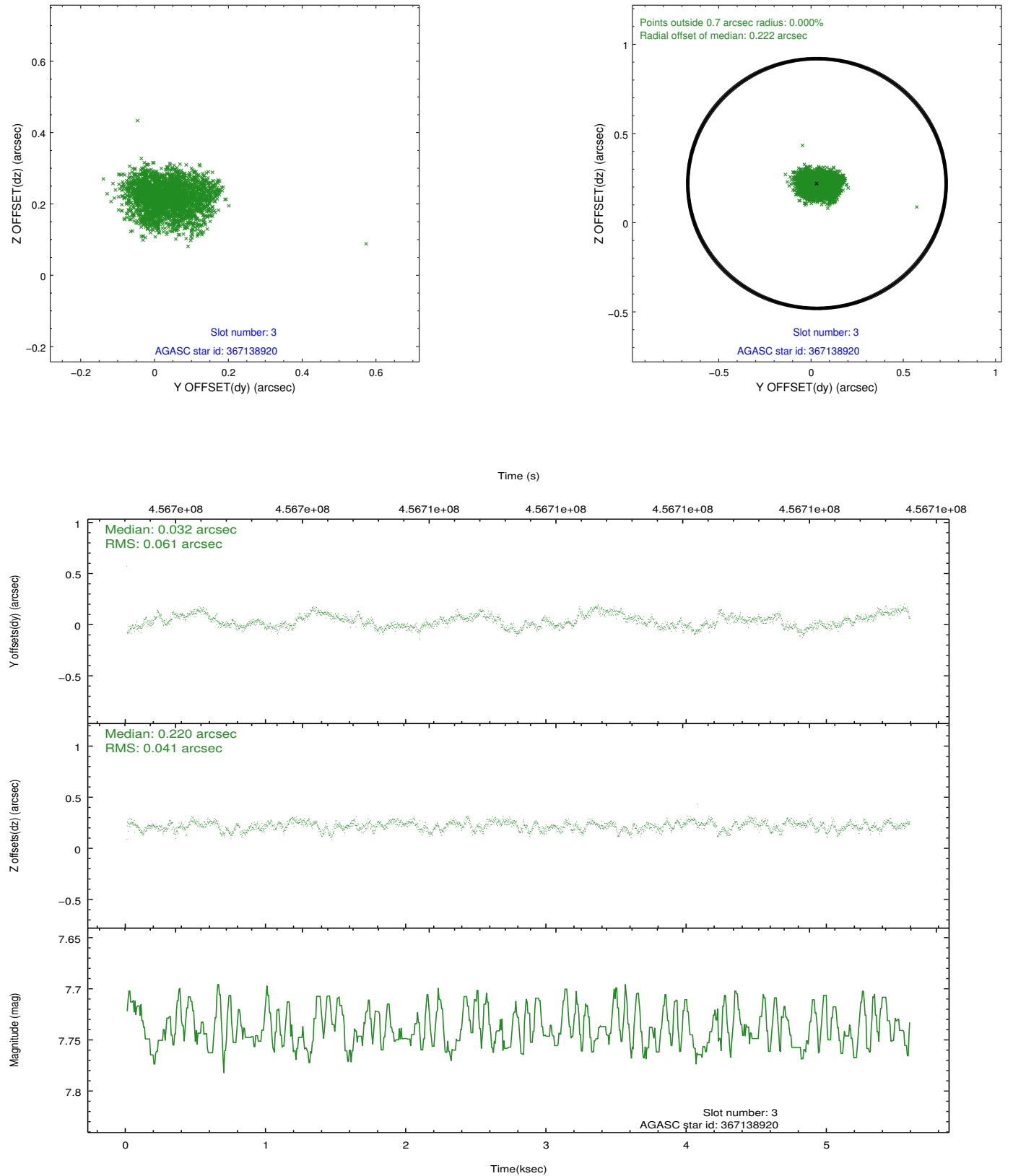


Slot Statistics

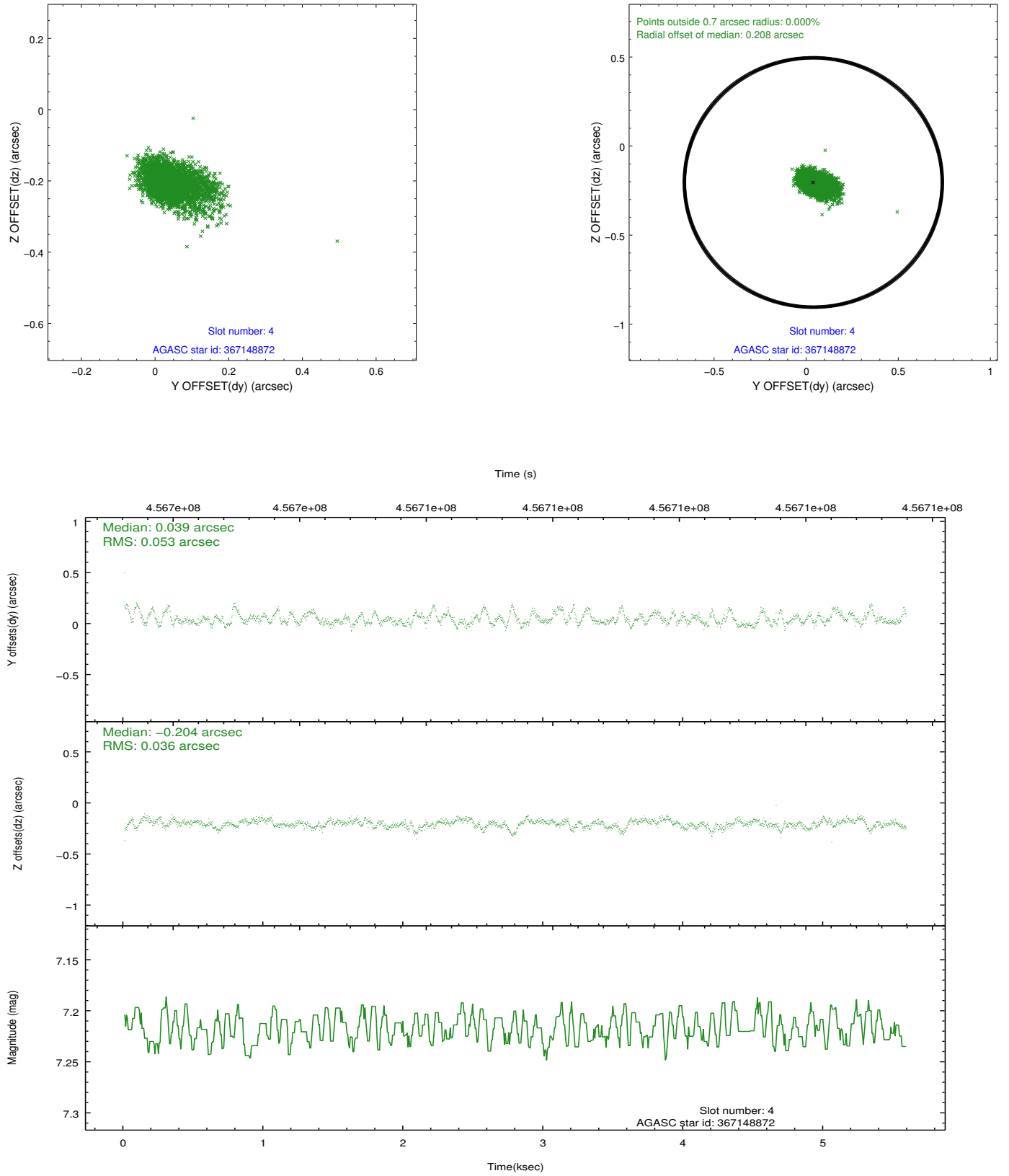
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.08	1362	0.047	0.003	0.008	0.014	0.000000	0.000000	926.59	-840.18
1	FID	ACIS-I-2	7.00	1362	-0.141	-0.063	0.009	0.014	0.000000	0.000000	-767.09	-847.21
2	FID	ACIS-I-6	7.08	1362	0.003	0.126	0.006	0.013	0.000000	0.000000	391.72	1701.22
3	GUIDE	367138920	7.74	2720	0.032	0.220	0.080	0.122	11.513485	40.808909	-2026.50	-1819.83
4	GUIDE	367148872	7.22	2725	0.039	-0.204	0.062	0.119	10.505940	40.688258	-1883.64	958.72
5	GUIDE	367657896	9.03	2719	0.137	-0.030	0.101	0.157	11.197765	41.313576	-73.18	-1348.25
6	GUIDE	367663272	9.29	2723	-0.081	-0.021	0.094	0.150	10.656279	41.699429	1589.01	-208.57
7	GUIDE	367674552	8.84	2722	-0.137	0.055	0.108	0.164	11.016238	41.570845	934.81	-1059.84

