

V&V Reference Report

L2 ASCDS Version : 10.4.1

Observation 17445 - L2 Version 2
Chandra X-Ray Center

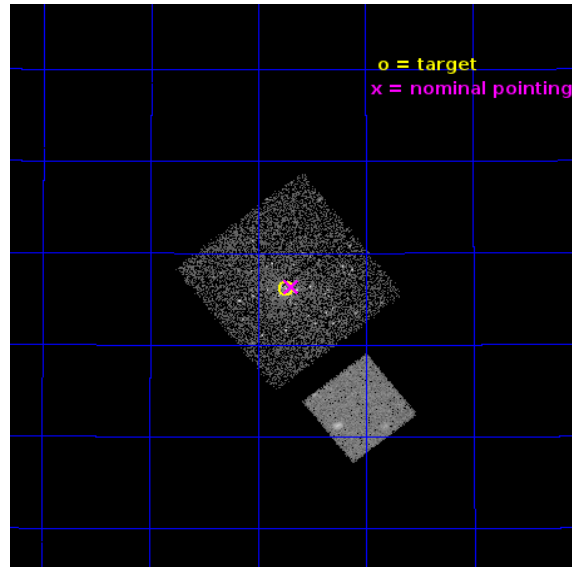
L2 Processing Date : Sep 1 2015

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1 Front

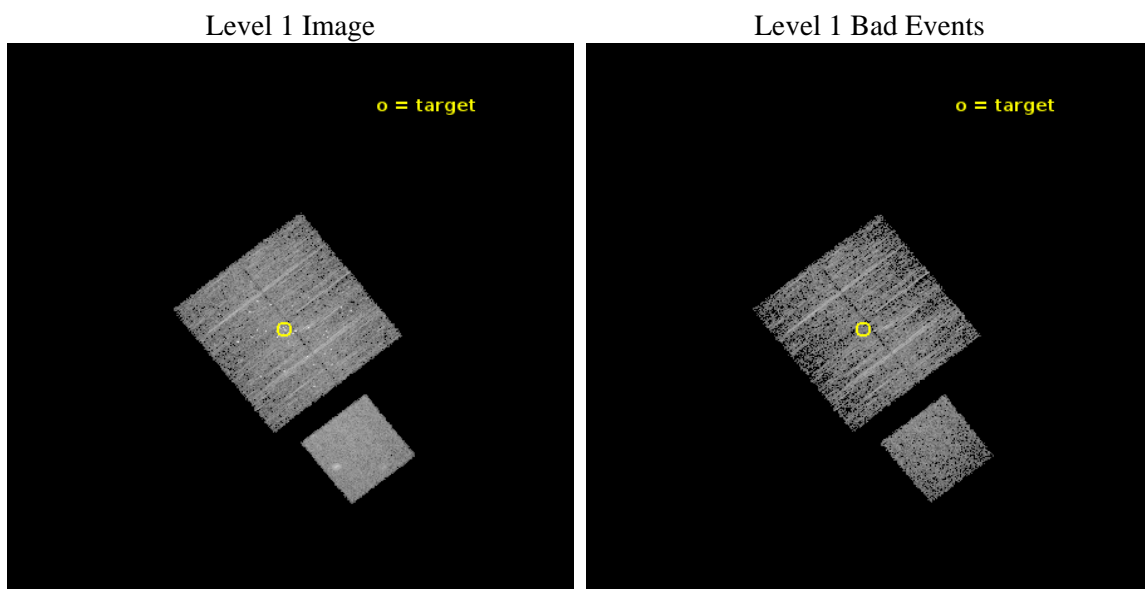
seq_num	401678	Sequence number
obs_id	17445	Observation id
title	Monitoring the central region of M31 for X-ray transients	Proposal
observer	Dr. Stephen Murray	Principal investigator
object	M31 bulge	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.269028	Observer's specified target Dec [deg]
ra_nom	10.672341192501	Nominal RA [deg]
dec_nom	41.272371125061	Nominal Dec [deg]
roll_nom	141.73350405967	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5062.300039053	Sum of GTIs [s]
livetime	4996.1573622317	Livetime [s]
ontime0	5062.300039053	Sum of GTIs [s]
ontime1	5062.300039053	Sum of GTIs [s]
ontime2	5062.300039053	Sum of GTIs [s]
ontime3	5062.300039053	Sum of GTIs [s]
ontime7	5062.300039053	Sum of GTIs [s]
l2events	36071	Number of level 2 events



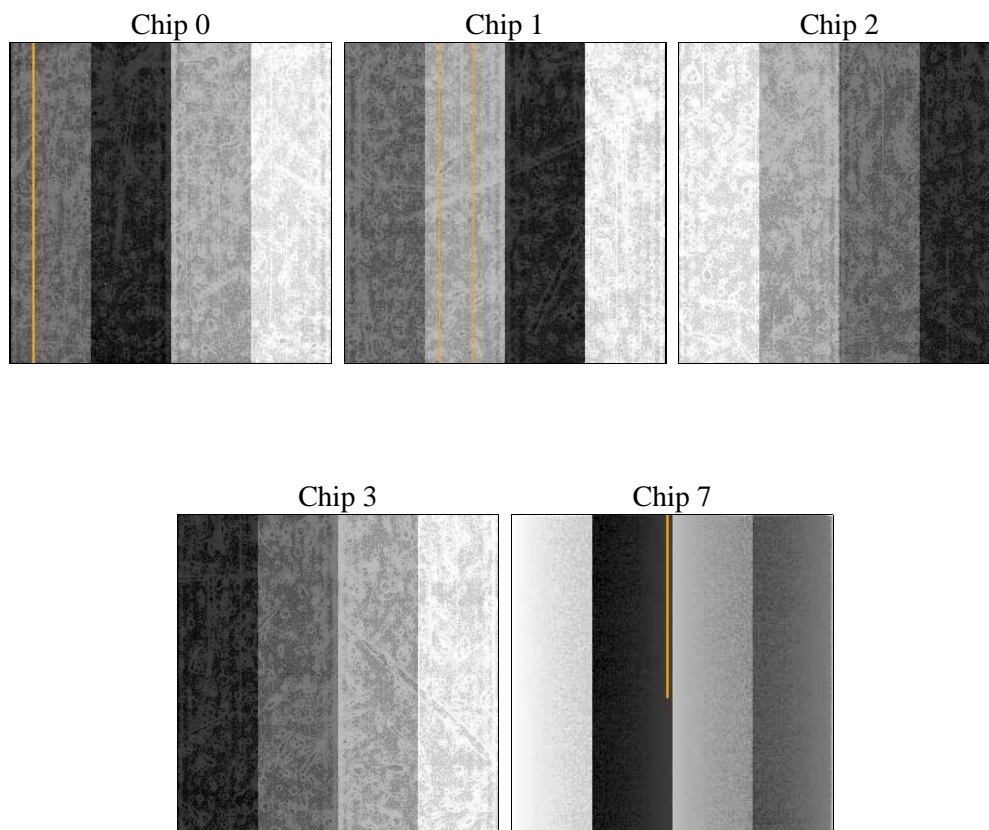
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.1	Processing system revision	ontime	5062.300039053	Sum of GTIs [s]
caldsver	4.6.8	 	ontime0	5062.300039053	Sum of GTIs [s]
date	2015-09-01T15:43:55	Date and time of file creation	ontime1	5062.300039053	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	5062.300039053	Sum of GTIs [s]
			ontime3	5062.300039053	Sum of GTIs [s]
			ontime7	5062.300039053	Sum of GTIs [s]
			l1events	154069	Number of level 1 events

