

V&V Reference Report

L2 ASCDS Version : 10.5

Observation 18081 - L2 Version 2
Chandra X-Ray Center

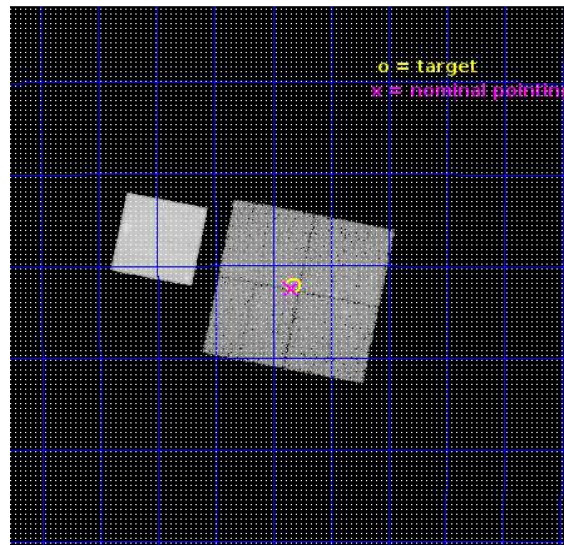
L2 Processing Date : Jul 26 2016

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

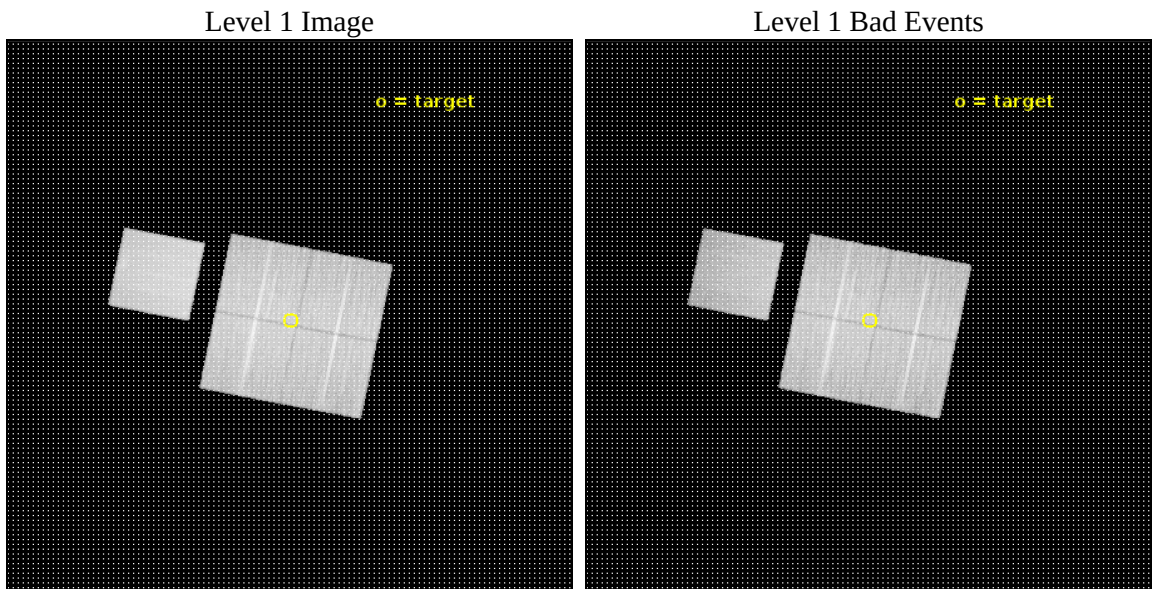
seq_num	901195	Sequence number
obs_id	18081	Observation id
title	From Dusty Filament to Starry Firmament: The Transfiguration of NGC 6334	Proposal title
observer	Leisa Townsley	Principal investigator
object	G350.776+0.831	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	259.580417	Observer's specified target RA [deg]
dec_targ	-36.202694	Observer's specified target Dec [deg]
ra_nom	259.58502743821	Nominal RA [deg]
dec_nom	-36.208367620353	Nominal Dec [deg]
roll_nom	281.25149472391	Nominal Roll [deg]
revision	2	Processing version of data
ontime	38063.835864186	Sum of GTIs [s]
livetime	37566.503826432	Livetime [s]
ontime0	38063.712744117	Sum of GTIs [s]
ontime1	38060.612783909	Sum of GTIs [s]
ontime2	38060.653803945	Sum of GTIs [s]
ontime3	38063.835864186	Sum of GTIs [s]
ontime7	38063.87690413	Sum of GTIs [s]
l2events	203554	Number of level 2 events



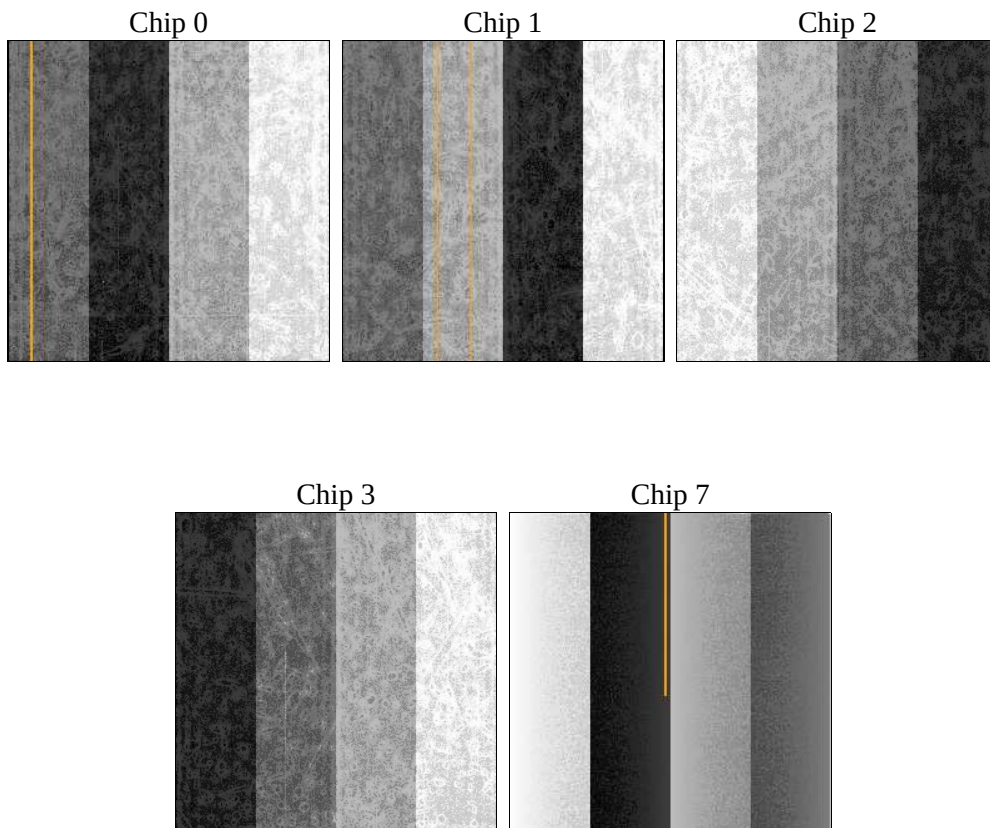
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	38000.000000	[s] Scheduled observation exposure time
ascdsver	10.5	Processing system revision	ontime	38063.835864186	Sum of GTIs [s]
caldsver	4.7.2	 	ontime0	38063.712744117	Sum of GTIs [s]
date	2016-07-26T16:05:30	Date and time of file creation	ontime1	38060.612783909	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	38060.653803945	Sum of GTIs [s]
			ontime3	38063.835864186	Sum of GTIs [s]
			ontime7	38063.87690413	Sum of GTIs [s]
			l1events	1087191	Number of level 1 events

