

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 19760 - L2 Version 2
Chandra X-Ray Center

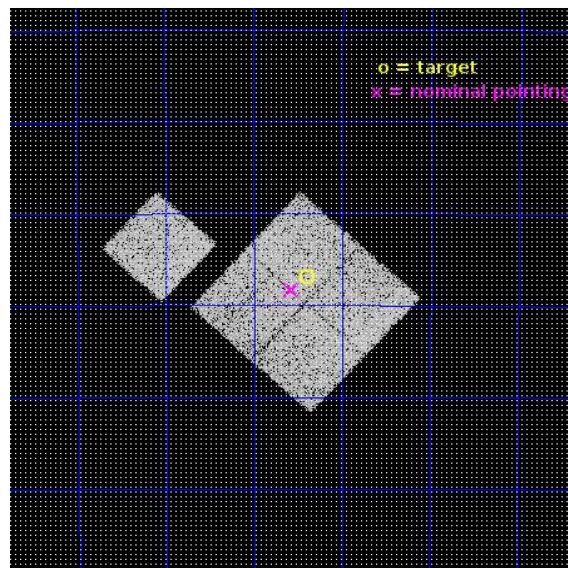
L2 Processing Date : Nov 16 2017

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

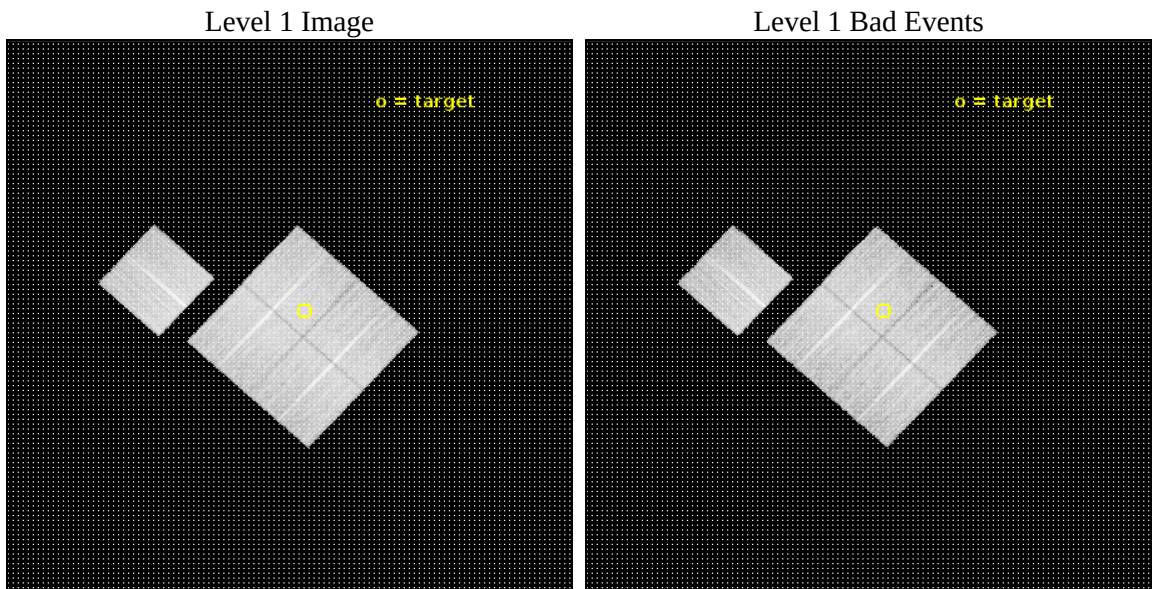
seq_num	801697	Sequence number
obs_id	19760	Observation id
title	A Chandra Survey of high-redshift ($0.7 < z < 0.8$) clusters selected in the 100 deg ² SPT-Pol Deep Field	Proposal title
observer	Gordon Garmire	Principal investigator
object	SPT-CLJ2355-5156	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	358.85	Observer's specified target RA [deg]
dec_targ	-51.948	Observer's specified target Dec [deg]
ra_nom	358.89383677537	Nominal RA [deg]
dec_nom	-51.97197329425	Nominal Dec [deg]
roll_nom	312.47742580423	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15763.46664691	Sum of GTIs [s]
livetime	15557.505350273	Livetime [s]
ontime0	15763.343526959	Sum of GTIs [s]
ontime1	15763.384566903	Sum of GTIs [s]
ontime2	15763.425606966	Sum of GTIs [s]
ontime3	15763.46664691	Sum of GTIs [s]
ontime6	15763.302486897	Sum of GTIs [s]
l2events	50522	Number of level 2 events



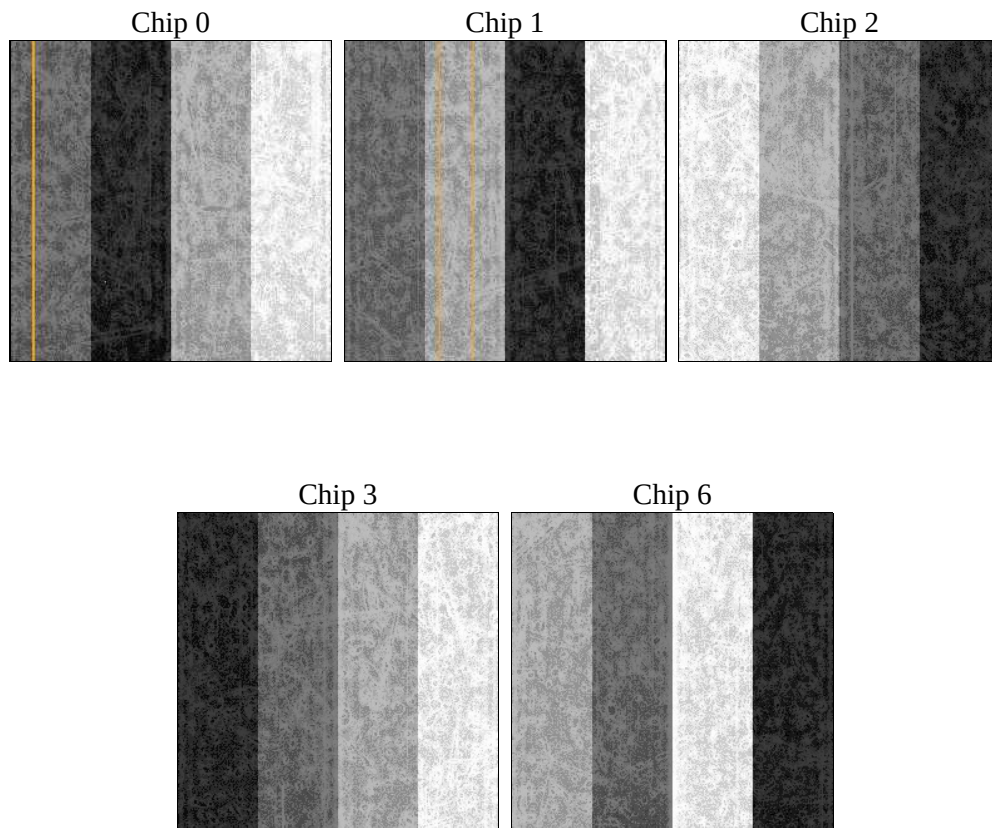
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	15700.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	15763.46664691	Sum of GTIs [s]
caldsver	4.7.6	 	ontime0	15763.343526959	Sum of GTIs [s]
date	2017-11-16T21:59:34	Date and time of file creation	ontime1	15763.384566903	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	15763.425606966	Sum of GTIs [s]
			ontime3	15763.46664691	Sum of GTIs [s]
			ontime6	15763.302486897	Sum of GTIs [s]
			l1events	542043	Number of level 1 events

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	104062	103618	112978	108924	112461
rejected events	91998	90646	101405	97652	100507
rejected %	88%	87%	89%	89%	89%

