

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 14007 - L2 Version 3
Chandra X-Ray Center

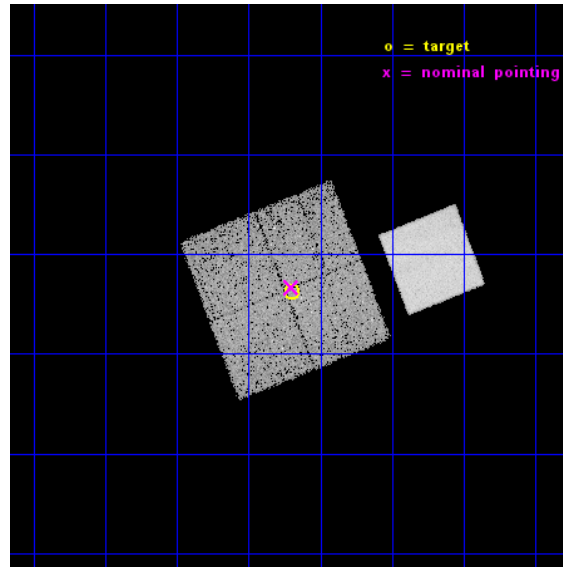
L2 Processing Date : Nov 29 2014

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

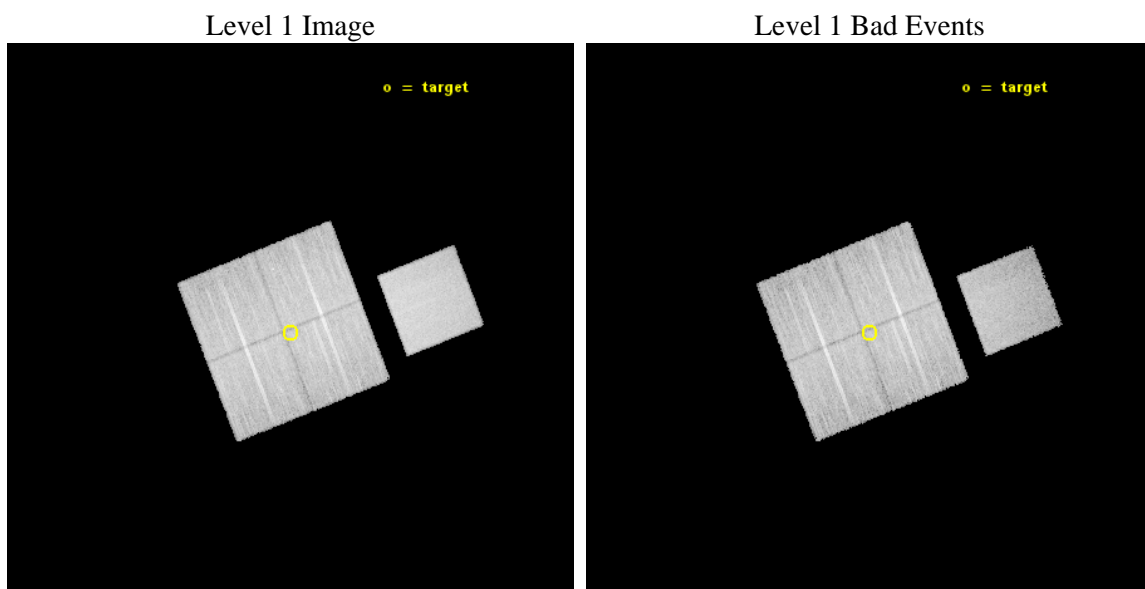
seq_num	801187	Sequence number
obs_id	14007	Observation id
title	GAMA groups and cosmic feedback	Proposal title
observer	Prof Trevor Ponman	Principal investigator
object	G12-63	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	176.3	Observer's specified target RA [deg]
dec_targ	-1.73	Observer's specified target Dec [deg]
ra_nom	176.30059180091	Nominal RA [deg]
dec_nom	-1.7219357758002	Nominal Dec [deg]
roll_nom	68.601265773174	Nominal Roll [deg]
revision	3	Processing version of data
ontime	25065.903475523	Sum of GTIs [s]
livetime	24738.398993366	Livetime [s]
ontime0	25068.921315908	Sum of GTIs [s]
ontime1	25062.680425227	Sum of GTIs [s]
ontime2	25065.862405717	Sum of GTIs [s]
ontime3	25065.903475523	Sum of GTIs [s]
ontime7	25069.085475922	Sum of GTIs [s]
l2events	112257	Number of level 2 events



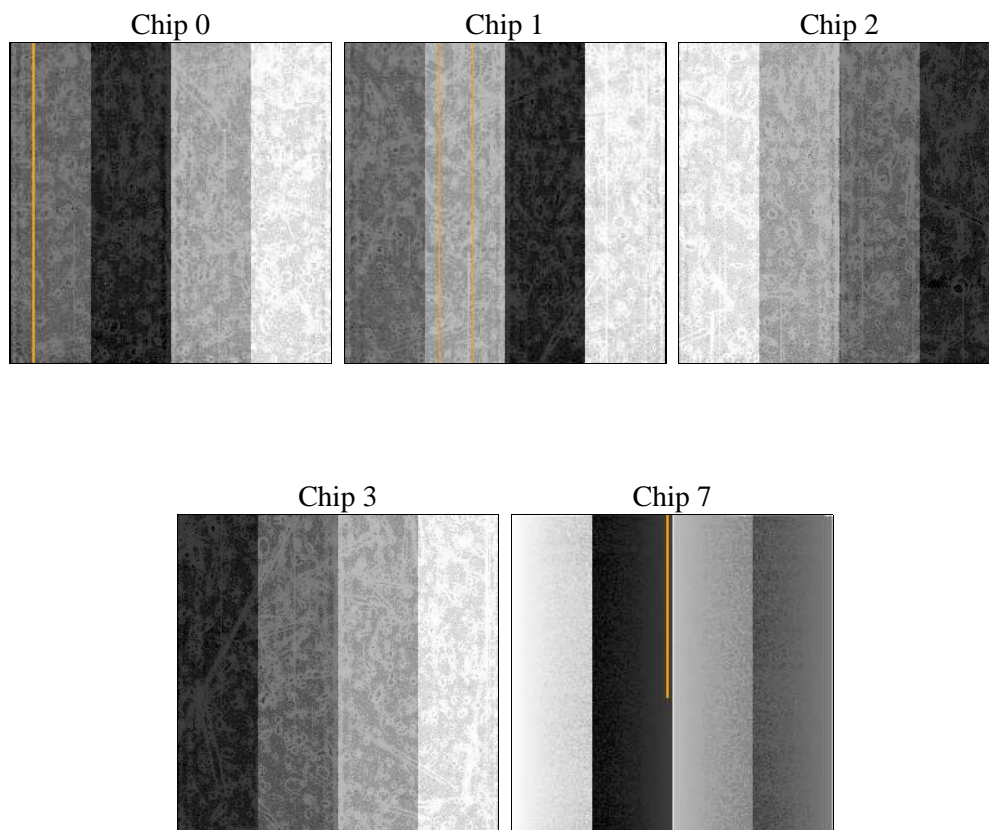
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	25065.903475523	Sum of GTIs [s]
caldbver	4.6.4	 	ontime0	25068.921315908	Sum of GTIs [s]
date	2014-11-29T14:29:37	Date and time of file creation	ontime1	25062.680425227	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	25065.862405717	Sum of GTIs [s]
			ontime3	25065.903475523	Sum of GTIs [s]
			ontime7	25069.085475922	Sum of GTIs [s]
			l1events	608289	Number of level 1 events

