

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22073 - L2 Version 2
Chandra X-Ray Center

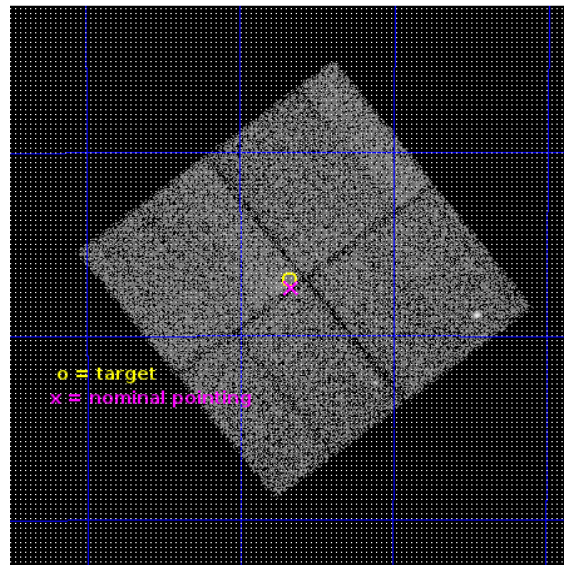
L2 Processing Date : Feb 13 2019

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1 Front

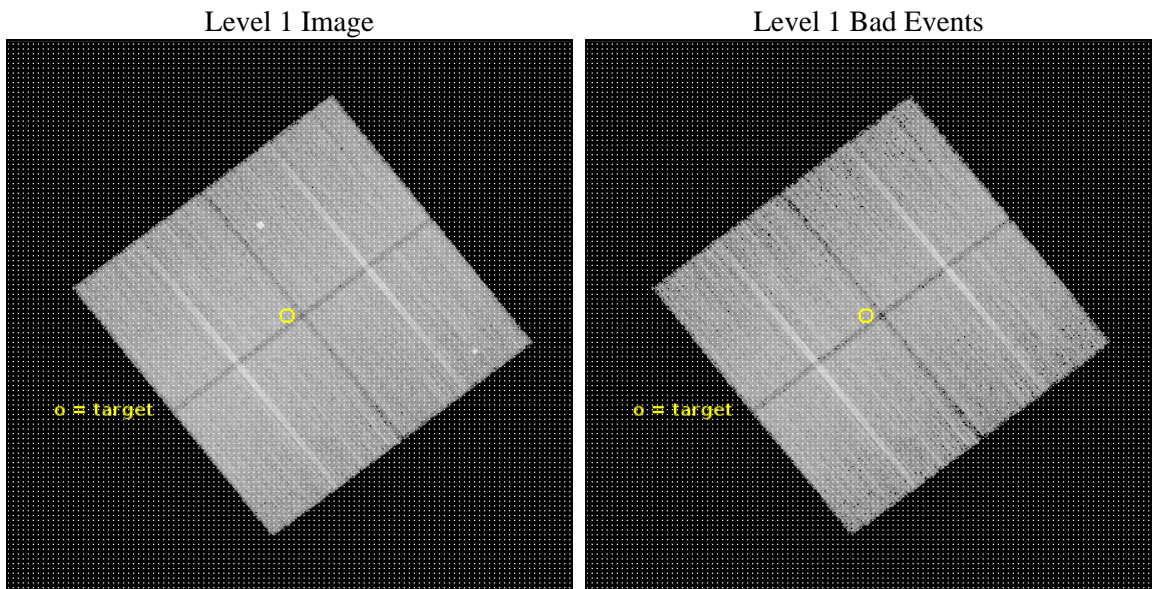
seq_num	801850	Sequence number
obs_id	22073	Observation id
title	Studying the Progenitors of Our Favorite Clusters at $z > 1$ (HRC-GTO)	
observer	Ralph Kraft	Principal investigator
object	SPT-CLJ2331-5736	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	352.9189	Observer's specified target RA [deg]
dec_targ	-57.6155	Observer's specified target Dec [deg]
ra_nom	352.91646112293	Nominal RA [deg]
dec_nom	-57.623066821527	Nominal Dec [deg]
roll_nom	232.20662443876	Nominal Roll [deg]
revision	2	Processing version of data
ontime	31944.299617529	Sum of GTIs [s]
livetime	31526.923825975	Livetime [s]
ontime0	31941.03552711	Sum of GTIs [s]
ontime1	31937.935557127	Sum of GTIs [s]
ontime2	31944.258577585	Sum of GTIs [s]
ontime3	31944.299617529	Sum of GTIs [s]
l2events	92735	Number of level 2 events



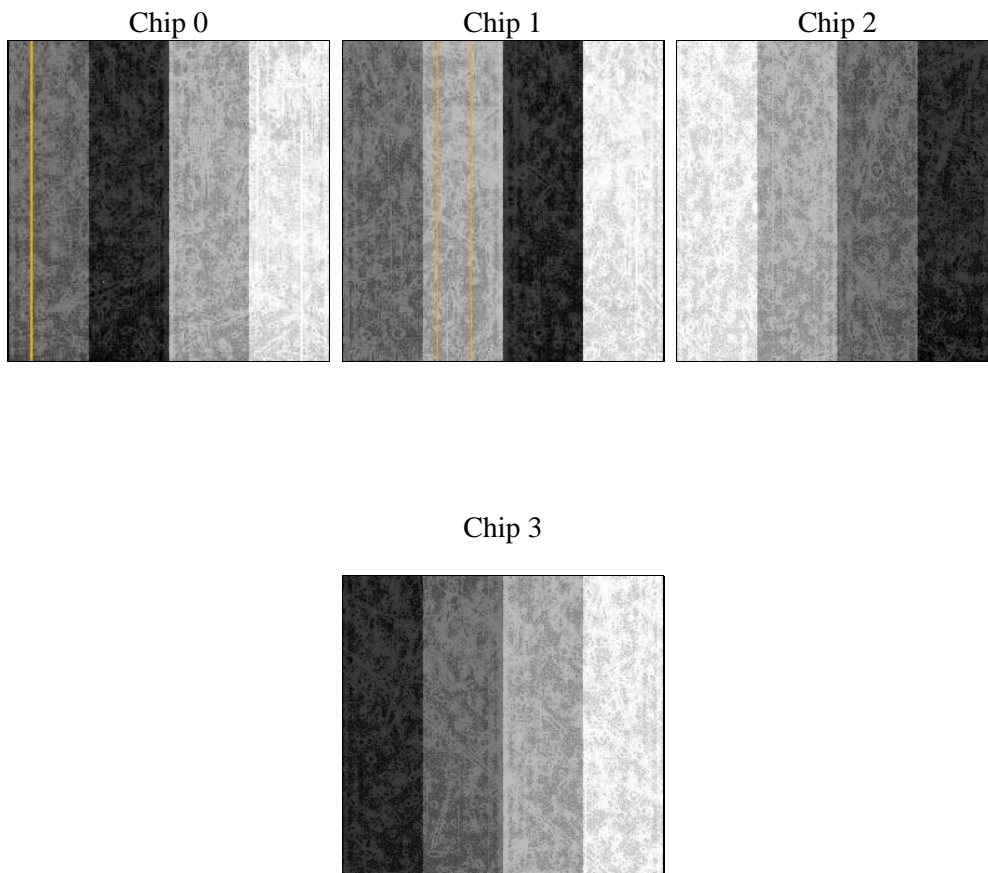
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	31866.089000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	31944.299617529	Sum of GTIs [s]
caldbver	4.8.2	 	ontime0	31941.03552711	Sum of GTIs [s]
date	2019-02-13T20:11:37	Date and time of file creation	ontime1	31937.935557127	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	31944.258577585	Sum of GTIs [s]
			ontime3	31944.299617529	Sum of GTIs [s]
			l1events	909391	Number of level 1 events

