

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 22737 - L2 Version 2
Chandra X-Ray Center

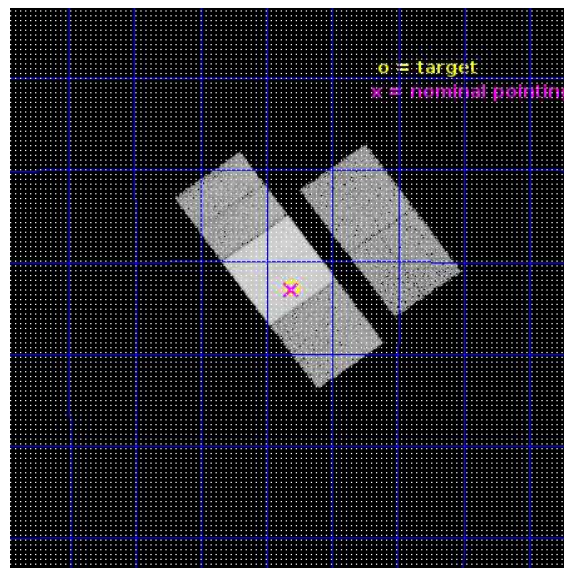
L2 Processing Date : Oct 1 2019

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1 Front

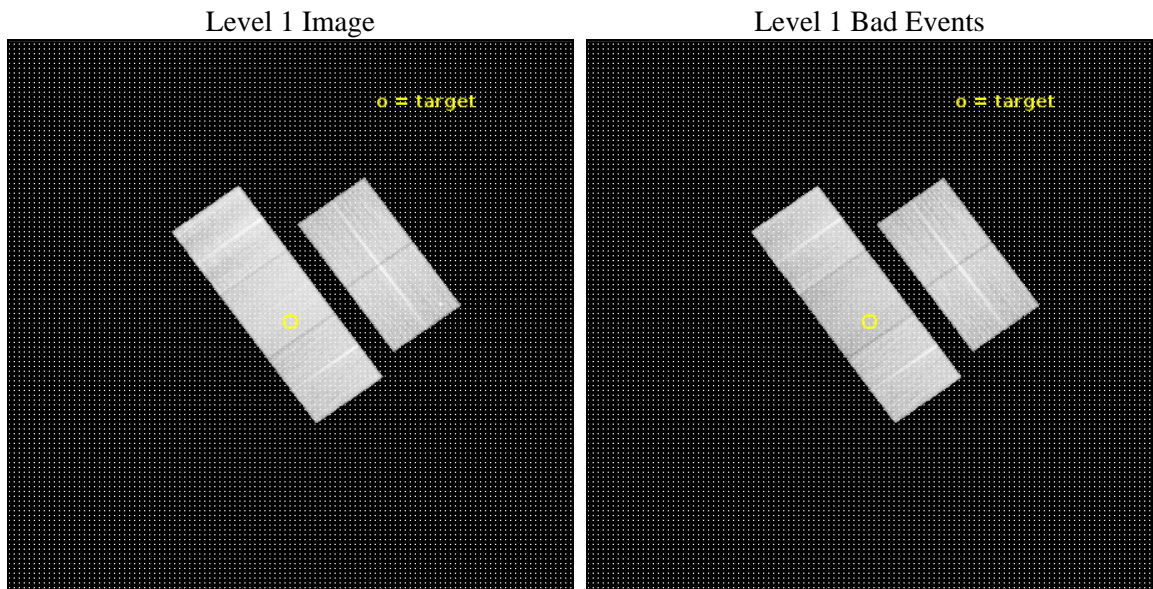
seq_num	503137	Sequence number
obs_id	22737	Observation id
title	A year in the life of GW170817: constraining the nature of its relativistic outflow with Chandra	Proposal title
observer	Eleonora Troja	Principal investigator
object	GW170817	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	197.450417	Observer's specified target RA [deg]
dec_targ	-23.381472	Observer's specified target Dec [deg]
ra_nom	197.45262396115	Nominal RA [deg]
dec_nom	-23.383854109388	Nominal Dec [deg]
roll_nom	234.15750496717	Nominal Roll [deg]
revision	2	Processing version of data
ontime	25579.915624738	Sum of GTIs [s]
livetime	25245.695195441	Livetime [s]
ontime2	25579.751464725	Sum of GTIs [s]
ontime3	25576.692584515	Sum of GTIs [s]
ontime6	25579.874584794	Sum of GTIs [s]
ontime7	25579.915624738	Sum of GTIs [s]
ontime8	25573.510583758	Sum of GTIs [s]
l2events	183751	Number of level 2 events



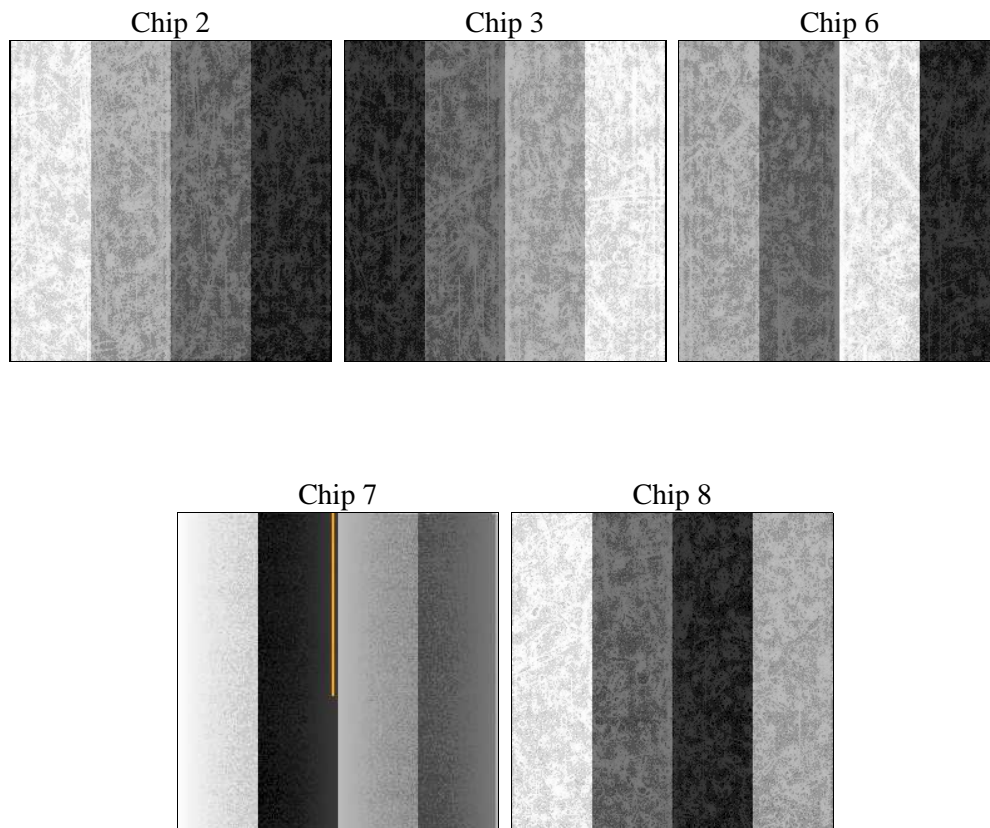
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25525.000000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	25579.915624738	Sum of GTIs [s]
caldsver	4.8.4.1	 	ontime2	25579.751464725	Sum of GTIs [s]
date	2019-10-01T15:46:49	Date and time of file creation	ontime3	25576.692584515	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	25579.874584794	Sum of GTIs [s]
			ontime7	25579.915624738	Sum of GTIs [s]
			ontime8	25573.510583758	Sum of GTIs [s]
			l1events	1116469	Number of level 1 events