2.1.4 Events

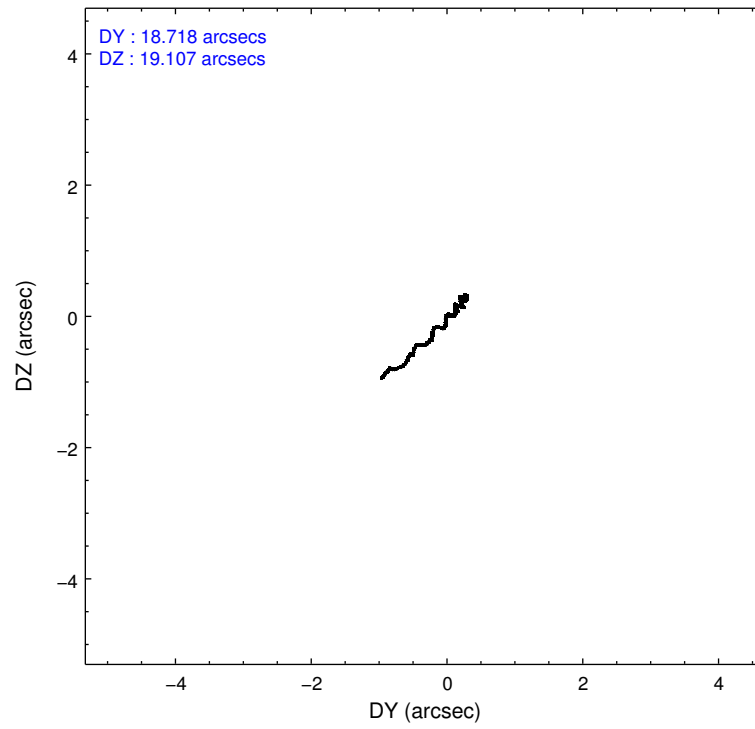
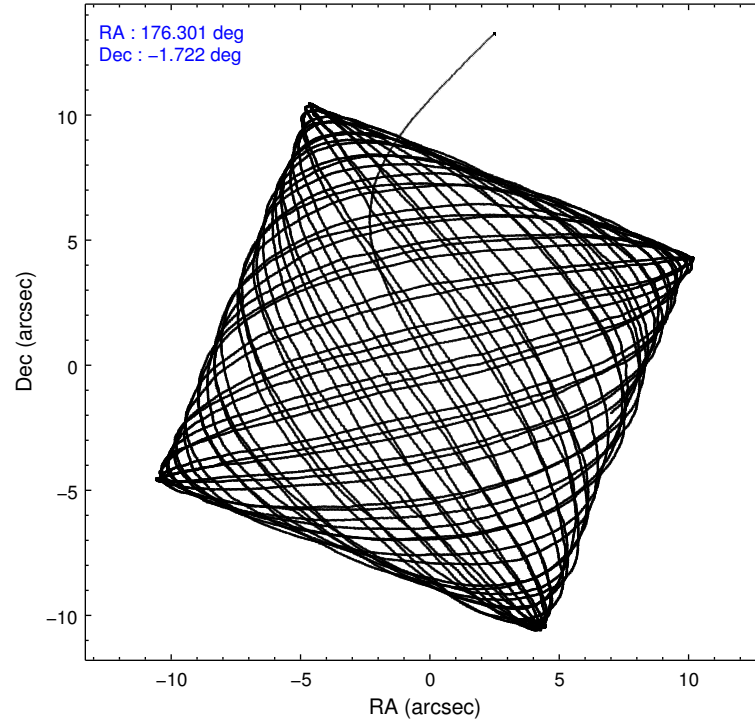
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	110946	112272	123338	119317	142416
rejected events	96880	97288	109176	105568	75254
rejected %	87%	86%	88%	88%	52%

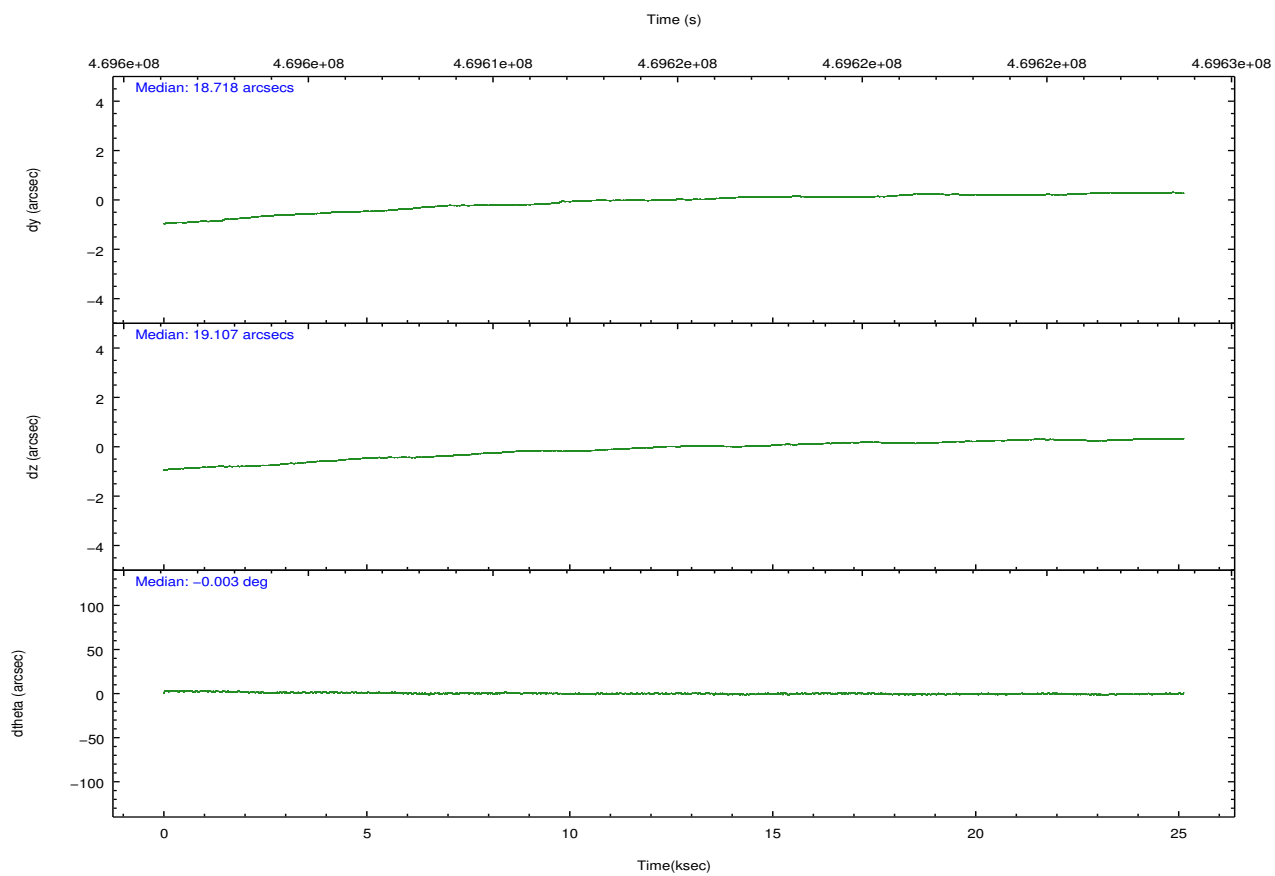
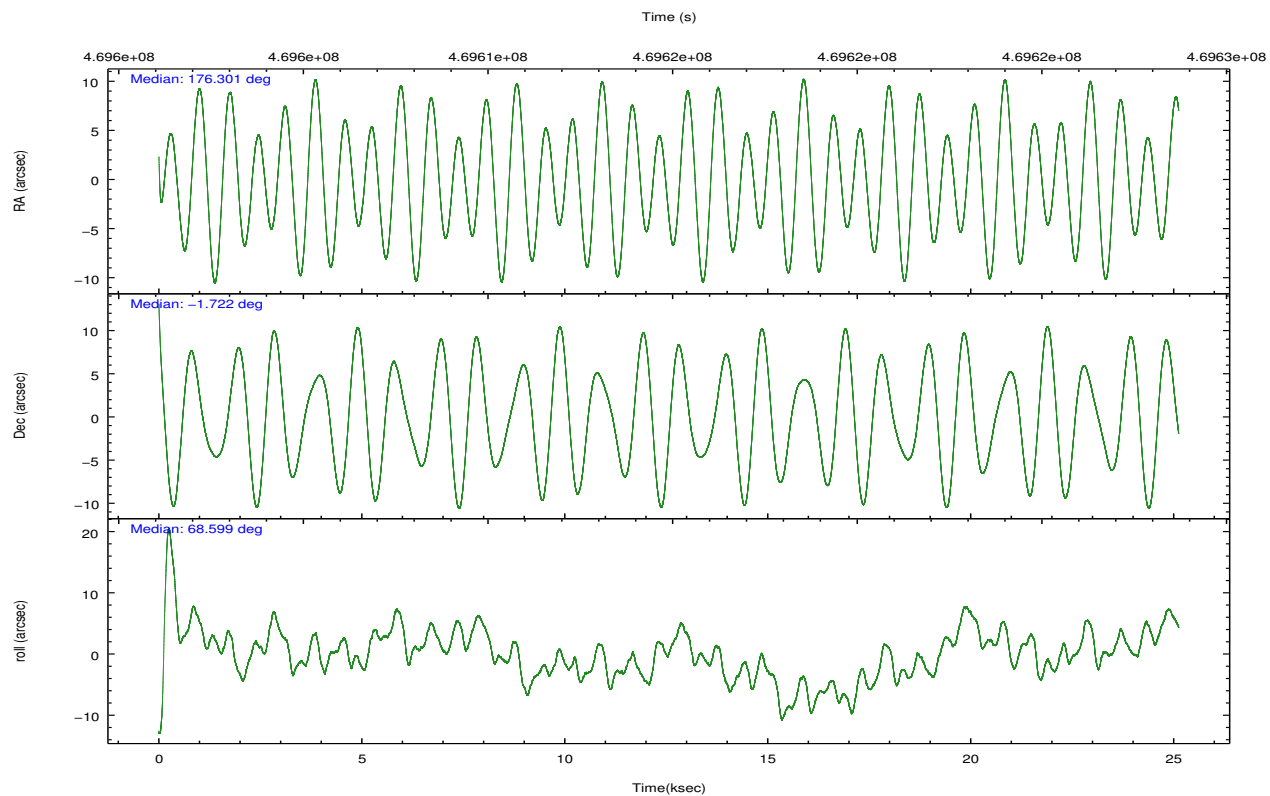
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	4946	5259	5332	5265	6460
	4%	4%	4%	4%	4%
grade 1 events	61	54	75	91	226
	0%	0%	0%	0%	0%
grade 2 events	3536	3447	3532	2961	14247
	3%	3%	2%	2%	10%
grade 3 events	1520	1541	1335	1442	5920
	1%	1%	1%	1%	4%
grade 4 events	1383	1547	1438	1460	5892
	1%	1%	1%	1%	4%
grade 5 events	4796	5324	4498	5588	15058
	4%	4%	3%	4%	10%
grade 6 events	2687	3194	2527	2623	34656
	2%	2%	2%	2%	24%
grade 7 events	92017	91906	104601	99887	59957
	82%	81%	84%	83%	42%