2.1.4 Events

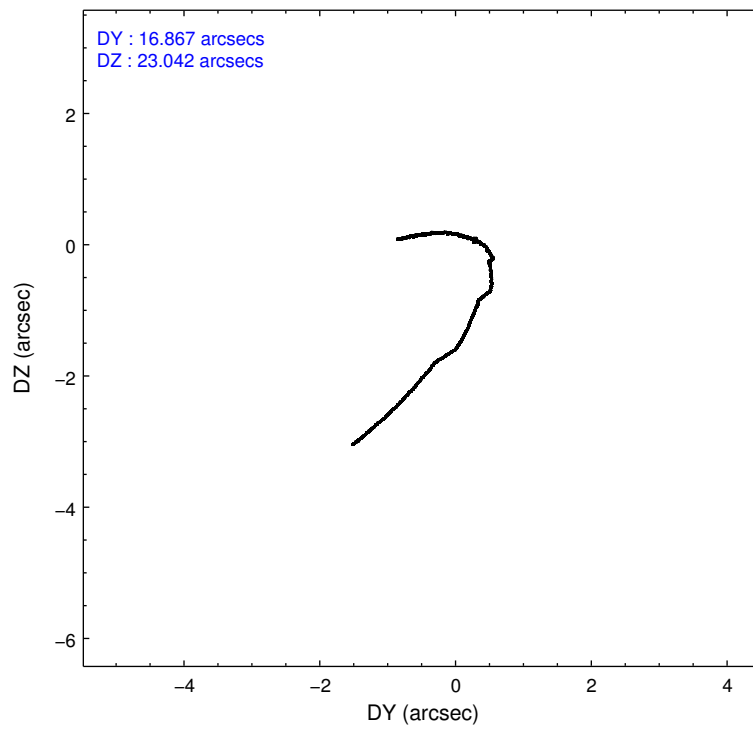
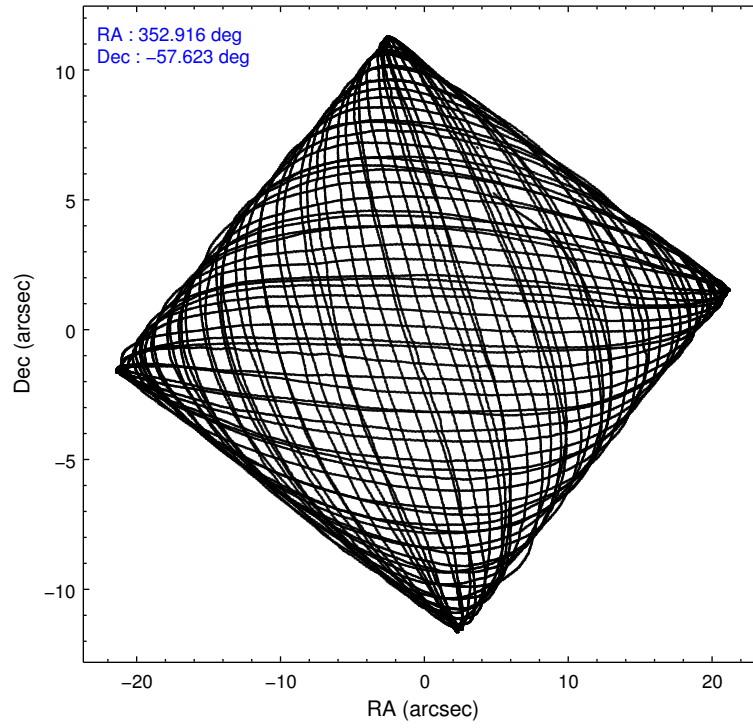
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	215119	223090	237452	233730
rejected events	187395	190563	211143	206842
rejected %	87%	85%	88%	88%

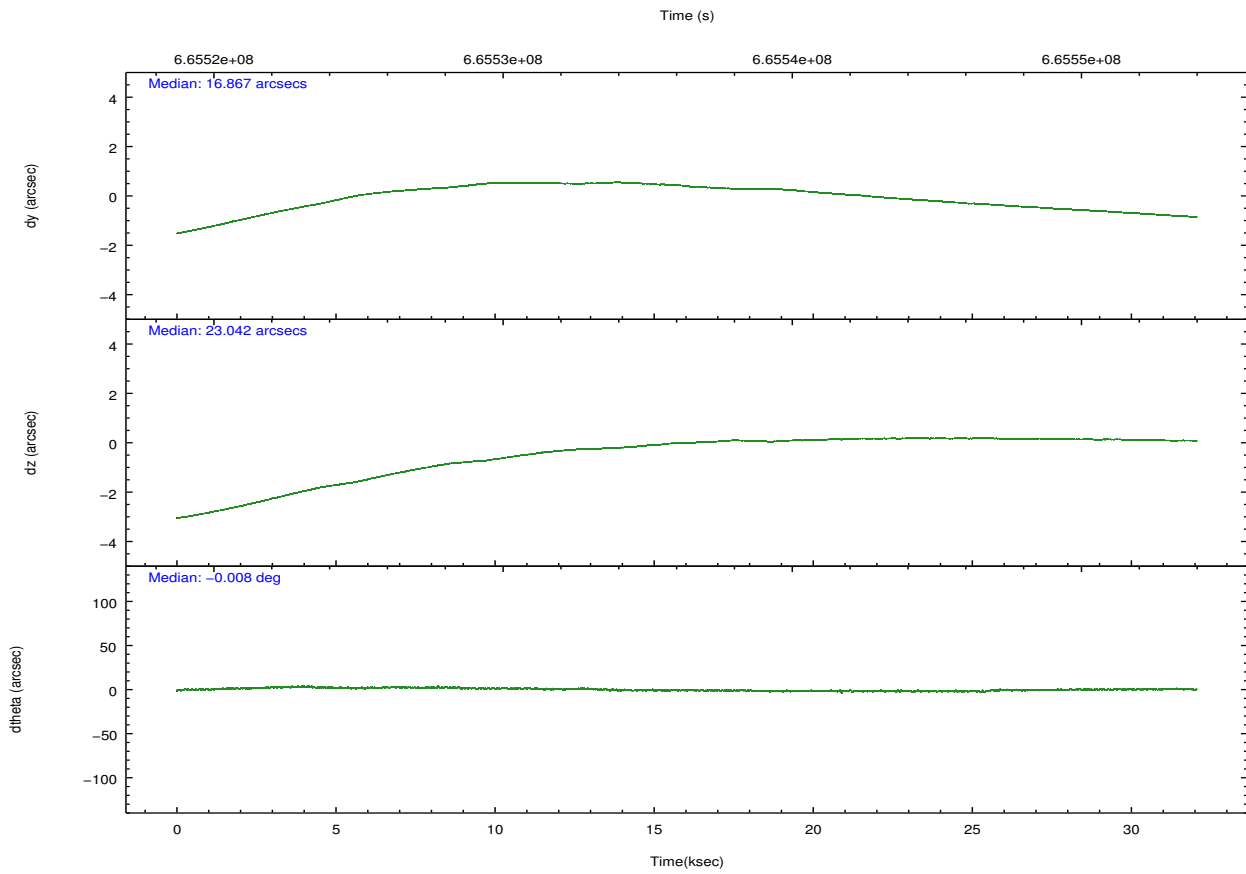
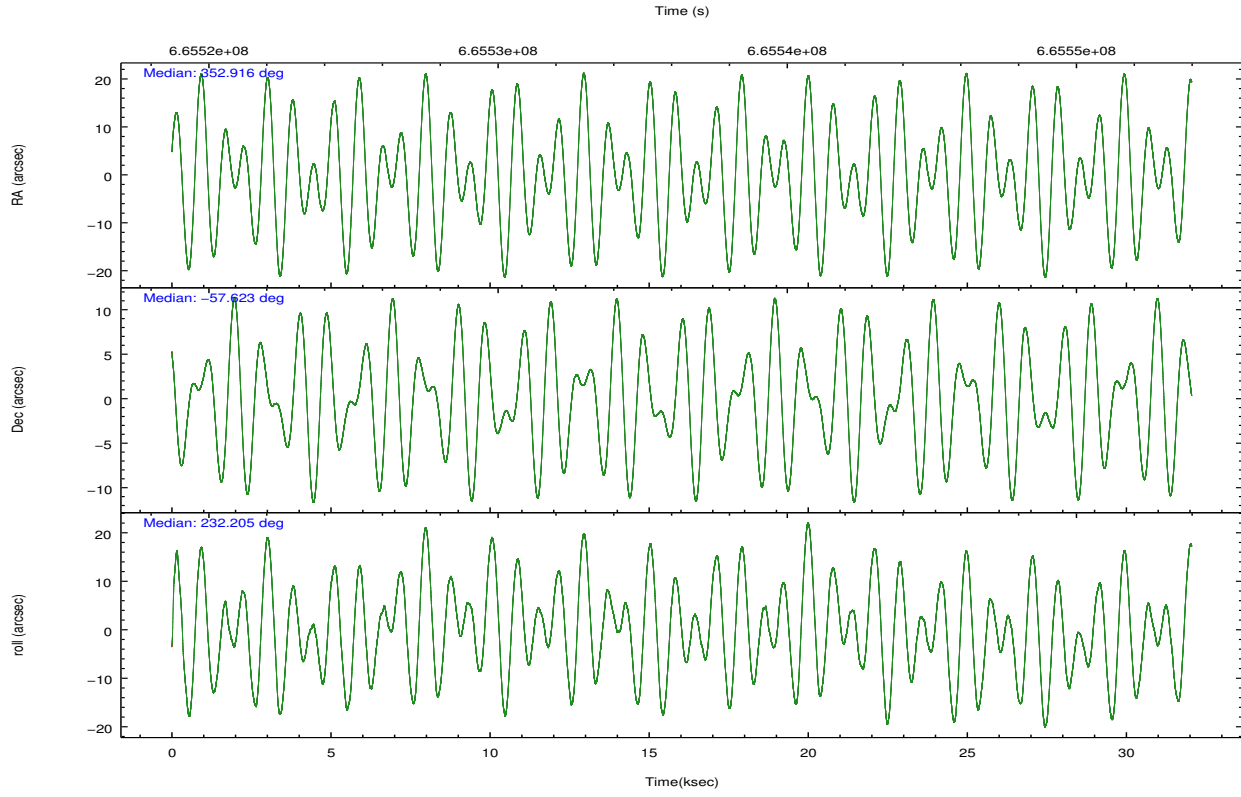
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	9889	12806	9213	10201
	4%	5%	3%	4%
grade 1 events	131	158	158	134
	0%	0%	0%	0%
grade 2 events	6907	7814	6689	5741
	3%	3%	2%	2%
grade 3 events	2791	2680	2560	2668
	1%	1%	1%	1%
grade 4 events	2609	2820	2559	2676
	1%	1%	1%	1%
grade 5 events	10187	10667	9621	11391
	4%	4%	4%	4%
grade 6 events	5535	6418	5289	5608
	2%	2%	2%	2%
grade 7 events	177070	179727	201363	195311
	82%	80%	84%	83%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	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	352.923243	352.9164611229252	CCD I2 on	Y	Y
[deg] Pointing Dec	-57.595709	-57.62306682152679	CCD I3 on	Y	Y
[deg] Pointing Roll	232.003664	232.206624438755	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	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	665520525.184000	665519459.61874	CCD S5 on	N	N
Observation start date	2019-02-02T18:47:36	2019-02-02T18:30:59	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	665552392.184000	665553520.88327	On-chip summing requested	N	N
Observation end date	2019-02-03T03:38:43	2019-02-03T03:58:40	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect





