

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 21372 - L2 Version 2
Chandra X-Ray Center

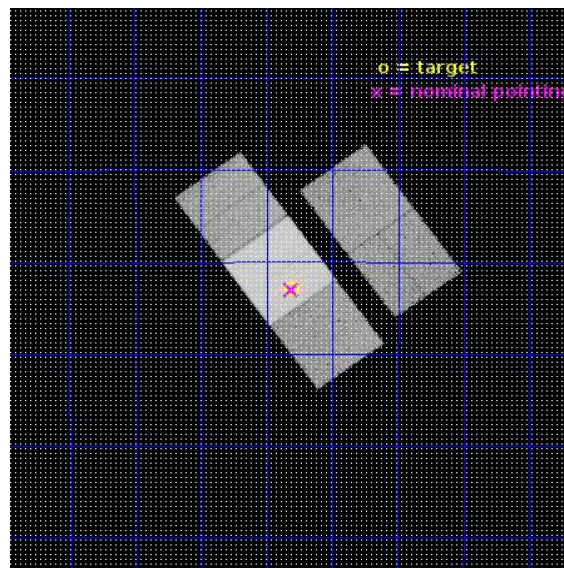
L2 Processing Date : Sep 26 2019

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1 Front

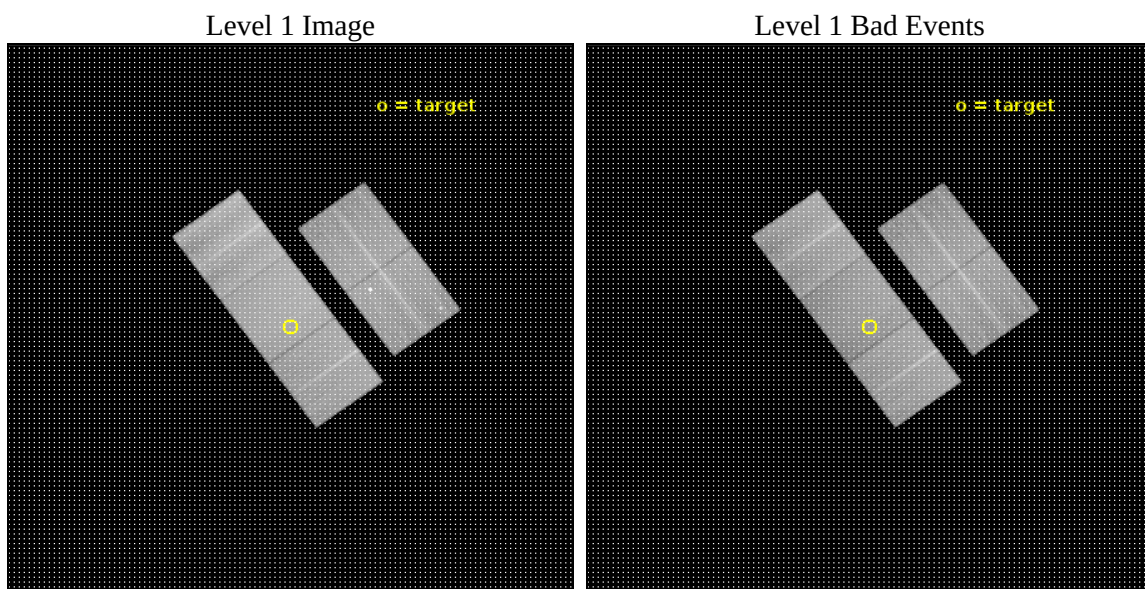
seq_num	503137	Sequence number
obs_id	21372	Observation id
title	A year in the life of GW170817: constraining the nature of its relativistic outflow with Chandra	Proposal title
observer	Eleonora Troja	Principal investigator
object	GW170817	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	197.450417	Observer's specified target RA [deg]
dec_targ	-23.381472	Observer's specified target Dec [deg]
ra_nom	197.45266112945	Nominal RA [deg]
dec_nom	-23.383660444522	Nominal Dec [deg]
roll_nom	234.15752230574	Nominal Roll [deg]
revision	2	Processing version of data
ontime	40526.300311804	Sum of GTIs [s]
livetime	39996.794363202	Livetime [s]
ontime2	40526.300311804	Sum of GTIs [s]
ontime3	40520.018361211	Sum of GTIs [s]
ontime6	40523.159341574	Sum of GTIs [s]
ontime7	40526.300311804	Sum of GTIs [s]
ontime8	40520.018391252	Sum of GTIs [s]
l2events	295288	Number of level 2 events



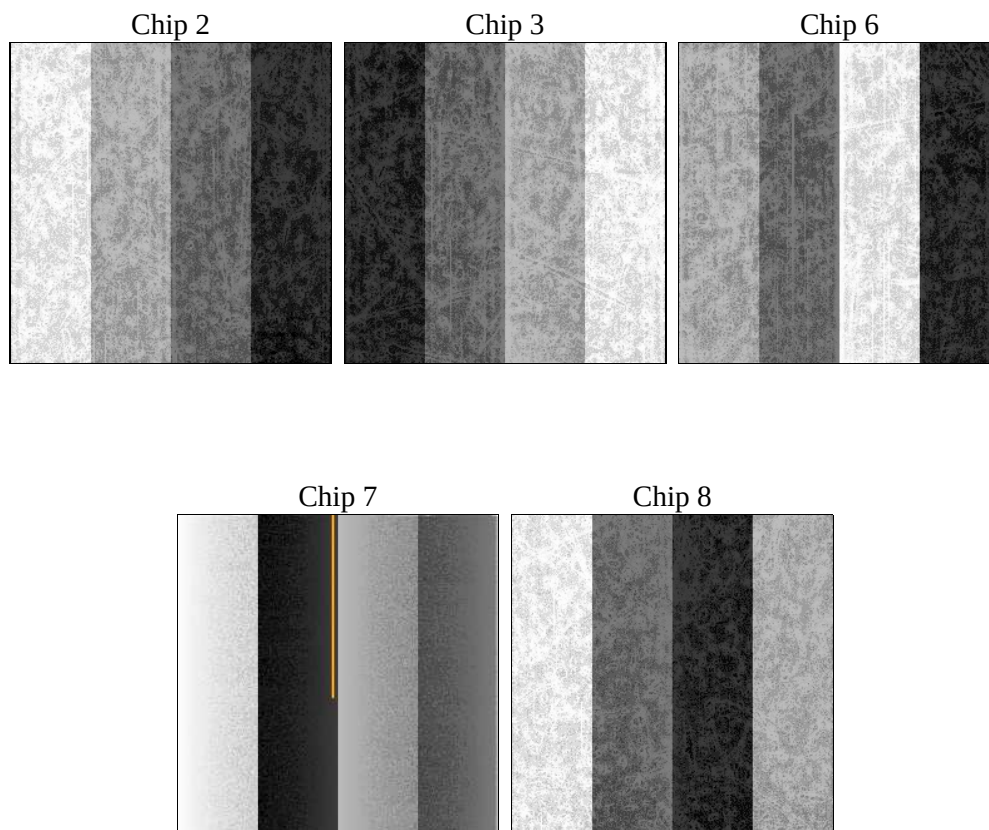
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	40475.000000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	40526.300311804	Sum of GTIs [s]
caldsver	4.8.4.1	 	ontime2	40526.300311804	Sum of GTIs [s]
date	2019-09-26T16:28:52	Date and time of file creation	ontime3	40520.018361211	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	40523.159341574	Sum of GTIs [s]
			ontime7	40526.300311804	Sum of GTIs [s]
			ontime8	40520.018391252	Sum of GTIs [s]
			l1events	1764124	Number of level 1 events