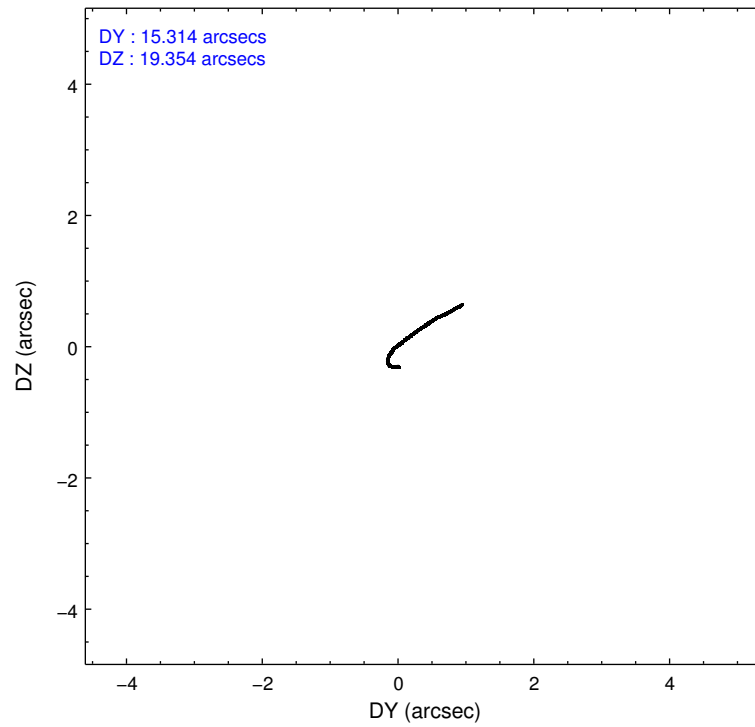
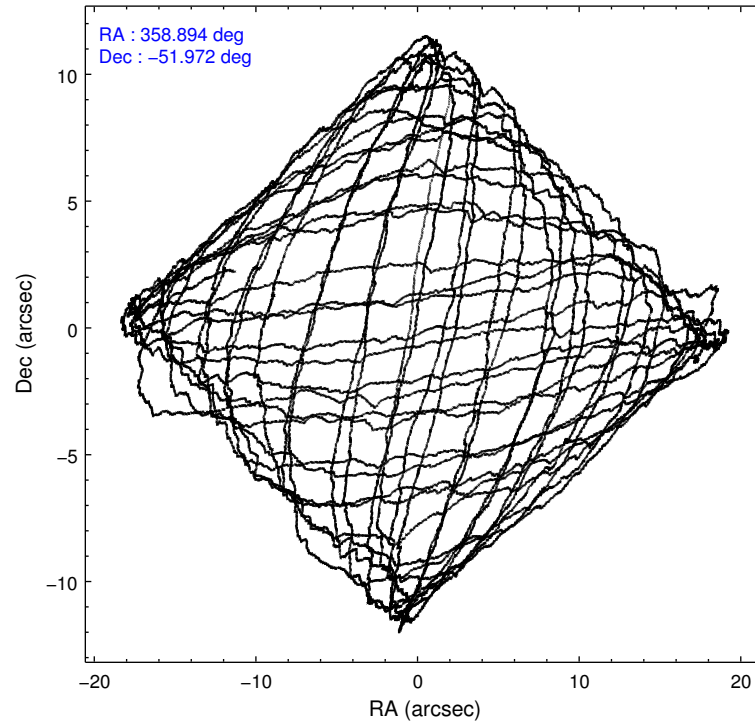
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	3982	4112	4034	3987	3620
	3%	3%	3%	3%	3%
grade 1 events	51	60	69	58	39
	0%	0%	0%	0%	0%
grade 2 events	3194	3431	2830	2492	2950
	3%	3%	2%	2%	2%
grade 3 events	1204	1155	1196	1165	1140
	1%	1%	1%	1%	1%
grade 4 events	1130	1189	1183	1178	1082
	1%	1%	1%	1%	0%
grade 5 events	4422	4679	4200	5276	4676
	4%	4%	3%	4%	4%
grade 6 events	2556	3087	2334	2452	3168
	2%	2%	2%	2%	2%
grade 7 events	87523	85905	97132	92316	95786
	84%	82%	85%	84%	85%

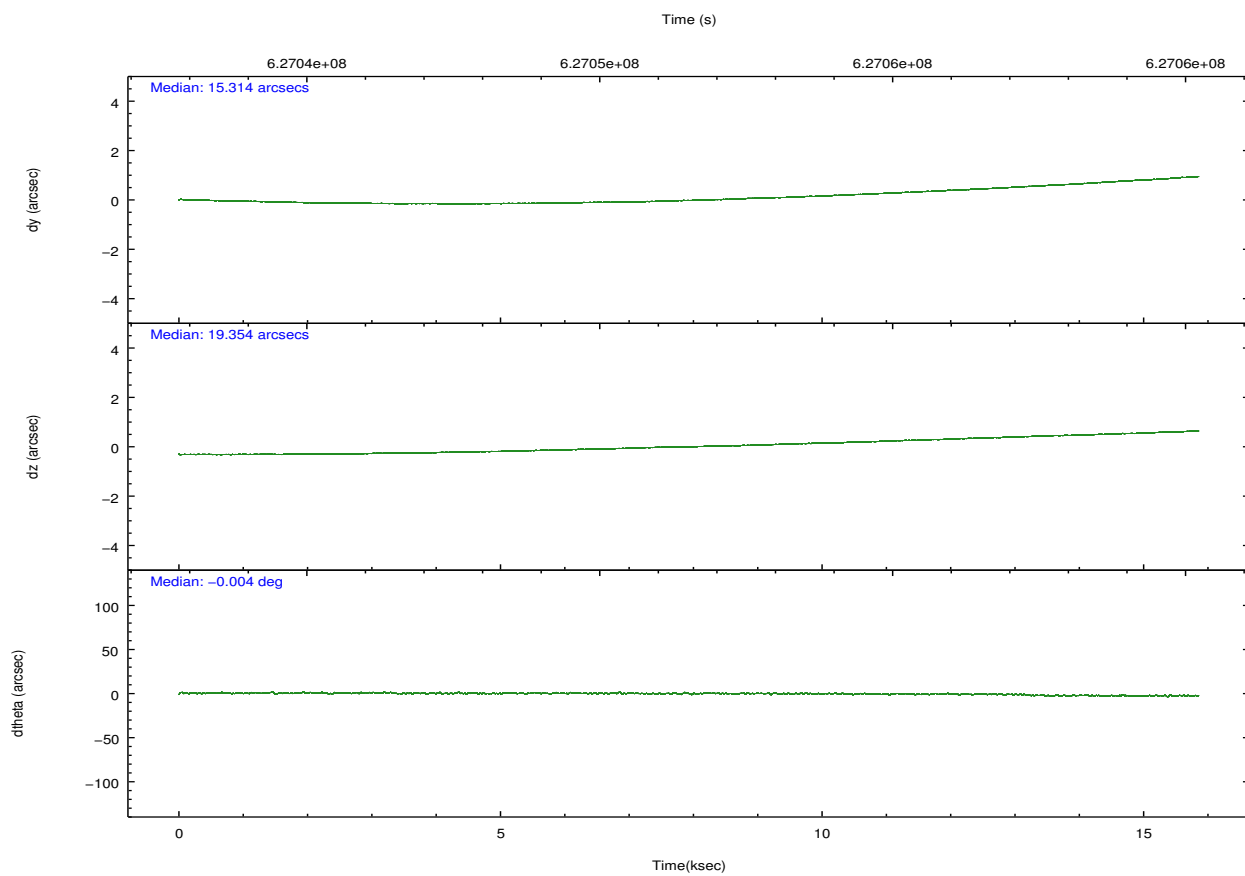
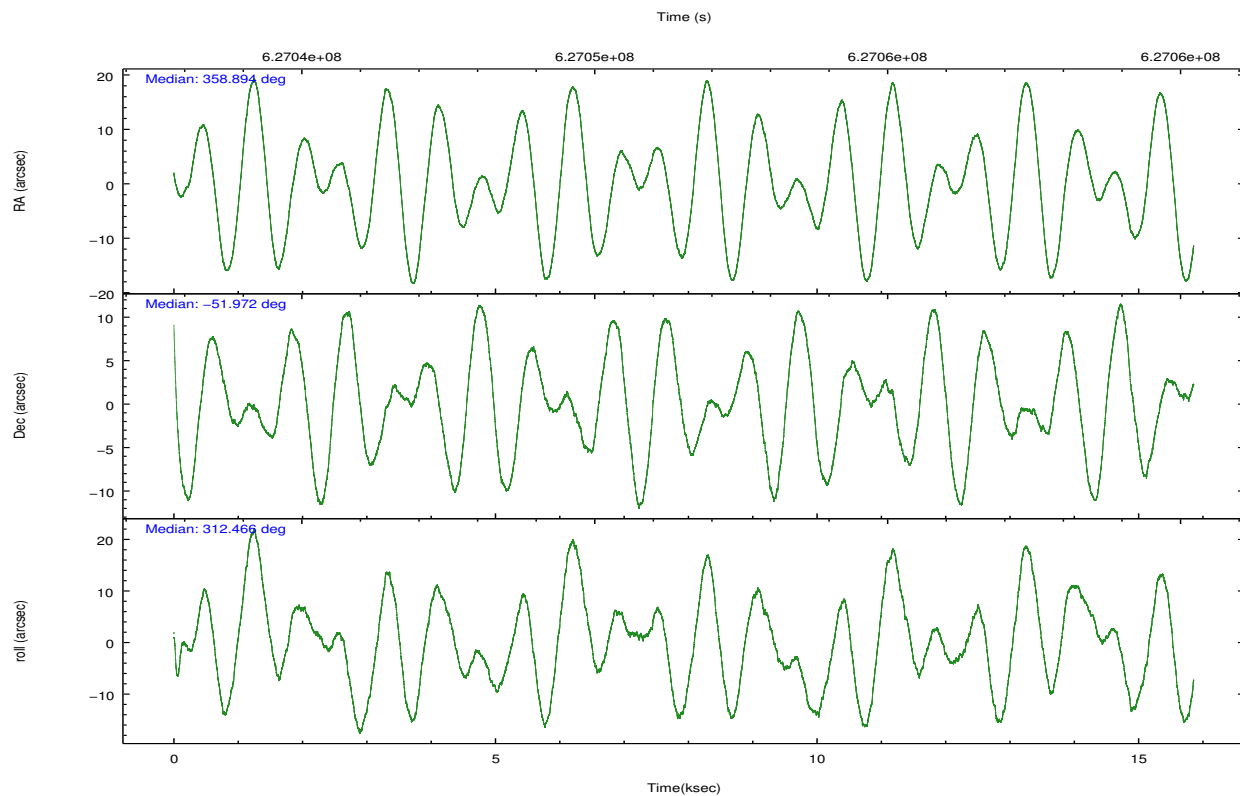
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-01236	ACIS-01236
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	358.851104	358.8938367753655
[deg] Pointing Dec	-51.963735	-51.9719732942497
[deg] Pointing Roll	312.235082	312.477425804233
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-230.082463	-230.0875075610572
[mm] SIM translation stage offset	-3.51	-3.504945441872508
[s] Observation start time (MET)	627043760.184000	627042796.62318
Observation start date	2017-11-14T10:48:11	2017-11-14T10:33:16
[s] Observation end time (MET)	627059460.184000	627060560.3867199
Observation end date	2017-11-14T15:09:51	2017-11-14T15:29:20
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	Y	Y
CCD I1 on	Y	Y
CCD I2 on	Y	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O1	Y
CCD S3 on	N	N
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect



