

V&V Reference Report

L2 ASCDS Version : 10.5.1.1

Observation 18633 - L2 Version 2
Chandra X-Ray Center

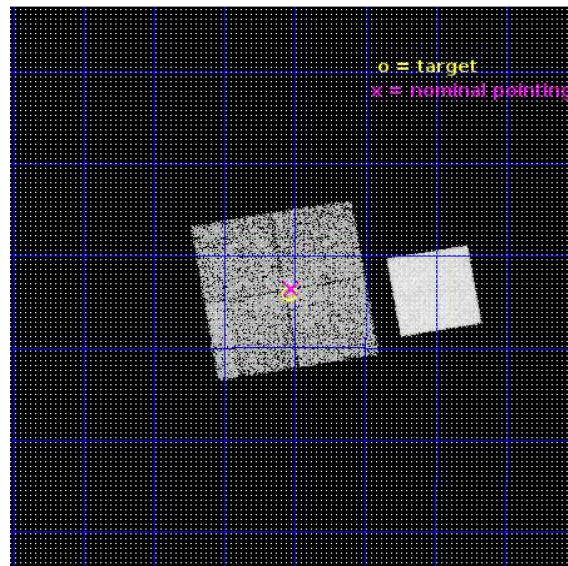
L2 Processing Date : Sep 12 2016

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1 Front

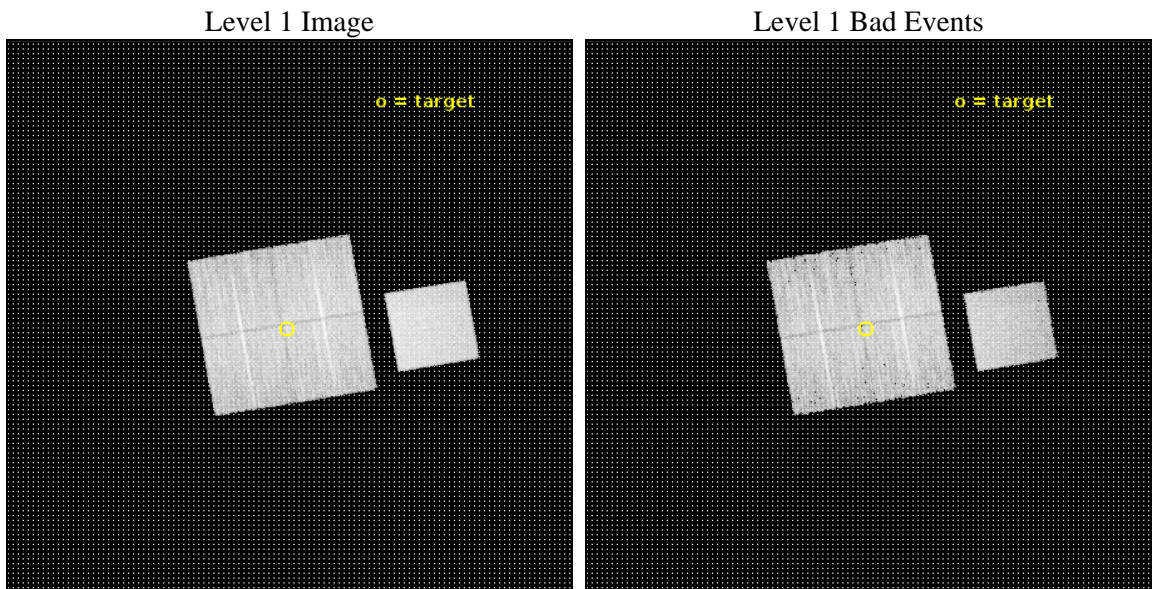
seq_num	801641	Sequence number
obs_id	18633	Observation id
title	Lensing Calibration of the Evolution of Cluster Scaling Relations for eROSITA	Proposal title
observer	Peter Predehl	Principal investigator
object	CODEX 64232	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	10.63375	Observer's specified target RA [deg]
dec_targ	-11.068556	Observer's specified target Dec [deg]
ra_nom	10.631486616944	Nominal RA [deg]
dec_nom	-11.059556363567	Nominal Dec [deg]
roll_nom	80.278665154318	Nominal Roll [deg]
revision	2	Processing version of data
ontime	12064.157406807	Sum of GTIs [s]
livetime	11906.530308784	Livetime [s]
ontime0	12064.034286737	Sum of GTIs [s]
ontime1	12064.0753268	Sum of GTIs [s]
ontime2	12064.116366744	Sum of GTIs [s]
ontime3	12064.157406807	Sum of GTIs [s]
ontime7	12064.198446751	Sum of GTIs [s]
l2events	71733	Number of level 2 events



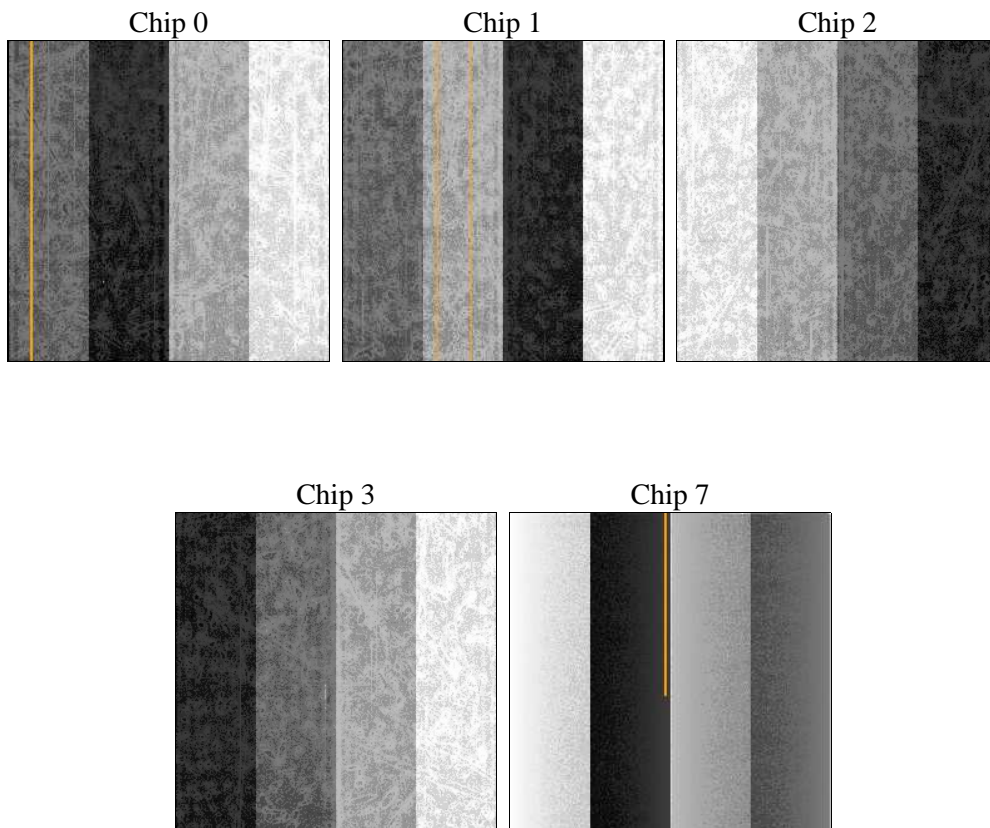
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	12000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.1.1	Processing system revision	ontime	12064.157406807	Sum of GTIs [s]
caldbver	4.7.2	 	ontime0	12064.034286737	Sum of GTIs [s]
date	2016-09-12T16:41:14	Date and time of file creation	ontime1	12064.0753268	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	12064.116366744	Sum of GTIs [s]
			ontime3	12064.157406807	Sum of GTIs [s]
			ontime7	12064.198446751	Sum of GTIs [s]
			l1events	388554	Number of level 1 events

