

V&V Reference Report

L2 ASCDS Version : 10.7

Observation 20333 - L2 Version 2
Chandra X-Ray Center

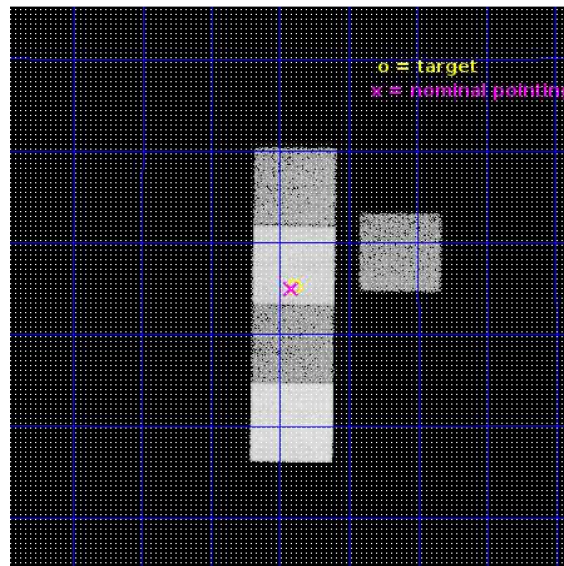
L2 Processing Date : Nov 15 2018

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1 Front

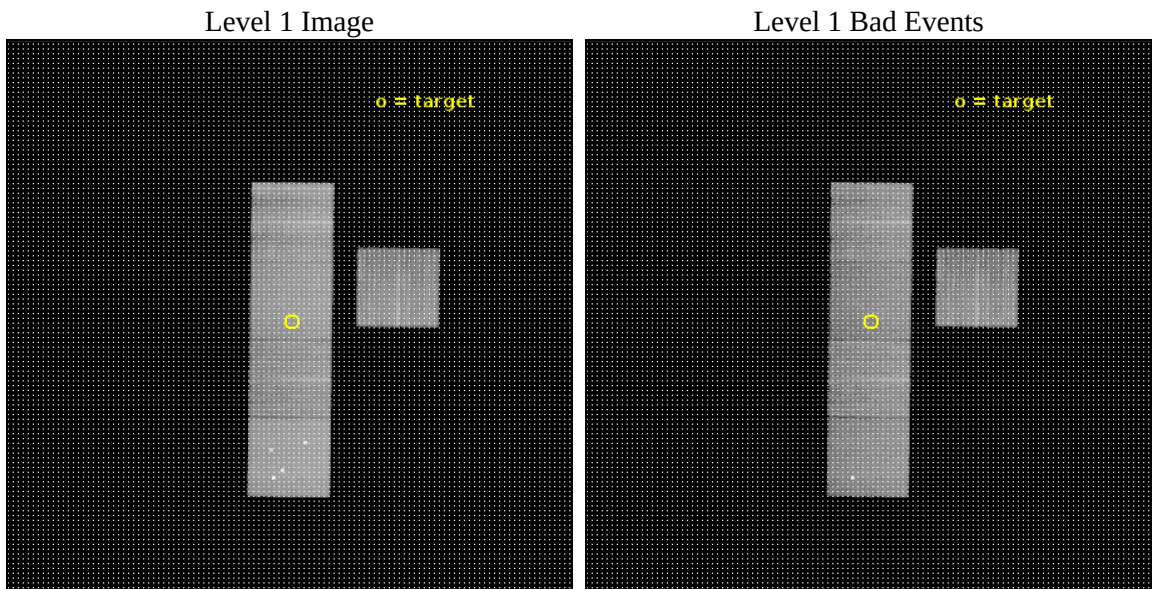
seq_num	503026	Sequence number
obs_id	20333	Observation id
title	Direct Observation of Accretion onto a Hypernova's Newly Formed Black Hole	Proposal title
observer	Dan Milisavljevic	Principal investigator
object	SN2002ap	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	24.099583	Observer's specified target RA [deg]
dec_targ	15.753667	Observer's specified target Dec [deg]
ra_nom	24.104380894974	Nominal RA [deg]
dec_nom	15.749595587003	Nominal Dec [deg]
roll_nom	270.69960569773	Nominal Roll [deg]
revision	2	Processing version of data
ontime	16051.435147643	Sum of GTIs [s]
livetime	15841.711330544	Livetime [s]
ontime3	16051.312027693	Sum of GTIs [s]
ontime5	16051.394107699	Sum of GTIs [s]
ontime6	16051.353067636	Sum of GTIs [s]
ontime7	16051.435147643	Sum of GTIs [s]
ontime8	16051.27098763	Sum of GTIs [s]
l2events	196650	Number of level 2 events



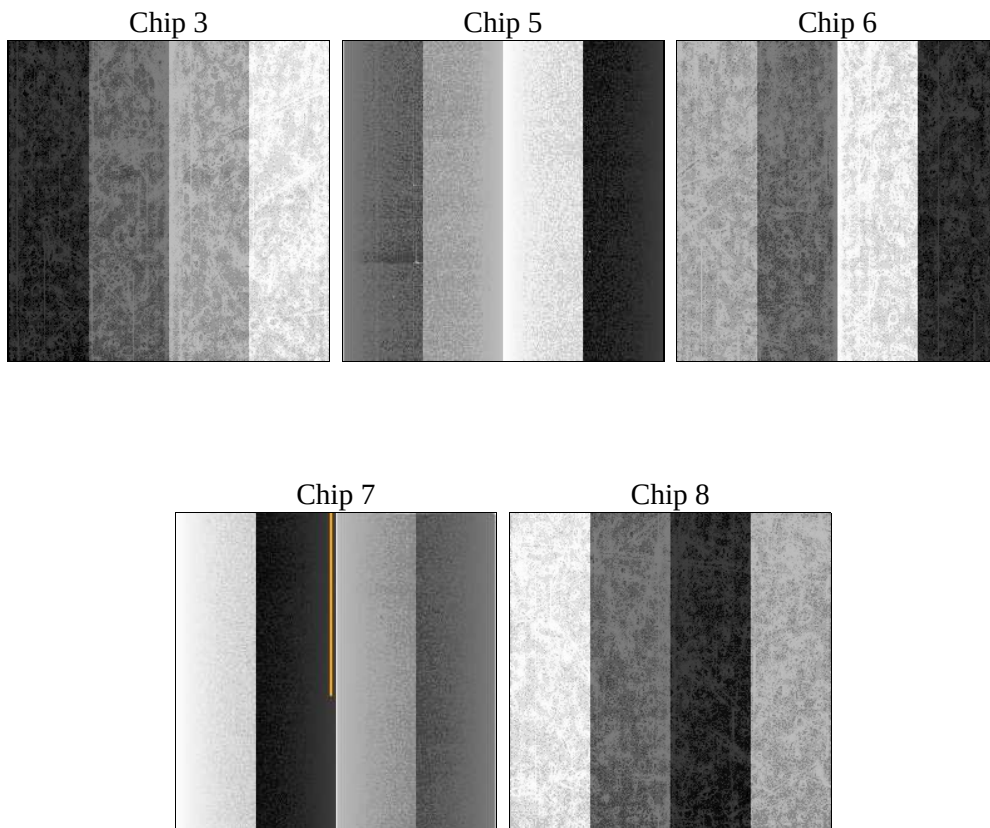
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	16000.000000	[s] Scheduled observation exposure time
ascdsver	10.7	Processing system revision	ontime	16051.435147643	Sum of GTIs [s]
caldsver	4.8.0.1	 	ontime3	16051.312027693	Sum of GTIs [s]
date	2018-11-15T20:56:24	Date and time of file creation	ontime5	16051.394107699	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	16051.353067636	Sum of GTIs [s]
			ontime7	16051.435147643	Sum of GTIs [s]
			ontime8	16051.27098763	Sum of GTIs [s]
			l1events	783446	Number of level 1 events

