

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 20576 - L2 Version 2
Chandra X-Ray Center

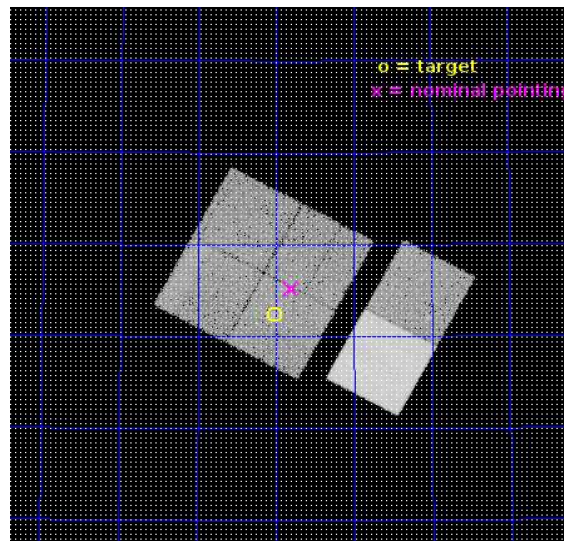
L2 Processing Date : Mar 12 2019

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1 Front

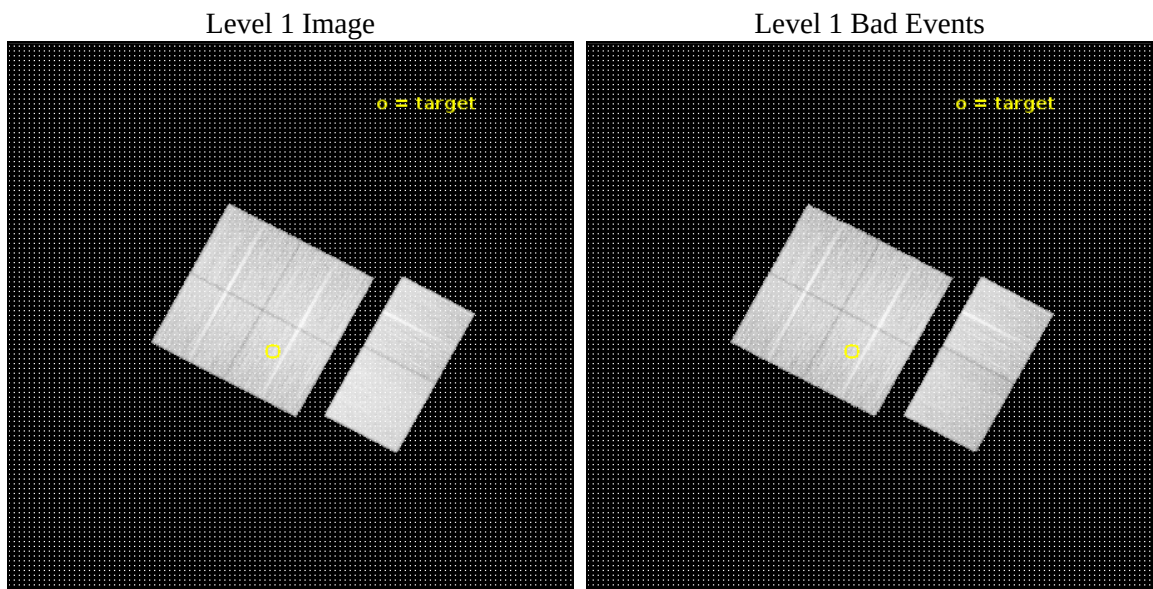
seq_num	801775	Sequence number
obs_id	20576	Observation id
title	The Chandra Strong Lens Sample: Revealing Baryonic Physics In Strong Lensing Selected Clusters	Proposal title
observer	Matthew Bayliss	Principal investigator
object	SDSSJ1456+5702	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	224.004167	Observer's specified target RA [deg]
dec_targ	57.038889	Observer's specified target Dec [deg]
ra_nom	223.95035435218	Nominal RA [deg]
dec_nom	57.086839063153	Nominal Dec [deg]
roll_nom	118.25384926506	Nominal Roll [deg]
revision	2	Processing version of data
ontime	26857.264630079	Sum of GTIs [s]
livetime	26517.18177383	Livetime [s]
ontime0	26857.141510129	Sum of GTIs [s]
ontime1	26857.182550073	Sum of GTIs [s]
ontime2	26857.223590136	Sum of GTIs [s]
ontime3	26857.264630079	Sum of GTIs [s]
ontime6	26857.346710086	Sum of GTIs [s]
ontime7	26857.305670142	Sum of GTIs [s]
l2events	210028	Number of level 2 events



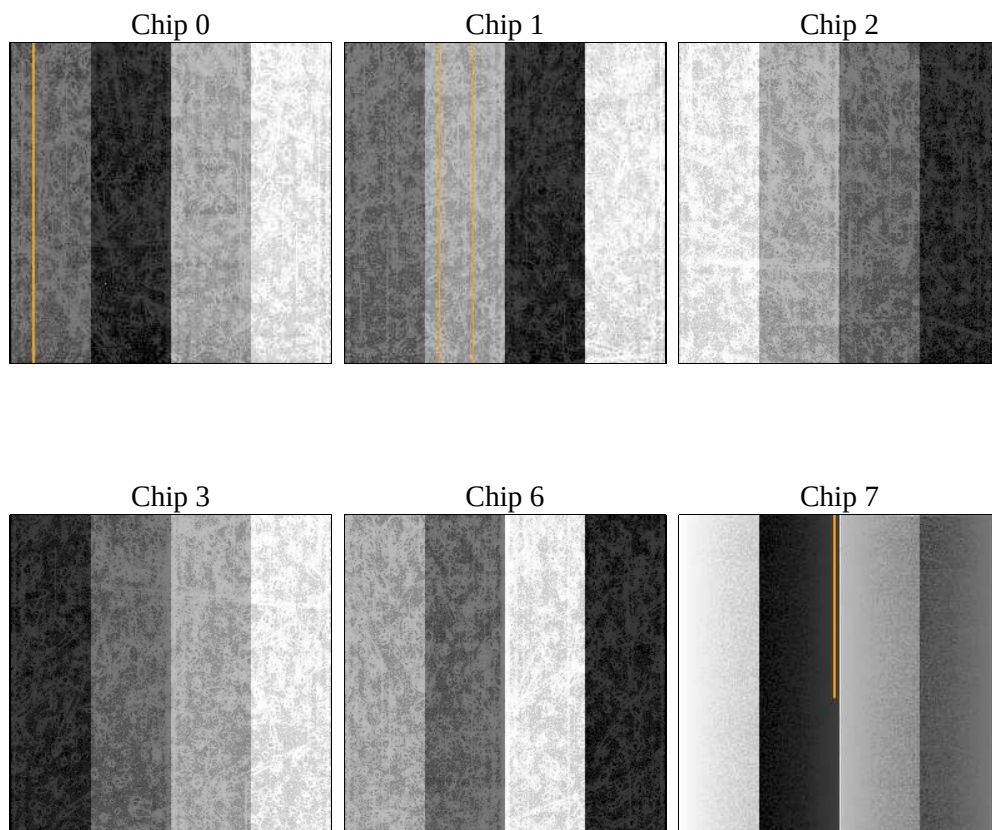
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	26900.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	26857.264630079	Sum of GTIs [s]
caldsver	4.8.2	 	ontime0	26857.141510129	Sum of GTIs [s]
date	2019-03-12T17:50:07	Date and time of file creation	ontime1	26857.182550073	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	26857.223590136	Sum of GTIs [s]
			ontime3	26857.264630079	Sum of GTIs [s]
			ontime6	26857.346710086	Sum of GTIs [s]
			ontime7	26857.305670142	Sum of GTIs [s]
			l1events	1246282	Number of level 1 events