2.1.4 Events

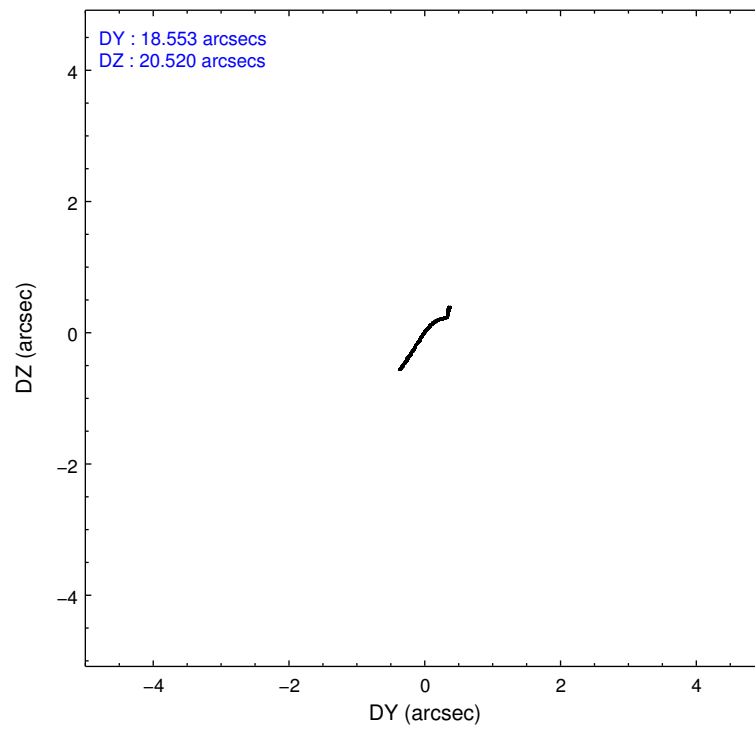
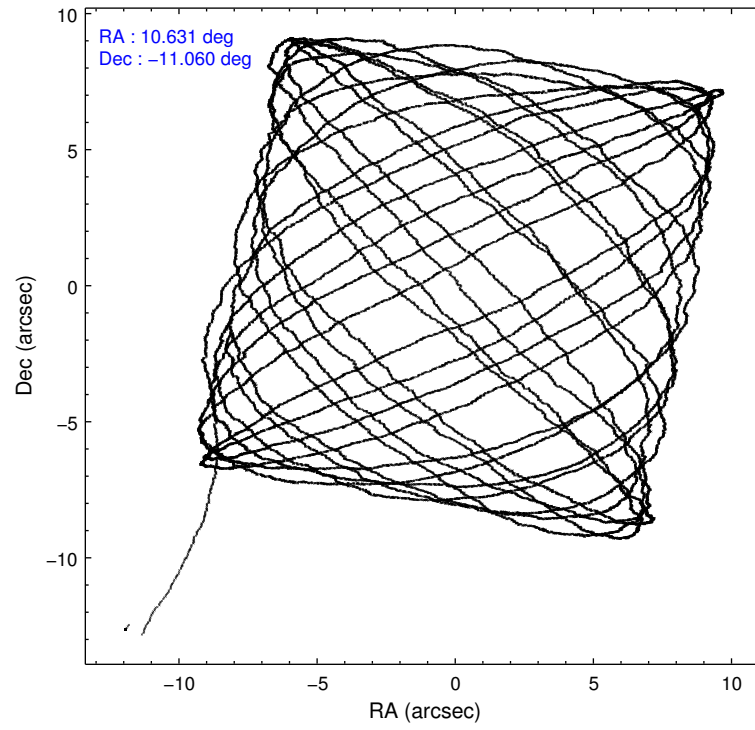
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	68226	68721	76593	74594	100420
rejected events	59556	59304	68016	66190	56779
rejected %	87%	86%	88%	88%	56%

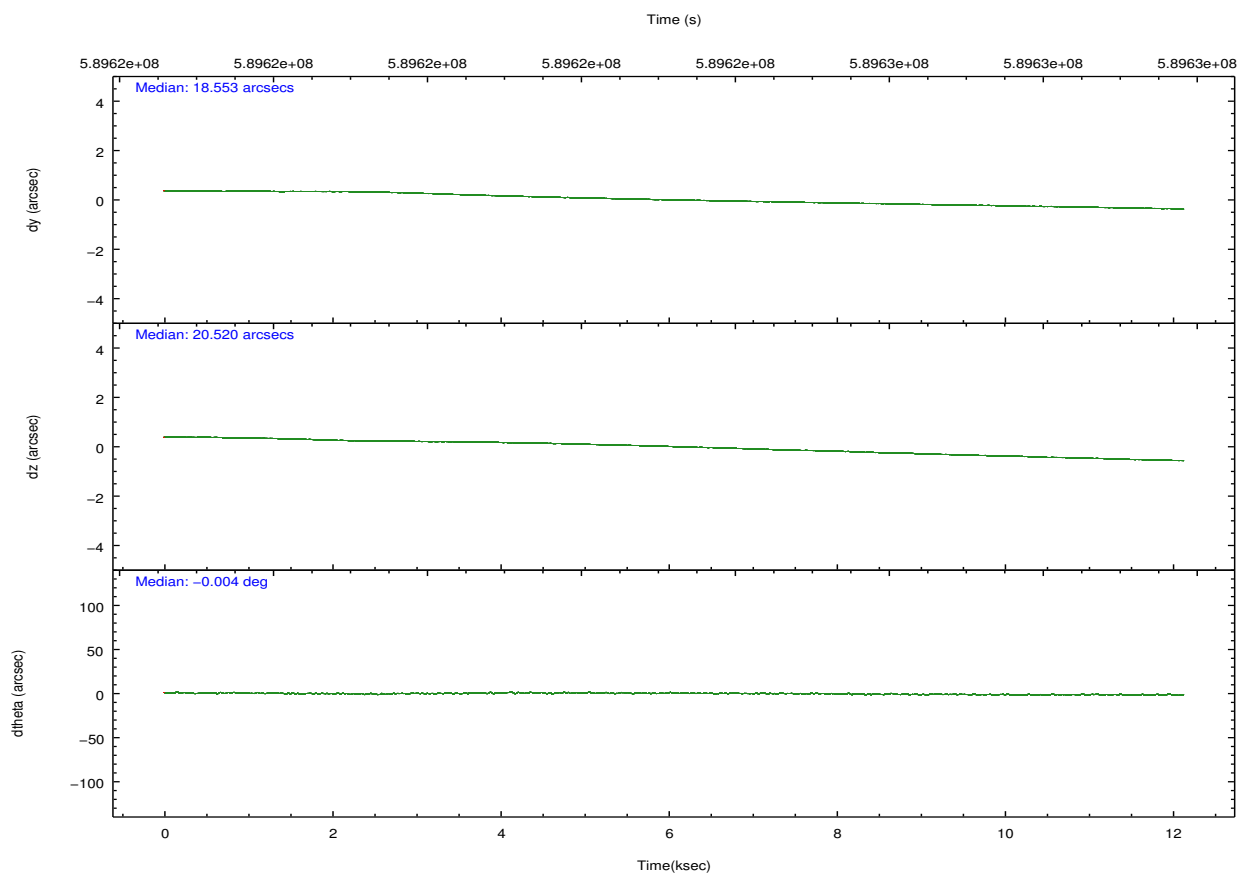
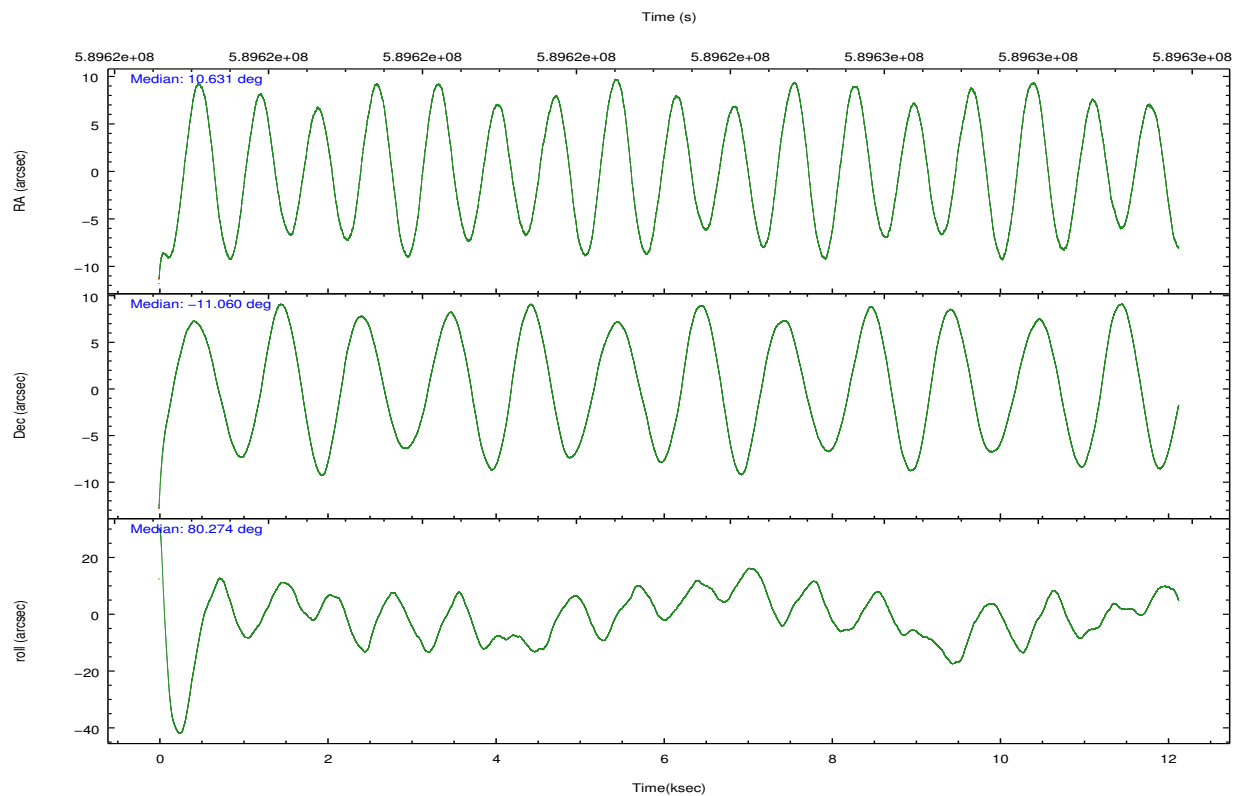
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	3013	3212	3137	3072	3734
	4%	4%	4%	4%	3%
grade 1 events	43	35	44	38	131
	0%	0%	0%	0%	0%
grade 2 events	2189	2359	2065	1823	9337
	3%	3%	2%	2%	9%
grade 3 events	908	905	855	925	3585
	1%	1%	1%	1%	3%
grade 4 events	817	882	873	818	3562
	1%	1%	1%	1%	3%
grade 5 events	3423	3604	3209	3771	10176
	5%	5%	4%	5%	10%
grade 6 events	1747	2063	1647	1766	23432
	2%	3%	2%	2%	23%
grade 7 events	56086	55661	64763	62381	46463
	82%	80%	84%	83%	46%