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	176.304805	176.3005918009132	CCD I2 on	Y	Y
[deg] Pointing Dec	-1.749114	-1.721935775800228	CCD I3 on	Y	Y
[deg] Pointing Roll	68.392717	68.60126577317354	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)	469602460.184000	469601004.06254	CCD S5 on	N	N
Observation start date	2012-11-18T05:06:33	2012-11-18T04:43:24	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	469627460.184000	469628073.289	On-chip summing requested	N	N
Observation end date	2012-11-18T12:03:13	2012-11-18T12:14:33	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



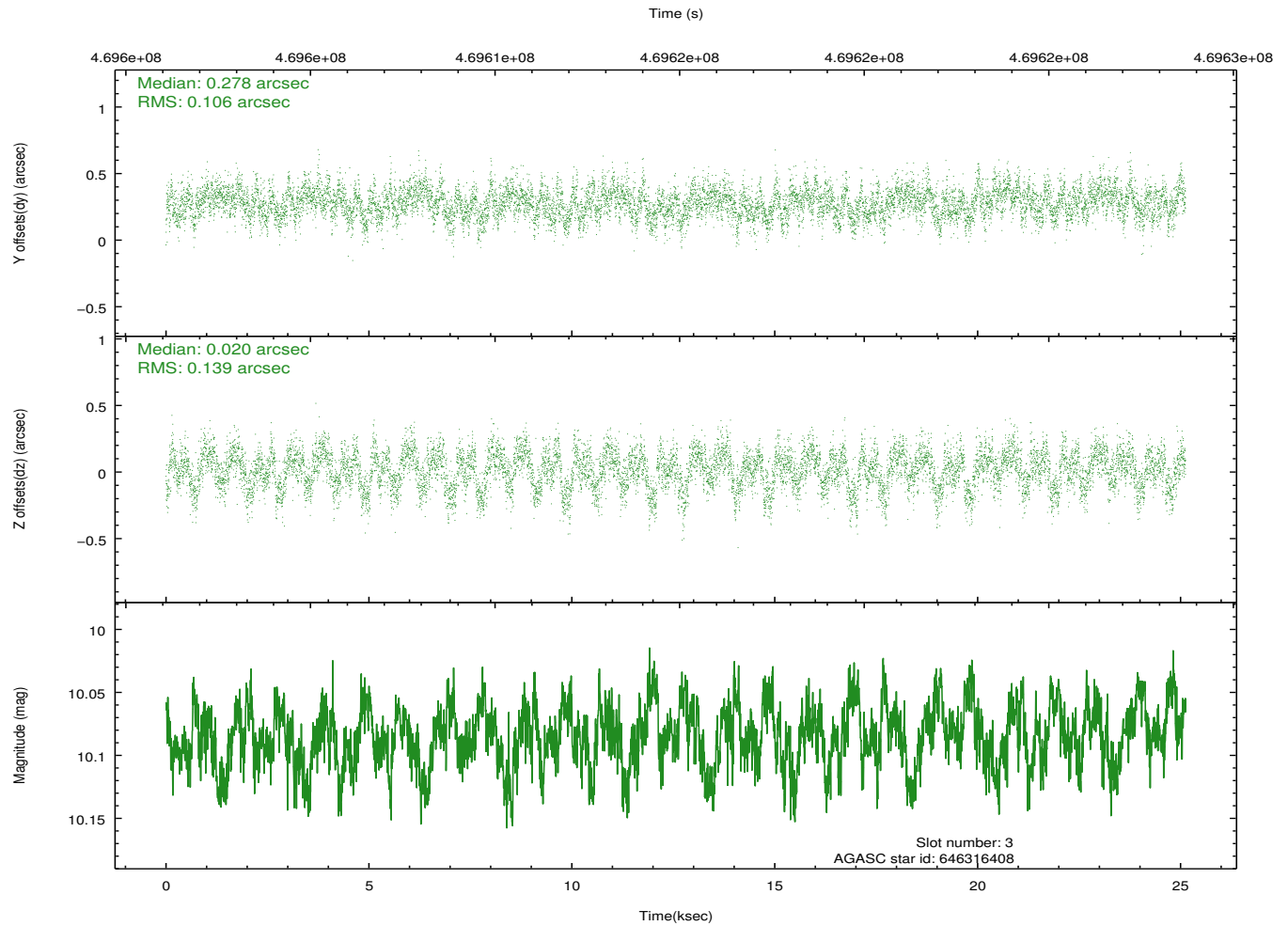
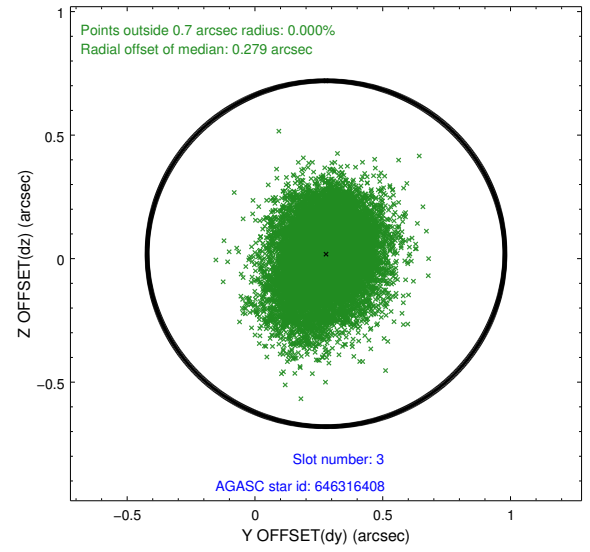
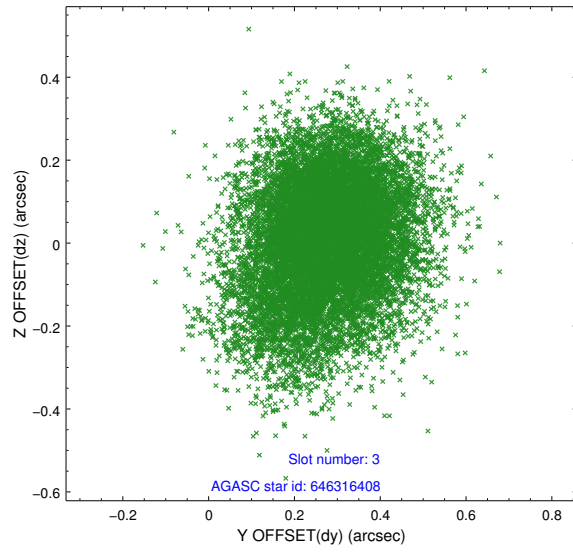