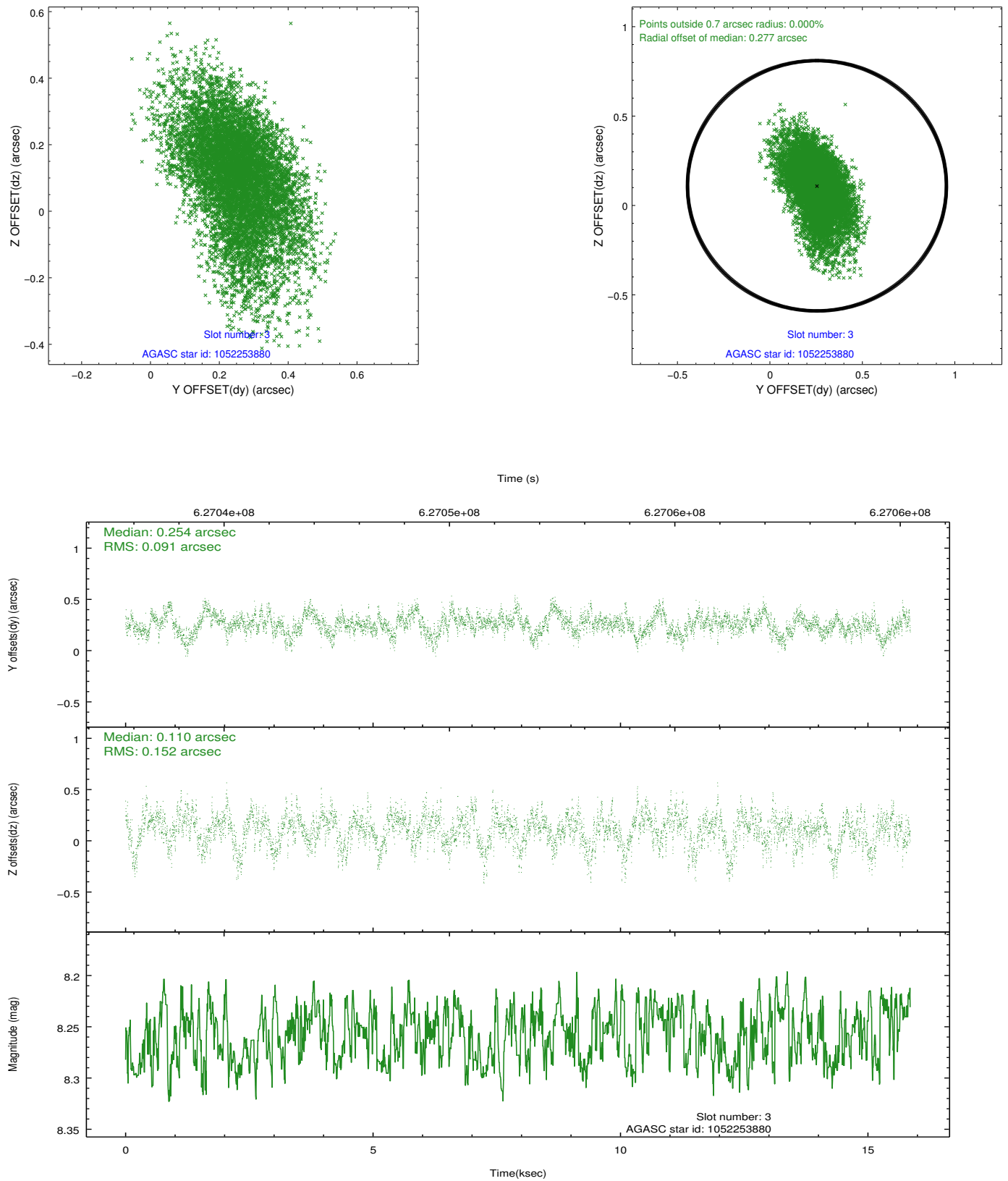


Slot Statistics

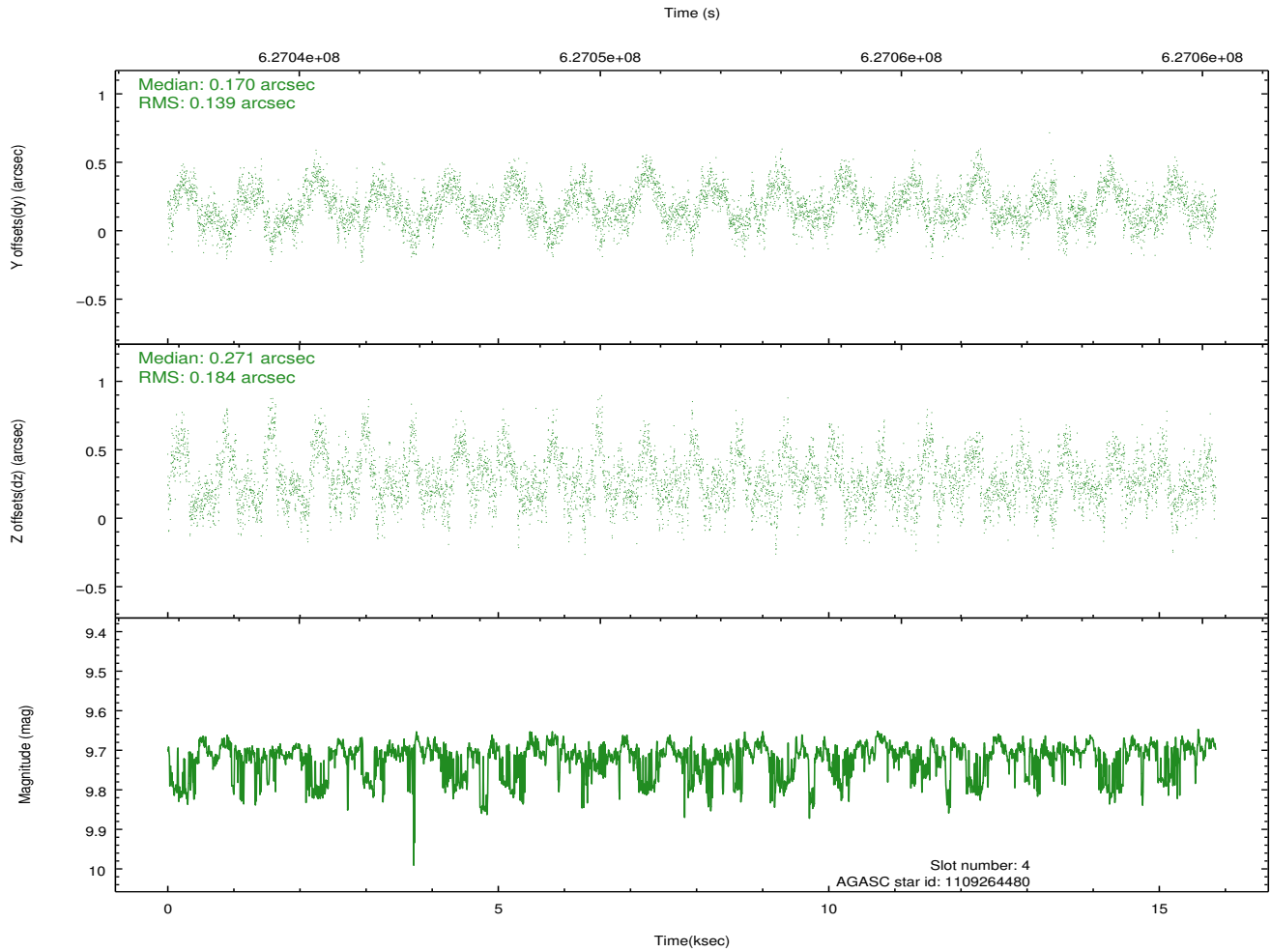
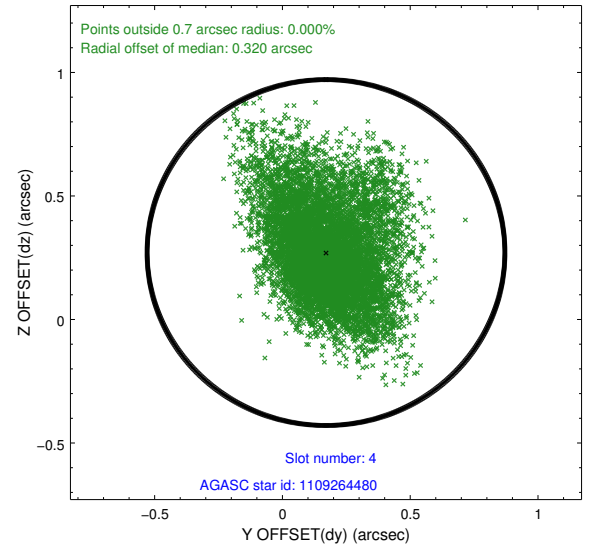
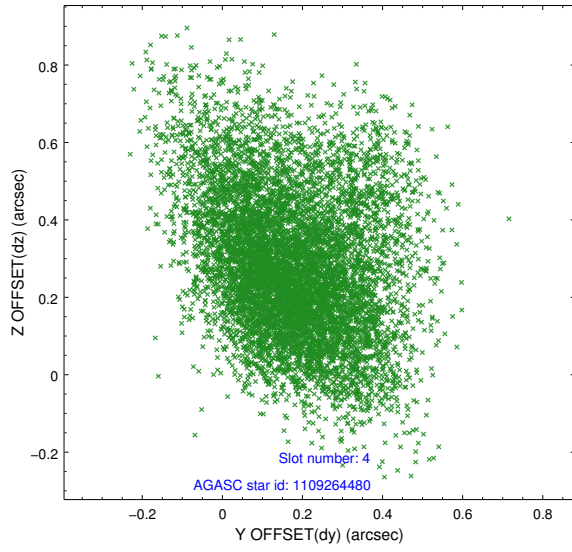
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.25	3868	0.146	-0.141	0.017	0.042	0.000000	0.000000	924.10	-915.11
1	FID		ACIS-I-5	7.23	3868	-0.426	0.074	0.009	0.014	0.000000	0.000000	-1824.51	982.30
2	FID		ACIS-I-6	7.24	3867	0.188	0.137	0.023	0.049	0.000000	0.000000	389.27	1627.28
3	GUIDE	used	1052253880	8.26	7733	0.254	0.110	0.180	0.331	0.008640	-51.893539	1556.89	2060.72
4	GUIDE	used	1109264480	9.71	7716	0.170	0.271	0.242	0.412	358.631145	-51.855071	-617.00	-99.02
5	GUIDE	used	1109270368	8.52	7731	-0.392	-0.290	0.140	0.251	358.906310	-51.374260	-1485.10	1518.95
6	GUIDE	used	1109271640	9.46	7725	-0.150	0.095	0.199	0.340	358.154194	-51.848857	-1340.90	-874.86
7	GUIDE	used	1157759424	9.47	7710	0.113	-0.176	0.198	0.333	359.117776	-52.573069	2017.73	-1042.91