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	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	10.641365	10.63148661694389	CCD I2 on	Y	Y
[deg] Pointing Dec	-11.085398	-11.0595563635667	CCD I3 on	Y	Y
[deg] Pointing Roll	80.071791	80.27866515431822	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)	589617273.184000	589615986.98648	CCD S5 on	N	N
Observation start date	2016-09-07T06:33:25	2016-09-07T06:13:06	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	589629273.184000	589629811.67477	On-chip summing requested	N	N
Observation end date	2016-09-07T09:53:25	2016-09-07T10:03:31	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



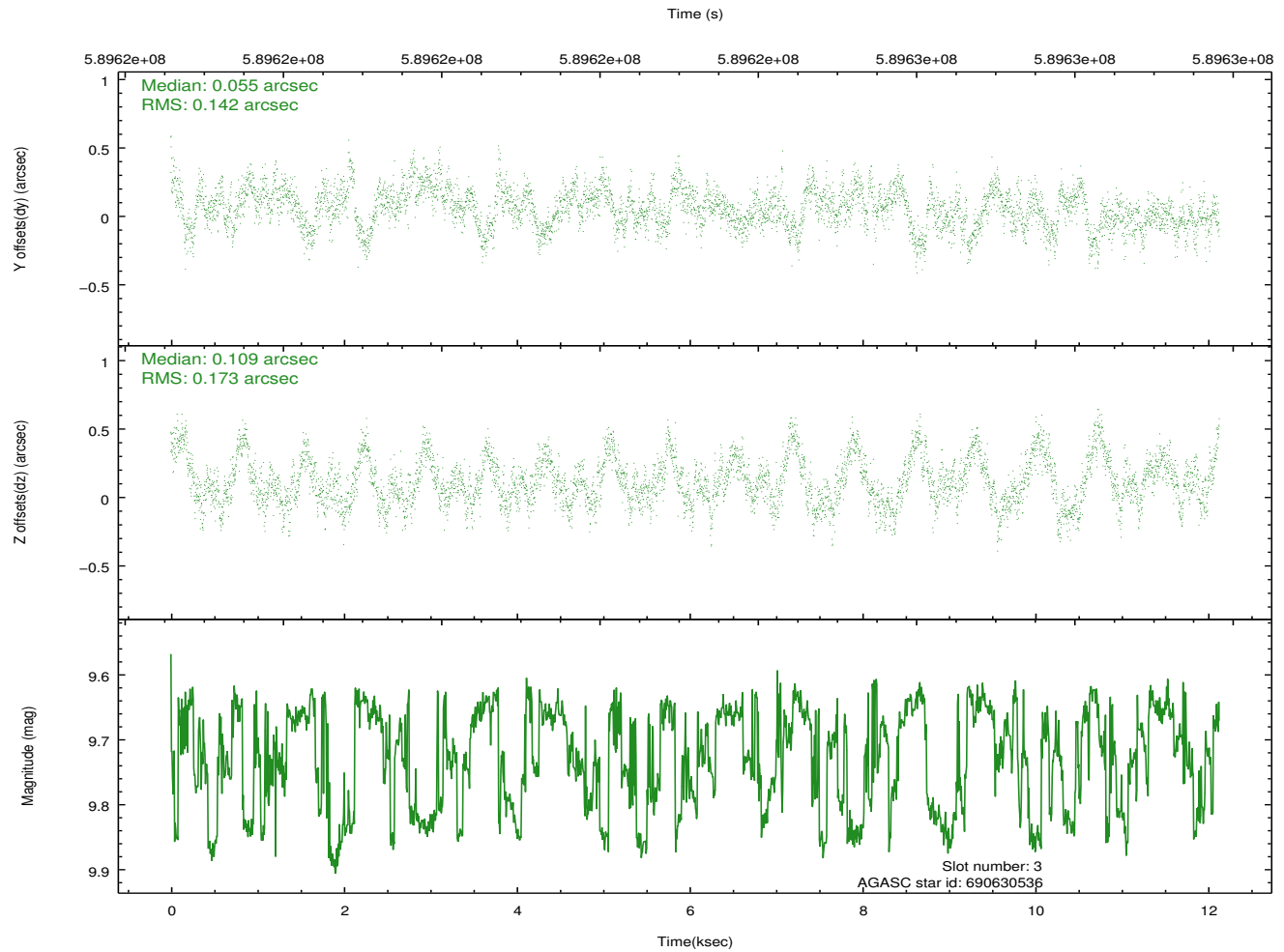
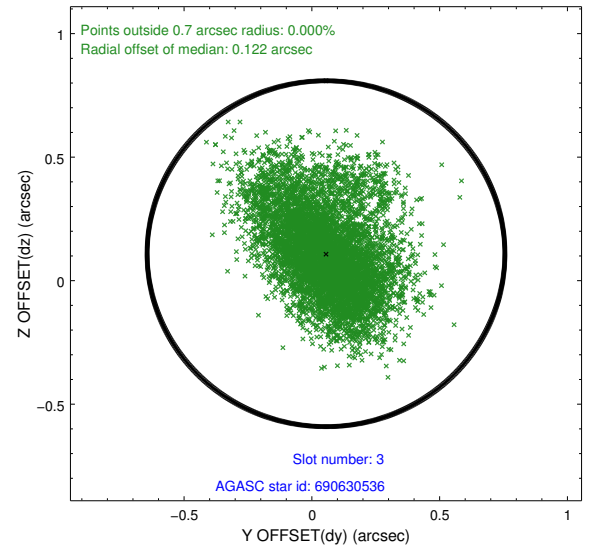
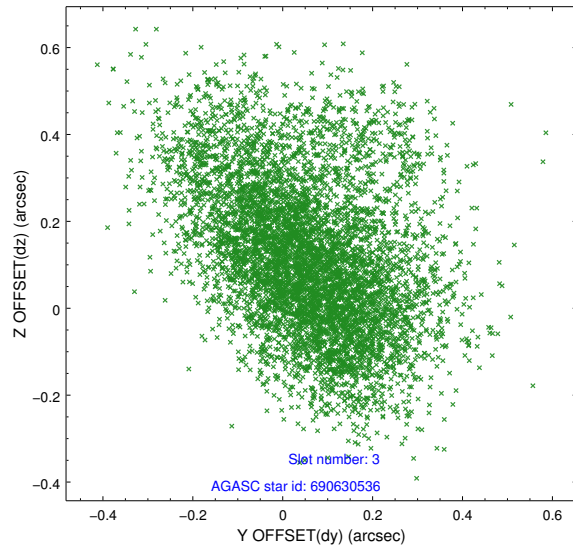