Slot Statistics

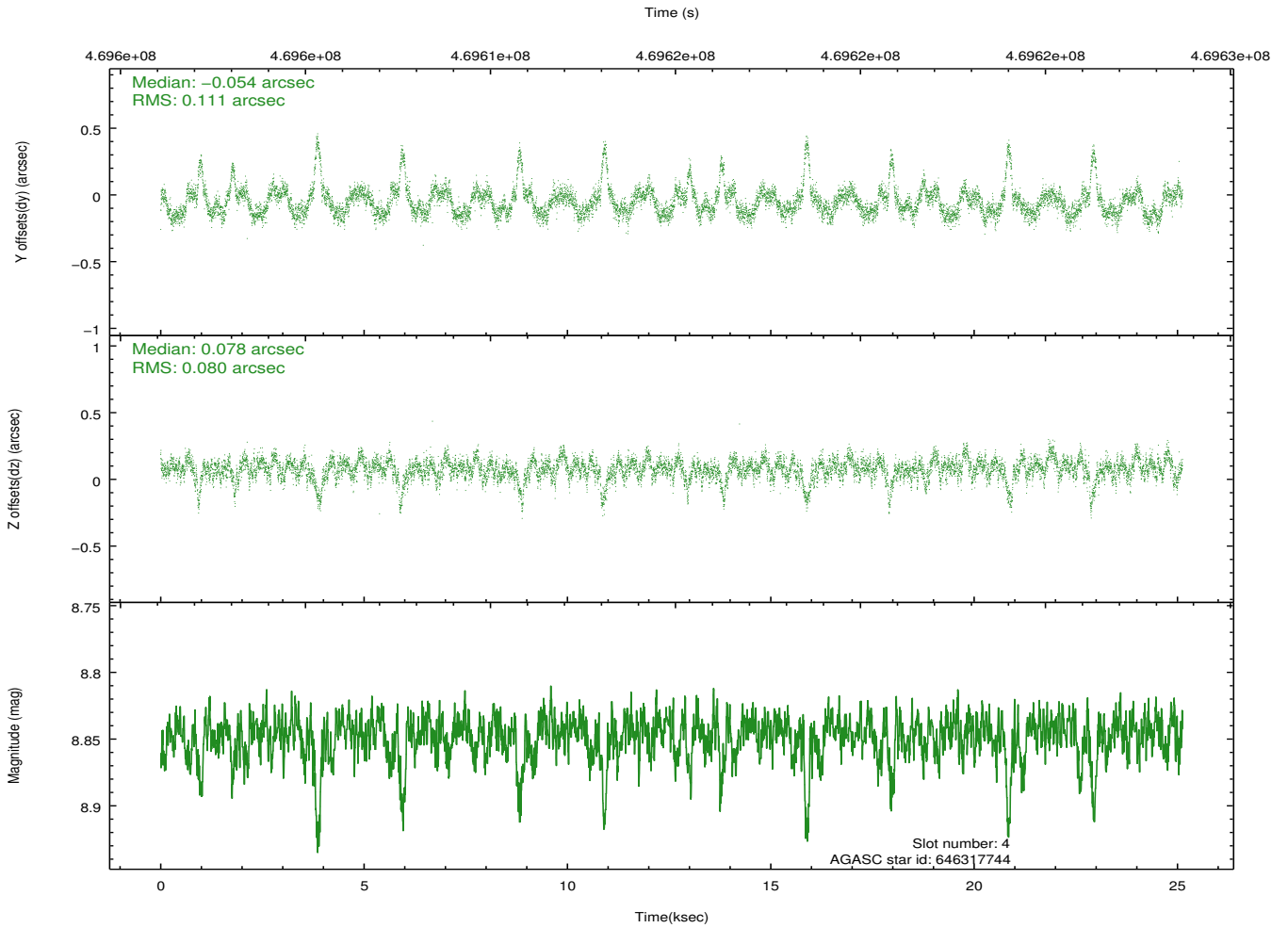
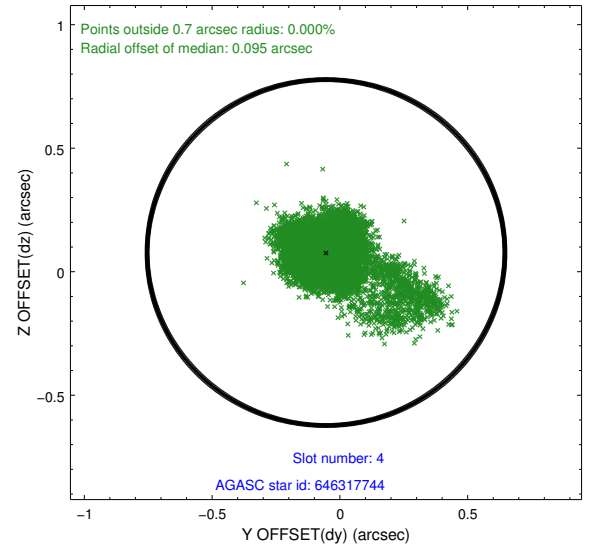
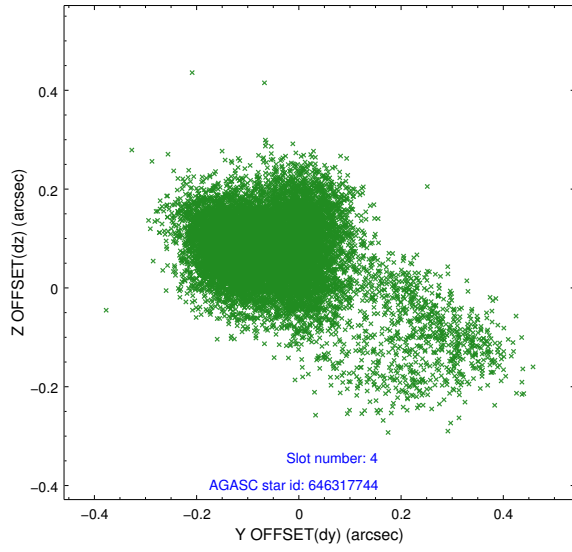
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.05	6128	0.034	0.035	0.010	0.016	0.000000	0.000000	920.79	-842.63
1	FID		ACIS-I-5	7.04	6128	-0.246	0.037	0.011	0.016	0.000000	0.000000	-1827.57	1054.74
2	FID		ACIS-I-6	7.05	6128	0.124	-0.000	0.012	0.023	0.000000	0.000000	386.24	1699.39
3	GUIDE	used	646316408	10.08	12199	0.278	0.020	0.184	0.304	176.490875	-2.448140	-2092.78	-1548.01
4	GUIDE	used	646317744	8.85	12252	-0.054	0.078	0.118	0.292	176.750120	-1.629335	991.16	-1330.45
5	GUIDE	used	646323040	9.73	12213	0.101	0.352	0.215	0.329	176.251683	-2.118555	-1306.44	-311.58
6	GUIDE	used	646323360	7.24	12254	-0.459	-0.446	0.064	0.120	176.150253	-1.384836	1014.16	999.93
7	GUIDE	used	646323408	9.56	12247	0.133	0.010	0.147	0.246	176.217373	-2.038376	-1083.46	-90.64