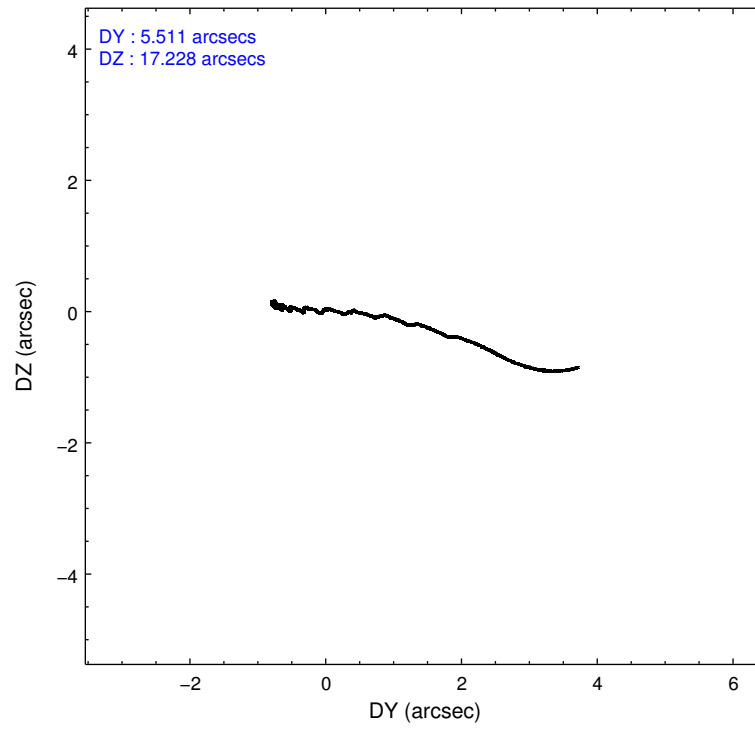
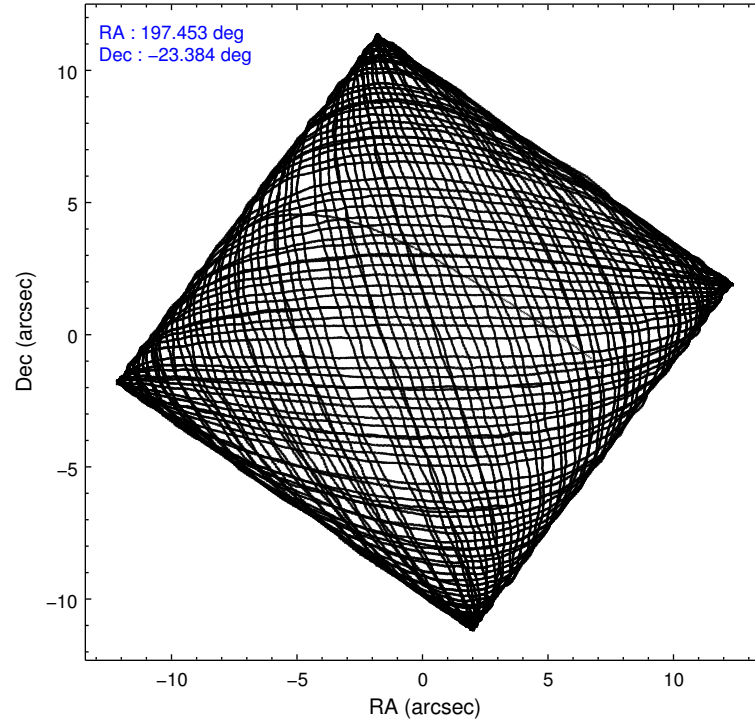
2.1.4 Events

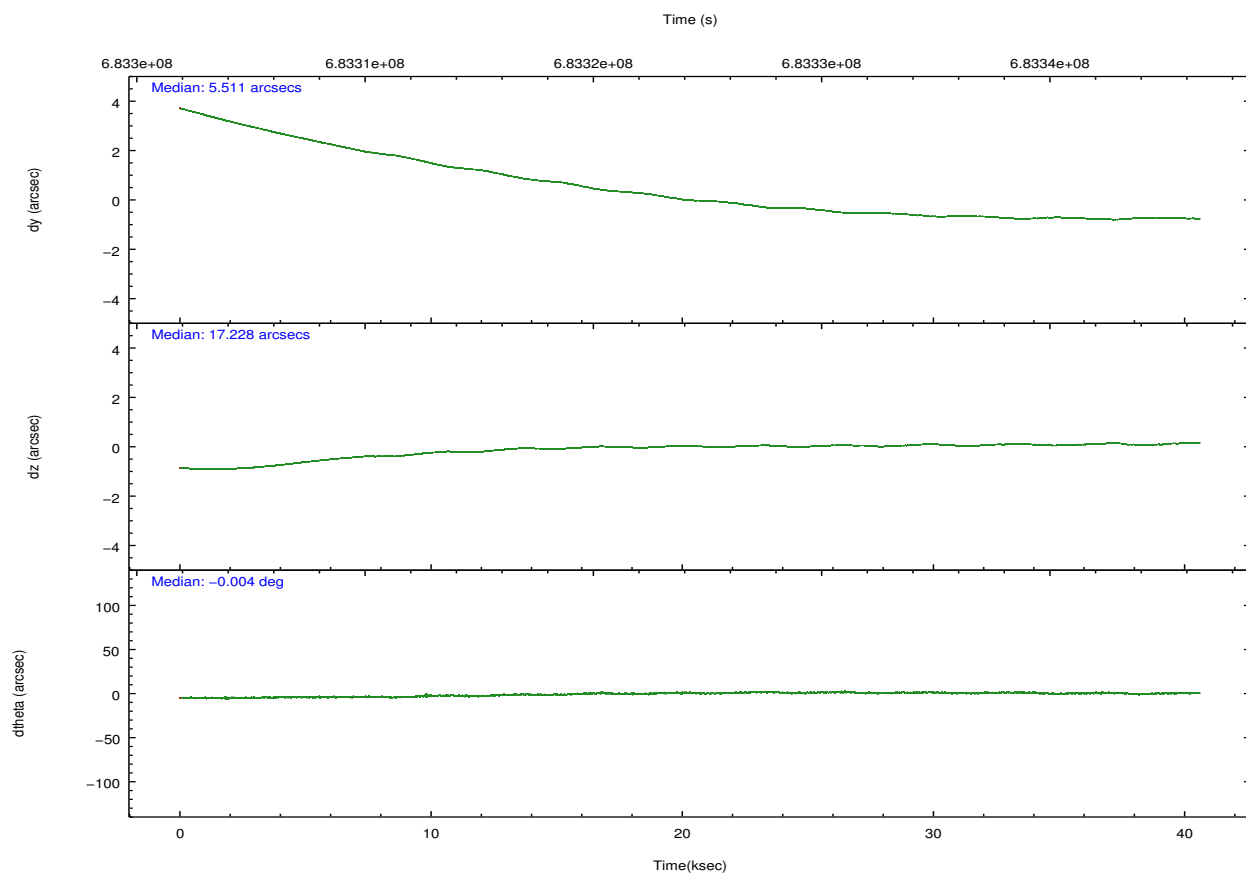
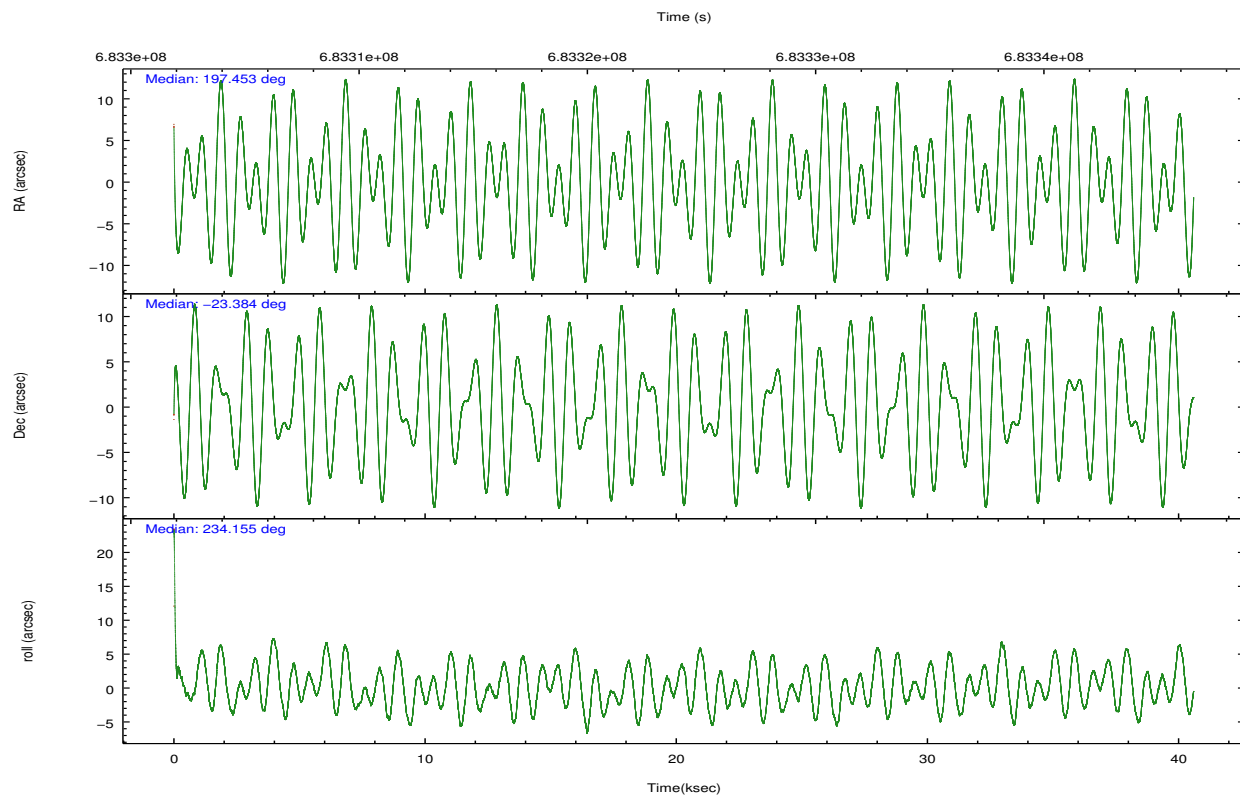
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	320897	298216	330073	402034	412904	grade 0 events	25469	11907	11677	14439	32332
rejected events	274259	265409	293539	228468	302250		7%	3%	3%	3%	7%
rejected %	85%	88%	88%	56%	73%	grade 1 events	304	150	175	594	302
							0%	0%	0%	0%	0%
						grade 2 events	8008	7192	9291	36819	26842
							2%	2%	2%	9%	6%
						grade 3 events	3181	3405	3214	13259	11110
							0%	1%	0%	3%	2%
						grade 4 events	3377	3361	3190	13244	10688
							1%	1%	0%	3%	2%
						grade 5 events	11806	14155	14002	39233	21933
							3%	4%	4%	9%	5%
						grade 6 events	6605	6944	9167	95828	29686
							2%	2%	2%	23%	7%
						grade 7 events	262147	251102	279357	188618	280011
							81%	84%	84%	46%	67%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	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	197.455333	197.4526611294474	CCD I2 on	O1	Y
[deg] Pointing Dec	-23.356311	-23.38366044452242	CCD I3 on	O2	Y
[deg] Pointing Roll	234.001953	234.1575223057438	CCD S0 on	N	N
[s] Window start time (MET)	665366469.184000	665366469.184000	CCD S1 on	N	N
[s] Window stop time (MET)	668995269.184000	668995269.184000	CCD S2 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S3 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S4 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S5 on	N	N
[mm] SIM translation stage offset	0	0.01005778216563158	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	683304023.184000	683302668.97208	On-chip summing requested	N	N
Observation start date	2019-08-27T14:39:14	2019-08-27T14:17:48	Subarray requested	NONE	NONE
[s] Observation end time (MET)	683344498.184000	683345402.76215	Alternating exposures requested	N	N
Observation end date	2019-08-28T01:53:49	2019-08-28T02:10:02	[s] Primary exposure time	0.000000	3.1
Read mode	TIMED	TIMED			

