

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 15560 - L2 Version 2
Chandra X-Ray Center

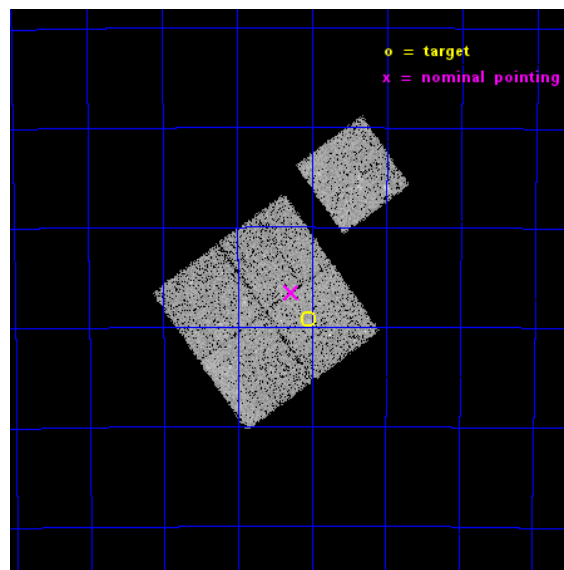
L2 Processing Date : Nov 28 2014

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

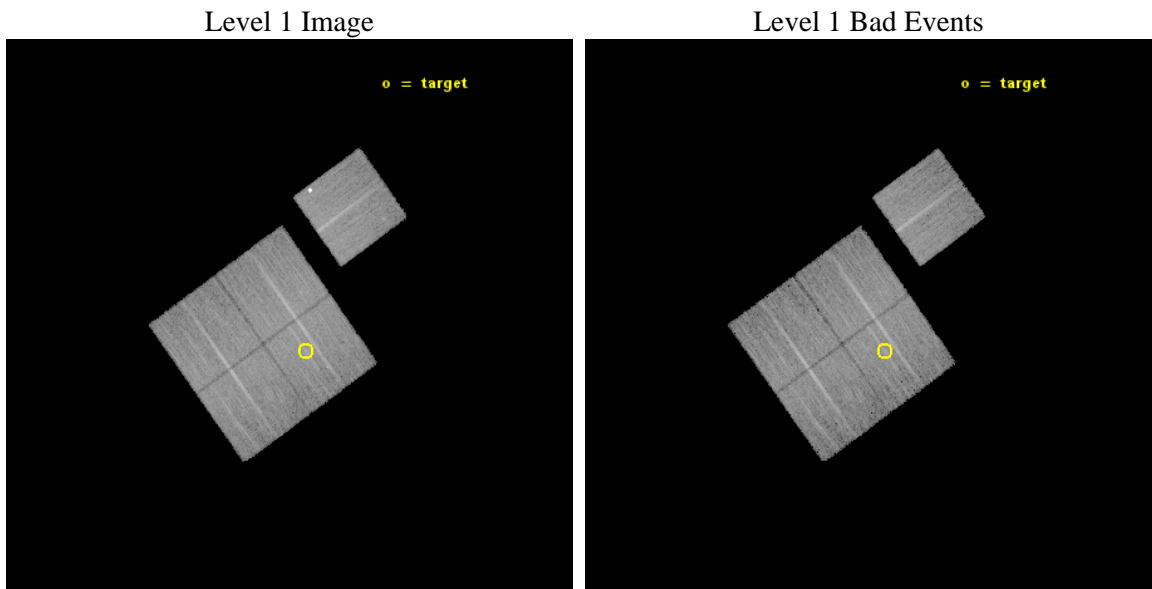
seq_num	801123	Sequence number
obs_id	15560	Observation id
title	Cosmology and Cluster Evolution from the 80 Most Massive Clusters in 2000 deg ² from the South Pole Telescope Survey	Proposal title
observer	Dr. Bradford Benson	Principal investigator
object	SPT-CLJ0446-5849	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	71.510833	Observer's specified target RA [deg]
dec_targ	-58.8215	Observer's specified target Dec [deg]
ra_nom	71.568710995147	Nominal RA [deg]
dec_nom	-58.776049880775	Nominal Dec [deg]
roll_nom	54.258181488242	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20987.000161409	Sum of GTIs [s]
livetime	20712.789553896	Livetime [s]
ontime0	20986.914819837	Sum of GTIs [s]
ontime1	20986.95585984	Sum of GTIs [s]
ontime2	20986.996899843	Sum of GTIs [s]
ontime3	20987.000161409	Sum of GTIs [s]
ontime6	20986.873779833	Sum of GTIs [s]
l2events	52714	Number of level 2 events



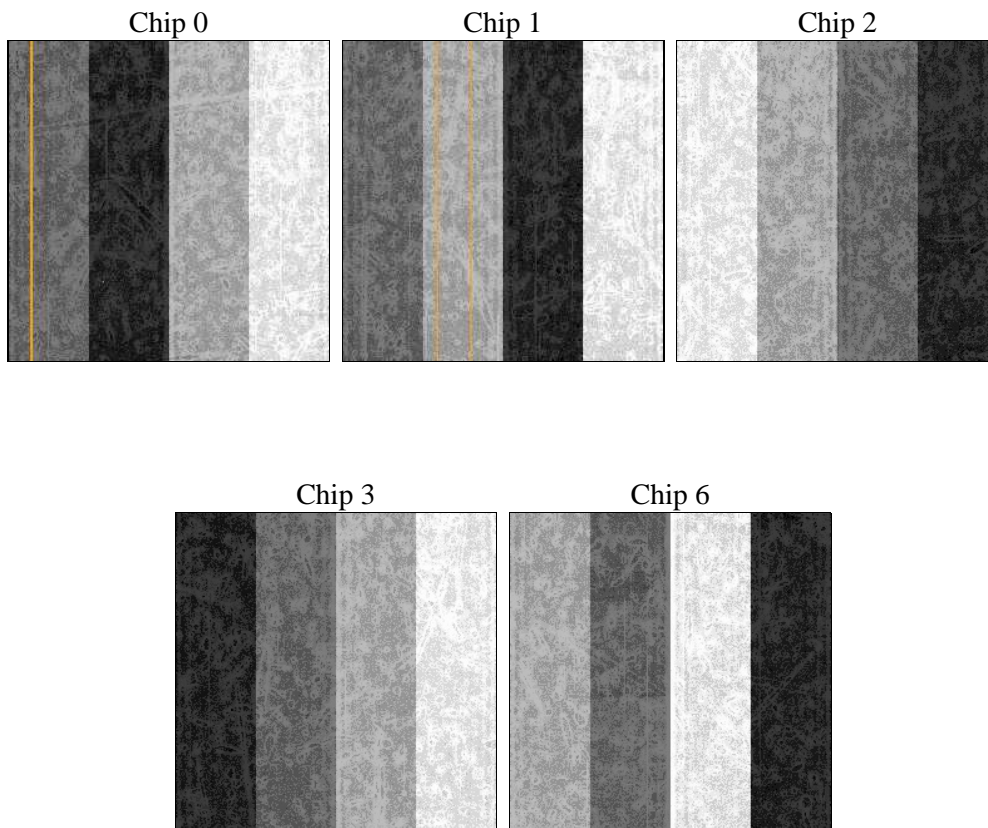
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20900.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	20987.000161409	Sum of GTIs [s]
caldbver	4.6.4	 	ontime0	20986.914819837	Sum of GTIs [s]
date	2014-11-28T10:51:05	Date and time of file creation	ontime1	20986.95585984	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	20986.996899843	Sum of GTIs [s]
			ontime3	20987.000161409	Sum of GTIs [s]
			ontime6	20986.873779833	Sum of GTIs [s]
			l1events	499874	Number of level 1 events

