

V&V Reference Report

L2 ASCDS Version : 10.6.4.1

Observation 20277 - L2 Version 1
Chandra X-Ray Center

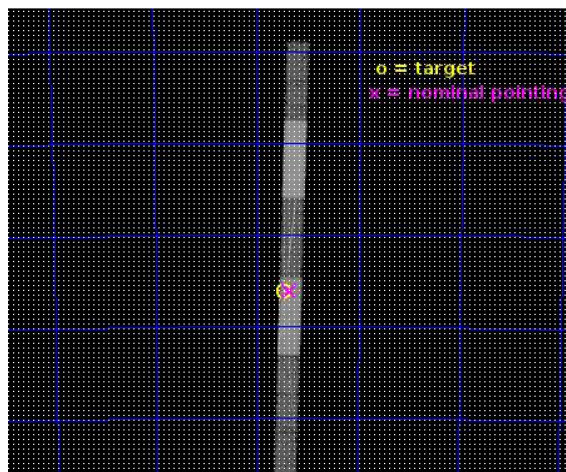
L2 Processing Date : Sep 16 2018

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1 Front

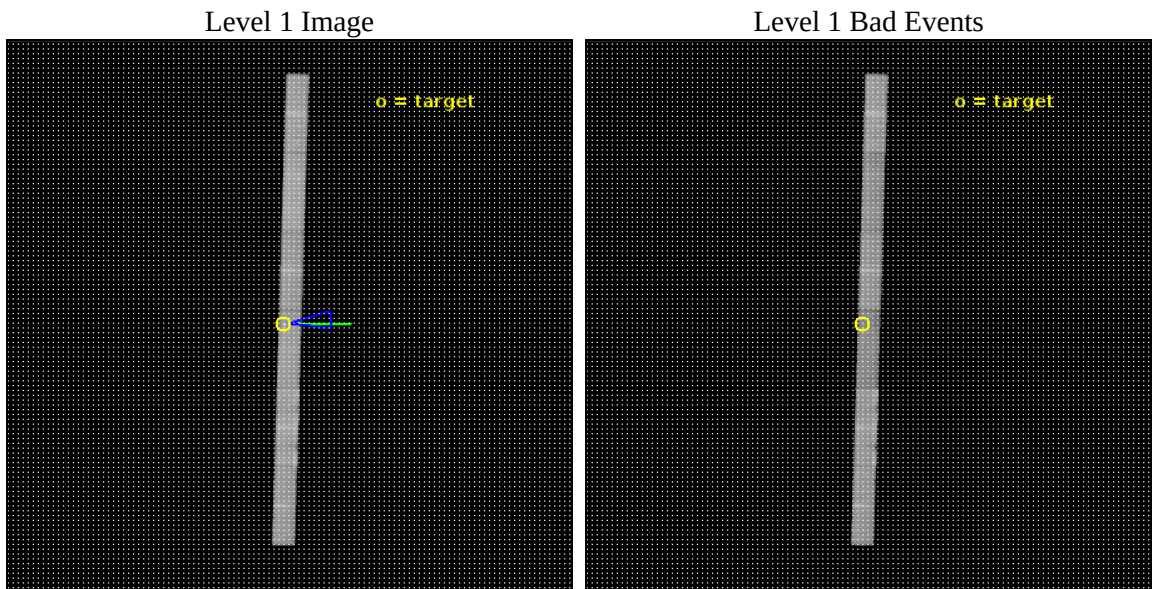
seq_num	502976	Sequence number
obs_id	20277	Observation id
title	Chandra Cycle 19 Spatial and Spectral Monitoring of SN 1987A	Propo
observer	David Burrows	Principal investigator
object	SN 1987A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.866667	Observer's specified target RA [deg]
dec_targ	-69.26975	Observer's specified target Dec [deg]
ra_nom	83.841914811148	Nominal RA [deg]
dec_nom	-69.268334102364	Nominal Dec [deg]
roll_nom	91.633473969188	Nominal Roll [deg]
revision	1	Processing version of data
ontime	35087.487230539	Sum of GTIs [s]
livetime	33825.488986883	Livetime [s]
ontime4	35087.528270483	Sum of GTIs [s]
ontime5	35087.446190476	Sum of GTIs [s]
ontime6	35087.405150533	Sum of GTIs [s]
ontime7	35087.487230539	Sum of GTIs [s]
ontime8	35087.36411047	Sum of GTIs [s]
ontime9	35087.323070526	Sum of GTIs [s]
l2events	117448	Number of level 2 events