2.4 Star Slots

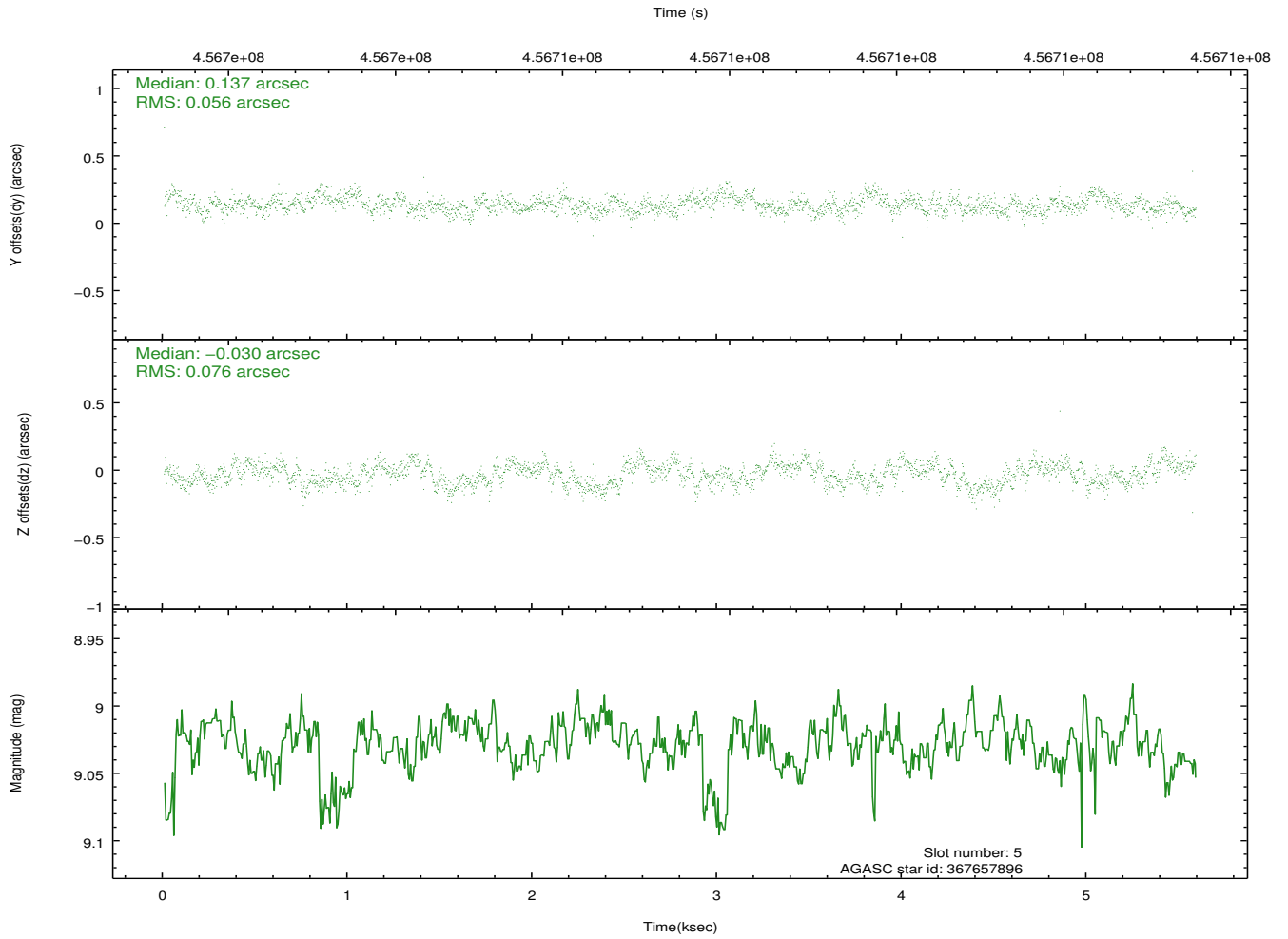
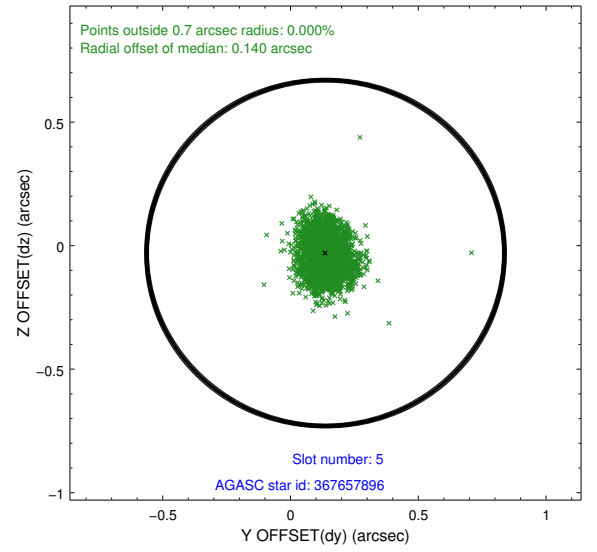
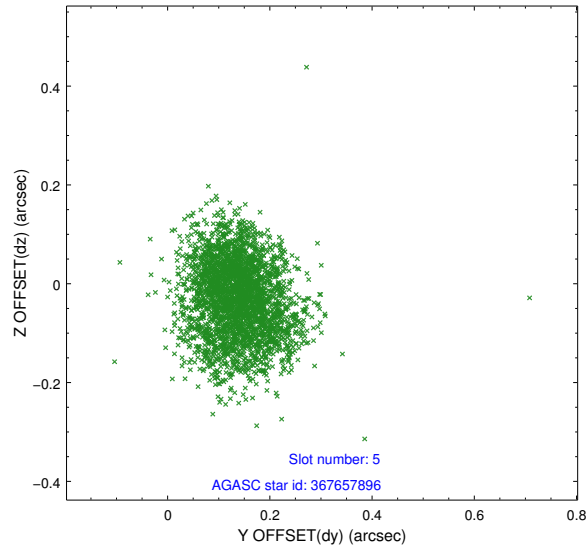
2.4.1 Slot 3