2.1.4 Events

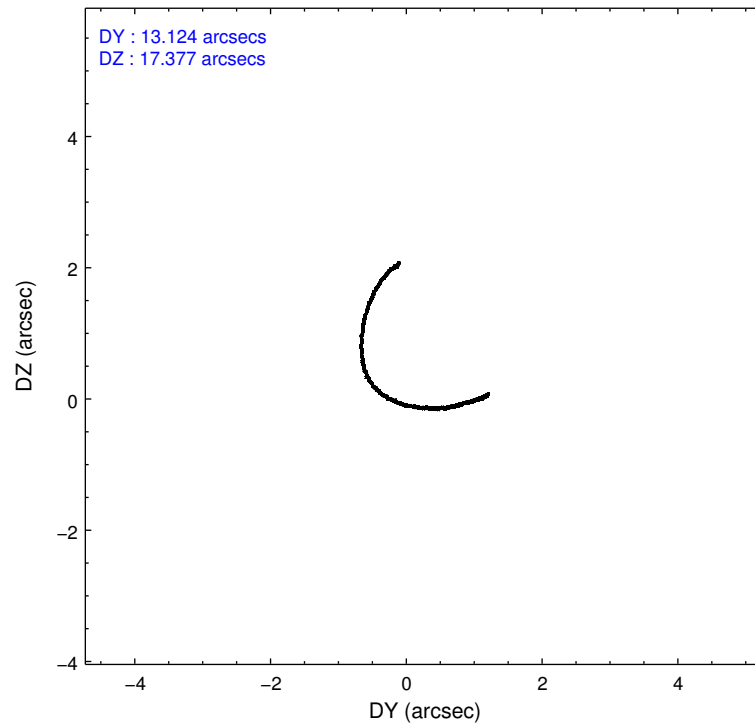
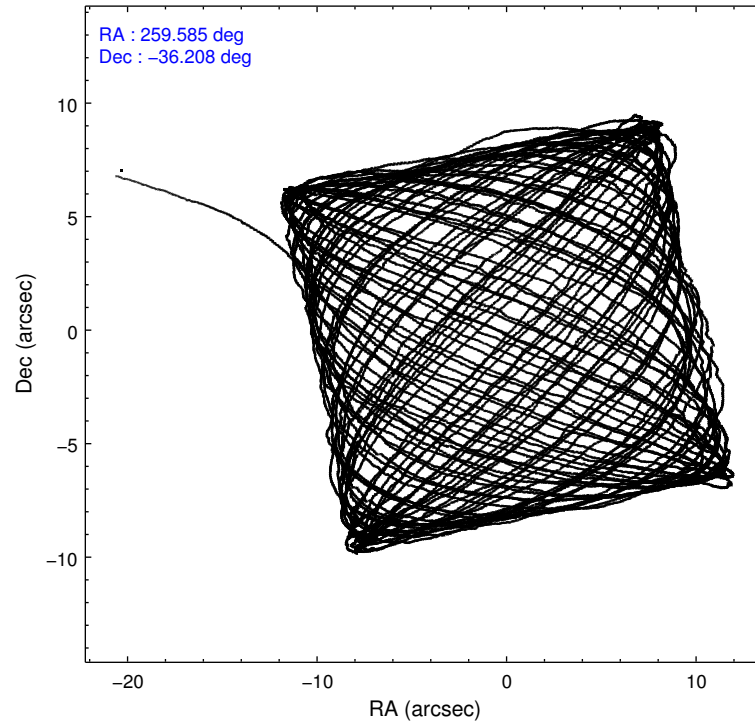
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	196864	203495	217539	214973	254320
rejected events	171533	176114	192360	191127	132060
rejected %	87%	86%	88%	88%	51%

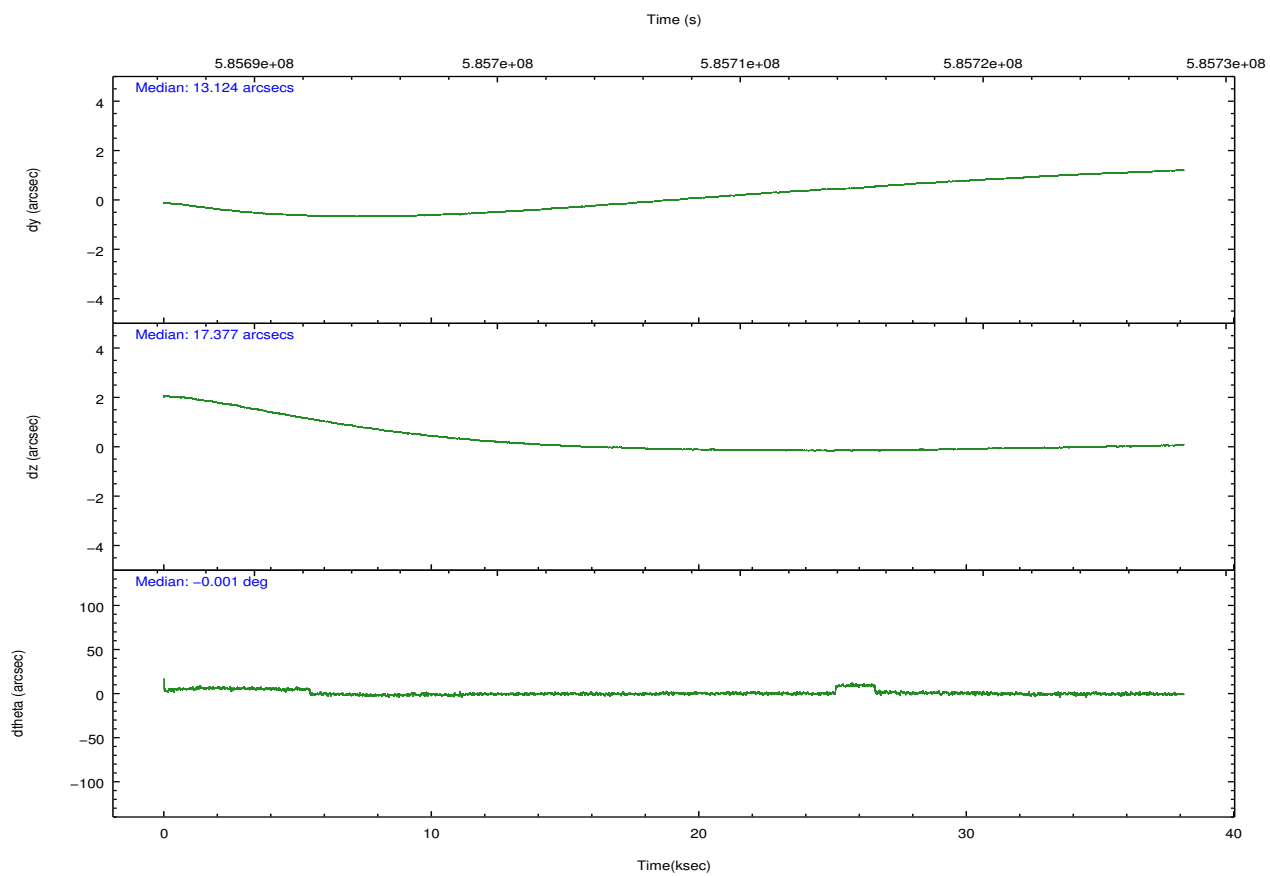
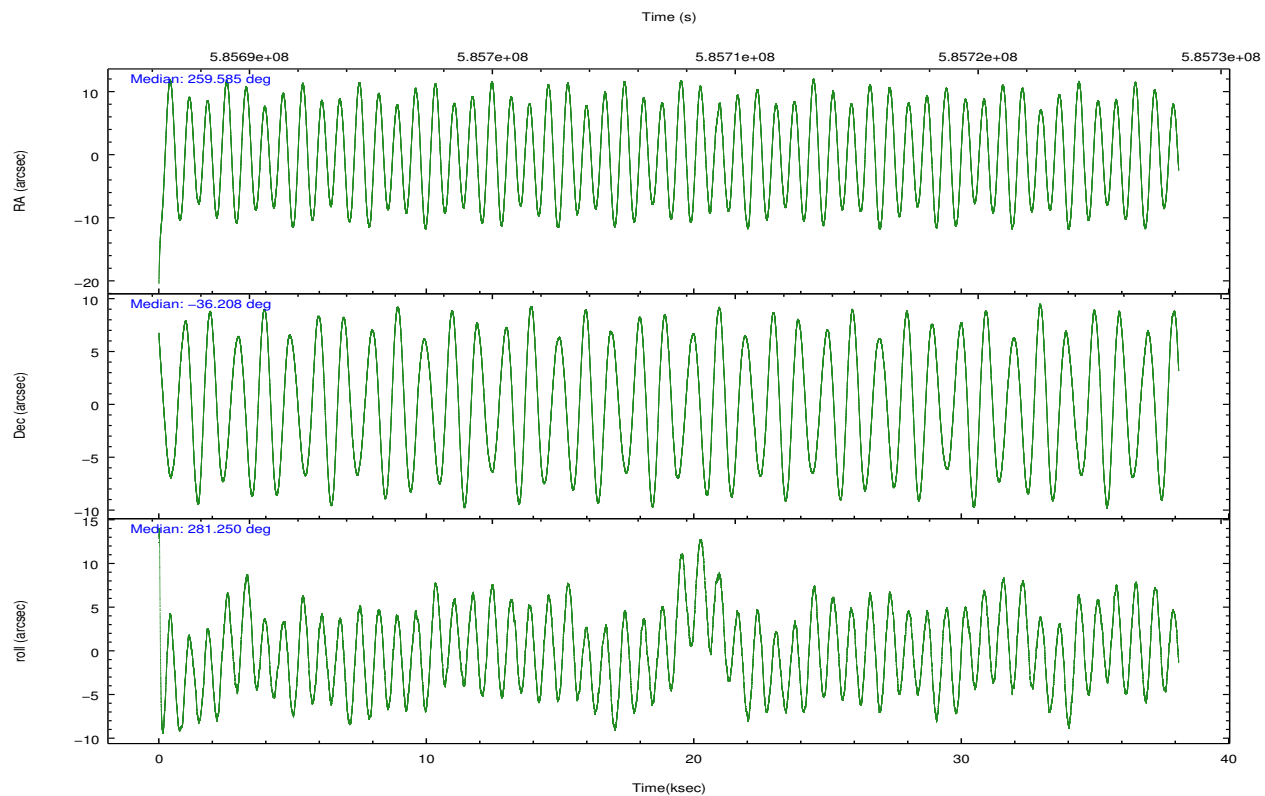
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	9393	9883	9568	8893	11975
	4%	4%	4%	4%	4%
grade 1 events	124	113	125	111	356
	0%	0%	0%	0%	0%
grade 2 events	6176	6502	6195	5412	27251
	3%	3%	2%	2%	10%
grade 3 events	2615	2706	2322	2415	10563
	1%	1%	1%	1%	4%
grade 4 events	2358	2648	2458	2438	10245
	1%	1%	1%	1%	4%
grade 5 events	8275	8804	7767	9448	26066
	4%	4%	3%	4%	10%
grade 6 events	4791	5647	4637	4691	62244
	2%	2%	2%	2%	24%
grade 7 events	163132	167192	184467	181565	105620
	82%	82%	84%	84%	41%