2.1.4 Events

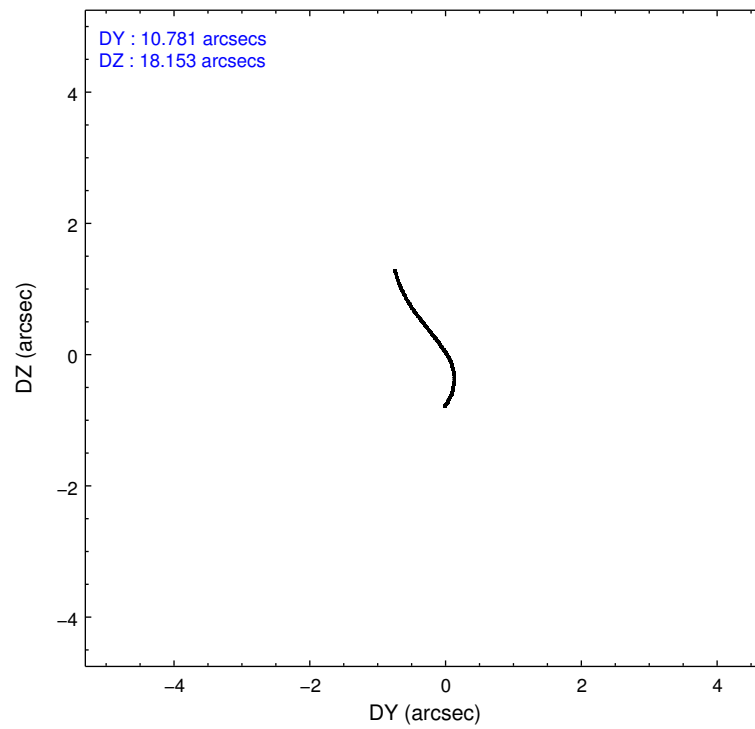
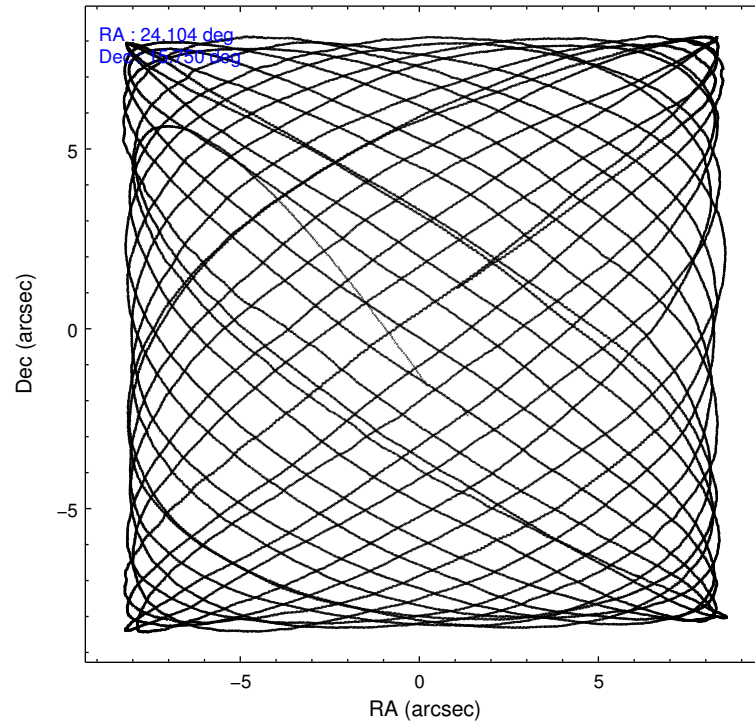
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	116790	215948	127217	160910	162581
rejected events	104291	108190	112887	91727	118090
rejected %	89%	50%	88%	57%	72%

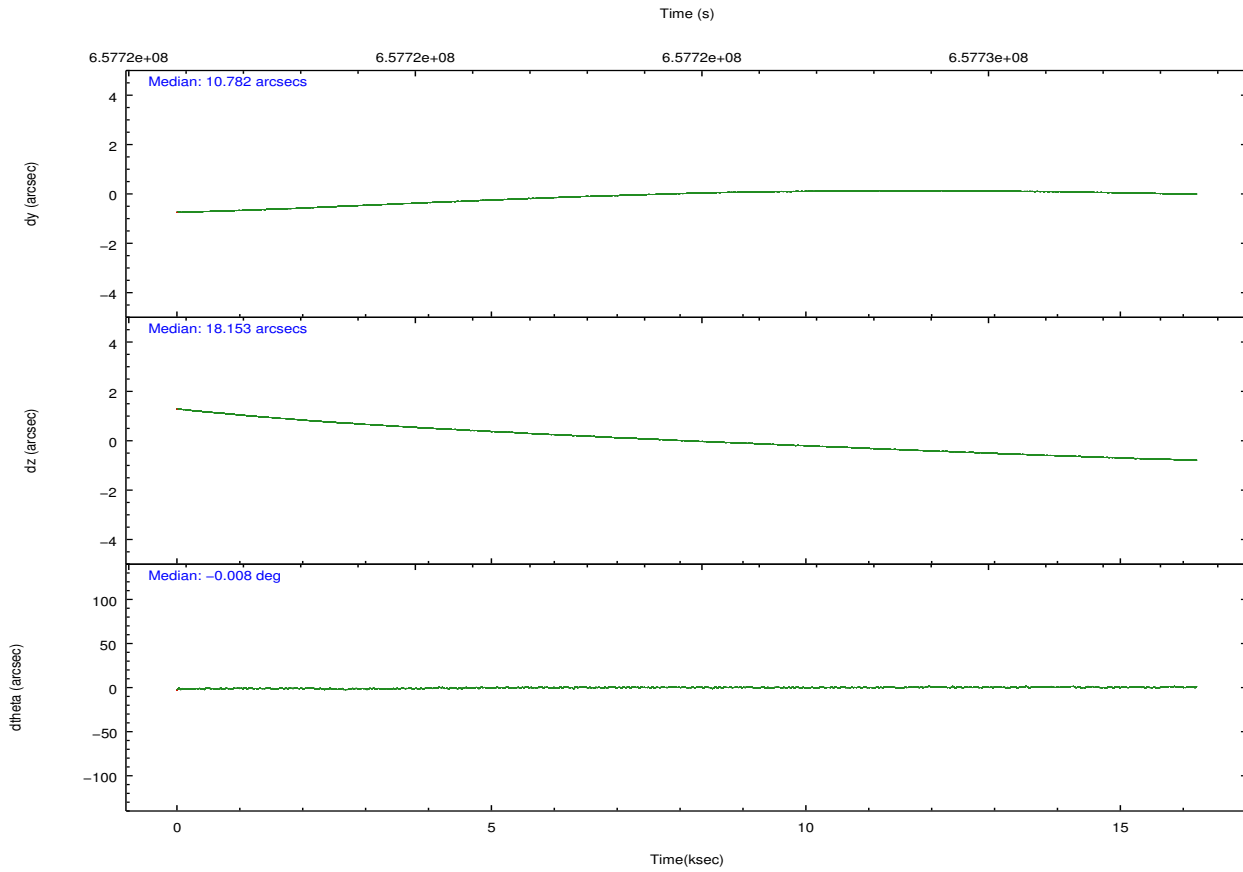
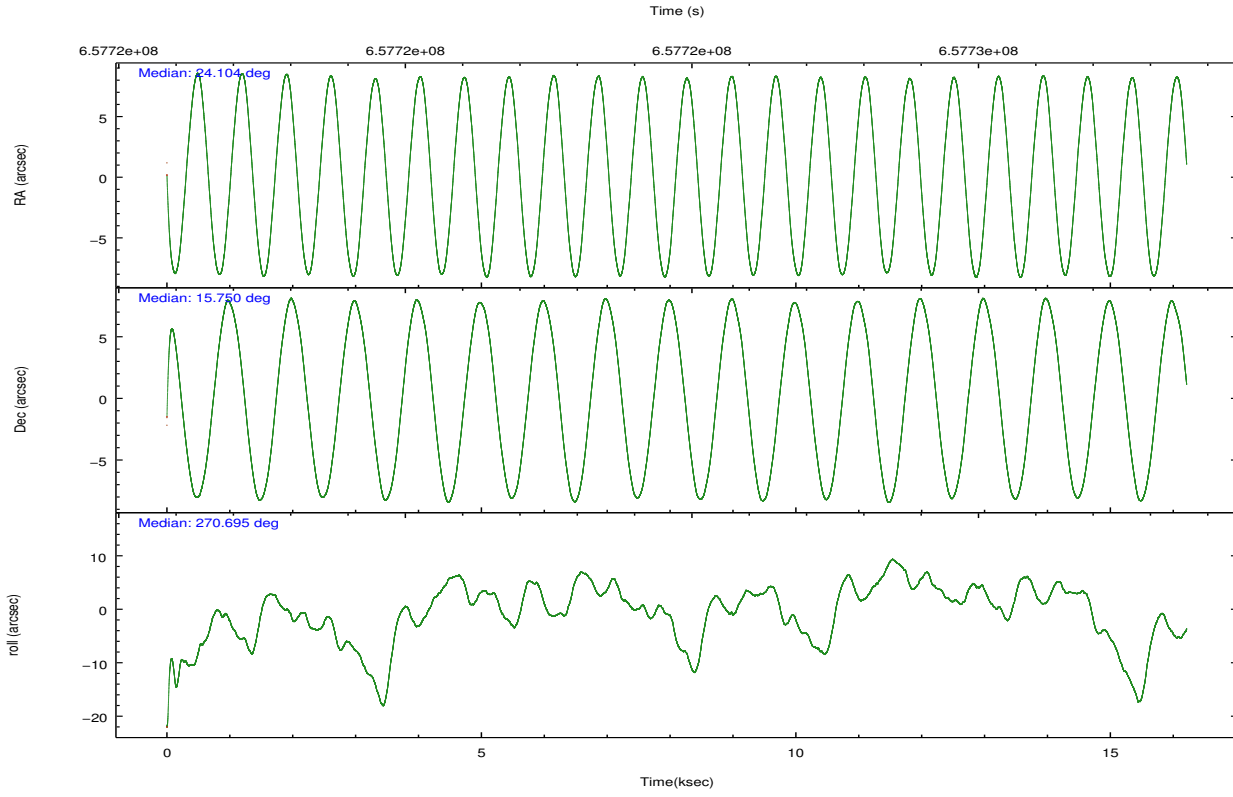
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	4287	17720	4696	5770	12381
	3%	8%	3%	3%	7%
grade 1 events	62	473	60	252	140
	0%	0%	0%	0%	0%
grade 2 events	2762	32050	3445	14917	10817
	2%	14%	2%	9%	6%
grade 3 events	1369	2967	1373	5406	4552
	1%	1%	1%	3%	2%
grade 4 events	1341	2832	1467	5321	4376
	1%	1%	1%	3%	2%
grade 5 events	5885	14303	5901	15813	8902
	5%	6%	4%	9%	5%
grade 6 events	2744	52224	3351	37795	12390
	2%	24%	2%	23%	7%
grade 7 events	98340	93379	106924	75636	109023
	84%	43%	84%	47%	67%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-35678	ACIS-35678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	24.089489	24.10438089497394	CCD I2 on	N	N
[deg] Pointing Dec	15.772998	15.74959558700341	CCD I3 on	O1	Y
[deg] Pointing Roll	270.547035	270.6996056977325	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	657716850.184000	657715966.56585	CCD S5 on	N	N
Observation start date	2018-11-04T11:06:21	2018-11-04T10:52:46	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	657732850.184000	657733424.36689	On-chip summing requested	N	N
Observation end date	2018-11-04T15:33:01	2018-11-04T15:43:44	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