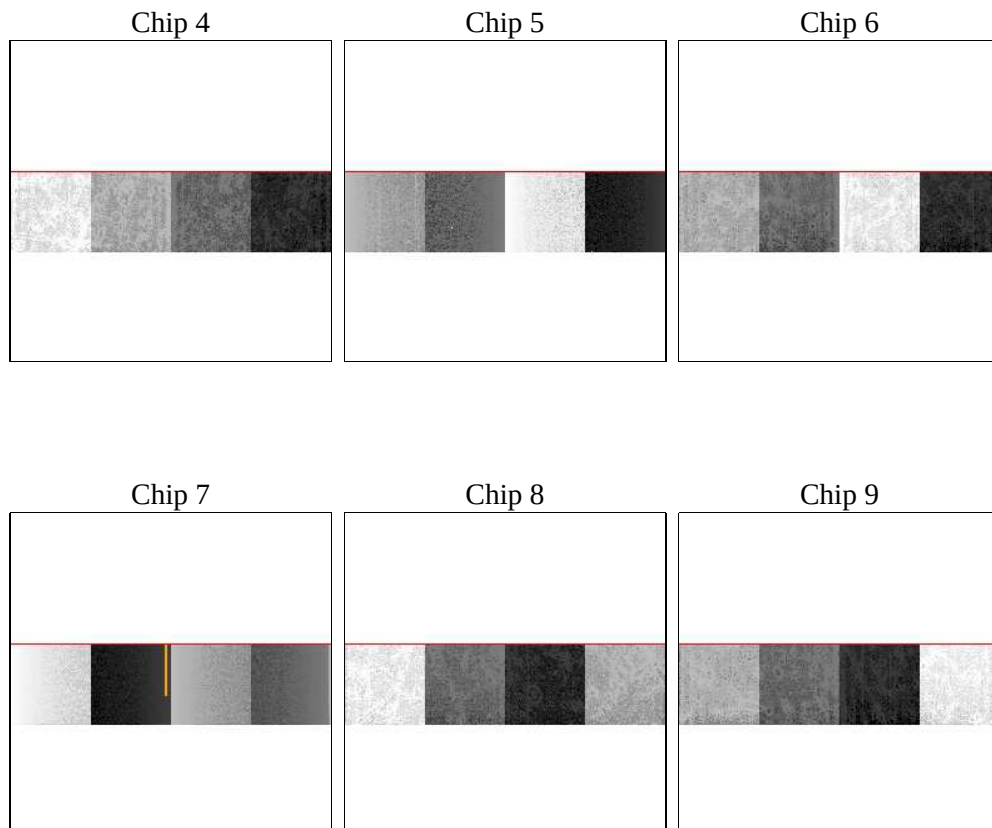
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	34999.984000	[s] Scheduled observation exposure time
ascdsver	10.6.4.1	Processing system revision	ontime	35087.487230539	Sum of GTIs [s]
caldsver	4.8.0	 	ontime4	35087.528270483	Sum of GTIs [s]
date	2018-09-16T04:15:25	Date and time of file creation	ontime5	35087.446190476	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	35087.405150533	Sum of GTIs [s]
			ontime7	35087.487230539	Sum of GTIs [s]
			ontime8	35087.36411047	Sum of GTIs [s]
			ontime9	35087.323070526	Sum of GTIs [s]
			l1events	500127	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			src1a_pos	(4022.16, 4085.04)	src1a sky pixel position

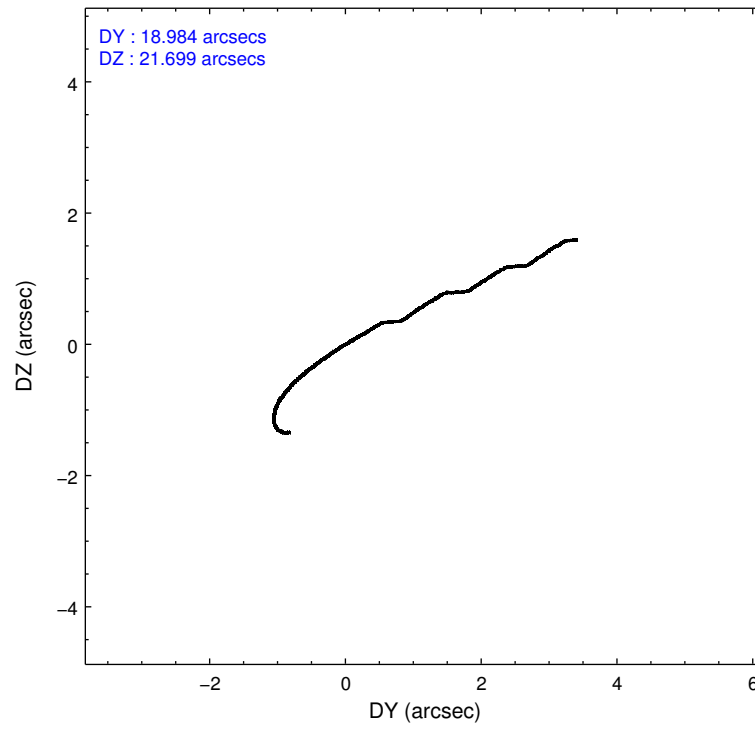
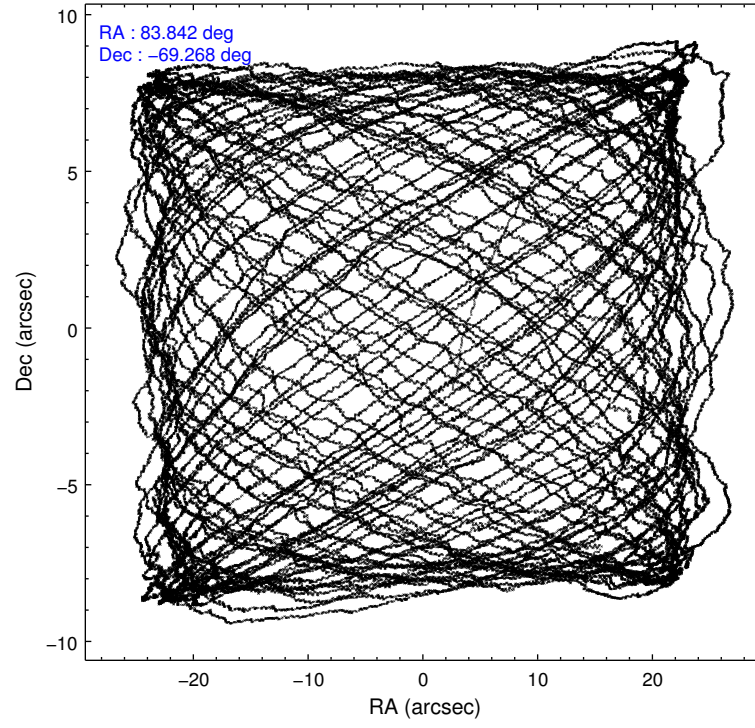
2.1.4 Events