Slot Statistics

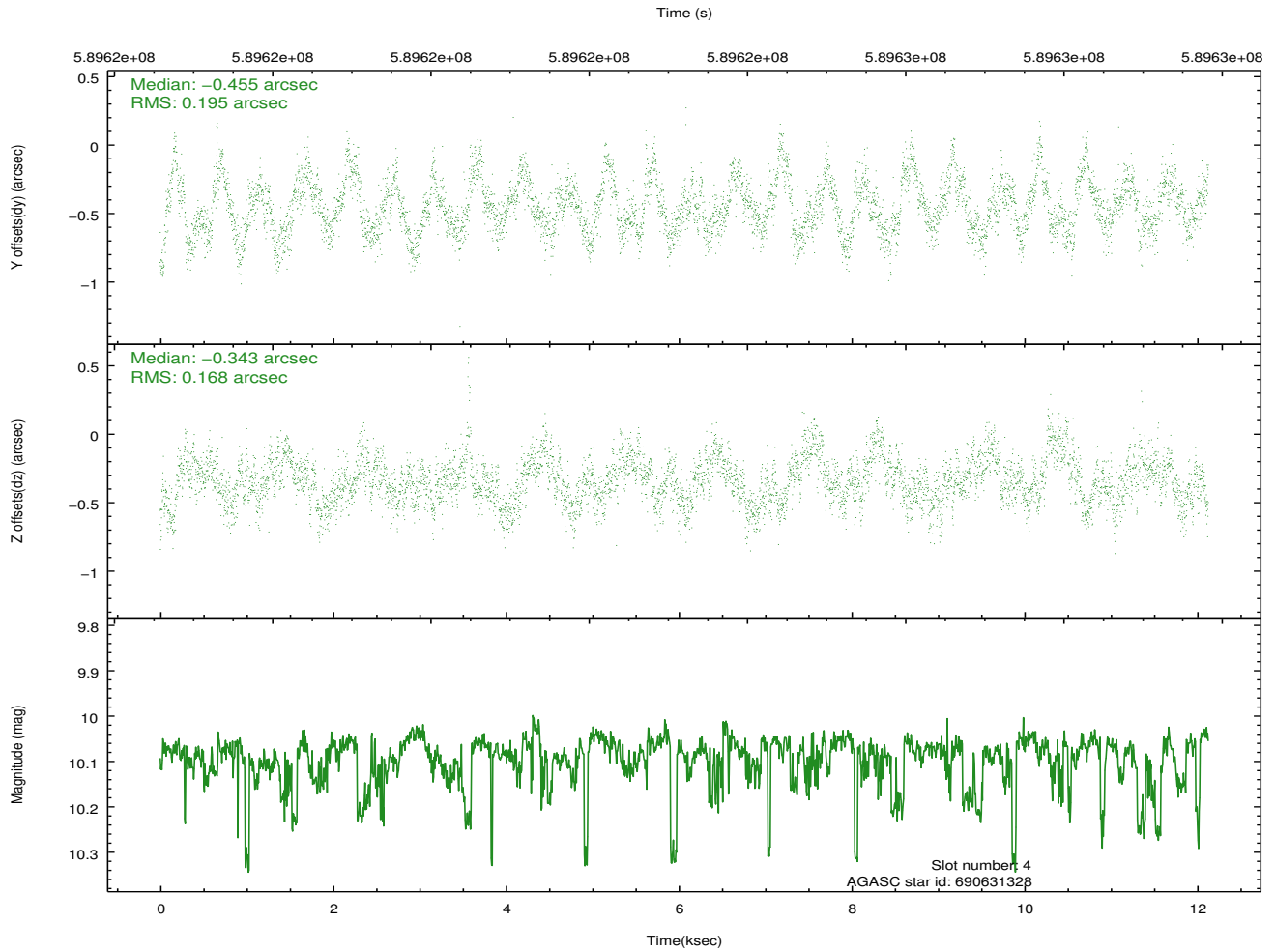
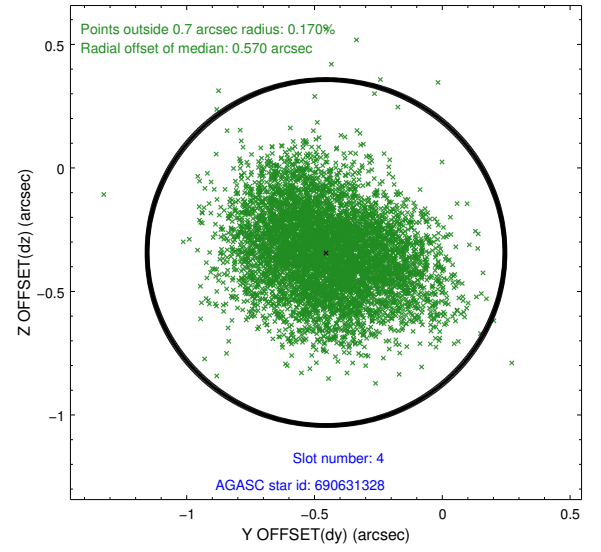
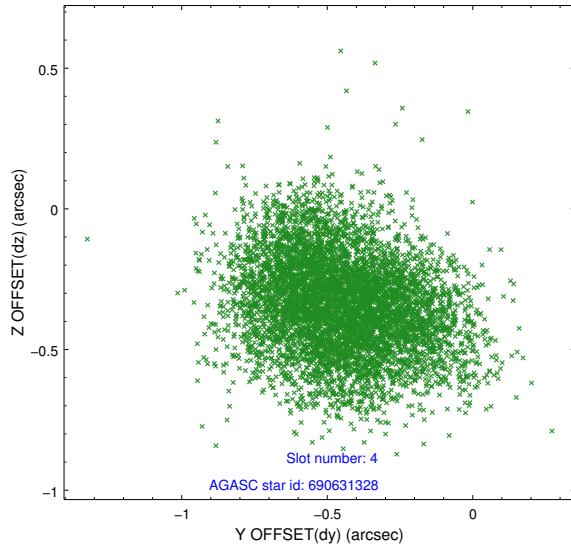
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.08	2960	0.069	-0.056	0.016	0.033	0.000000	0.000000	920.88	-844.25
1	FID		ACIS-I-5	7.07	2959	-0.356	0.025	0.009	0.015	0.000000	0.000000	-1827.50	1053.00
2	FID		ACIS-I-6	7.08	2960	0.196	0.099	0.012	0.022	0.000000	0.000000	386.01	1698.13
3	GUIDE	used	690630536	9.73	5909	0.055	0.109	0.240	0.394	11.162945	-10.633367	1920.11	-1540.33
4	GUIDE	used	690631328	10.09	5898	-0.455	-0.343	0.277	0.436	10.267888	-10.483969	1904.41	1674.57
5	GUIDE	used	690636760	10.25	5879	0.024	-0.039	0.333	0.524	11.050522	-10.532787	2209.50	-1083.62
6	GUIDE	used	690887768	9.38	5910	0.415	0.341	0.176	0.276	10.700840	-11.713094	-2188.41	-596.23
7	GUIDE	used	690896720	9.15	5911	-0.066	-0.072	0.157	0.277	10.195840	-11.367026	-1270.40	1372.75