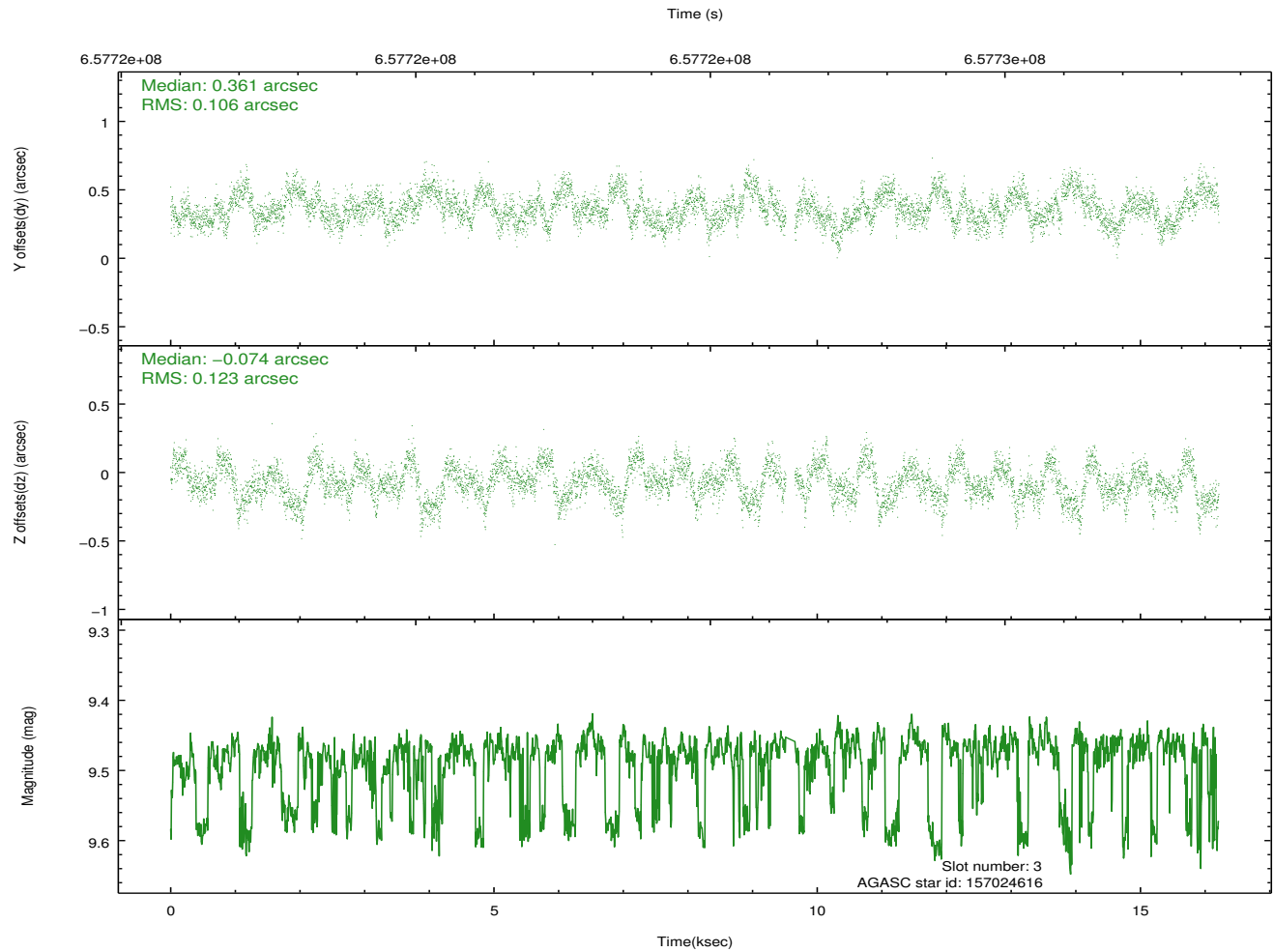
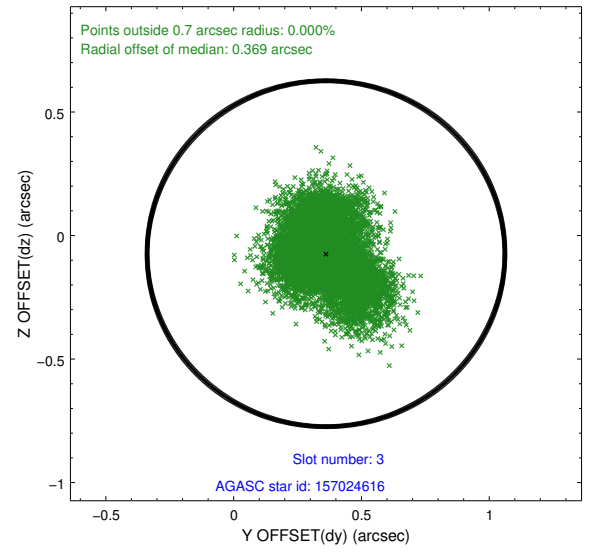
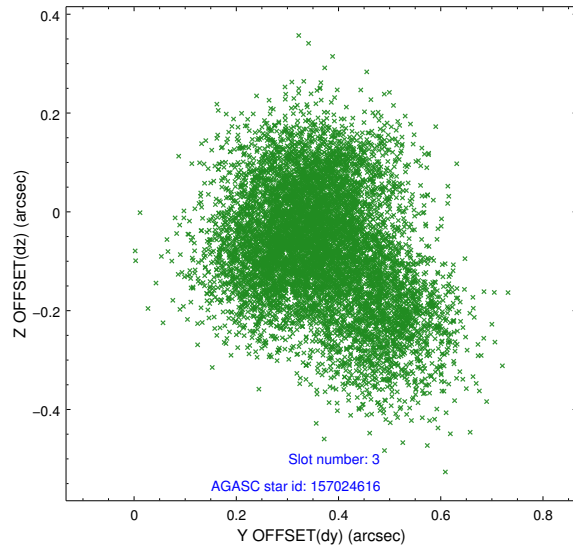