2.1.4 Events

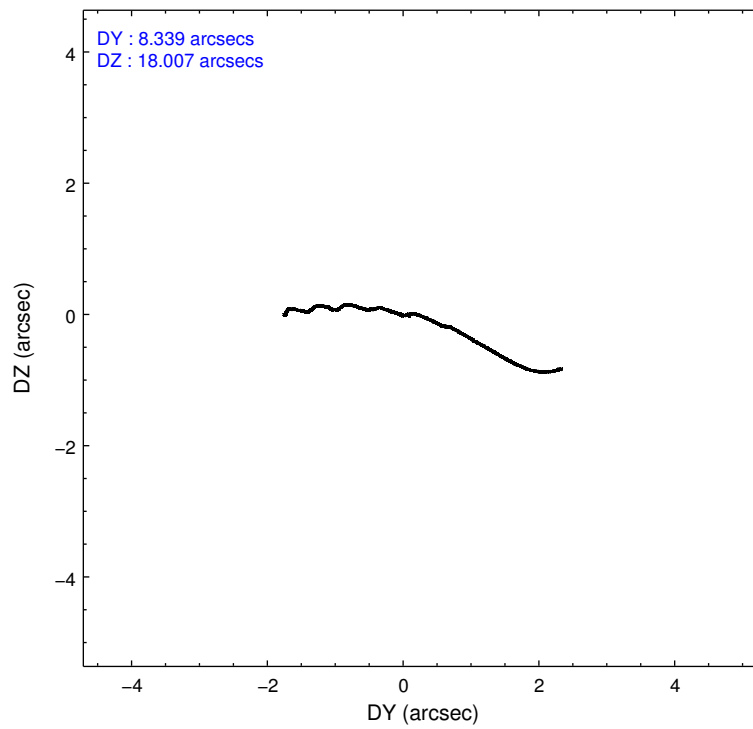
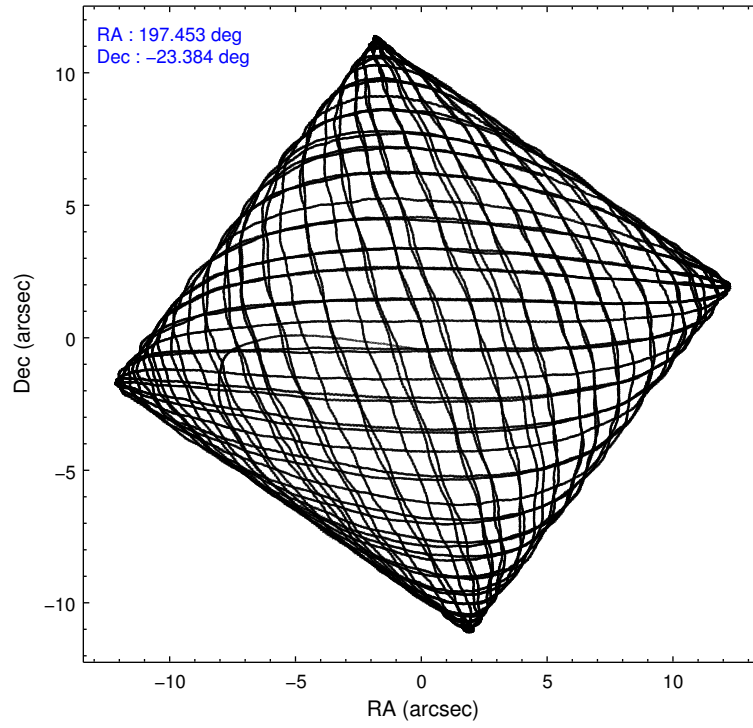
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	196400	194241	210603	254169	261056
rejected events	175656	174075	187618	144613	193039
rejected %	89%	89%	89%	56%	73%

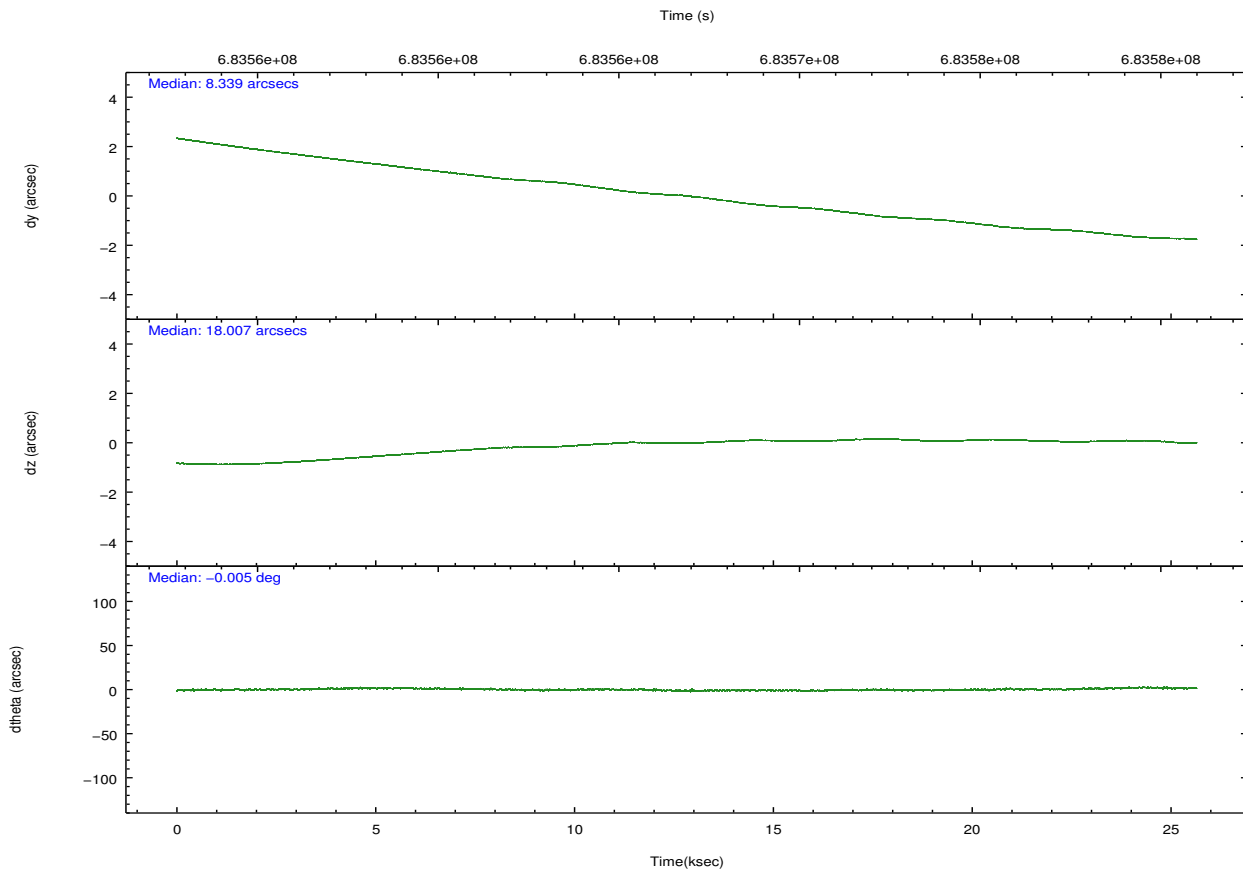
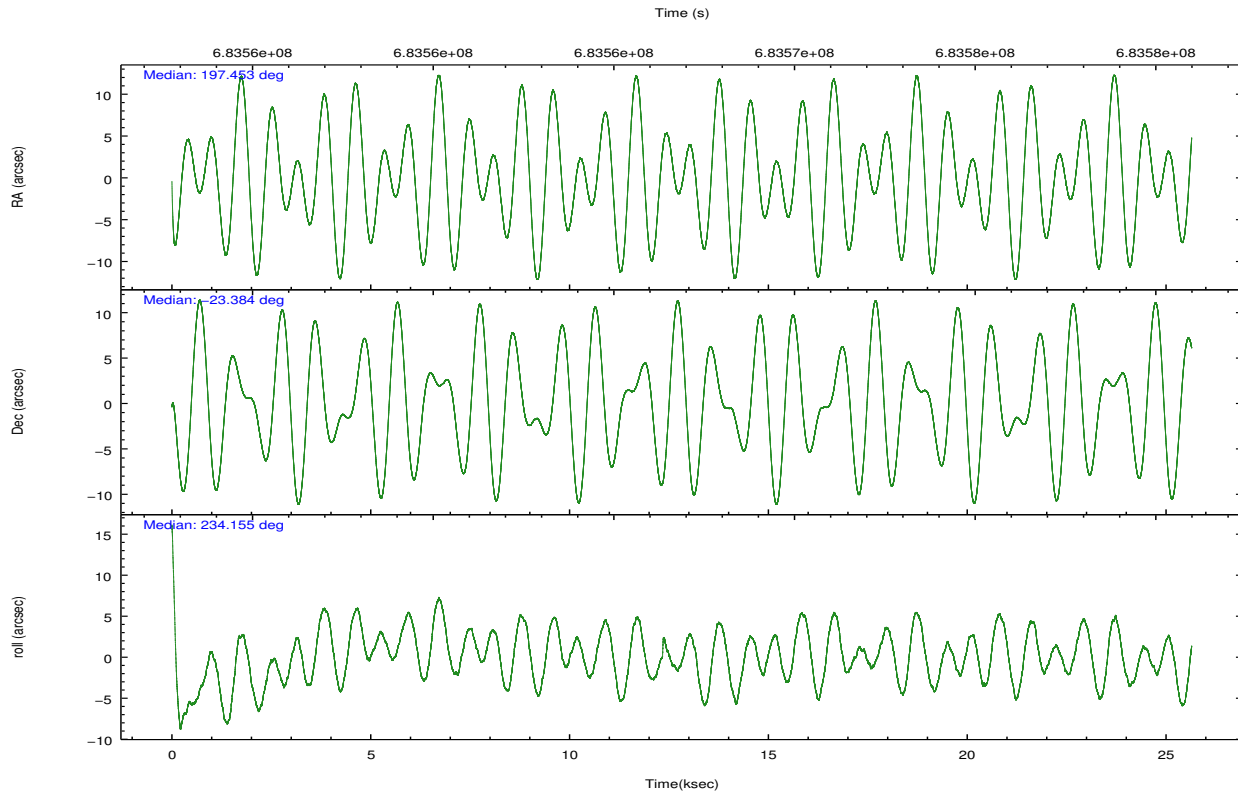
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	7774	7082	7106	8921	18995
	3%	3%	3%	3%	7%
grade 1 events	97	119	87	374	220
	0%	0%	0%	0%	0%
grade 2 events	4914	4623	6192	23484	16622
	2%	2%	2%	9%	6%
grade 3 events	1955	2071	1935	8317	6819
	0%	1%	0%	3%	2%
grade 4 events	2046	1964	1837	8178	6334
	1%	1%	0%	3%	2%
grade 5 events	7185	8675	8394	24466	13471
	3%	4%	3%	9%	5%
grade 6 events	4057	4429	5920	60671	19250
	2%	2%	2%	23%	7%
grade 7 events	168372	165278	179132	119758	179345
	85%	85%	85%	47%	68%