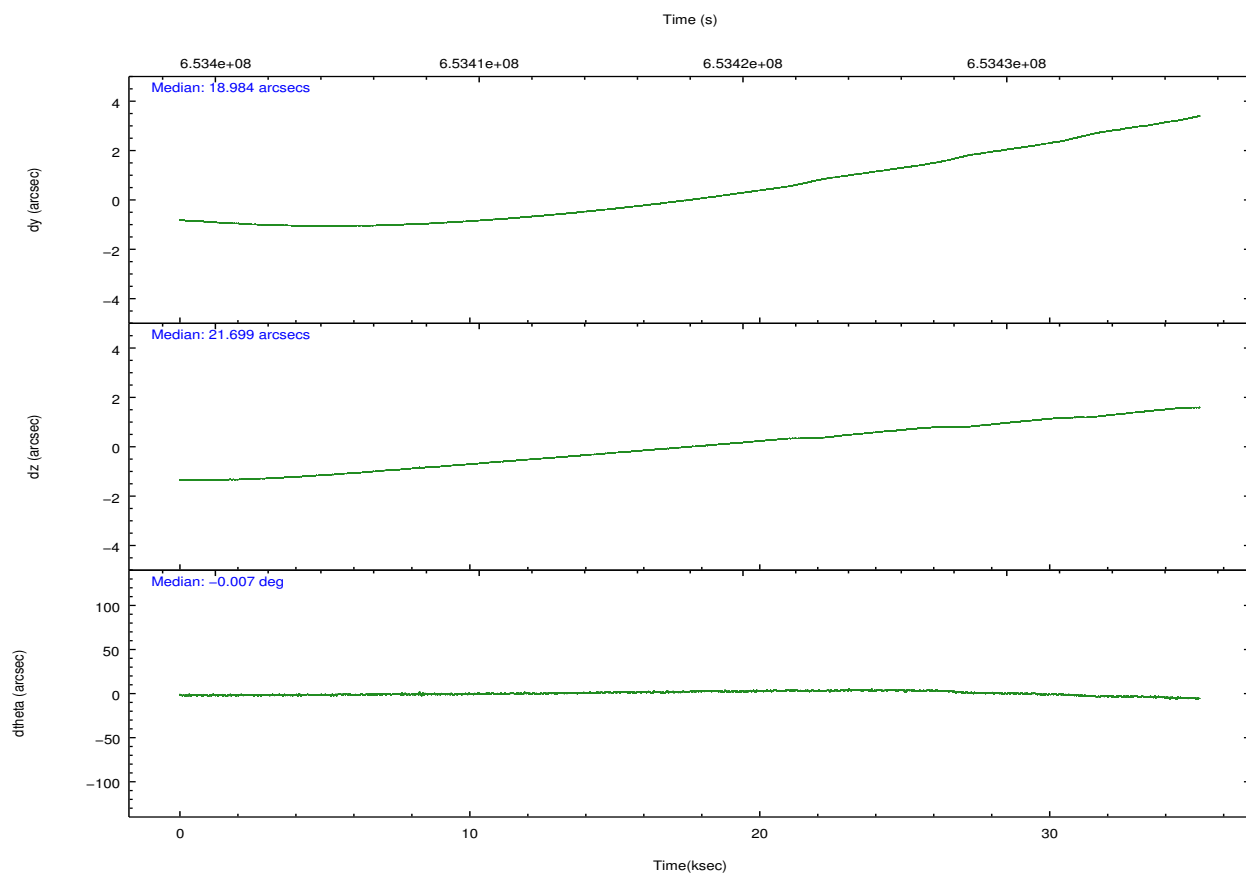
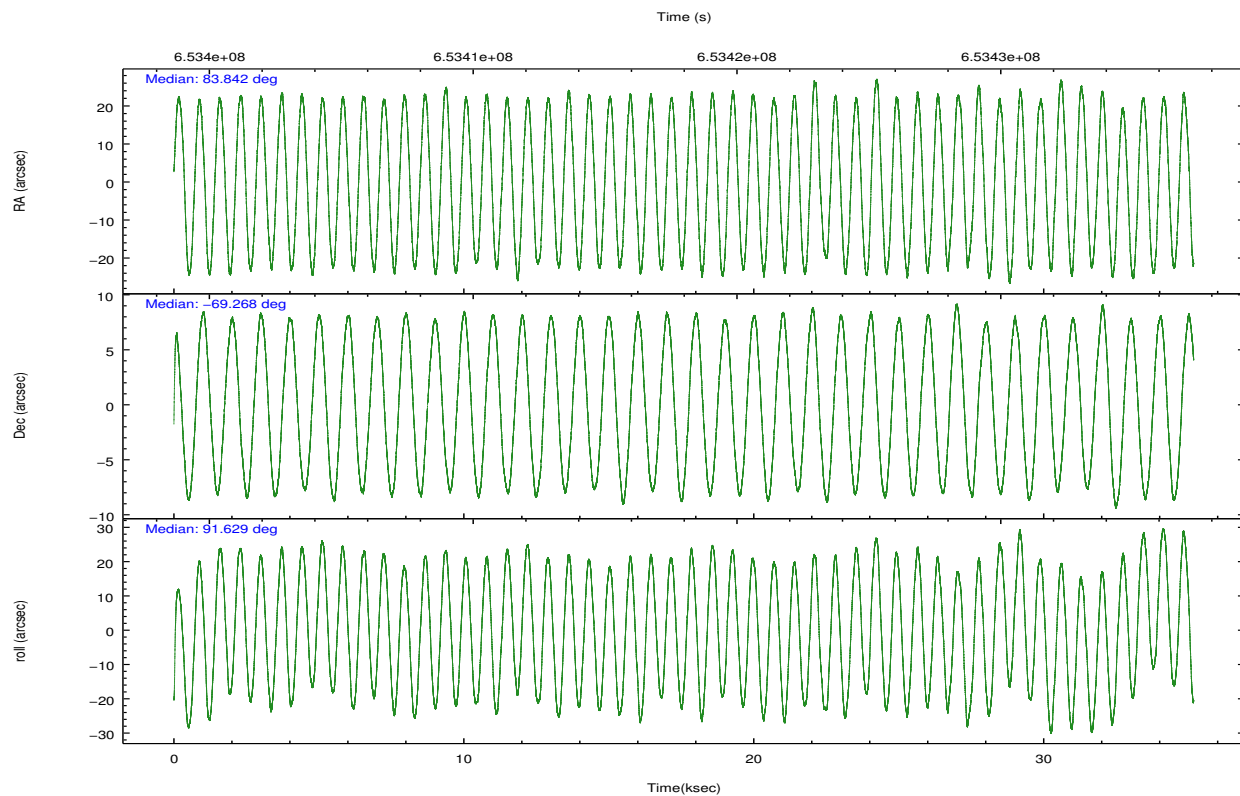
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	84813	94066	74061	79924	97331	69932	grade 0 events	3056	3888	4696	5326	6558	2489
rejected events	76029	45847	63163	37592	72919	62012		3%	4%	6%	6%	6%	3%
rejected %	89%	48%	85%	47%	74%	88%	grade 1 events	57	319	22	164	50	38
								0%	0%	0%	0%	0%	0%
							grade 2 events	1949	15104	2019	9444	5634	1549
								2%	16%	2%	11%	5%	2%
							grade 3 events	1233	2322	1211	4530	2547	1189
								1%	2%	1%	5%	2%	1%
							grade 4 events	1193	2172	1230	4460	2377	1099
								1%	2%	1%	5%	2%	1%
							grade 5 events	2802	7109	2554	7957	4042	2849
								3%	7%	3%	9%	4%	4%
							grade 6 events	1353	24734	1743	18574	7298	1595
								1%	26%	2%	23%	7%	2%
							grade 7 events	73170	38418	60586	29469	68825	59124
								86%	40%	81%	36%	70%	84%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	83.883464	83.84191481114772	CCD I2 on	N	N
[deg] Pointing Dec	-69.291511	-69.26833410236411	CCD I3 on	N	N
[deg] Pointing Roll	91.515712	91.6334739691884	CCD S0 on	O1	Y
[deg] Roll angle	84.000000	84.000000	CCD S1 on	Y	Y
[deg] Roll tolerance	12.000000	12.000000	CCD S2 on	Y	Y
Roll constraint allows 180D rotation	N	N	CCD S3 on	Y	Y
[s] Window start time (MET)	653011269.184000	653011269.184000	CCD S4 on	Y	Y
[s] Window stop time (MET)	655084869.184000	655084869.184000	CCD S5 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Number of optional ACIS chips dropped	0	0
[mm] SIM defocus	0	0.001444936568705701	On-chip summing requested	N	N
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	Subarray requested	CUSTOM	1/4
[mm] SIM translation stage offset	0	0.00754346686406393	Subarray start row	351	351
[s] Observation start time (MET)	653400559.184000	653399254.0668	Subarray row count	256	256
Observation start date	2018-09-15T12:08:10	2018-09-15T11:47:34	Alternating exposures requested	N	N
[s] Observation end time (MET)	653435559.184000	653436430.81901	[s] Primary exposure time	0.000000	1.1
Observation end date	2018-09-15T21:51:30	2018-09-15T22:07:10			
Read mode	TIMED	TIMED			

