

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 21278 - L2 Version 1
Chandra X-Ray Center

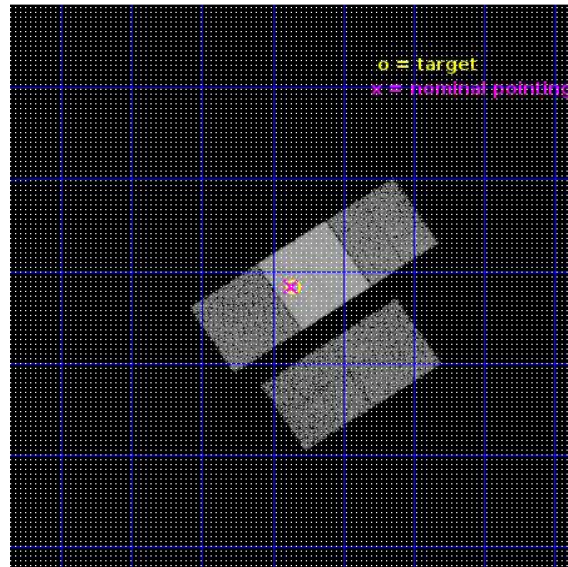
L2 Processing Date : Jan 30 2019

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1 Front

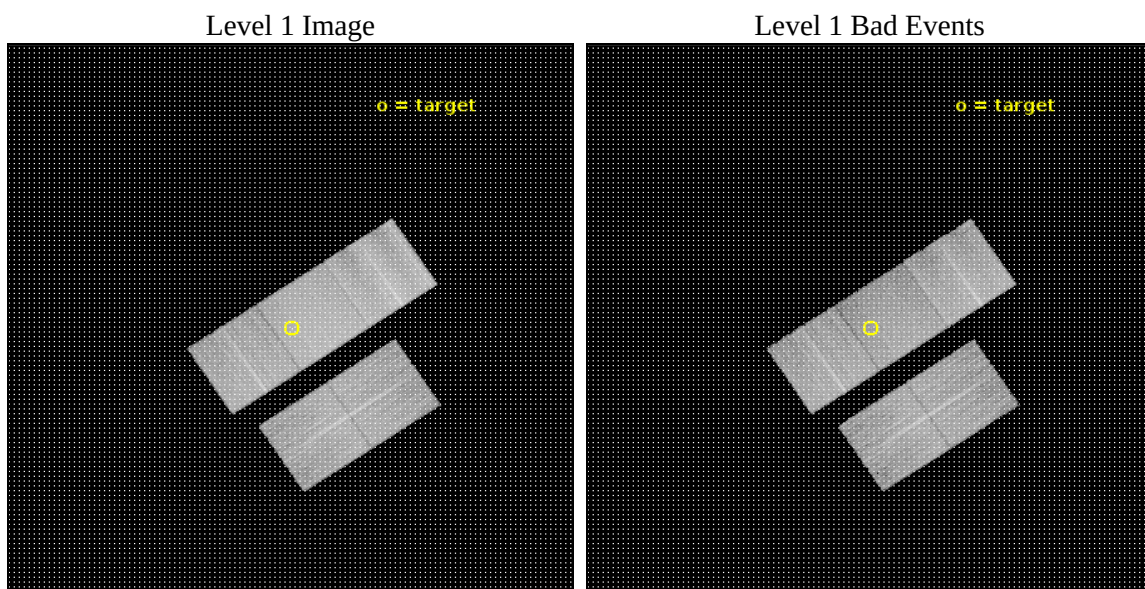
seq_num	300410	Sequence number
obs_id	21278	Observation id
title	The Mysterious Boundary Layers in High Accretion Rate White Dwarf Binaries	Proposal title
observer	Koji Mukai	Principal investigator
object	KQ Mon	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	112.837917	Observer's specified target RA [deg]
dec_targ	-10.363611	Observer's specified target Dec [deg]
ra_nom	112.84174214607	Nominal RA [deg]
dec_nom	-10.361733007789	Nominal Dec [deg]
roll_nom	326.48123078096	Nominal Roll [deg]
revision	1	Processing version of data
ontime	15049.89991045	Sum of GTIs [s]
livetime	14853.261888545	Livetime [s]
ontime2	15049.735750437	Sum of GTIs [s]
ontime3	15049.817830443	Sum of GTIs [s]
ontime6	15049.858870506	Sum of GTIs [s]
ontime7	15049.89991045	Sum of GTIs [s]
ontime8	15049.7767905	Sum of GTIs [s]
l2events	109179	Number of level 2 events



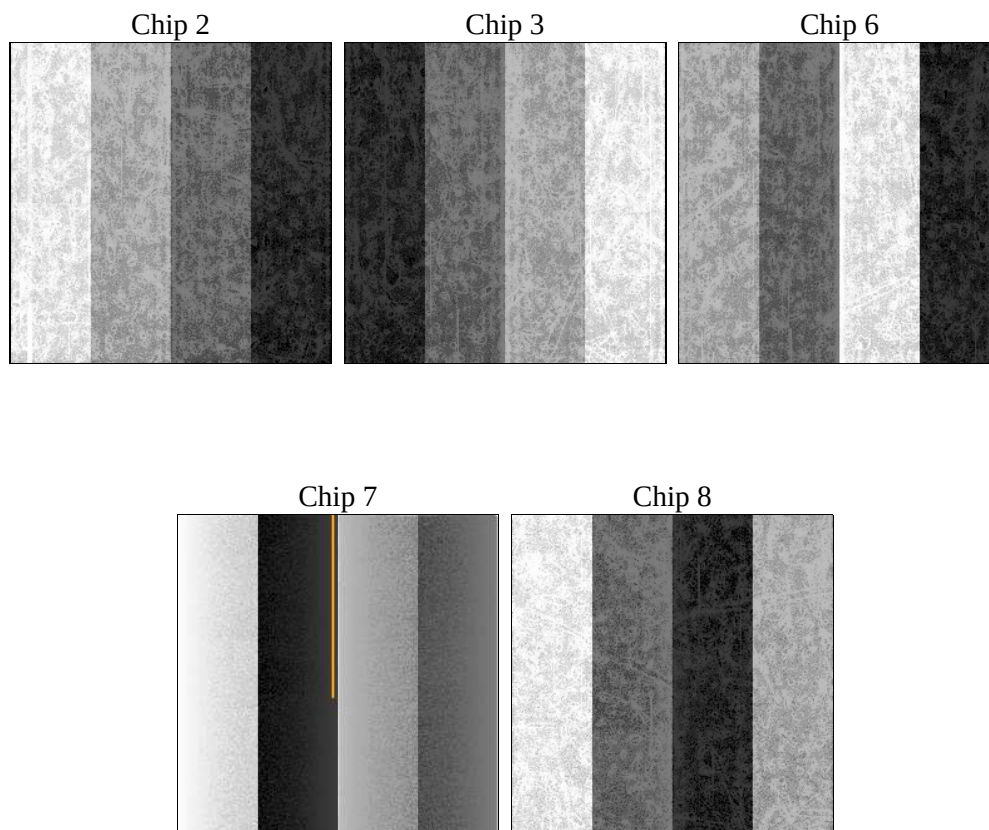
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	15049.89991045	Sum of GTIs [s]
caldsver	4.8.2	 	ontime2	15049.735750437	Sum of GTIs [s]
date	2019-01-30T15:56:44	Date and time of file creation	ontime3	15049.817830443	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	15049.858870506	Sum of GTIs [s]
			ontime7	15049.89991045	Sum of GTIs [s]
			ontime8	15049.7767905	Sum of GTIs [s]
			l1events	644272	Number of level 1 events