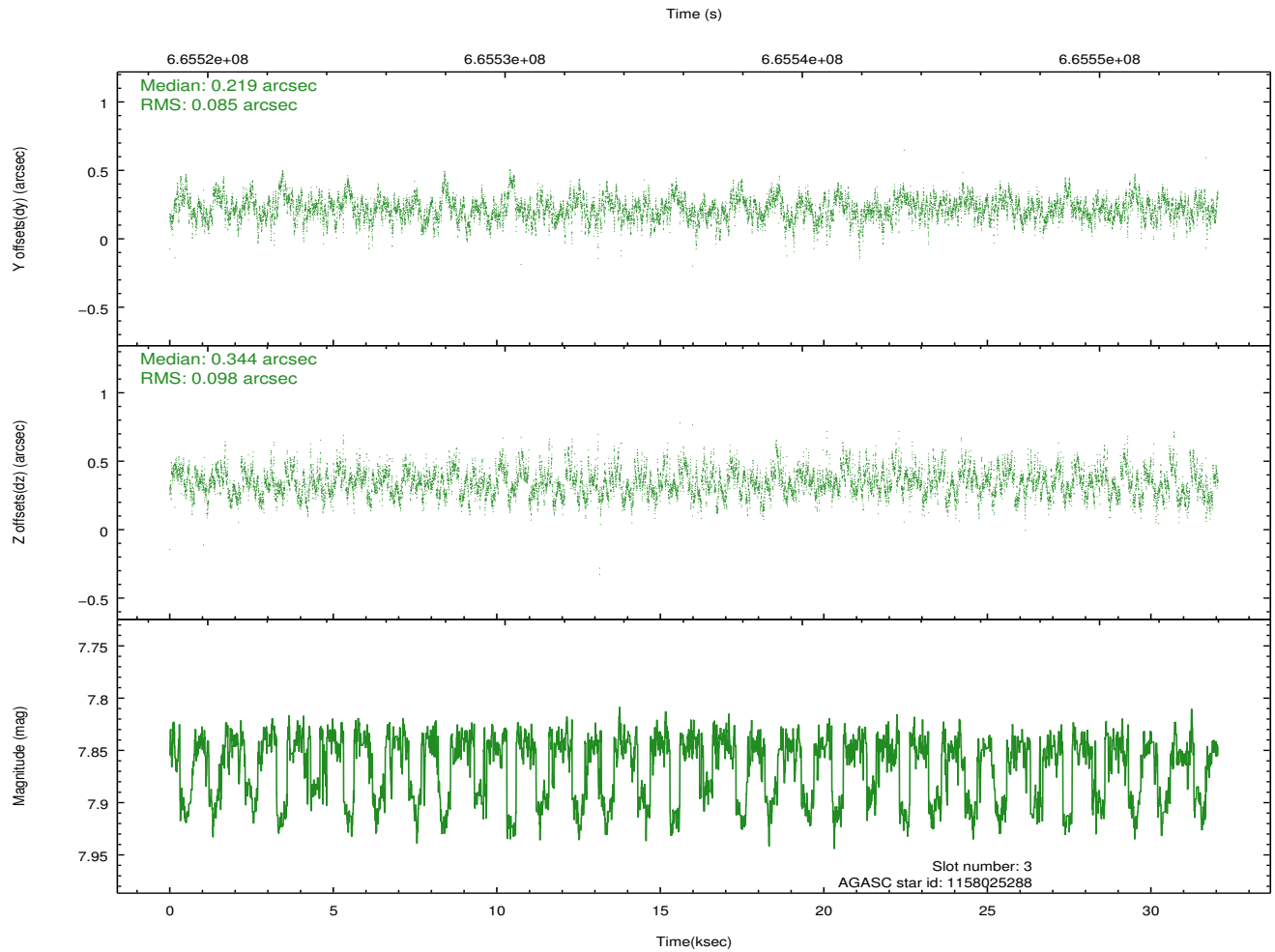
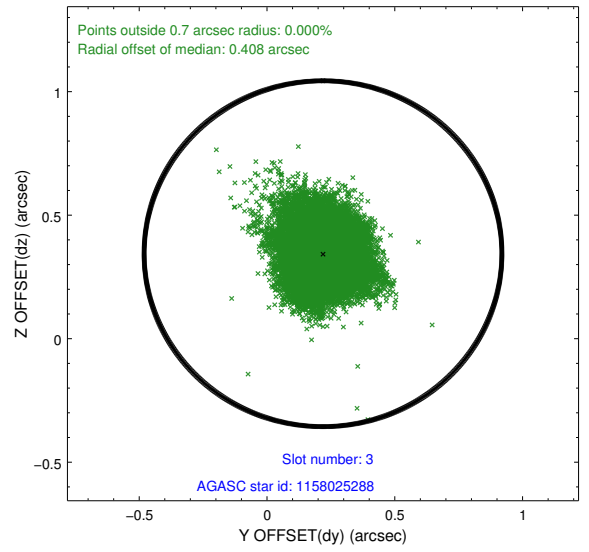
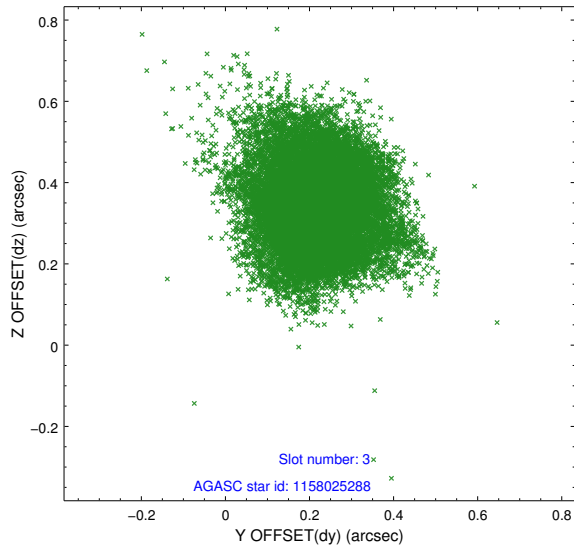
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.17	7816	1.000	0.076	-0.029	0.041	0.097	0.000000	0.000000	922.82	-846
1	FID		ACIS-I-5	7.16	7818	1.000	-0.506	-0.004	0.016	0.037	0.000000	0.000000	-1826.05	1050
2	FID		ACIS-I-6	7.18	7818	1.000	0.338	0.111	0.028	0.073	0.000000	0.000000	388.29	1695
3	GUIDE	used	1158025288	7.86	15630	1.000	0.219	0.344	0.137	0.222	351.772634	-57.312717	589.87	-2377
4	GUIDE	used	1158025800	9.69	15511	1.000	0.323	0.341	0.262	0.453	352.427920	-57.269903	-327.02	-1477
5	GUIDE	used	1158025952	9.60	15611	1.000	-0.039	0.164	0.183	0.319	354.216591	-57.316661	-2320.40	1378
6	GUIDE	used	1158418040	7.94	15628	1.000	-0.243	-0.569	0.115	0.181	352.834758	-58.209732	1843.15	1231
7	GUIDE	used	1158419544	9.27	15608	1.000	-0.265	-0.282	0.177	0.287	352.949719	-57.849744	689.40	603