2.3 Aspect



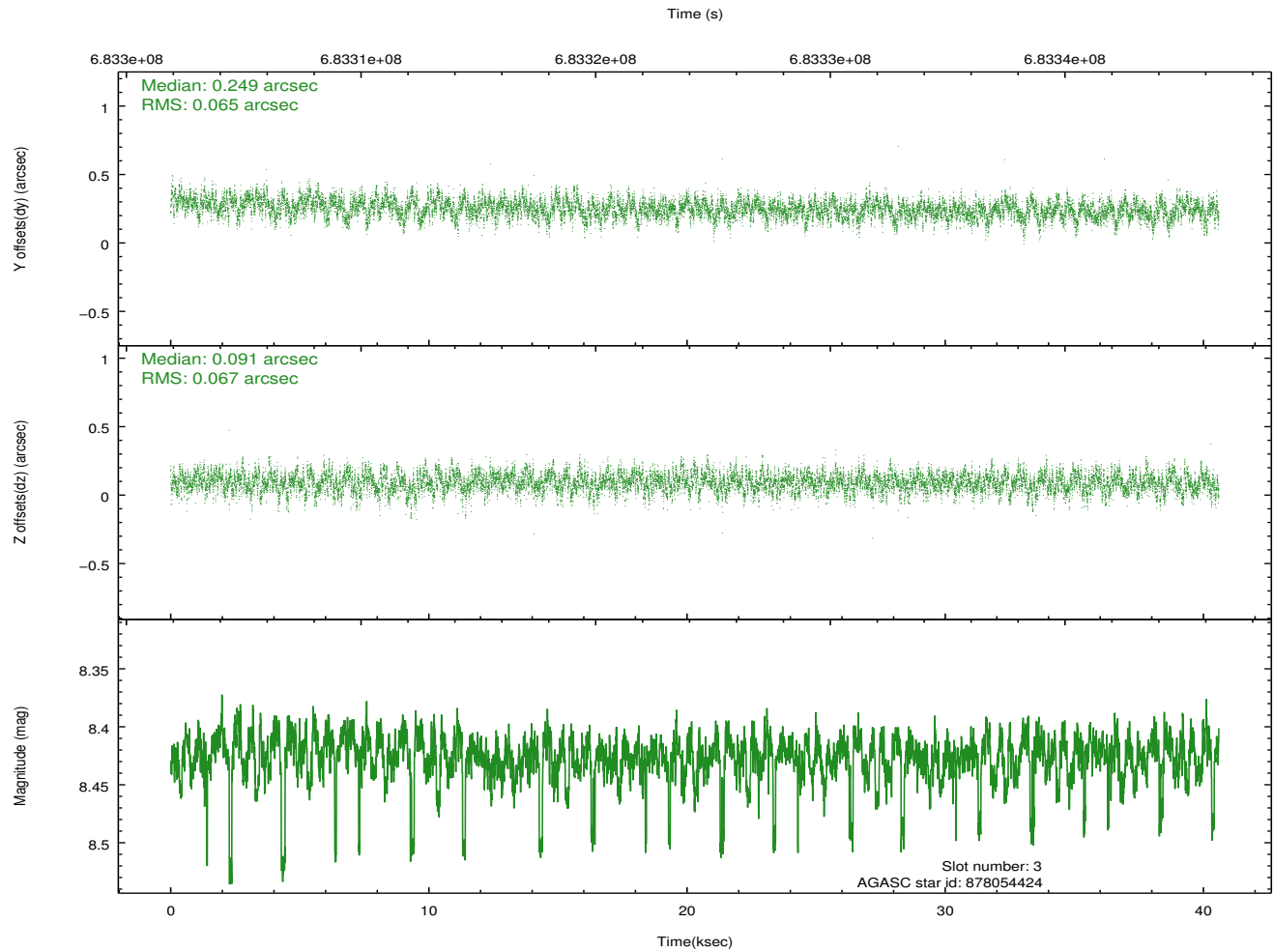
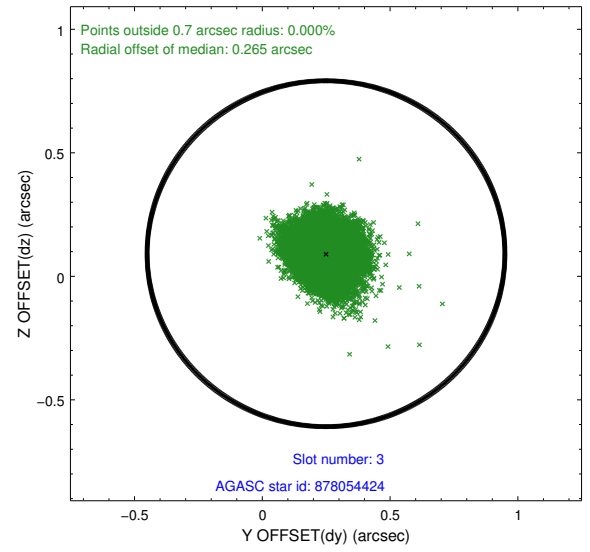
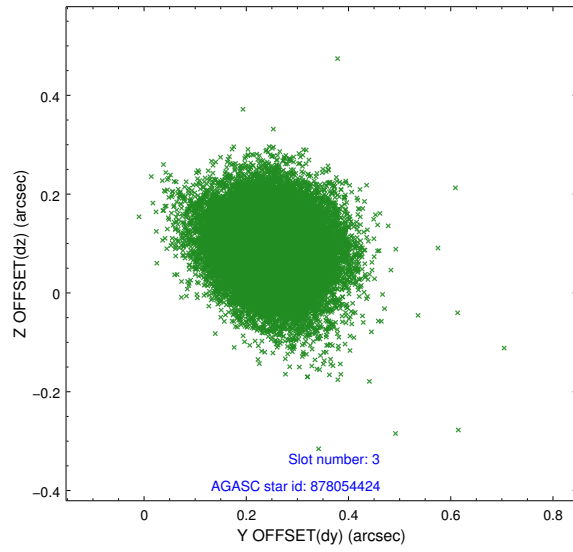