2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	114382	108527	117577	149764	154022
rejected events	102169	96447	104454	84779	111694
rejected %	89%	88%	88%	56%	72%

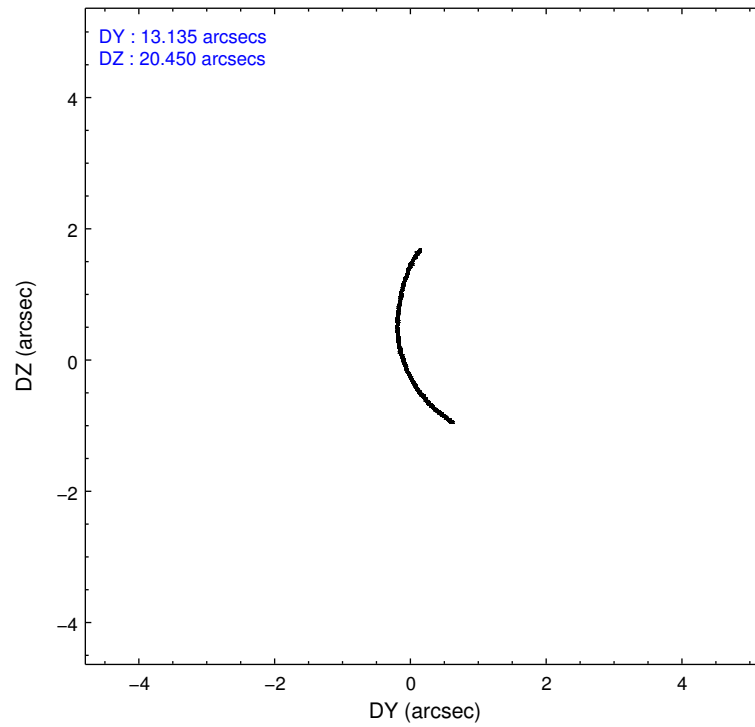
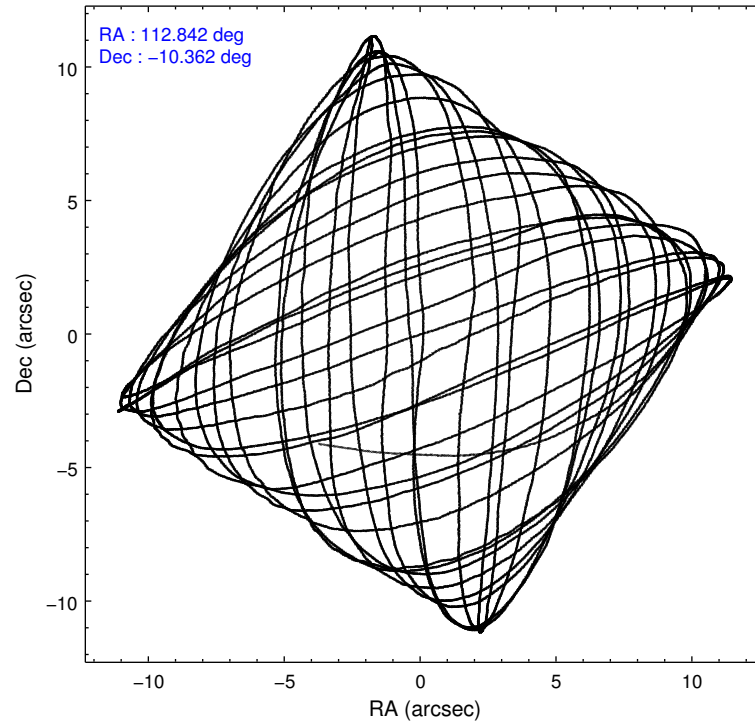
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	4360	4334	4287	5560	12032
	3%	3%	3%	3%	7%
grade 1 events	74	64	74	220	142
	0%	0%	0%	0%	0%
grade 2 events	3022	2713	3172	13929	10427
	2%	2%	2%	9%	6%
grade 3 events	1173	1259	1326	5143	4314
	1%	1%	1%	3%	2%
grade 4 events	1276	1268	1262	5120	4098
	1%	1%	1%	3%	2%
grade 5 events	4331	5397	5595	14790	8258
	3%	4%	4%	9%	5%
grade 6 events	2382	2512	3080	35259	11515
	2%	2%	2%	23%	7%
grade 7 events	97764	90980	98781	69743	103236
	85%	83%	84%	46%	67%