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	197.455290	197.452623961148	CCD I2 on	O1	Y
[deg] Pointing Dec	-23.356509	-23.38385410938781	CCD I3 on	O2	Y
[deg] Pointing Roll	234.001937	234.1575049671671	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)	683554158.184000	683552804.34962	On-chip summing requested	N	N
Observation start date	2019-08-30T12:08:09	2019-08-30T11:46:44	Subarray requested	NONE	NONE
[s] Observation end time (MET)	683579683.184000	683580767.88881	Alternating exposures requested	N	N
Observation end date	2019-08-30T19:13:34	2019-08-30T19:32:47	[s] Primary exposure time	0.000000	3.1
Read mode	TIMED	TIMED			

2.3 Aspect



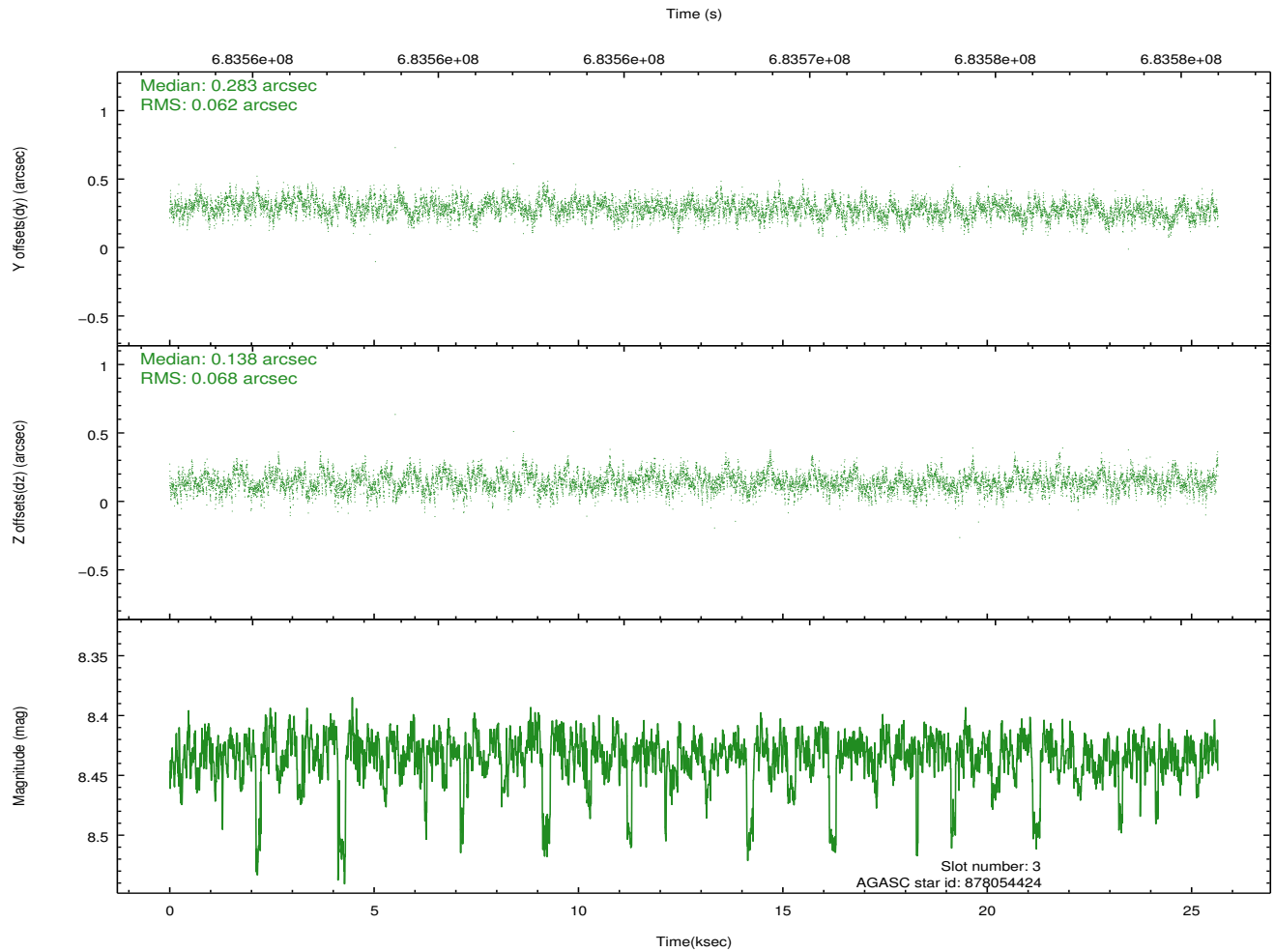
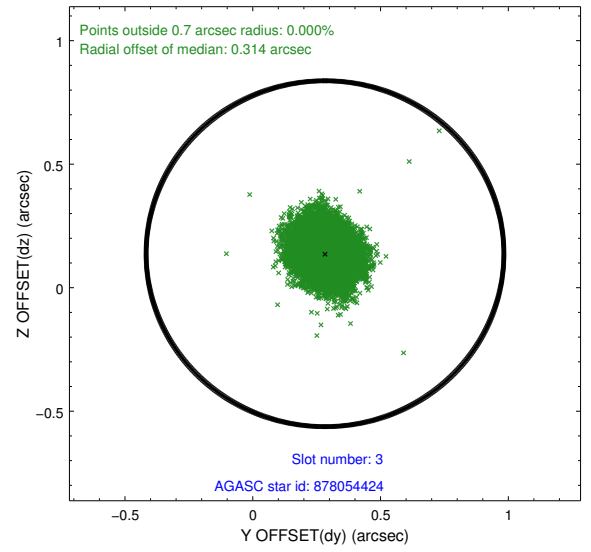
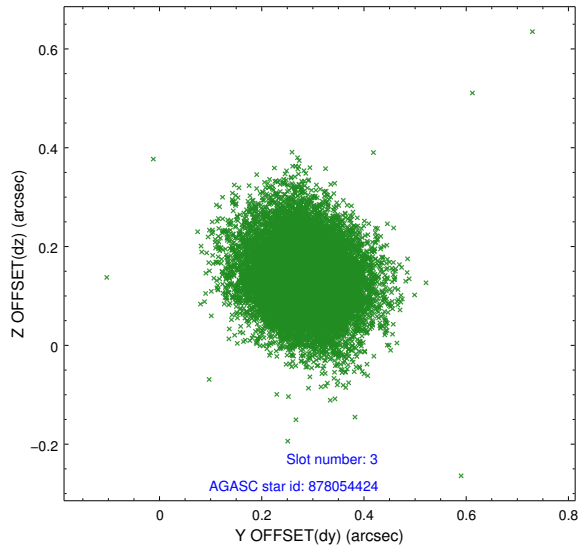