Slot Statistics

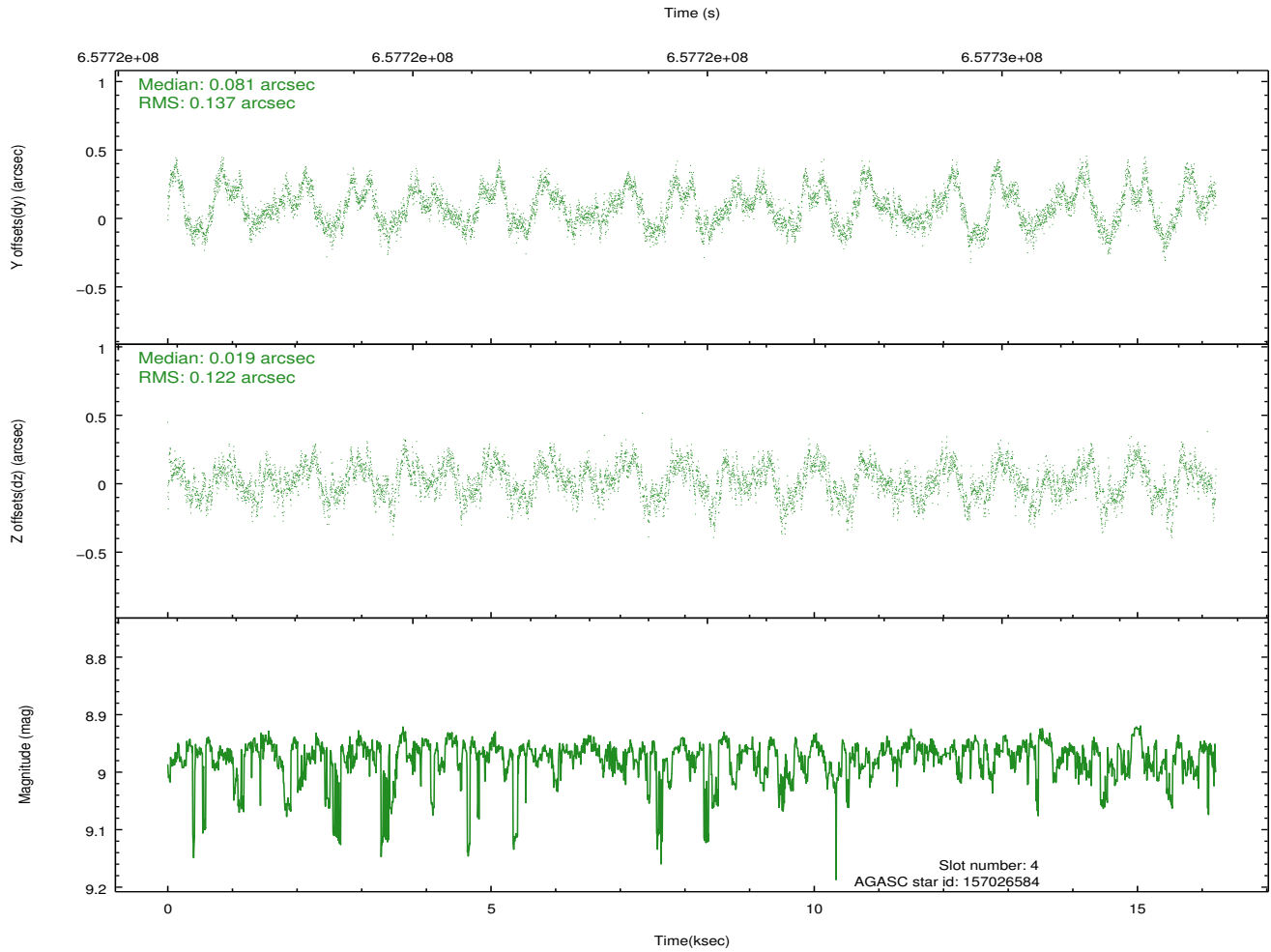
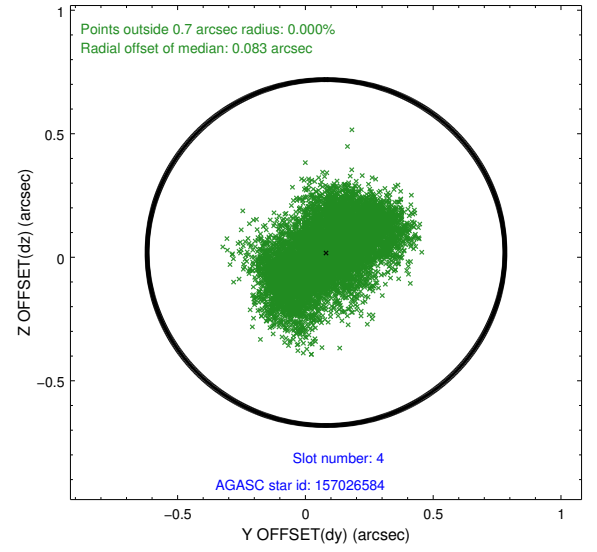
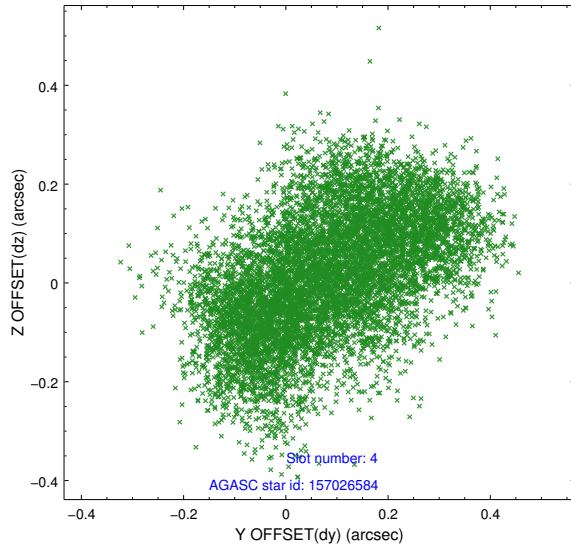
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.08	3955	1.000	0.143	-0.042	0.023	0.035	0.000000	0.000000	932.75	-1735
1	FID		ACIS-S-5	7.10	3955	1.000	-0.407	0.050	0.012	0.022	0.000000	0.000000	-1816.72	161
2	FID		ACIS-S-6	7.25	3955	1.000	0.242	0.007	0.018	0.027	0.000000	0.000000	398.02	806
3	GUIDE	used	157024616	9.48	7836	1.000	0.361	-0.074	0.175	0.280	23.644712	16.346768	-2080.62	-1516
4	GUIDE	used	157026584	8.97	7901	1.000	0.081	0.019	0.204	0.302	23.464180	15.603174	588.27	-2173
5	GUIDE	used	157036576	9.57	7897	1.000	-0.130	0.313	0.204	0.318	23.859578	16.337399	-2039.13	-774
6	GUIDE	used	157036752	9.00	7903	1.000	0.240	0.121	0.157	0.244	23.400830	16.130370	-1311.79	-2369
7	GUIDE	used	157953216	9.34	7895	1.000	-0.592	-0.386	0.213	0.344	24.189817	15.248642	1890.74	330