2.4 Star Slots

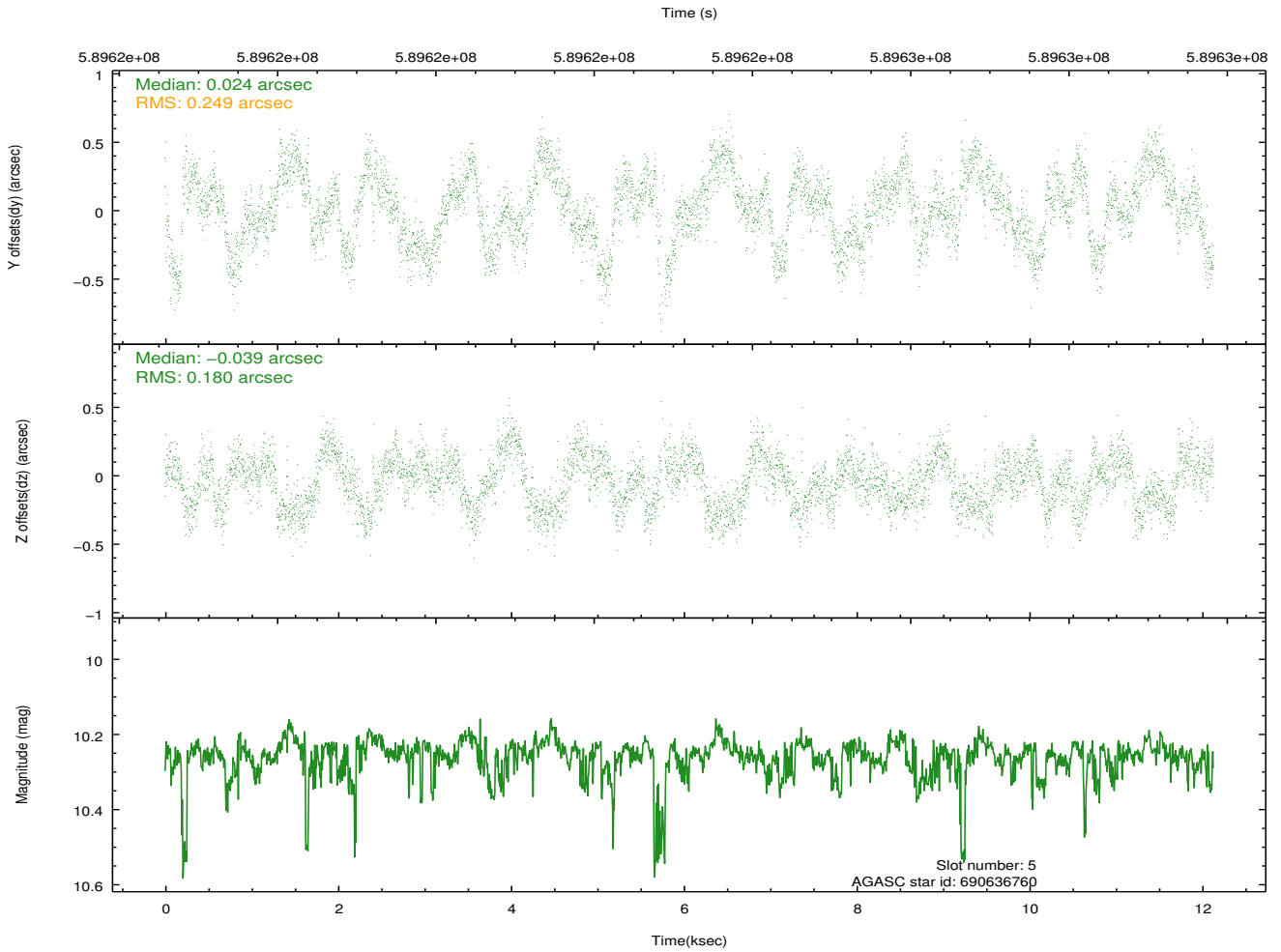
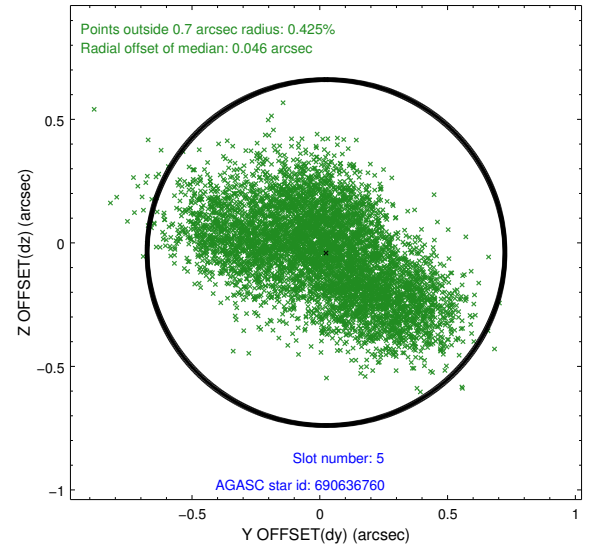
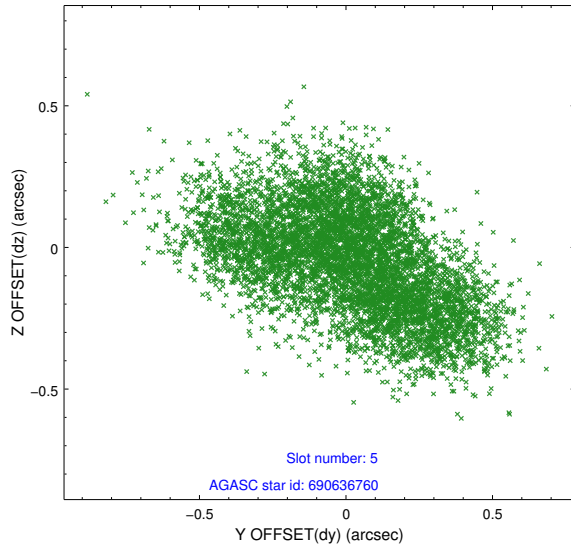
2.4.1 Slot 3