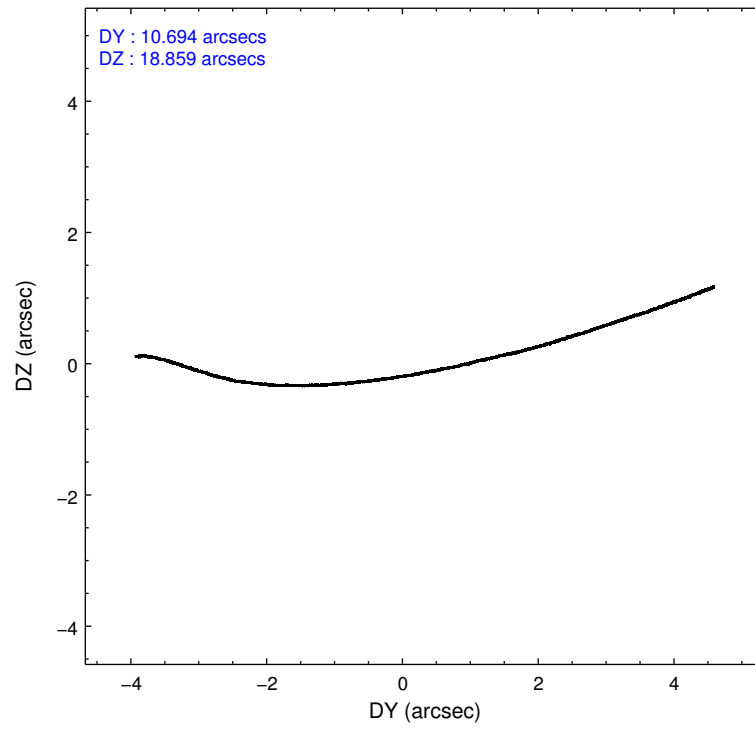
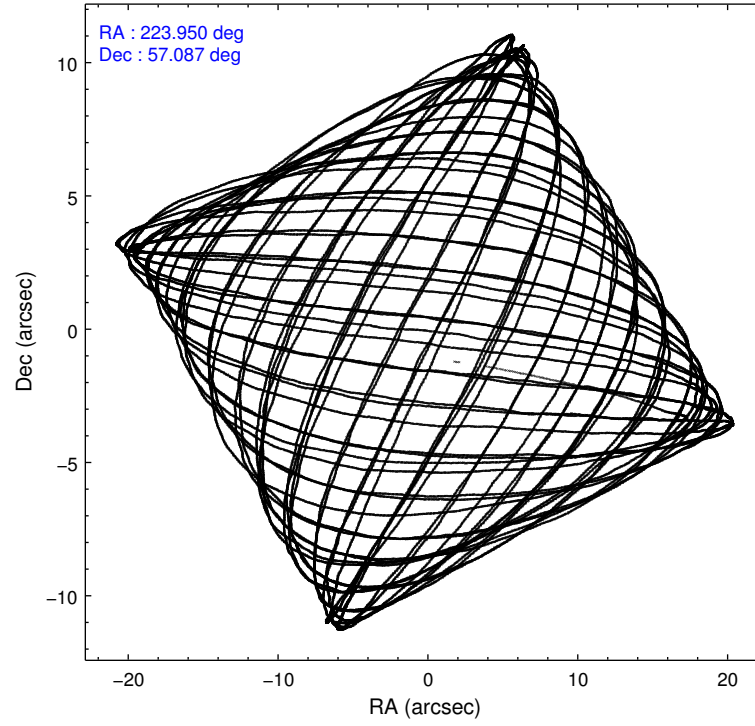
2.1.4 Events

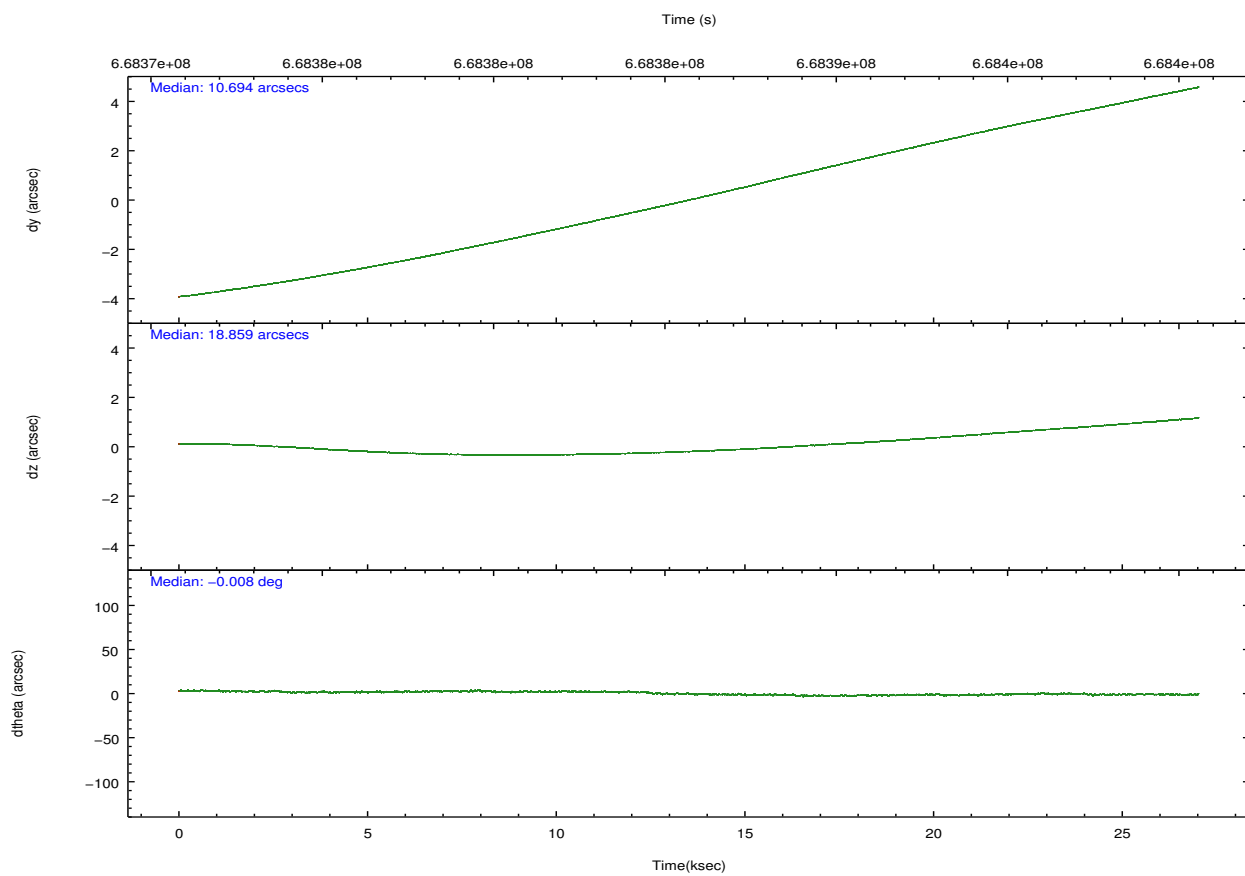
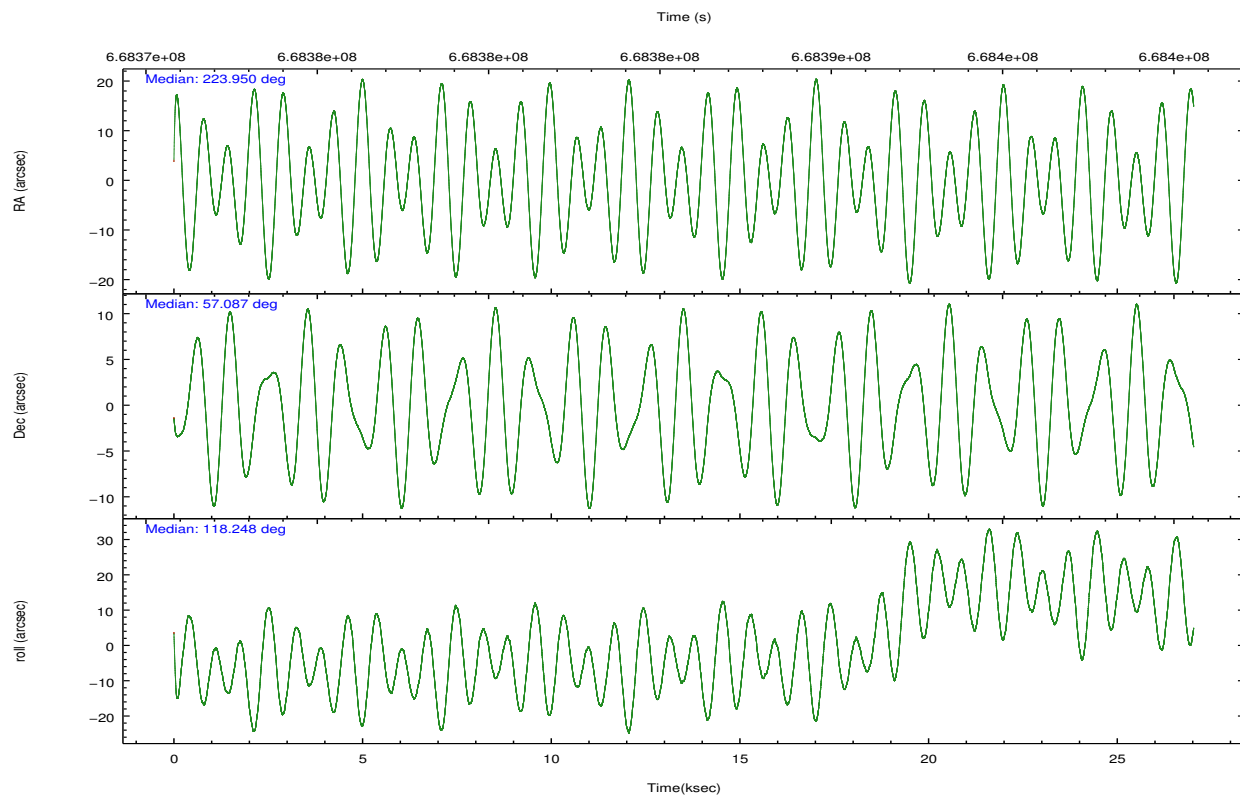
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	180135	187369	205364	198952	211131	263331	grade 0 events	7711	8405	7725	8389	7726	9500
rejected events	157191	162130	183065	176260	187462	148721		4%	4%	3%	4%	3%	3%
rejected %	87%	86%	89%	88%	88%	56%	grade 1 events	105	105	108	124	115	409
								0%	0%	0%	0%	0%	0%
							grade 2 events	5877	6492	5613	4883	5644	24777
								3%	3%	2%	2%	2%	9%
							grade 3 events	2322	2473	2211	2363	2308	9165
								1%	1%	1%	1%	1%	3%
							grade 4 events	2208	2366	2220	2363	2249	8977
								1%	1%	1%	1%	1%	3%
							grade 5 events	8952	9069	8494	9741	9953	26565
								4%	4%	4%	4%	4%	10%
							grade 6 events	4828	5509	4534	4696	5746	62206
								2%	2%	2%	2%	2%	23%
							grade 7 events	148132	152950	174459	166393	177390	121732
								82%	81%	84%	83%	84%	46%