2.4 Star Slots

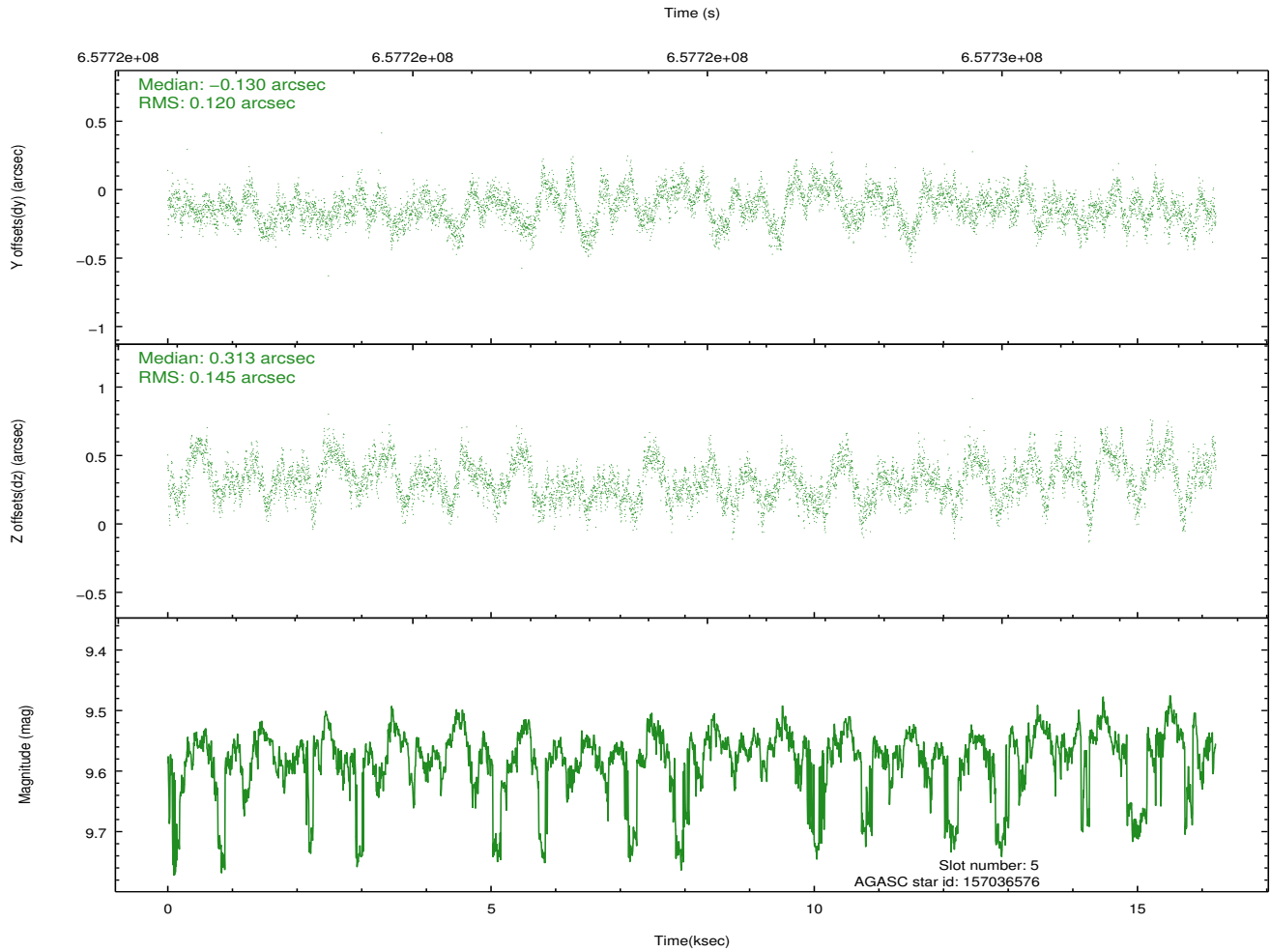
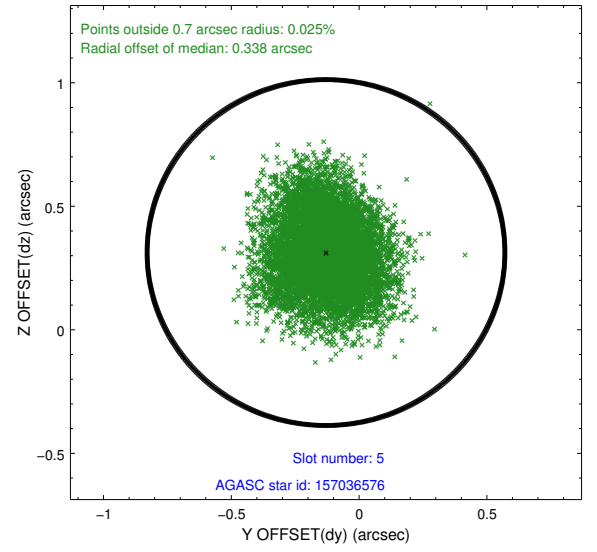
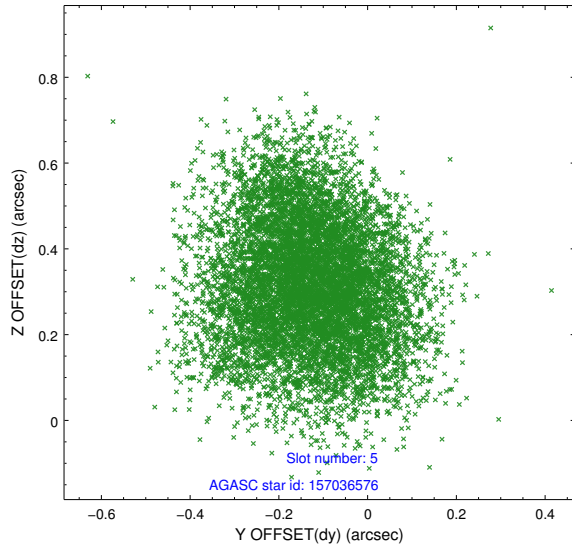
2.4.1 Slot 3