2.4 Star Slots

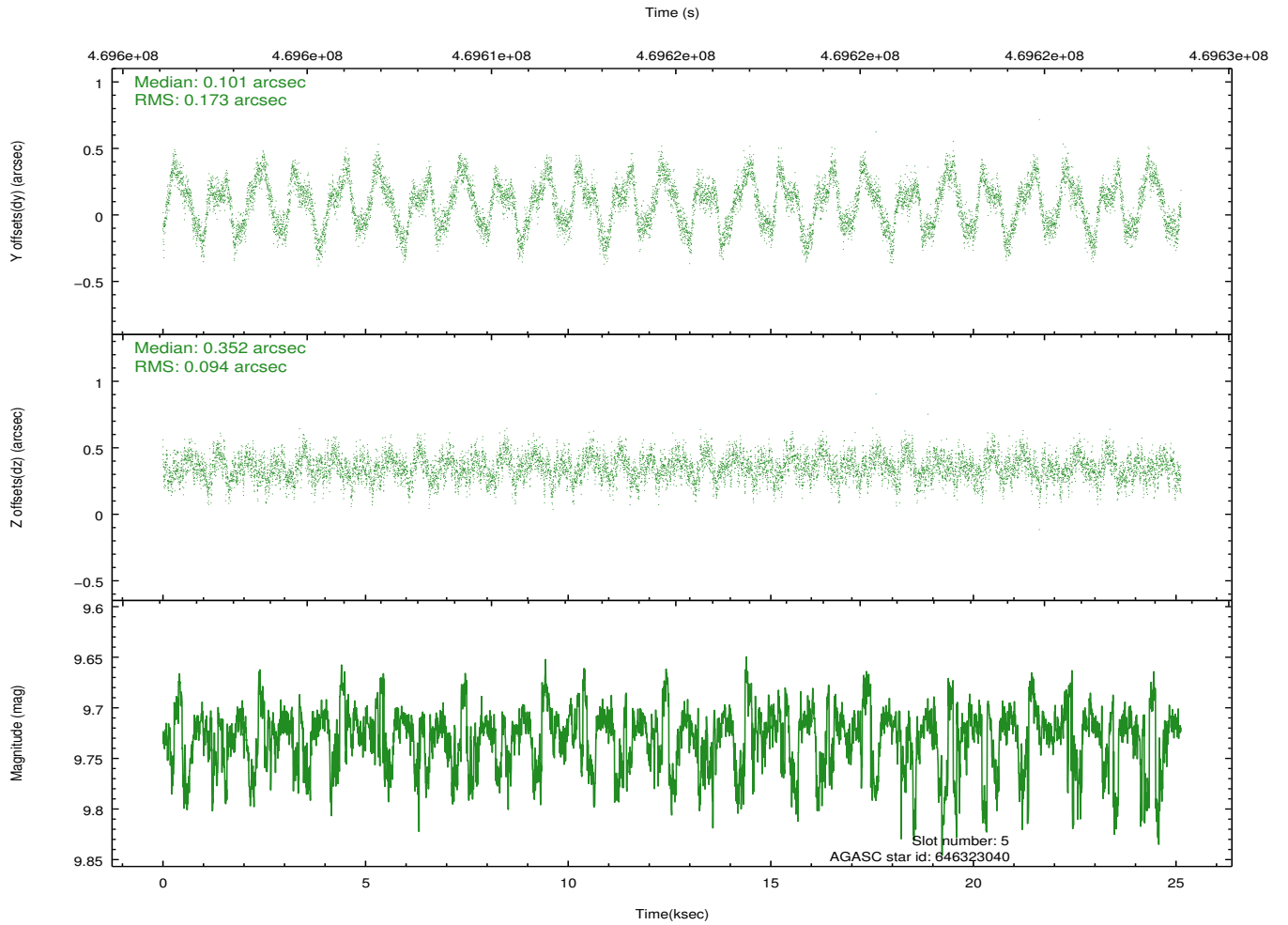
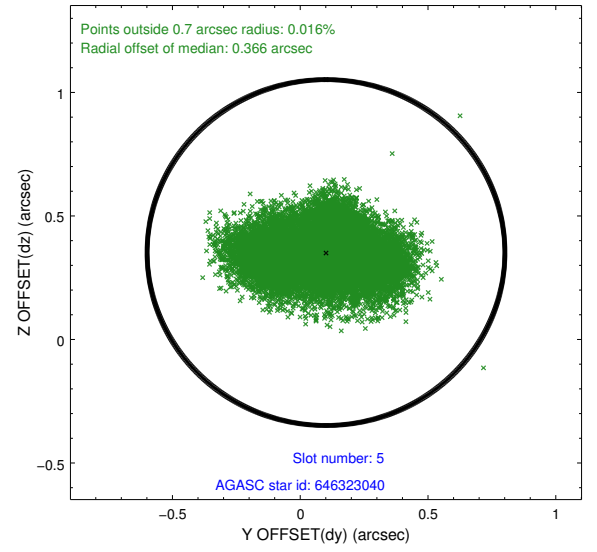
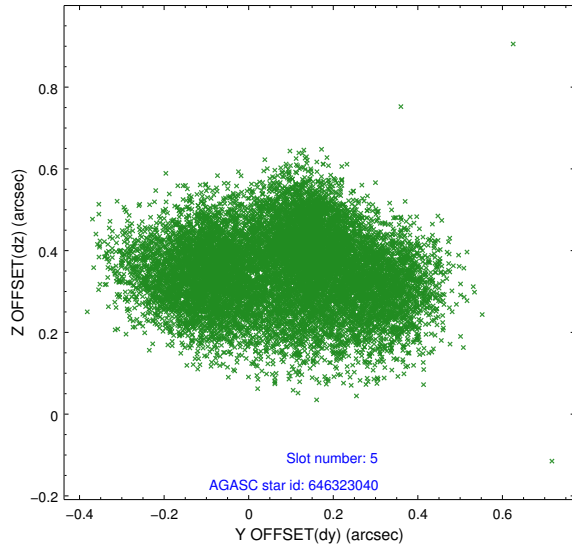
2.4.1 Slot 3