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	223.993619	223.9503543521814	CCD I2 on	Y	Y
[deg] Pointing Dec	57.072380	57.08683906315287	CCD I3 on	Y	Y
[deg] Pointing Roll	118.008845	118.253849265065	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	-225.840463	-225.8458576473255	CCD S3 on	O2	Y
[mm] SIM translation stage offset	-7.752	-7.746595355604228	CCD S4 on	N	N
[s] Observation start time (MET)	668372301.184000	668370638.73913	CCD S5 on	N	N
Observation start date	2019-03-07T18:57:12	2019-03-07T18:30:38	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	668399201.184000	668400069.56589	On-chip summing requested	N	N
Observation end date	2019-03-08T02:25:32	2019-03-08T02:41:09	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



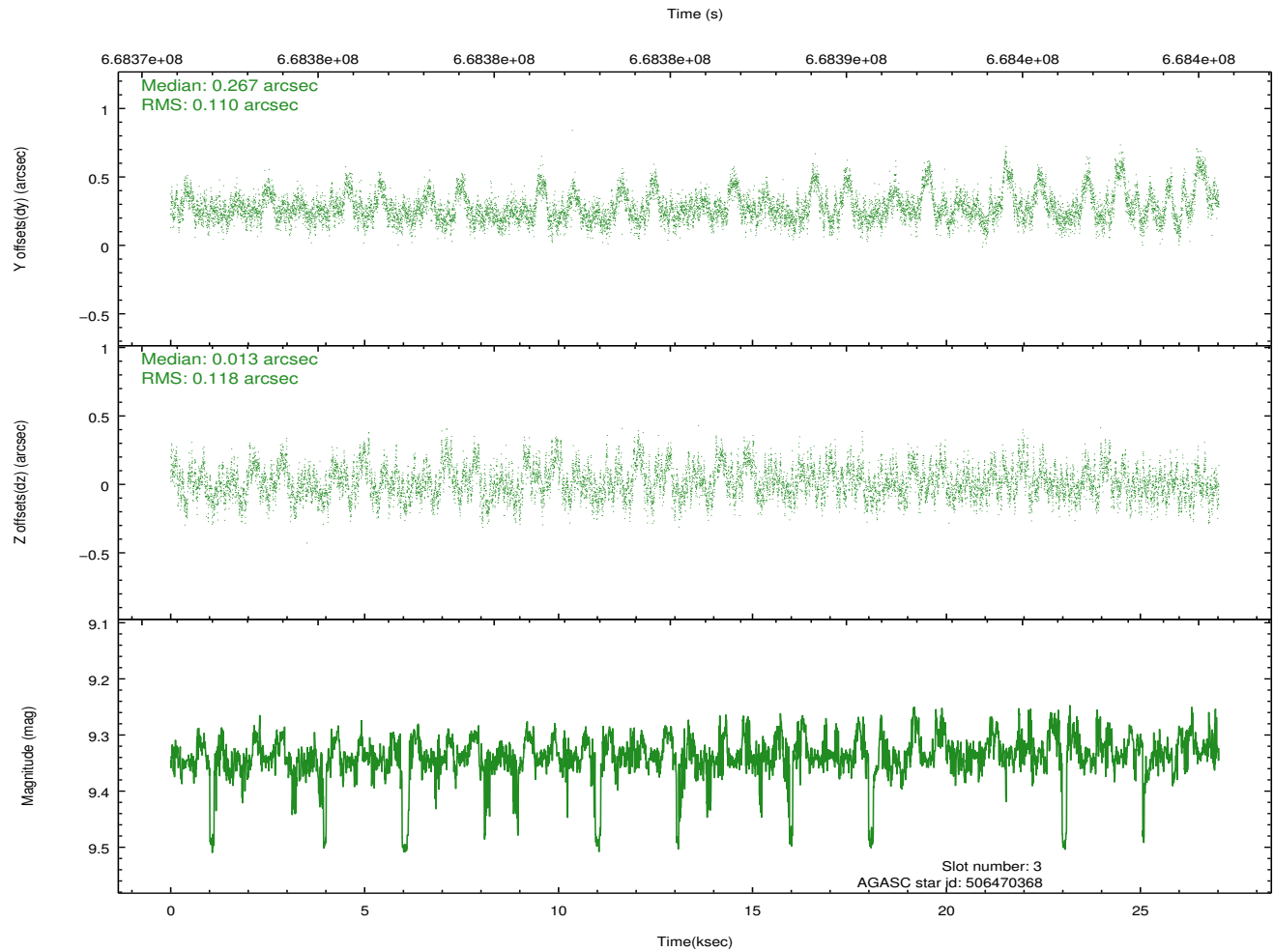
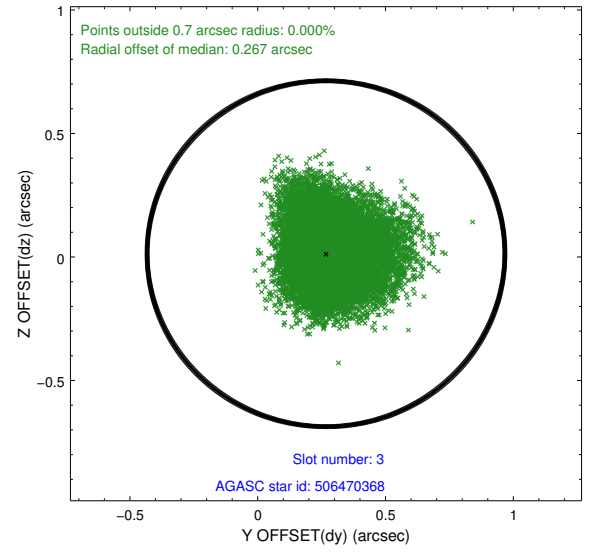
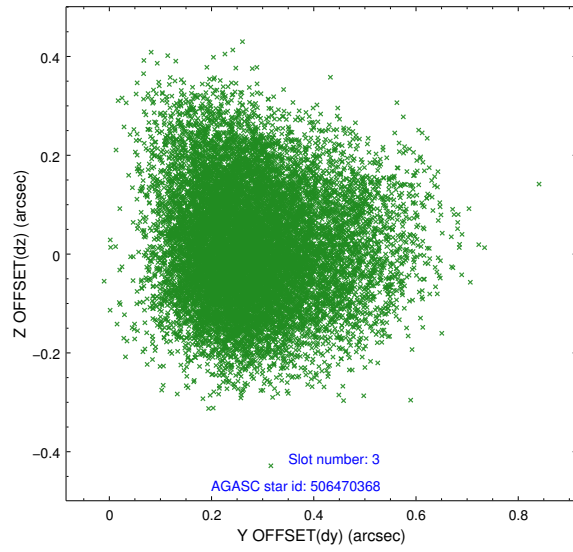