Slot Statistics

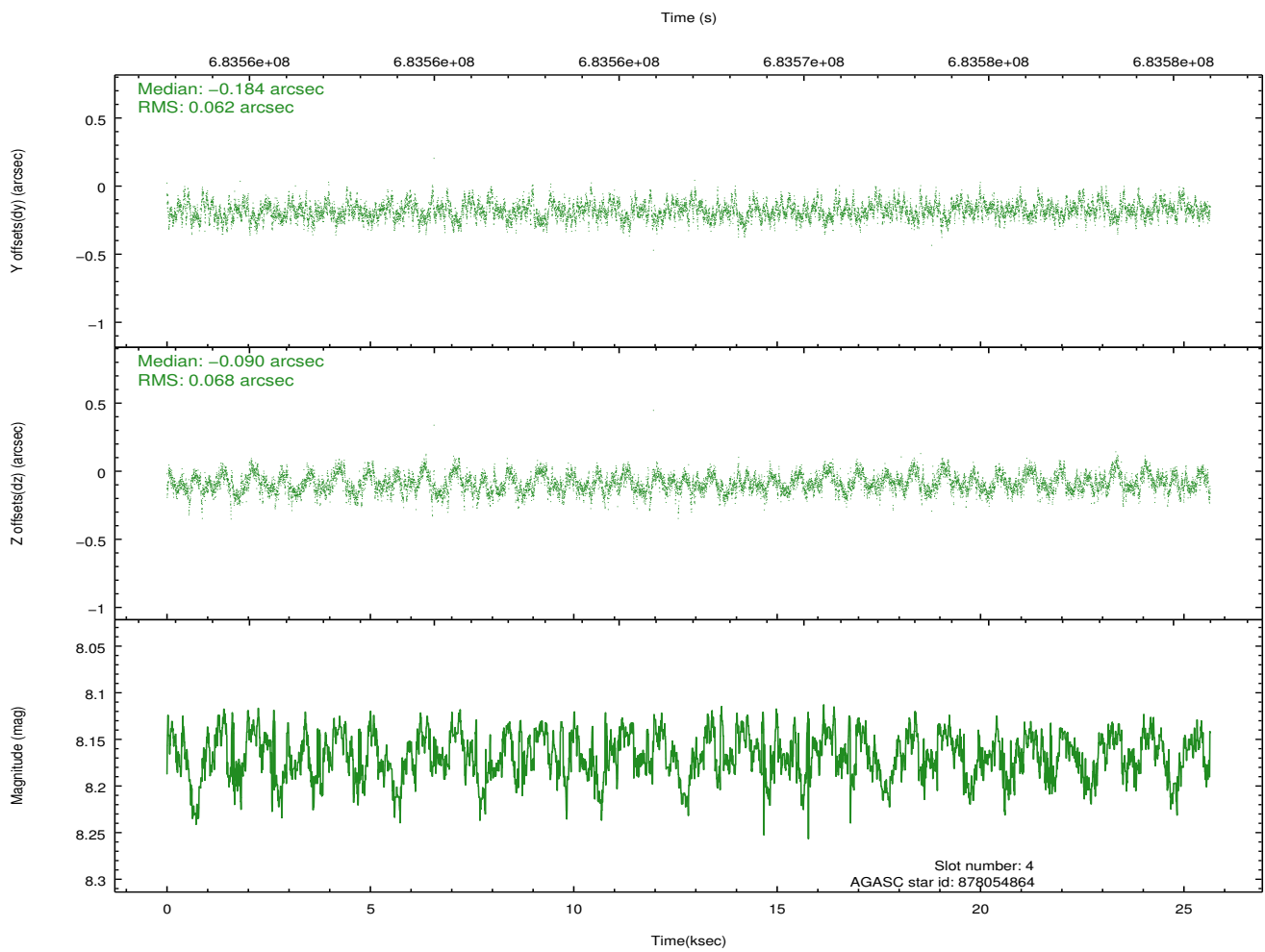
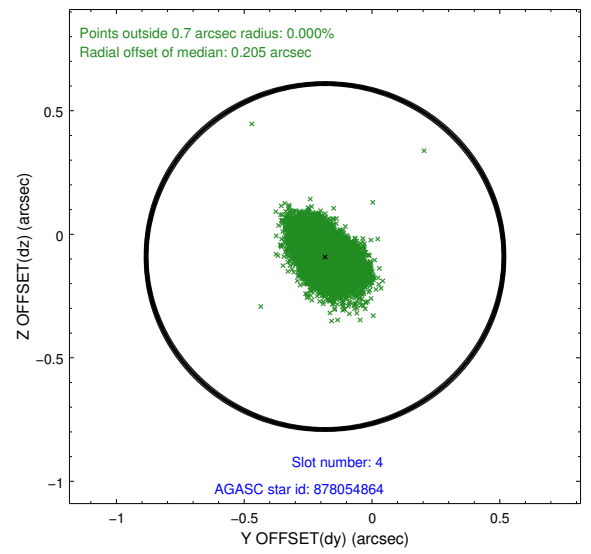
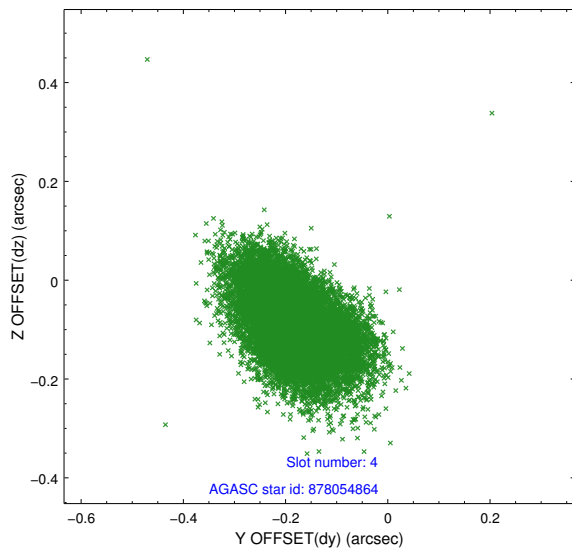
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.11	6255	1.000	-0.240	-0.172	0.024	0.033	0.000000	0.000000	-761.40	-1739
1	FID		ACIS-S-4	7.24	6253	1.000	0.582	0.159	0.070	0.088	0.000000	0.000000	2152.63	169
2	FID		ACIS-S-5	7.23	6255	1.000	-0.379	0.019	0.062	0.082	0.000000	0.000000	-1814.25	162
3	GUIDE	used	878054424	8.43	12505	1.000	0.283	0.138	0.098	0.157	197.311680	-23.210058	-146.15	-693
4	GUIDE	used	878054864	8.17	12503	1.000	-0.184	-0.090	0.098	0.160	197.588589	-23.624647	522.64	923
5	GUIDE	used	878055920	7.72	12448	1.000	-0.165	-0.321	0.082	0.130	197.166113	-23.822063	1918.06	213
6	GUIDE	used	878056592	8.75	12494	1.000	-0.217	-0.029	0.112	0.192	197.586702	-23.861101	1216.30	1416
7	GUIDE	used	878061480	7.95	12507	1.000	0.276	0.294	0.088	0.147	197.360027	-22.852260	-1281.16	-1322