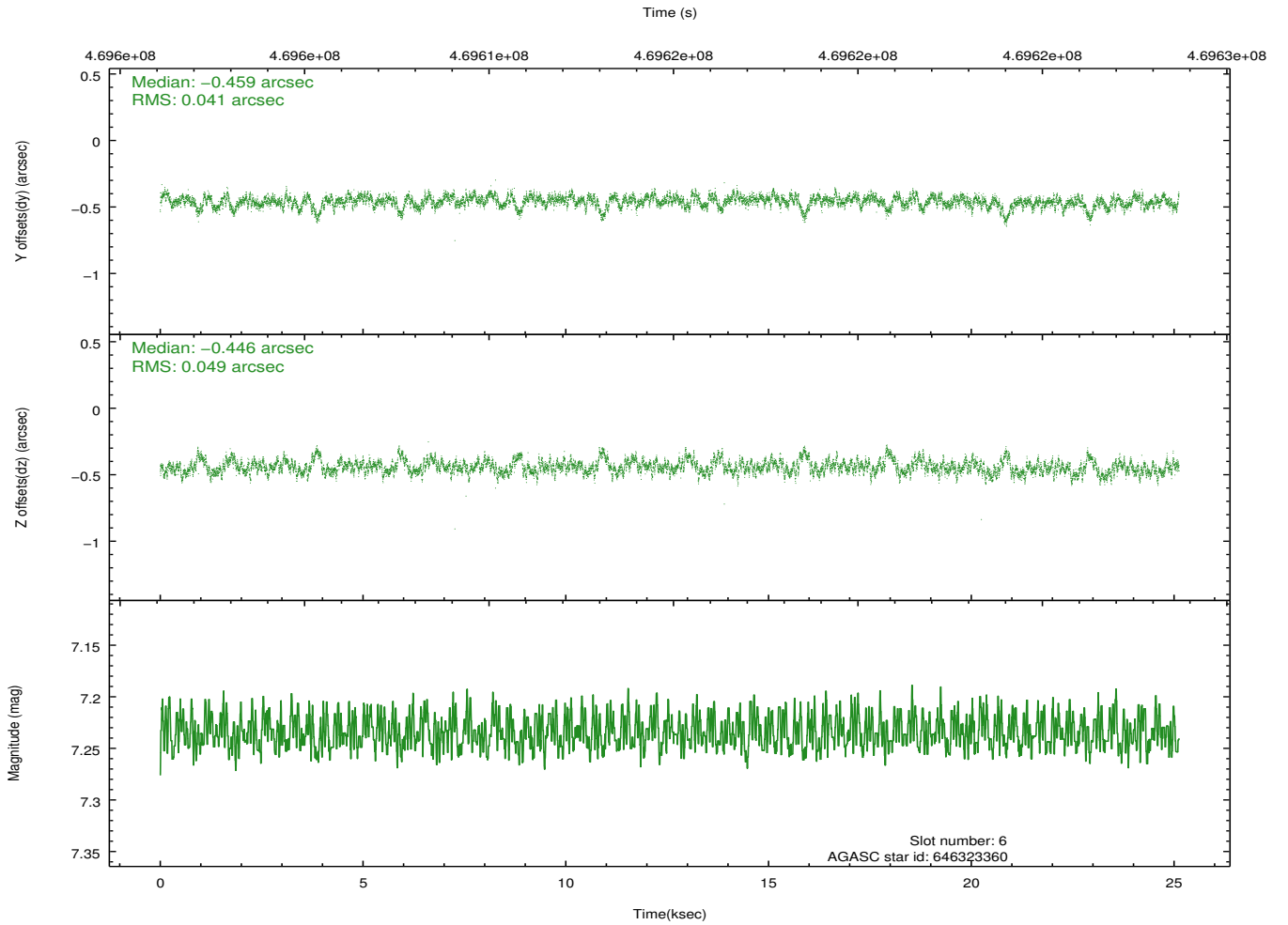
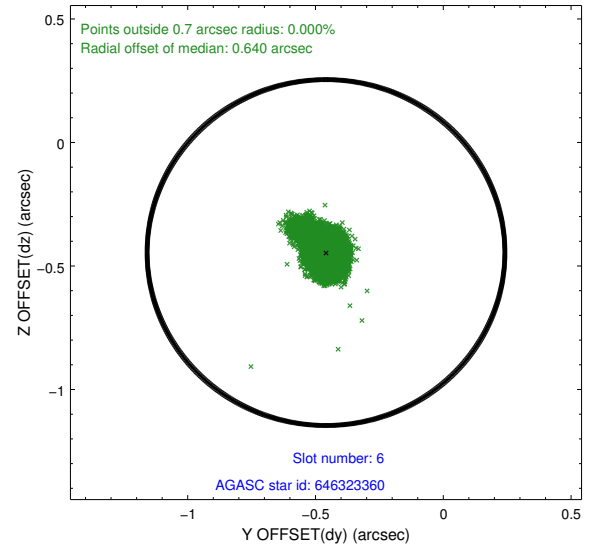
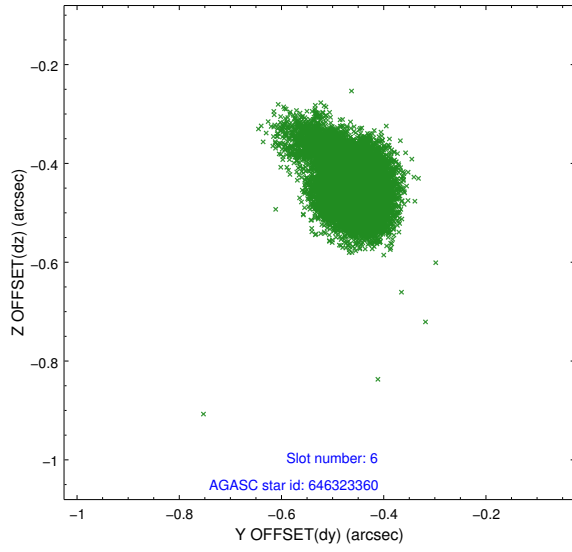
2.4.2 Slot 4



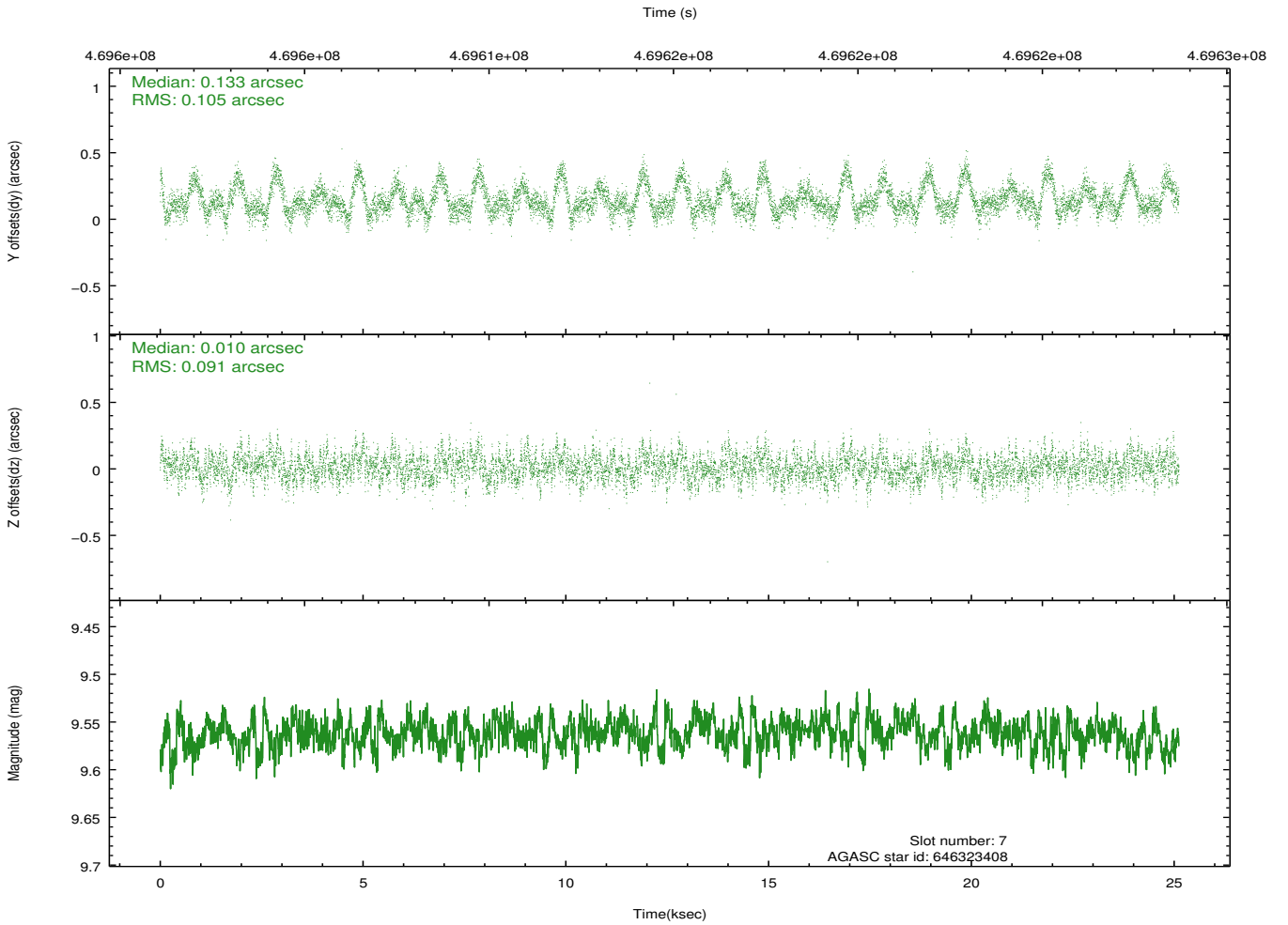
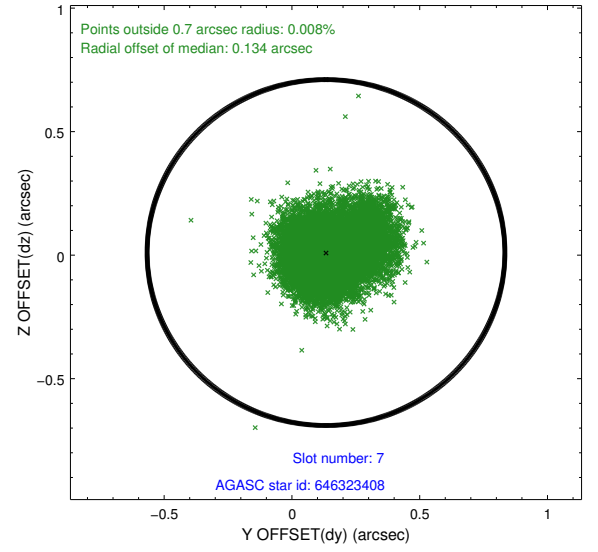
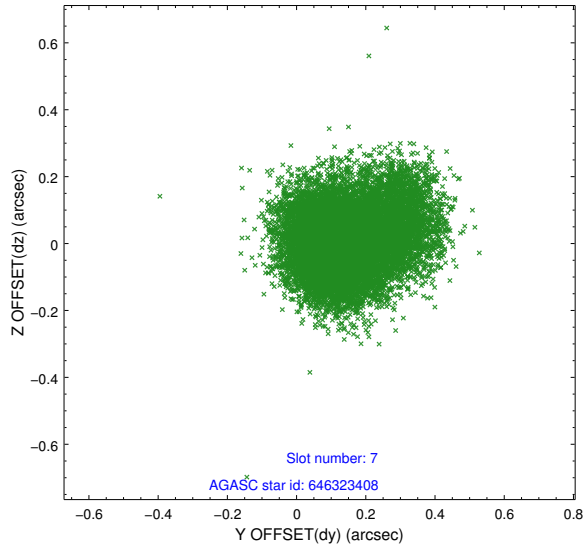
2.4.3 Slot 5