2.1.4 Events

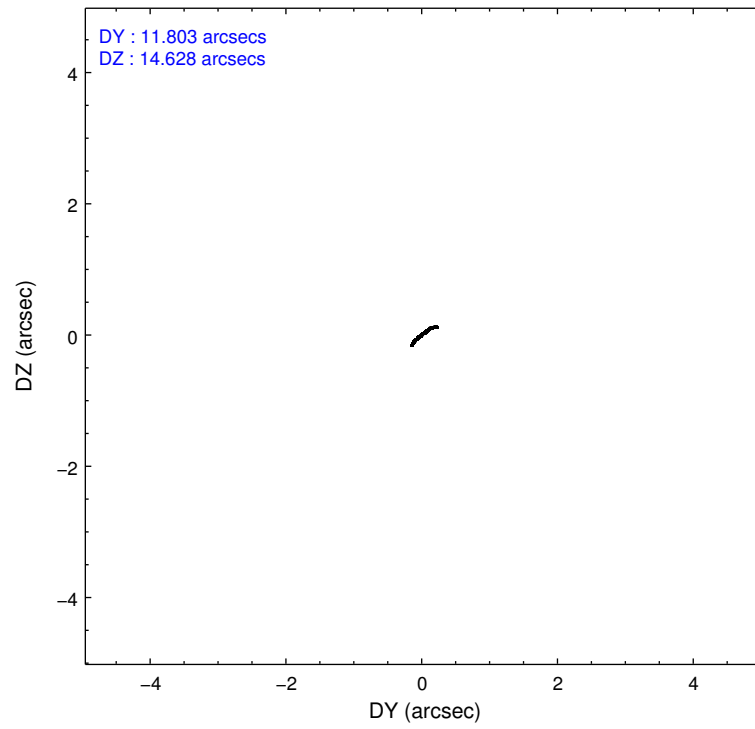
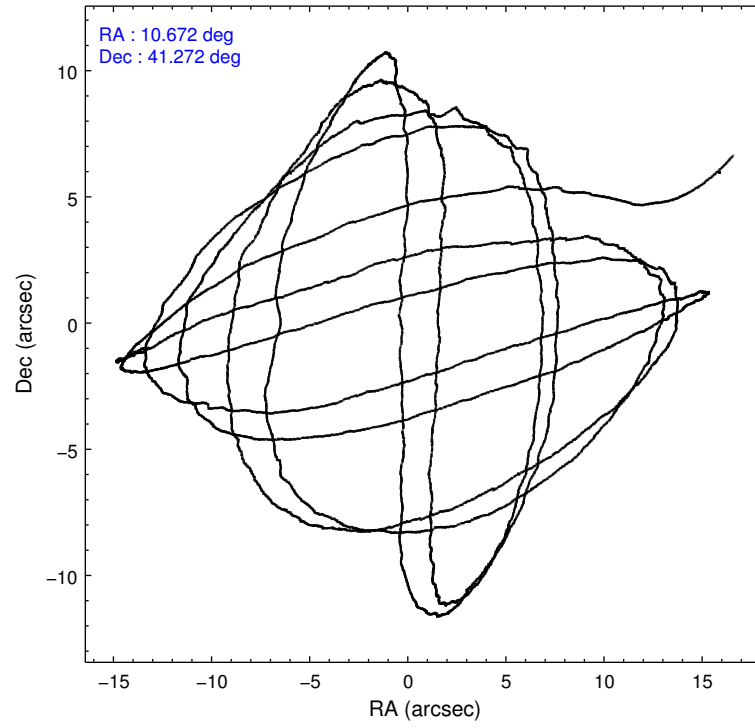
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	27156	27389	31845	30062	37617
rejected events	23498	21113	25916	23641	20859
rejected %	86%	77%	81%	78%	55%

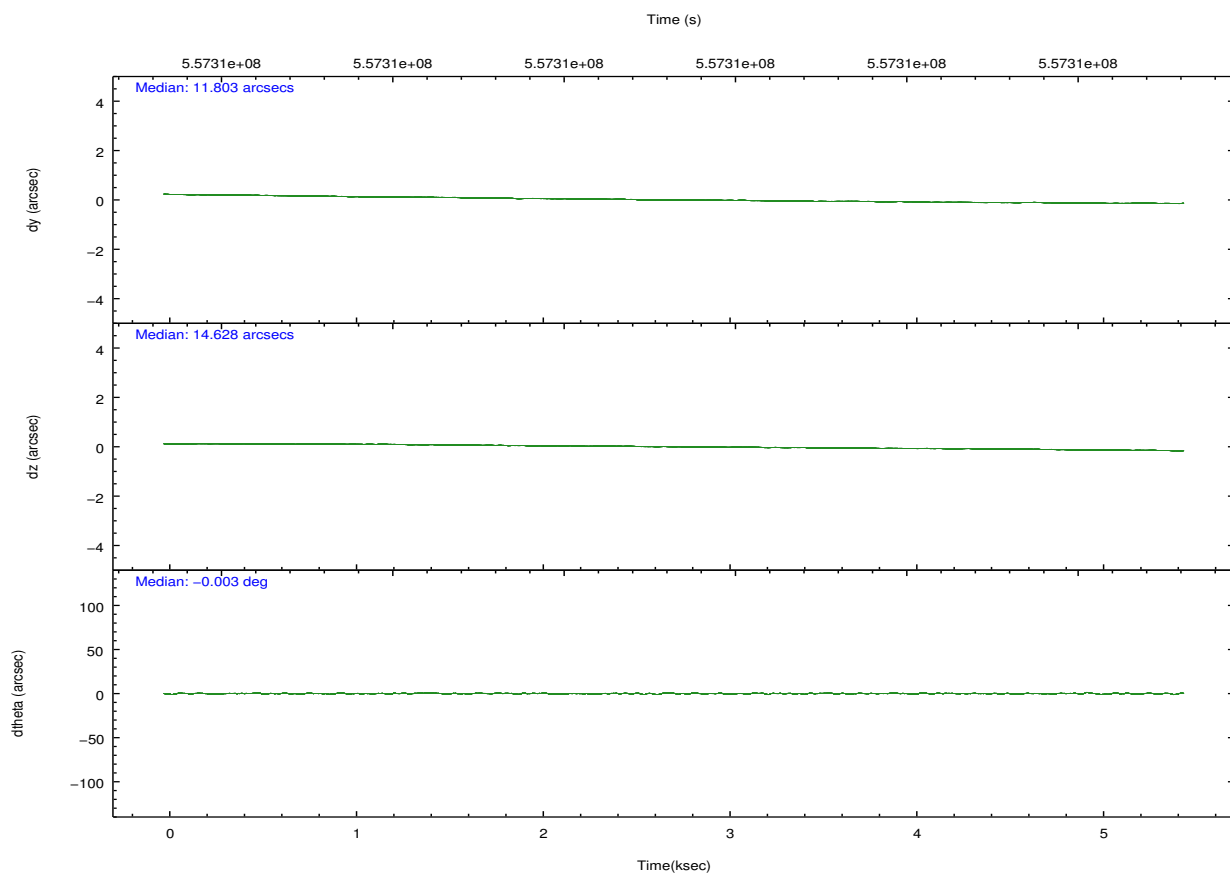
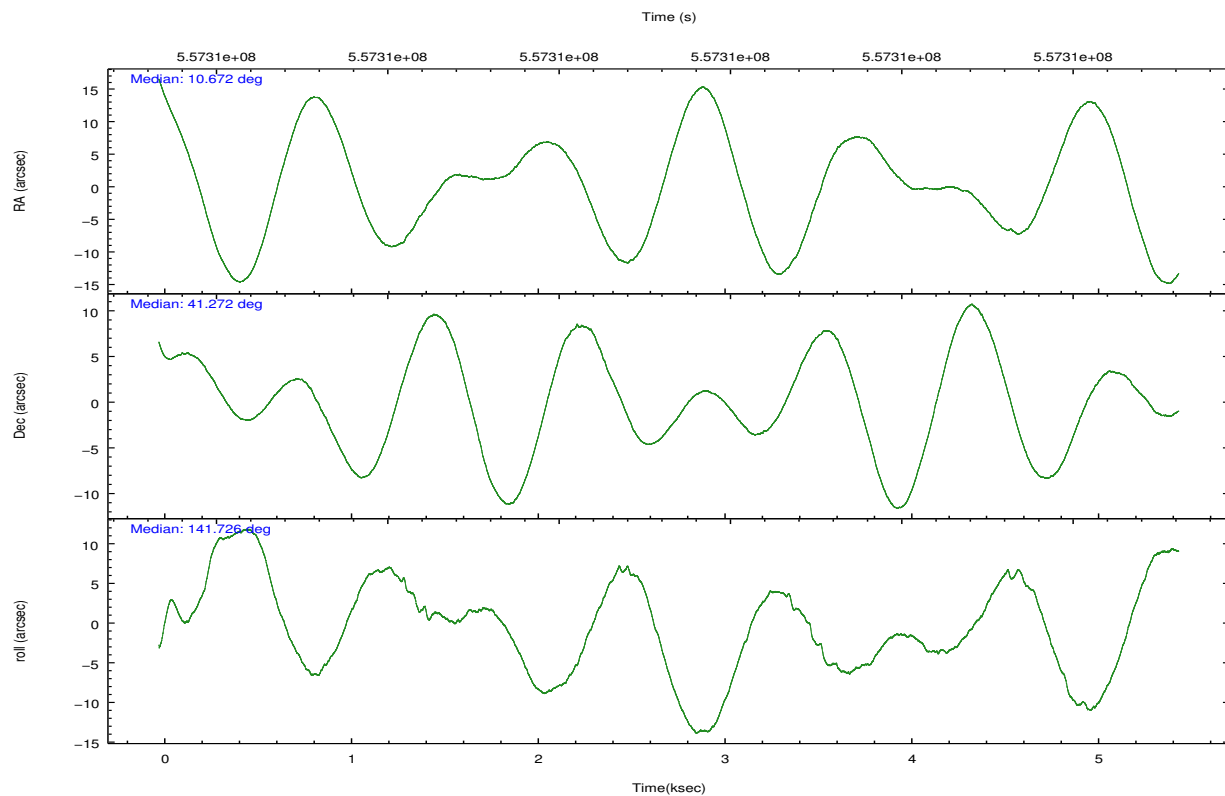
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	1536	3431	3405	3833	1588
	5%	12%	10%	12%	4%
grade 1 events	15	43	89	74	36
	0%	0%	0%	0%	0%
grade 2 events	782	1200	1046	1009	3646
	2%	4%	3%	3%	9%
grade 3 events	358	416	370	444	1287
	1%	1%	1%	1%	3%
grade 4 events	316	403	421	421	1273
	1%	1%	1%	1%	3%
grade 5 events	1171	1257	1200	1435	3527
	4%	4%	3%	4%	9%
grade 6 events	670	830	689	717	8975
	2%	3%	2%	2%	23%
grade 7 events	22308	19809	24625	22129	17285
	82%	72%	77%	73%	45%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	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	10.708760	10.67234119250122	CCD I2 on	Y	Y
[deg] Pointing Dec	41.268456	41.27237112506089	CCD I3 on	Y	Y
[deg] Pointing Roll	141.500804	141.733504059673	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	N	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	557306349.184000	557305270.73348	CCD S5 on	N	N
Observation start date	2015-08-30T07:18:01	2015-08-30T07:01:10	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	557311349.184000	557312129.5213701	On-chip summing requested	N	N
Observation end date	2015-08-30T08:41:21	2015-08-30T08:55:29	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