Slot Statistics

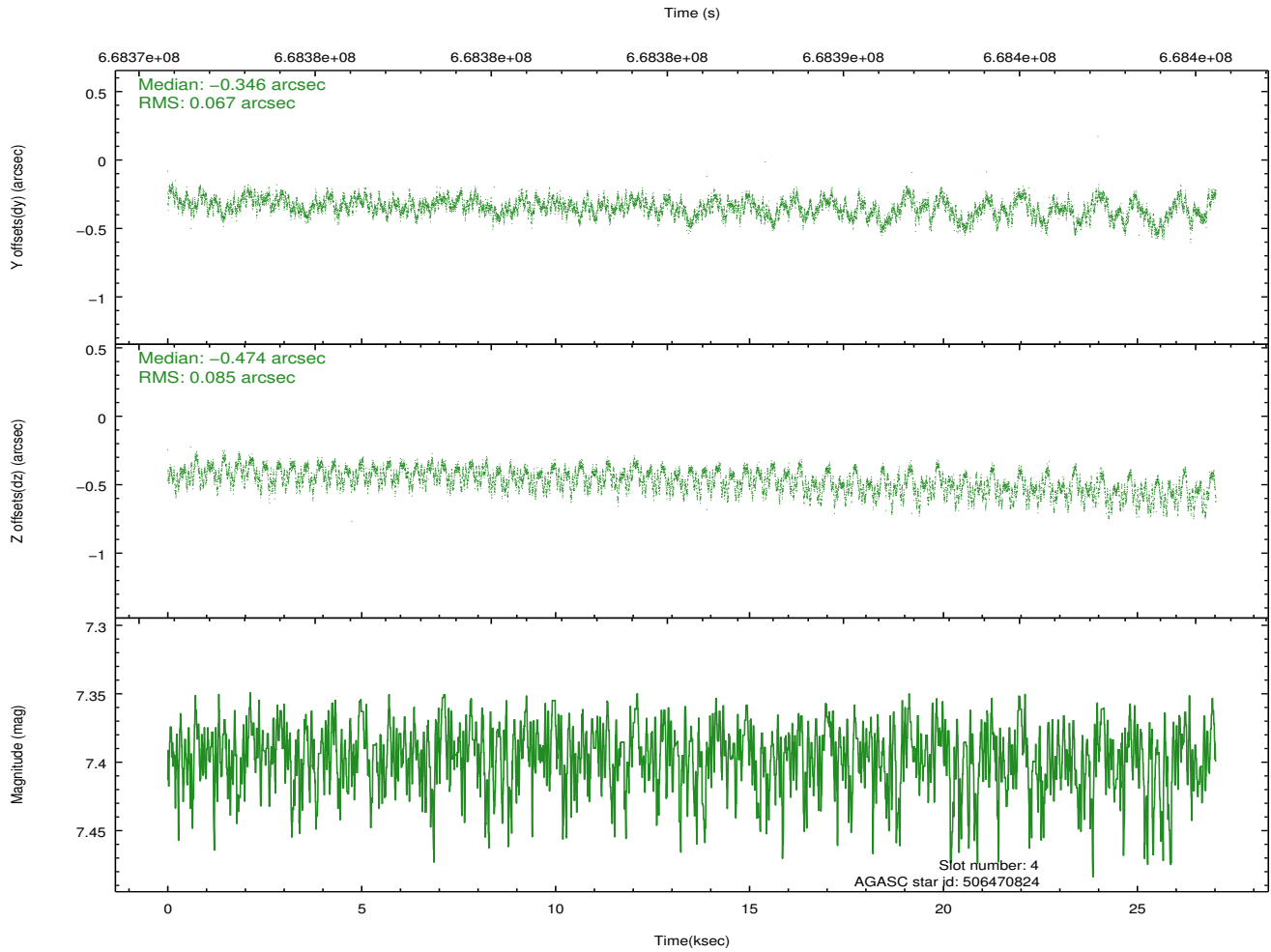
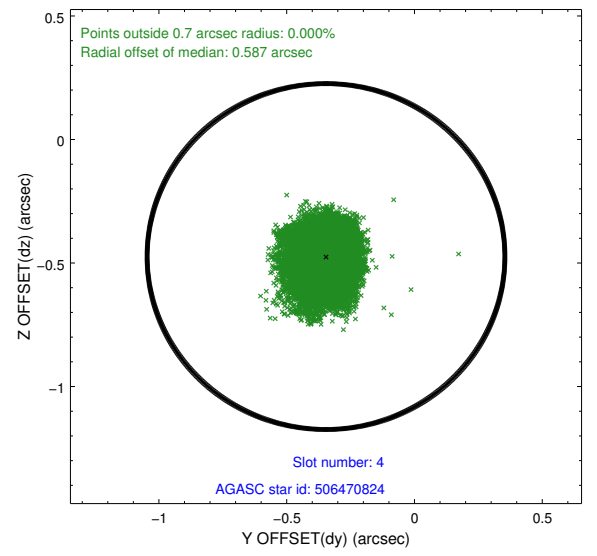
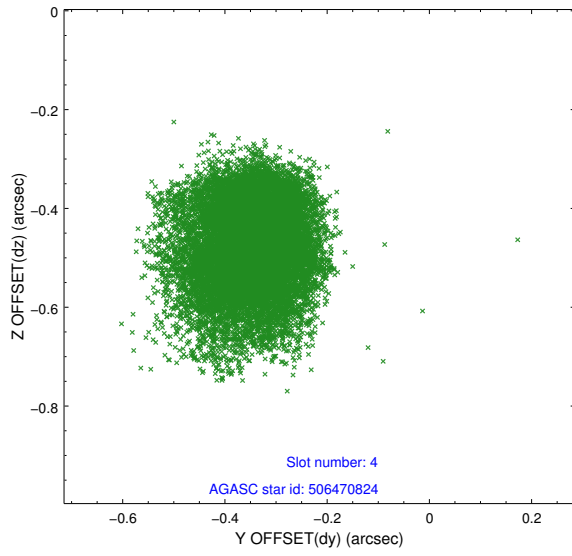
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.12	6592	1.000	0.139	-0.132	0.024	0.049	0.000000	0.000000	928.86	-1001
1	FID		ACIS-I-5	7.09	6592	1.000	-0.466	0.057	0.038	0.068	0.000000	0.000000	-1820.00	895
2	FID		ACIS-I-6	7.14	6592	1.000	0.235	0.149	0.049	0.080	0.000000	0.000000	394.14	1540
3	GUIDE	used	506470368	9.34	13172	1.000	0.267	0.013	0.170	0.285	223.878555	56.993616	-143.12	332
4	GUIDE	used	506470824	7.39	13183	1.000	-0.346	-0.474	0.116	0.185	222.702112	57.410951	2273.49	1627
5	GUIDE	used	506470872	9.61	13143	1.000	-0.365	0.010	0.269	0.471	223.476604	57.077746	495.31	882
6	GUIDE	used	506471888	8.39	13175	1.000	0.338	0.306	0.122	0.228	224.182070	57.044618	-260.63	-278
7	GUIDE	used	506861944	7.42	13183	1.000	0.075	0.144	0.132	0.221	224.335957	57.649138	1524.99	-1557