2.4 Star Slots

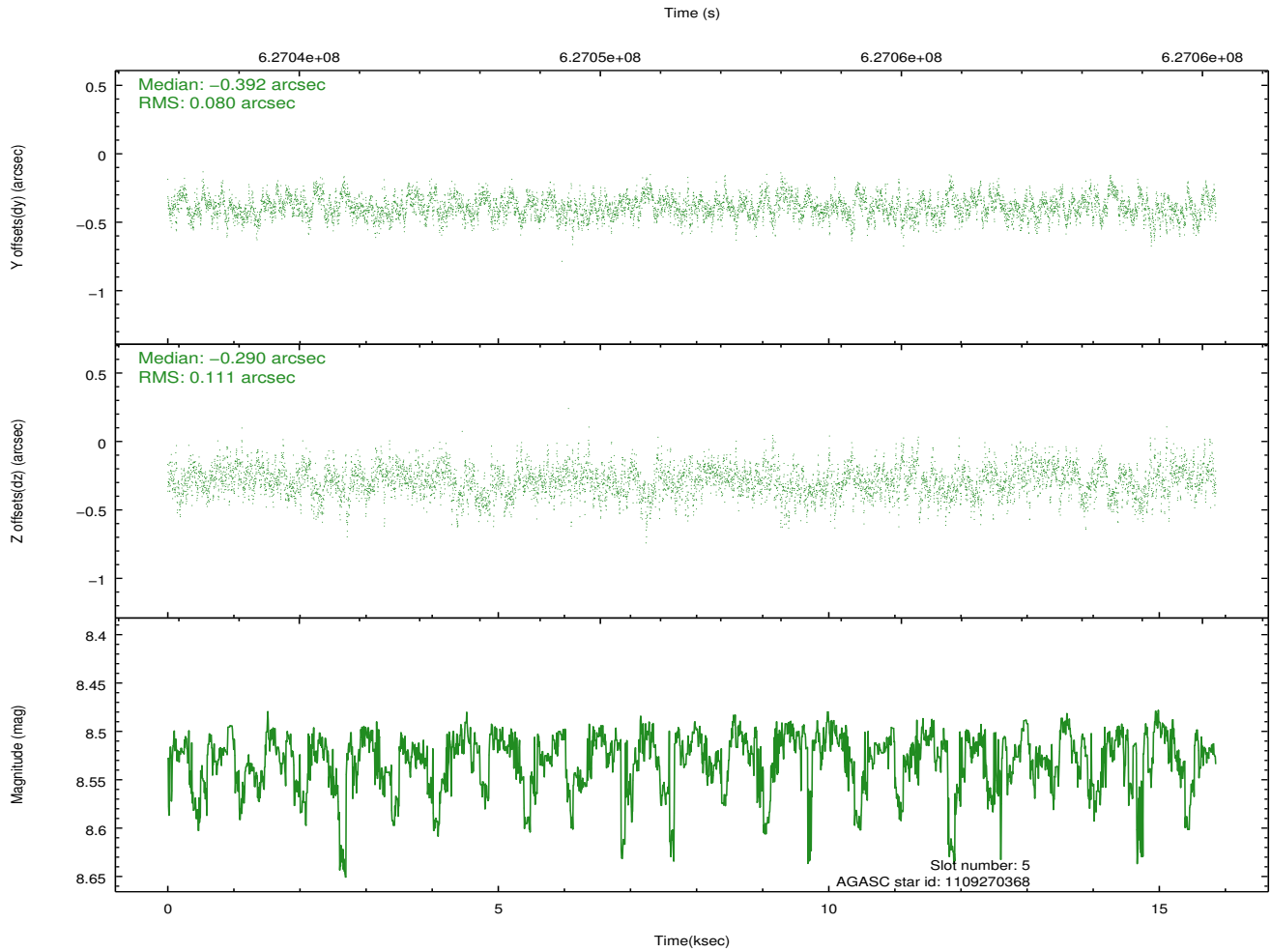
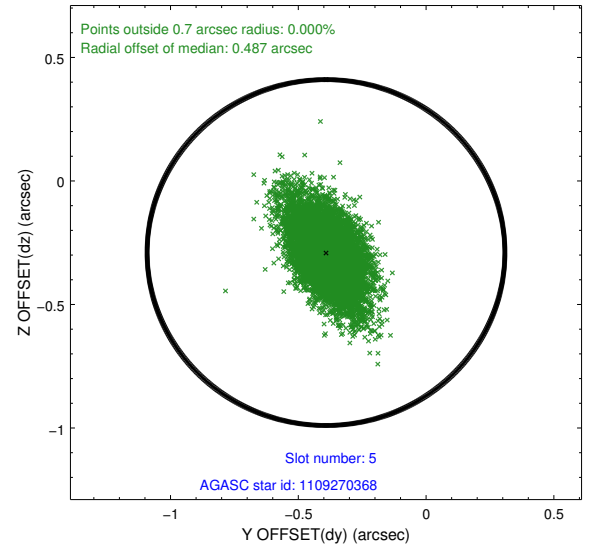
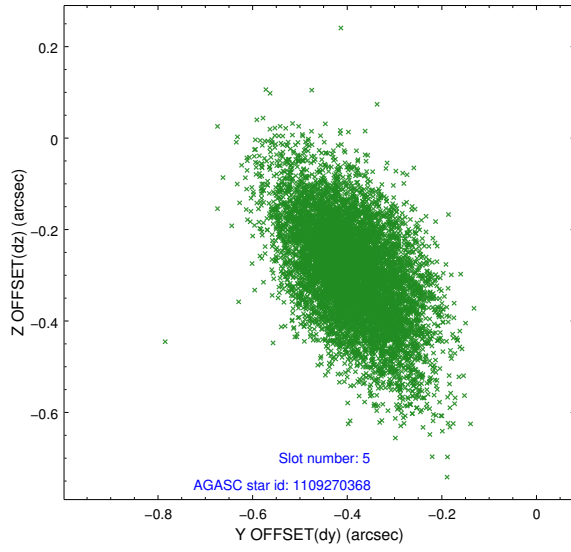