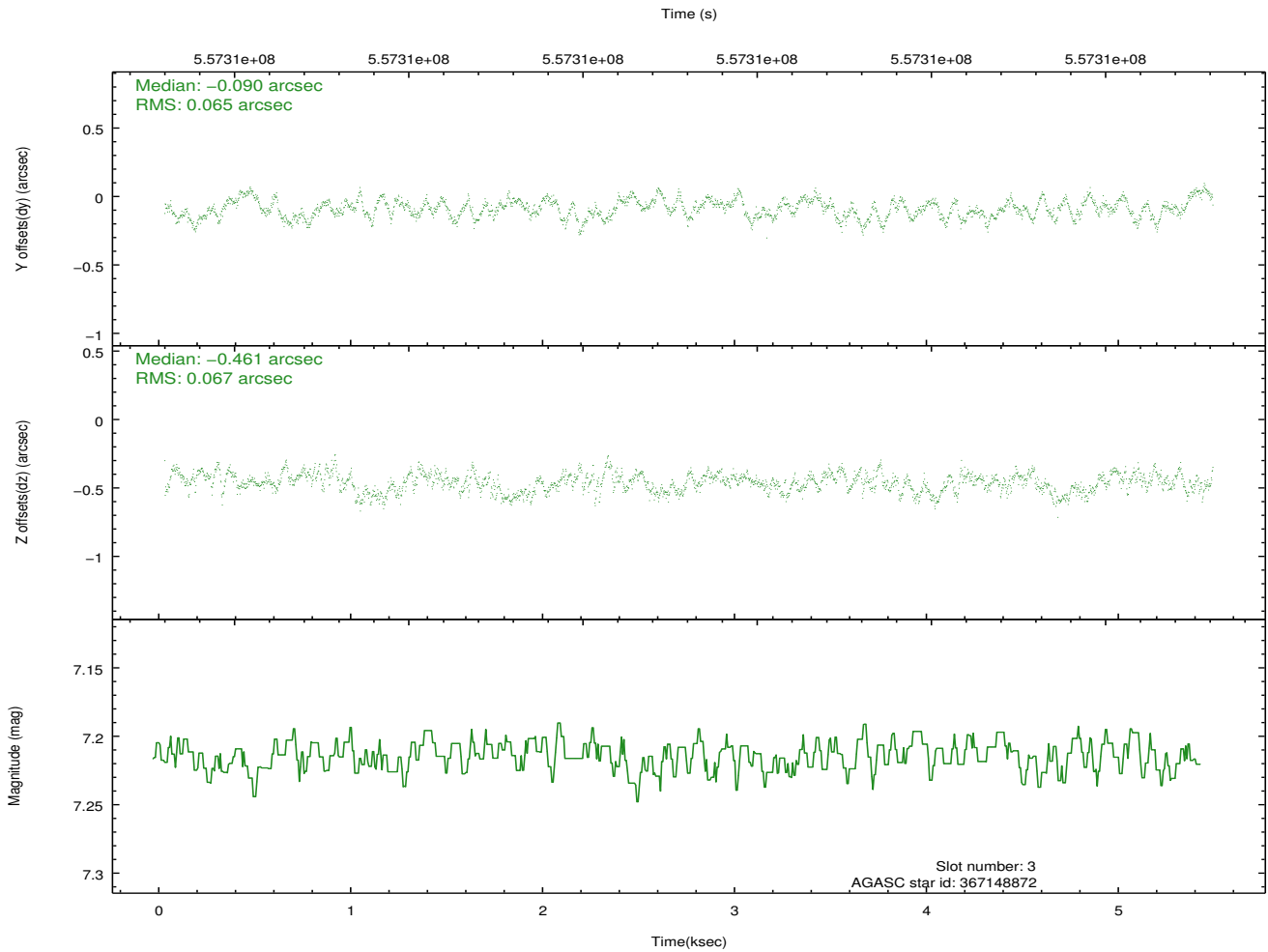
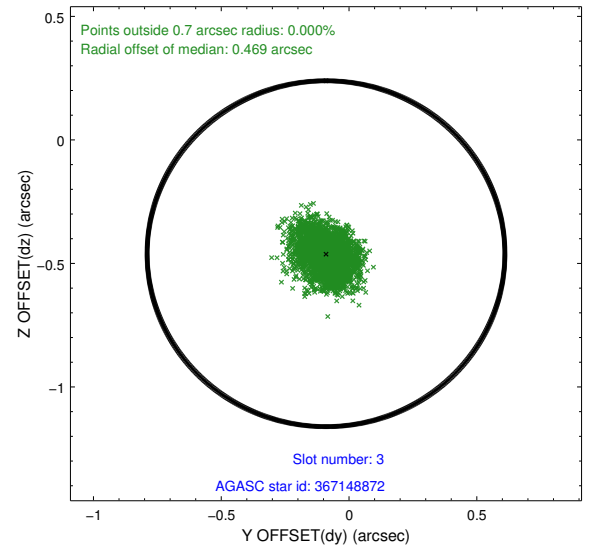
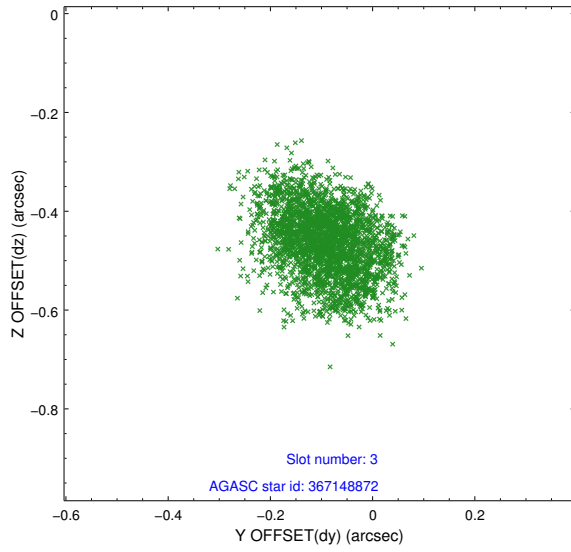