2.1.4 Events

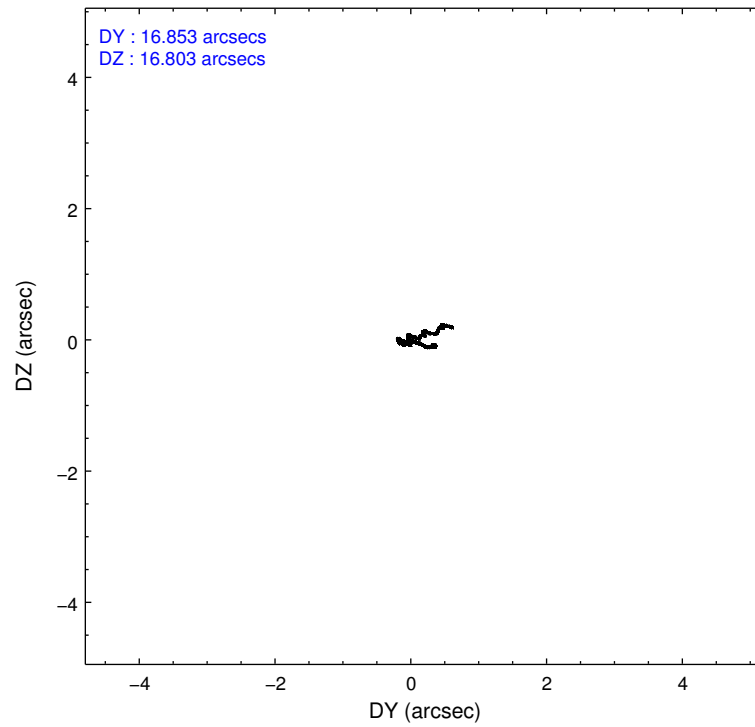
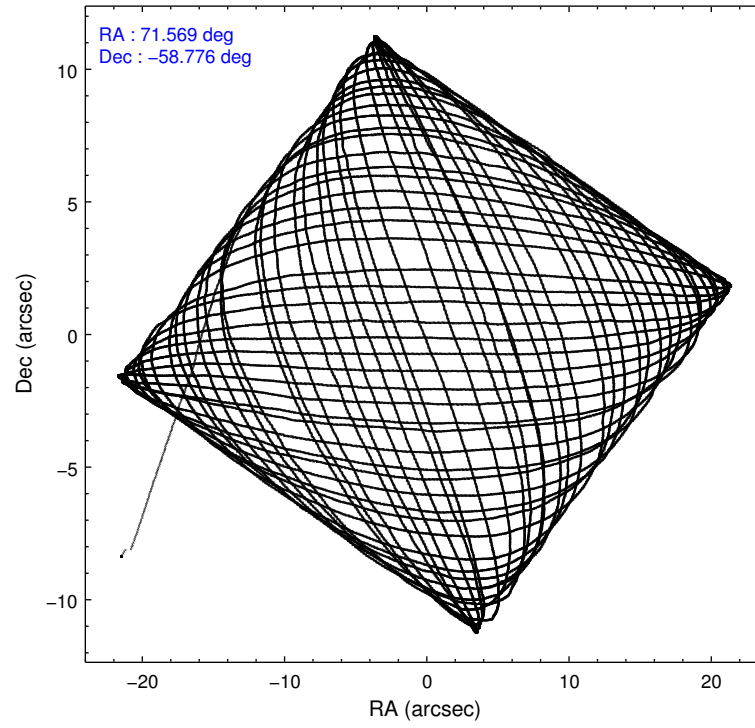
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	94183	93790	101961	100521	109419
rejected events	81863	80559	90070	88756	90034
rejected %	86%	85%	88%	88%	82%

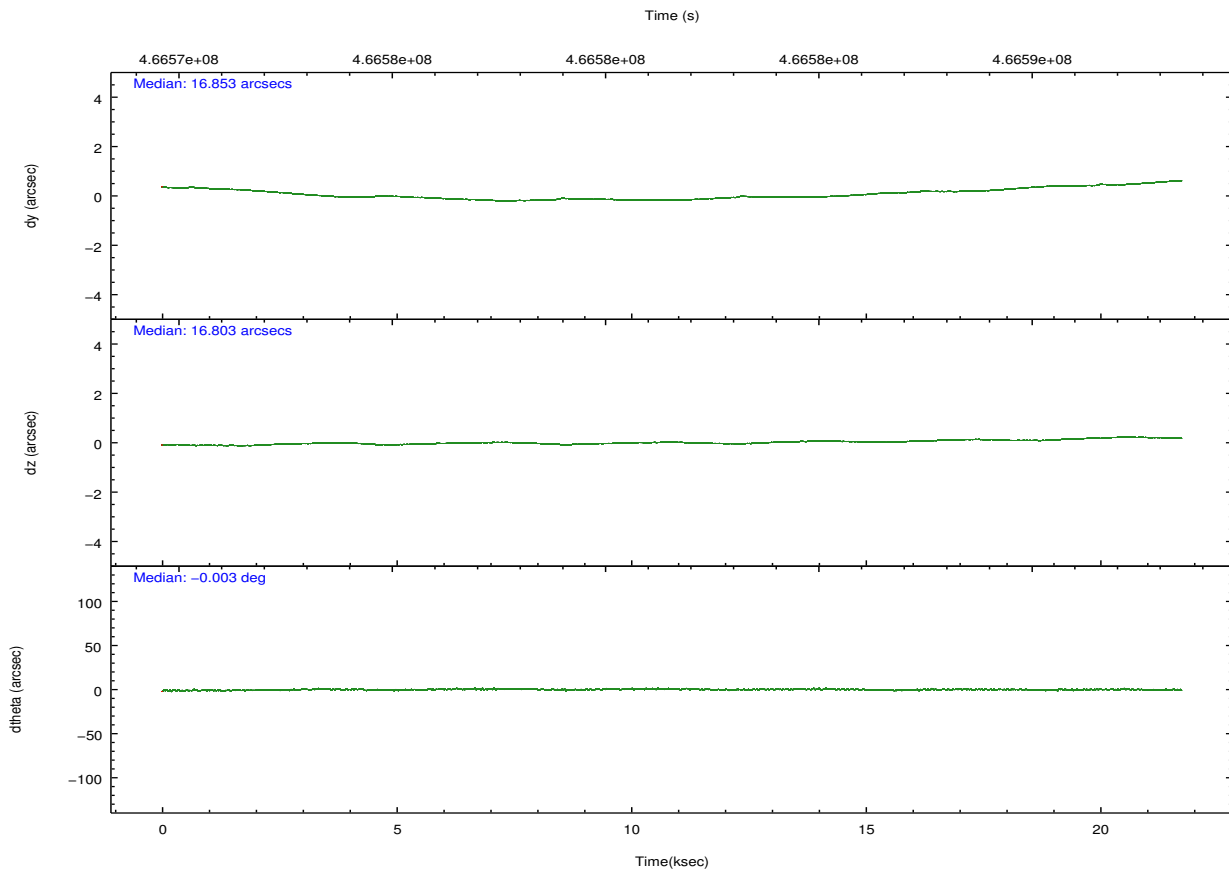
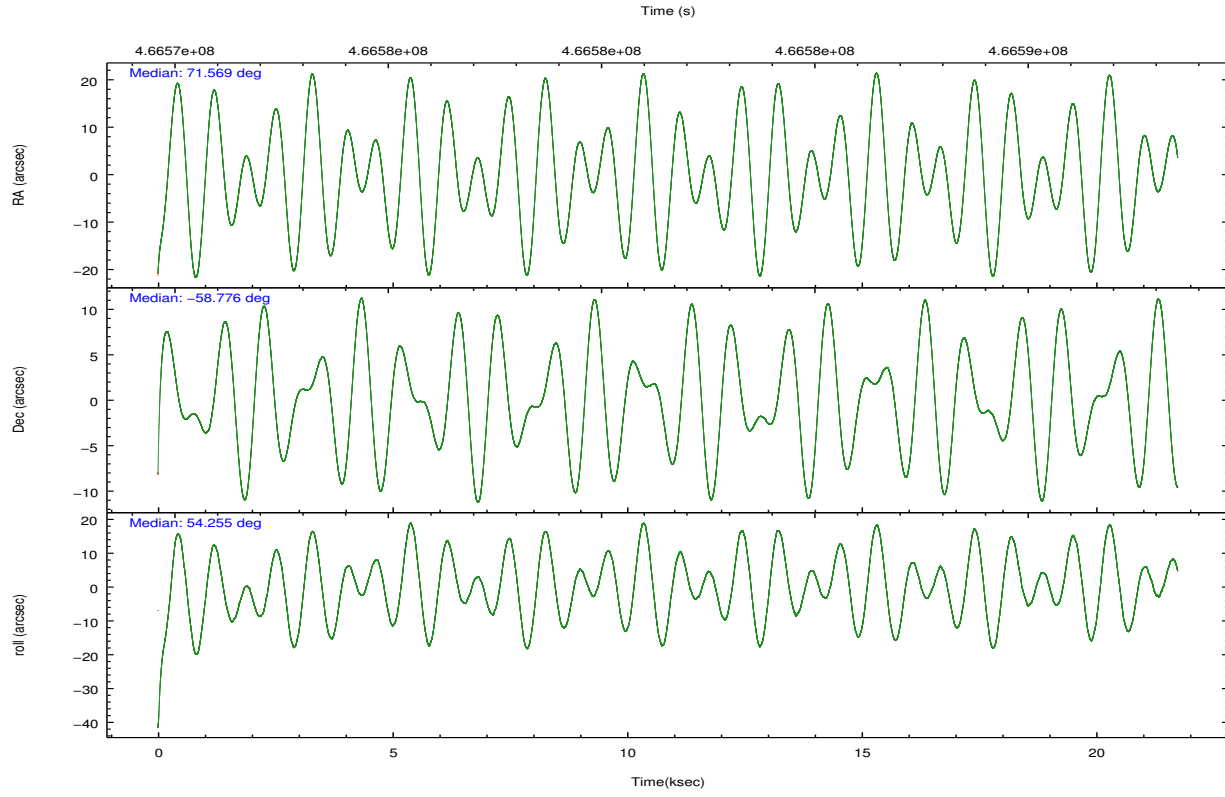
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	4137	4670	4207	4261	4528
	4%	4%	4%	4%	4%
grade 1 events	45	61	54	63	37
	0%	0%	0%	0%	0%
grade 2 events	3113	3194	2849	2673	9242
	3%	3%	2%	2%	8%
grade 3 events	1301	1263	1257	1240	1331
	1%	1%	1%	1%	1%
grade 4 events	1207	1309	1236	1240	1349
	1%	1%	1%	1%	1%
grade 5 events	4895	5085	4768	5385	5285
	5%	5%	4%	5%	4%
grade 6 events	2563	2795	2345	2352	2938
	2%	2%	2%	2%	2%
grade 7 events	76922	75413	85245	83307	84709
	81%	80%	83%	82%	77%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	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	71.563590	71.56871099514655	CCD I2 on	Y	Y
[deg] Pointing Dec	-58.803449	-58.77604988077486	CCD I3 on	Y	Y
[deg] Pointing Roll	54.045126	54.25818148824223	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	Y
[mm] SIM translation stage pos	-225.842463	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.75	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	466571508.184000	466569888.2497	CCD S5 on	N	N
Observation start date	2012-10-14T03:10:41	2012-10-14T02:44:48	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	466592408.184000	466592794.43843	On-chip summing requested	N	N
Observation end date	2012-10-14T08:59:01	2012-10-14T09:06:34	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect





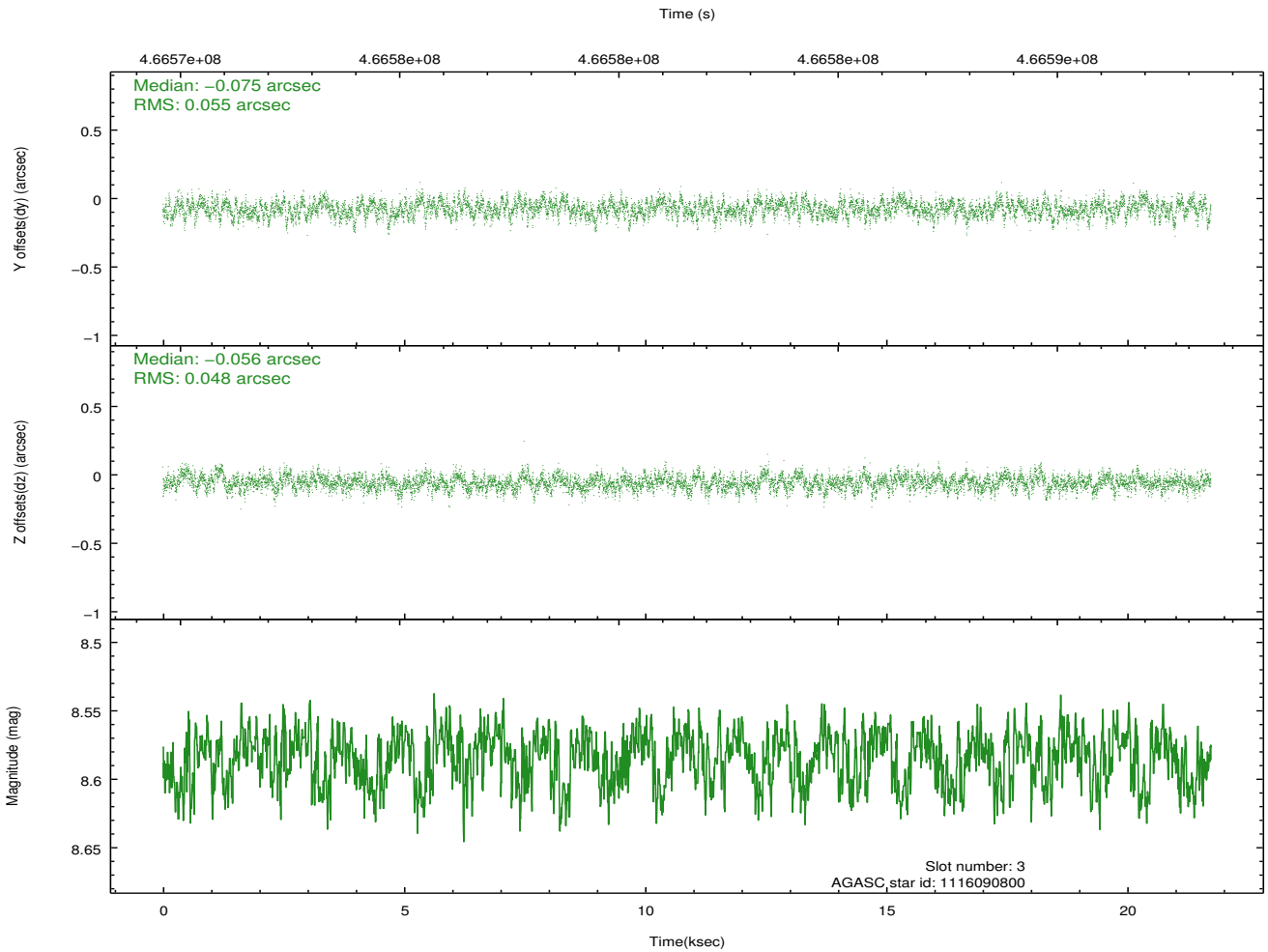
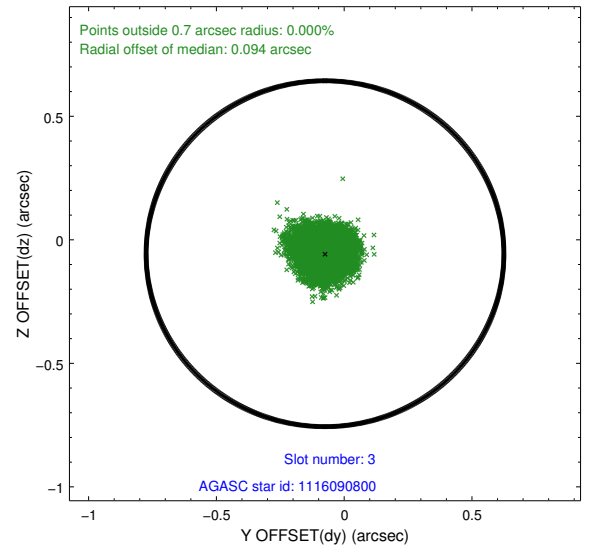
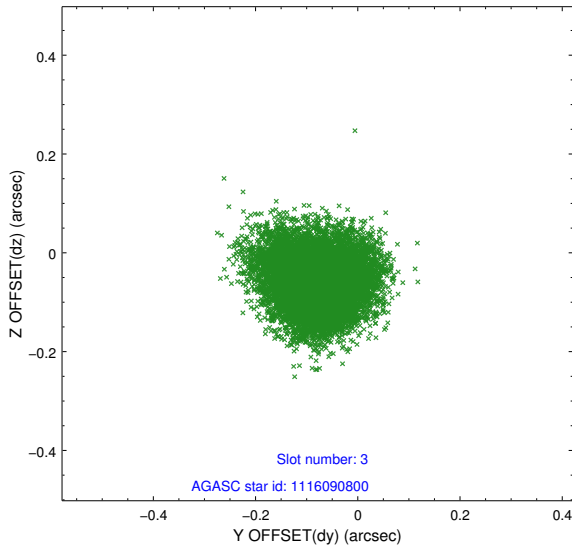
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.11	5301	0.172	-0.128	0.007	0.014	0.000000	0.000000	922.52	-999.66
1	FID		ACIS-I-5	7.11	5302	-0.312	0.138	0.007	0.016	0.000000	0.000000	-1826.02	897.93
2	FID		ACIS-I-6	7.11	5302	0.049	0.062	0.007	0.012	0.000000	0.000000	387.72	1542.59
3	GUIDE	used	1116090800	8.58	10603	-0.075	-0.056	0.078	0.124	70.863529	-58.789564	-731.63	1082.59
4	GUIDE	used	1116210816	7.26	10603	-0.129	0.019	0.068	0.110	72.529065	-58.801160	1053.90	-1459.74
5	GUIDE	used	1116211872	8.56	10597	0.380	0.148	0.078	0.126	71.953188	-58.361371	1719.32	337.97
6	GUIDE	used	1116213288	8.74	10601	-0.034	-0.036	0.084	0.134	71.629957	-59.225093	-1156.16	-990.00
7	GUIDE	used	1116220824	6.70	10603	-0.148	-0.074	0.069	0.115	71.778596	-59.137085	-739.26	-1027.03