2.4.1 Slot 3



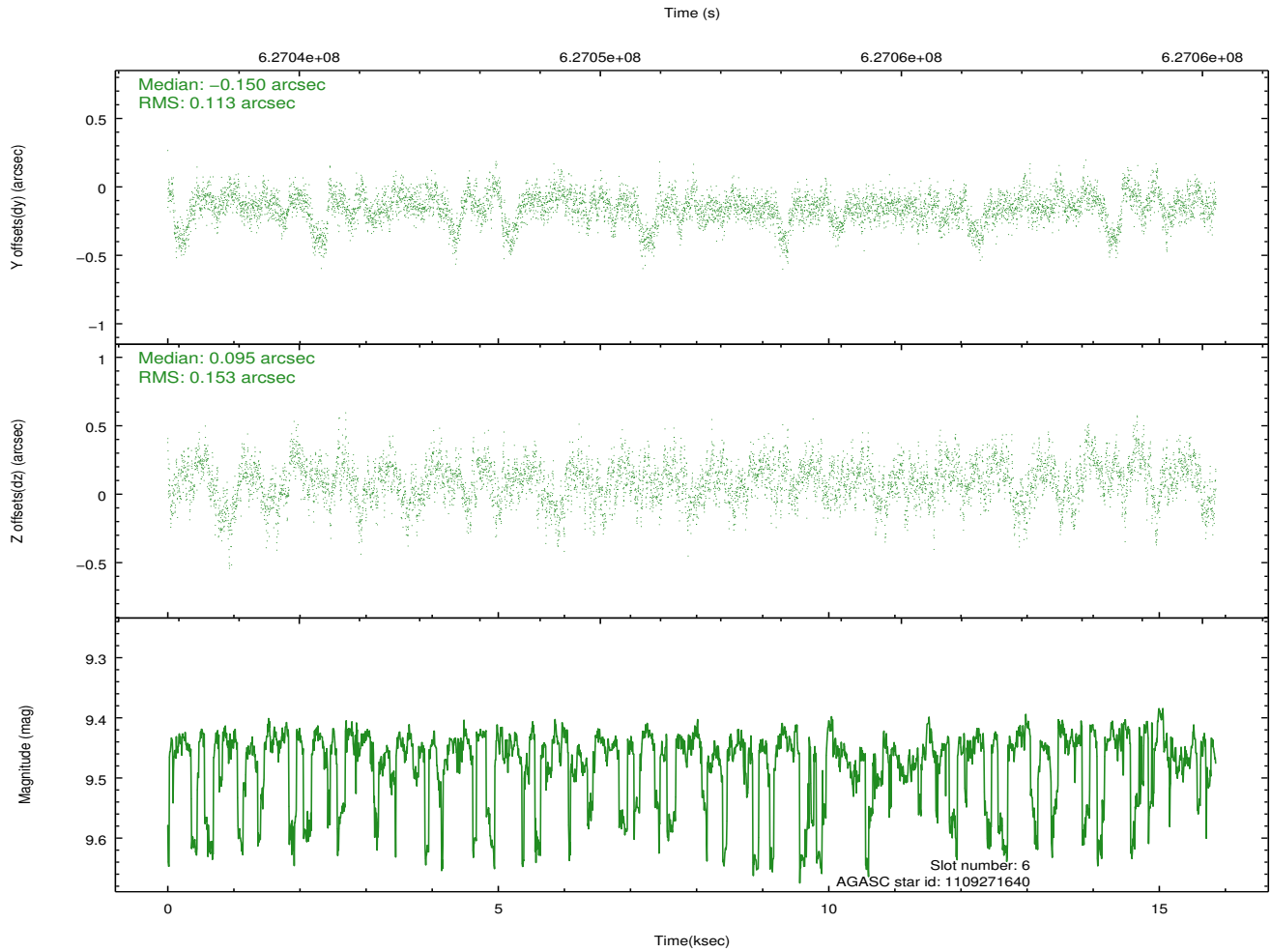
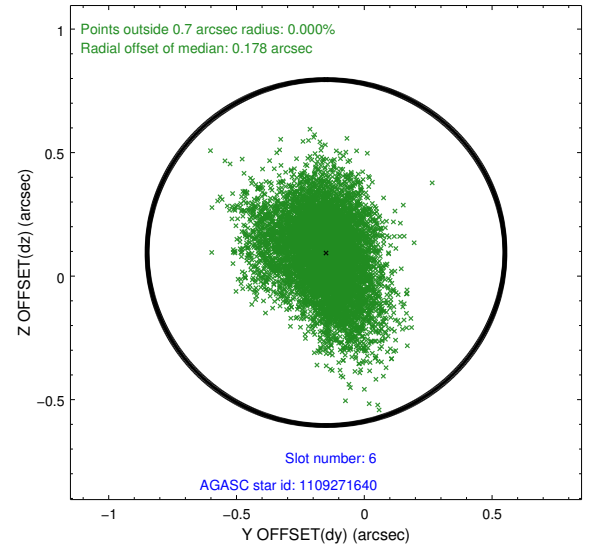
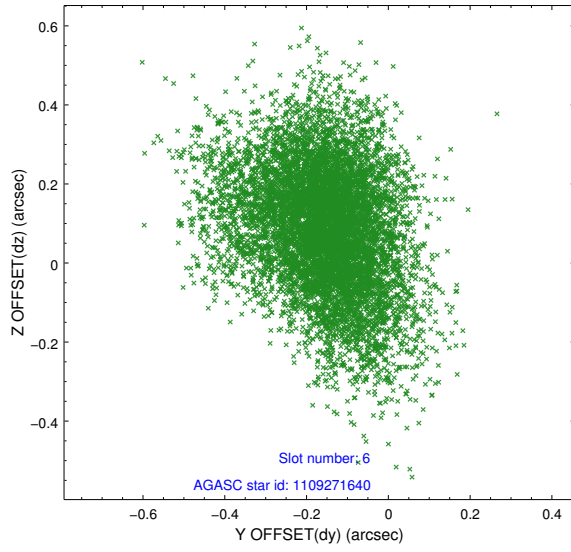
2.4.2 Slot 4