Slot Statistics

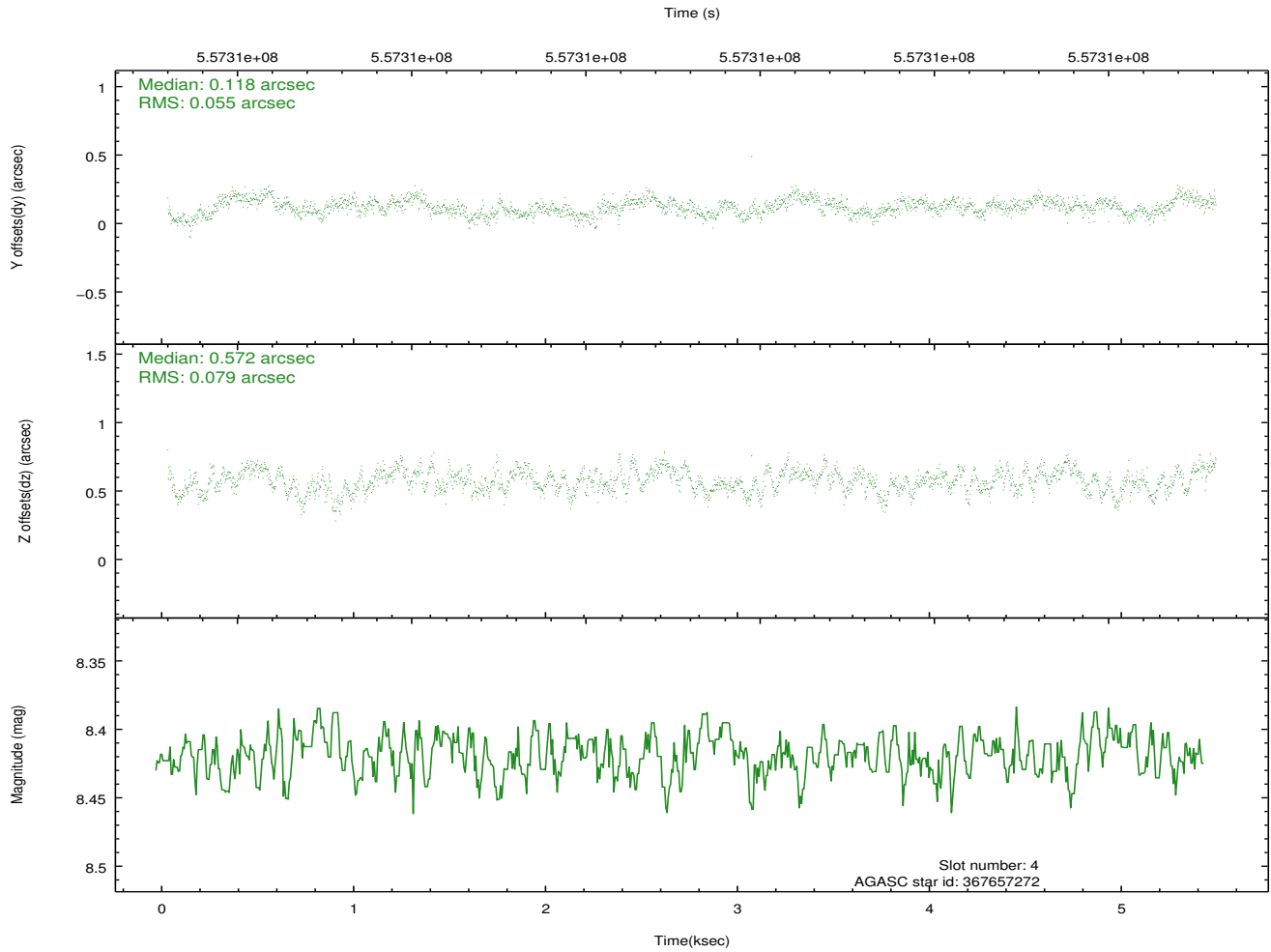
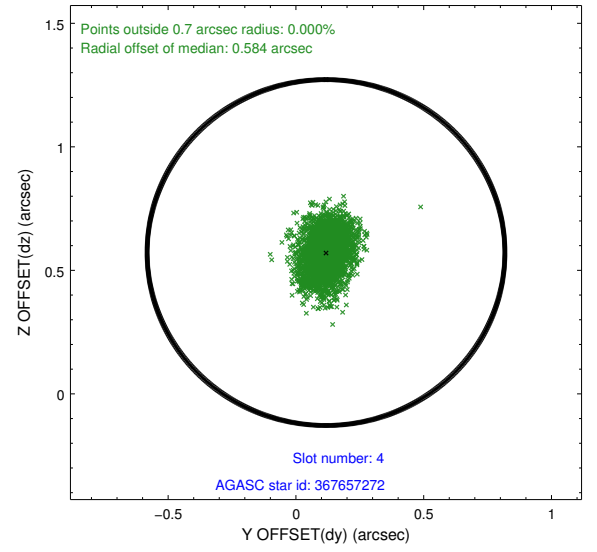
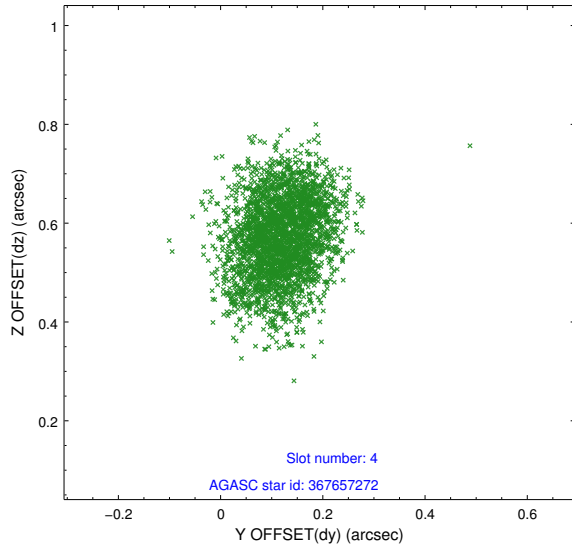
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.27	1332	0.045	-0.023	0.008	0.015	0.000000	0.000000	927.79	-838.22
1	FID		ACIS-I-5	7.26	1332	-0.227	0.043	0.007	0.012	0.000000	0.000000	-1820.02	1058.72
2	FID		ACIS-I-6	7.25	1330	0.090	0.050	0.008	0.013	0.000000	0.000000	392.13	1704.53
3	GUIDE	used	367148872	7.21	2665	-0.090	-0.461	0.102	0.155	10.505940	40.688258	-867.54	1979.51
4	GUIDE	used	367657272	8.42	2665	0.118	0.572	0.103	0.164	11.834471	41.298907	-2302.31	-1995.17
5	GUIDE	used	367657896	9.00	2665	0.132	0.211	0.092	0.151	11.197765	41.313576	-932.14	-953.45
6	GUIDE	used	367663272	9.27	2664	-0.161	0.043	0.116	0.195	10.656279	41.699429	1076.36	-1124.99
7	GUIDE	used	367145856	9.25	2664	0.005	-0.361	0.125	0.204	10.744946	40.402085	-2019.16	2378.91