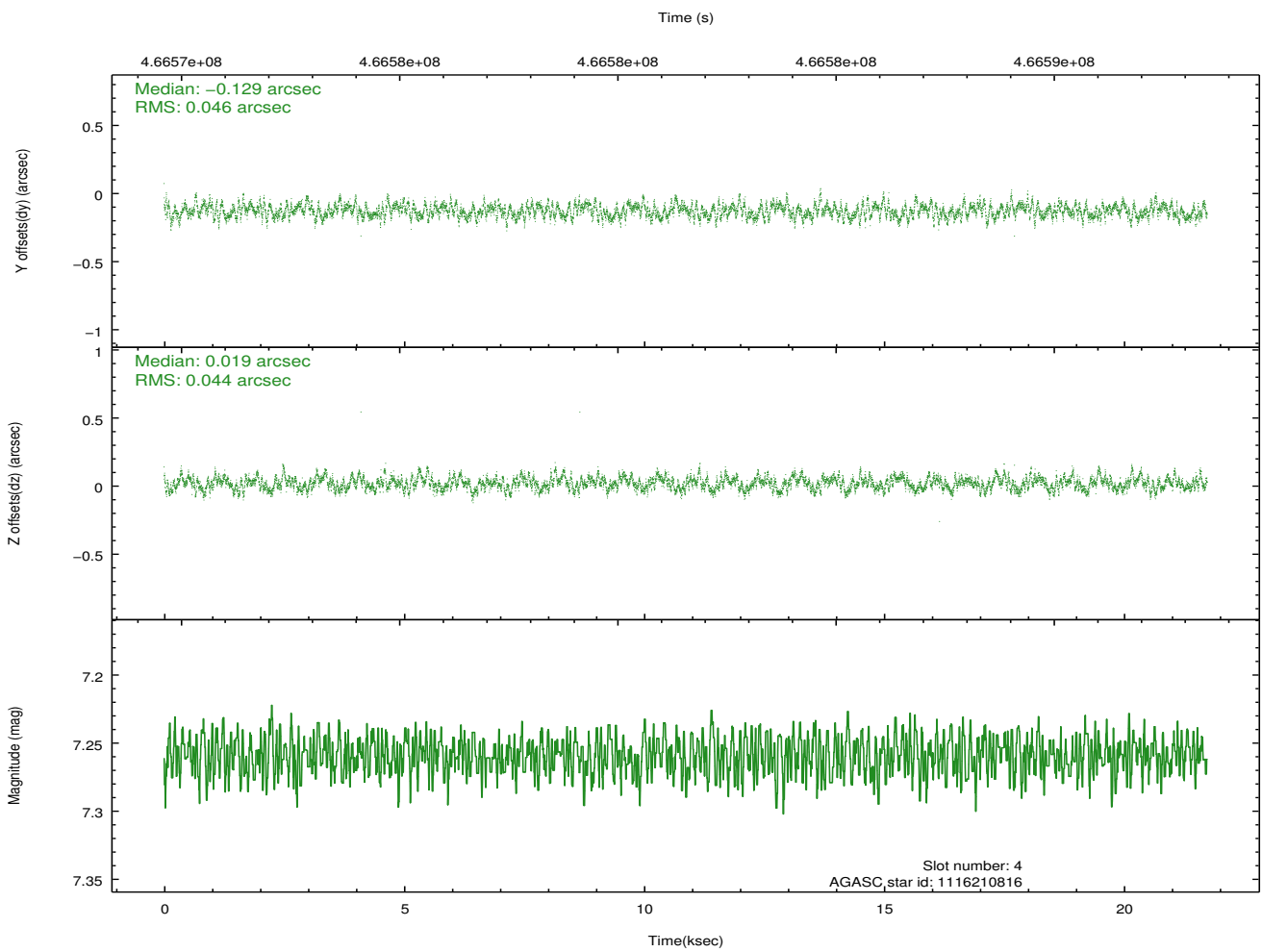
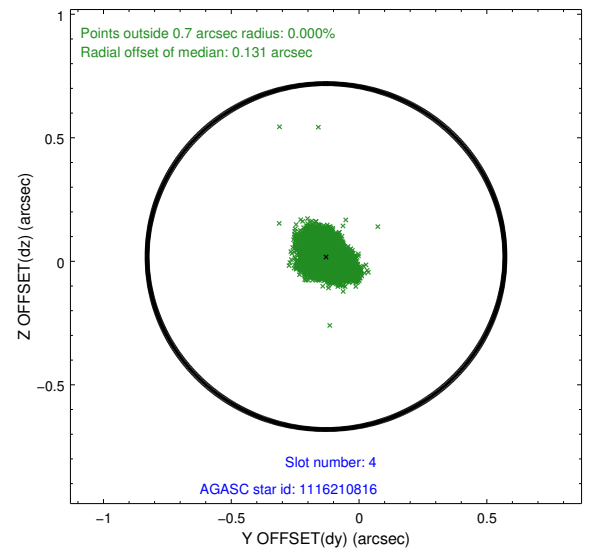
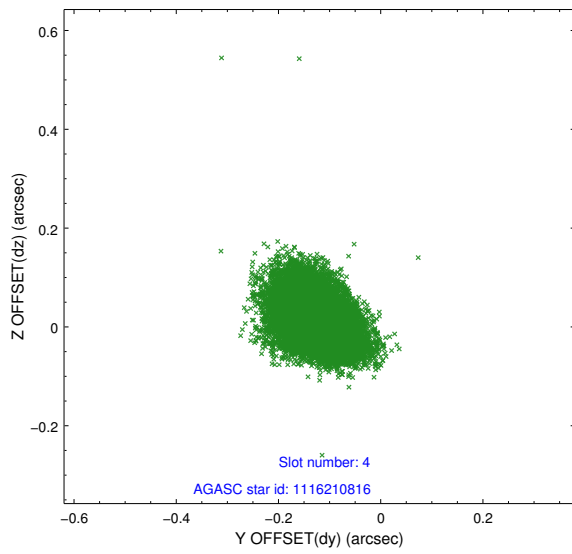
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2.4 Star Slots