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	259.562387	259.5850274382091	CCD I2 on	Y	Y
[deg] Pointing Dec	-36.187687	-36.2083676203533	CCD I3 on	Y	Y
[deg] Pointing Roll	281.029432	281.2514947239084	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	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	585688319.184000	585687035.17314	CCD S5 on	N	N
Observation start date	2016-07-23T19:10:51	2016-07-23T18:50:35	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	585726319.184000	585726680.63791	On-chip summing requested	N	N
Observation end date	2016-07-24T05:44:11	2016-07-24T05:51:20	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



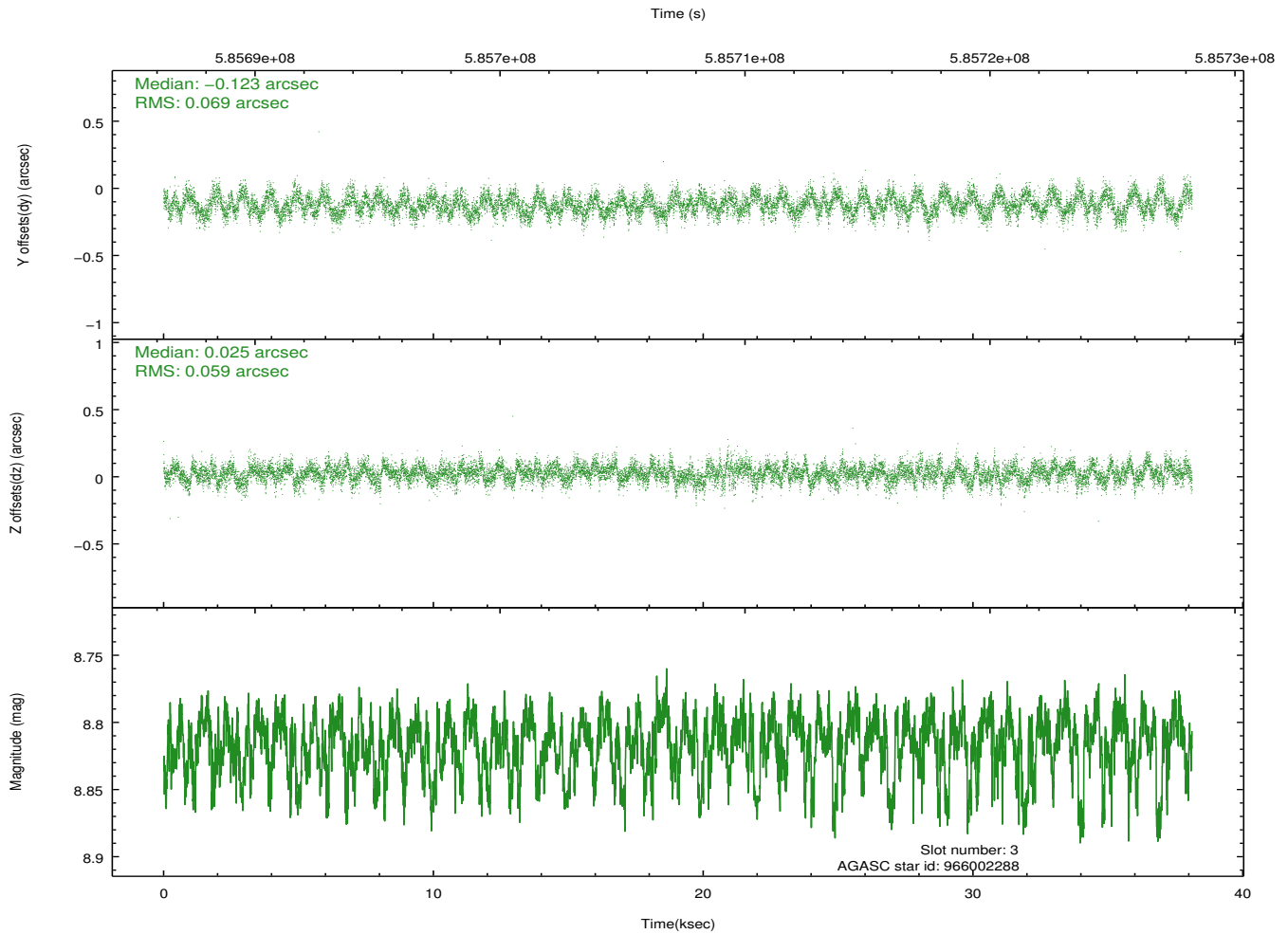
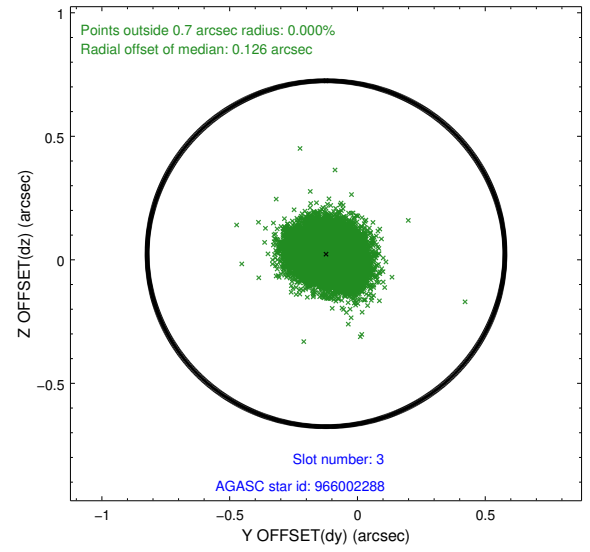
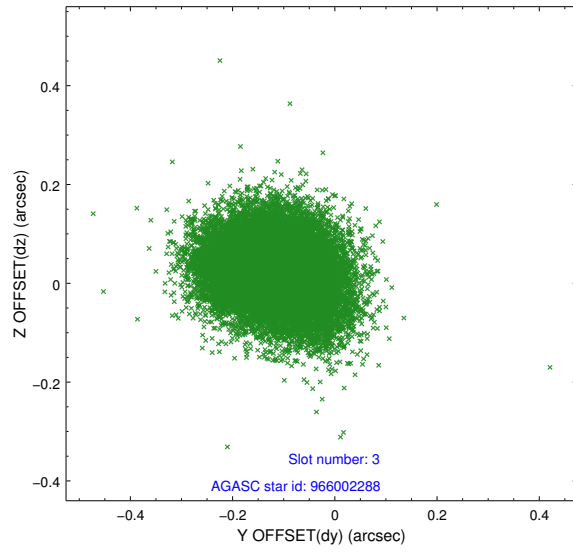