2.4 Star Slots

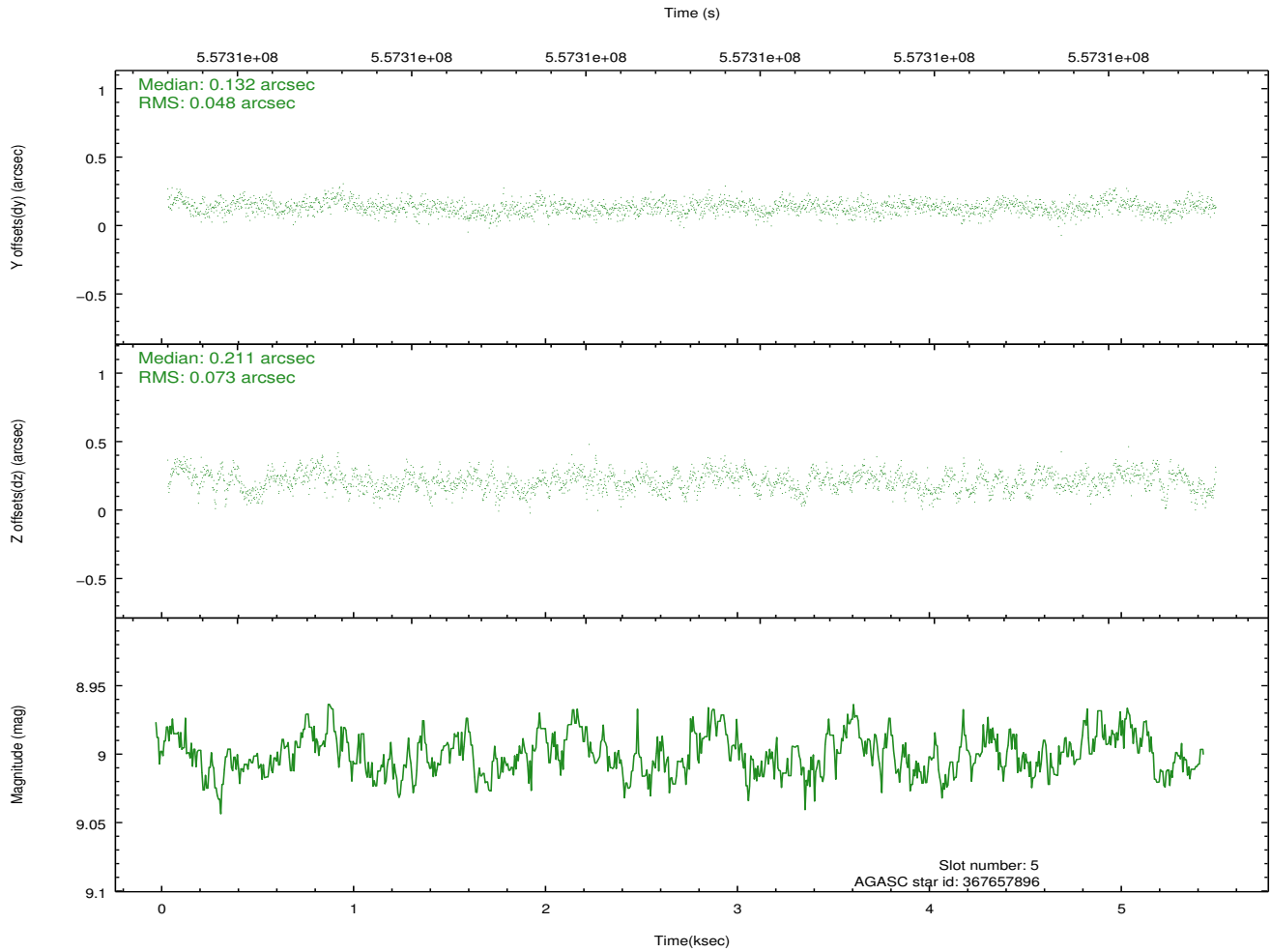
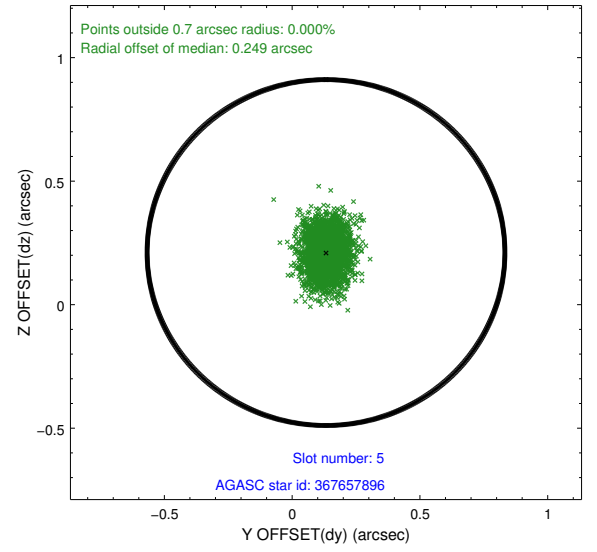
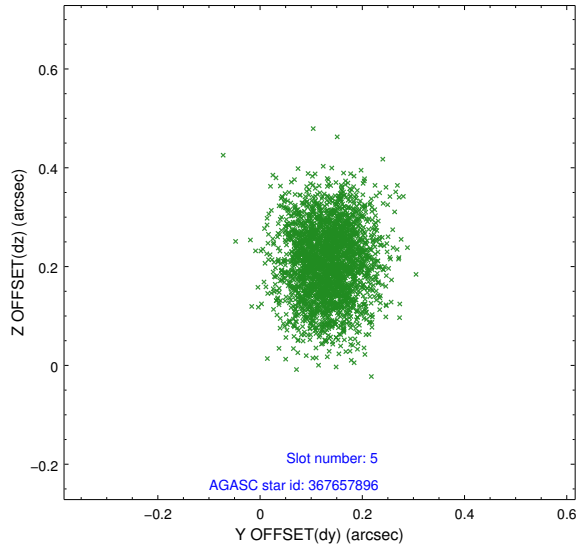
2.4.1 Slot 3