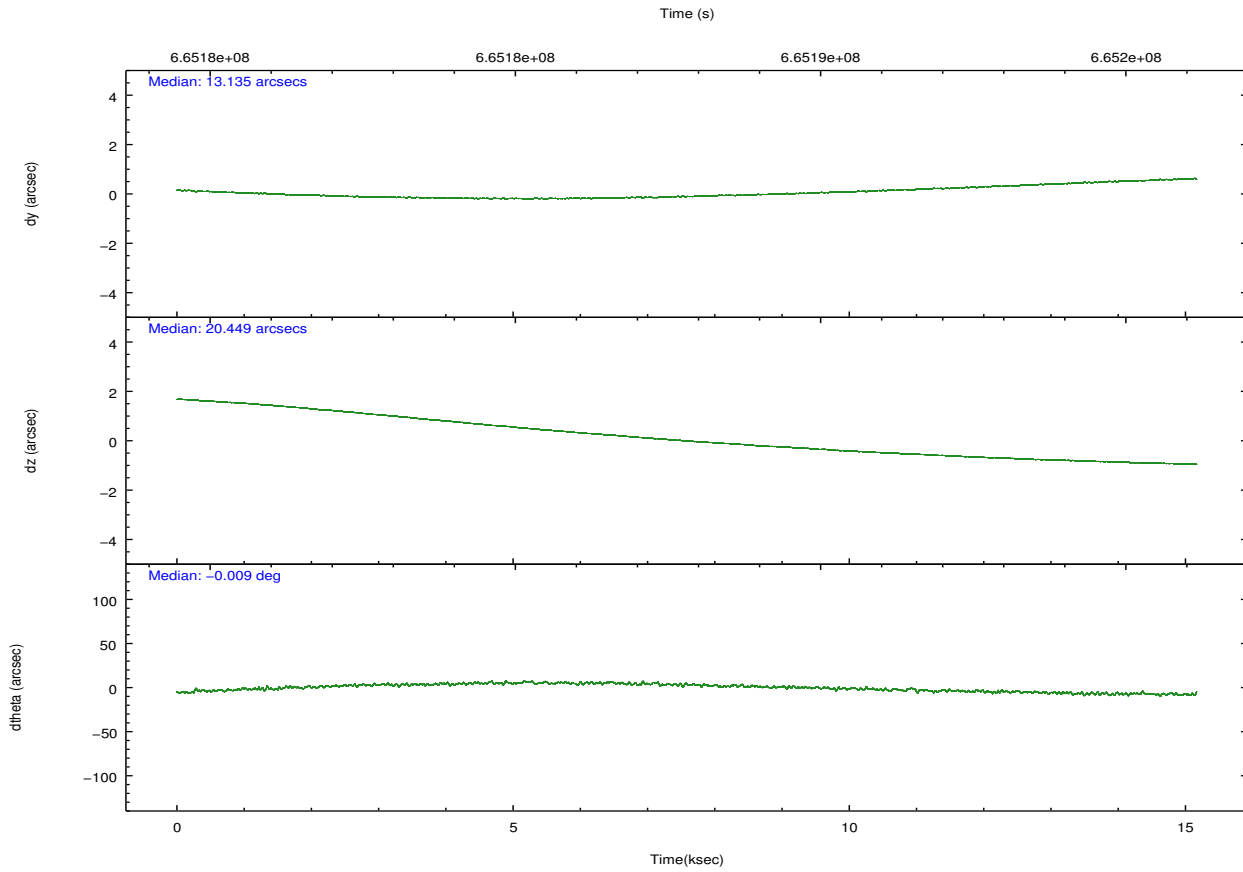
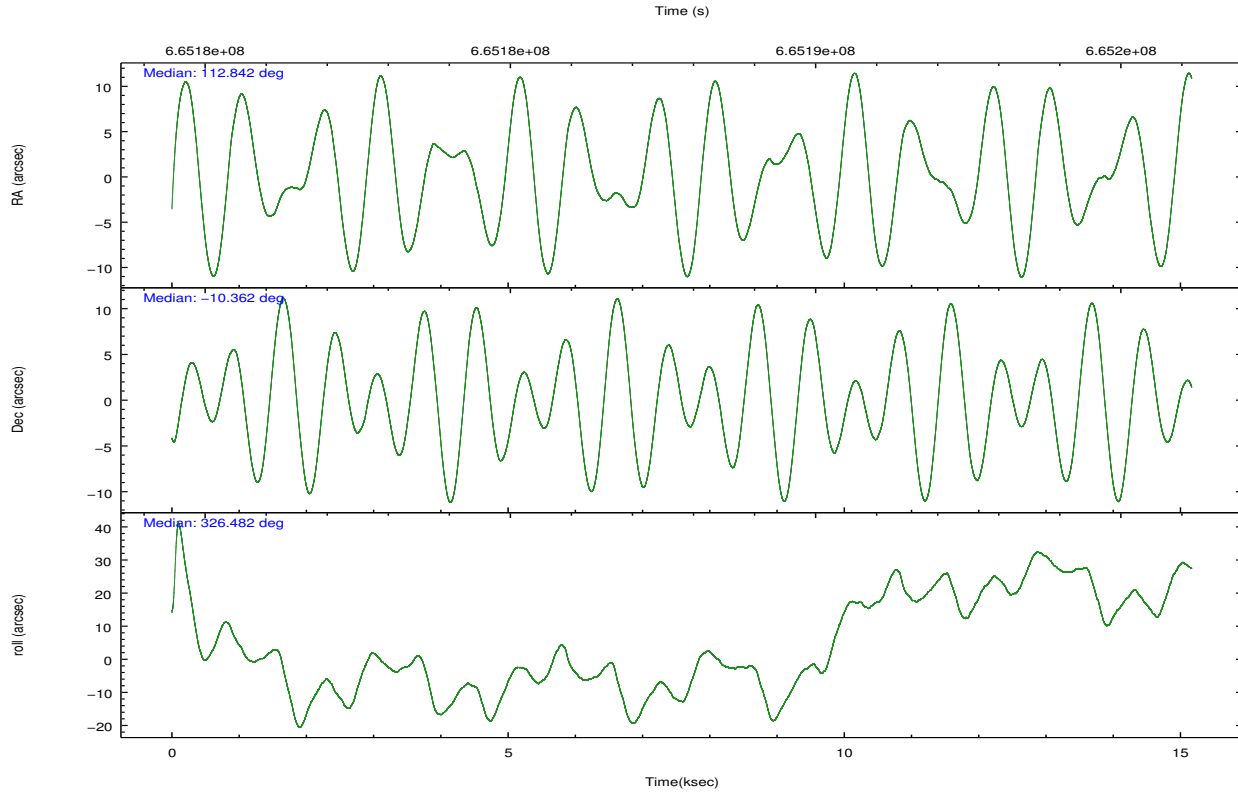
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-23678	ACIS-23678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	112.813845	112.8417421460693
[deg] Pointing Dec	-10.360429	-10.36173300778903
[deg] Pointing Roll	326.319605	326.4812307809559
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	665180395.184000	665179166.7733999
Observation start date	2019-01-29T20:18:46	2019-01-29T19:59:26
[s] Observation end time (MET)	665195395.184000	665196666.0869499
Observation end date	2019-01-30T00:28:46	2019-01-30T00:51:06
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	N	N
CCD I1 on	N	N
CCD I2 on	O1	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	Y	Y
CCD S3 on	Y	Y
CCD S4 on	Y	Y
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