Slot Statistics

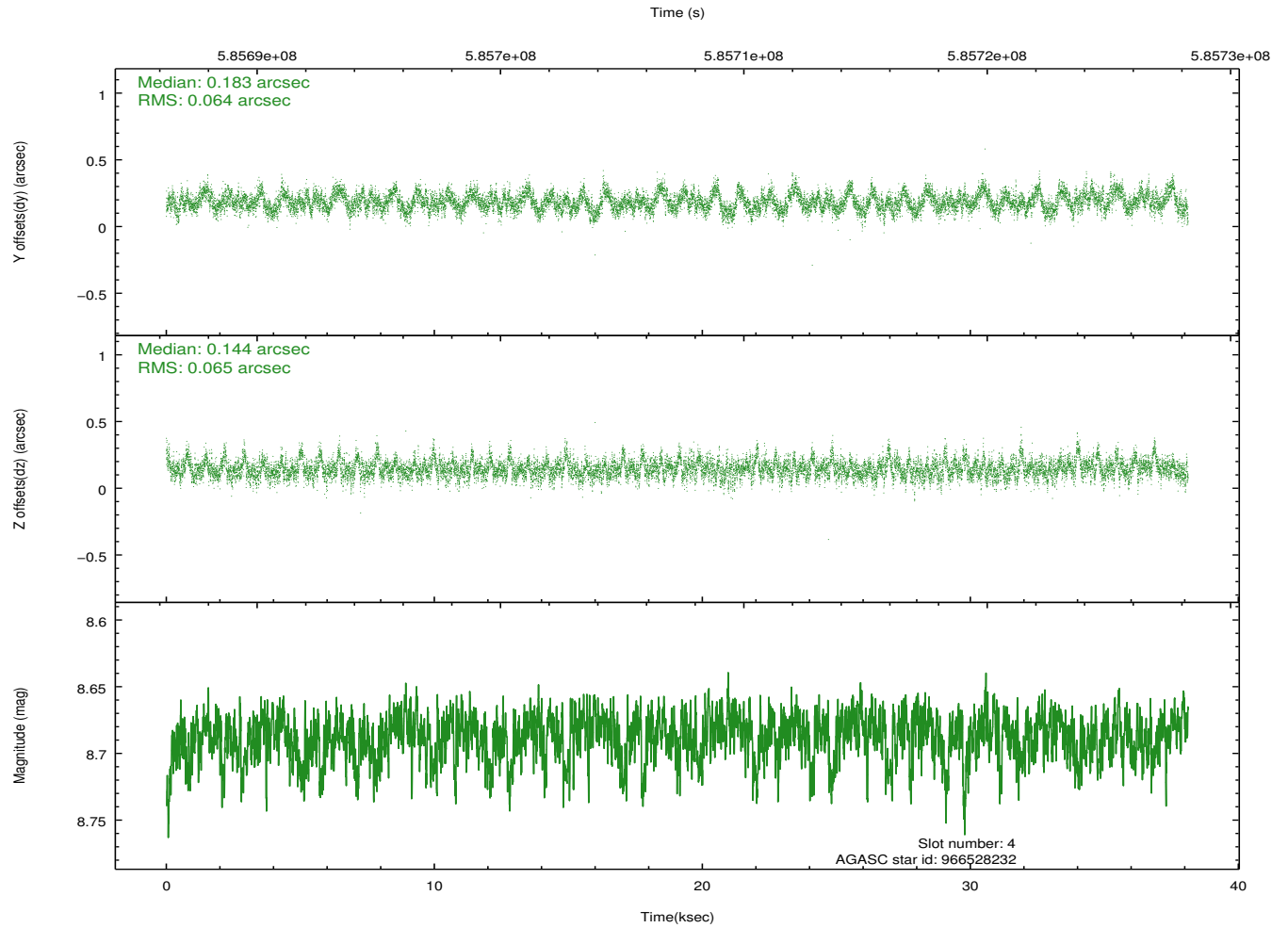
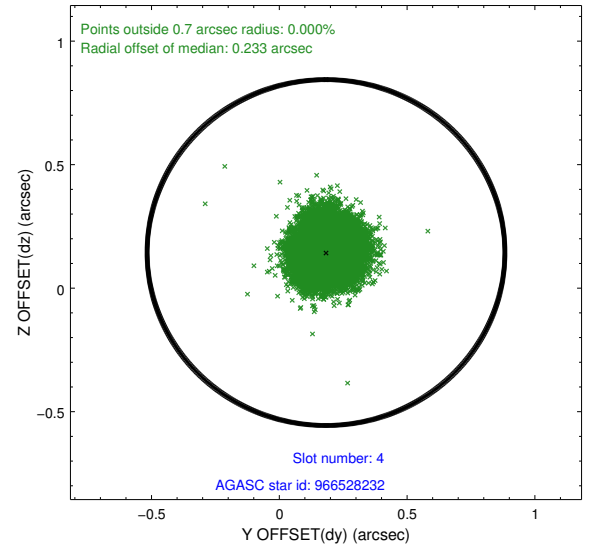
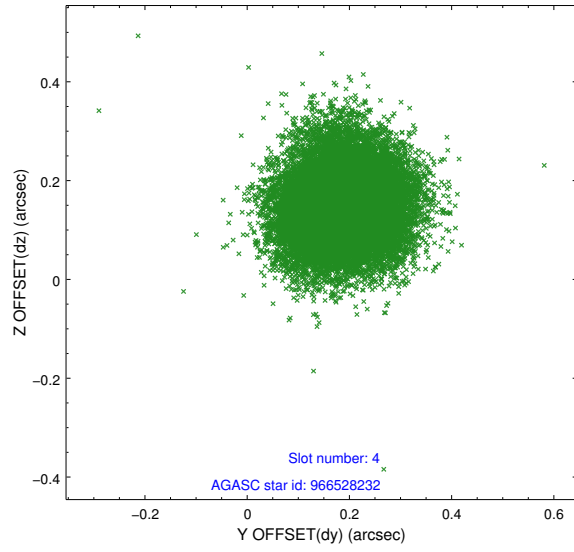
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.12	9299	-0.025	-0.034	0.019	0.069	0.000000	0.000000	926.23	-841.40
1	FID		ACIS-I-2	7.03	9299	-0.306	-0.130	0.023	0.052	0.000000	0.000000	-768.13	-847.92
2	FID		ACIS-I-4	7.04	9297	0.234	0.235	0.018	0.087	0.000000	0.000000	2146.39	1058.61
3	GUIDE	used	966002288	8.81	18591	-0.123	0.025	0.097	0.156	259.614800	-35.563330	-2176.54	580.83
4	GUIDE	used	966528232	8.69	18592	0.183	0.144	0.097	0.157	259.270821	-36.205055	-98.96	-843.16
5	GUIDE	used	966530176	8.73	18590	0.023	-0.257	0.125	0.195	260.167913	-36.682742	2089.48	1373.87
6	GUIDE	used	966530504	9.00	18583	-0.213	-0.095	0.123	0.201	260.219400	-36.072372	-35.17	1954.79
7	GUIDE	used	966533624	8.88	18585	0.130	0.174	0.105	0.172	258.836085	-35.885493	-1461.21	-1872.62