2.4 Star Slots

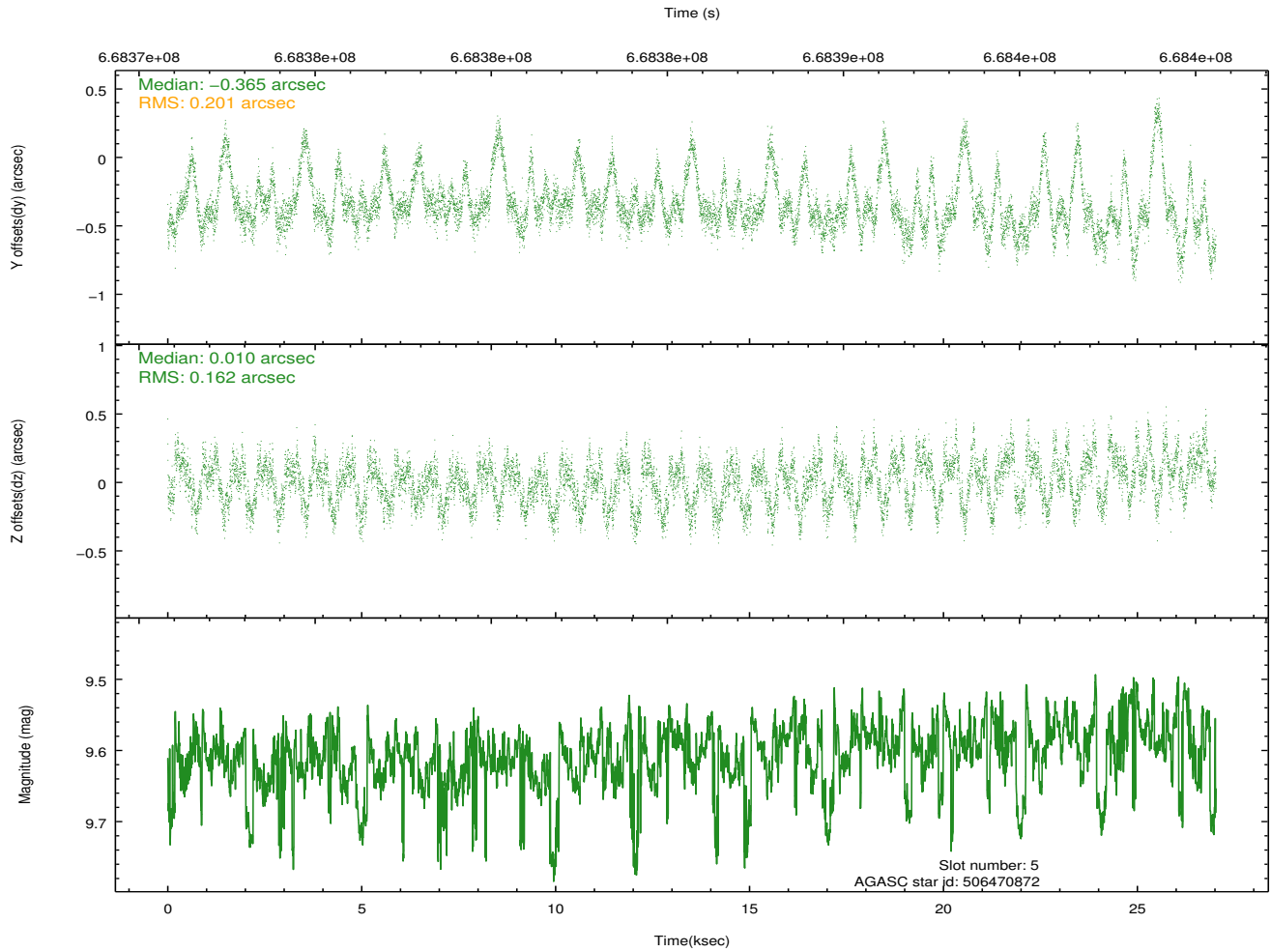
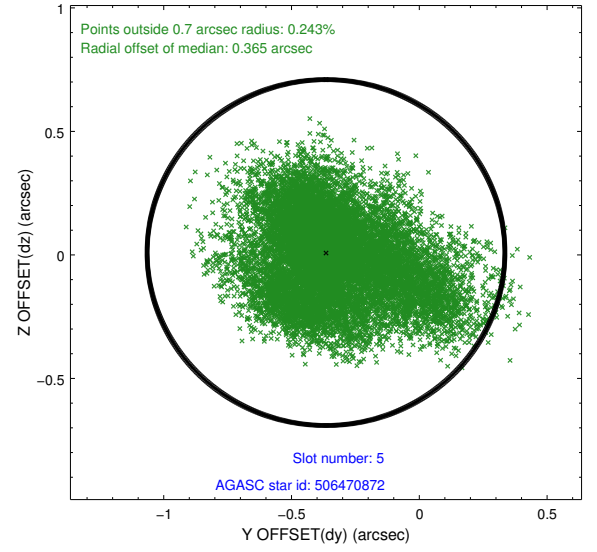
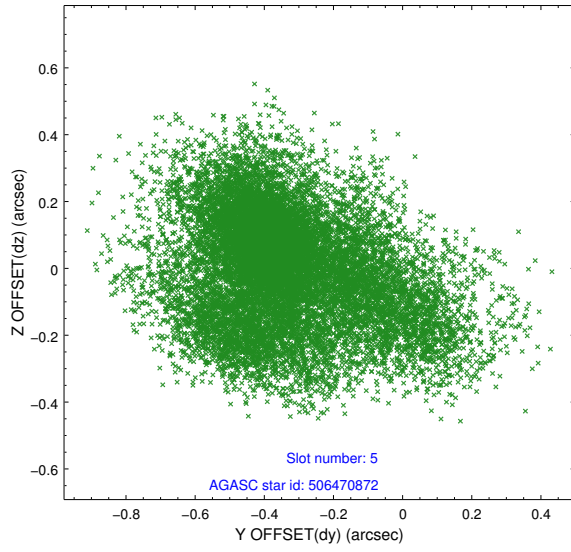
2.4.1 Slot 3