Slot Statistics

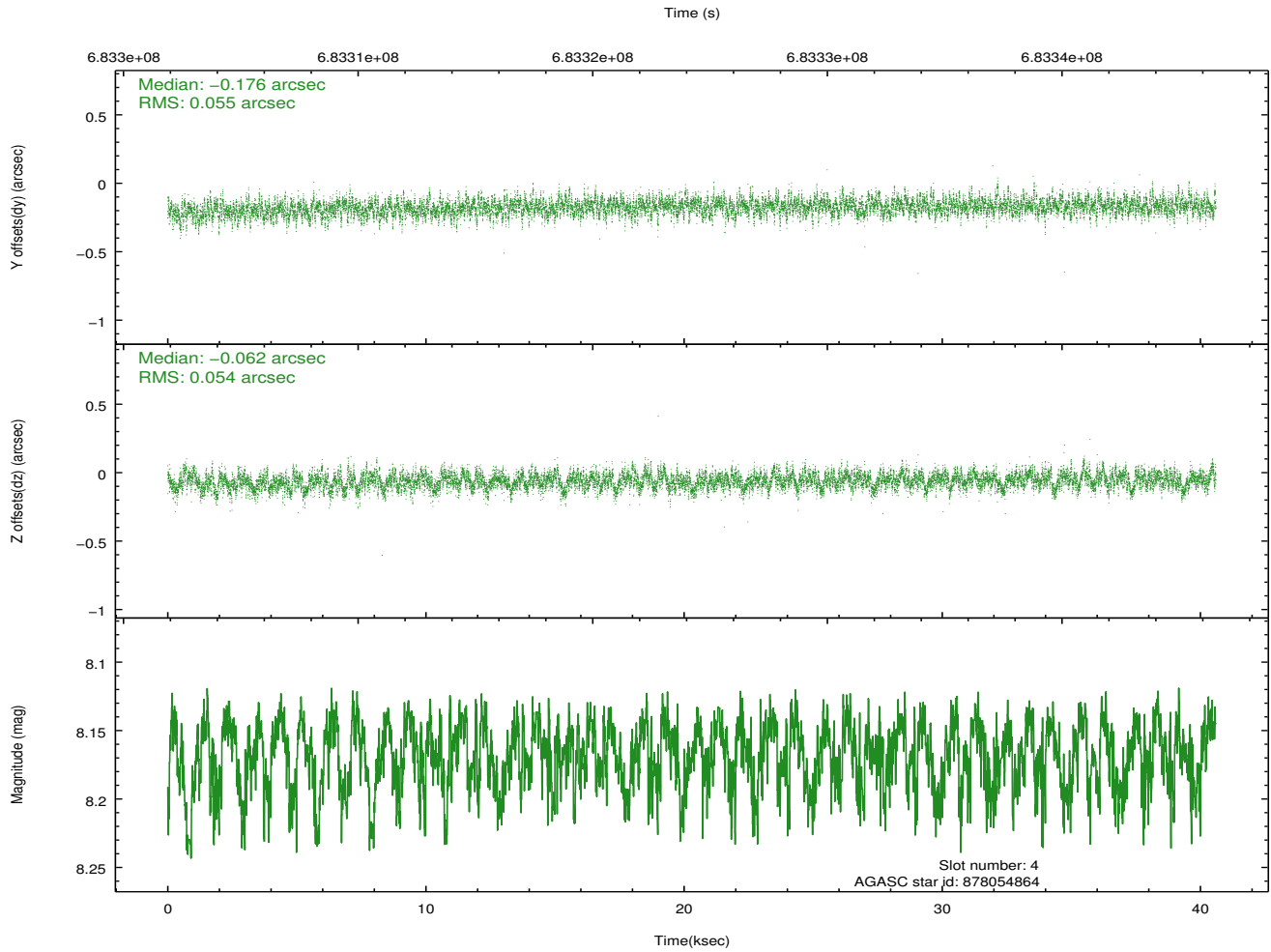
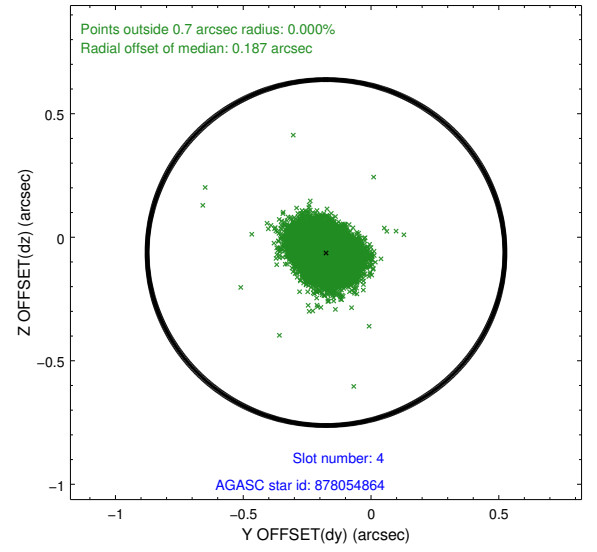
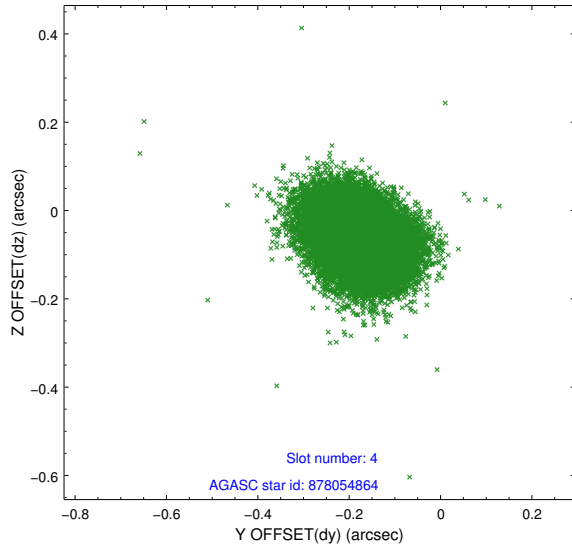
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.07	9902	1.000	-0.244	-0.117	0.017	0.024	0.000000	0.000000	-758.99	-1738
1	FID		ACIS-S-4	7.18	9902	1.000	0.524	0.151	0.017	0.111	0.000000	0.000000	2155.05	170
2	FID		ACIS-S-5	7.19	9903	1.000	-0.312	-0.025	0.022	0.104	0.000000	0.000000	-1811.91	163
3	GUIDE	used	878054424	8.43	19788	1.000	0.249	0.091	0.100	0.159	197.311680	-23.210058	-145.56	-693
4	GUIDE	used	878054864	8.17	19798	1.000	-0.176	-0.062	0.081	0.134	197.588589	-23.624647	523.26	923
5	GUIDE	used	878055920	7.71	19803	1.000	-0.143	-0.316	0.087	0.135	197.166113	-23.822063	1918.65	213
6	GUIDE	used	878056592	8.75	19786	1.000	-0.177	0.025	0.109	0.175	197.586702	-23.861101	1216.89	1417
7	GUIDE	used	878061480	7.95	19793	1.000	0.245	0.260	0.087	0.142	197.360027	-22.852260	-1280.60	-1322