2.4 Star Slots

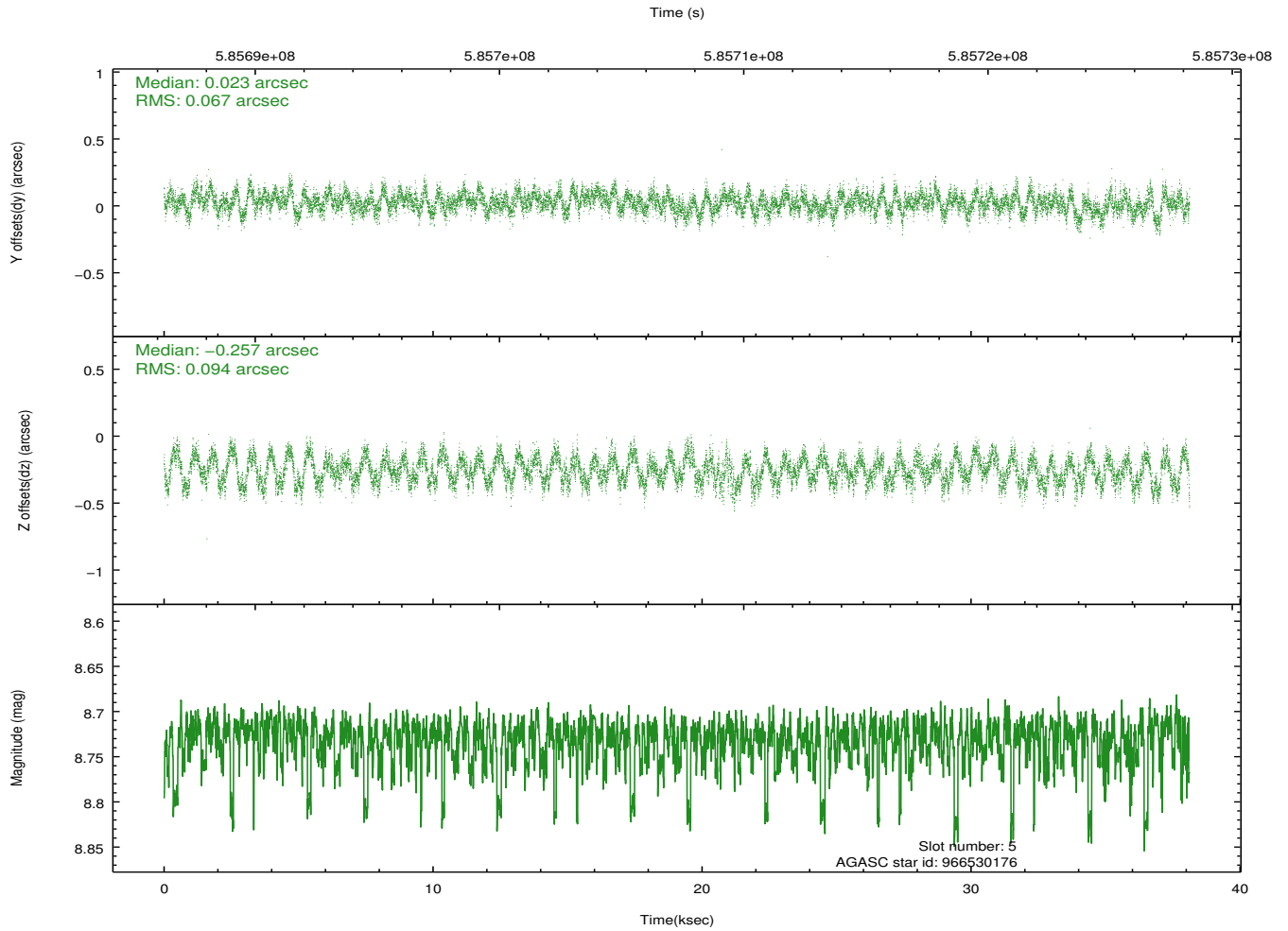
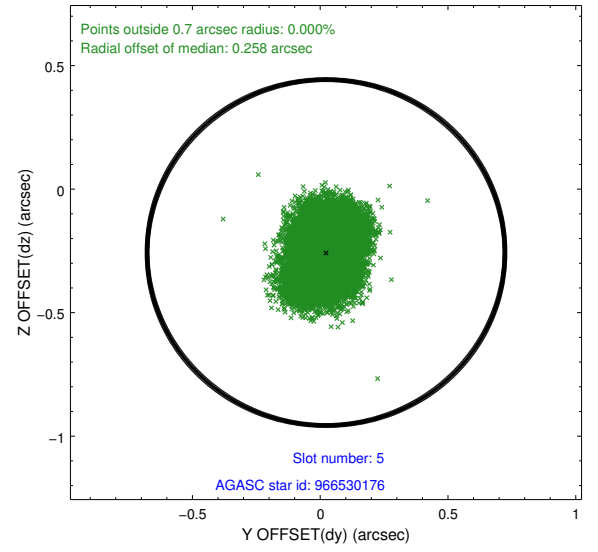
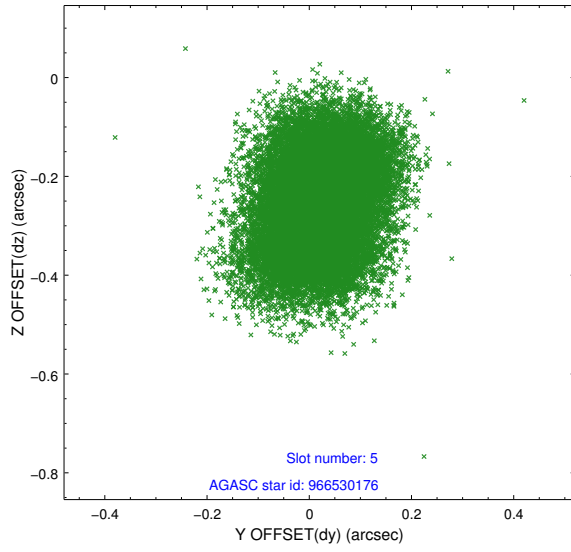
2.4.1 Slot 3