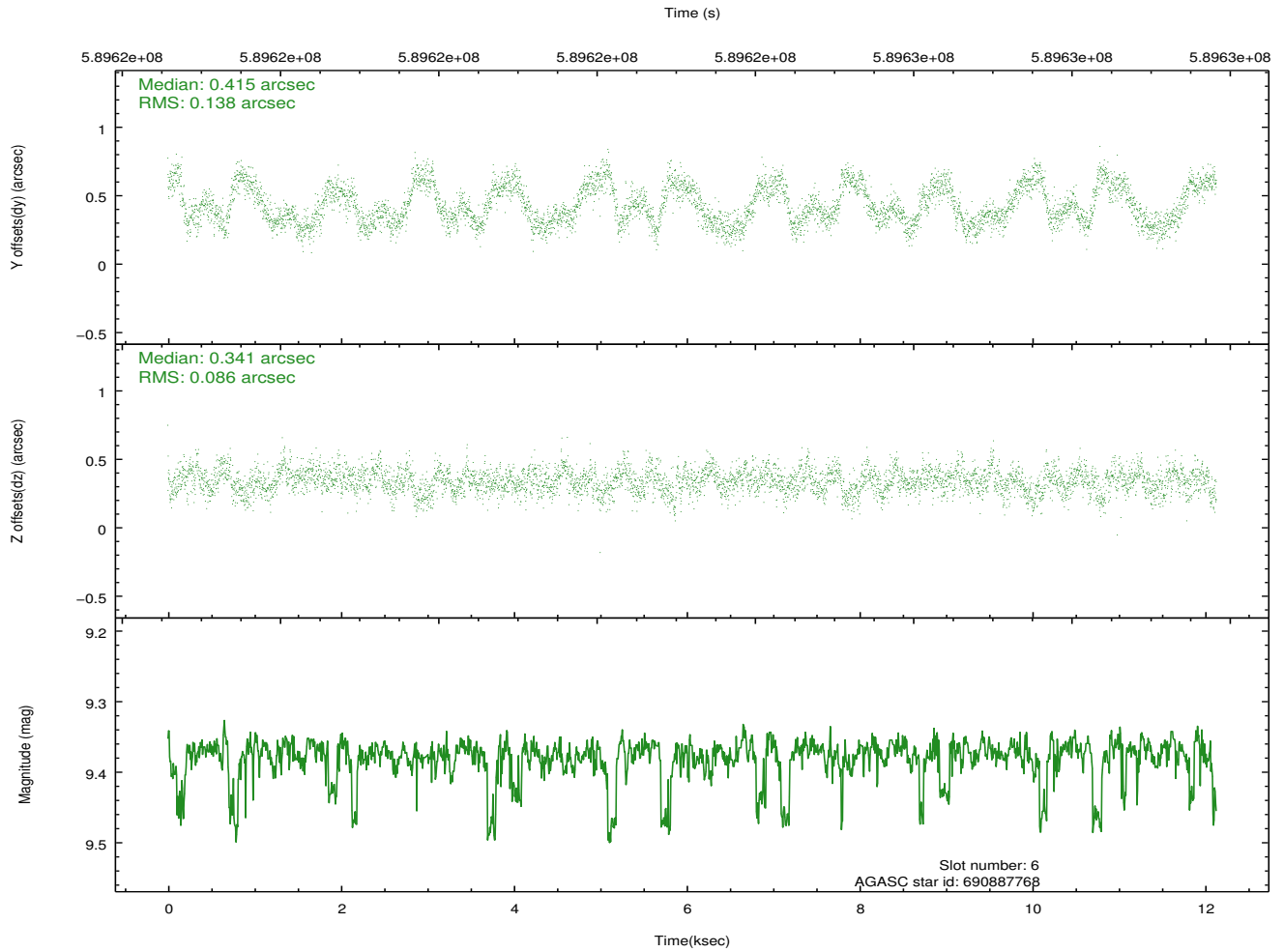
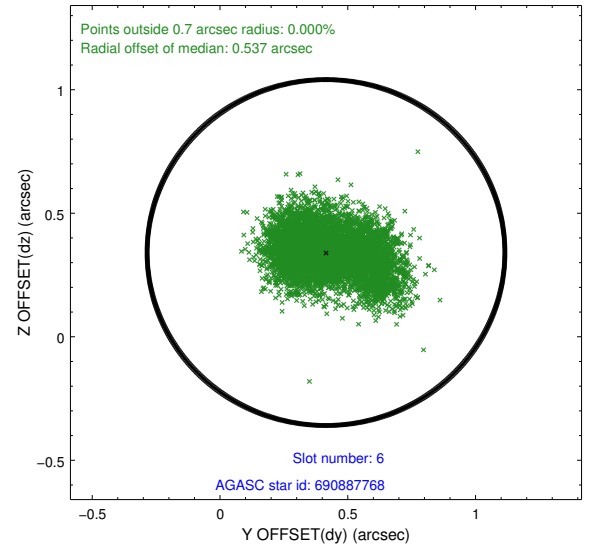
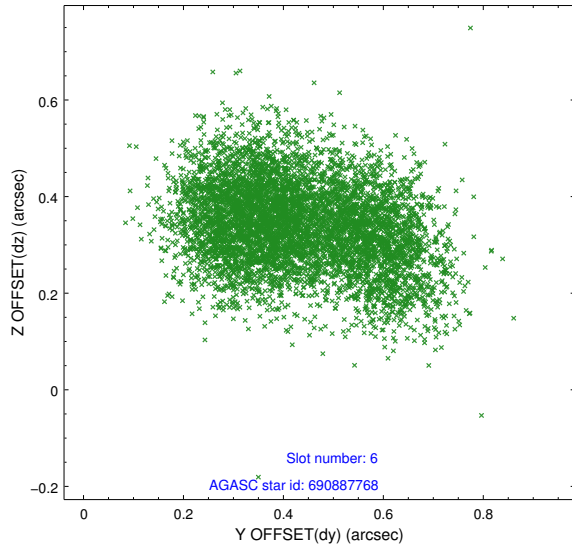
2.4.2 Slot 4



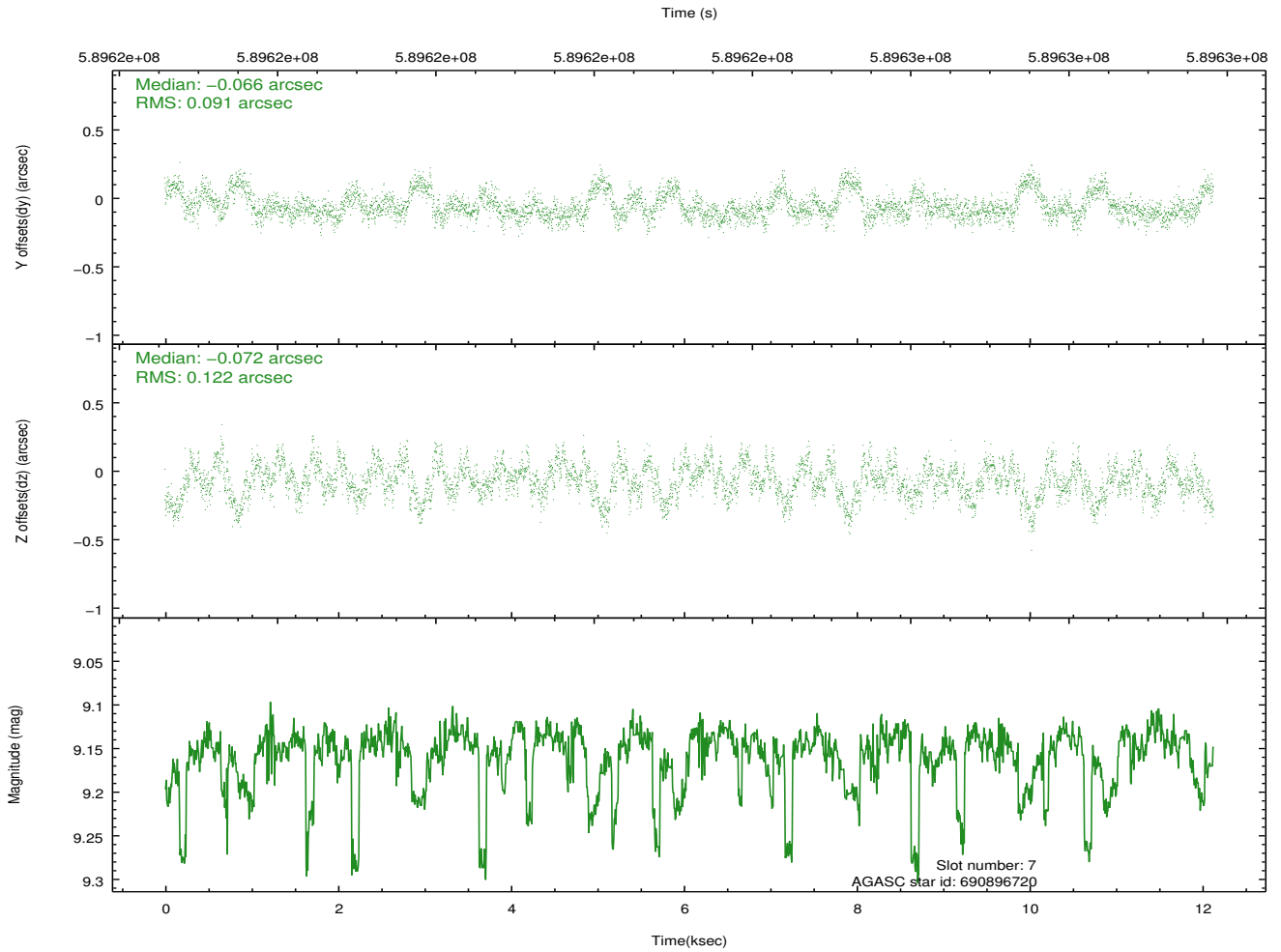
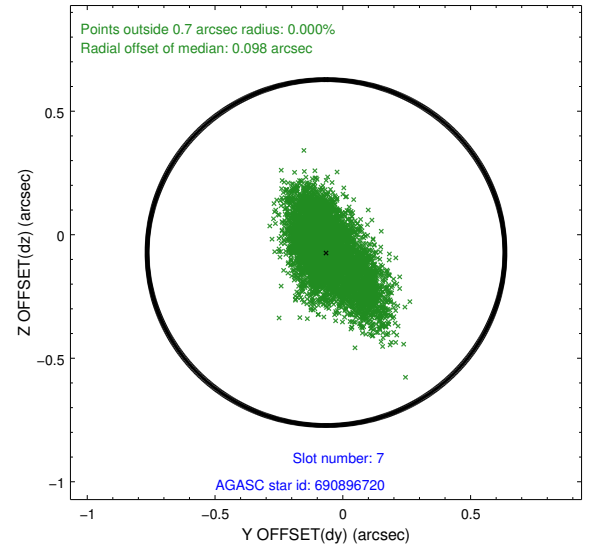
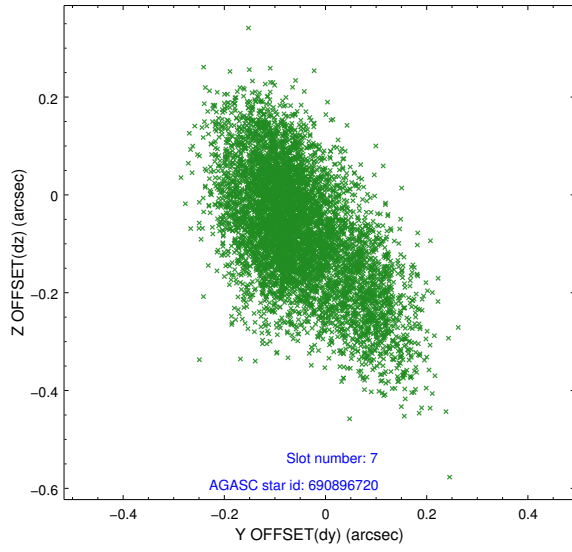
2.4.3 Slot 5