2.4 Star Slots

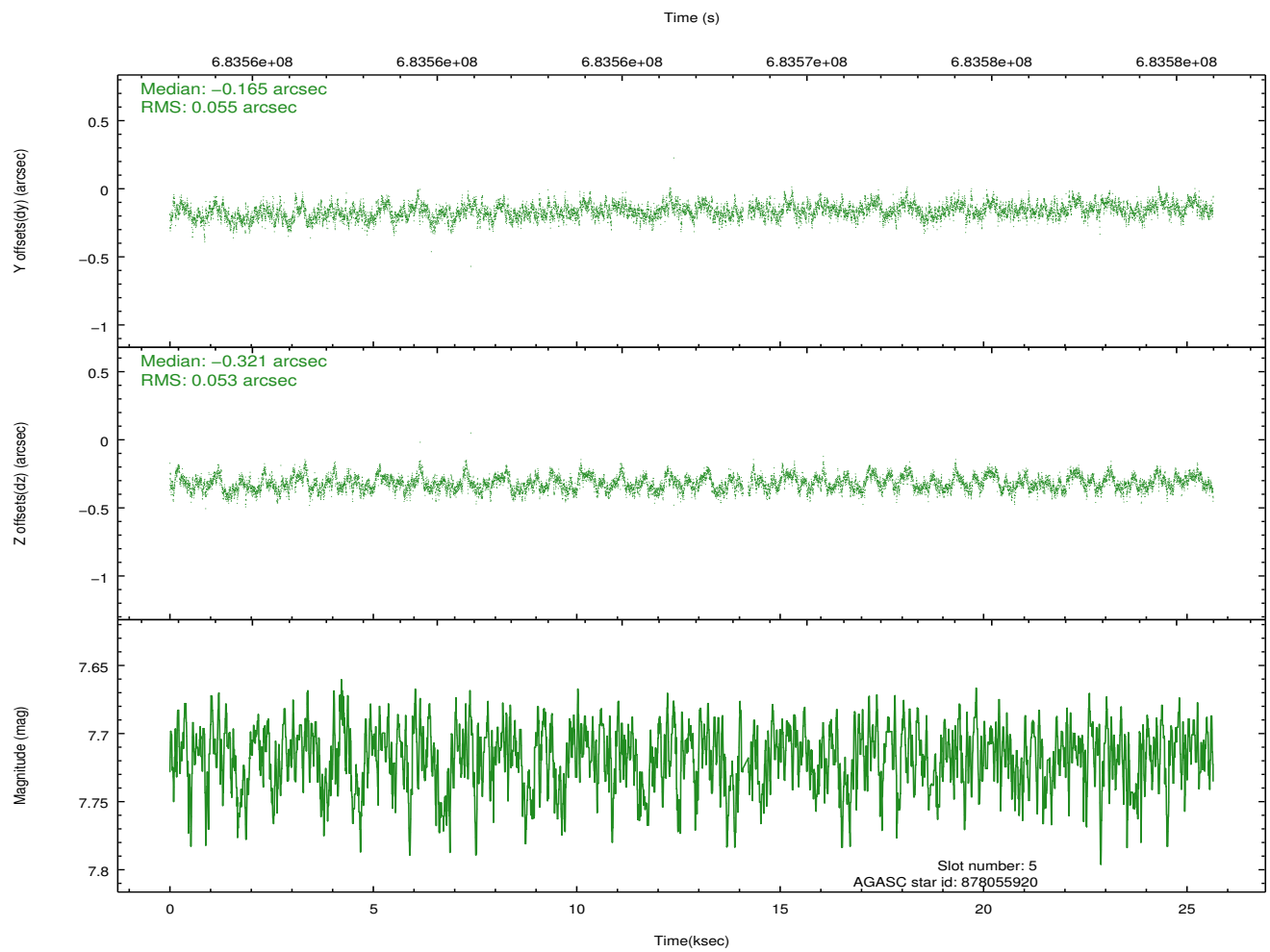
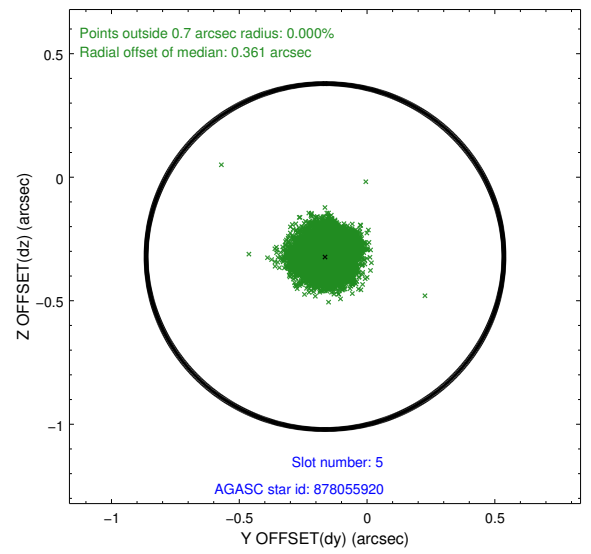
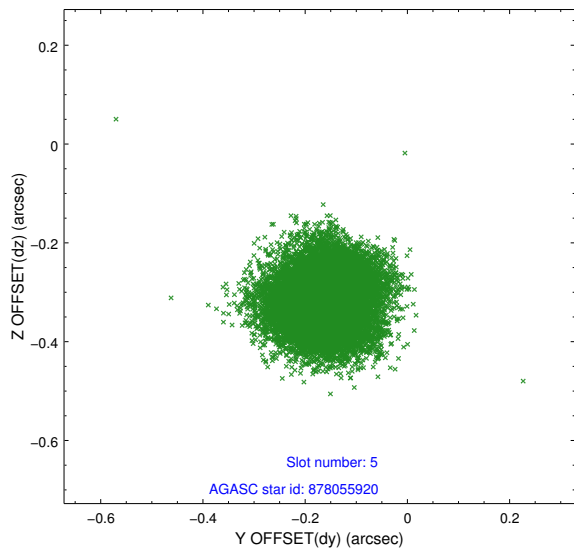
2.4.1 Slot 3



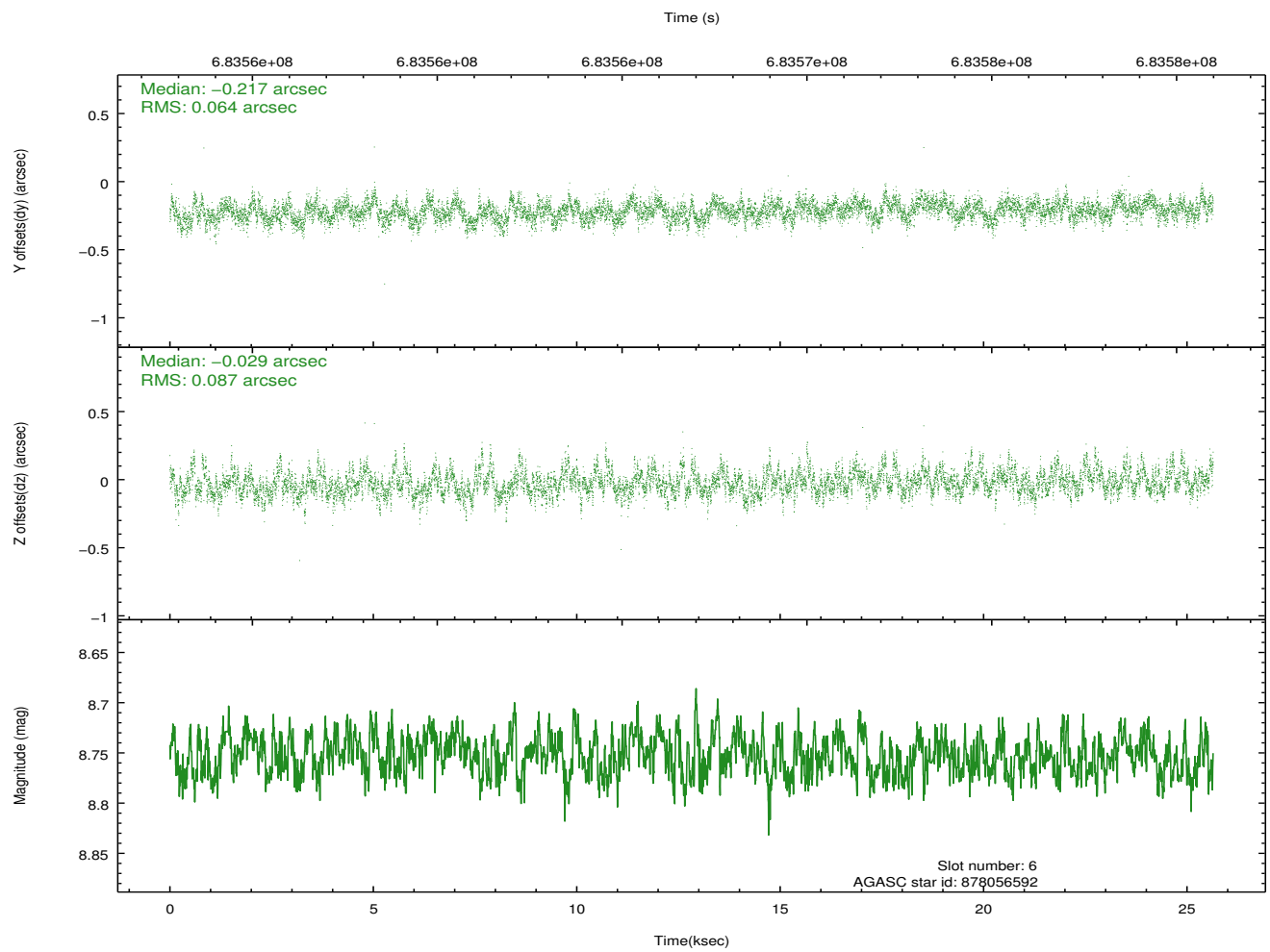
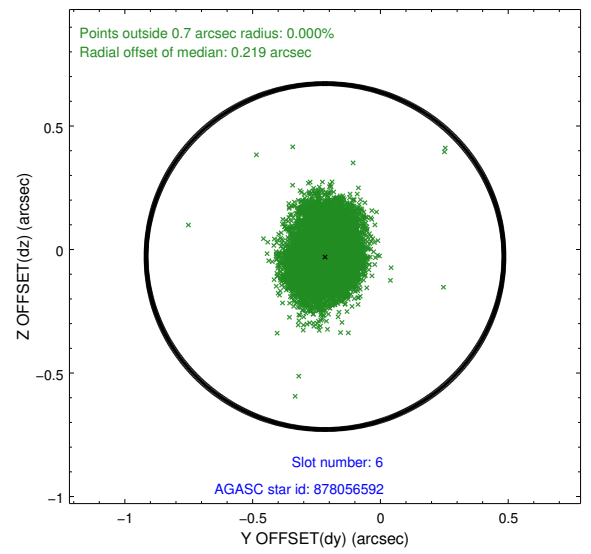
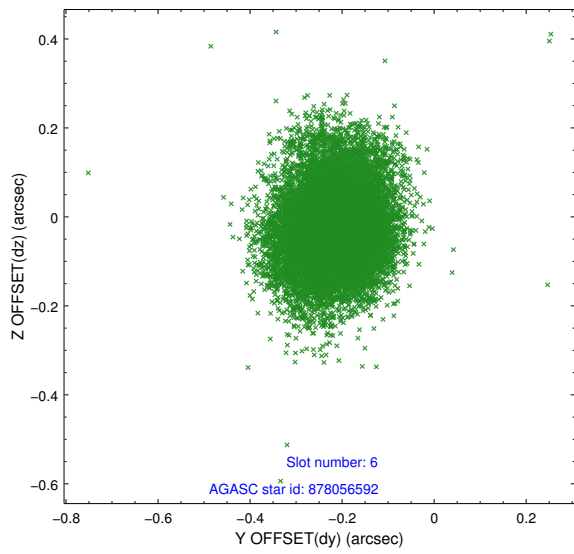
2.4.2 Slot 4