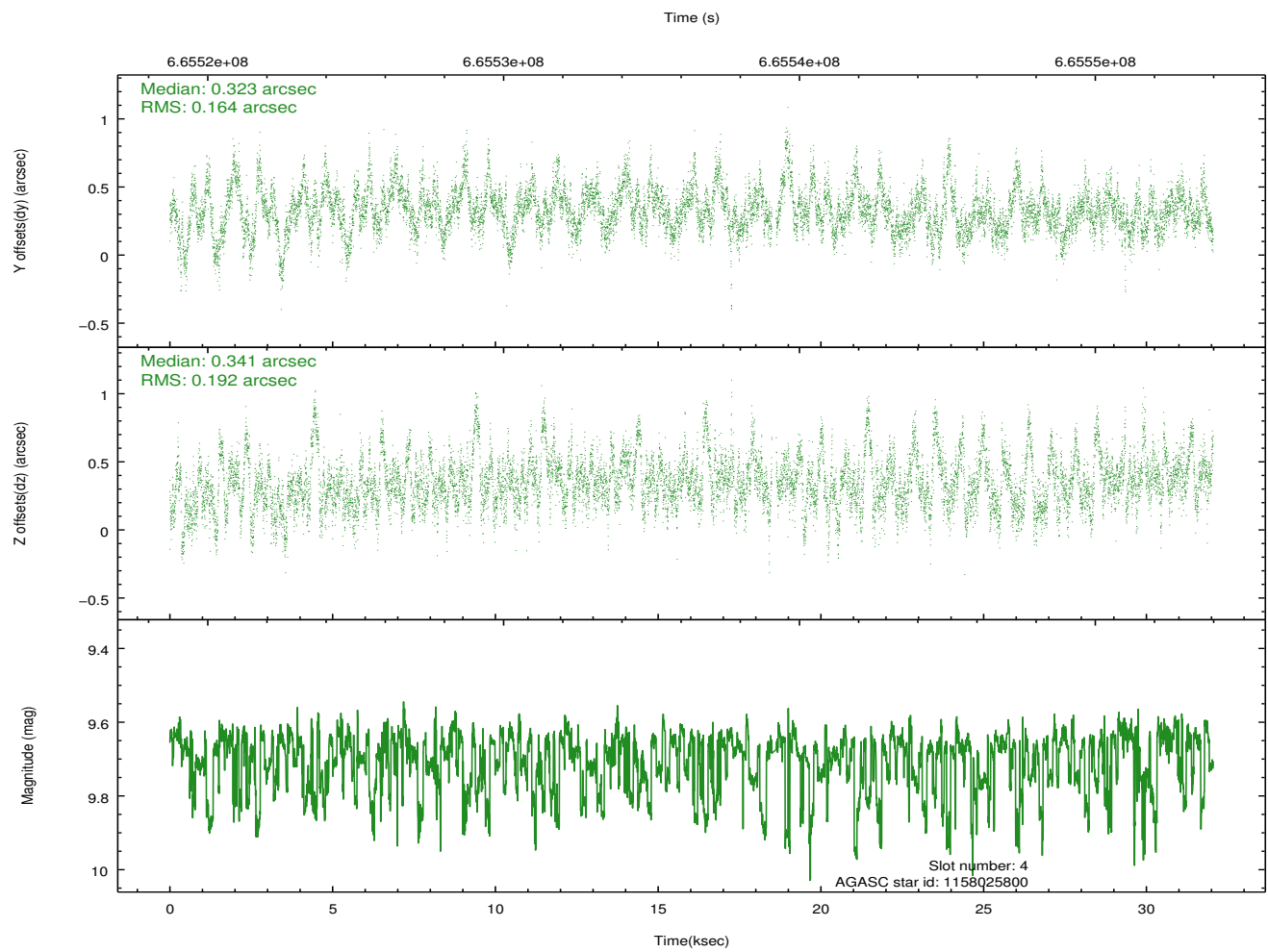
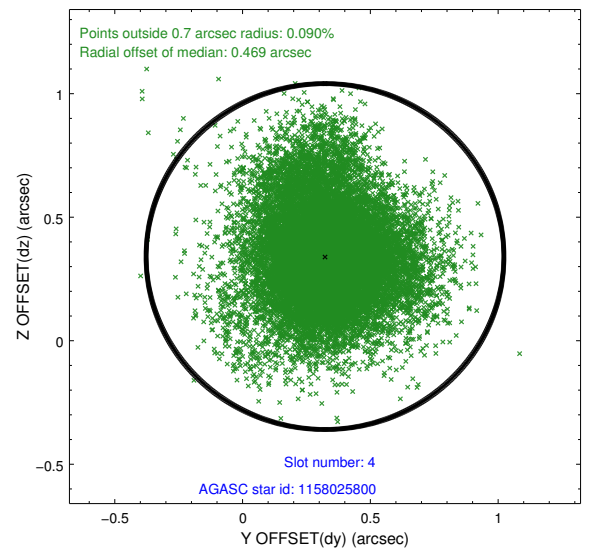
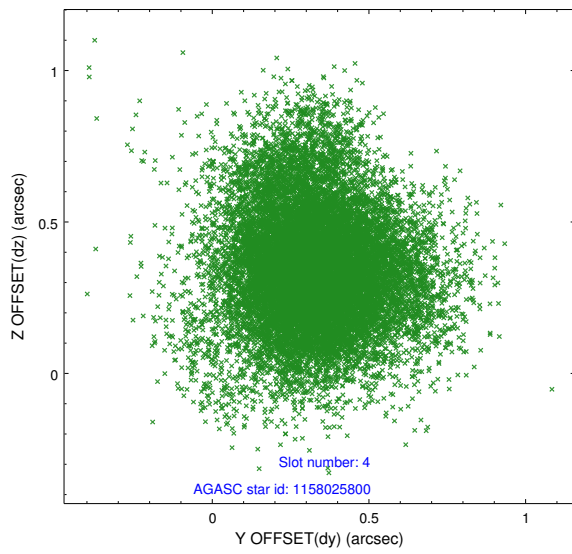
∞