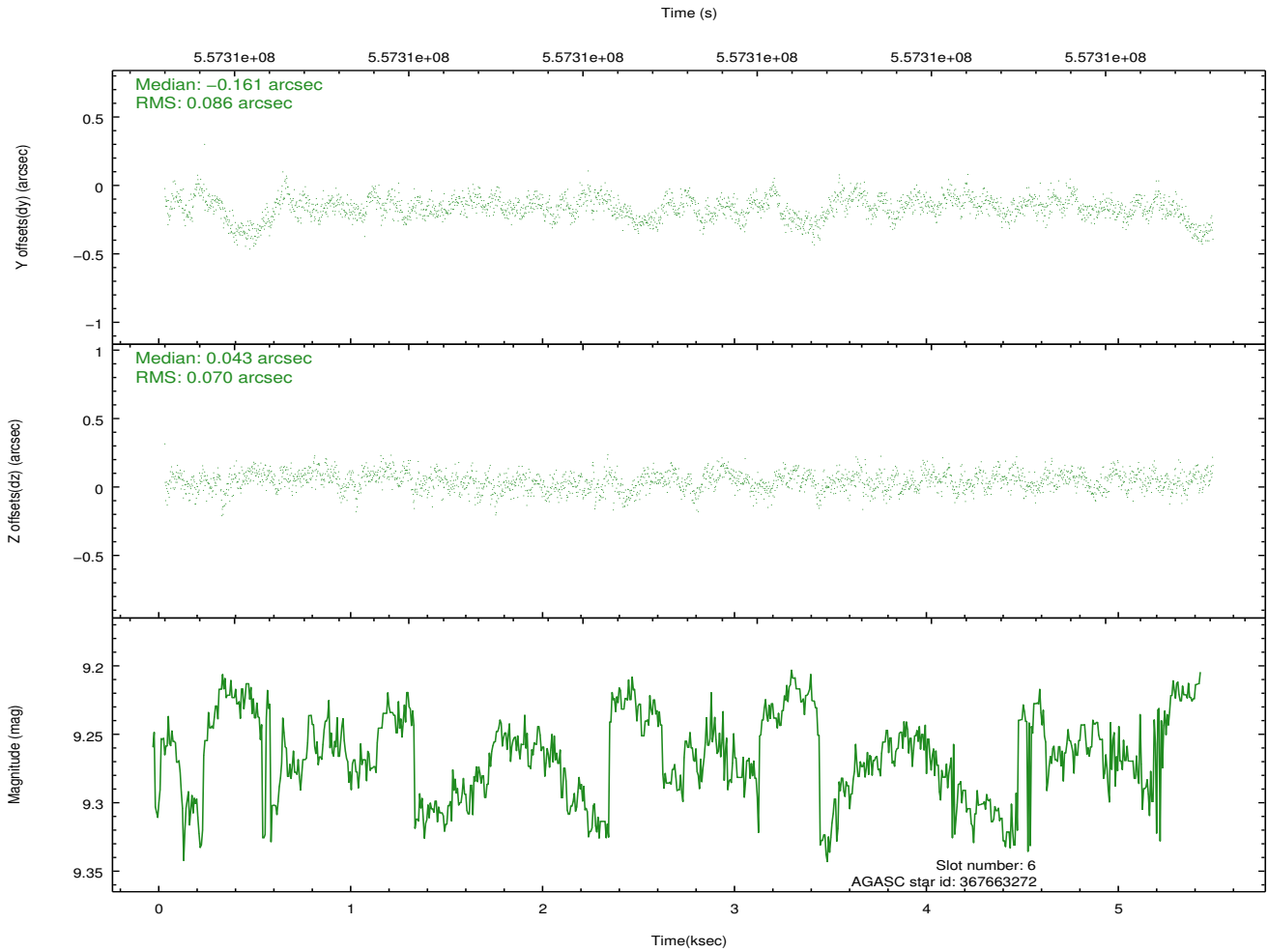
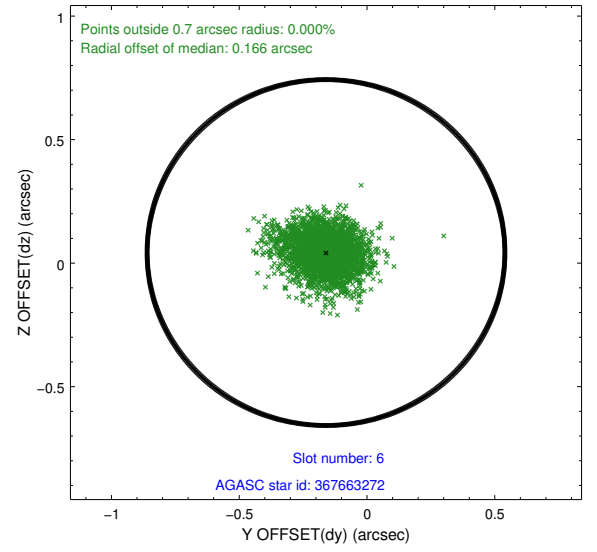
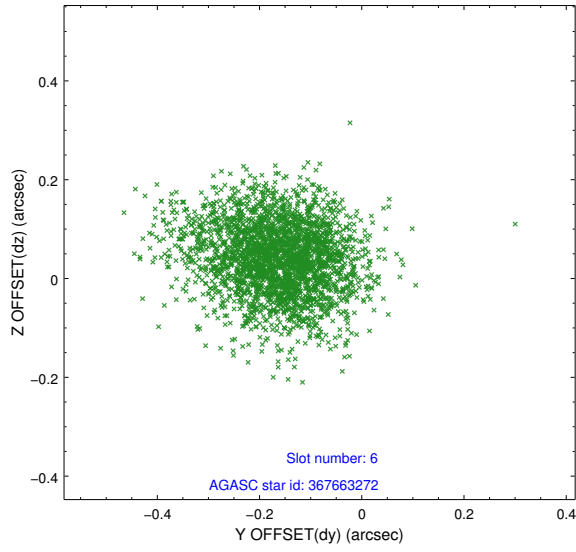
2.4.2 Slot 4