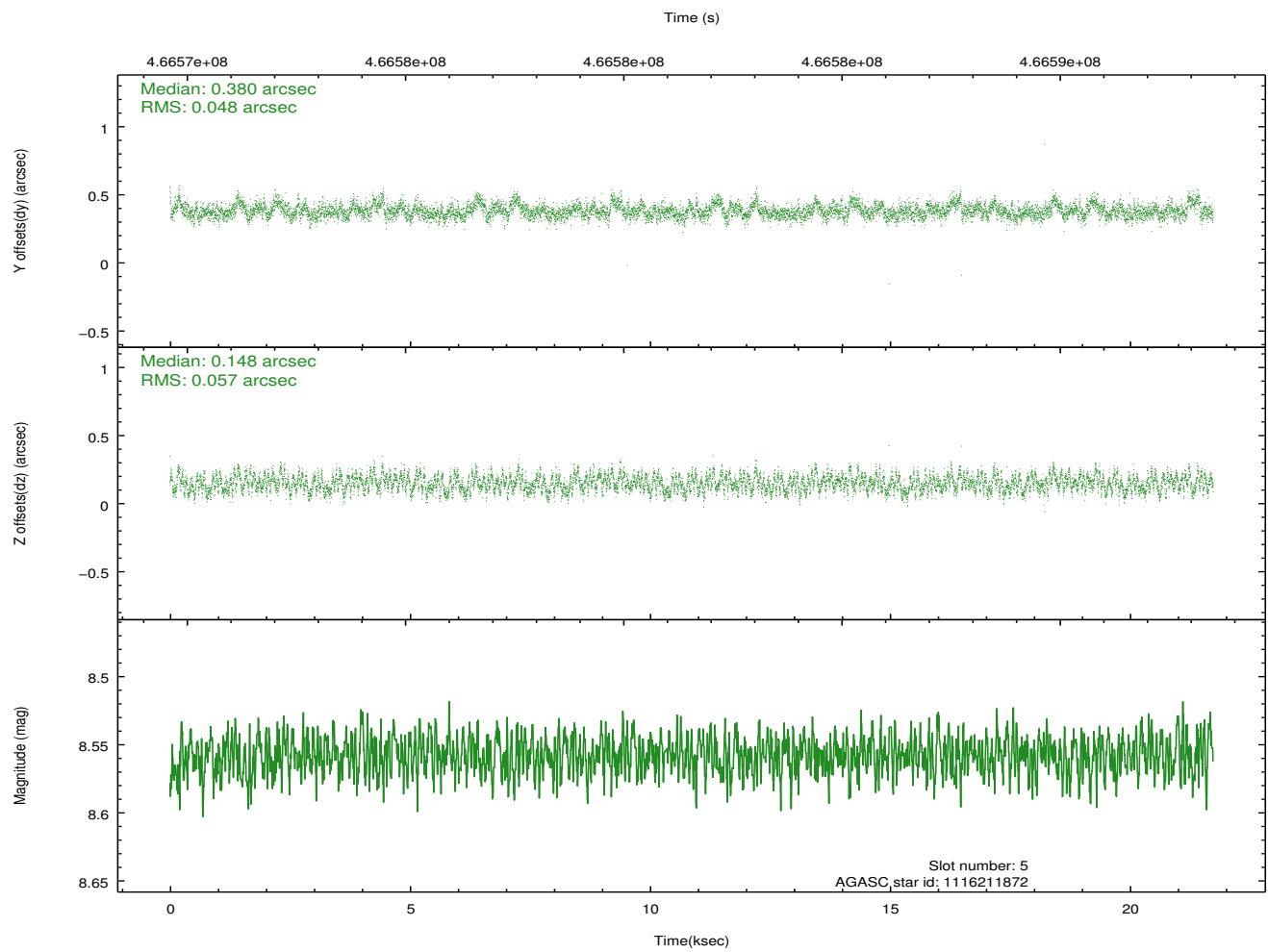
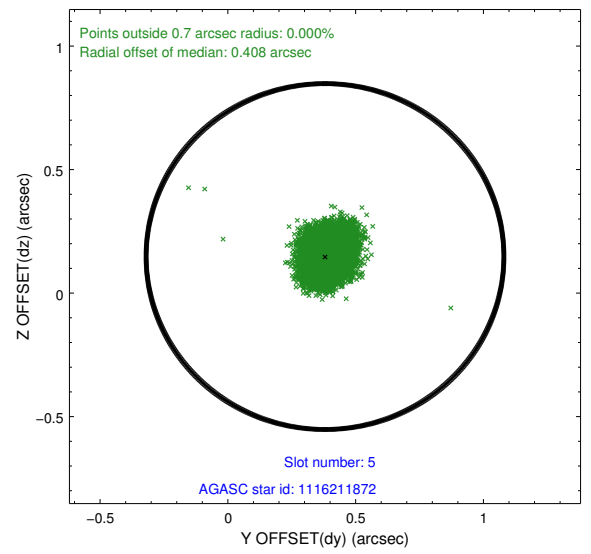
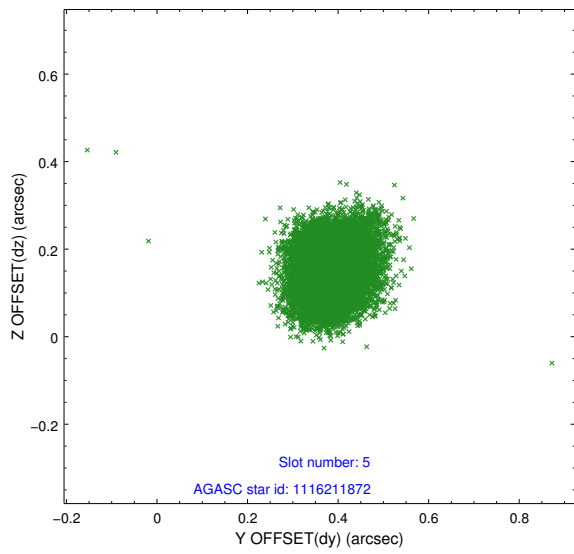
2.4.1 Slot 3



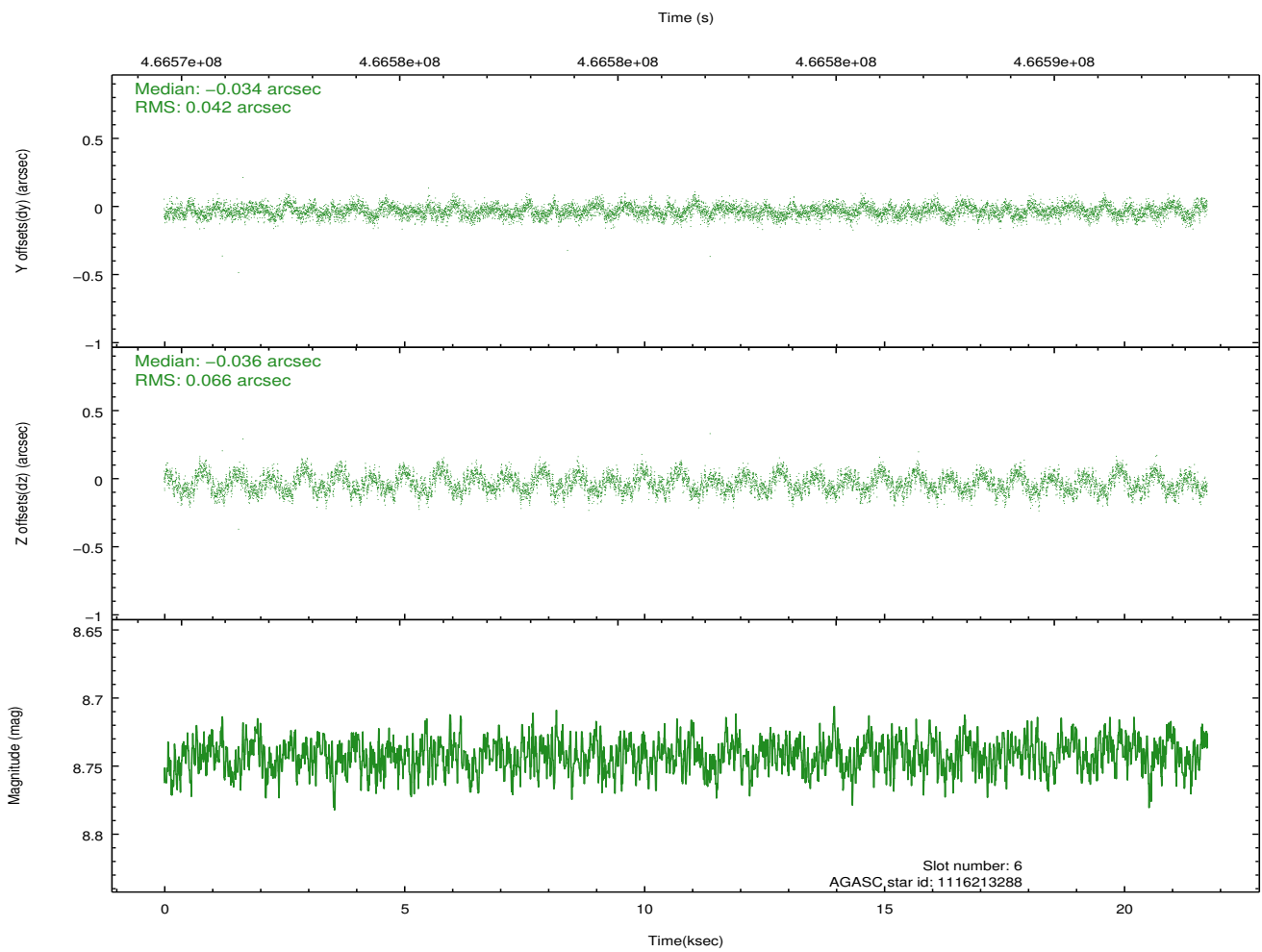
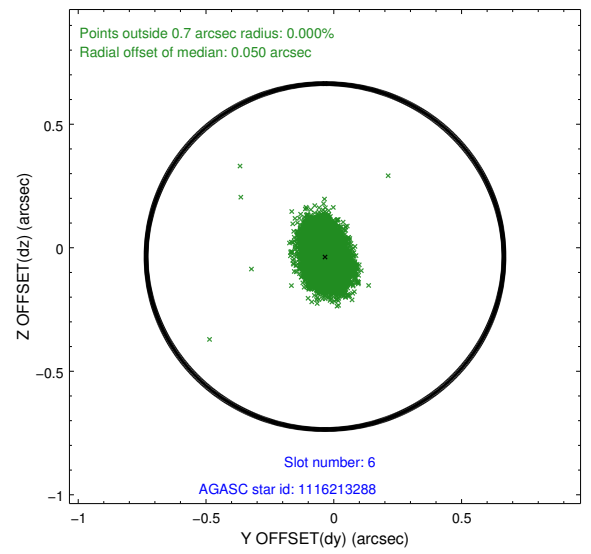
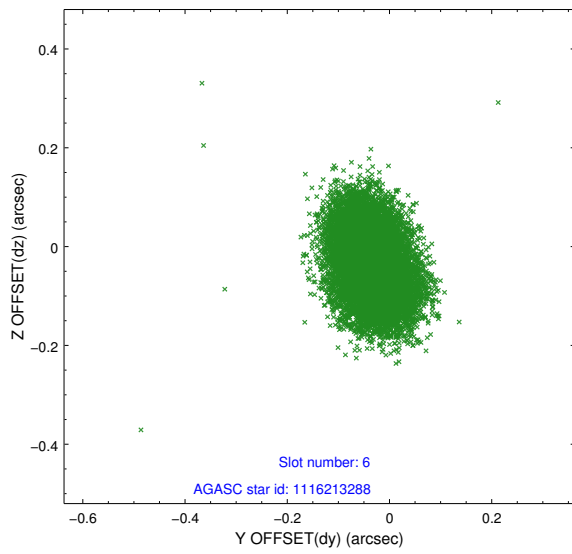
2.4.2 Slot 4