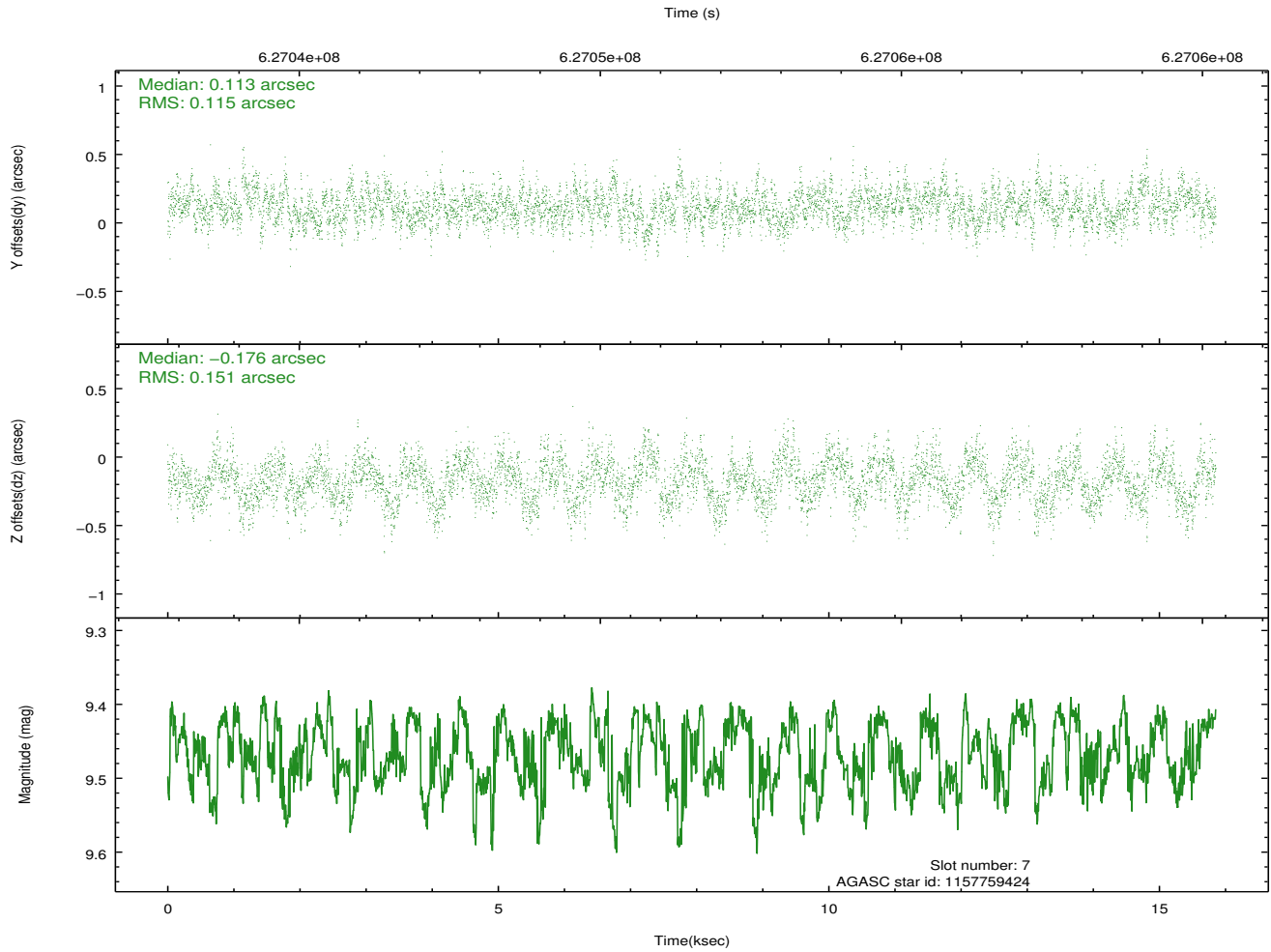
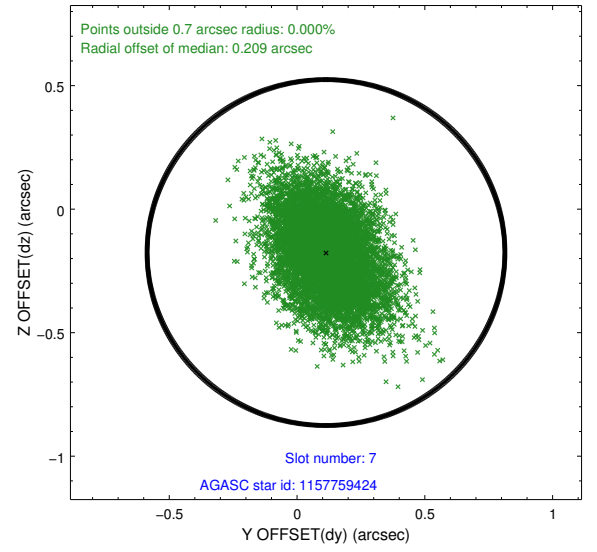
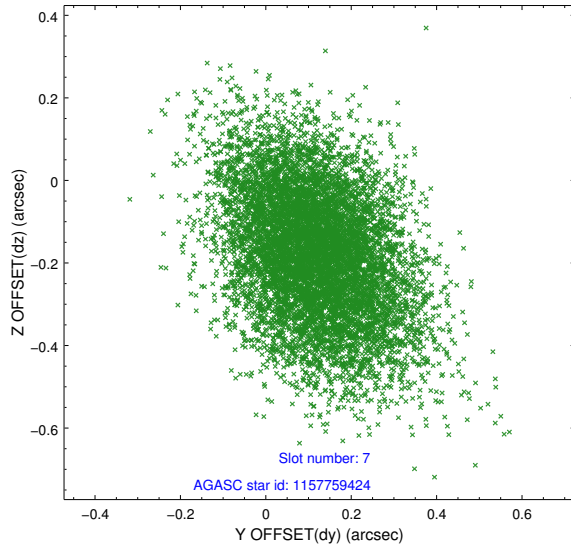
2.4.3 Slot 5