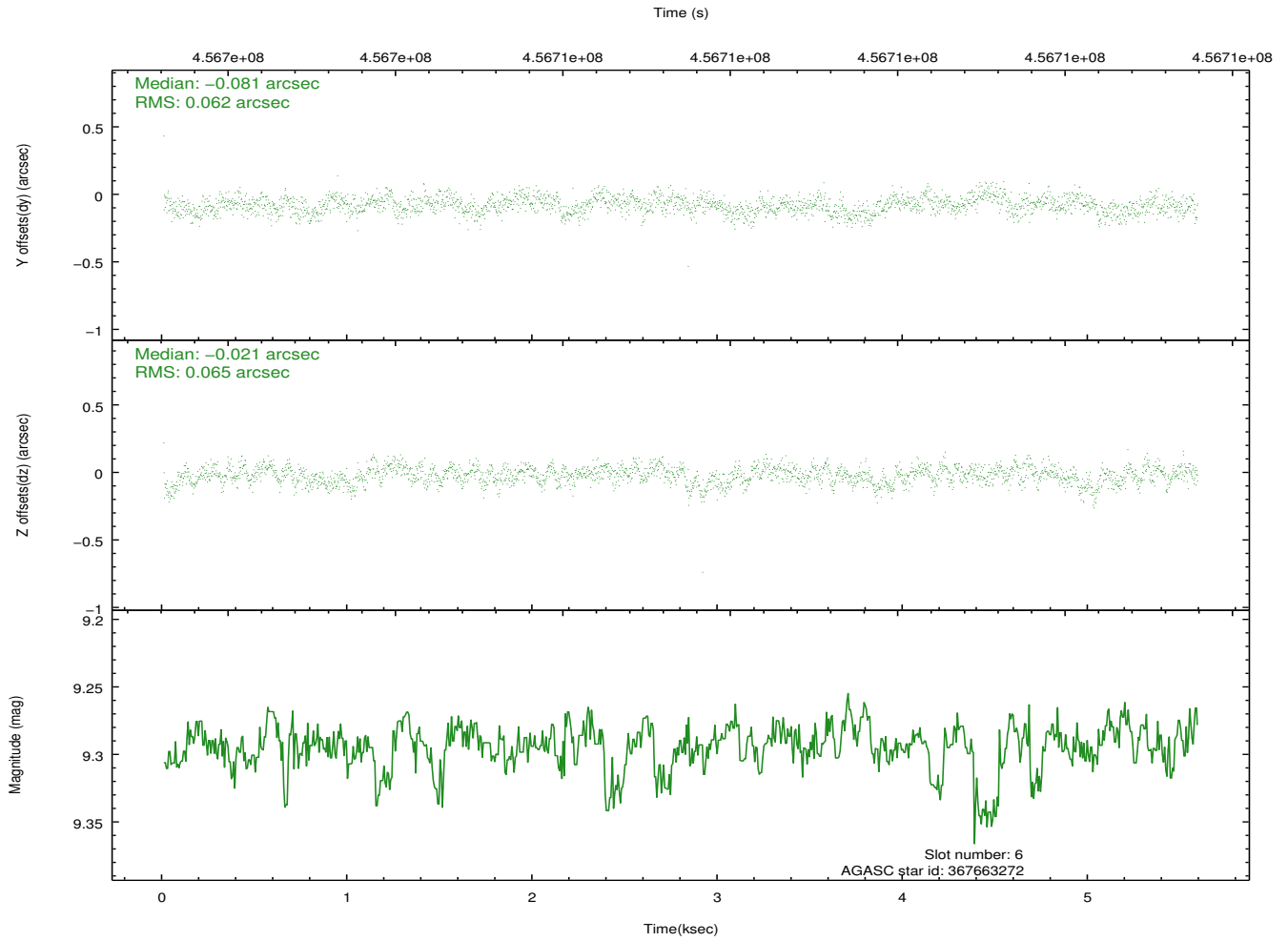
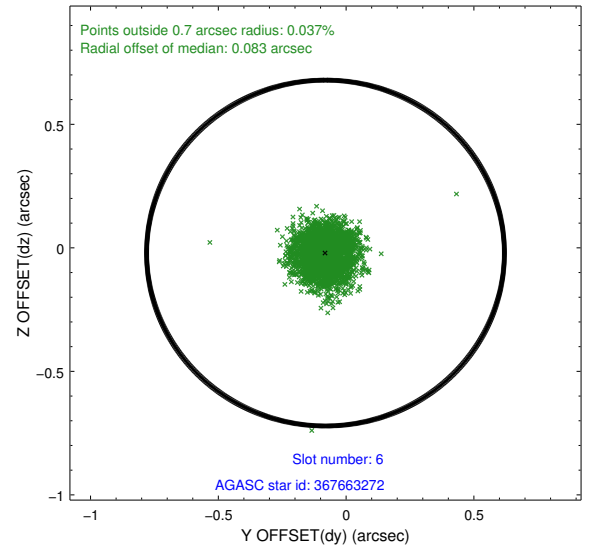
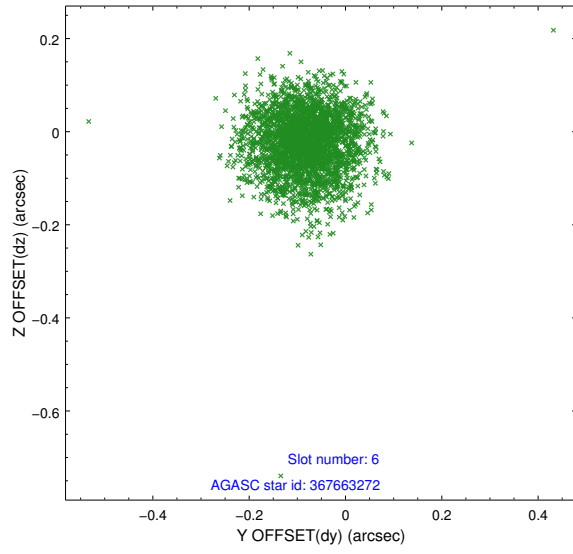
2.4.2 Slot 4