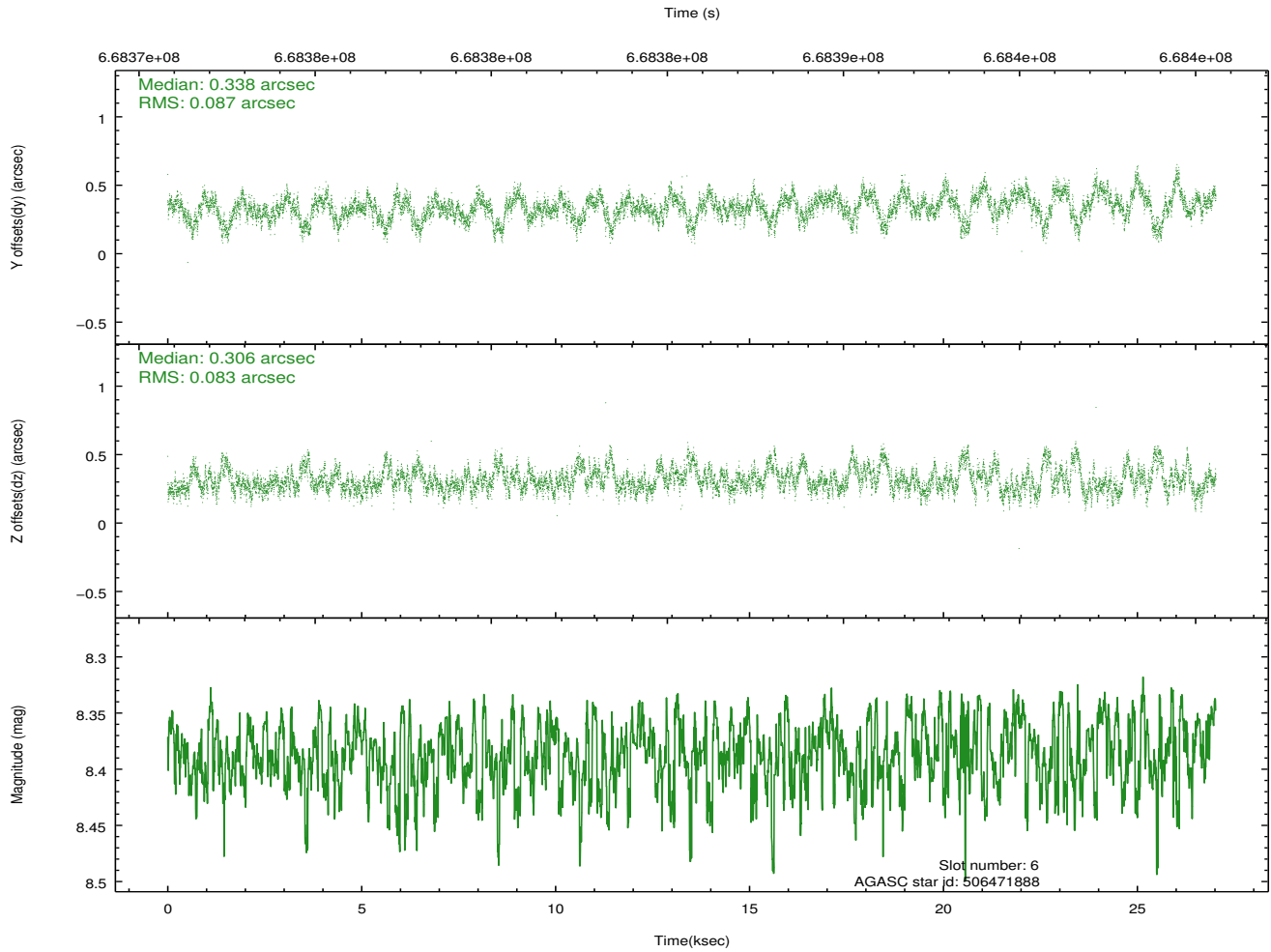
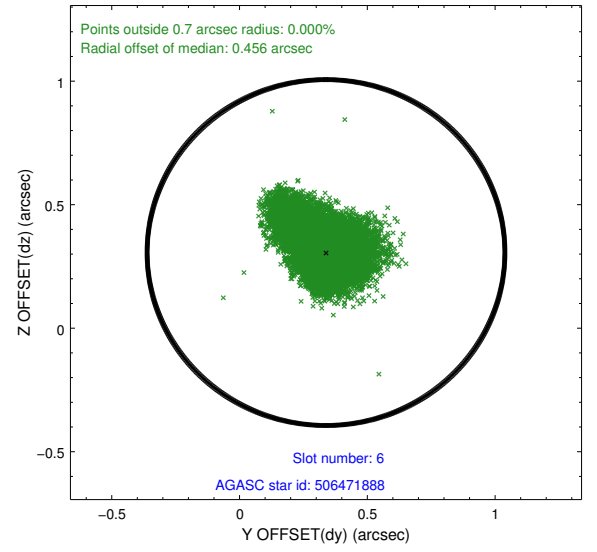
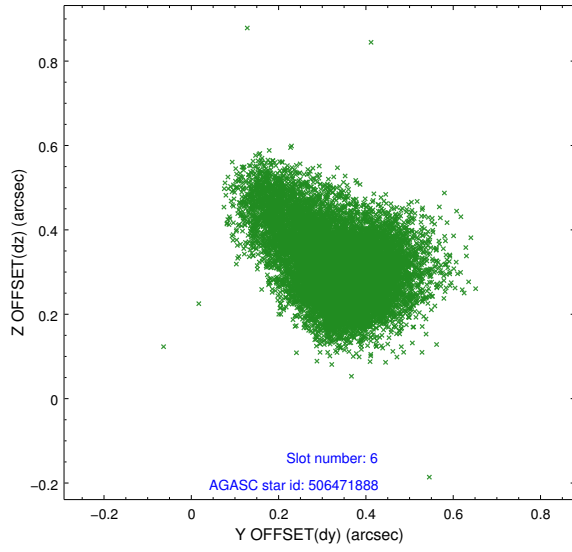
2.4.2 Slot 4



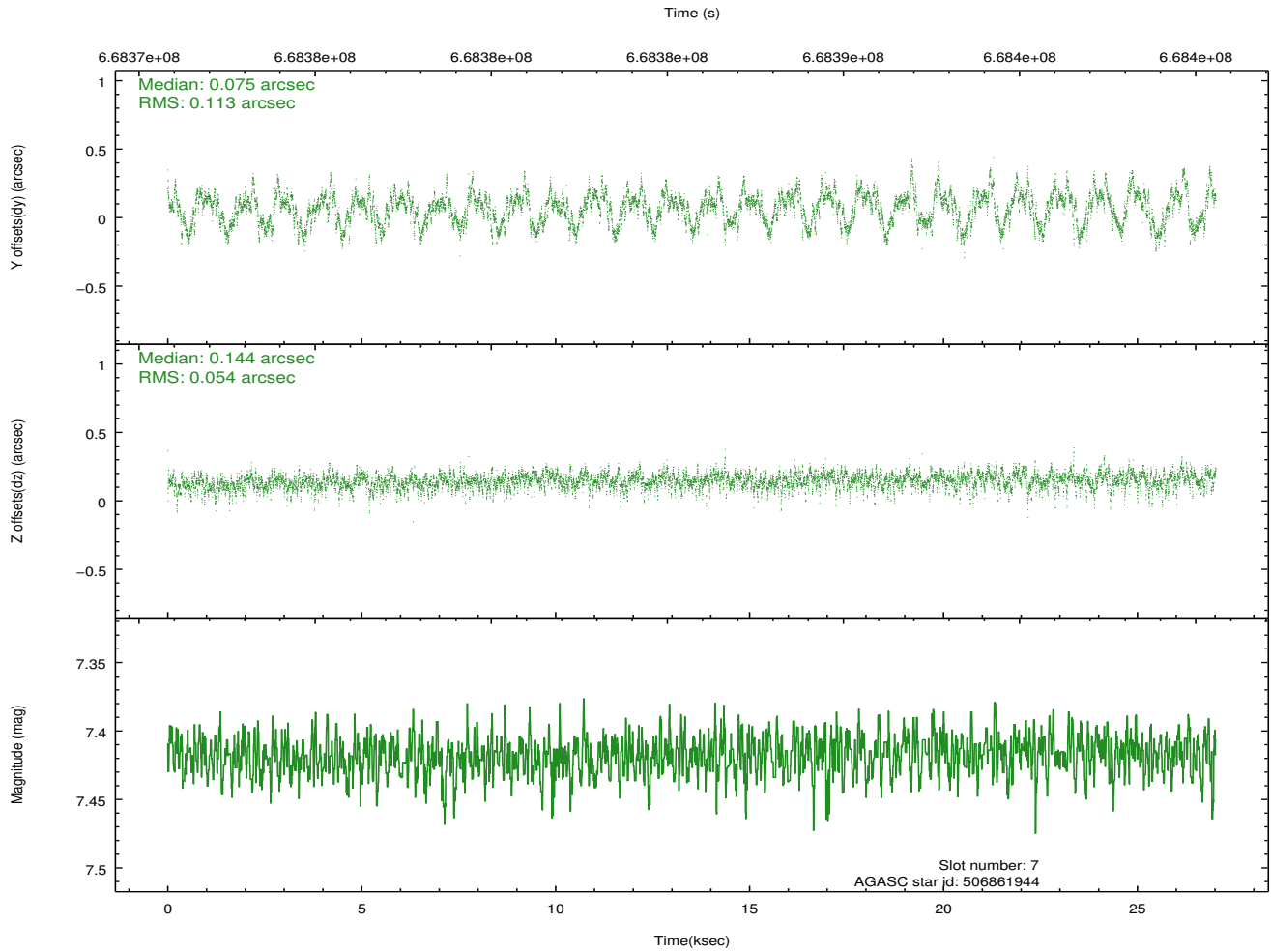
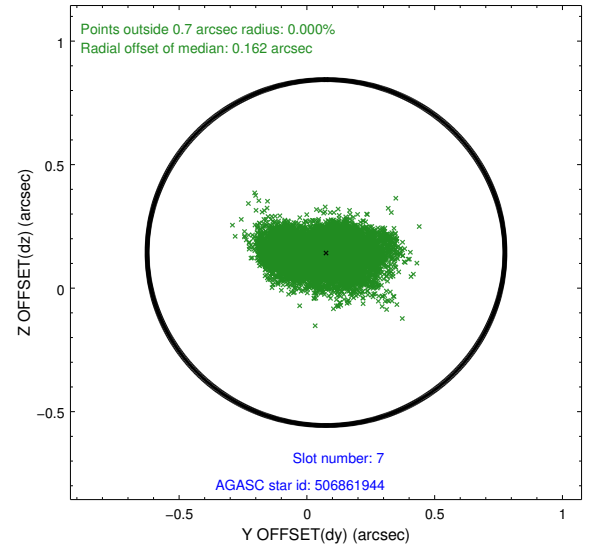
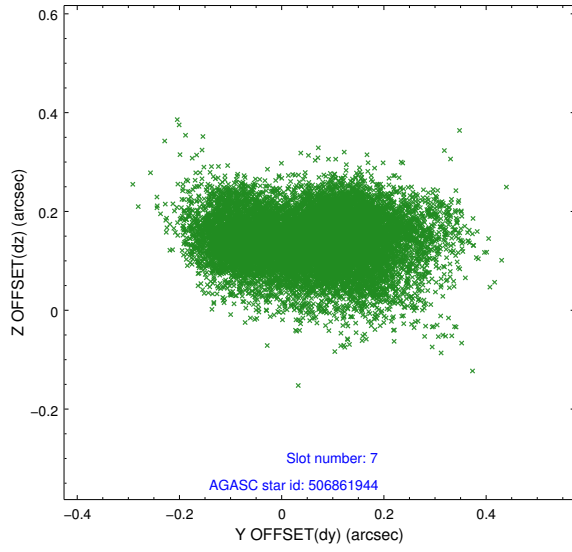
2.4.3 Slot 5