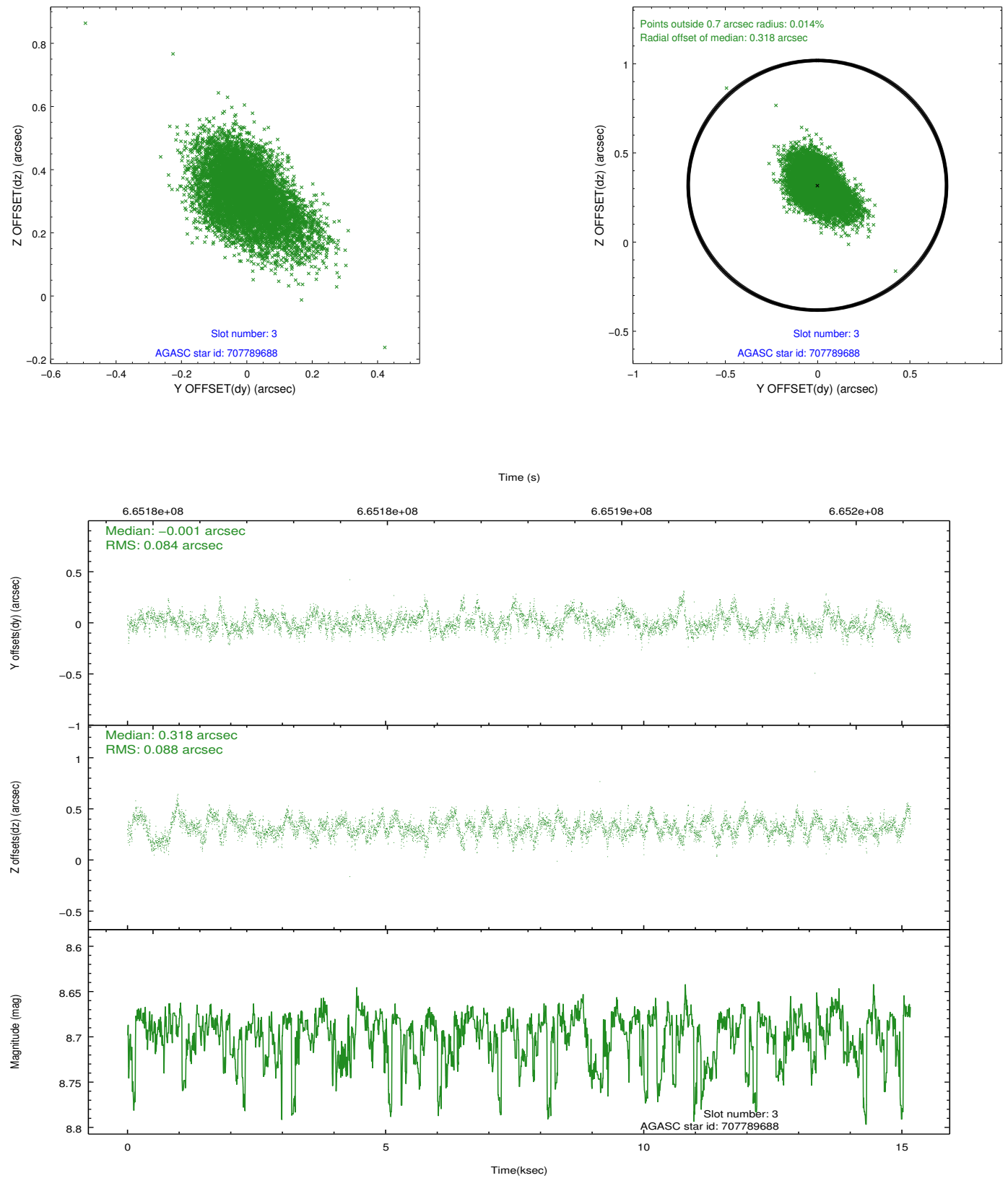


Slot Statistics

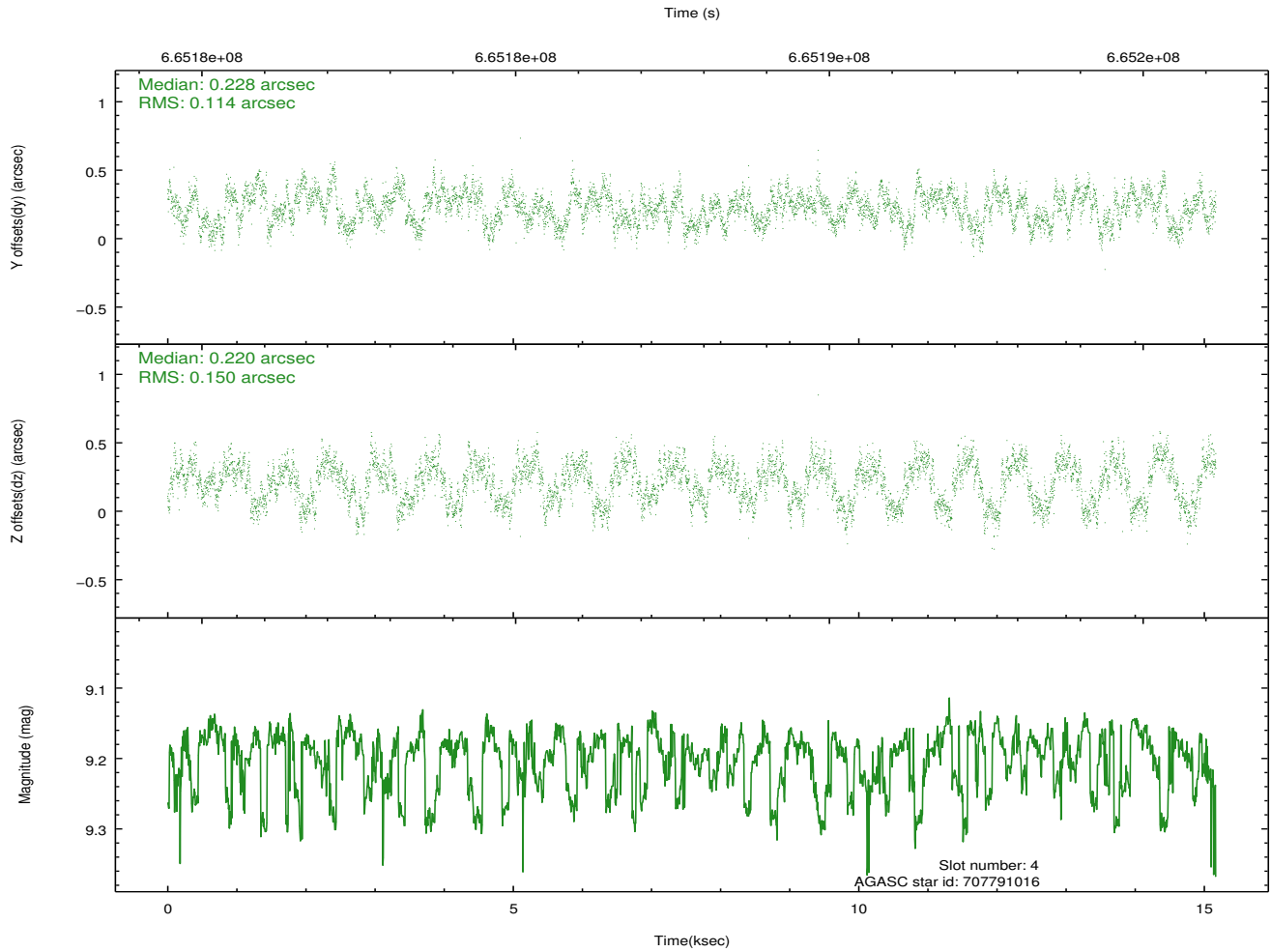
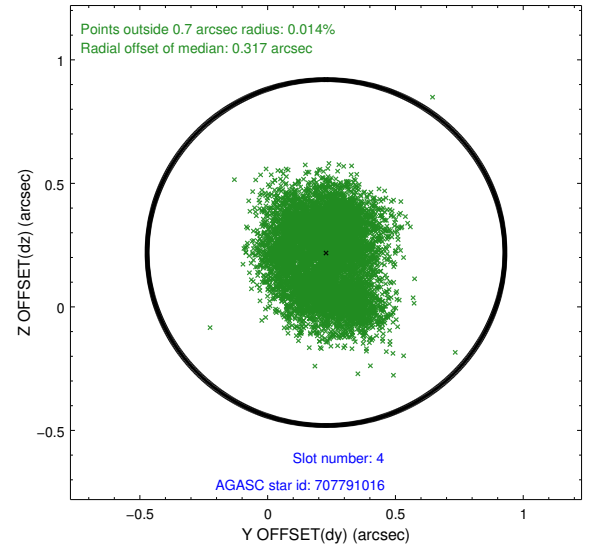
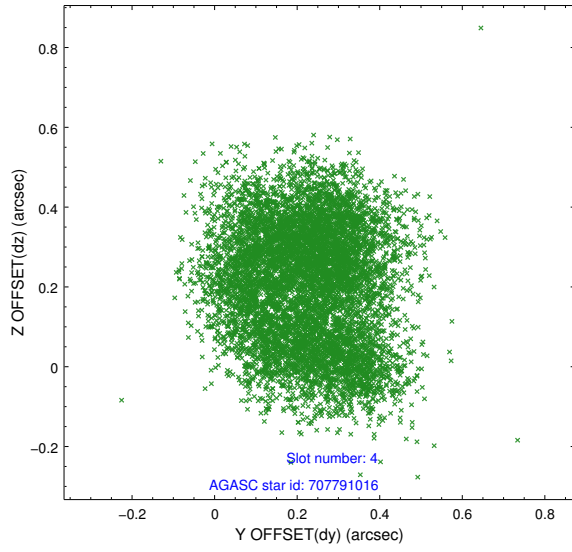
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.09	3700	1.000	0.338	0.052	0.013	0.019	0.000000	0.000000	930.37	-1737
1	FID		ACIS-S-2	6.99	3700	1.000	-0.199	0.026	0.012	0.020	0.000000	0.000000	-765.91	-1742
2	FID		ACIS-S-3	7.25	3700	1.000	-0.158	-0.077	0.015	0.028	0.000000	0.000000	46.88	-1871
3	GUIDE	used	707789688	8.69	7395	1.000	-0.001	0.318	0.126	0.218	112.909009	-11.027186	1611.14	-1810
4	GUIDE	used	707791016	9.19	7382	1.000	0.228	0.220	0.207	0.307	112.719659	-10.548806	99.30	-749
5	GUIDE	used	707792056	9.38	7387	1.000	0.170	0.067	0.161	0.263	112.441036	-10.101780	-1615.01	41
6	GUIDE	used	707921456	8.27	7395	1.000	-0.247	-0.218	0.094	0.146	113.321364	-10.479915	1733.84	636
7	GUIDE	used	707937248	8.04	7396	1.000	-0.156	-0.356	0.130	0.203	113.077876	-10.500200	1057.22	99