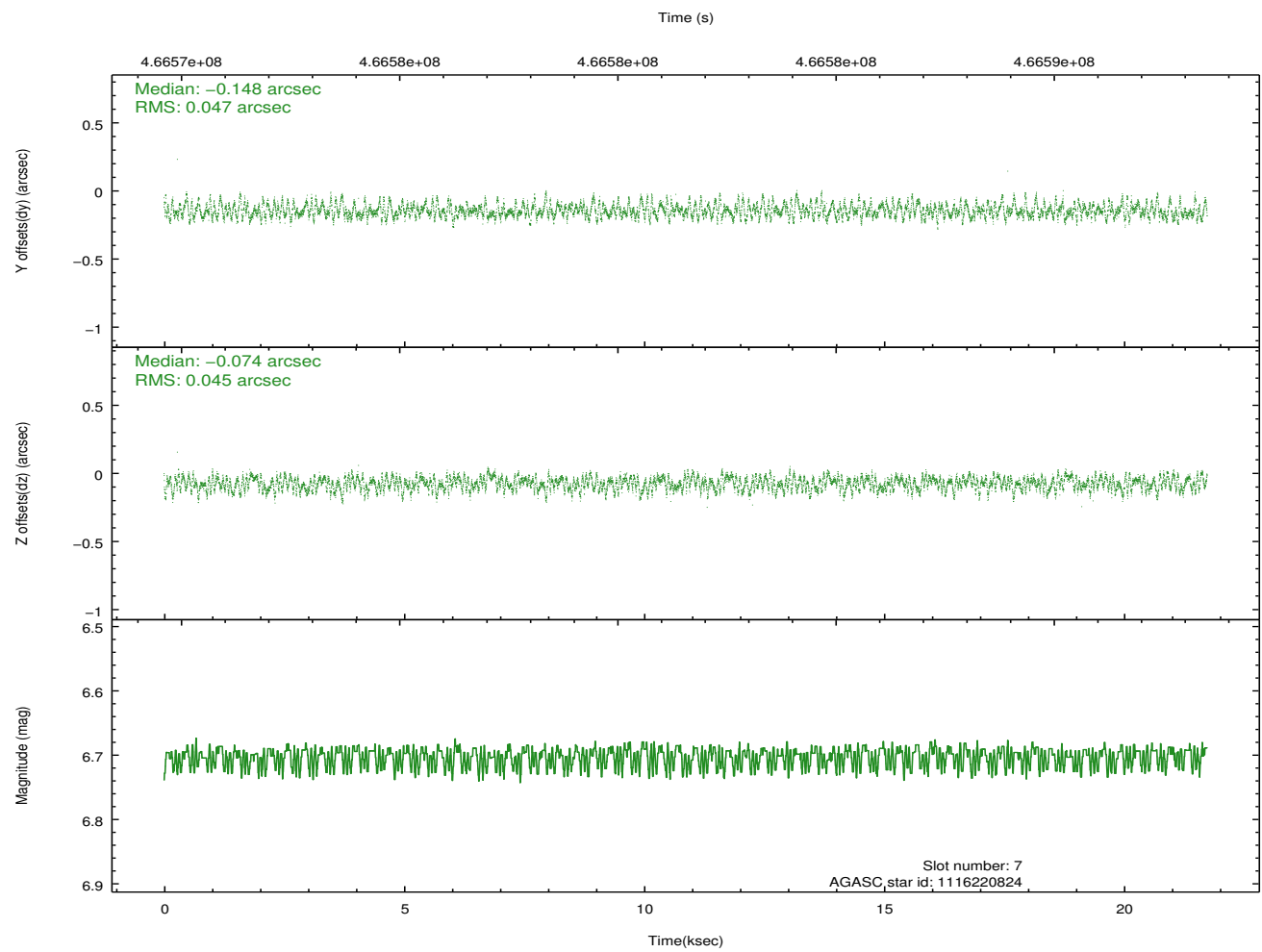
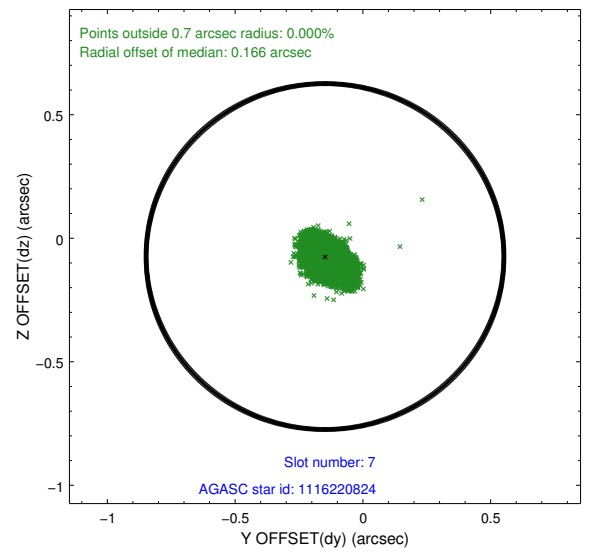
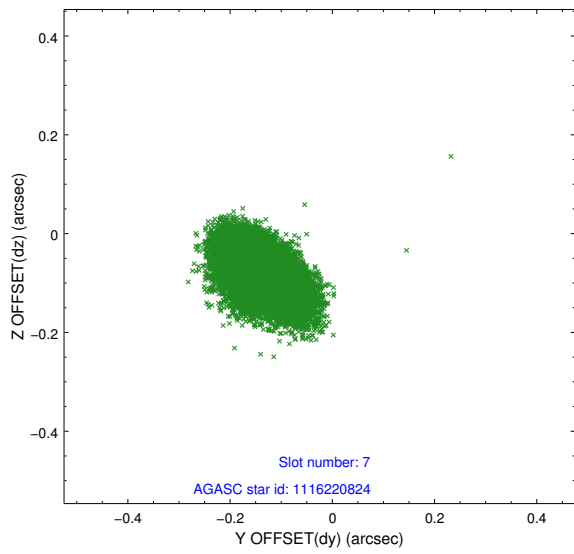
2.4.3 Slot 5