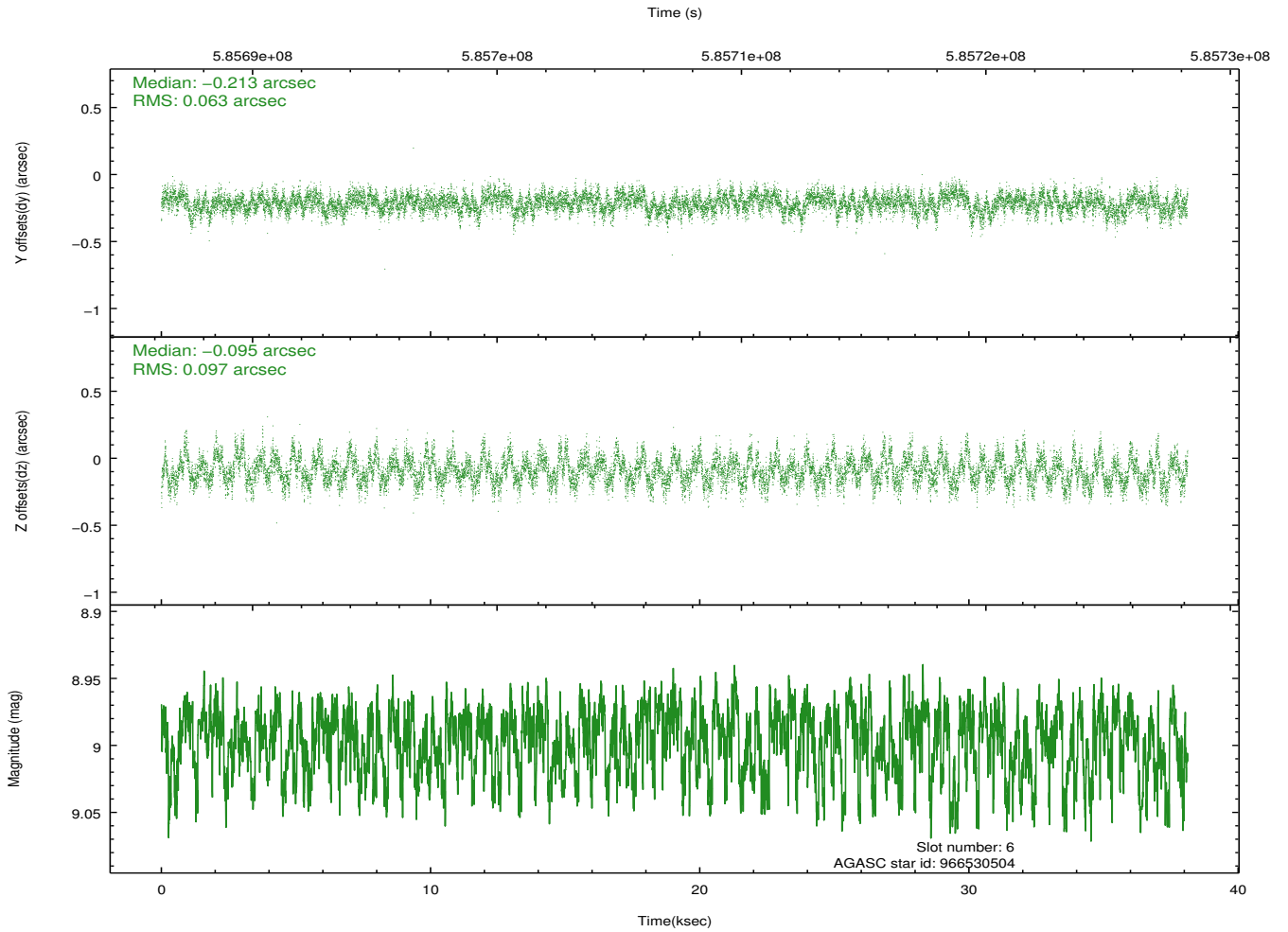
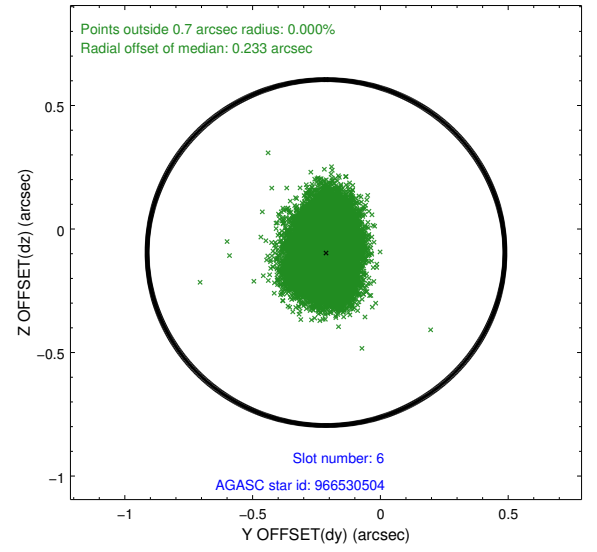
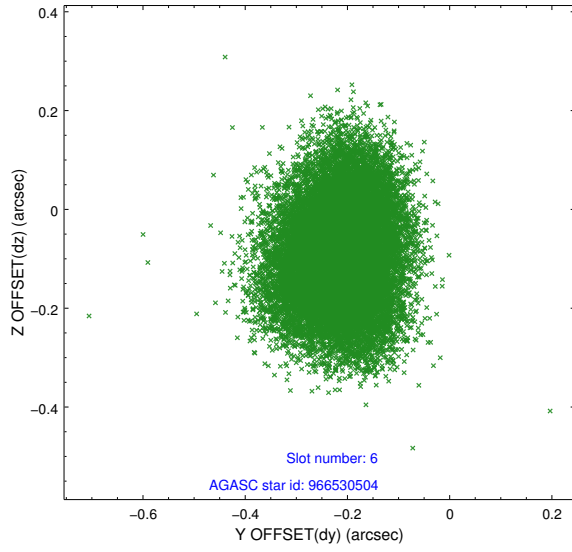
2.4.2 Slot 4



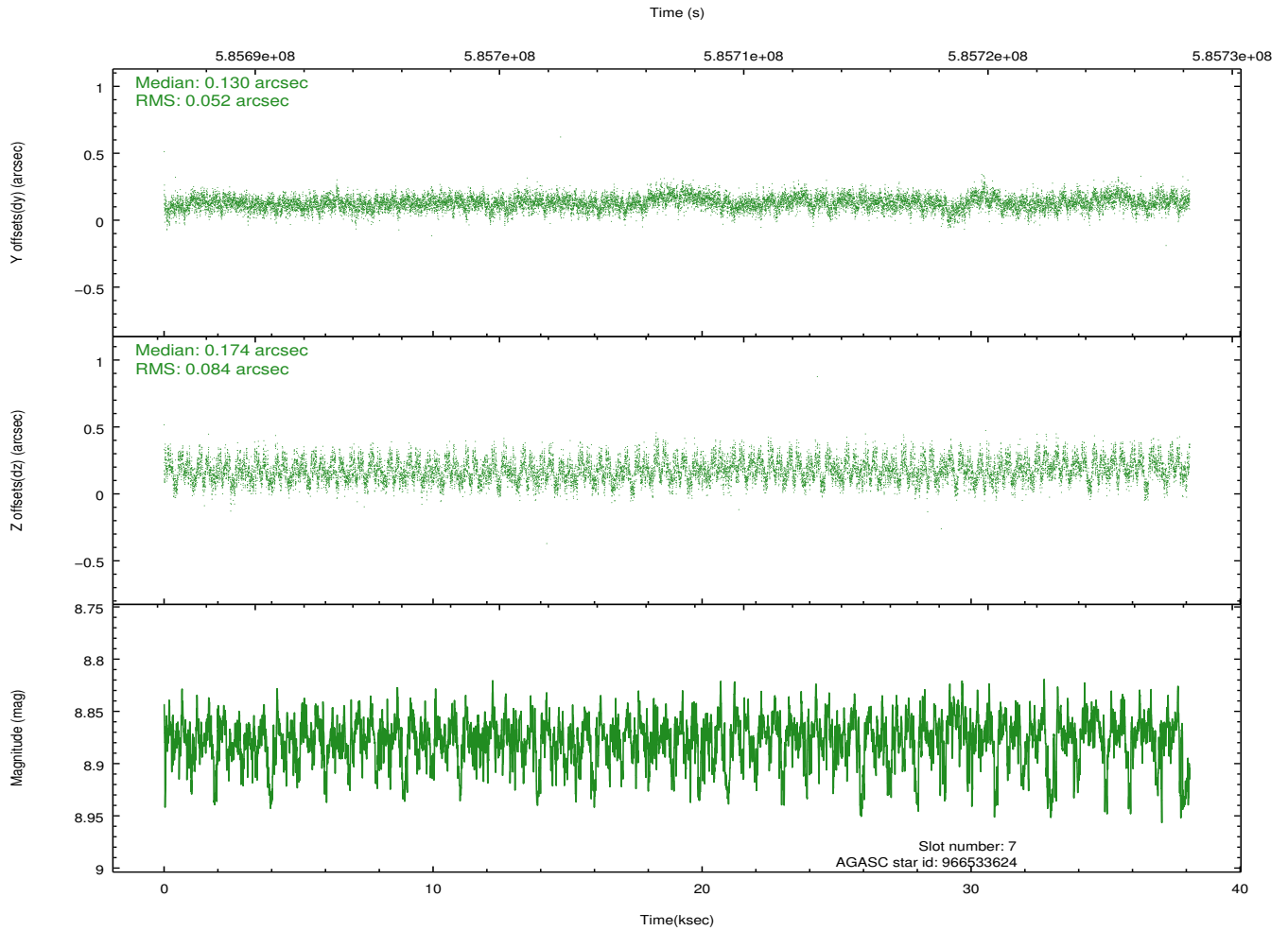
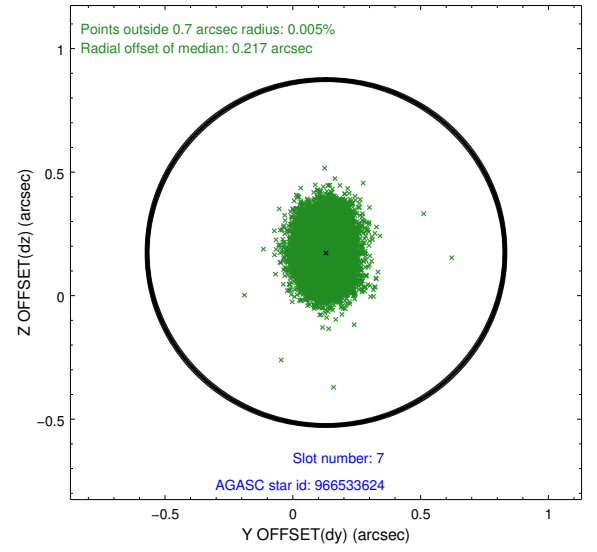
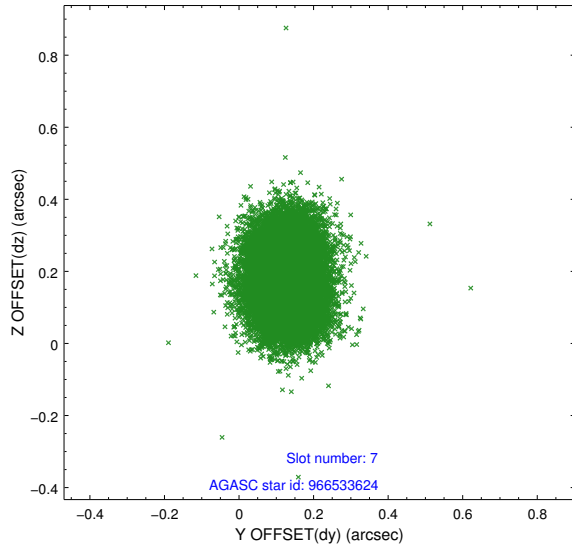
2.4.3 Slot 5