2.4 Star Slots

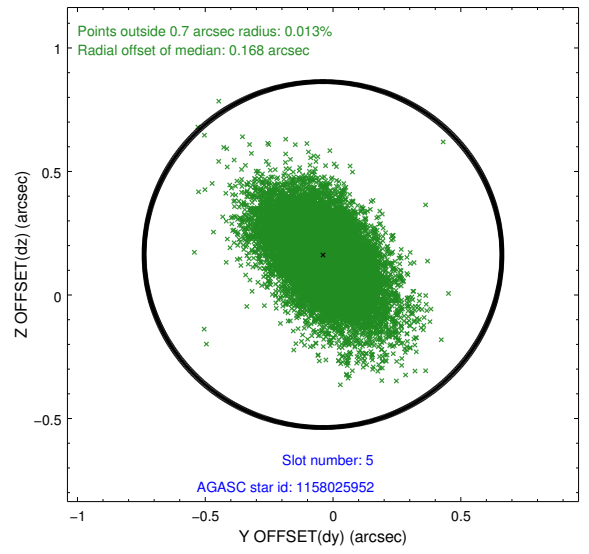
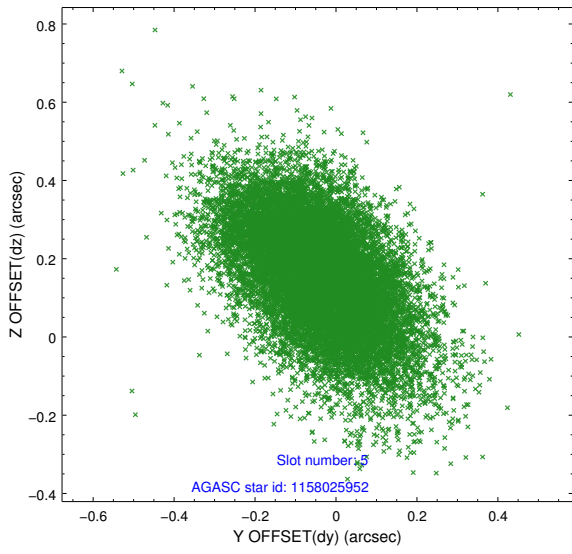
2.4.1 Slot 3



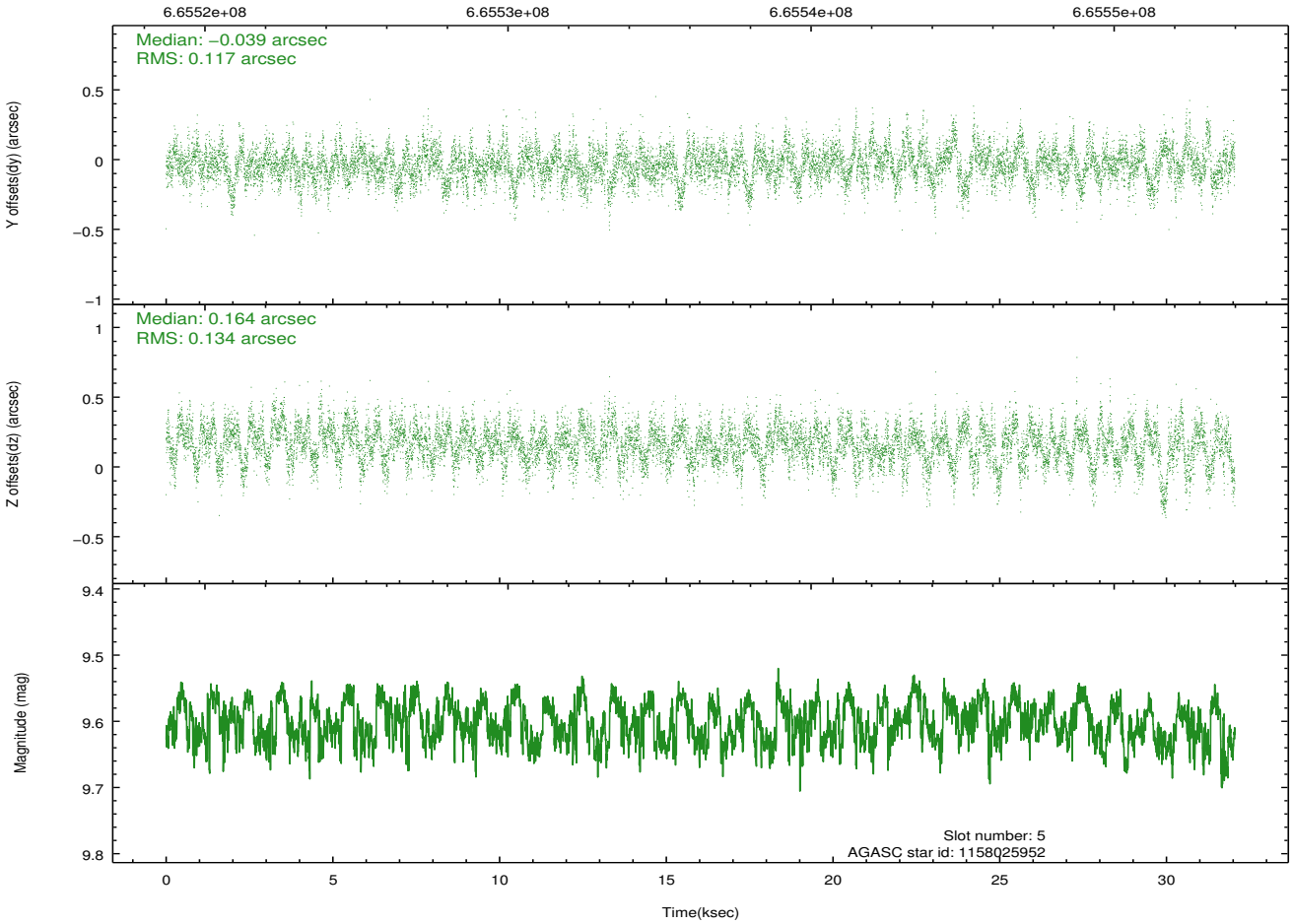
2.4.2 Slot 4



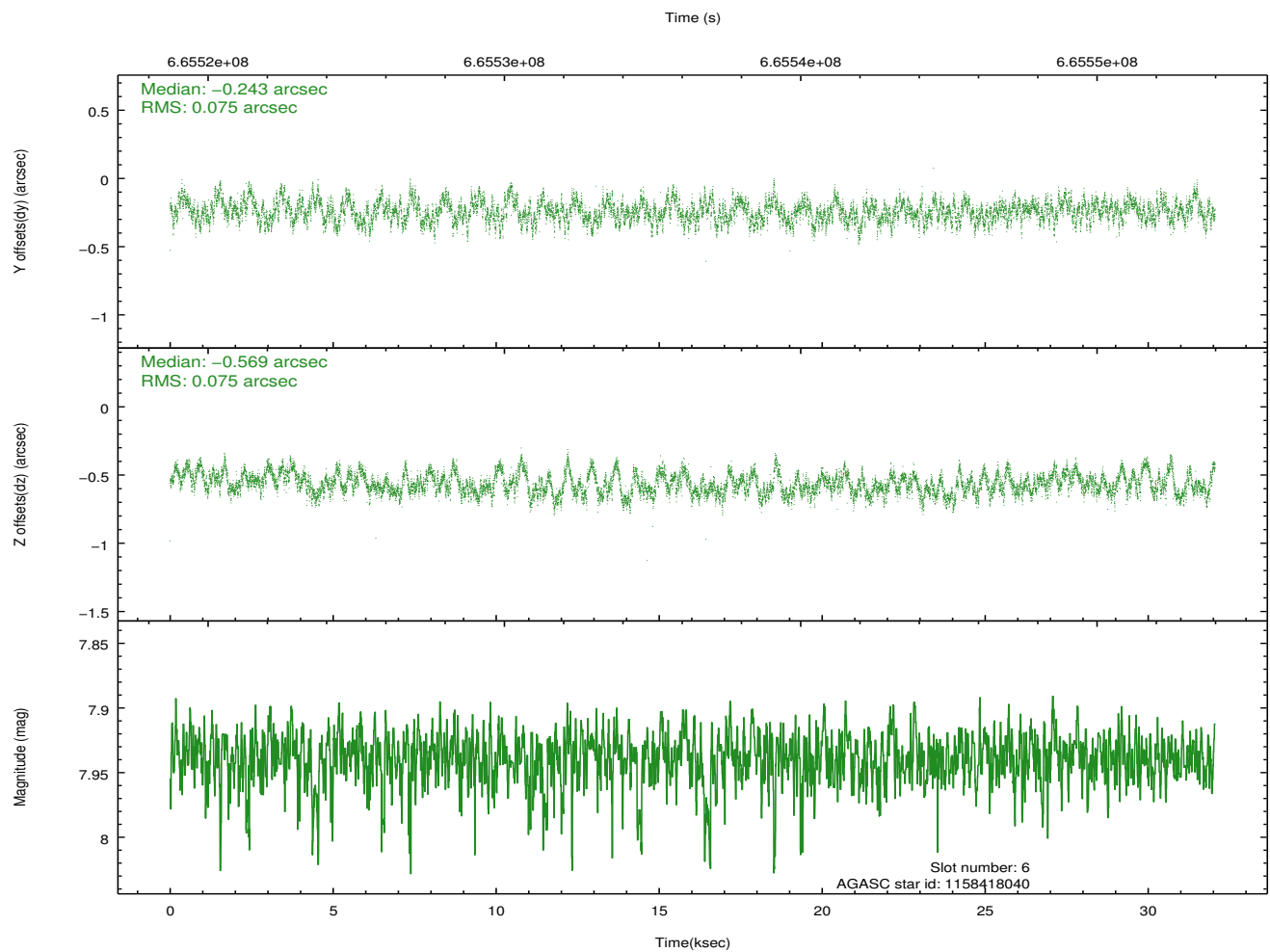
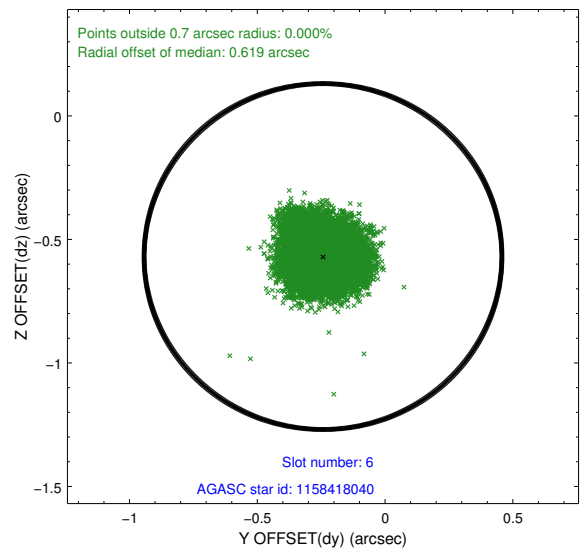
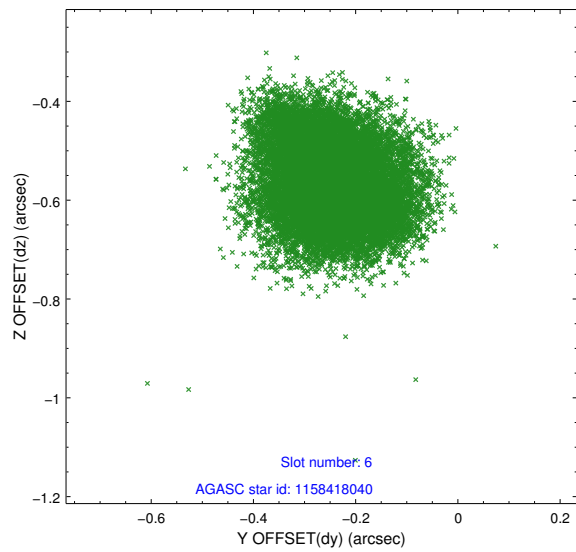
2.4.3 Slot 5