2.4 Star Slots

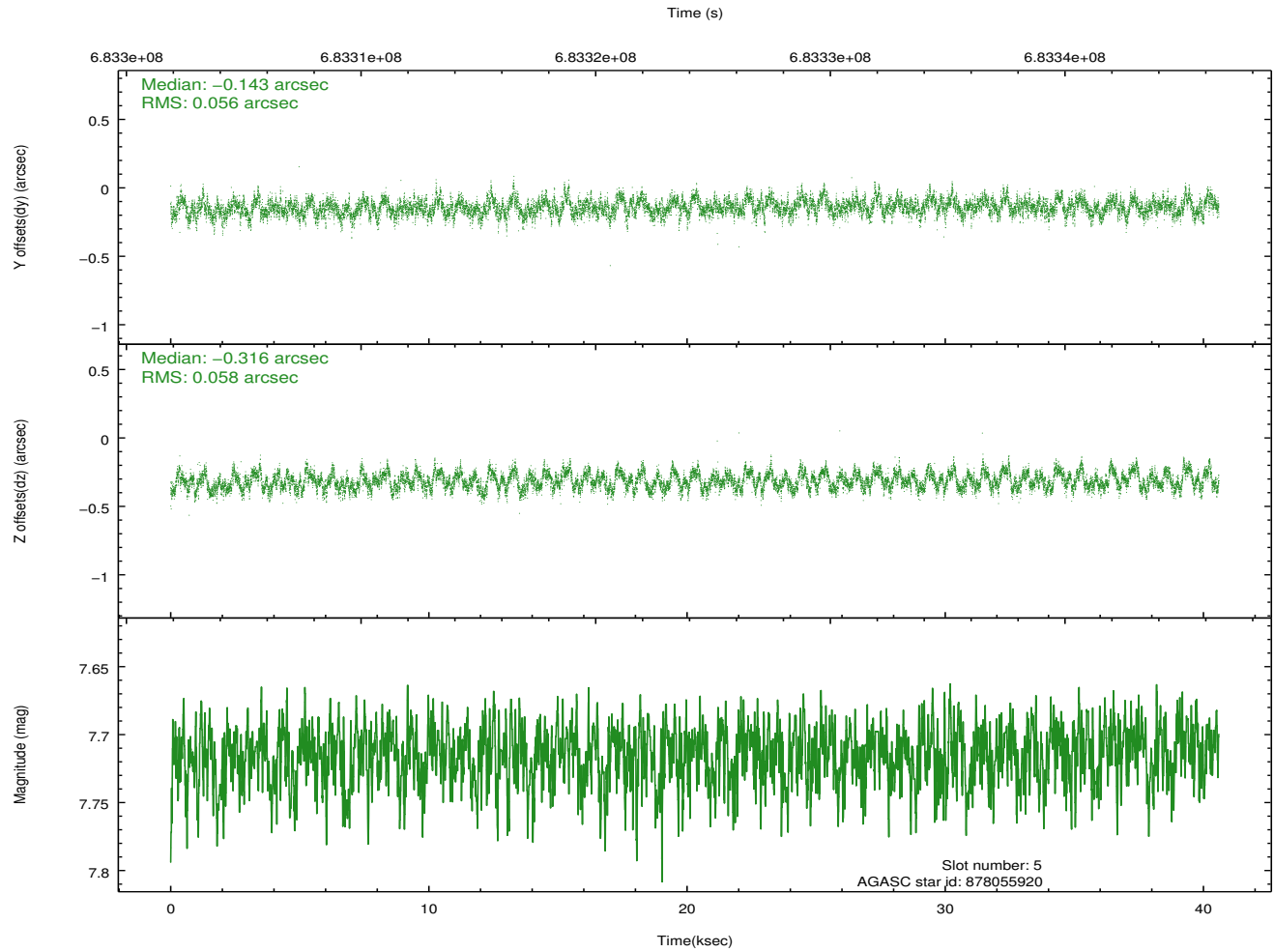
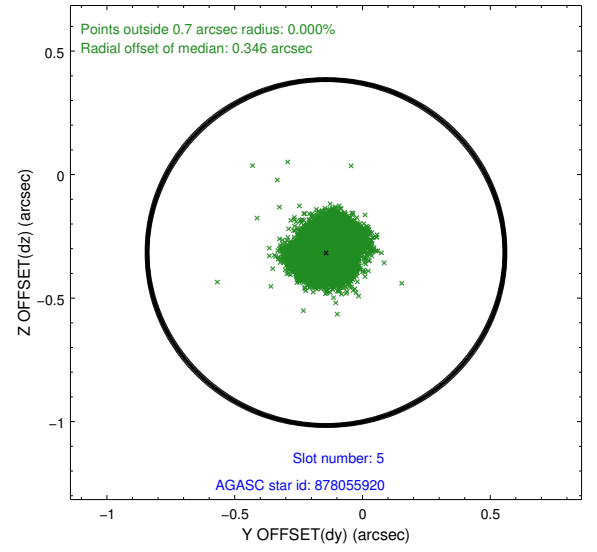
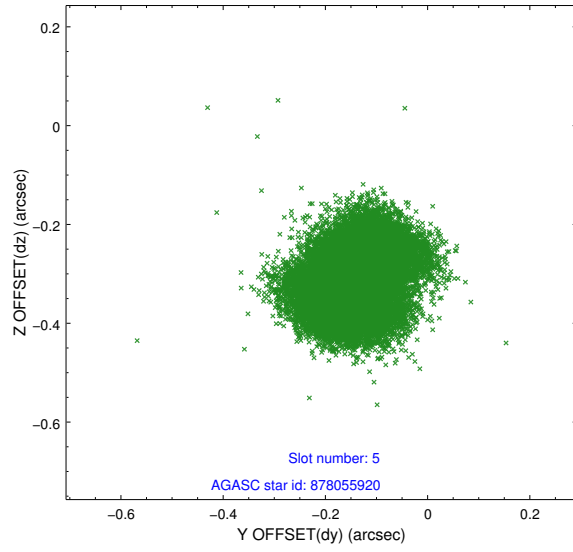
2.4.1 Slot 3