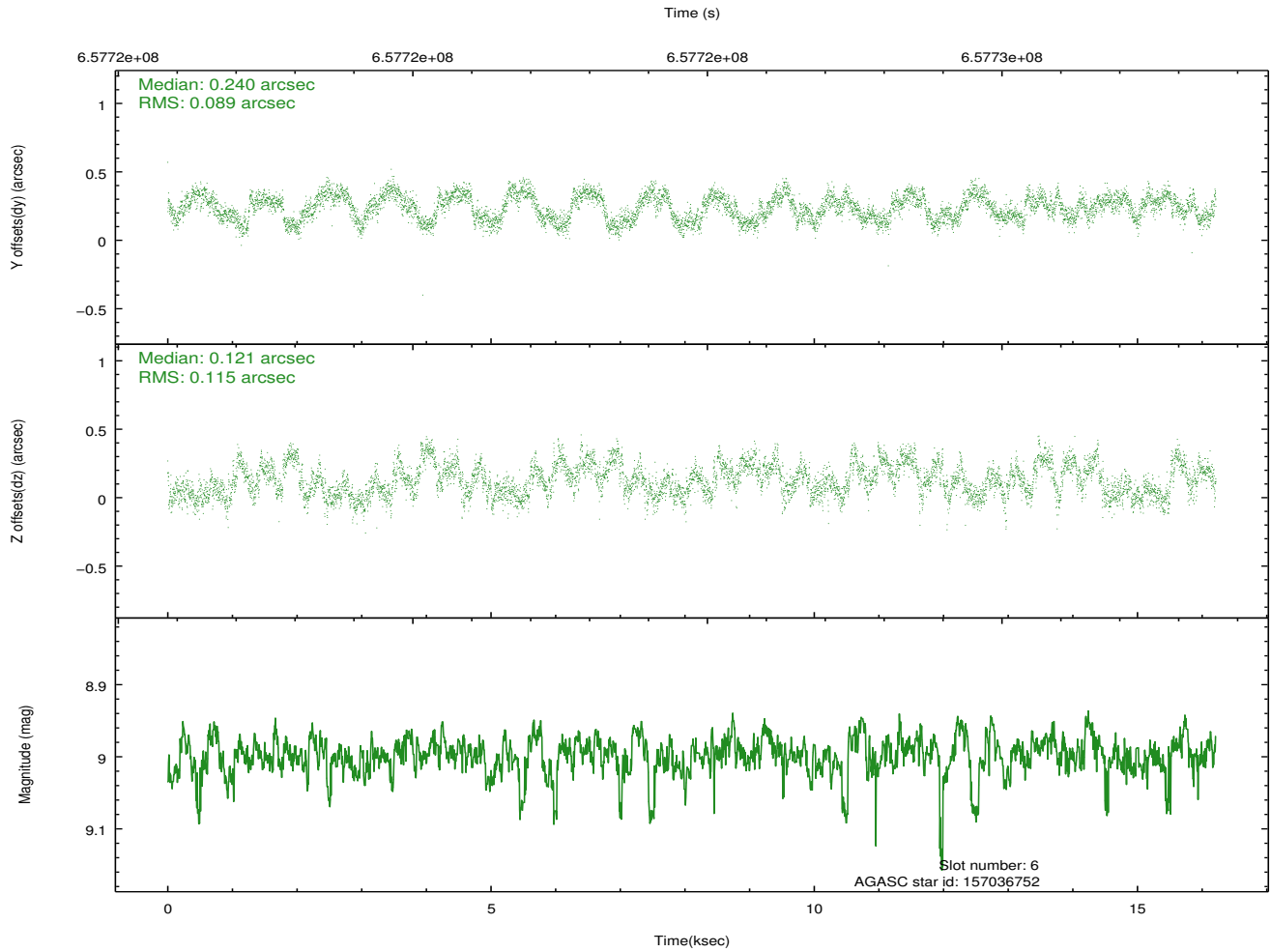
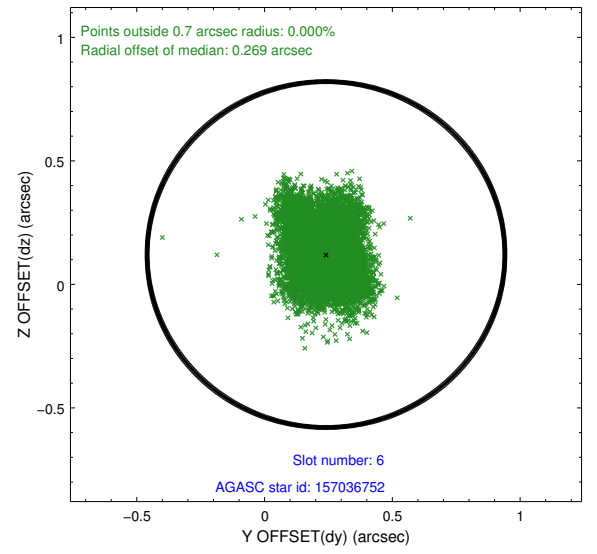
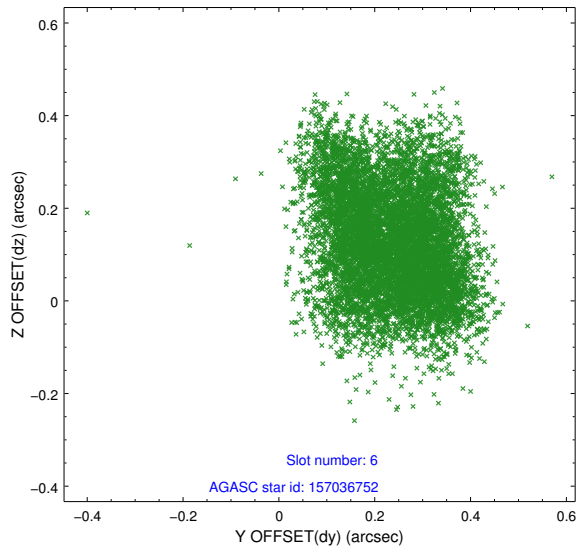
2.4.2 Slot 4



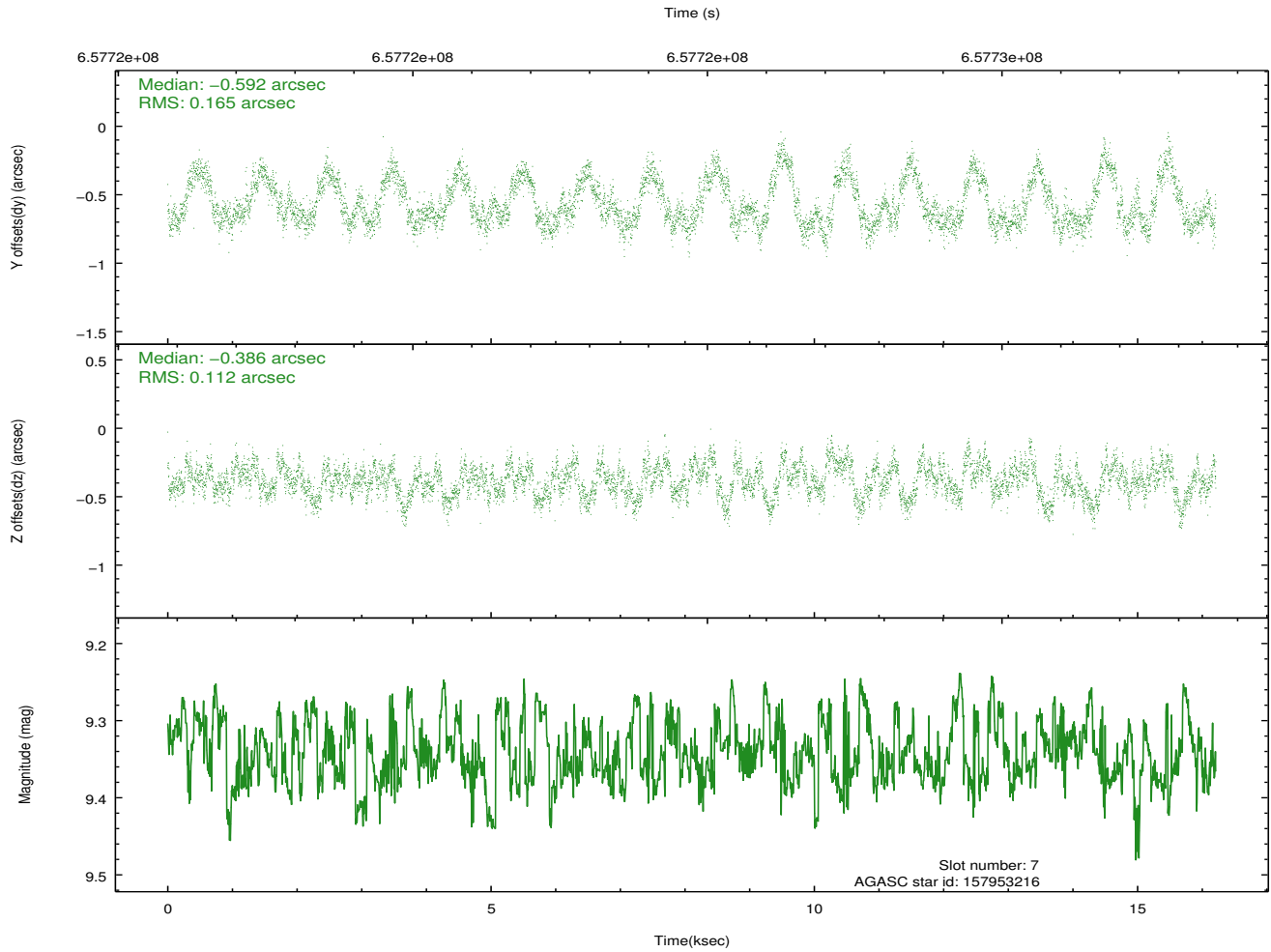
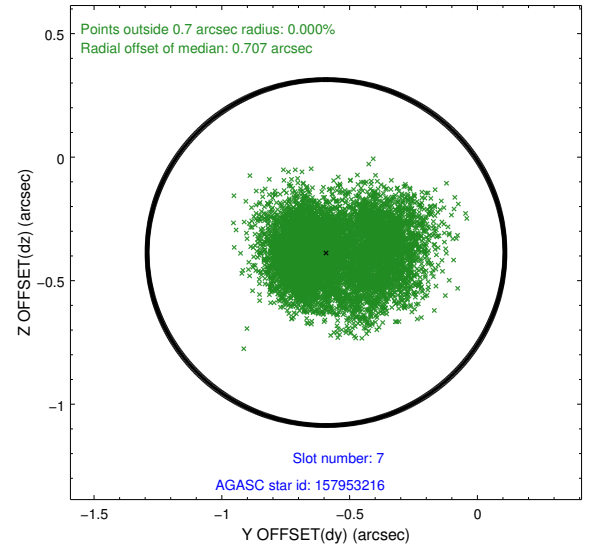
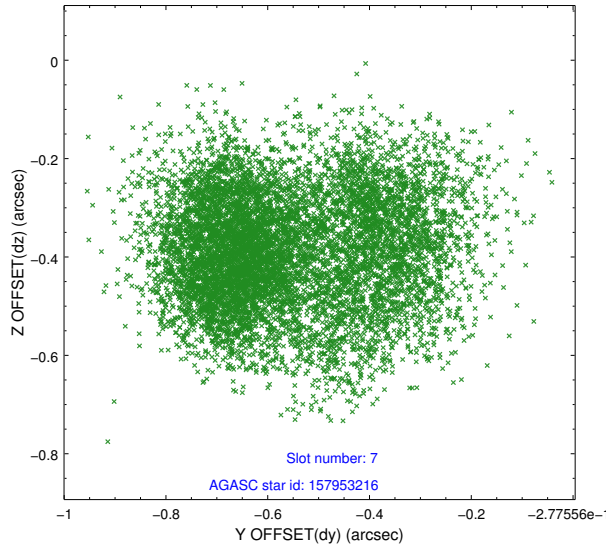
2.4.3 Slot 5