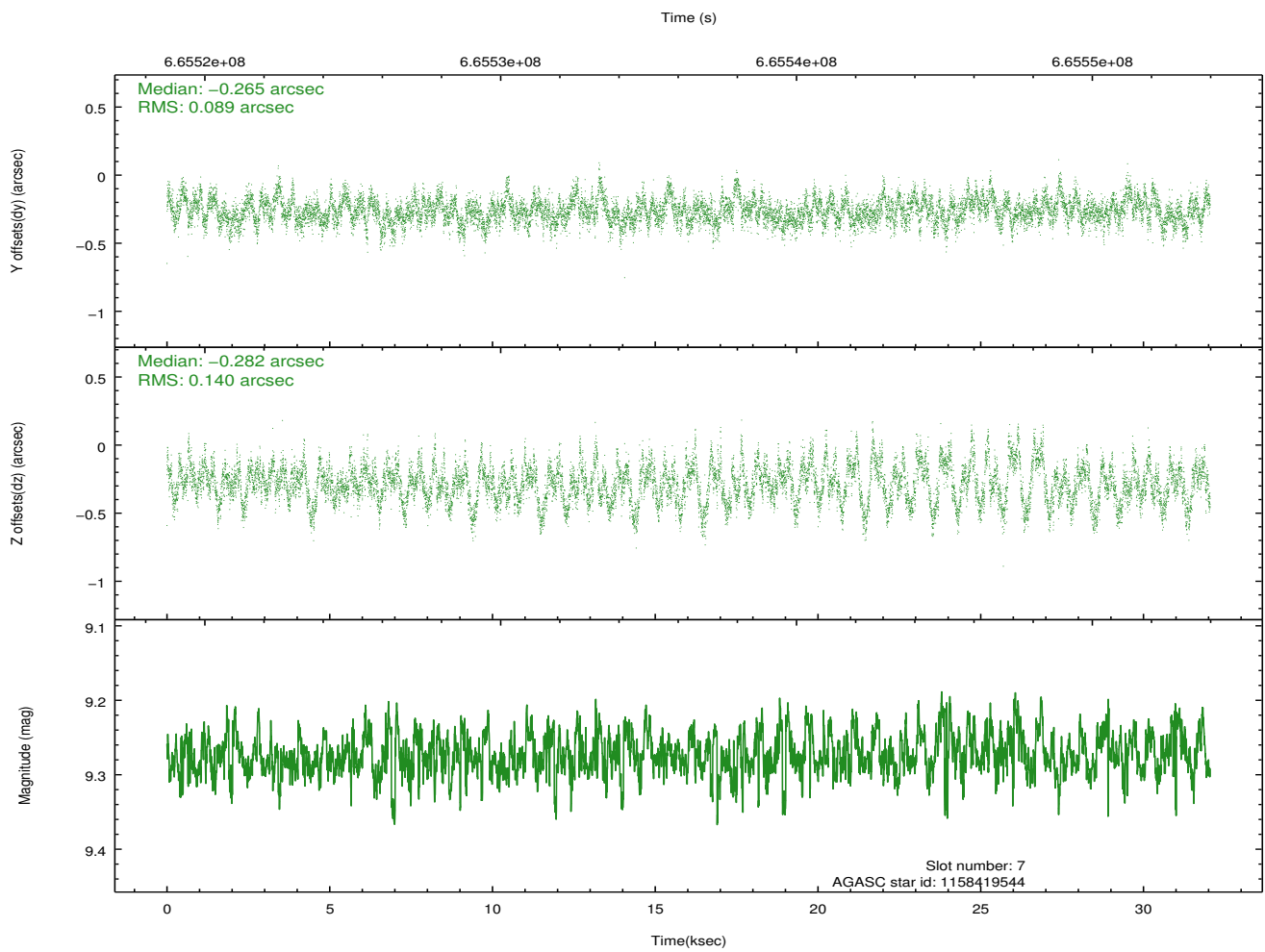
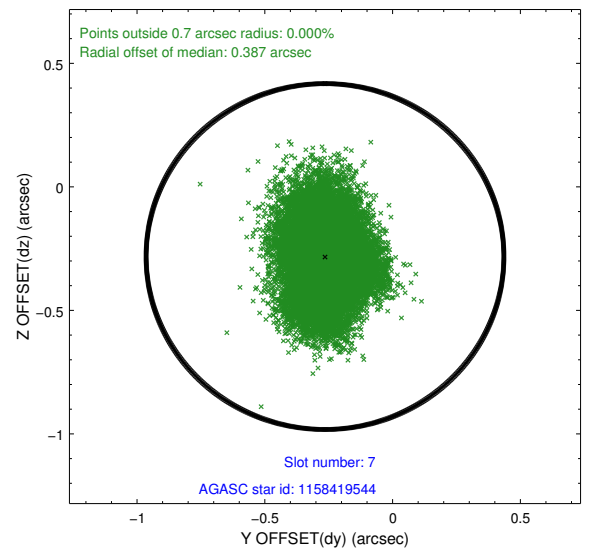
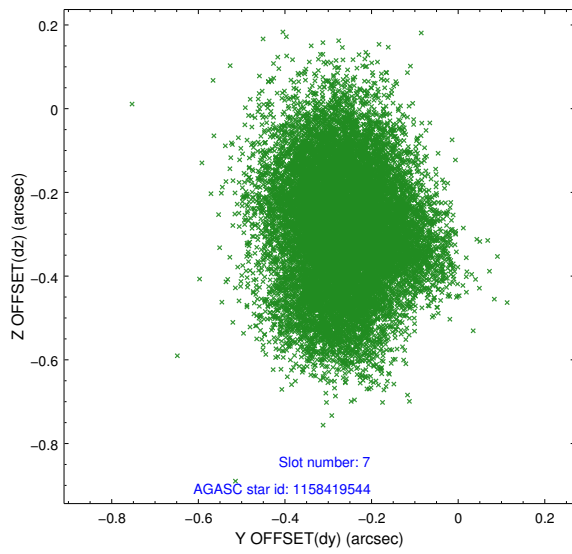
Time (s)