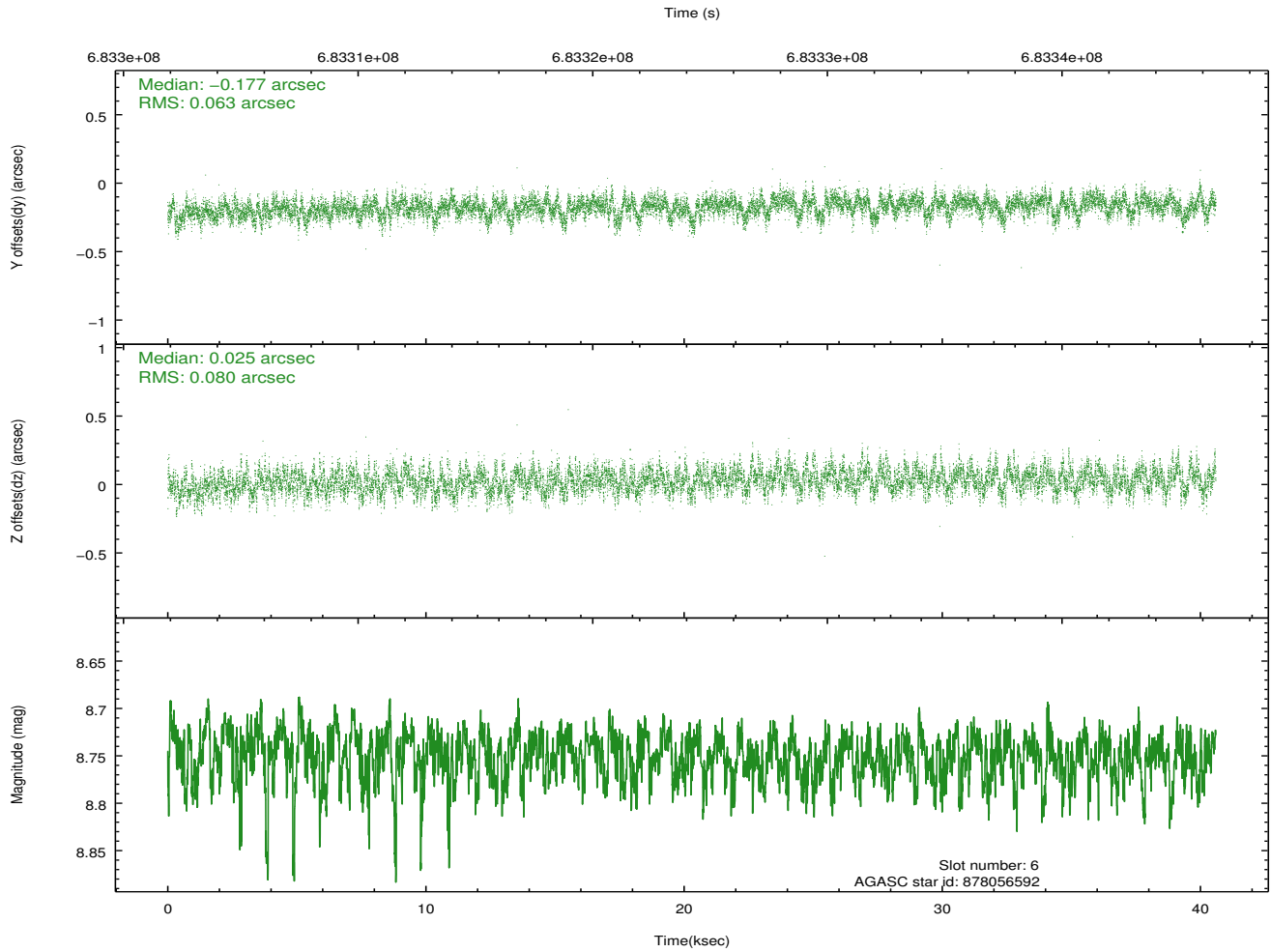
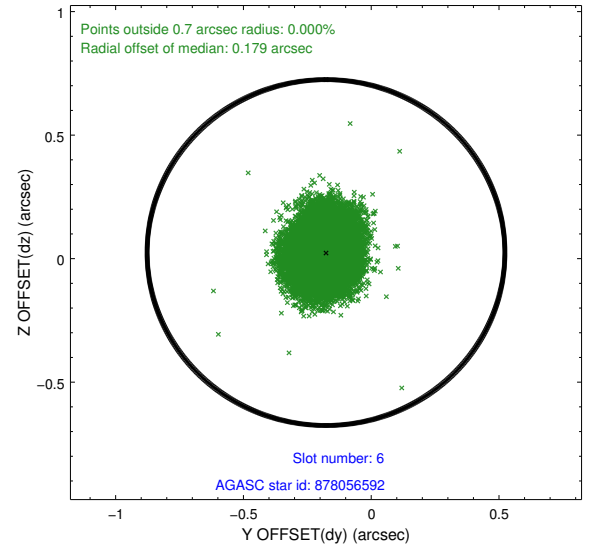
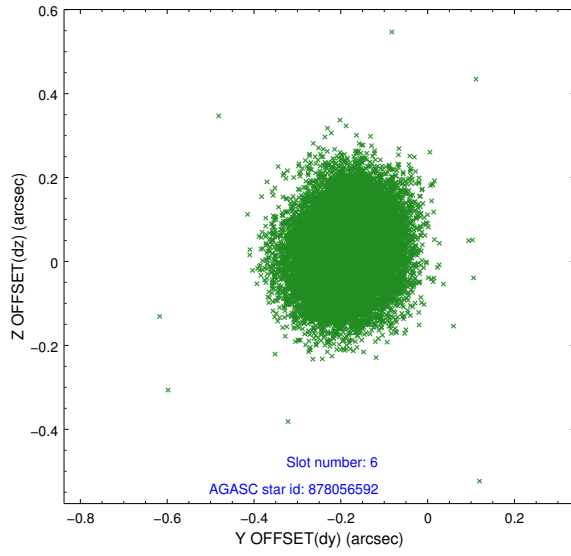
2.4.2 Slot 4