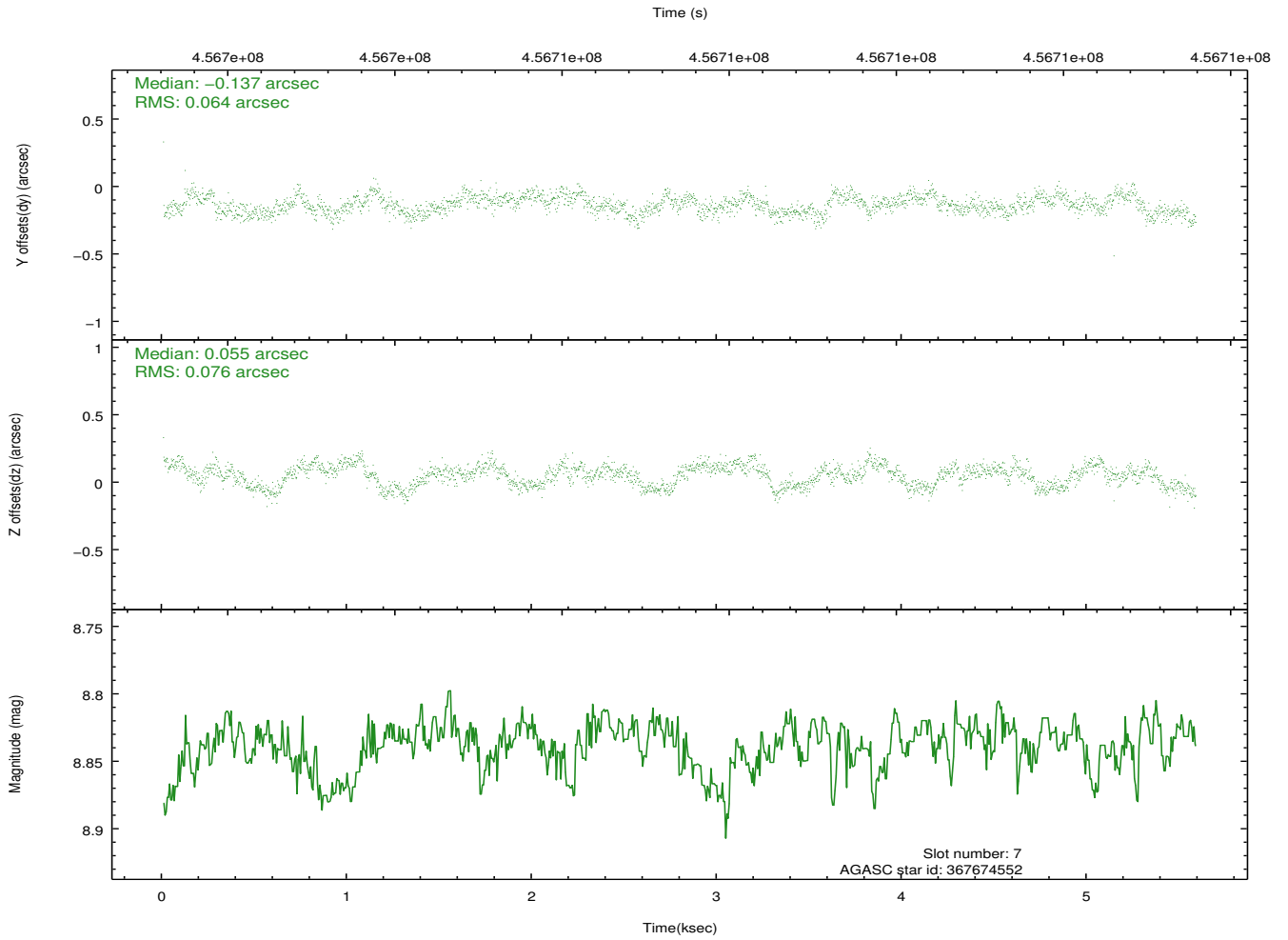
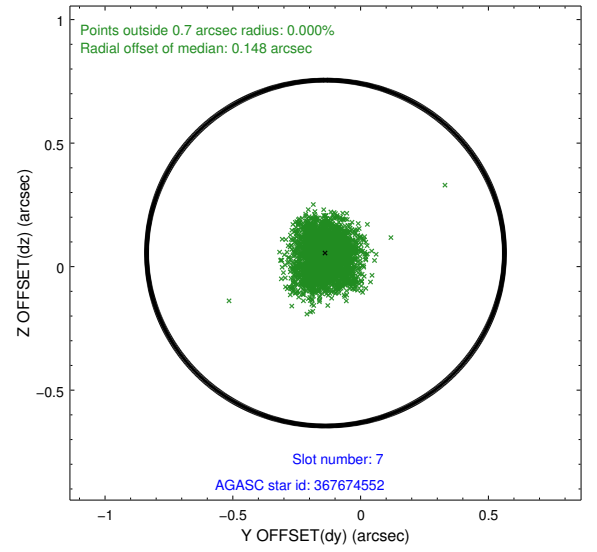
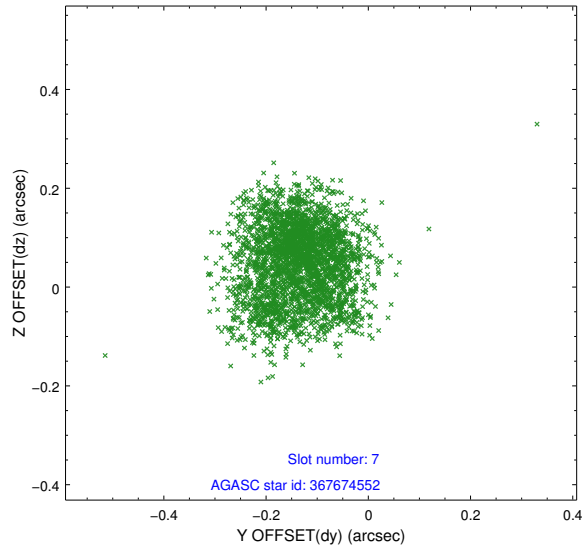
2.4.3 Slot 5