2.4.4 Slot 6

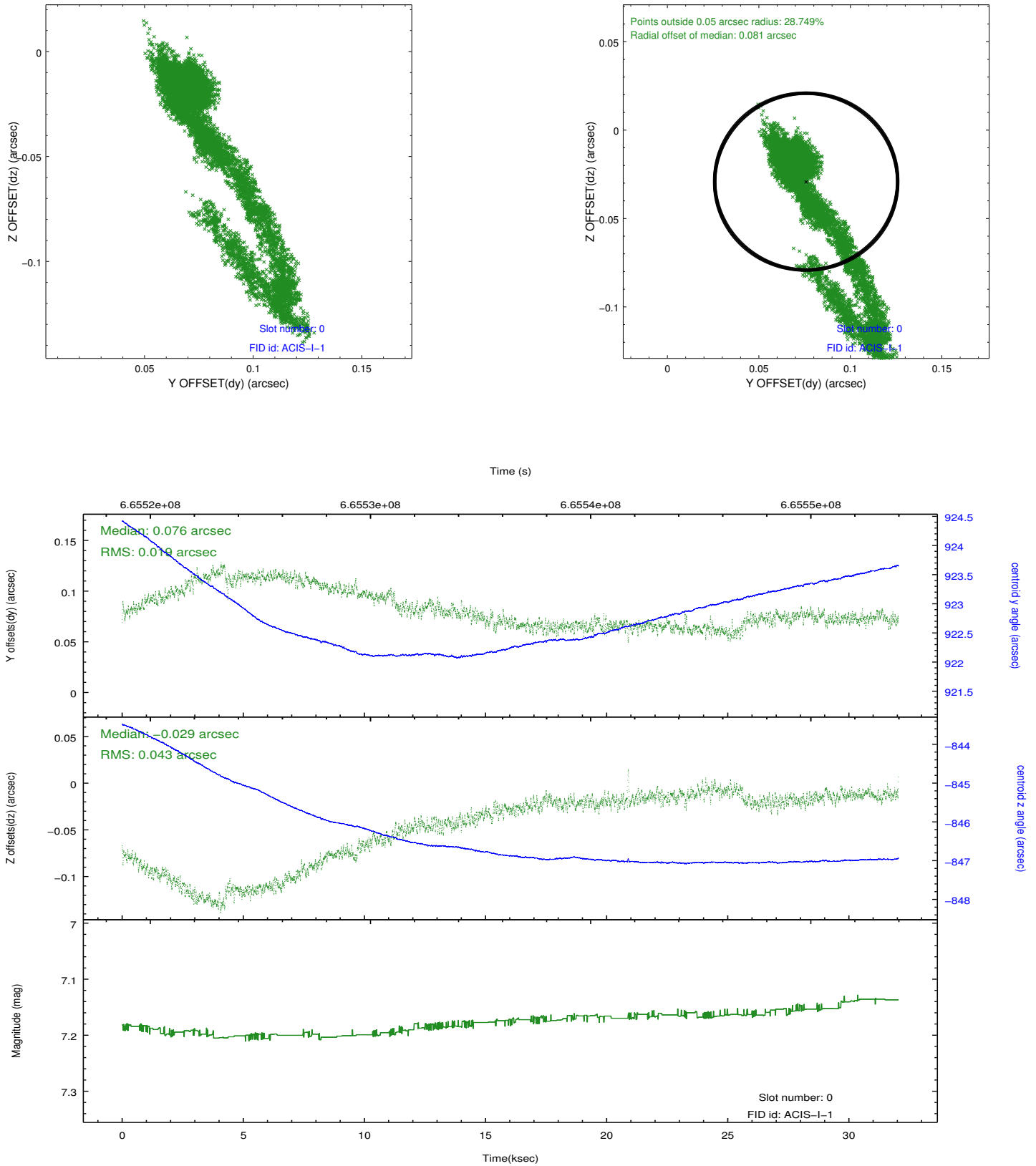


2.4.5 Slot 7

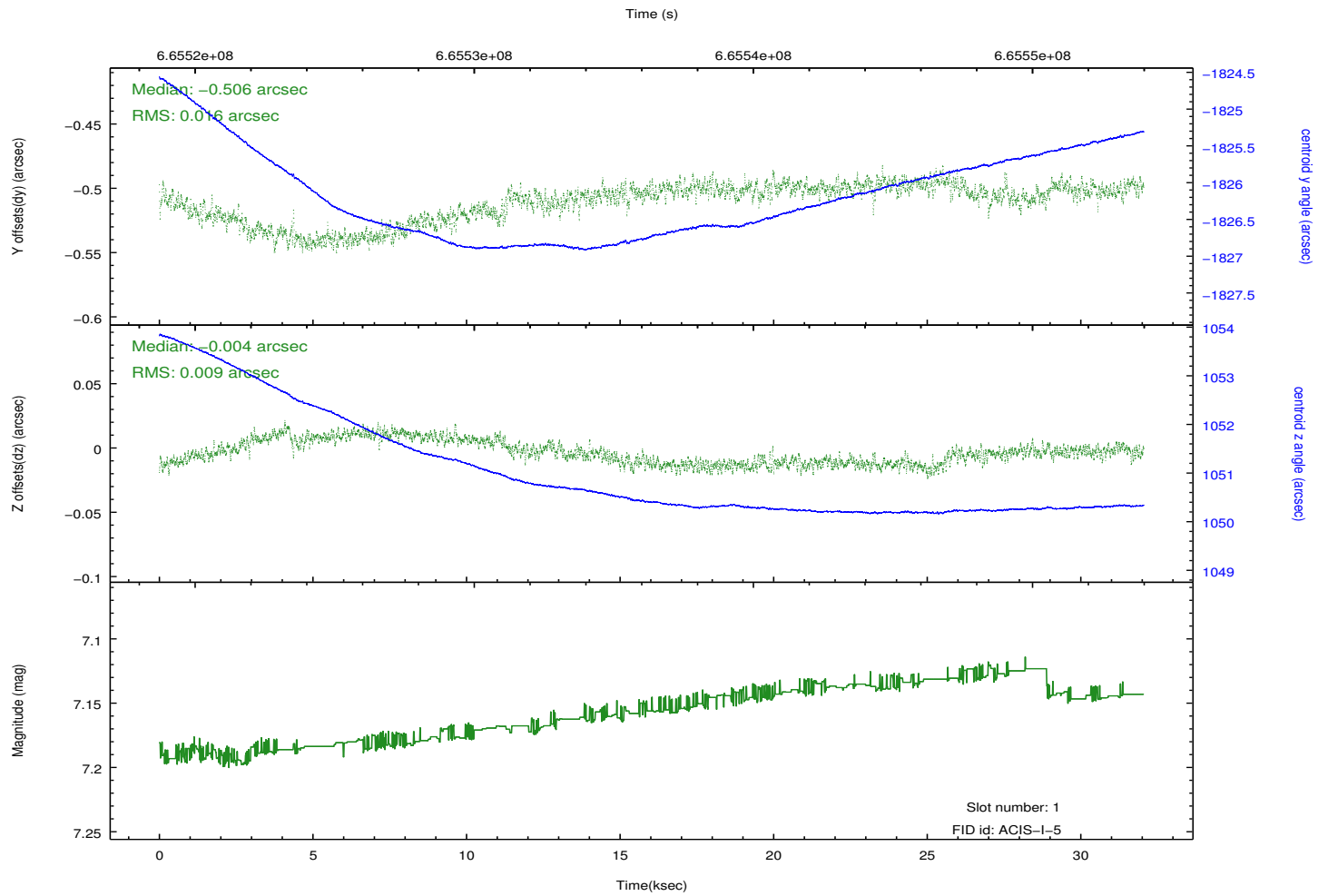
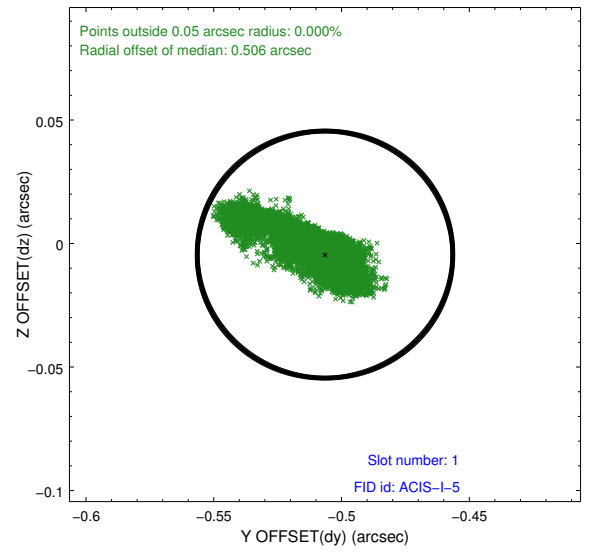
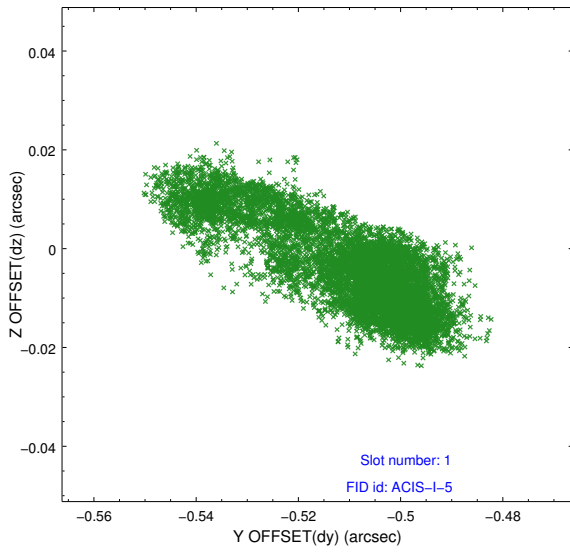