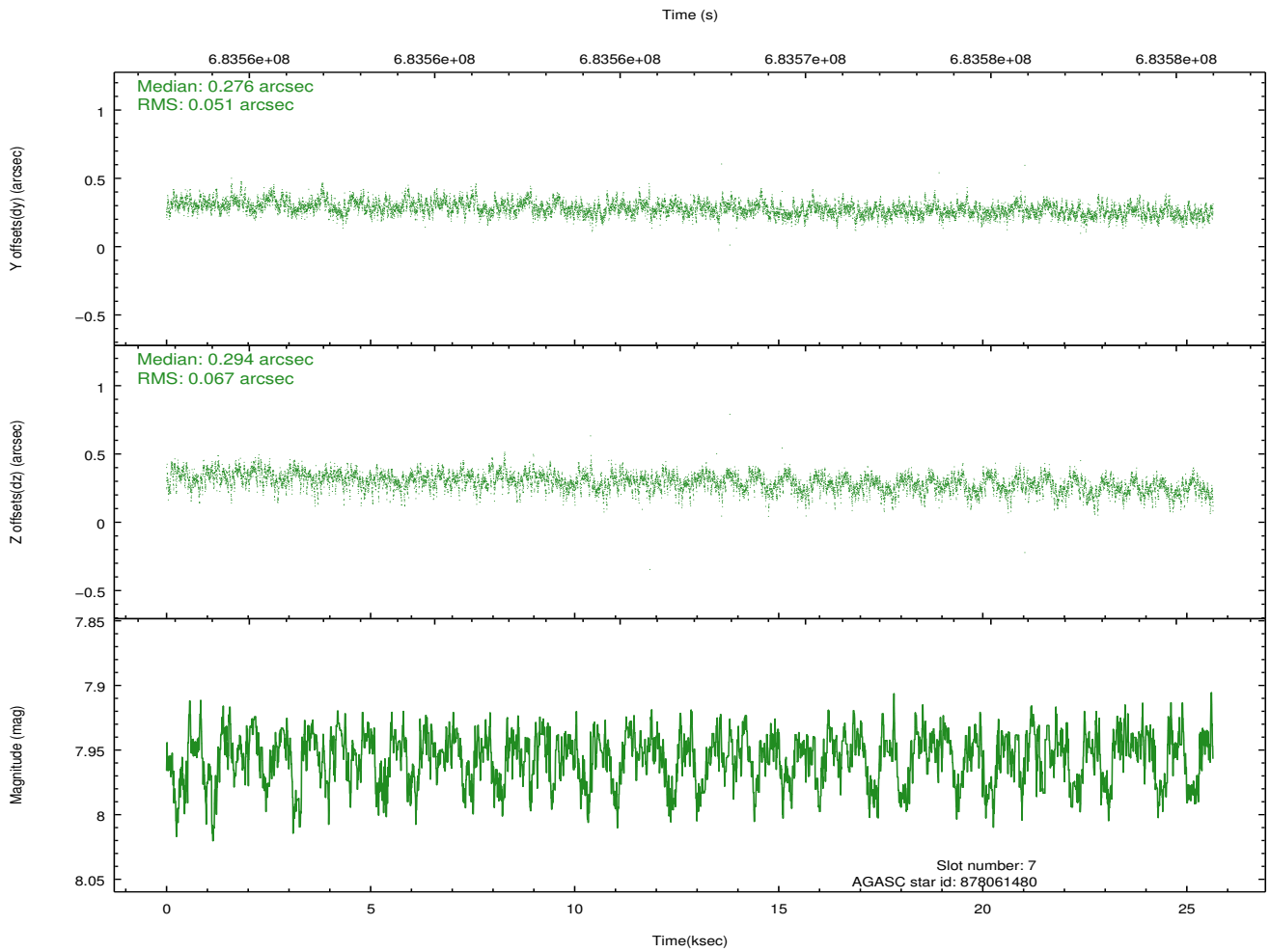
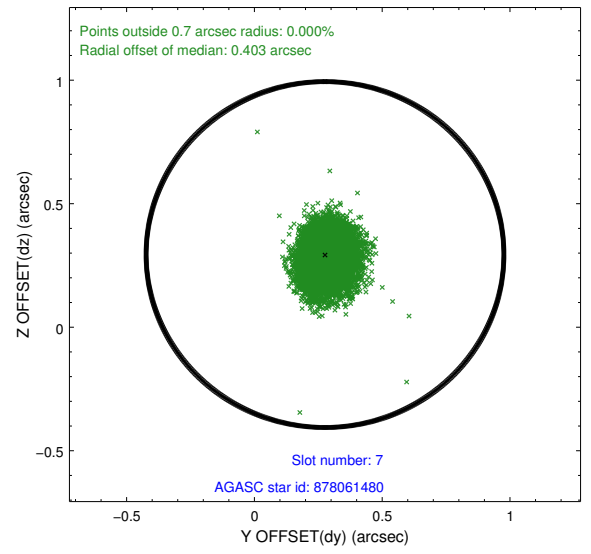
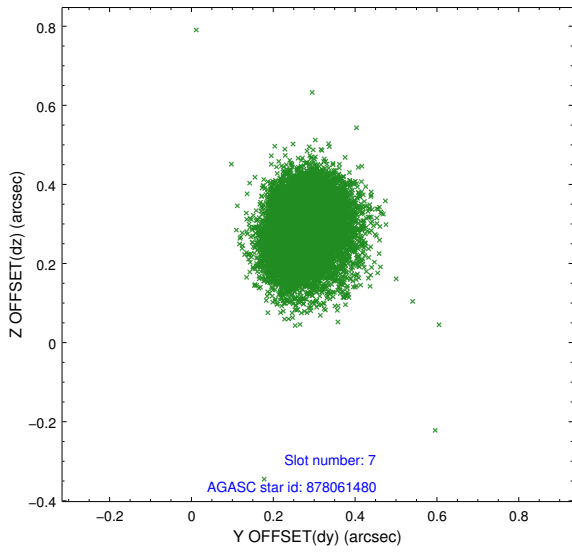
2.4.3 Slot 5