2.4.4 Slot 6

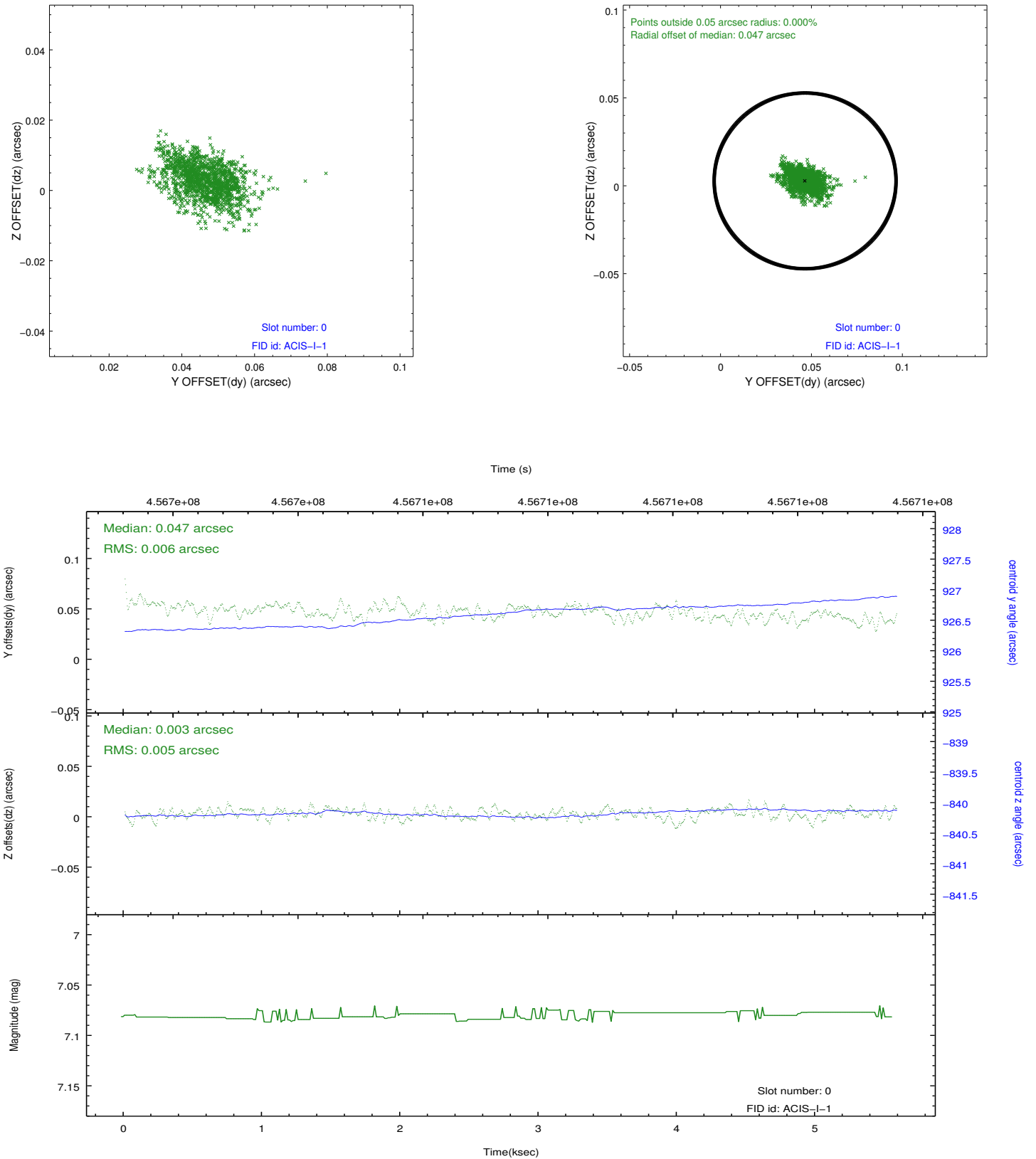


2.4.5 Slot 7

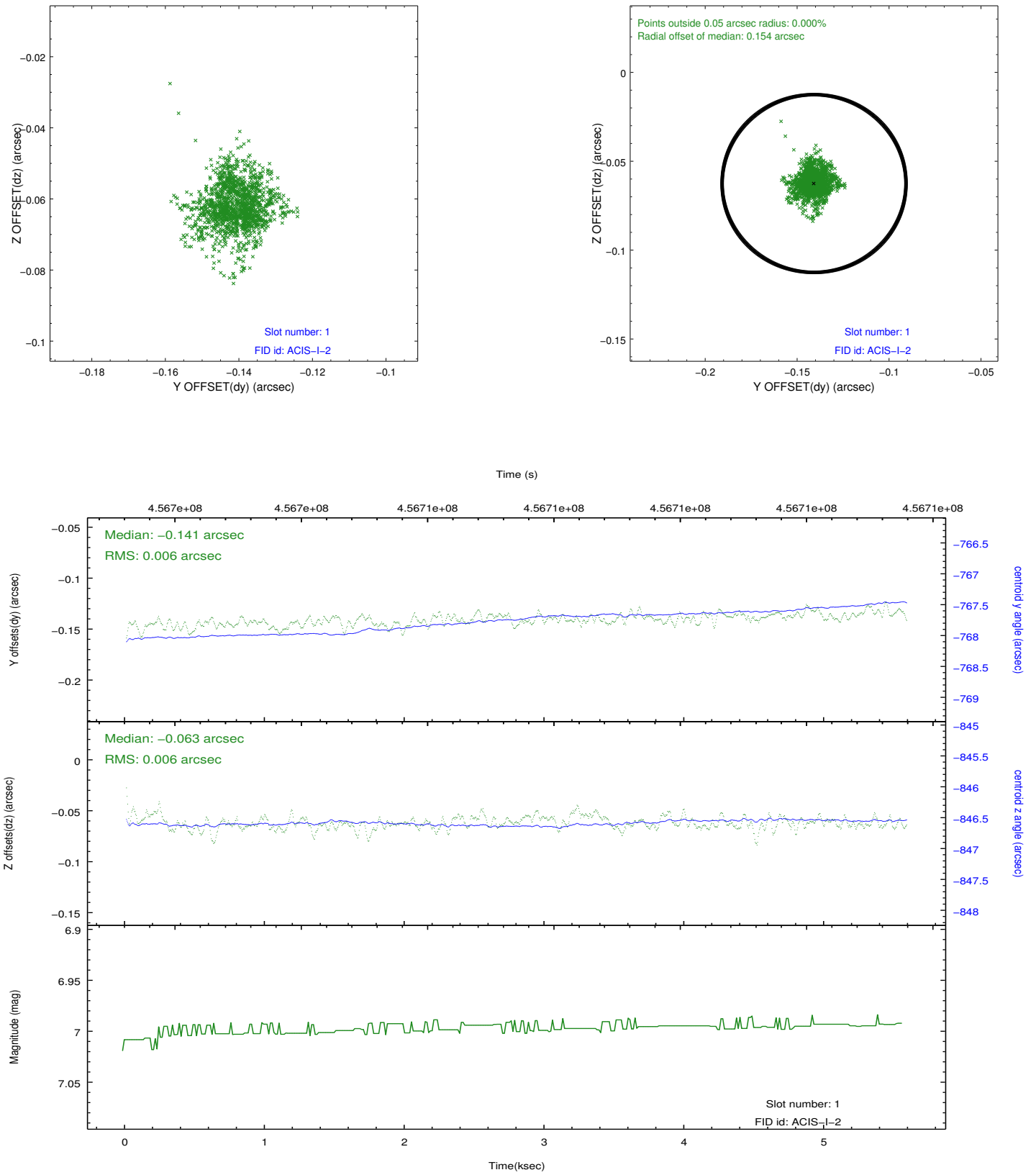


2.5 FID Slots

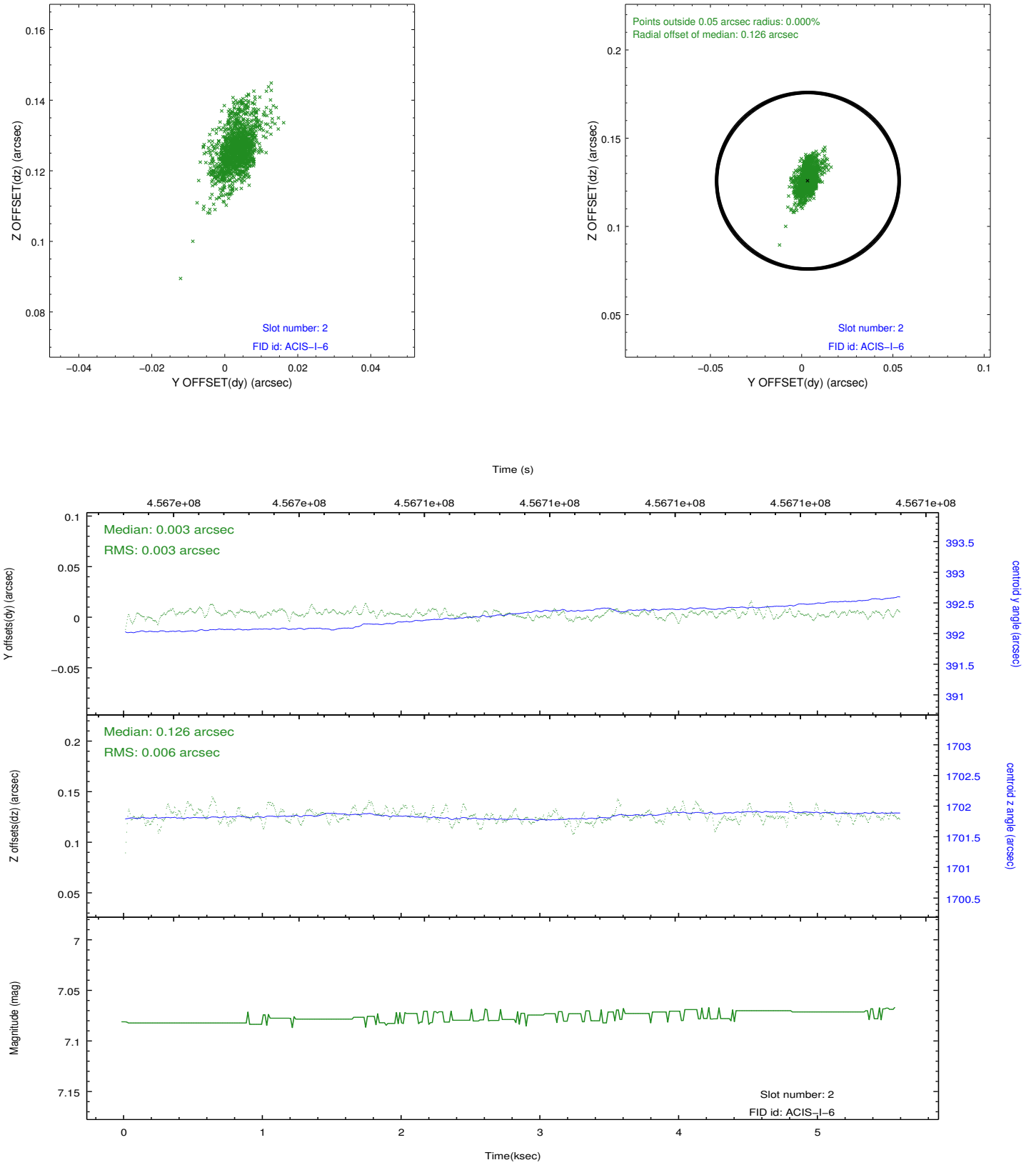
2.5.1 Slot 0



2.5.2 Slot 1



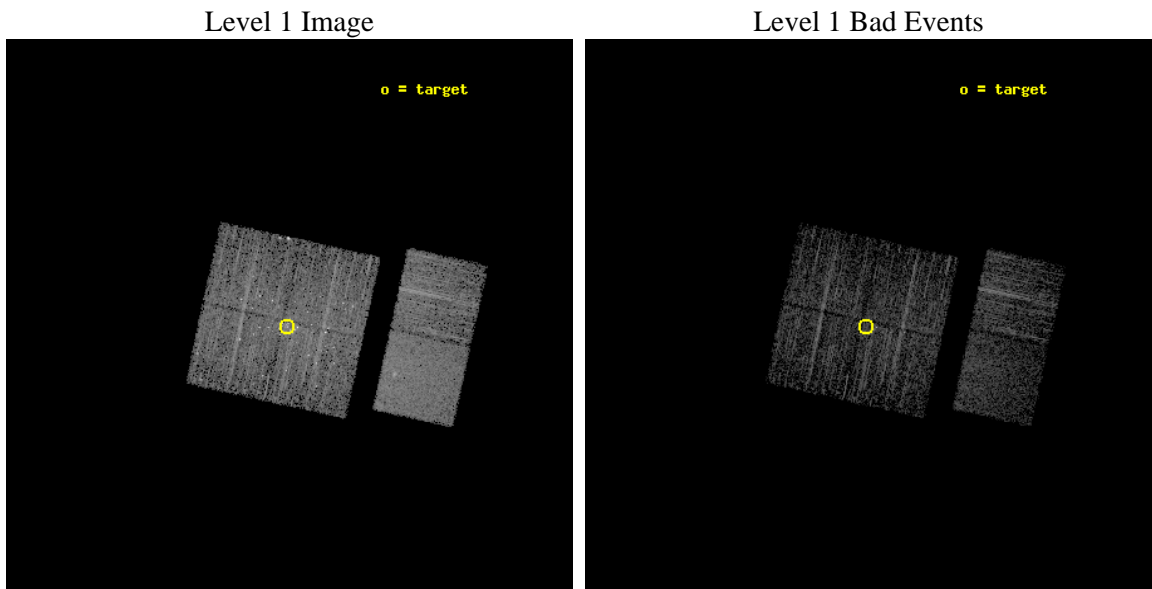
2.5.3 Slot 2



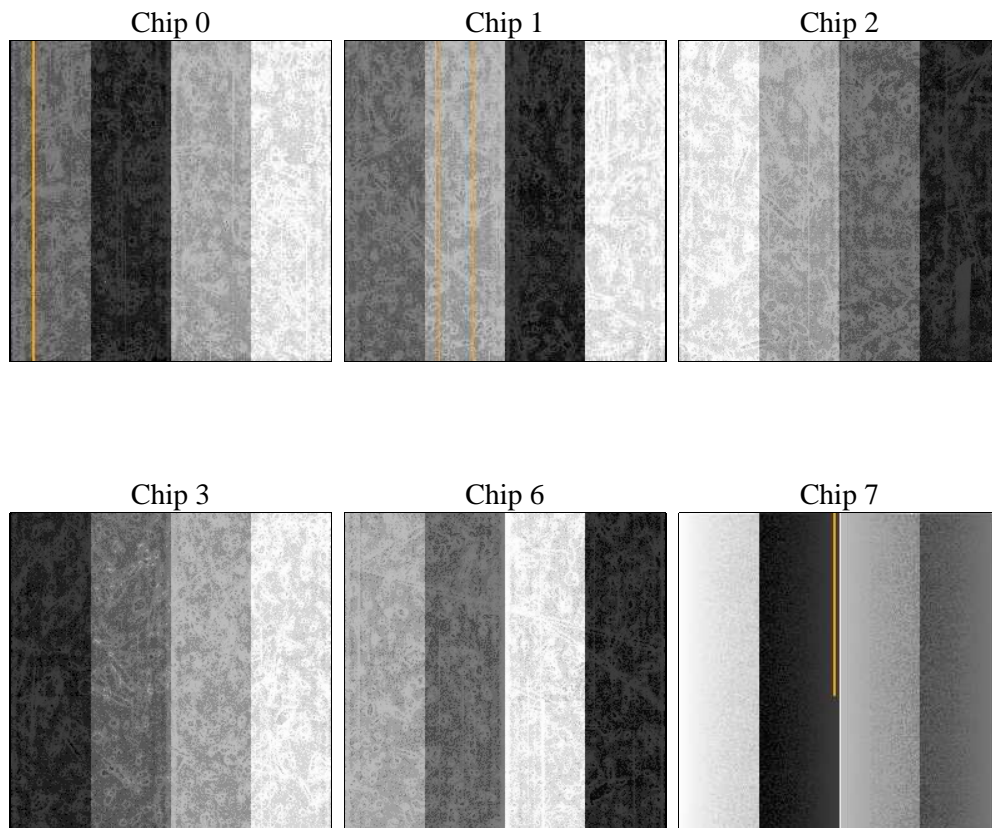
3 OBI Secondary

3.1 OBI

3.1.1 Images



3.1.2 Bias



3.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5006.312000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	3960.6489482522	Sum of GTIs [s]
caldsver	4.4.10	 	ontime0	3960.6483410597	Sum of GTIs [s]
date	2012-06-22T13:58:35	Date and time of file creation	ontime1	3960.6486492753	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	3960.6482015252	Sum of GTIs [s]