2.4.4 Slot 6

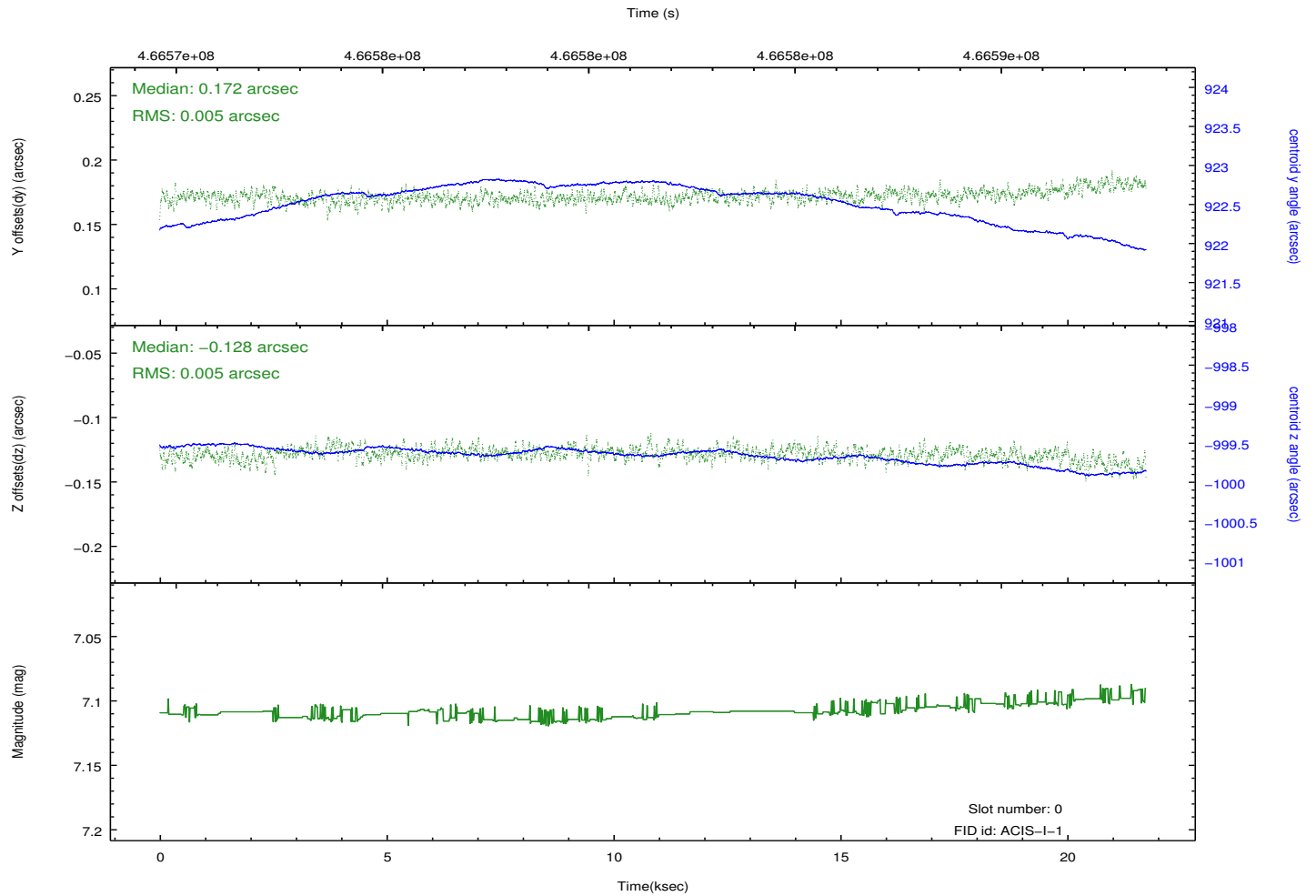
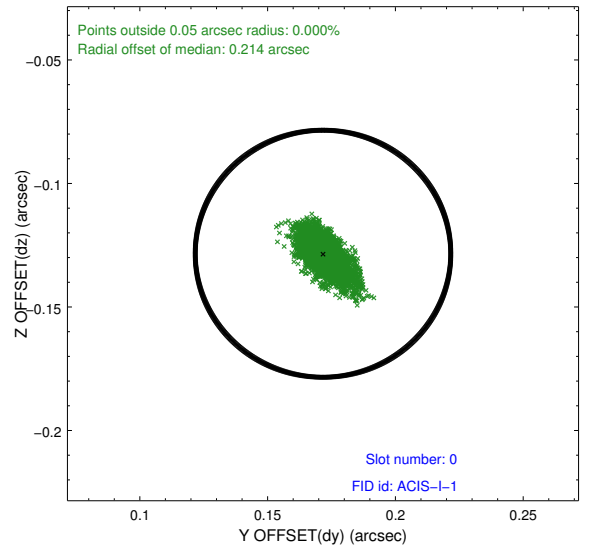
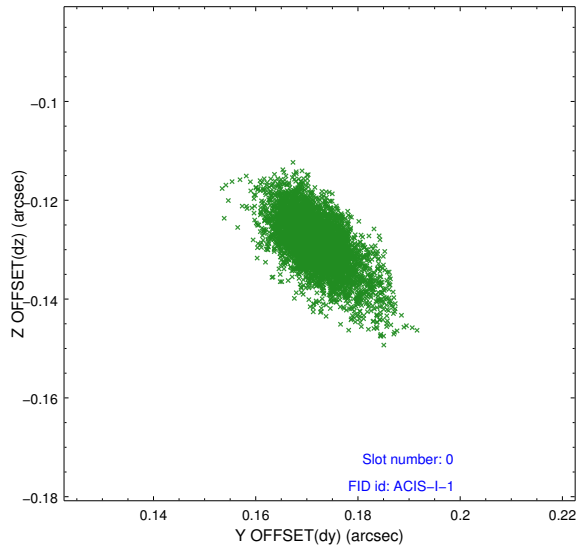


2.4.5 Slot 7

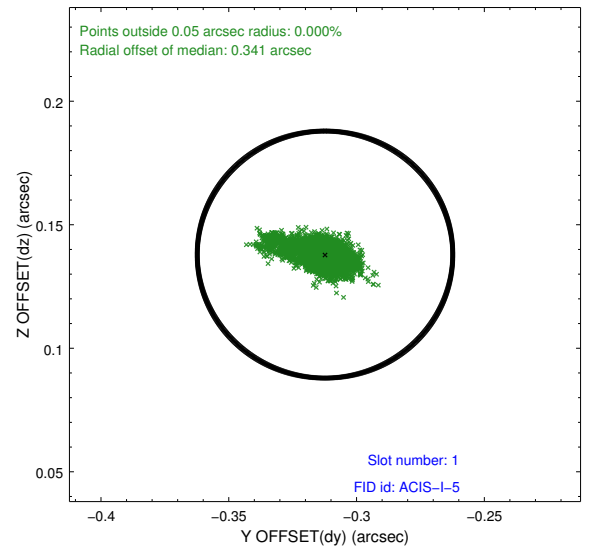
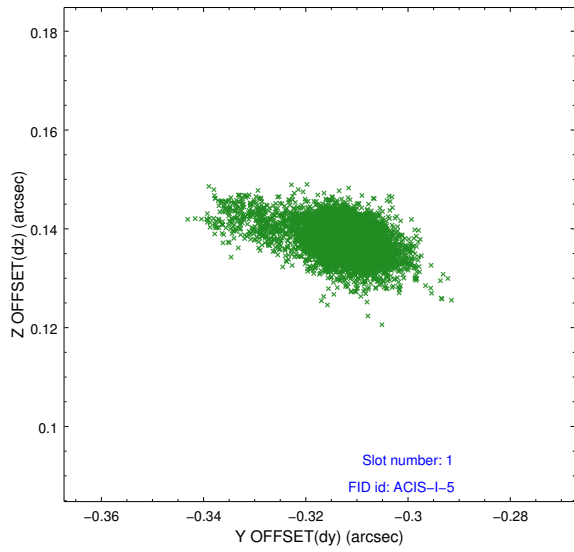