2.4 Star Slots

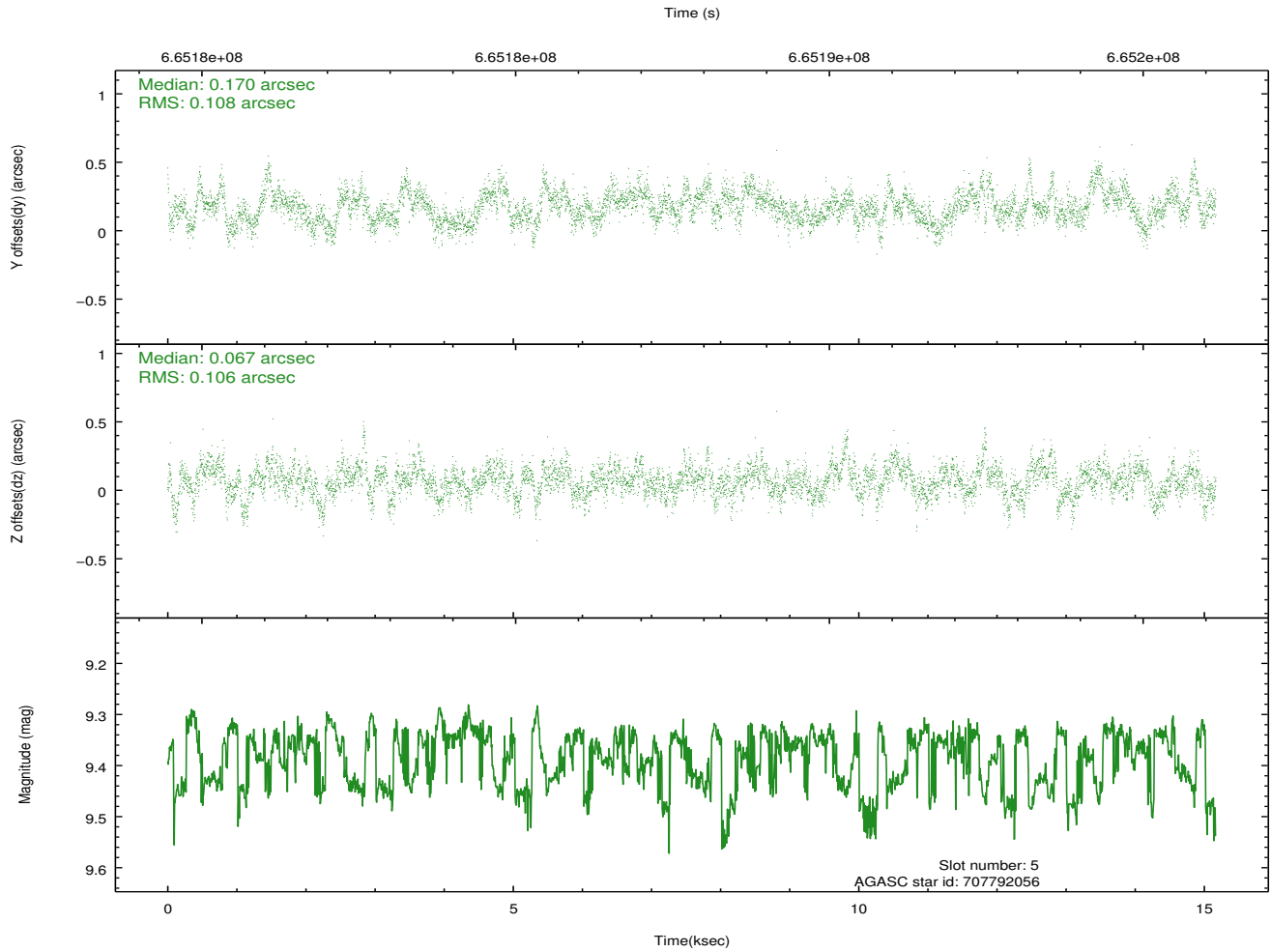
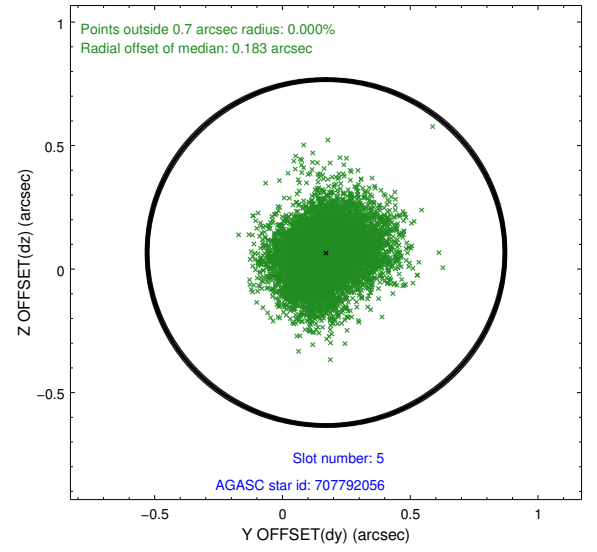
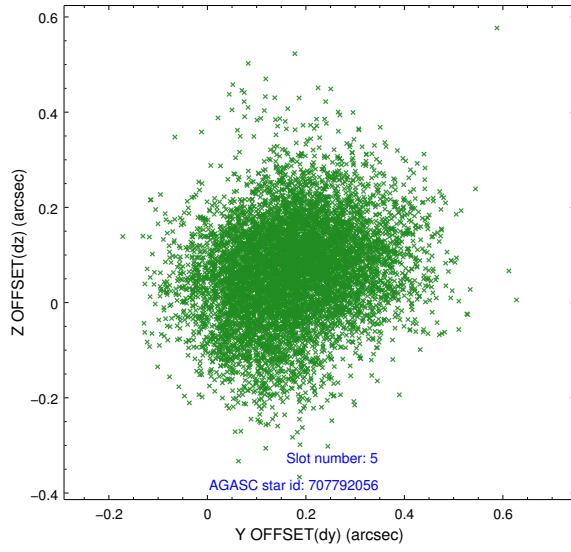
2.4.1 Slot 3