2.4.4 Slot 6

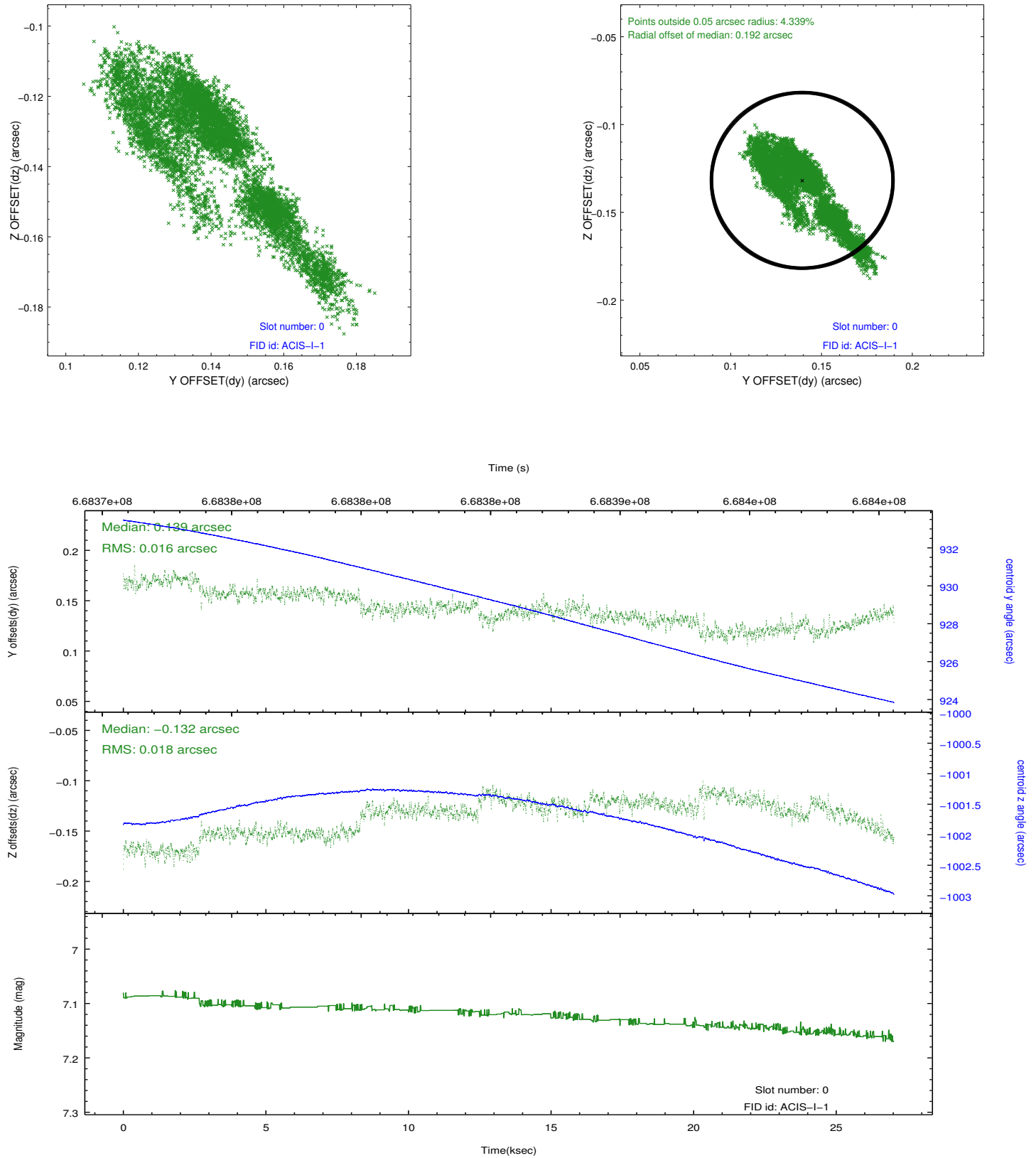


2.4.5 Slot 7

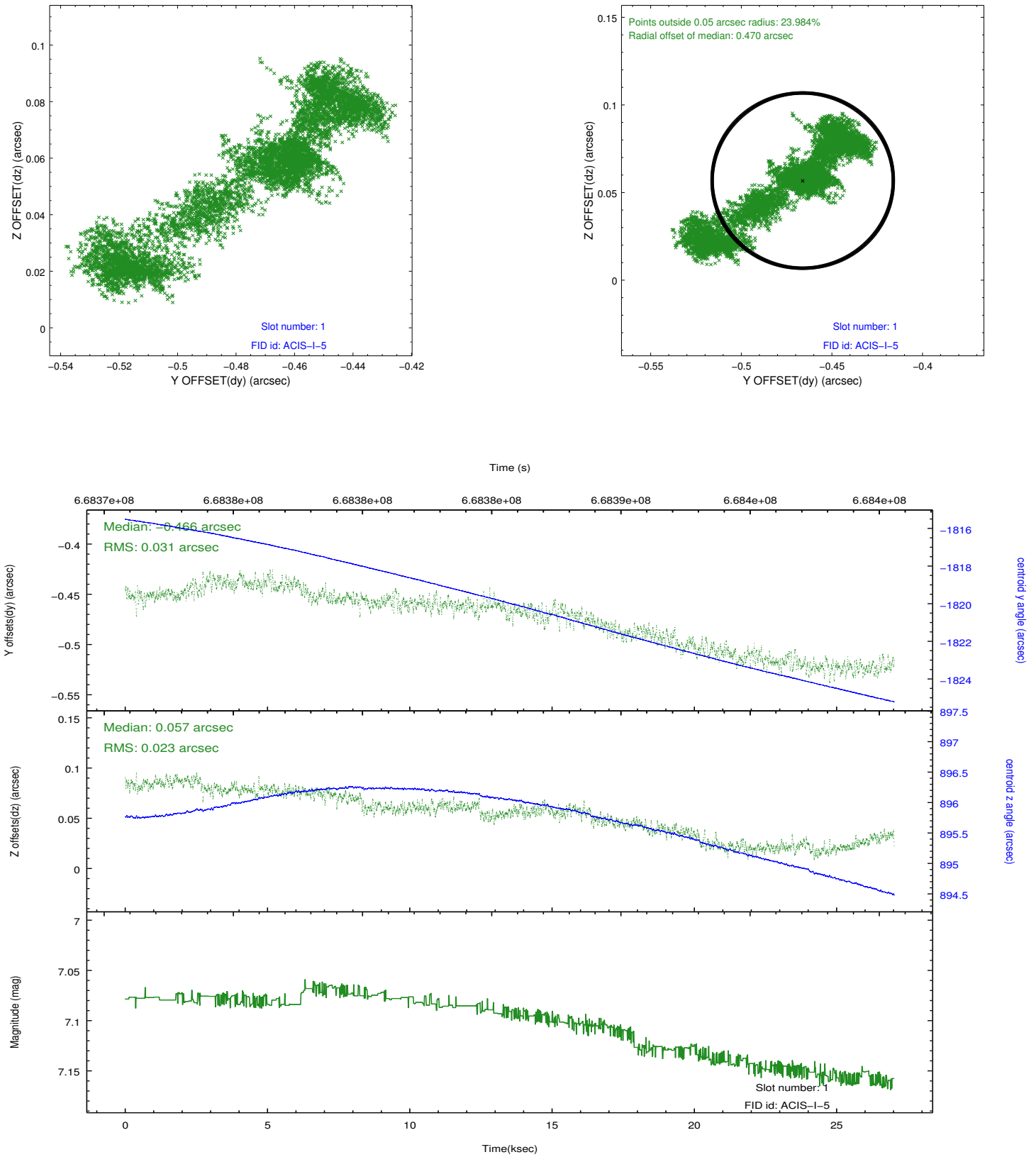


2.5 FID Slots

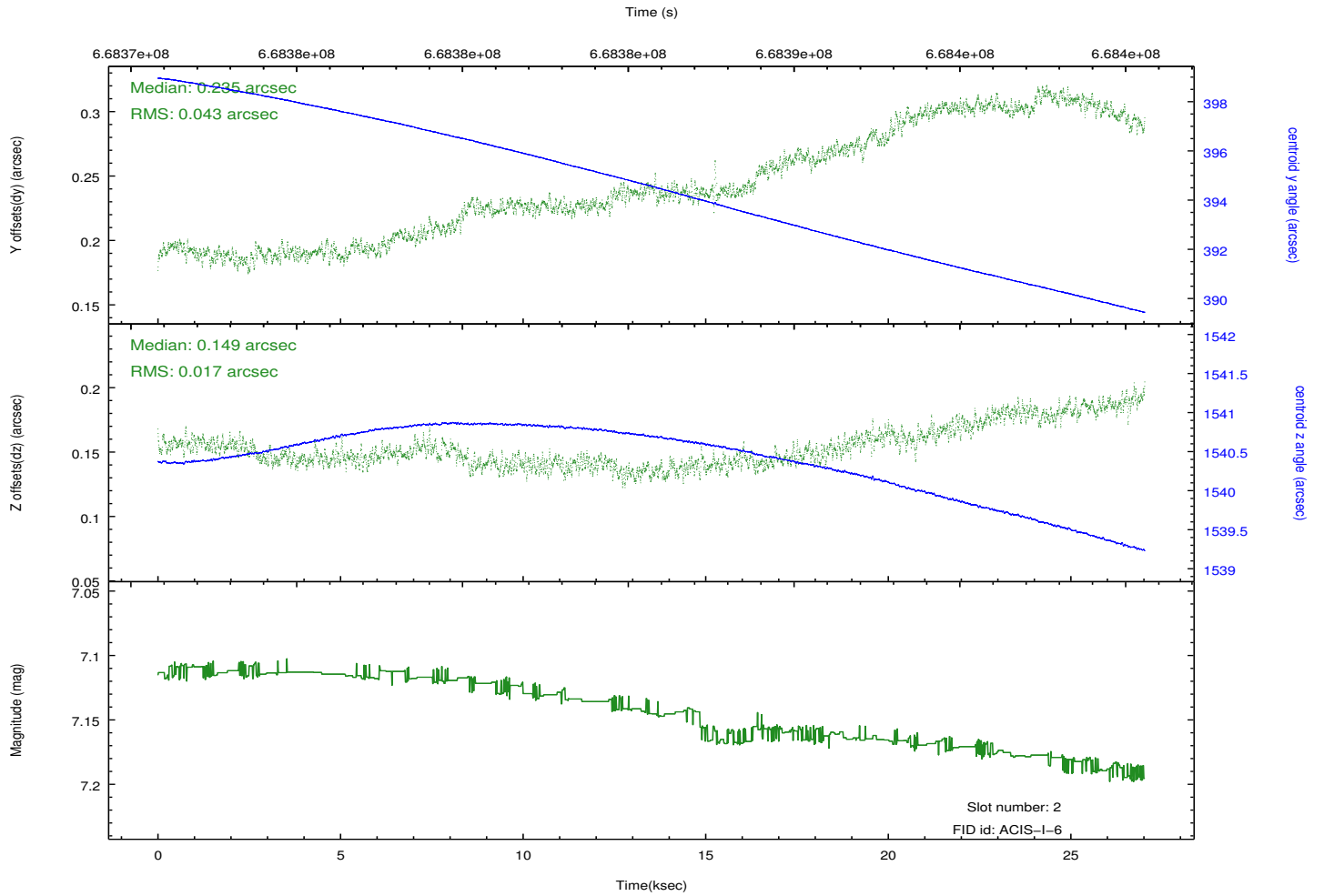
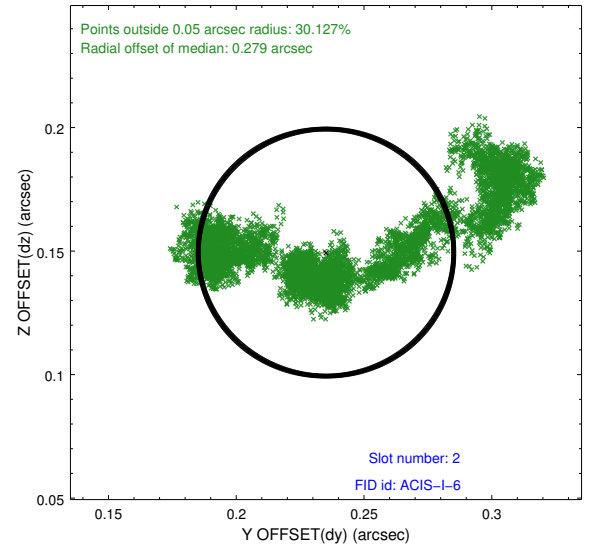
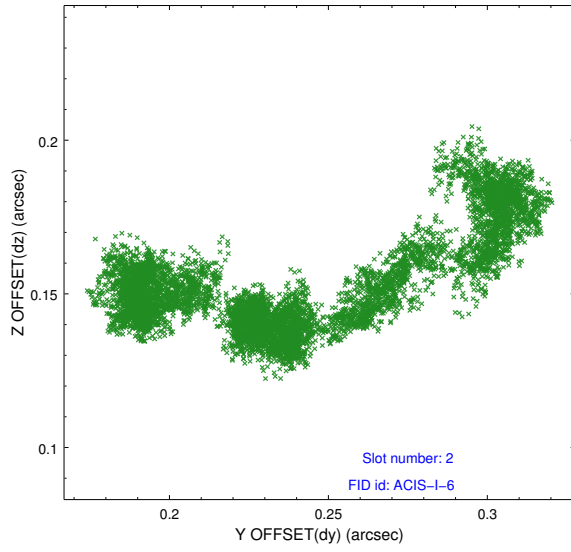
2.5.1 Slot 0



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)	2019.03.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	26.857264630079

A.2 Comments

Joint proposal with HST.

A spatial region 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: (224.03343,56.95405), (224.04204,56.95655), (223.98361,57.01590), (223.97440,57.01400).