2.4.4 Slot 6

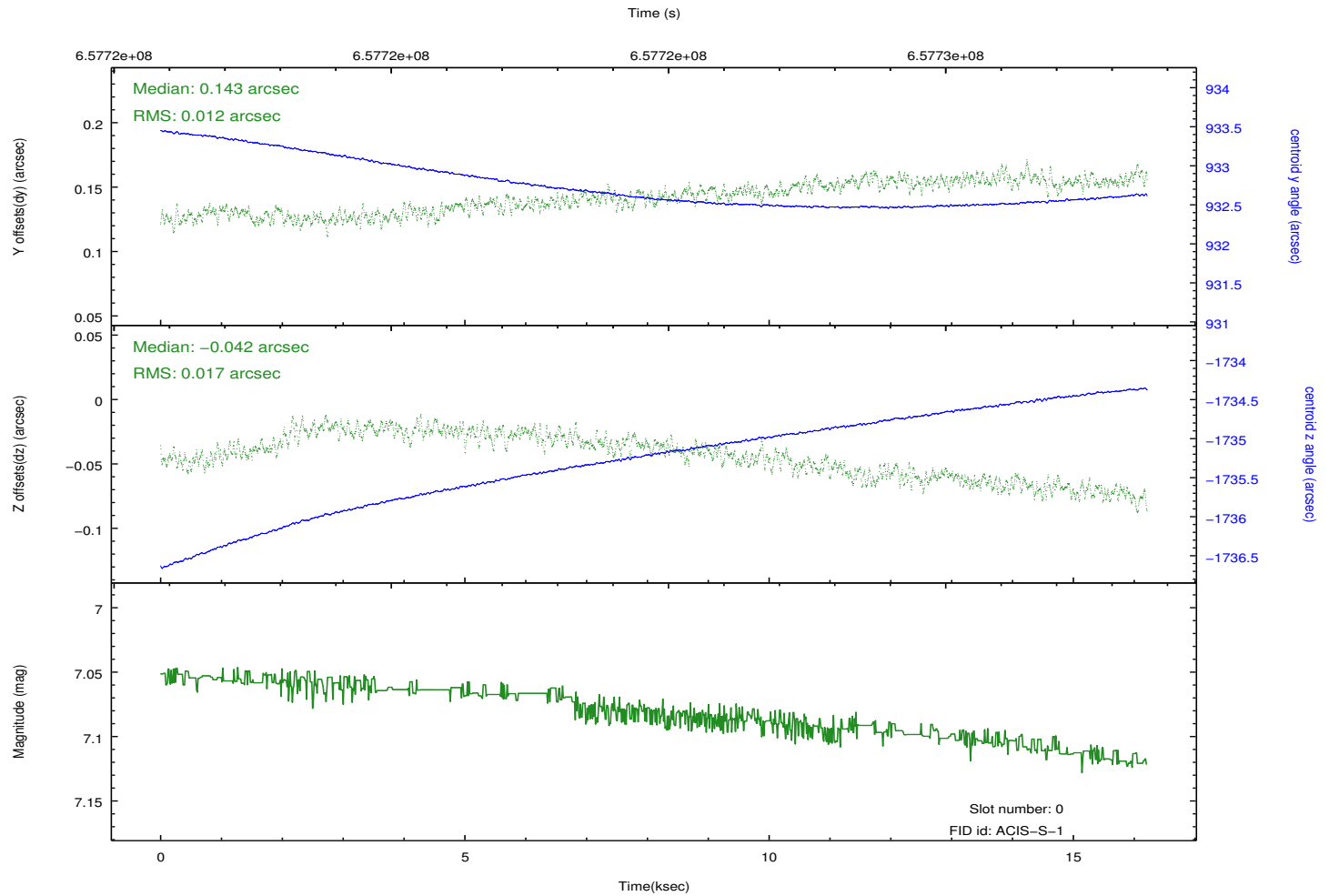
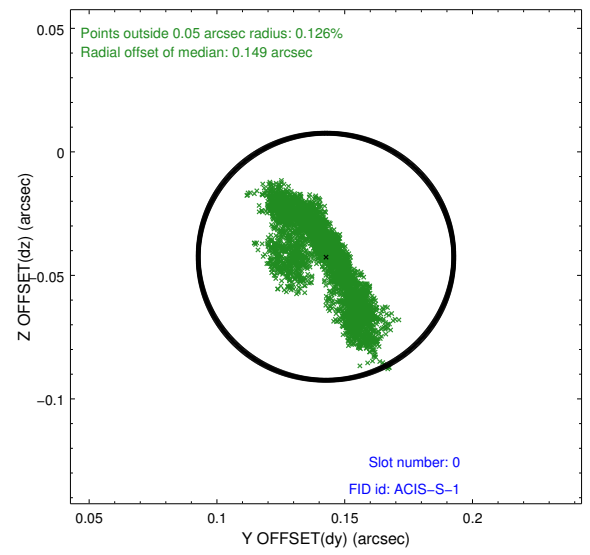
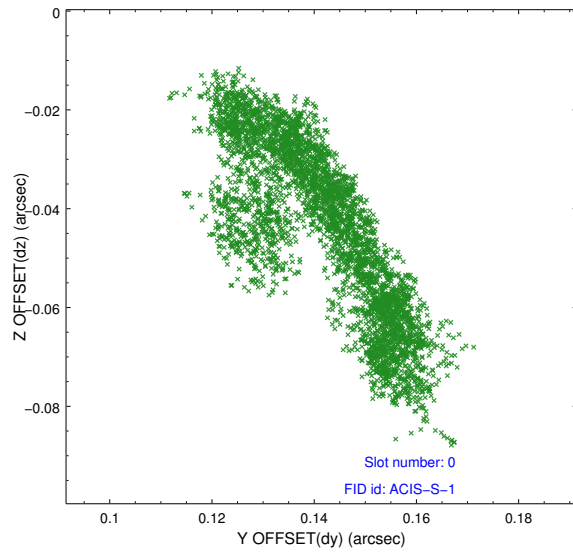