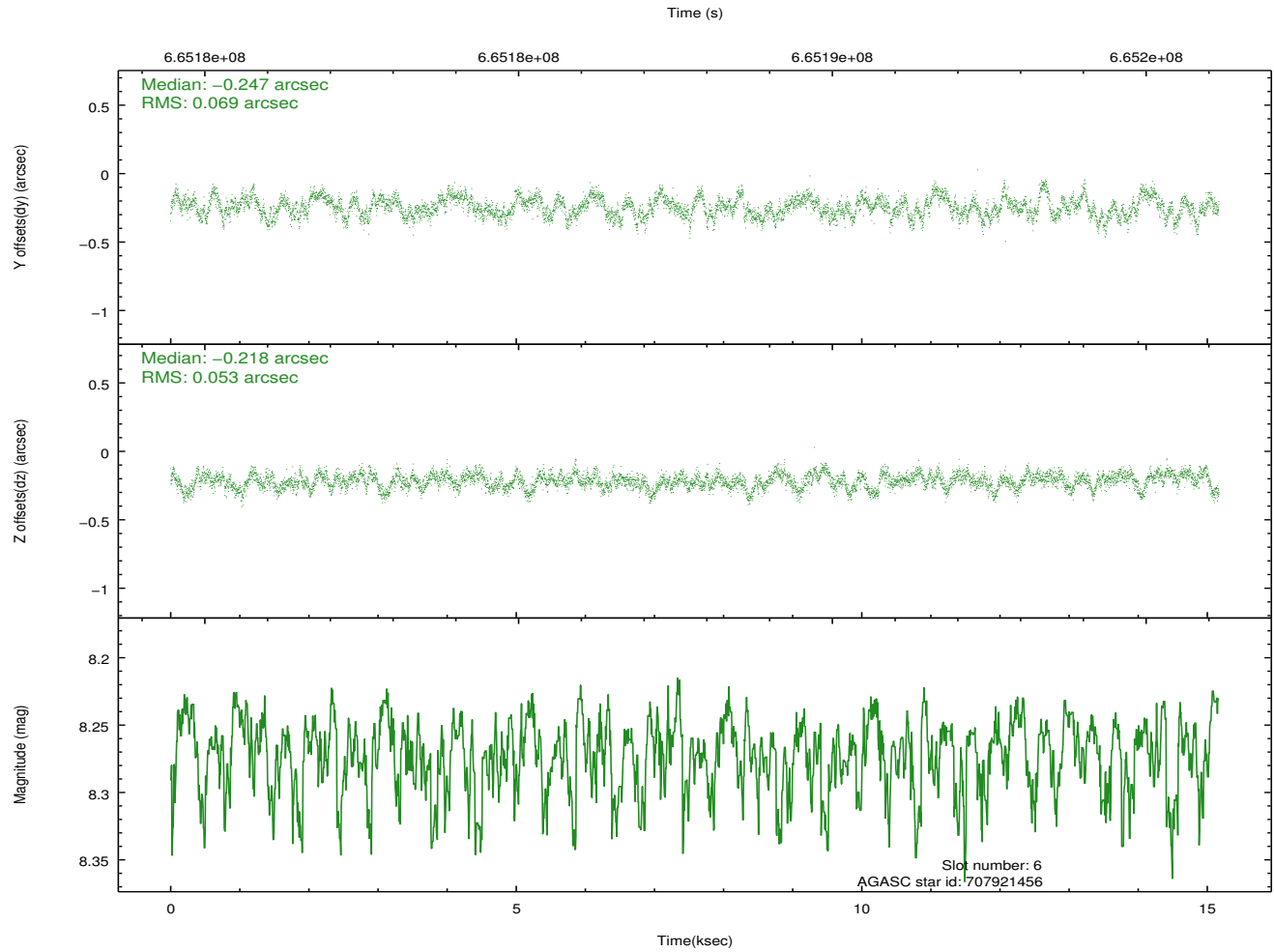
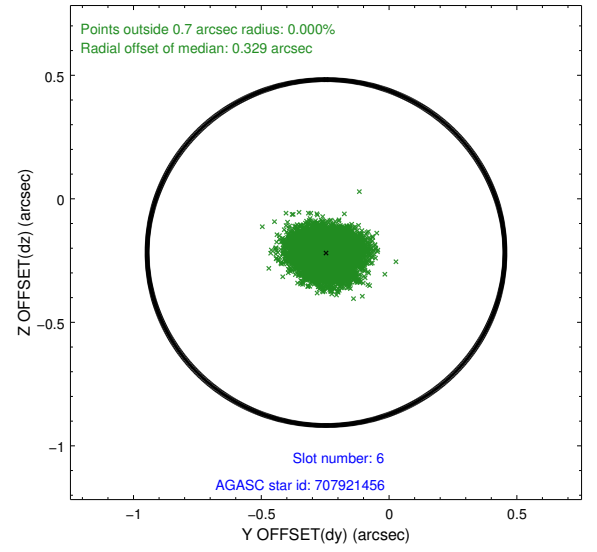
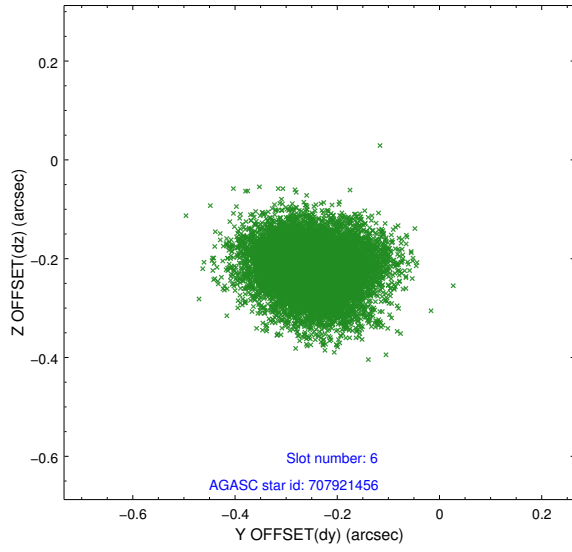
2.4.2 Slot 4