2.4.4 Slot 6

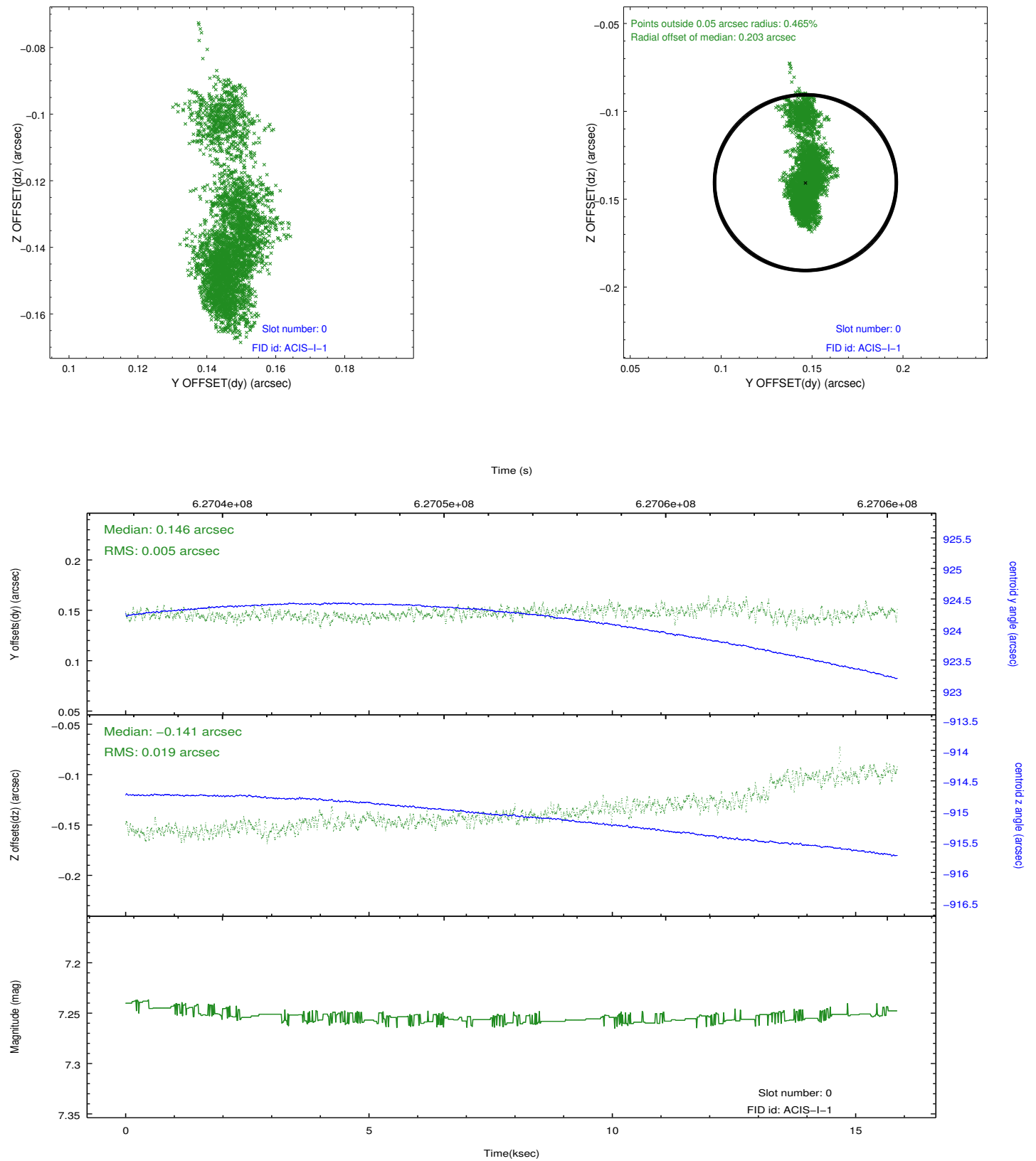


2.4.5 Slot 7

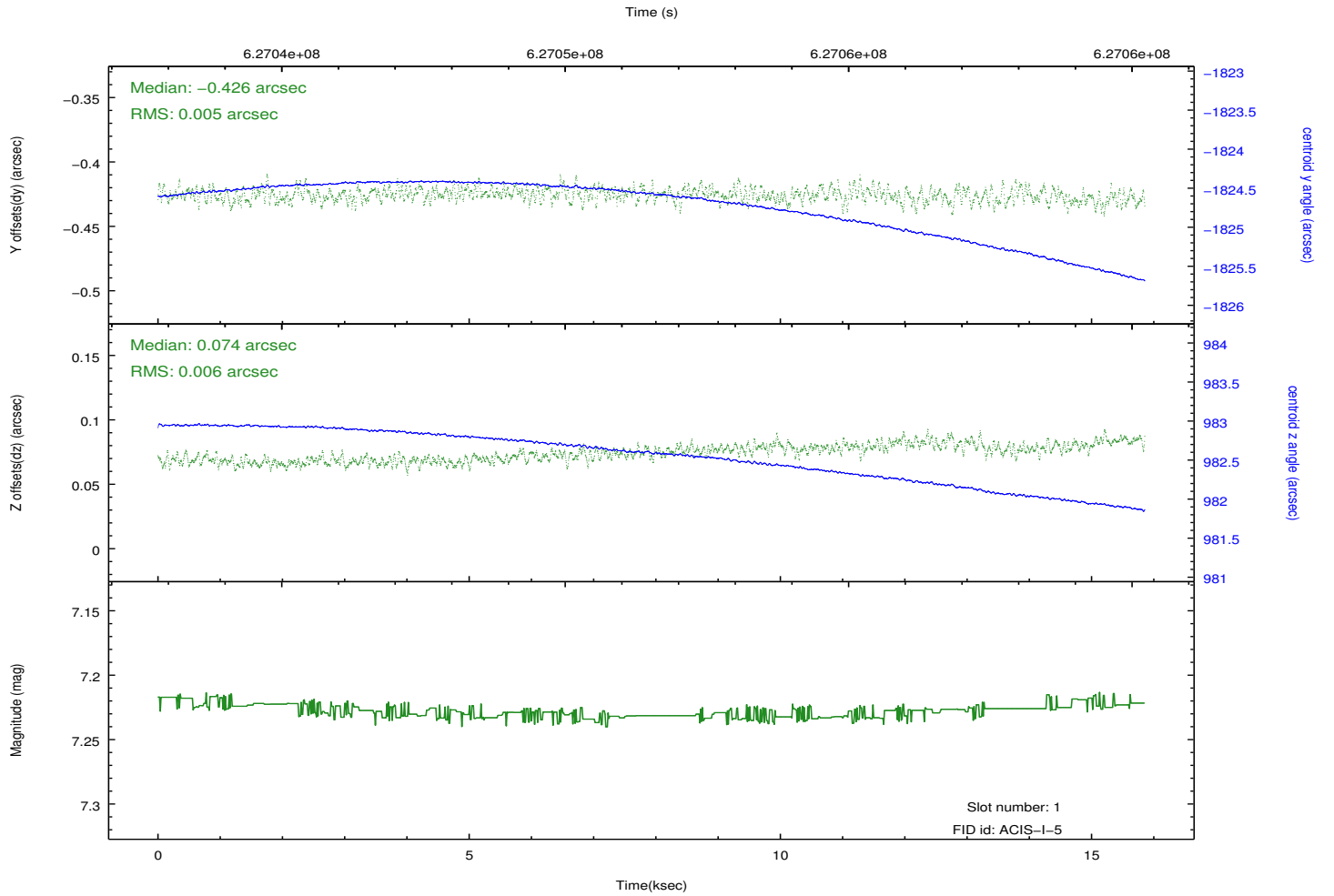
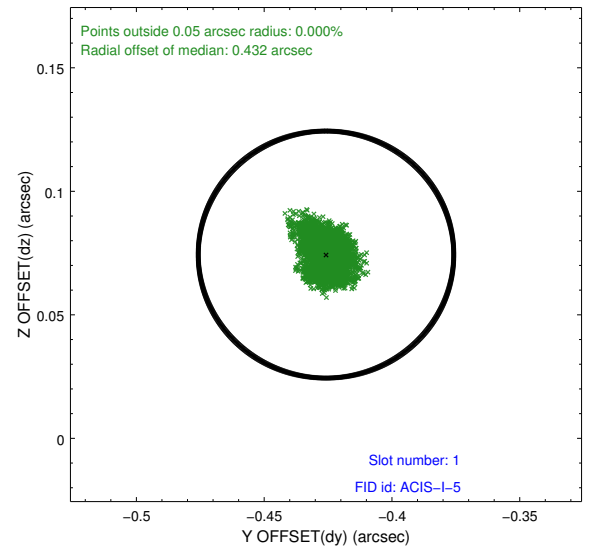
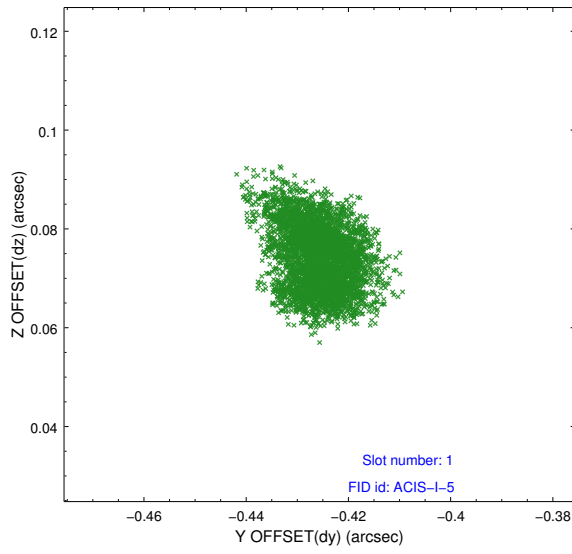