2.5 FID Slots

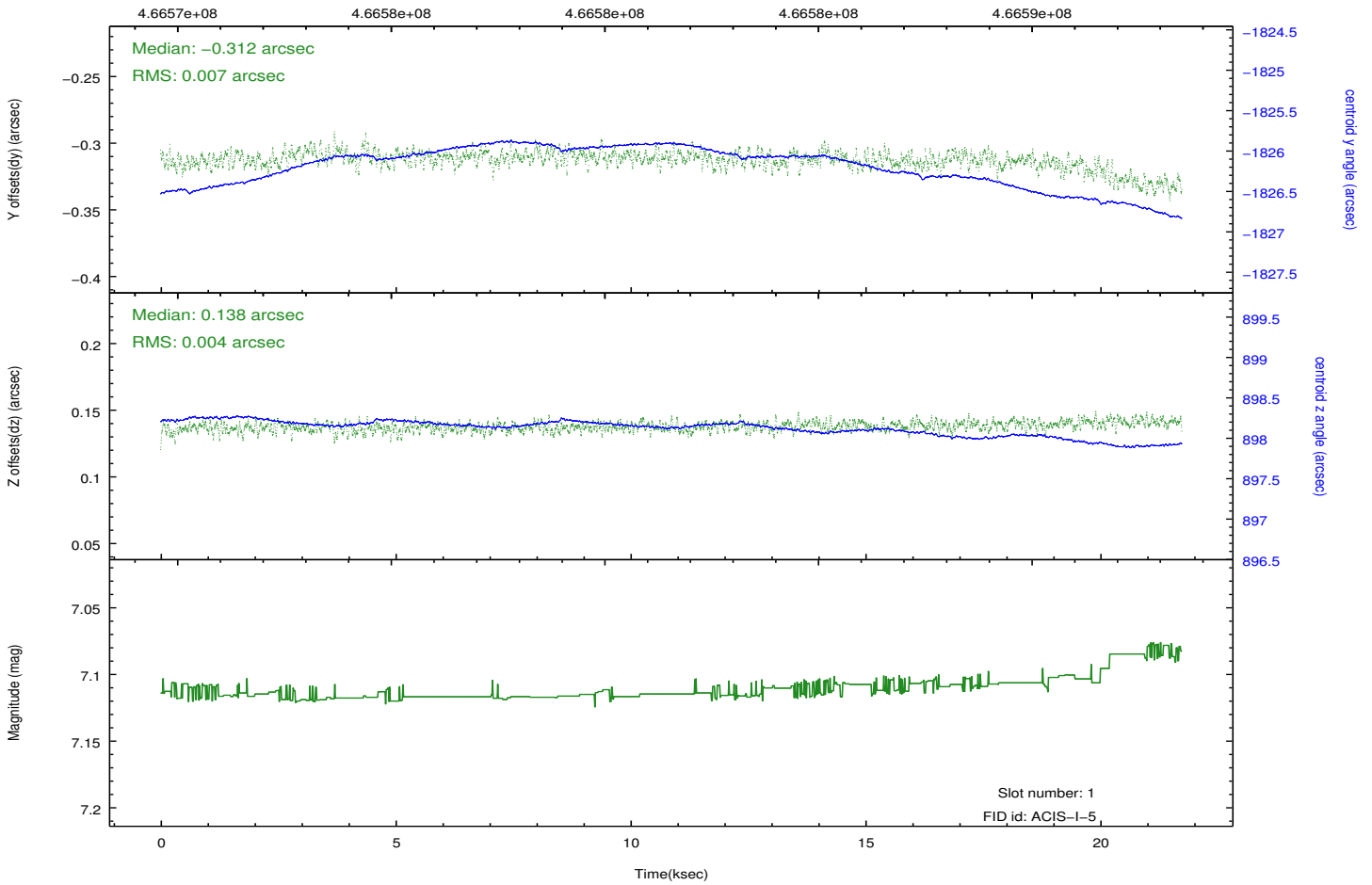
2.5.1 Slot 0



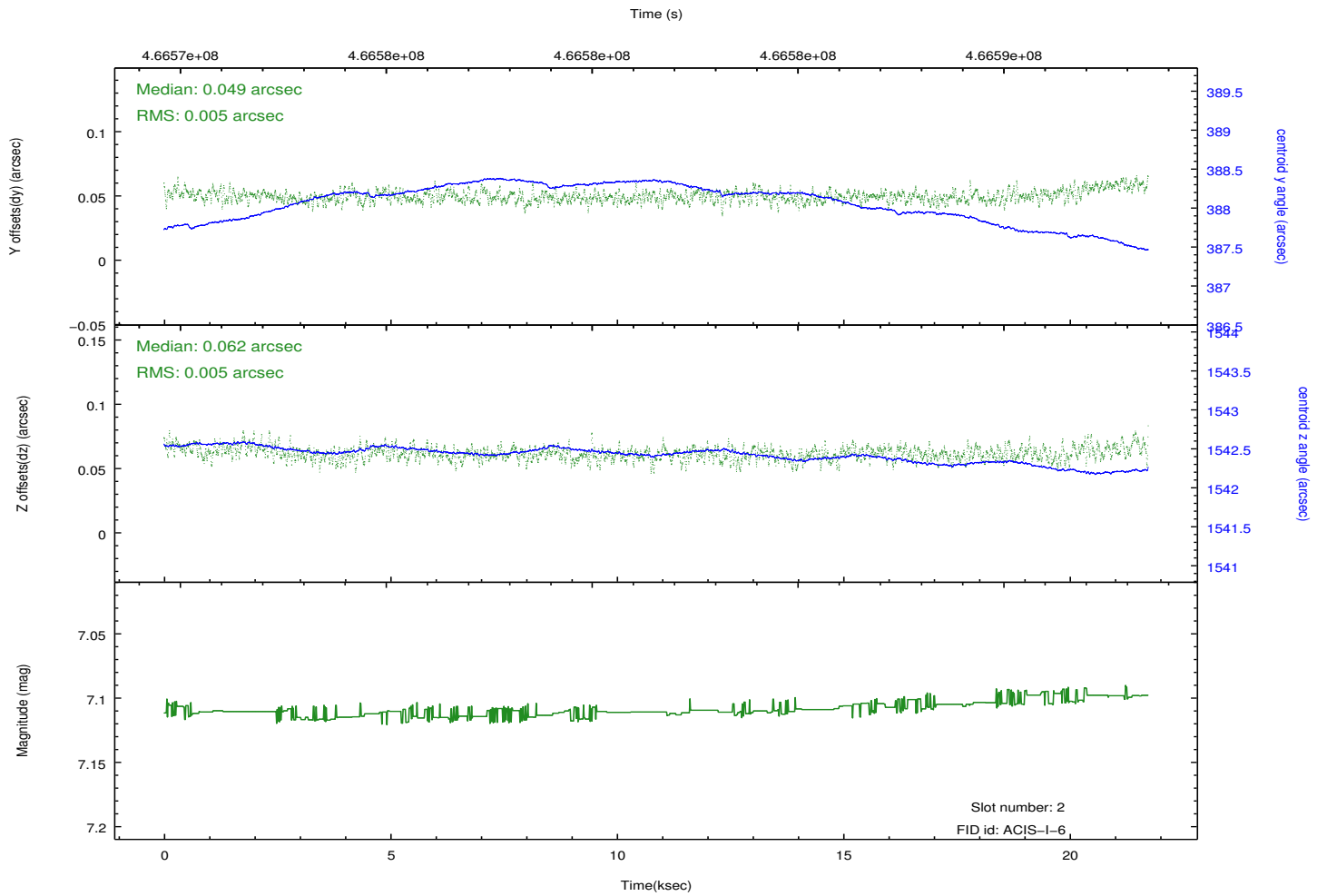
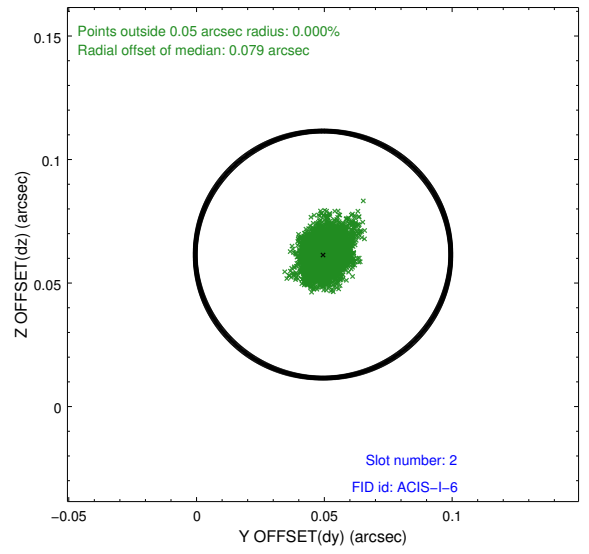
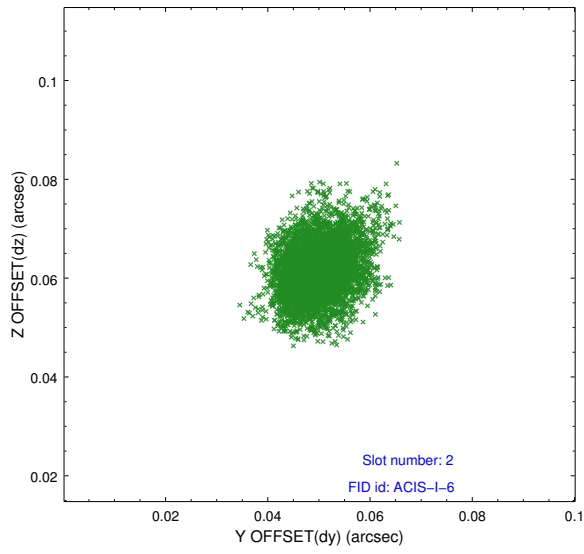
2.5.2 Slot 1



Time (s)



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.987000161409

A.2 Comments

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.