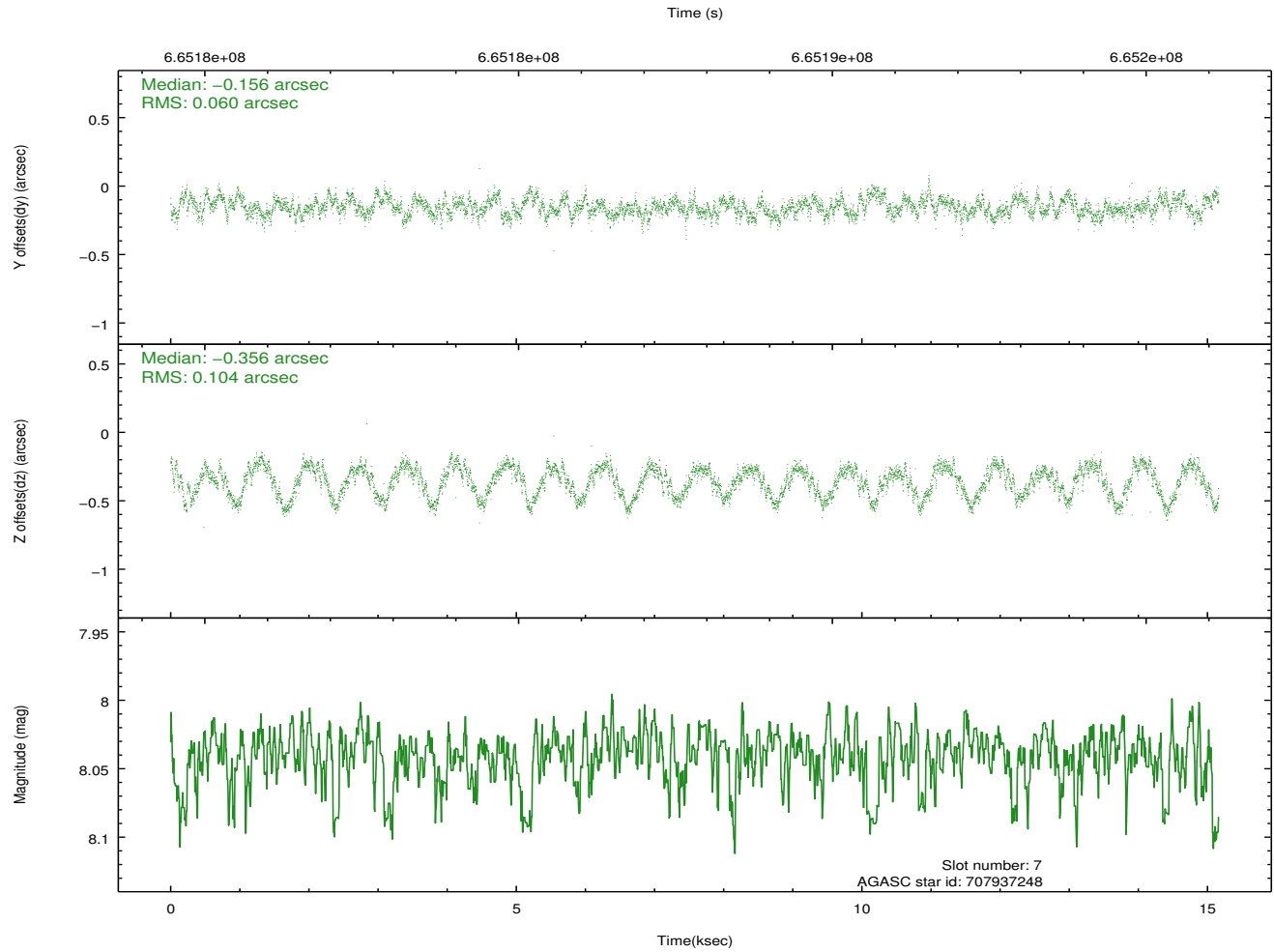
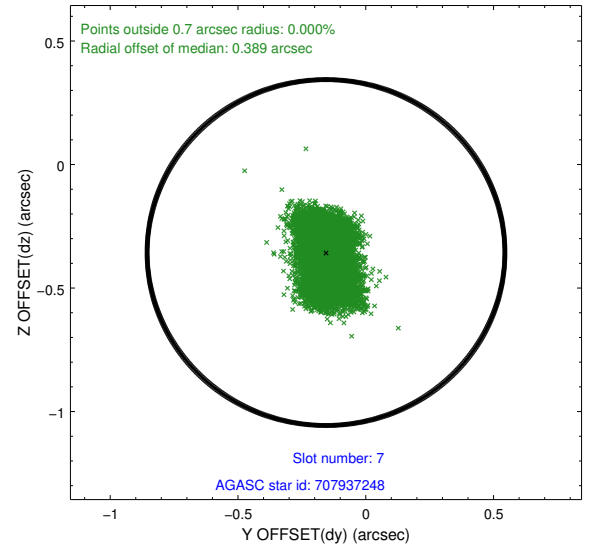
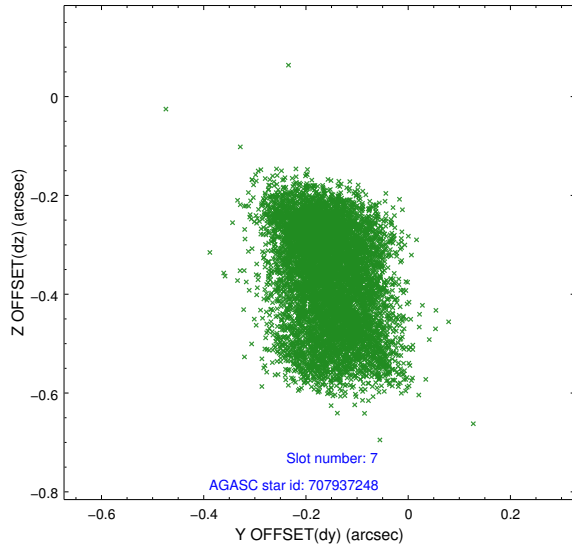
2.4.3 Slot 5