2.4.5 Slot 7

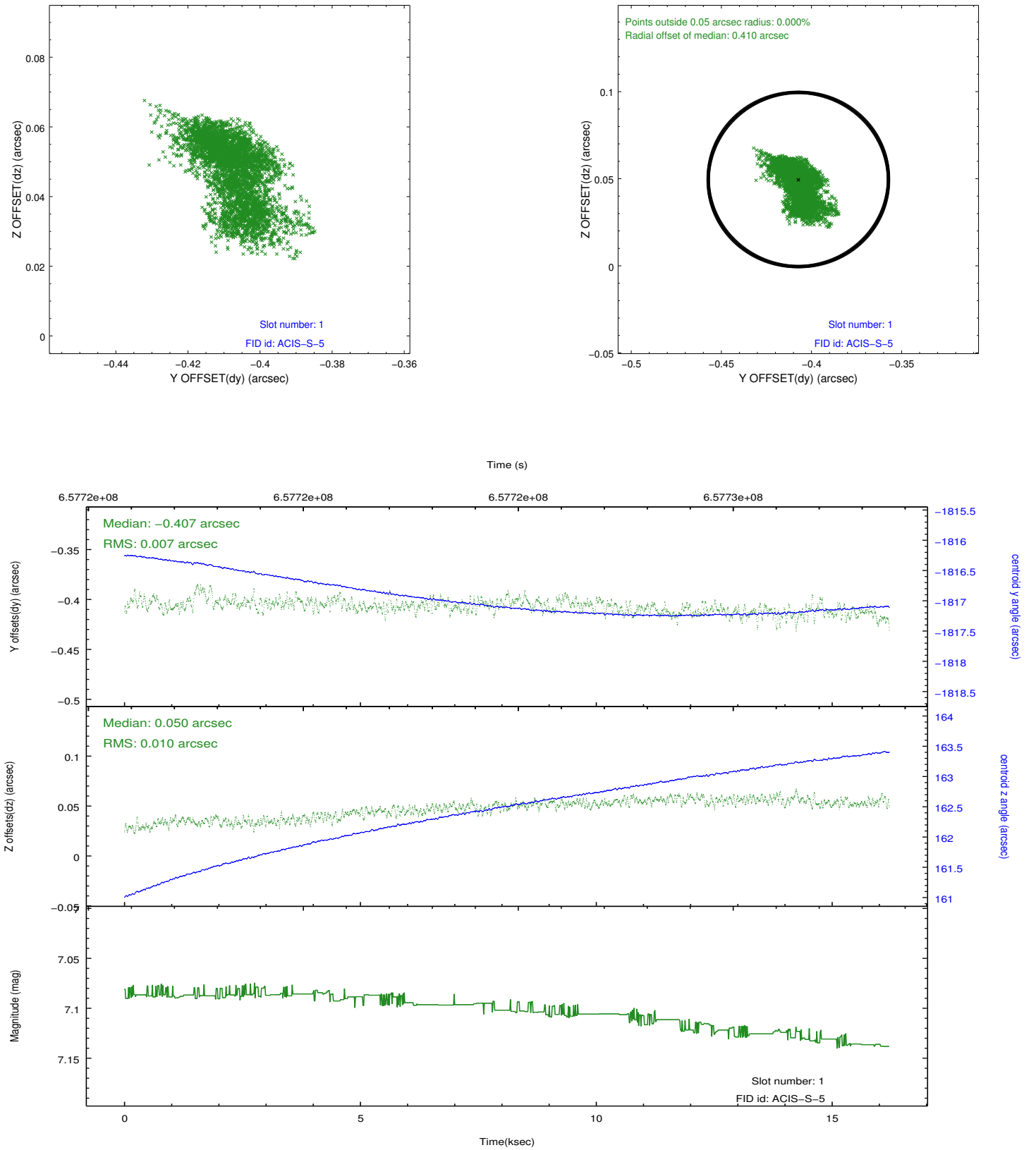


2.5 FID Slots

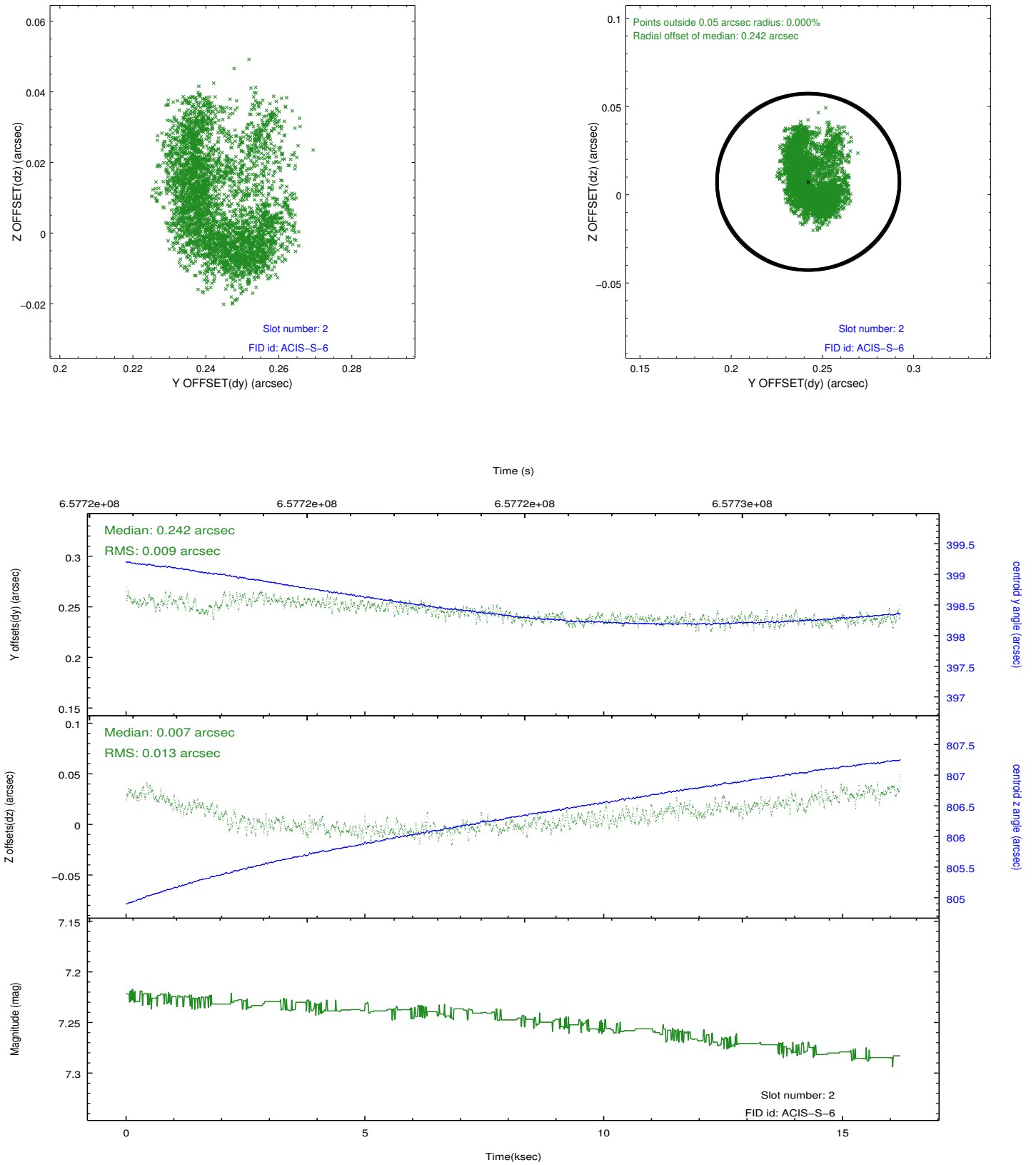
2.5.1 Slot 0



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)	2018.11.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	16.051435147643

A.2 Comments

A spatial region of the original bias map for CCD = 8 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 = 8 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: (24.12673,15.90646), (24.12669,15.90933), (24.08568,15.90882), (24.09651,15.90609).