2.3 Aspect



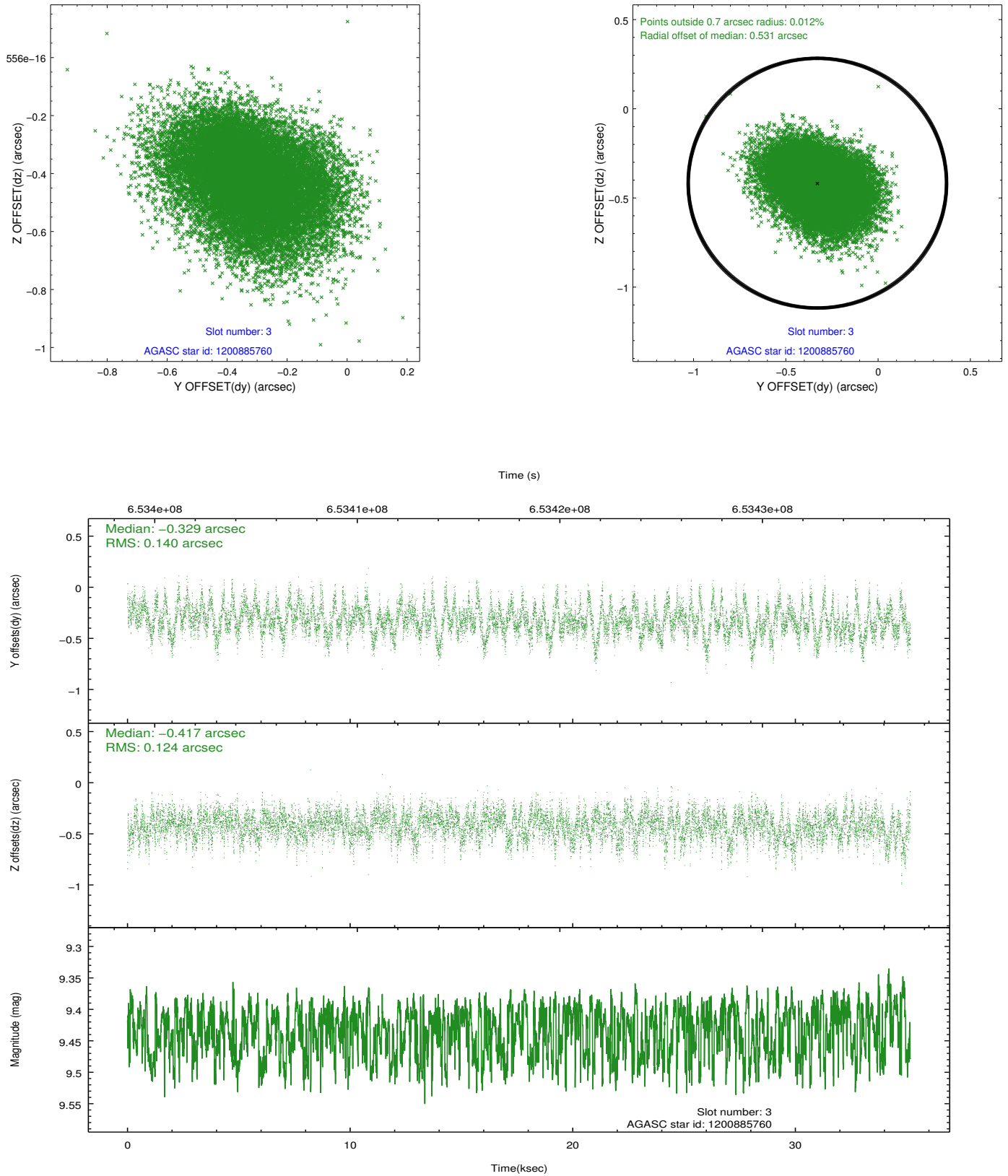


Slot Statistics

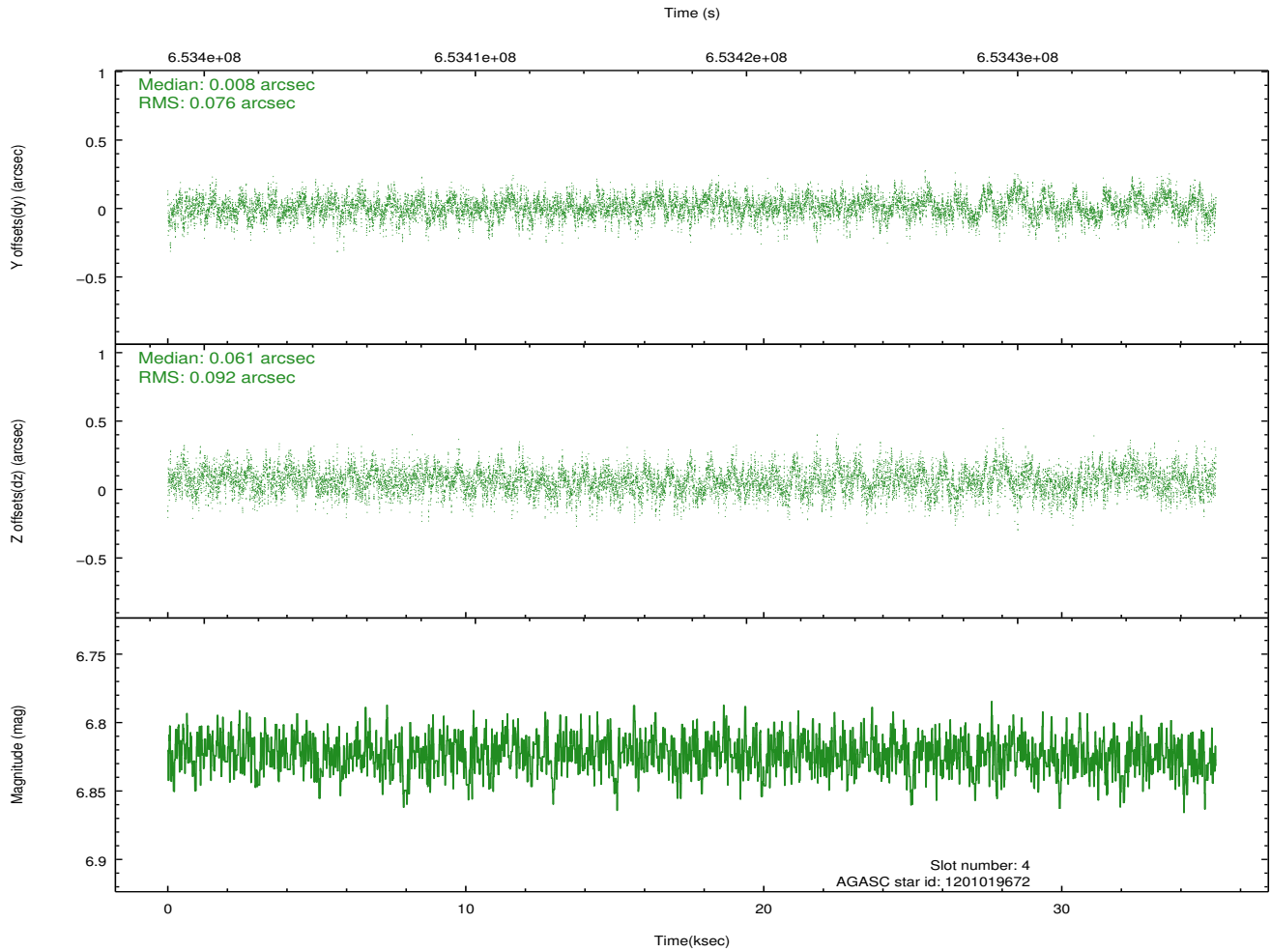
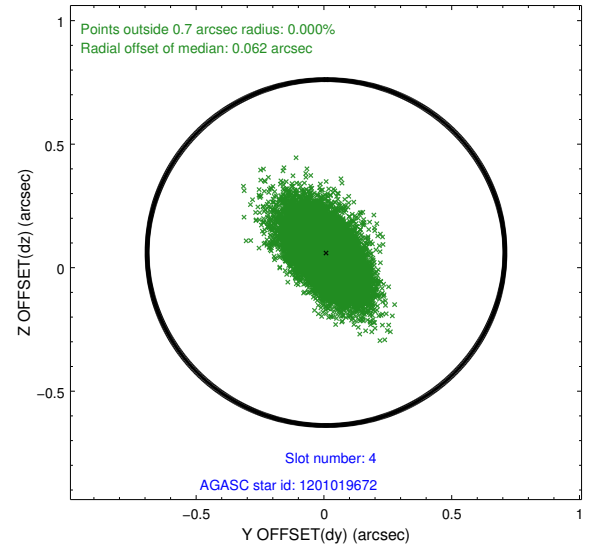
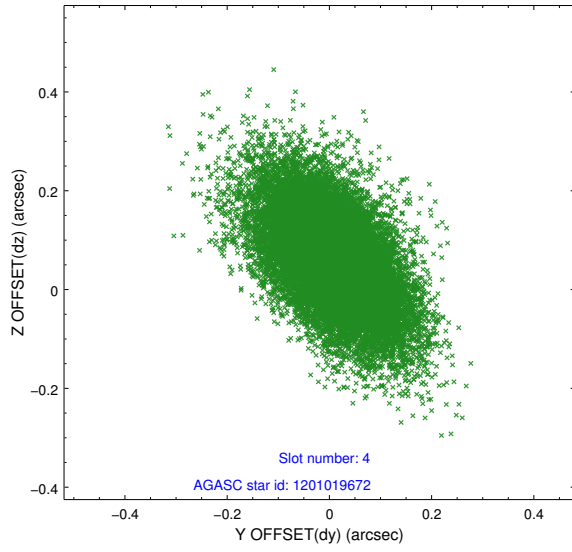
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.20	8579	1.000	0.155	-0.085	0.049	0.077	0.000000	0.000000	923.73	-1738
1	FID		ACIS-S-5	7.22	8579	1.000	-0.348	0.068	0.024	0.047	0.000000	0.000000	-1825.79	158
2	FID		ACIS-S-6	7.37	8579	1.000	0.171	0.023	0.027	0.046	0.000000	0.000000	389.19	802
3	GUIDE	used	1200885760	9.43	17133	1.000	-0.329	-0.417	0.200	0.324	83.723637	-68.777667	1854.14	159
4	GUIDE	used	1201019672	6.82	17159	1.000	0.008	0.061	0.122	0.214	85.312192	-68.770187	1805.80	-1910
5	GUIDE	used	1201020040	8.58	17138	1.000	-0.034	0.211	0.164	0.270	85.379163	-68.879396	1408.71	-1977
6	GUIDE	used	1201540776	9.48	17132	1.000	0.429	0.457	0.251	0.381	85.107945	-69.858480	-2094.79	-1462
7	GUIDE	used	1201410616	9.29	17135	1.000	-0.091	-0.299	0.197	0.367	82.516808	-69.784406	-1747.55	1746