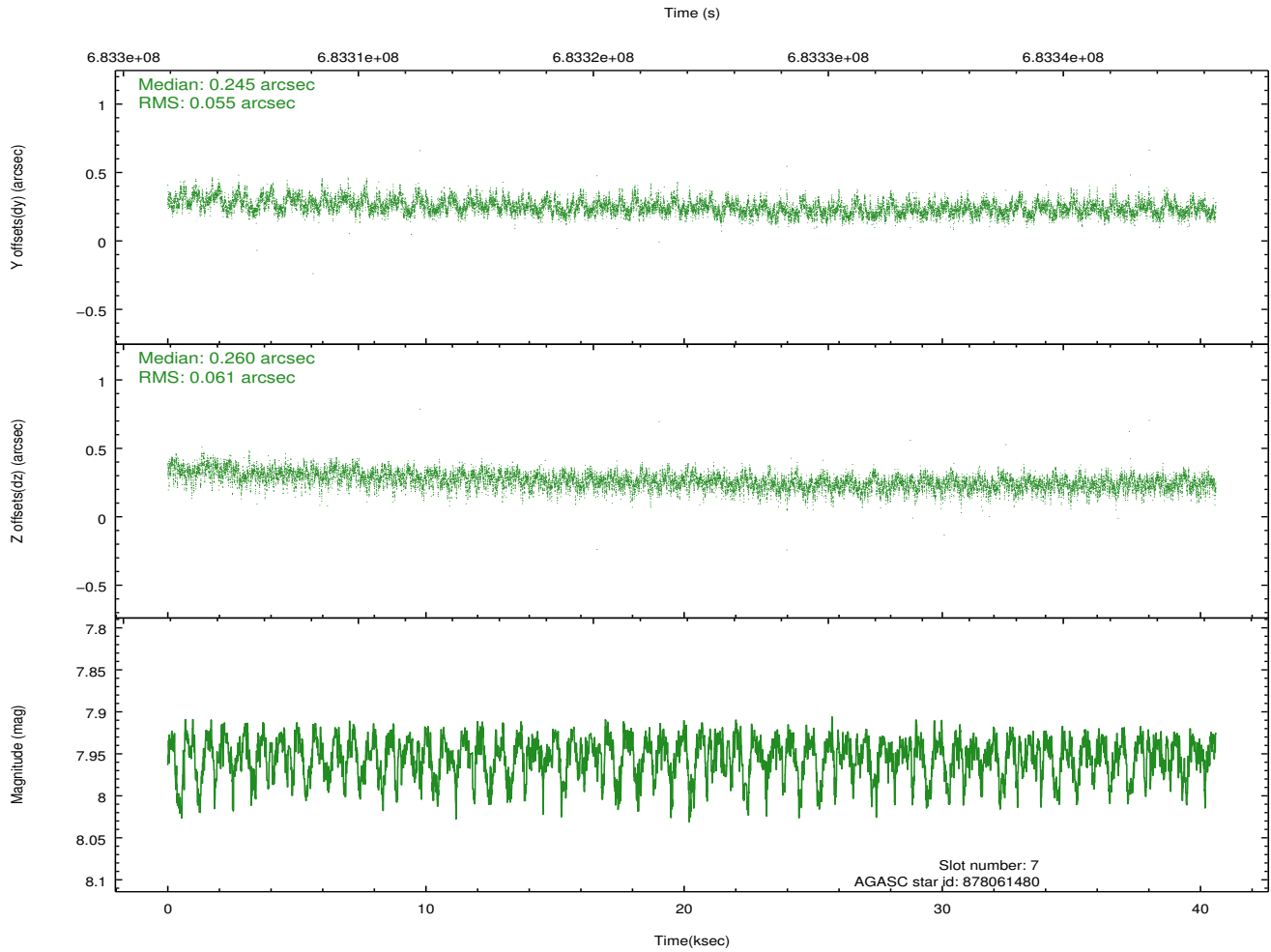
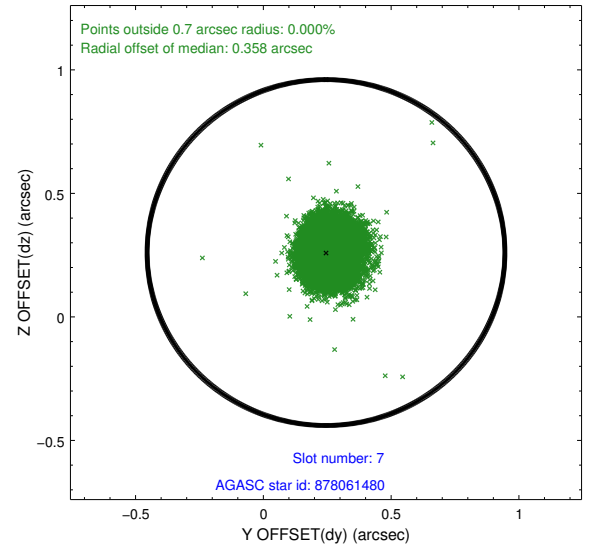
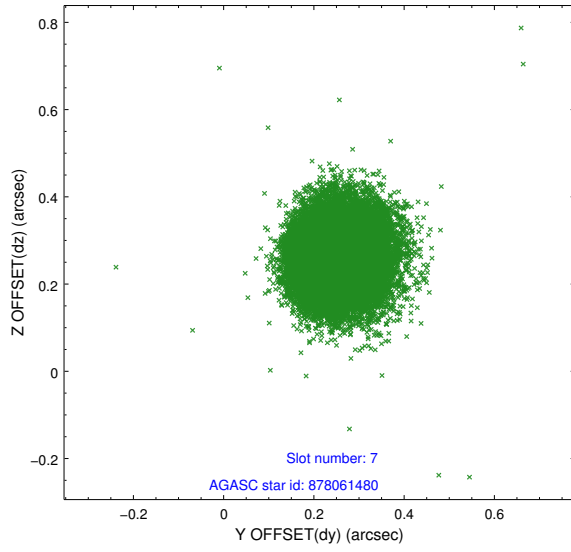
2.4.3 Slot 5