2.4.4 Slot 6

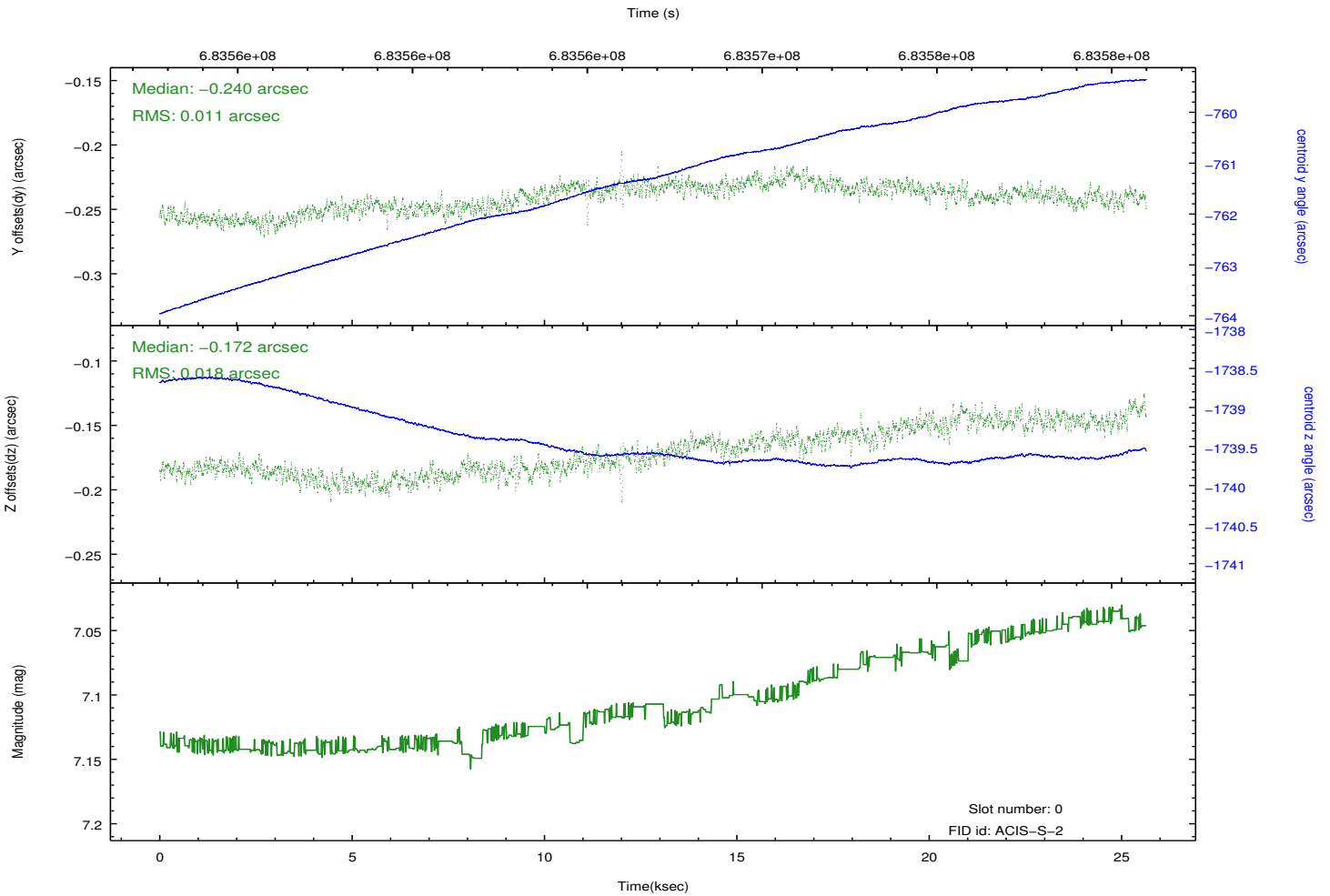
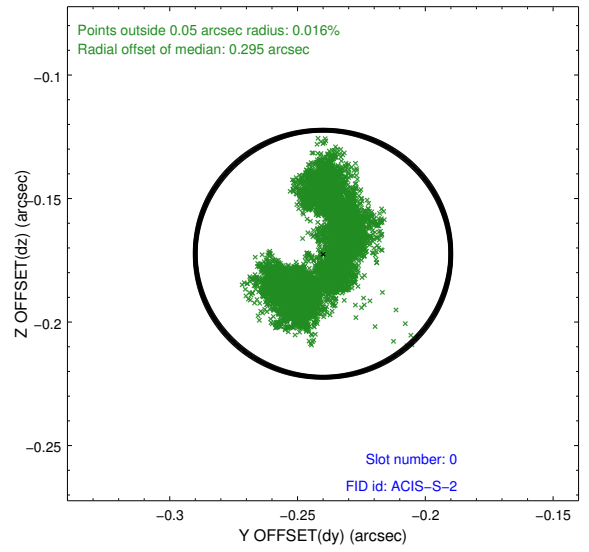
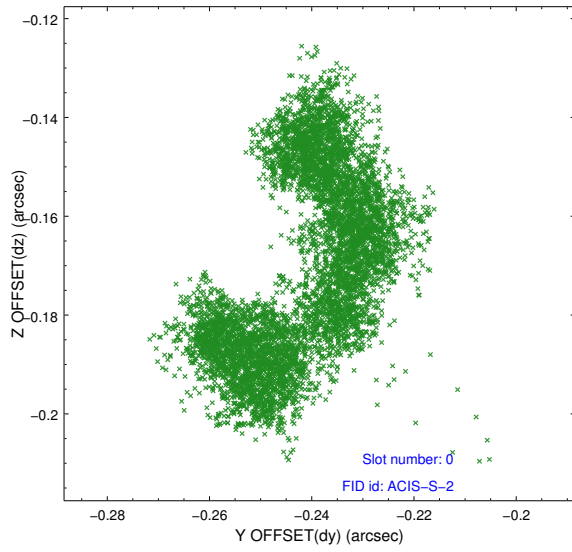


2.4.5 Slot 7

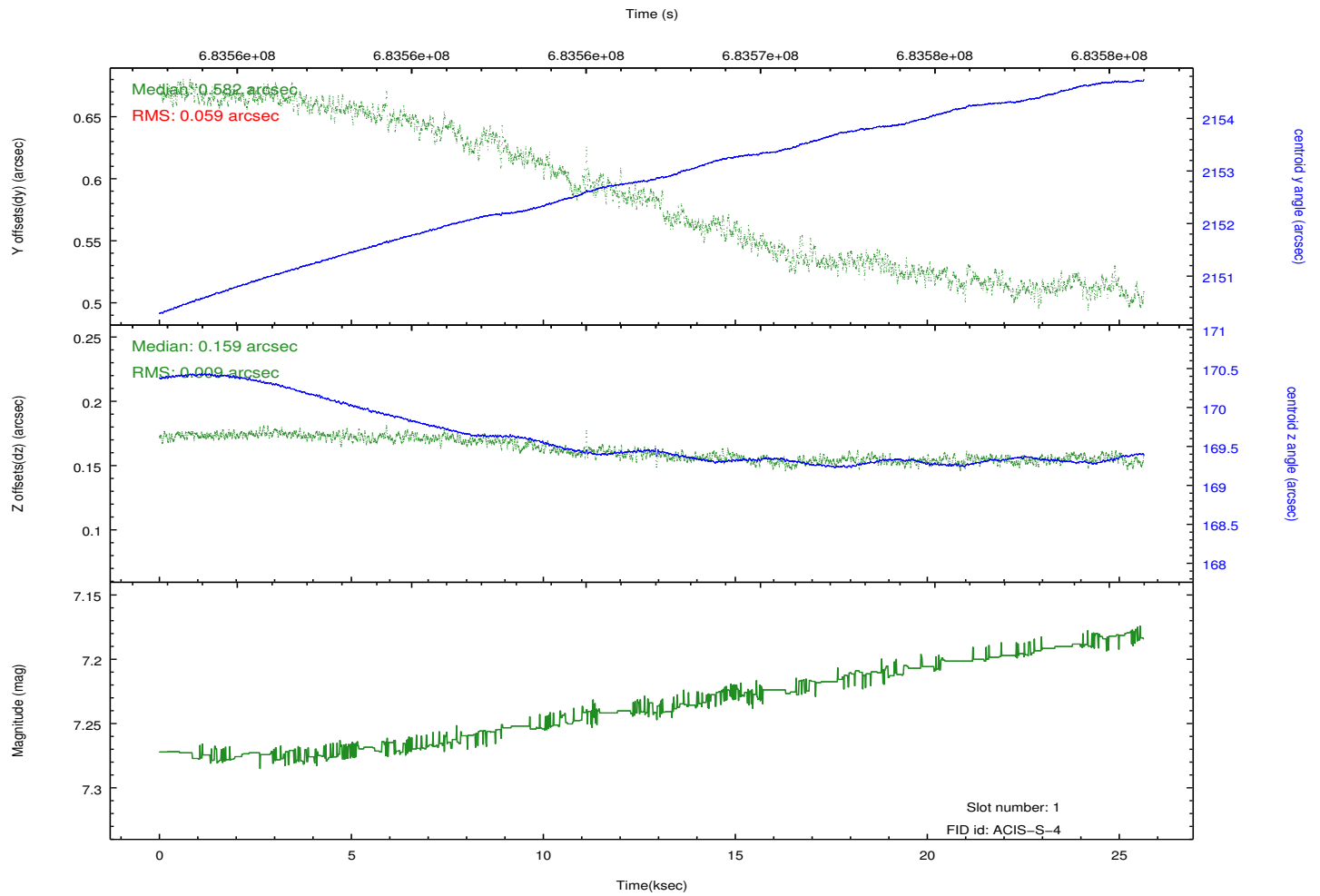
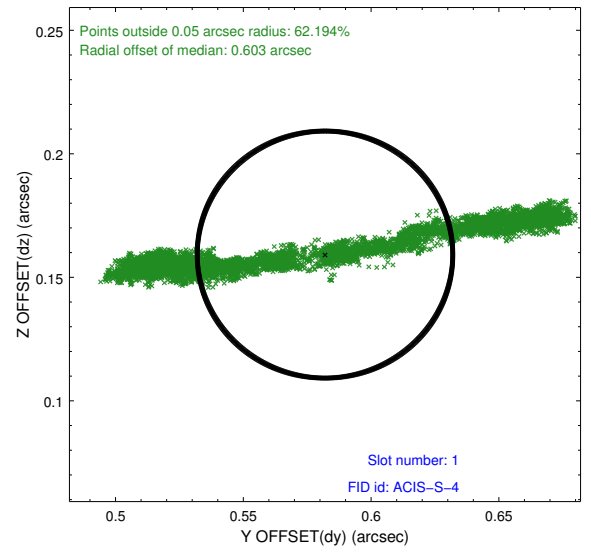
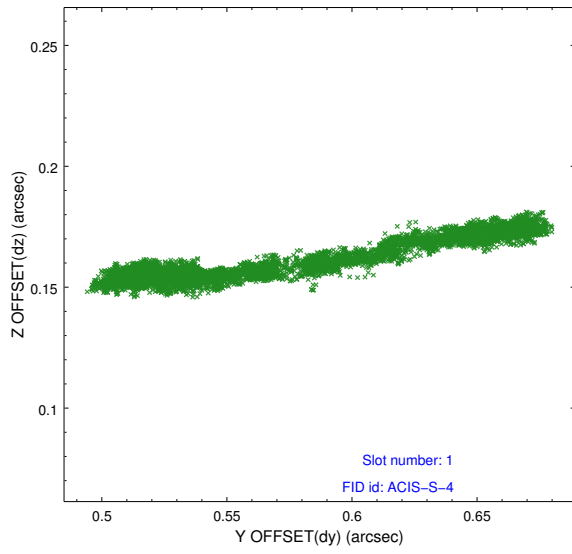