			ontime3	3960.6489482522	Sum of GTIs [s]
			ontime6	3960.6486003995	Sum of GTIs [s]
			ontime7	3960.6488094926	Sum of GTIs [s]
			l1events	148720	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	22502	22761	23528	26722	23670	29537	grade 0 events	2801	2701	2458	4876	971	1217
rejected events	17472	17671	19178	19258	20924	16270		12%	11%	10%	18%	4%	4%
rejected %	77%	77%	81%	72%	88%	55%	grade 1 events	35	36	25	150	19	36
								0%	0%	0%	0%	0%	0%
							grade 2 events	904	959	772	1062	652	2711
								4%	4%	3%	3%	2%	9%
							grade 3 events	374	392	311	415	253	1085
								1%	1%	1%	1%	1%	3%
							grade 4 events	361	369	318	435	270	1174
								1%	1%	1%	1%	1%	3%
							grade 5 events	992	1078	963	1279	1147	2983
								4%	4%	4%	4%	4%	10%
							grade 6 events	593	674	498	688	601	7102
								2%	2%	2%	2%	2%	24%
							grade 7 events	16442	16552	18183	17817	19757	13229
								73%	72%	77%	66%	83%	44%

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.06.22
V&V Edition	1
V&V Disposition and Status	Repr+DD
V&V Charge Time	4.88644225281477

A.2 Comments

The bias map for CCD_ID = 2 suffers from anomalously high bias values in an 'exacto-knife'-shaped area of the bias file. Pixels in the event data that have been bias-corrected by one of the 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_ID = 2 will be recreated to remove this anomaly and the data will be reprocessed.

==

SAP Team: Please reprocess using replacement bias file for chip 2.