2.5 FID Slots

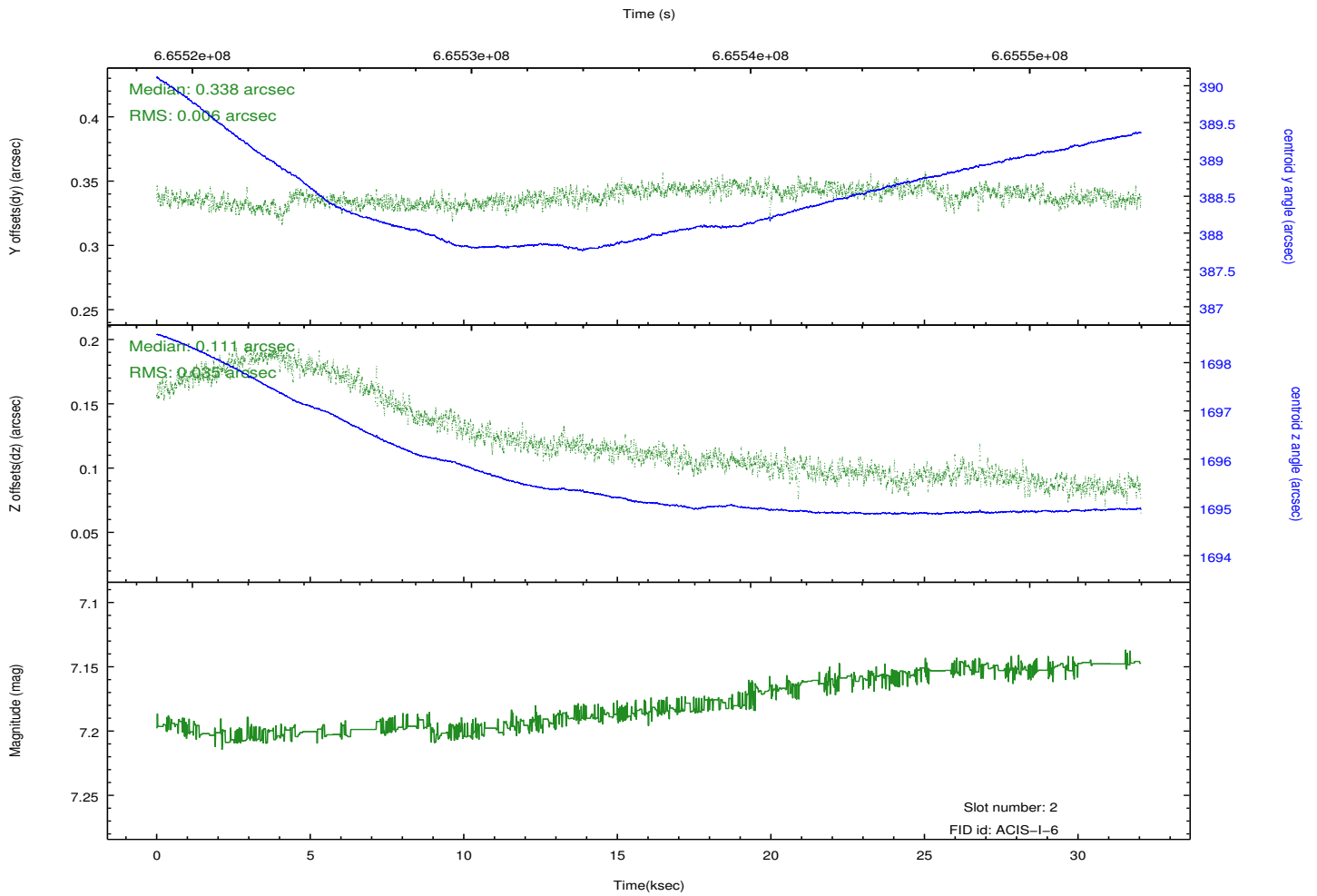
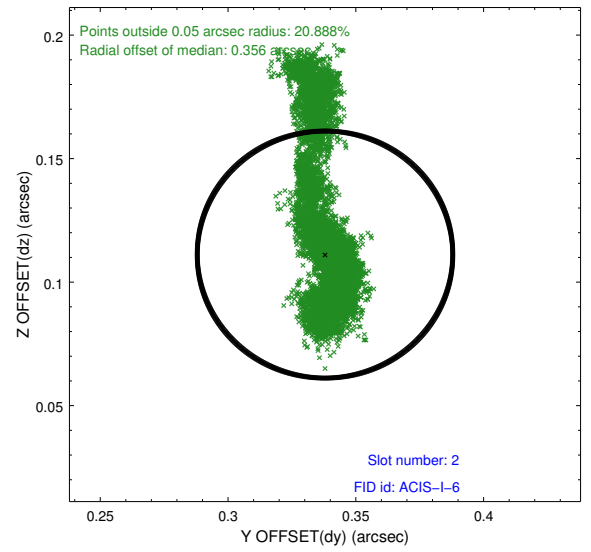
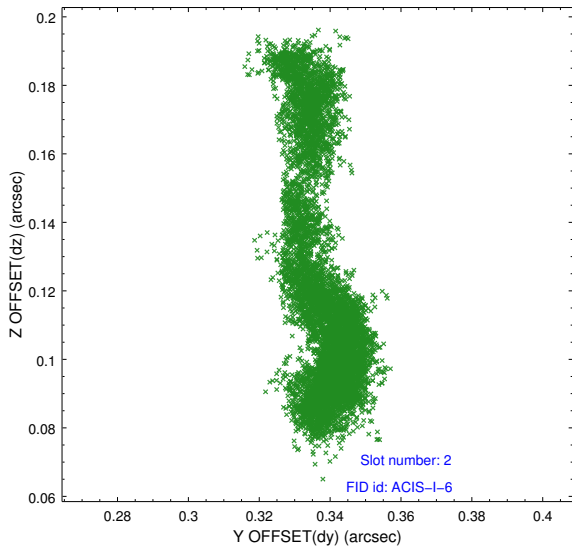
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.02.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.944299617529

A.2 Comments

One optional chip was dropped.

A spatial region of the original bias map for CCD = 0 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 = 0 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:
(352.61349, -57.67647), (352.61870, -57.67866), (352.63912, -57.66470),
(352.63595, -57.66112)