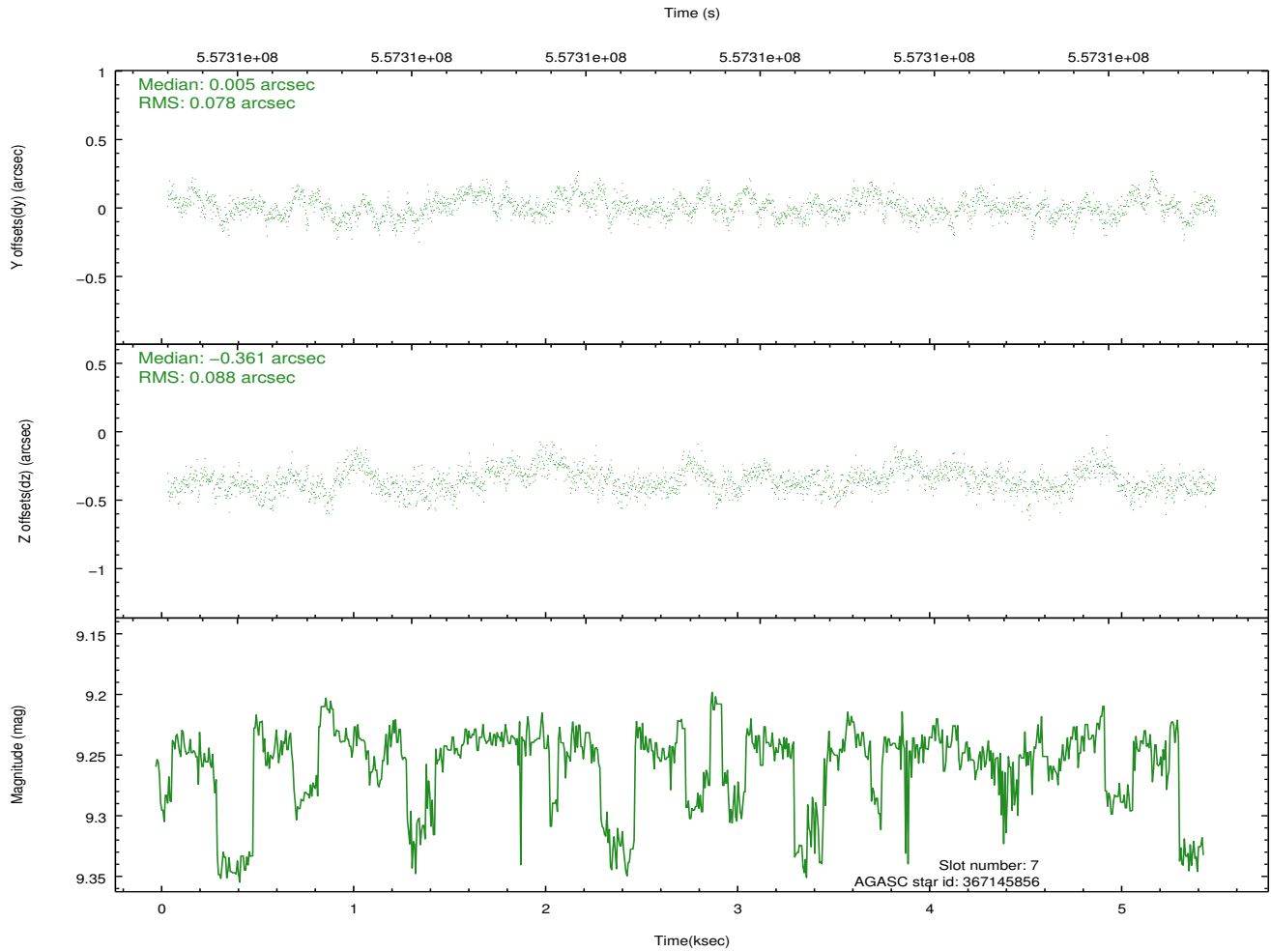
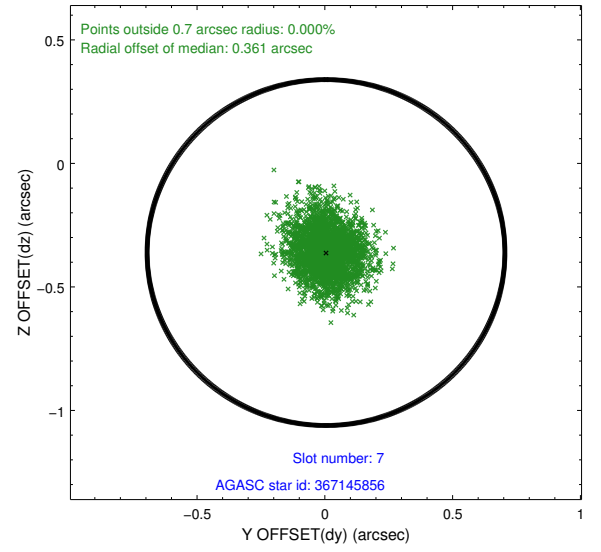
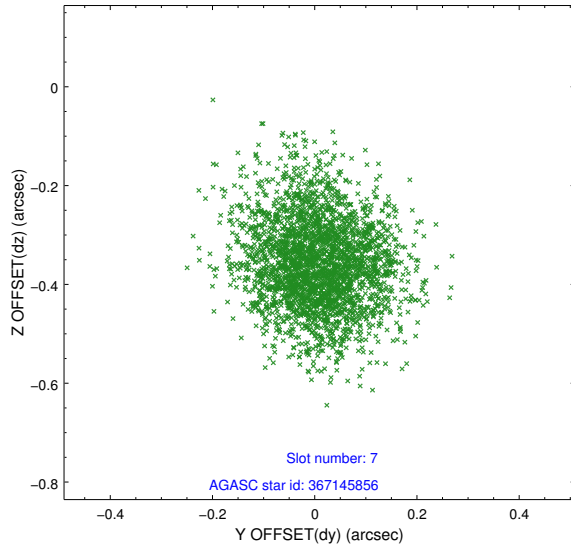
2.4.3 Slot 5