2.5 FID Slots

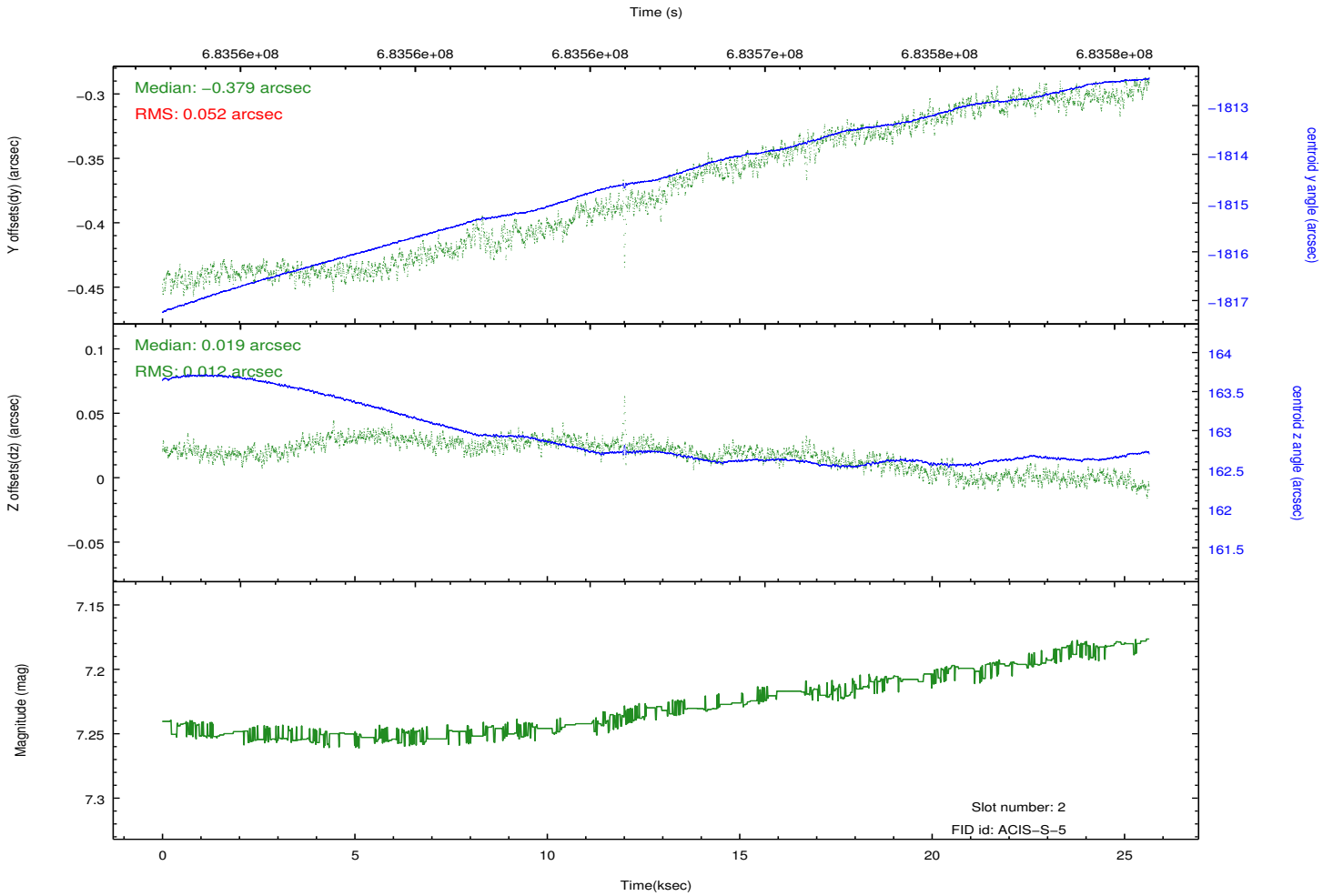
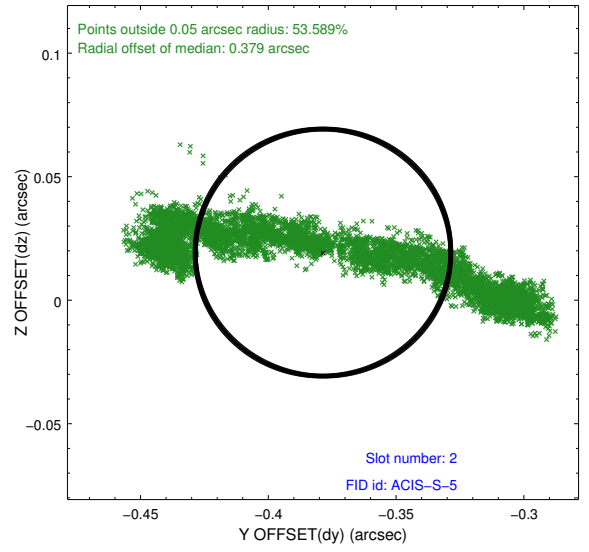
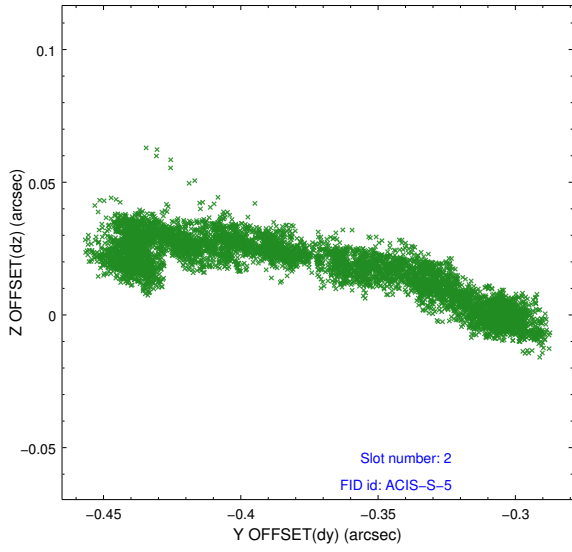
2.5.1 Slot 0



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)	2019.10.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.579915624738

A.2 Comments

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.