2.4.4 Slot 6

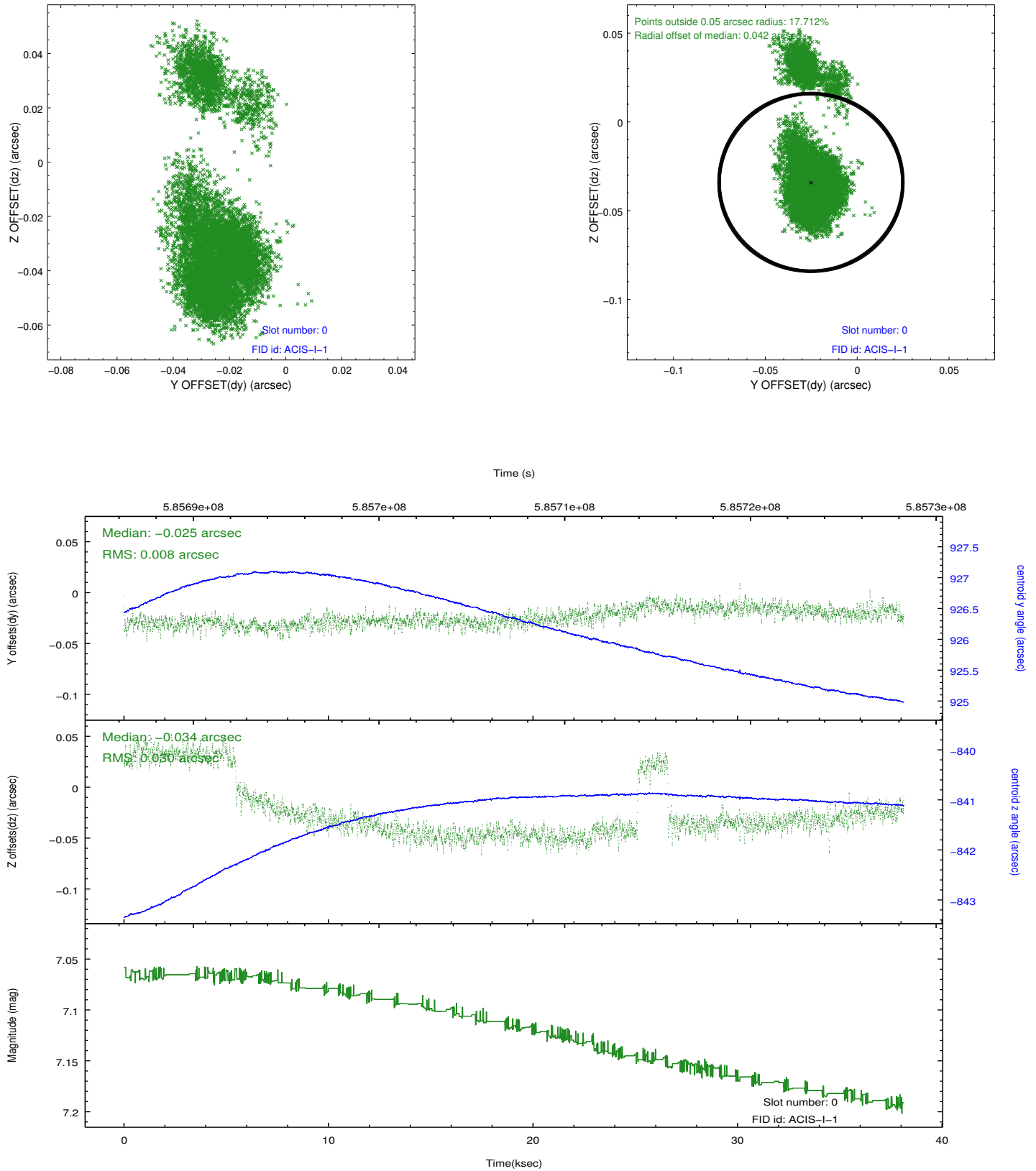


2.4.5 Slot 7

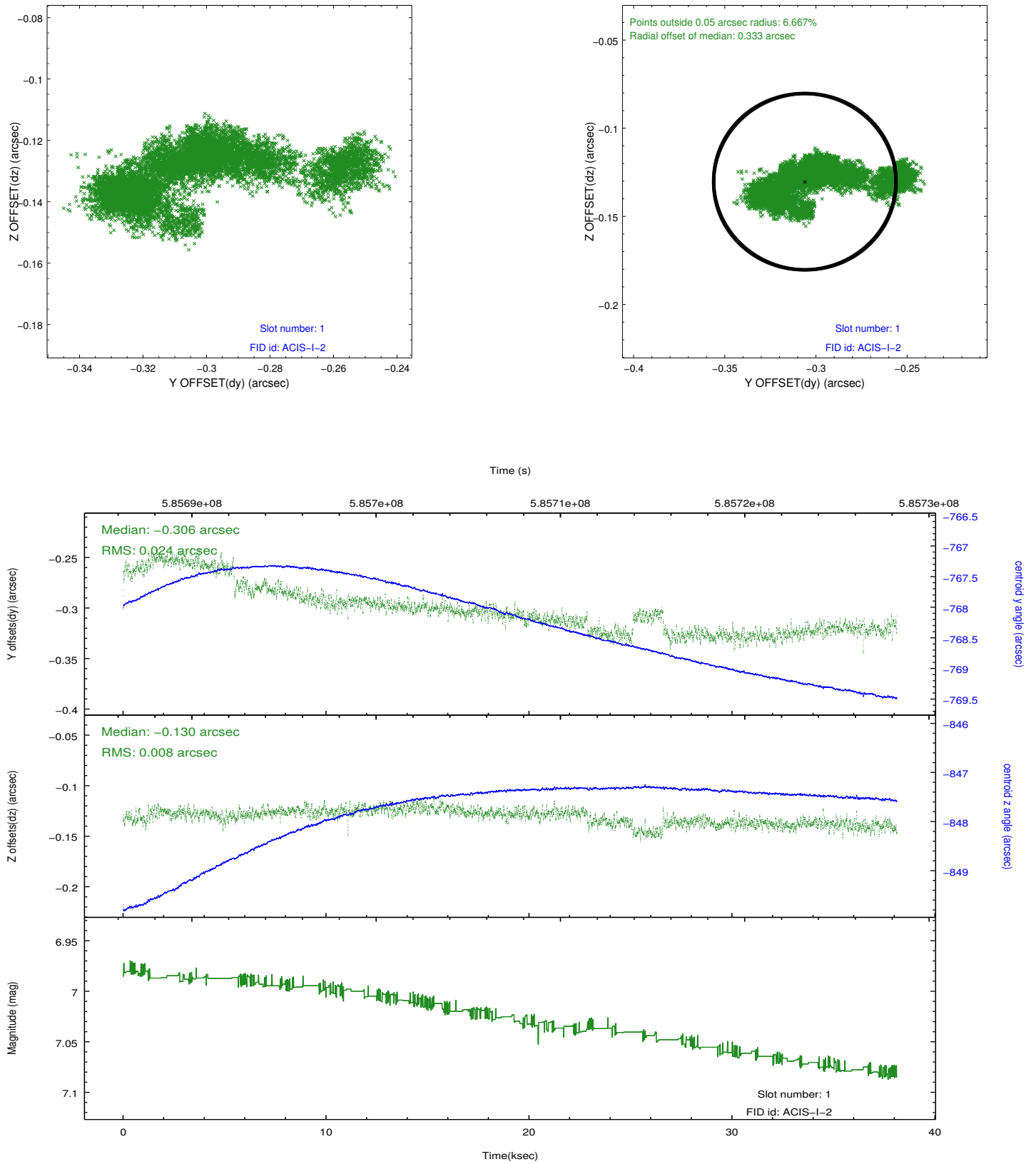


2.5 FID Slots

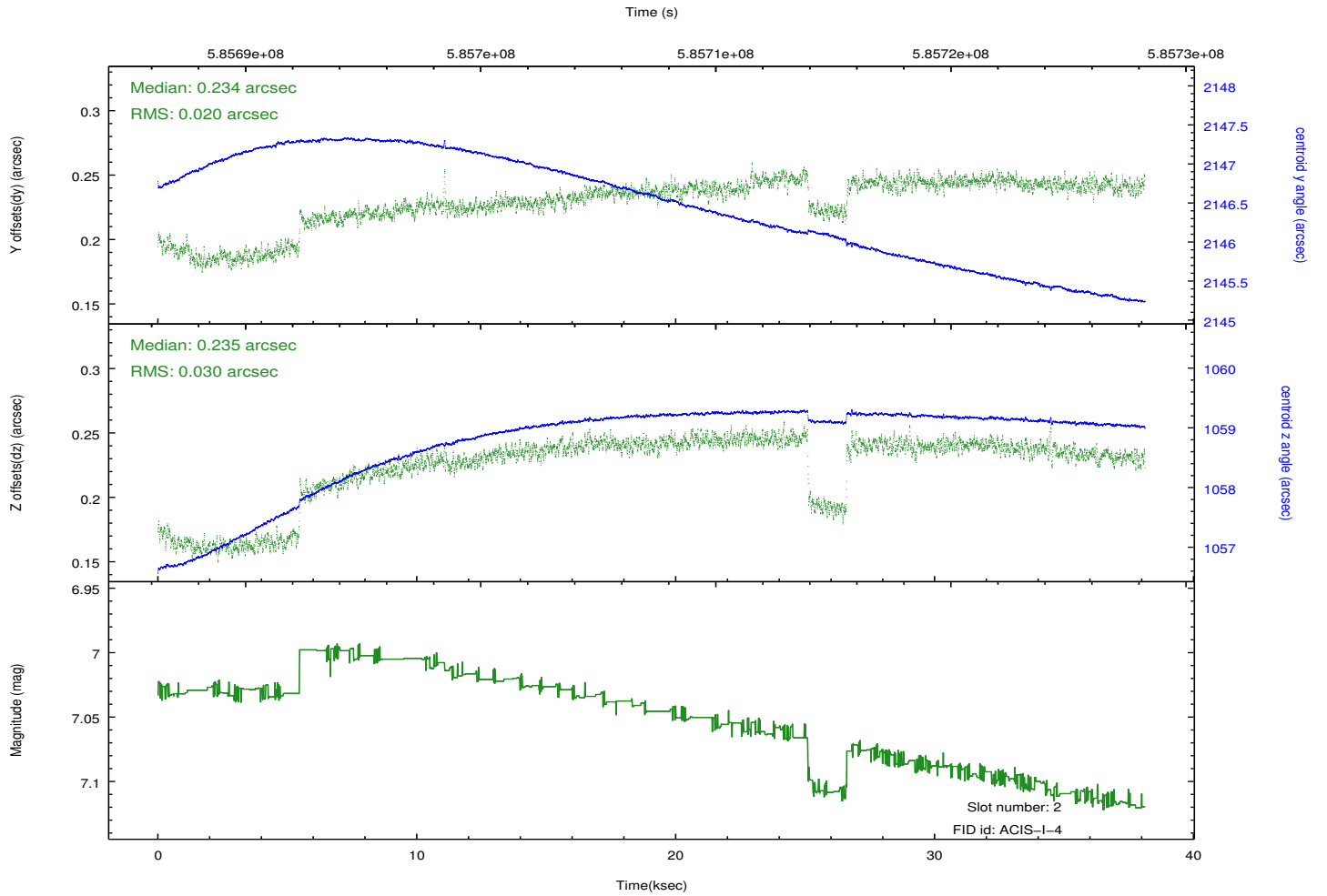
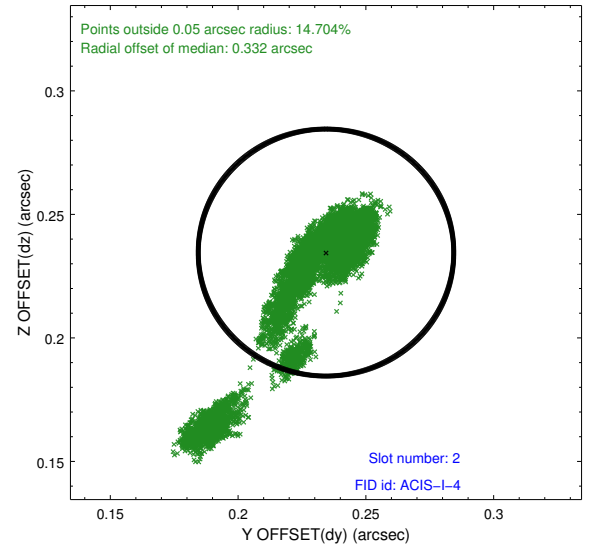
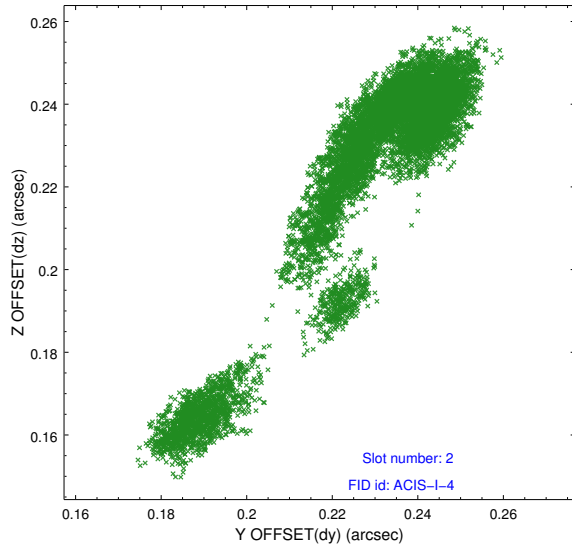
2.5.1 Slot 0



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)	2016.07.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	38.063835864186

A.2 Comments

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:
(259.52054,-36.33245), (259.52652,-36.33151), (259.51386,-36.28002),
(259.50821,-36.28230).