2.4.4 Slot 6

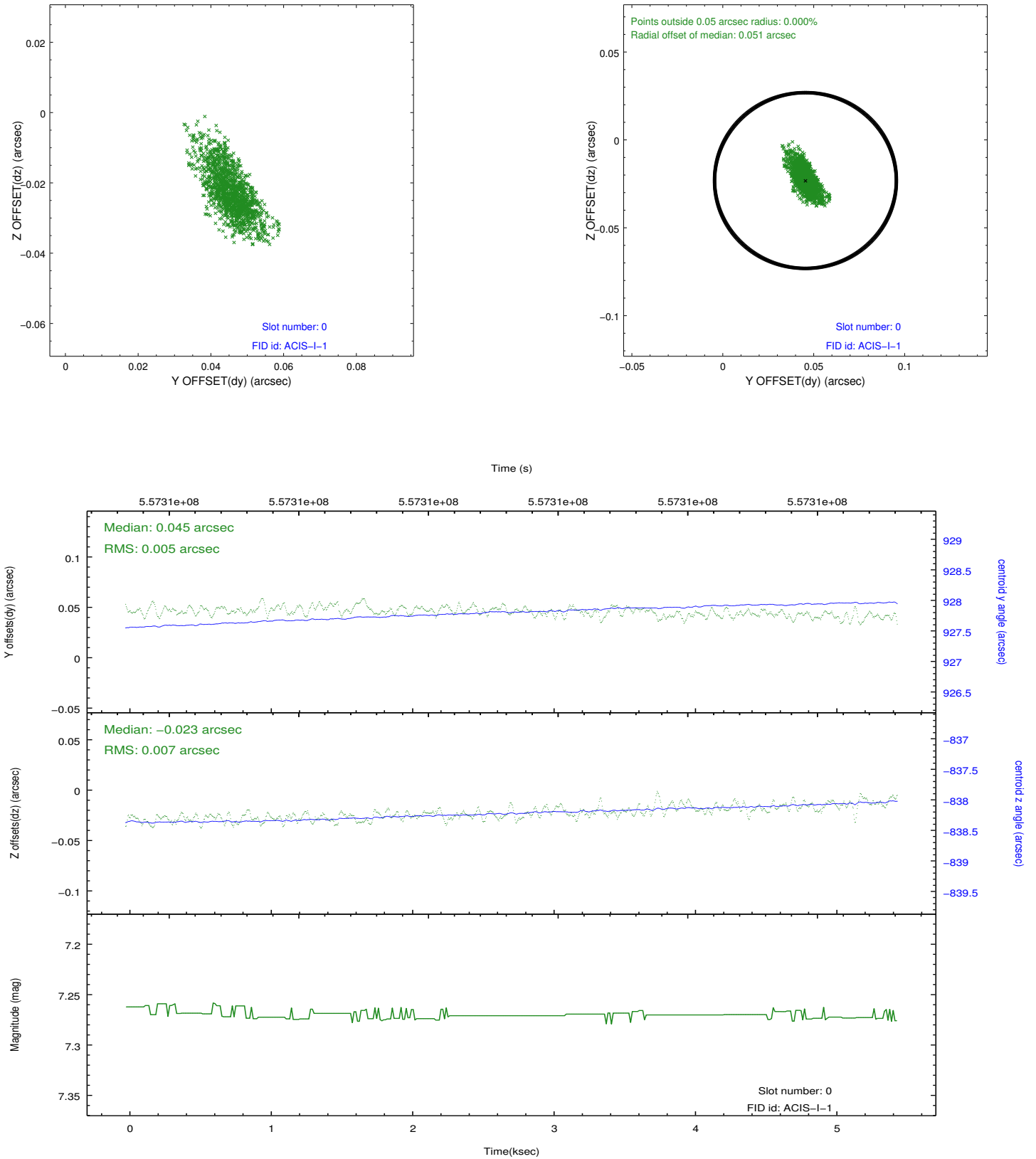


2.4.5 Slot 7

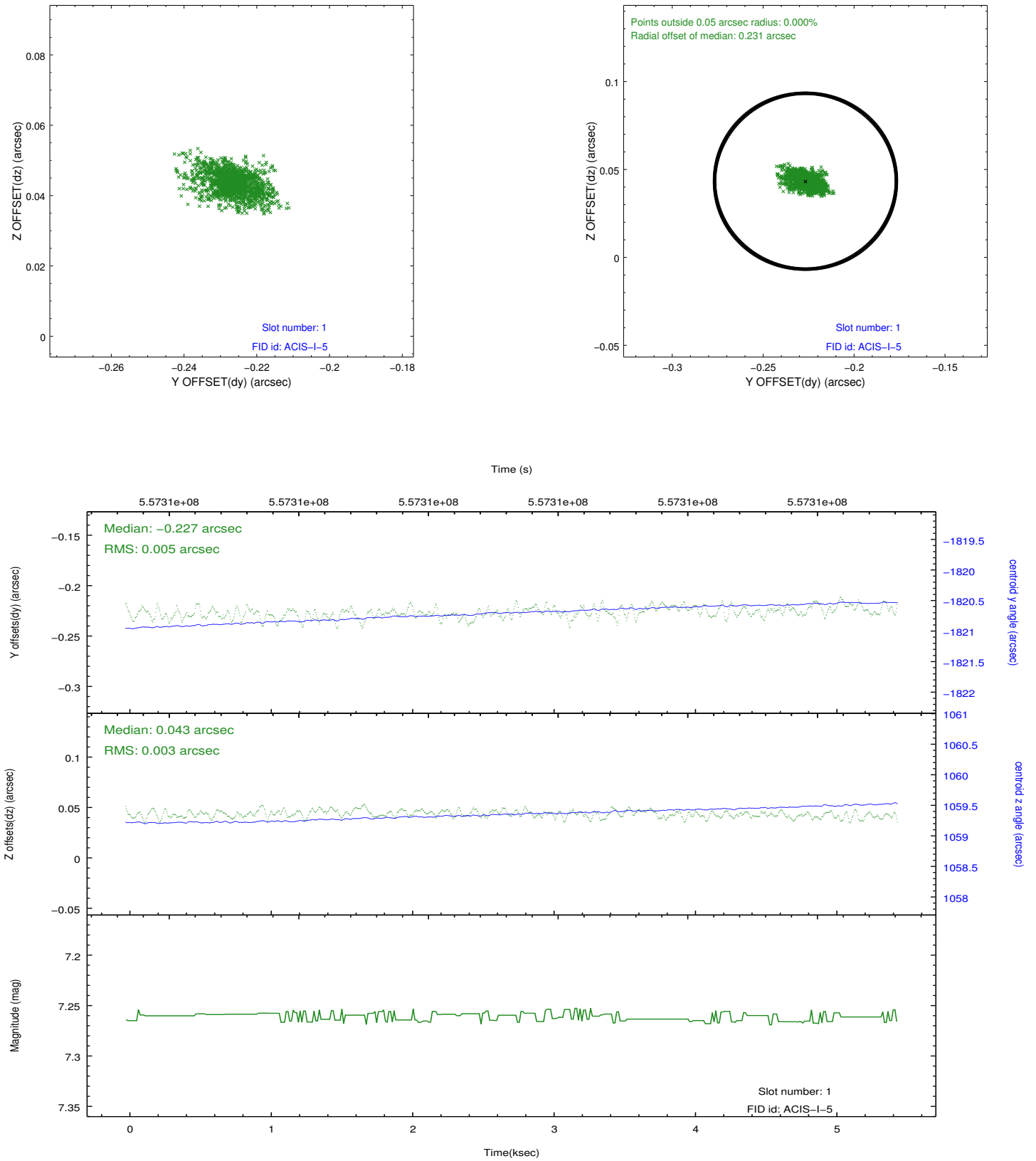


2.5 FID Slots

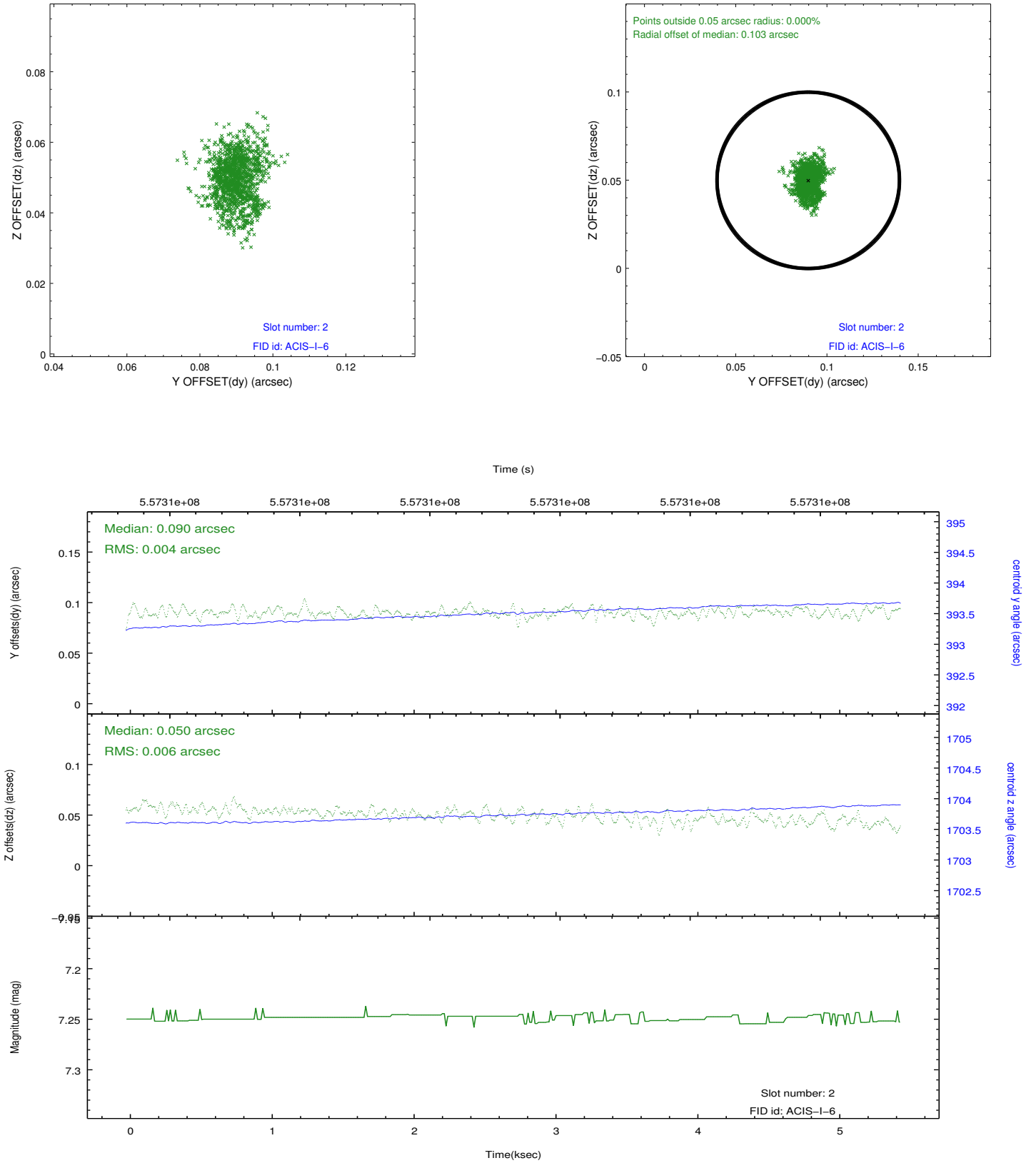
2.5.1 Slot 0



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)	2015.09.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.062300039053

A.2 Comments

Two spatial regions 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: (10.72544, 41.09935), (10.72803, 41.10180), (10.58259, 41.18816), (10.58001, 41.18570) and (10.79930, 41.16938), (10.80121, 41.17119), (10.65572, 41.25763), (10.65381, 41.25581).