2.4.4 Slot 6

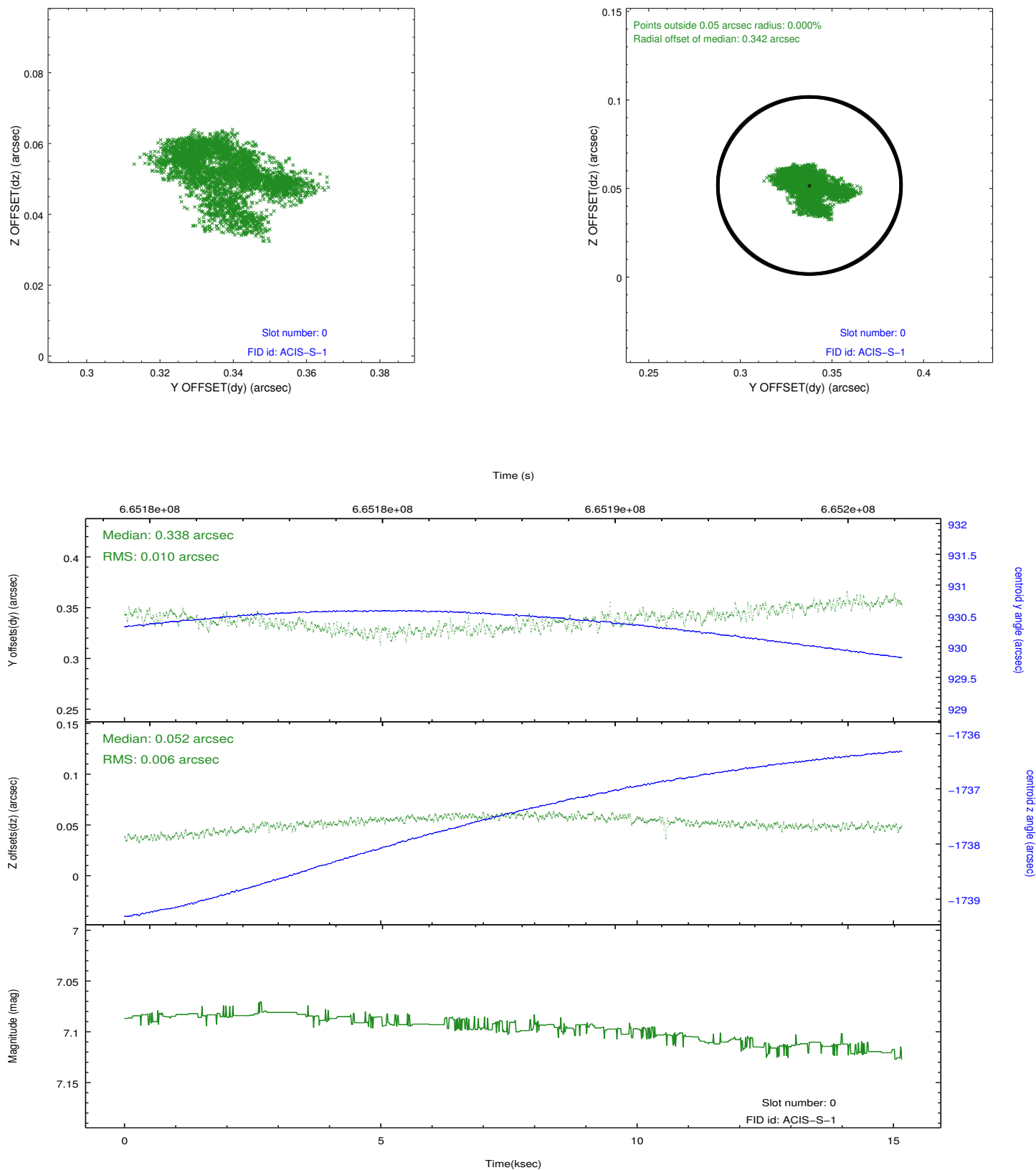


2.4.5 Slot 7

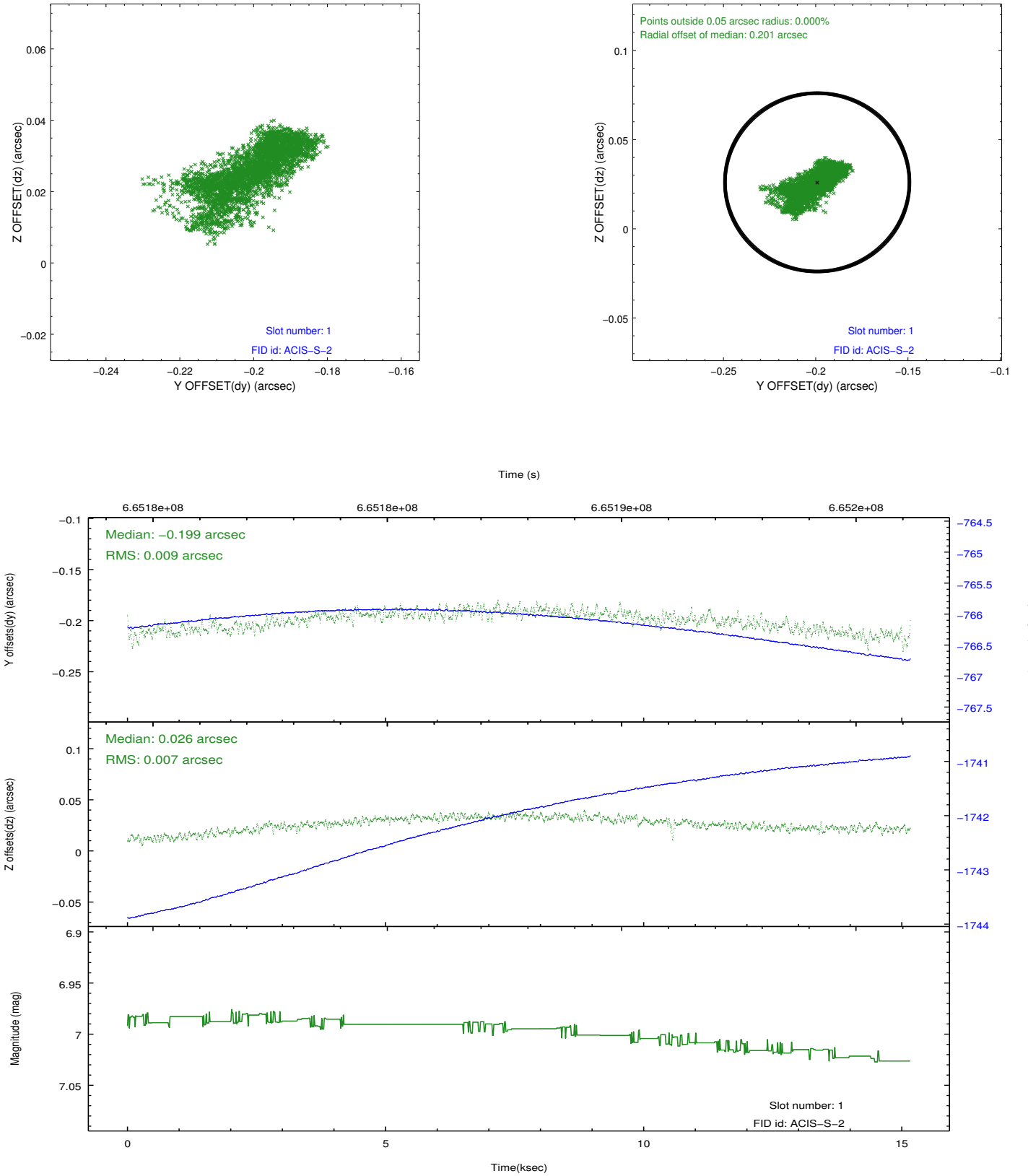


2.5 FID Slots

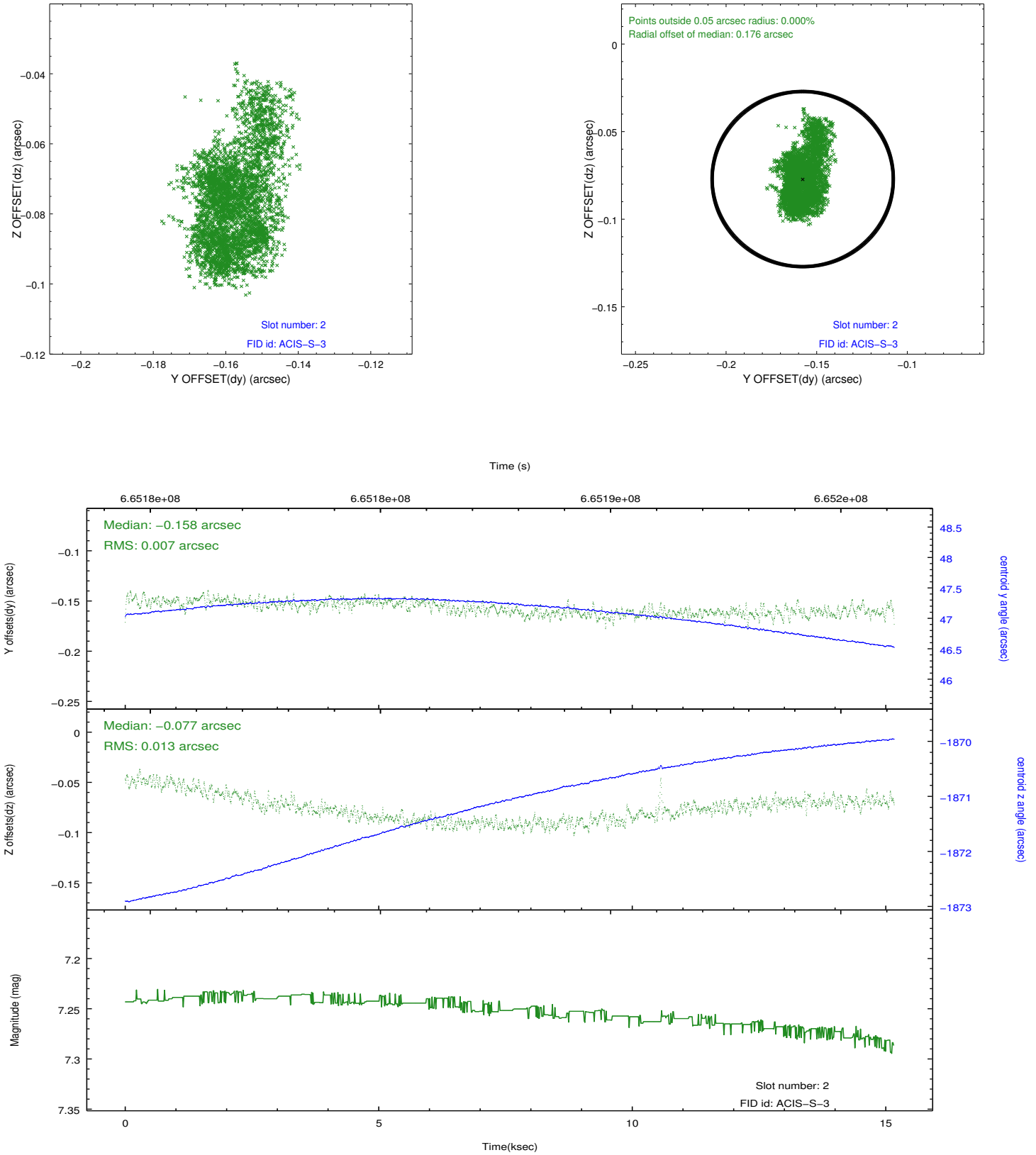
2.5.1 Slot 0



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)	2019.02.10
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	15.04989991045

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. In this case, the bias map for CCD = 2 could not be improved because no suitable data at a compatible temperature and time range are available to use as replacement values. The bias map used in this processing is the original bias map telemetered with the observation.