2.4.4 Slot 6

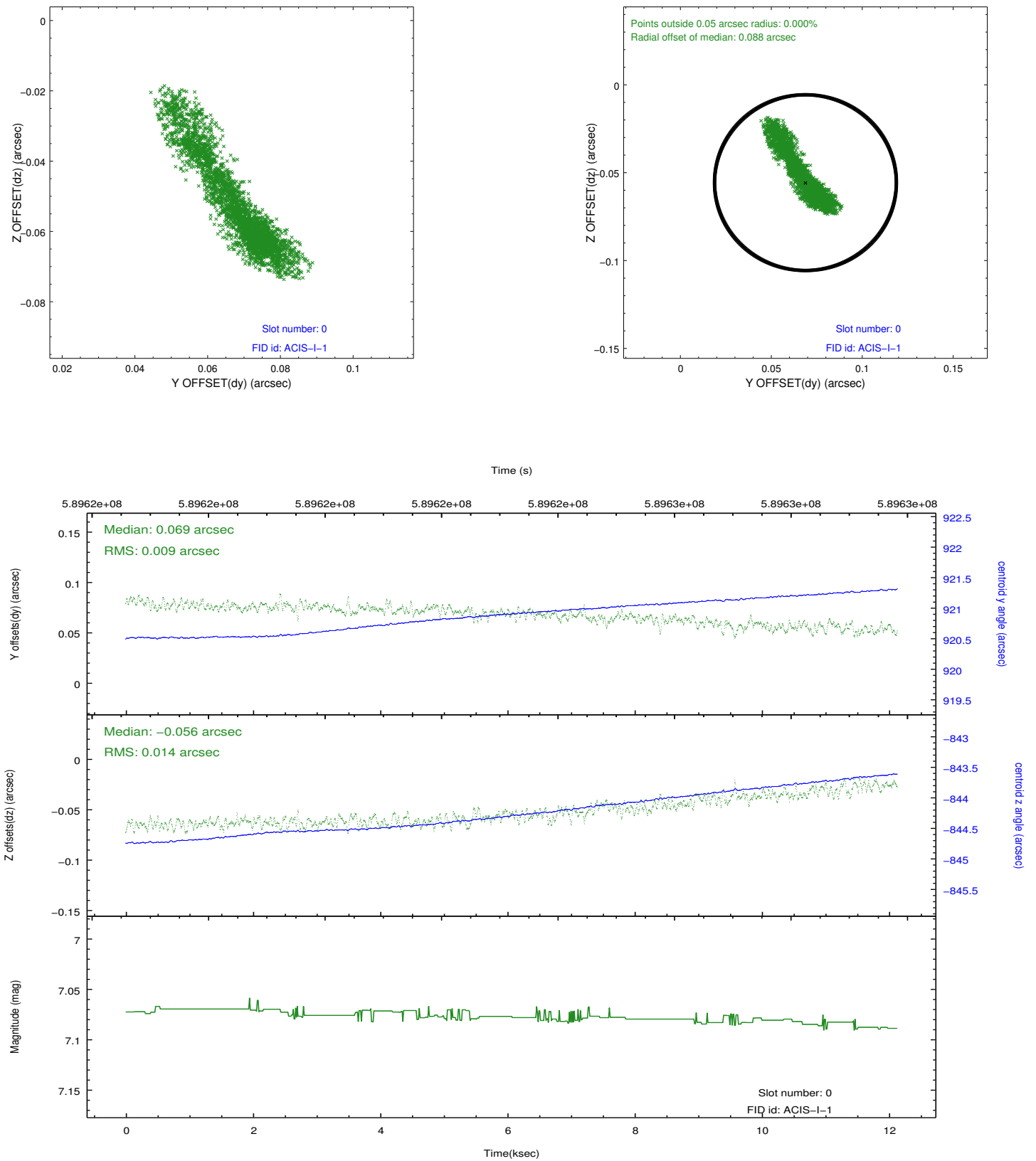


2.4.5 Slot 7

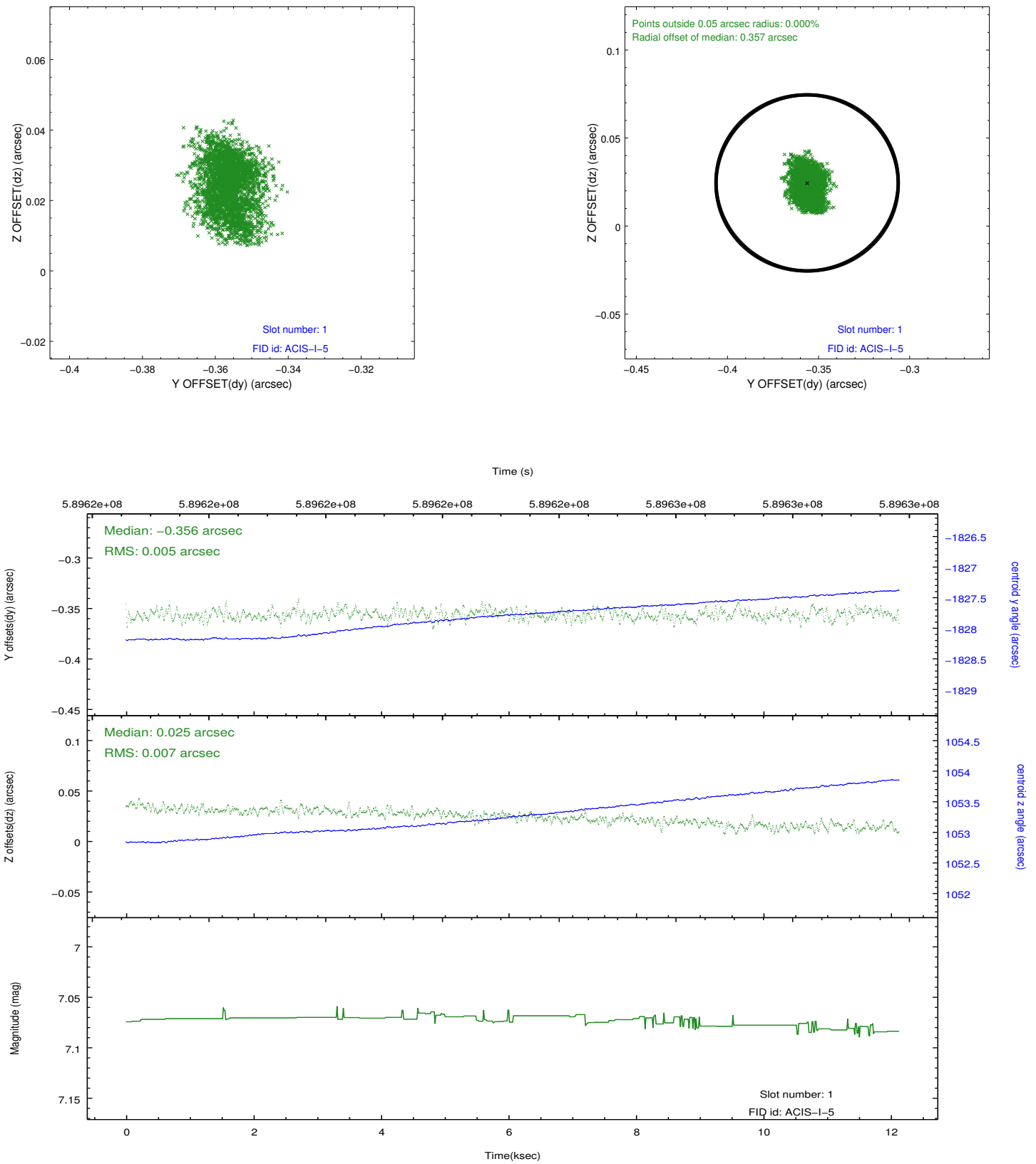


2.5 FID Slots

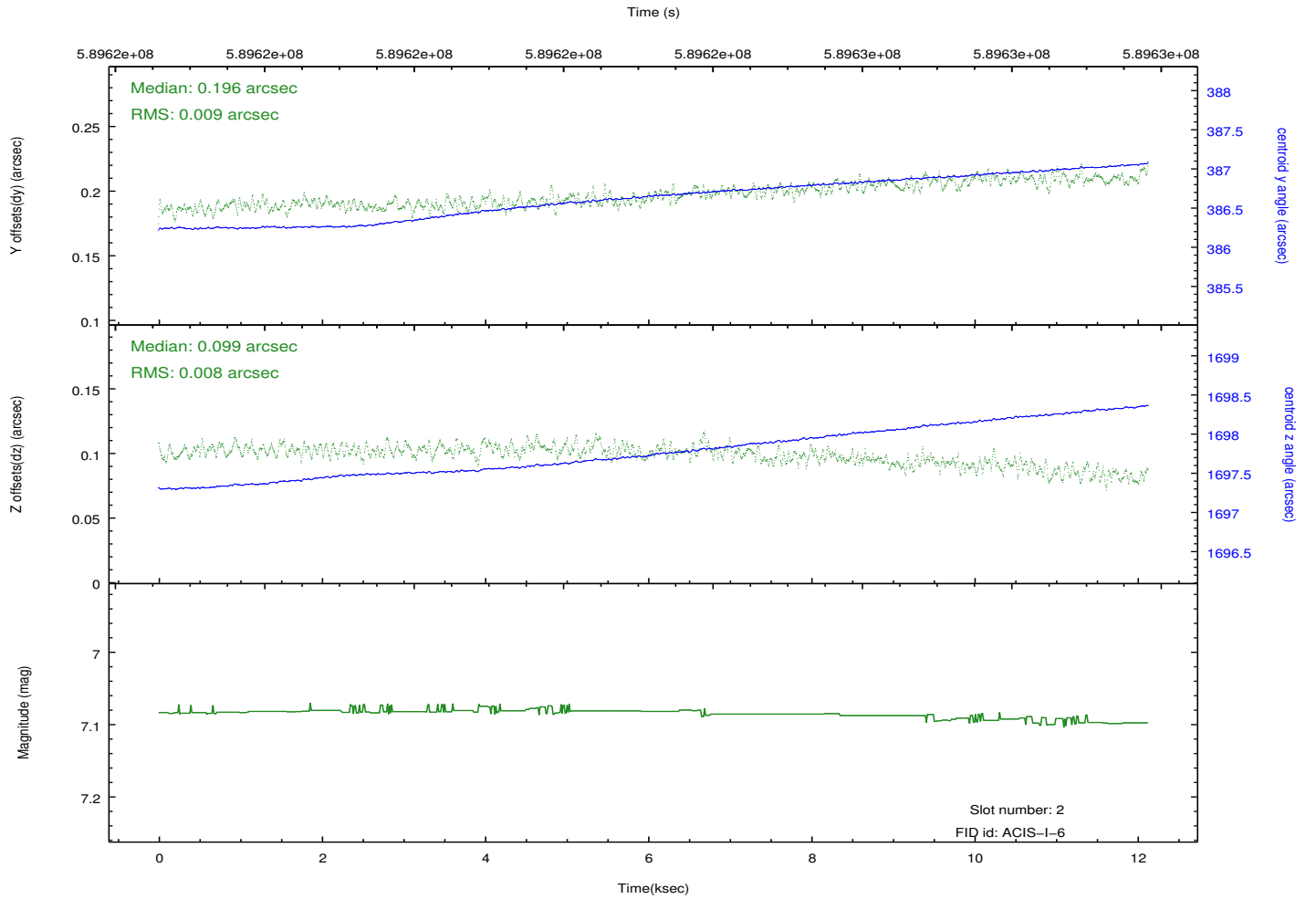
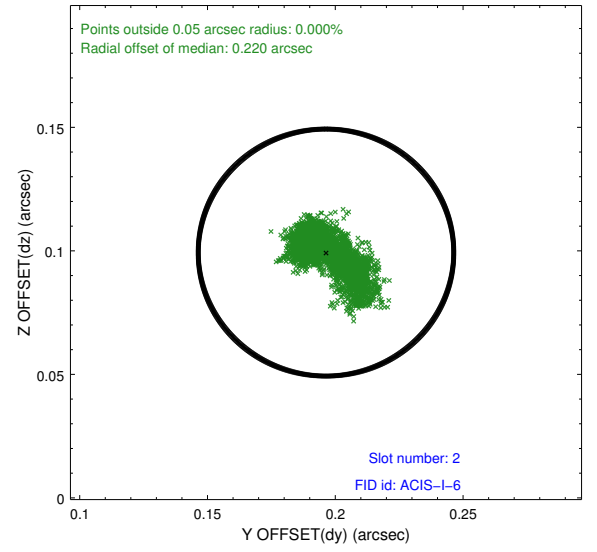
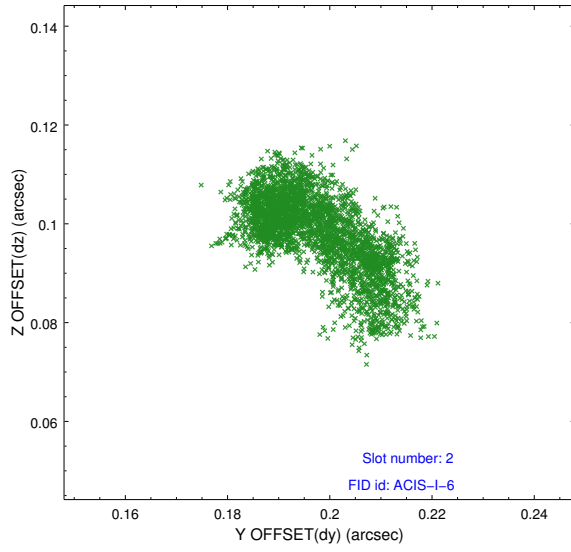
2.5.1 Slot 0



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)	2016.09.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	12.064157406807

A.2 Comments

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: (10.58503,-11.19449), (10.58777,-11.19496), (10.60324,-11.10641), (10.60083,-11.10406).