2.4 Star Slots

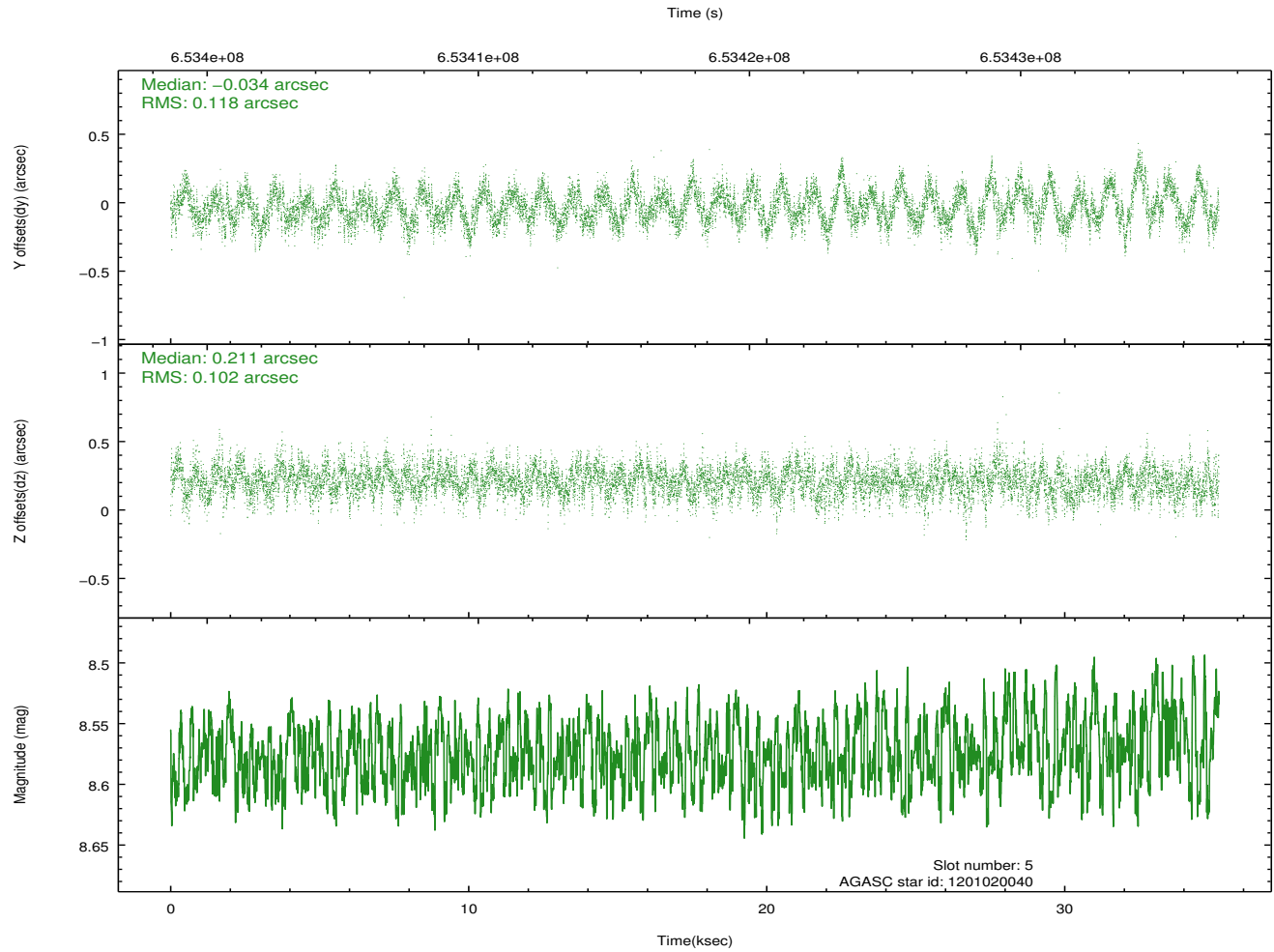
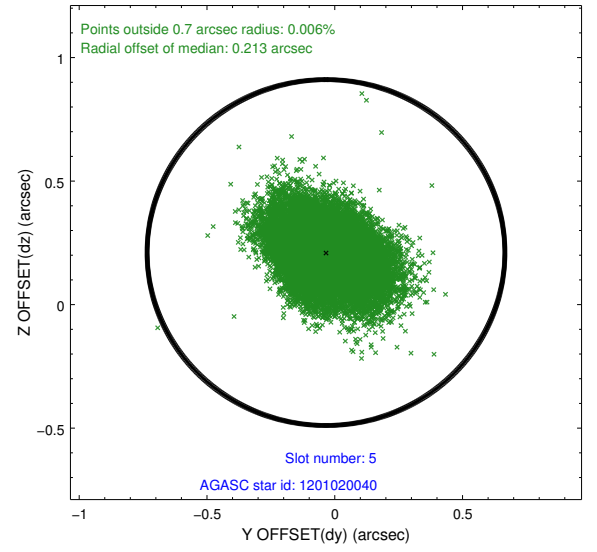
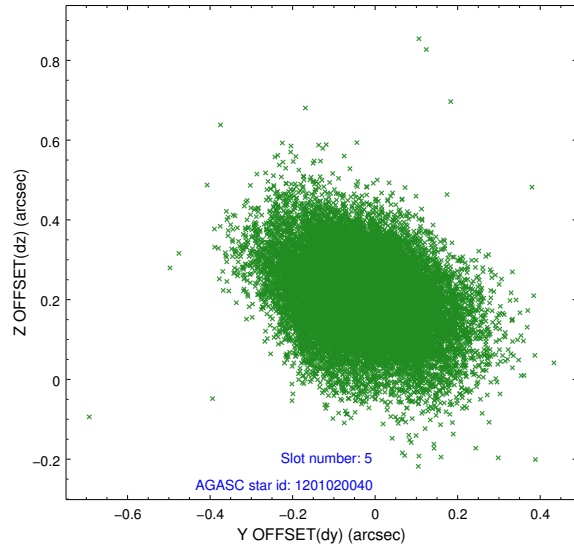
2.4.1 Slot 3