2.4.4 Slot 6

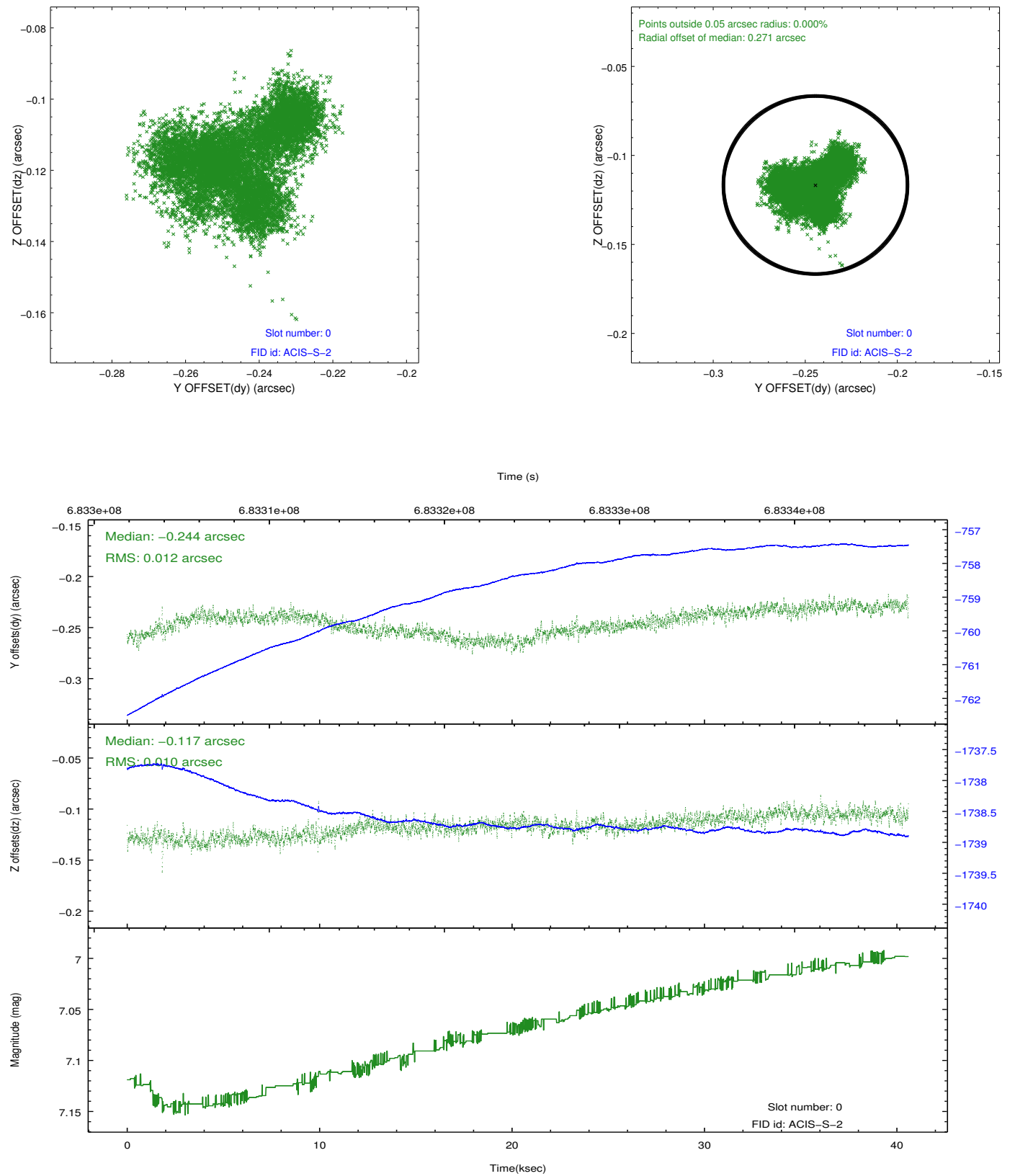


2.4.5 Slot 7

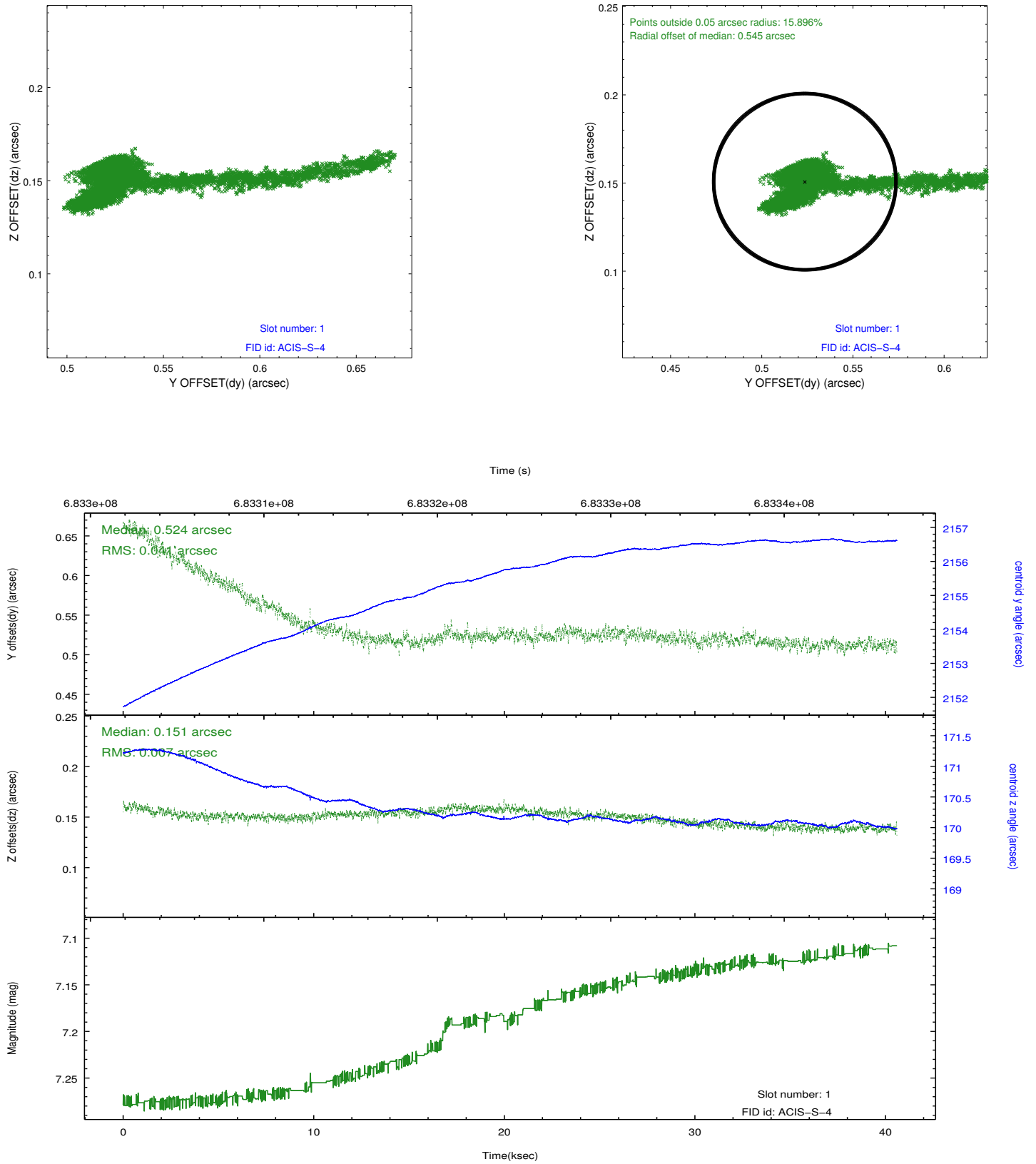


2.5 FID Slots

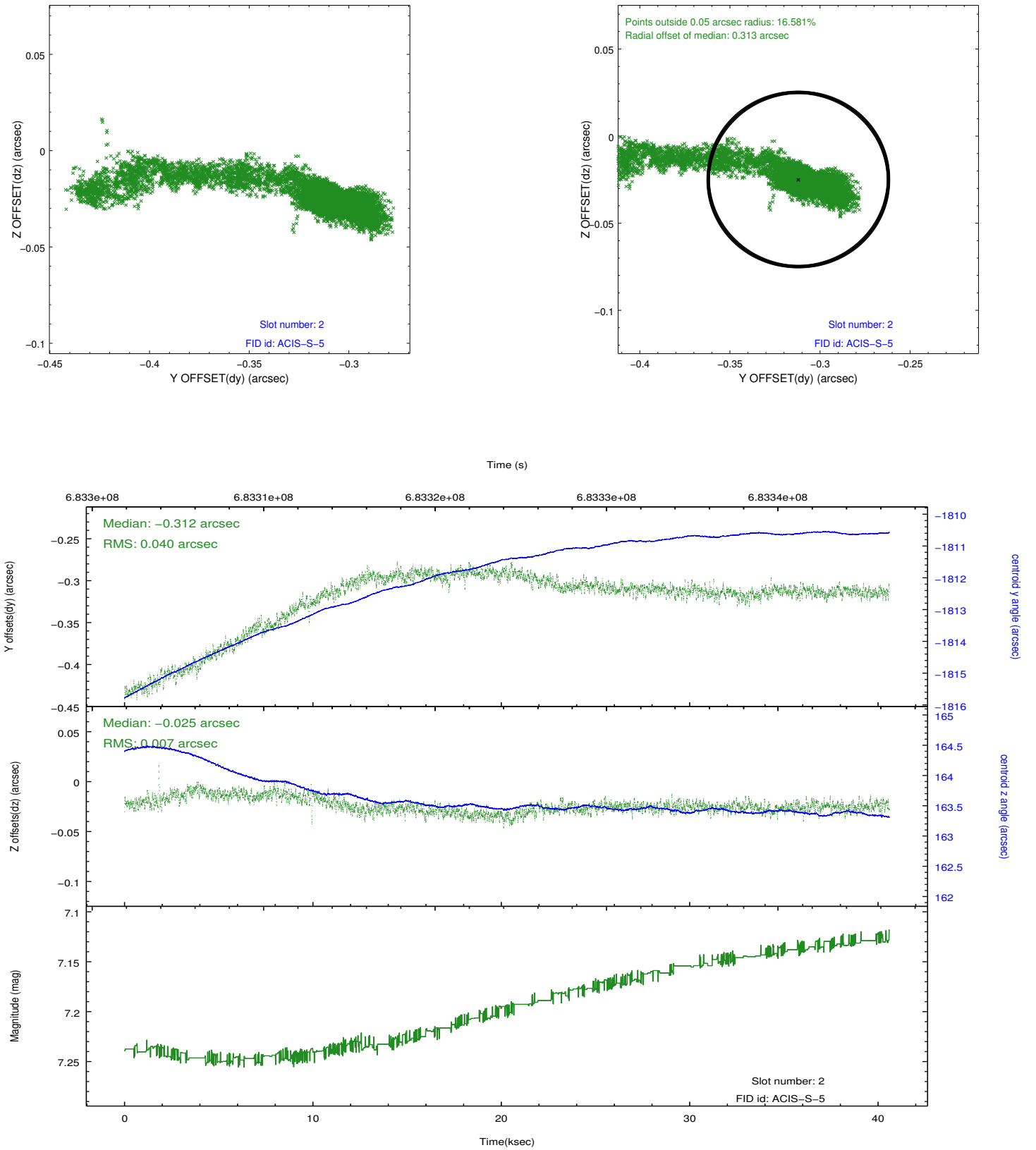
2.5.1 Slot 0



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)	2019.09.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.526300311804

A.2 Comments

Window constraint met.

ACIS T_GAIN files released in CalDB 4.8.3 (23 May 2019) and CalDB 4.8.4 (03 September 2019) have errors in the T_GAIN corrections for ACIS-I chips 0, 1, 2, and 3, and ACIS-S chip 6 (S2). All ACIS OBS_IDs including those chips, which were processed (or reprocessed) in SDP between 2019-05-24T01:06:00 and 2019-09-06T17:31:43 with CalDB 4.8.3, 4.8.3.1, or 4.8.4, were affected. The errors in the T_GAINs, which produce a 1%-2% reduction in the PHA and hence the ENERGY column values for dithered observations, result from alternating real value and zero value columns in CHIPX space across FI chips ACIS-0, 1, 2, 3, and 6. The error has been corrected in this version of the data products.