2.4.4 Slot 6

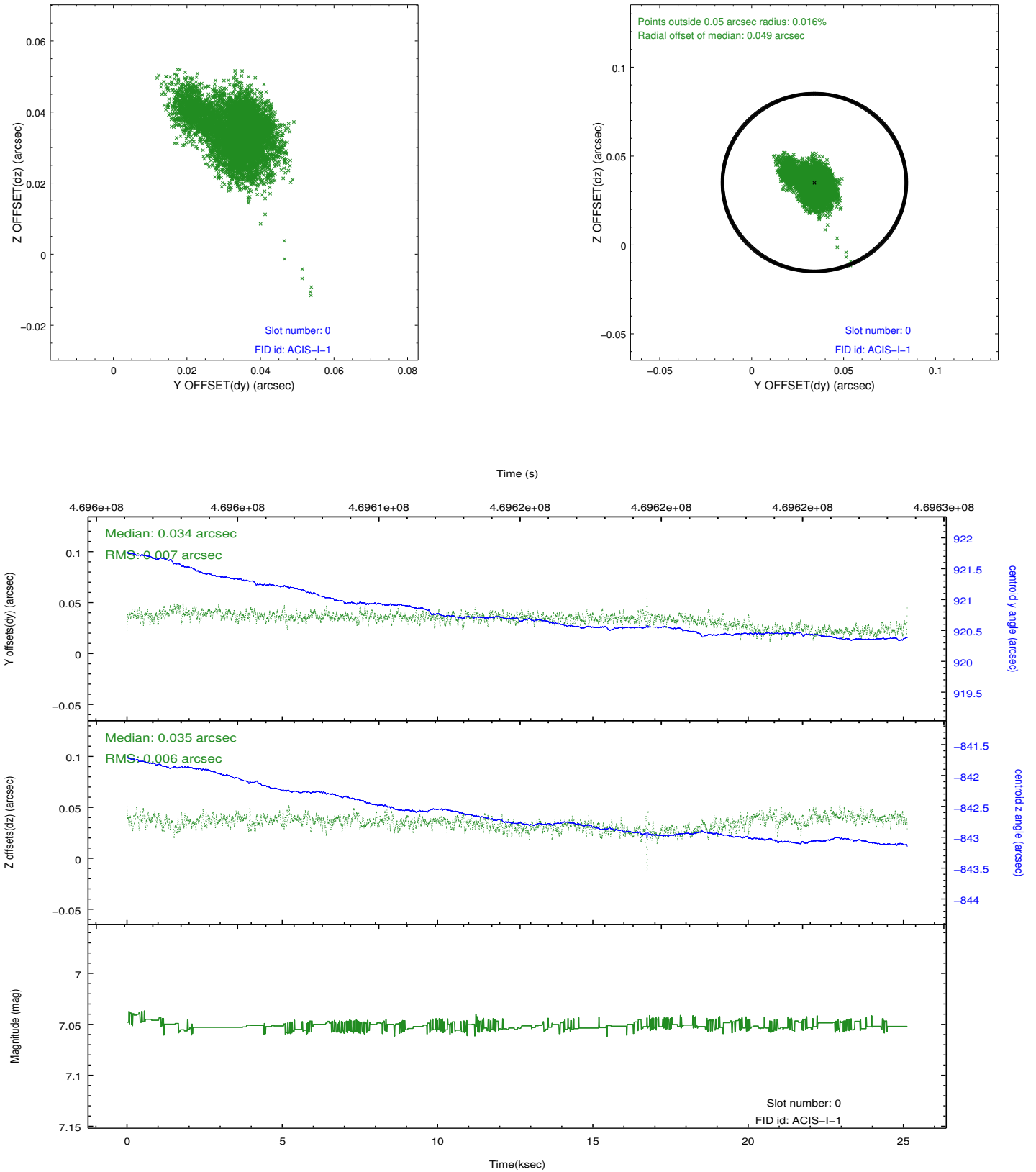


2.4.5 Slot 7

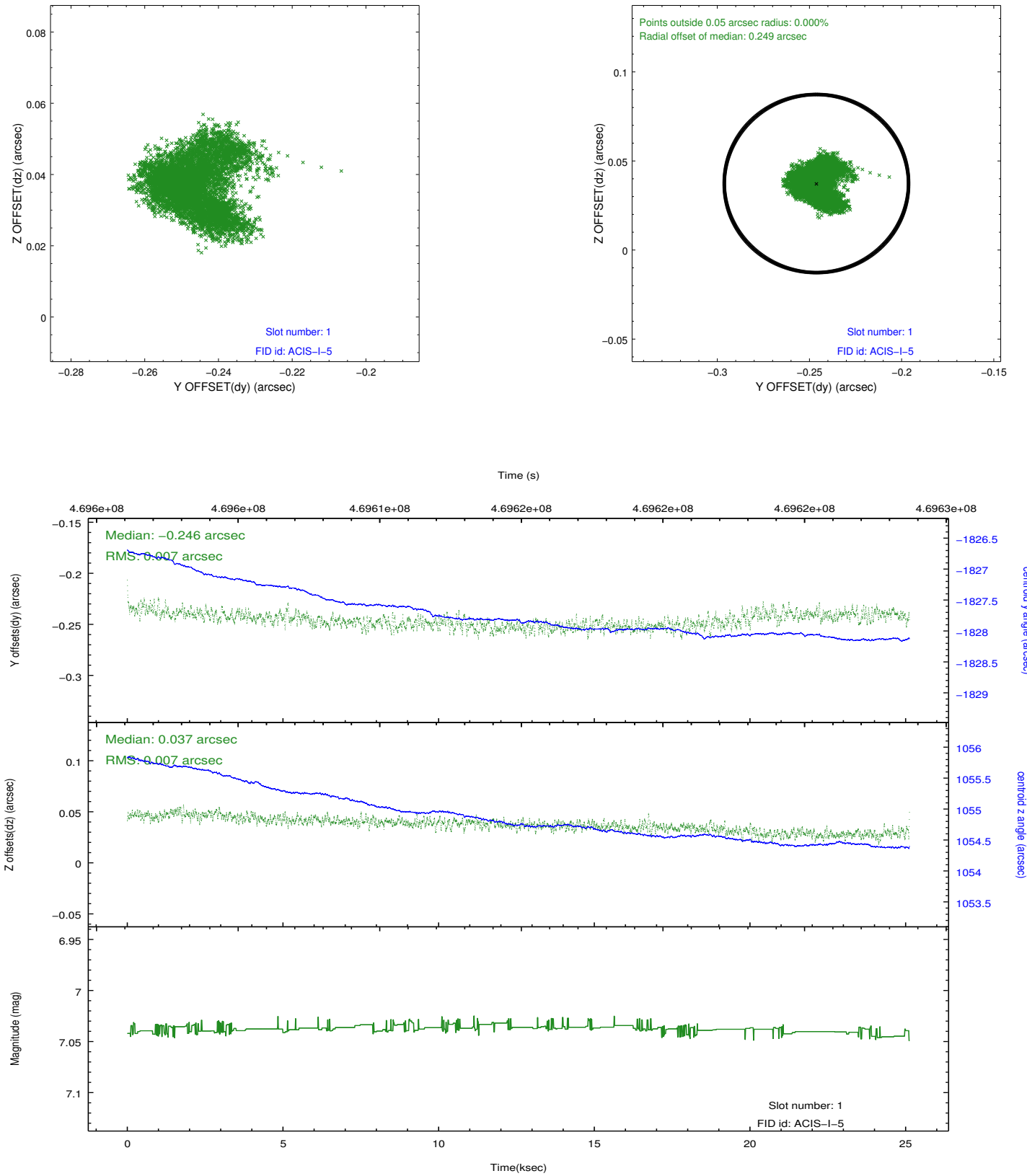


2.5 FID Slots

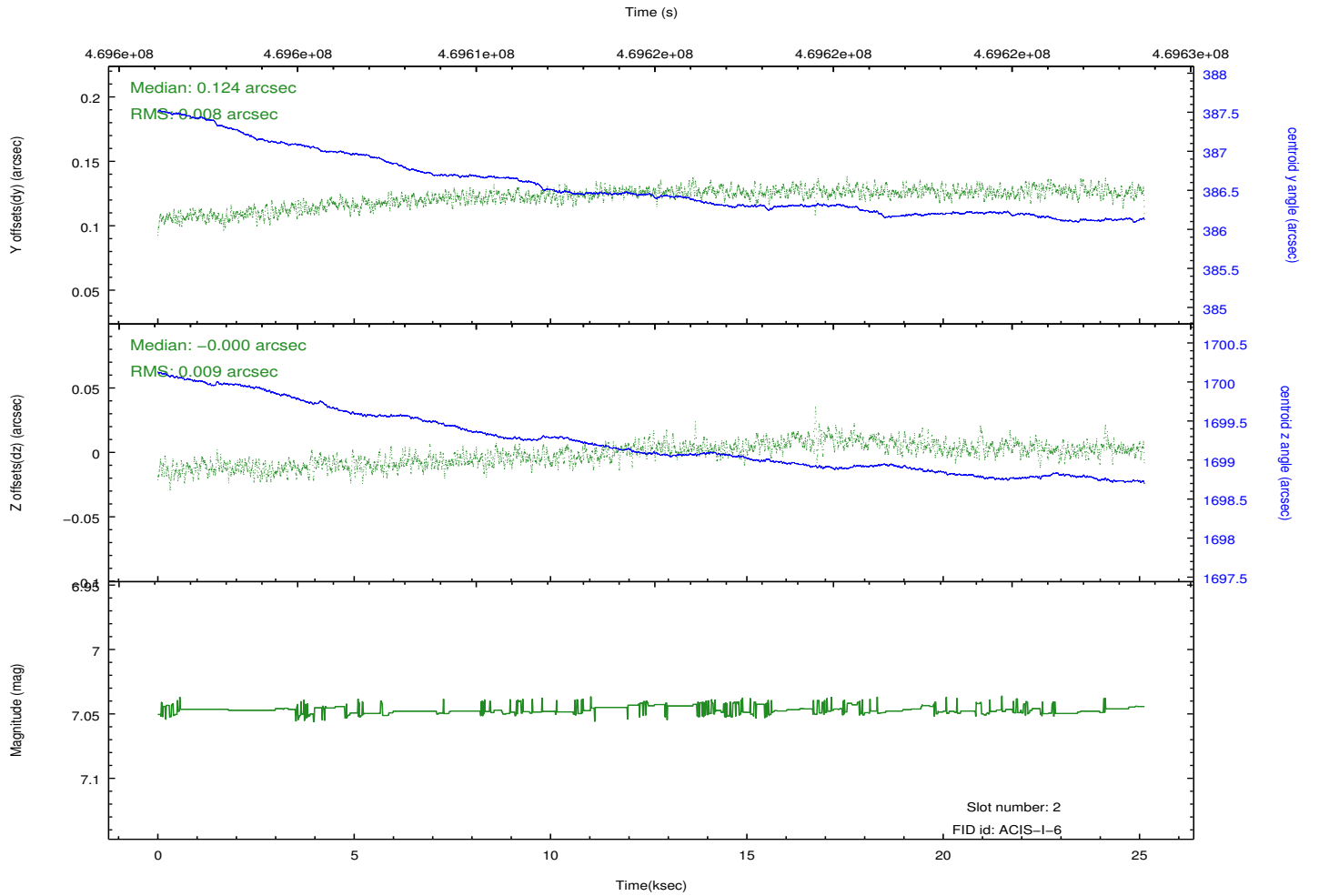
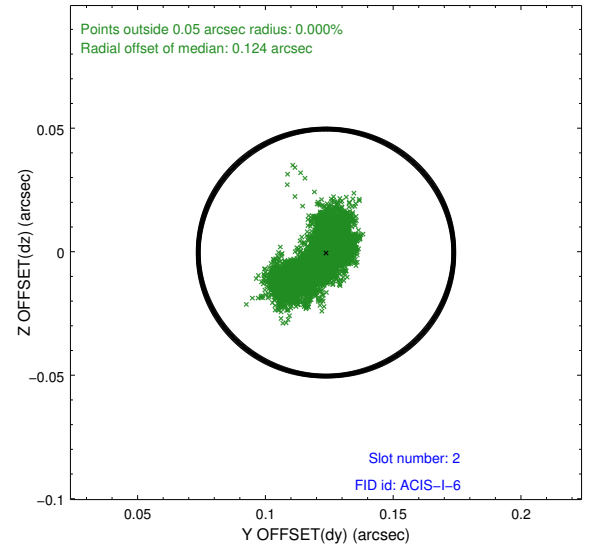
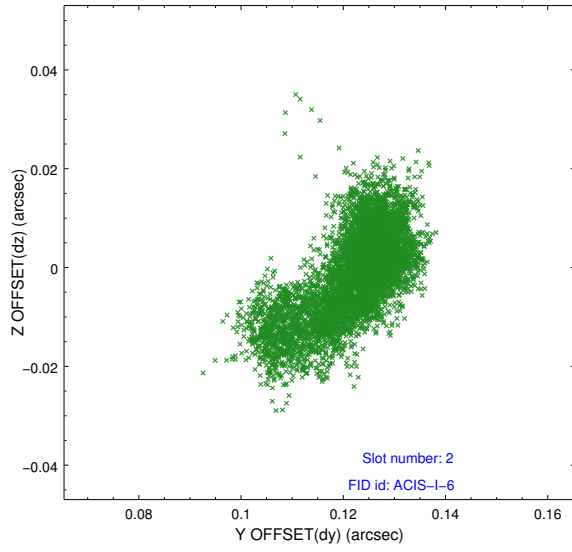
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.065903475523

A.2 Comments

A spatial region of the original bias map for CCD = 2 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 = 2 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:
(176.30552,-1.57211),(176.30285,-1.57107),(176.25196,-1.70093),(176.25462,-1.70196)

=====

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.