2.5 FID Slots

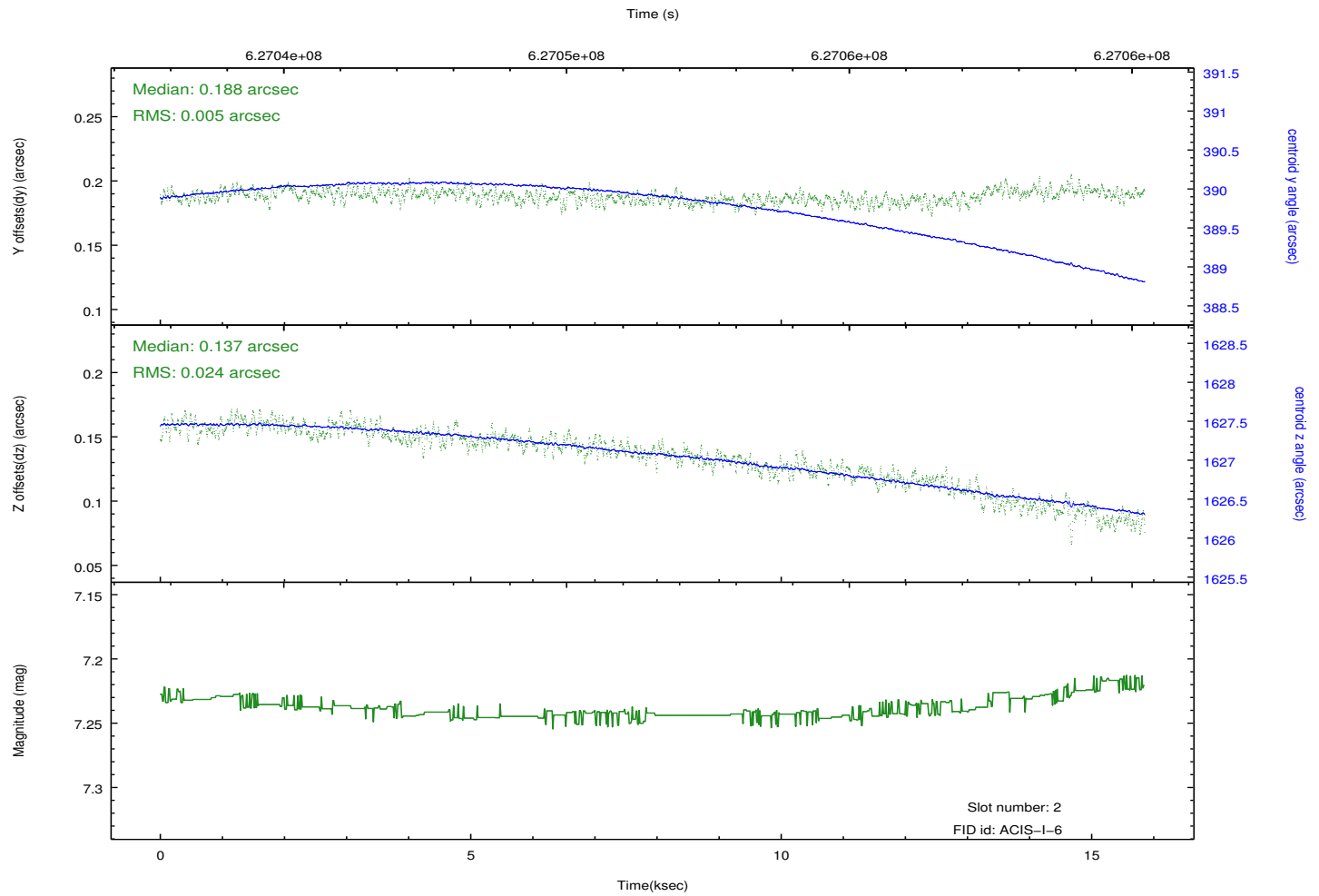
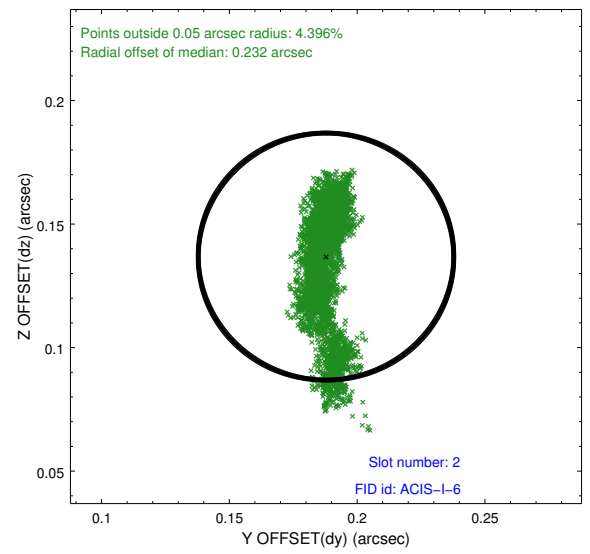
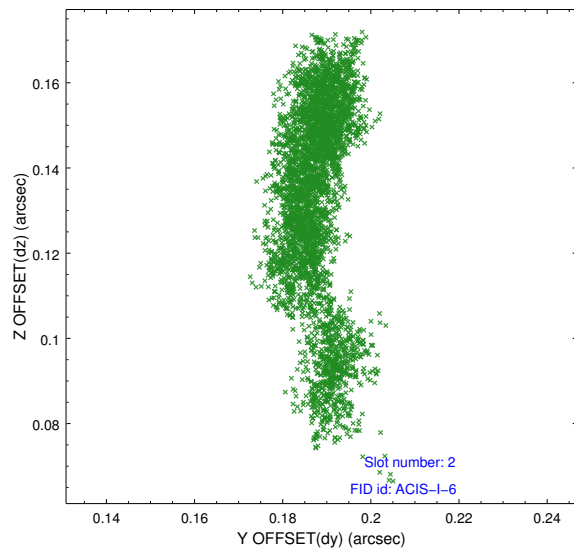
2.5.1 Slot 0



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)	2017.11.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.76346664691

A.2 Comments

A spatial region of the original bias map for CCD = 1 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 = 1 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:
(358.57195,-51.96378), (358.56655,-51.96681), (358.71905,-52.06999),
(358.72445,-52.06695)