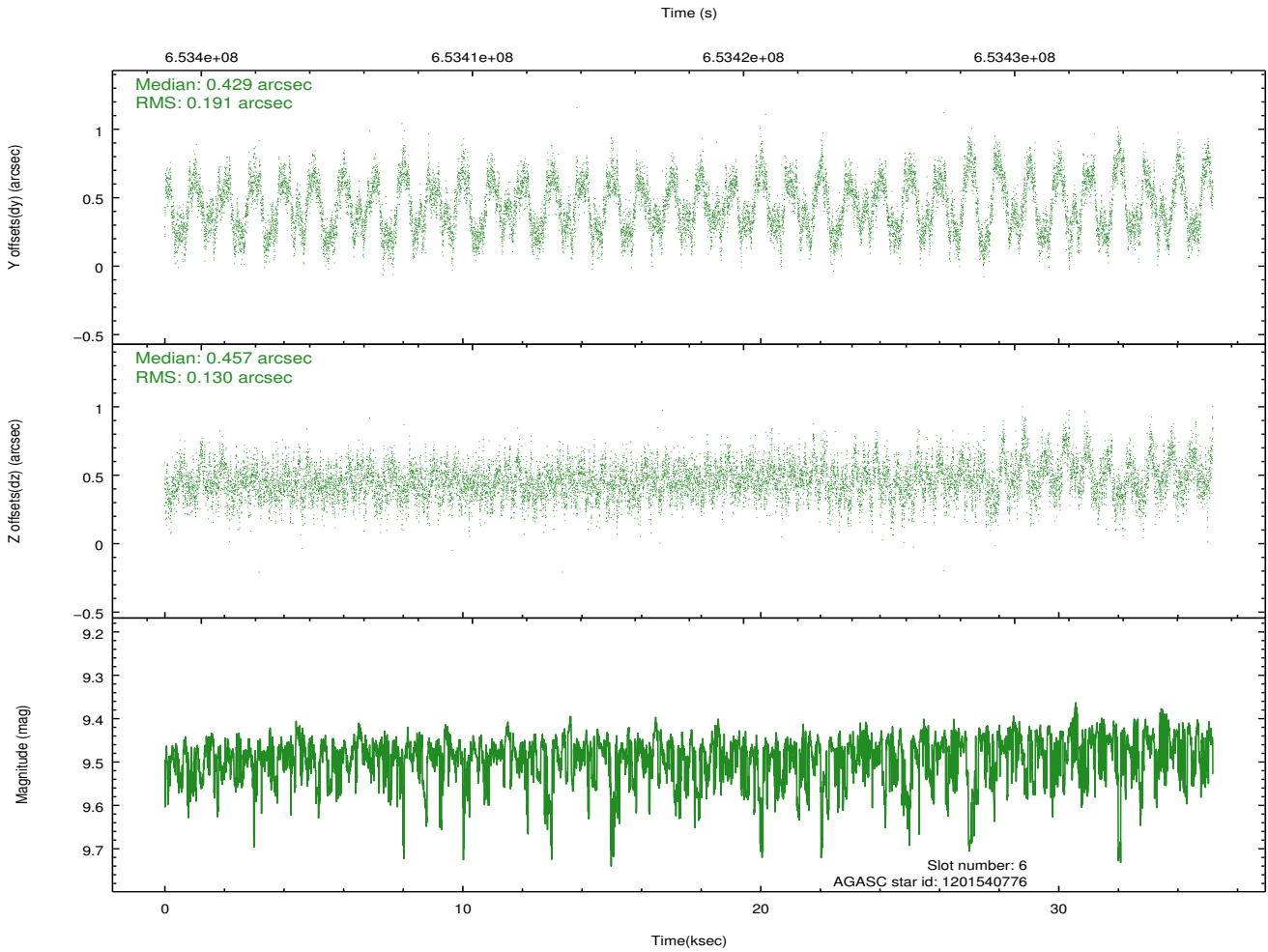
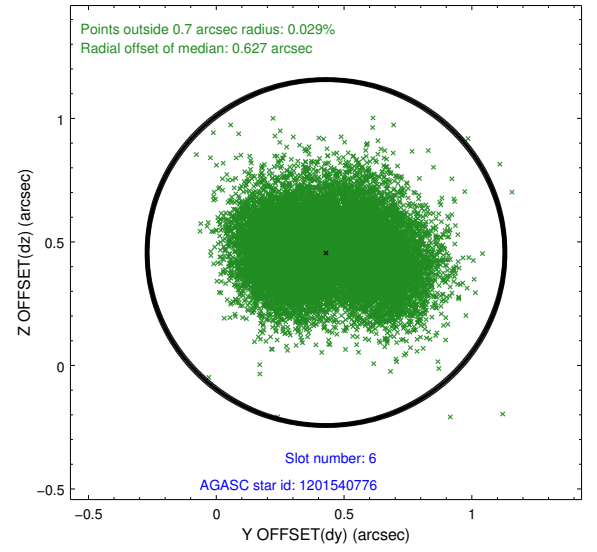
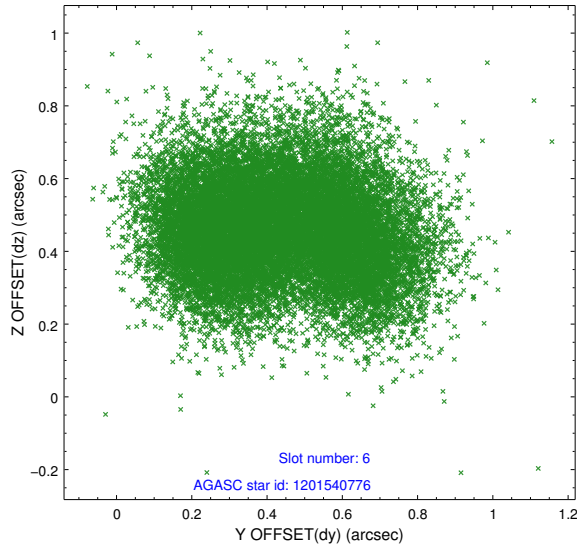
2.4.2 Slot 4



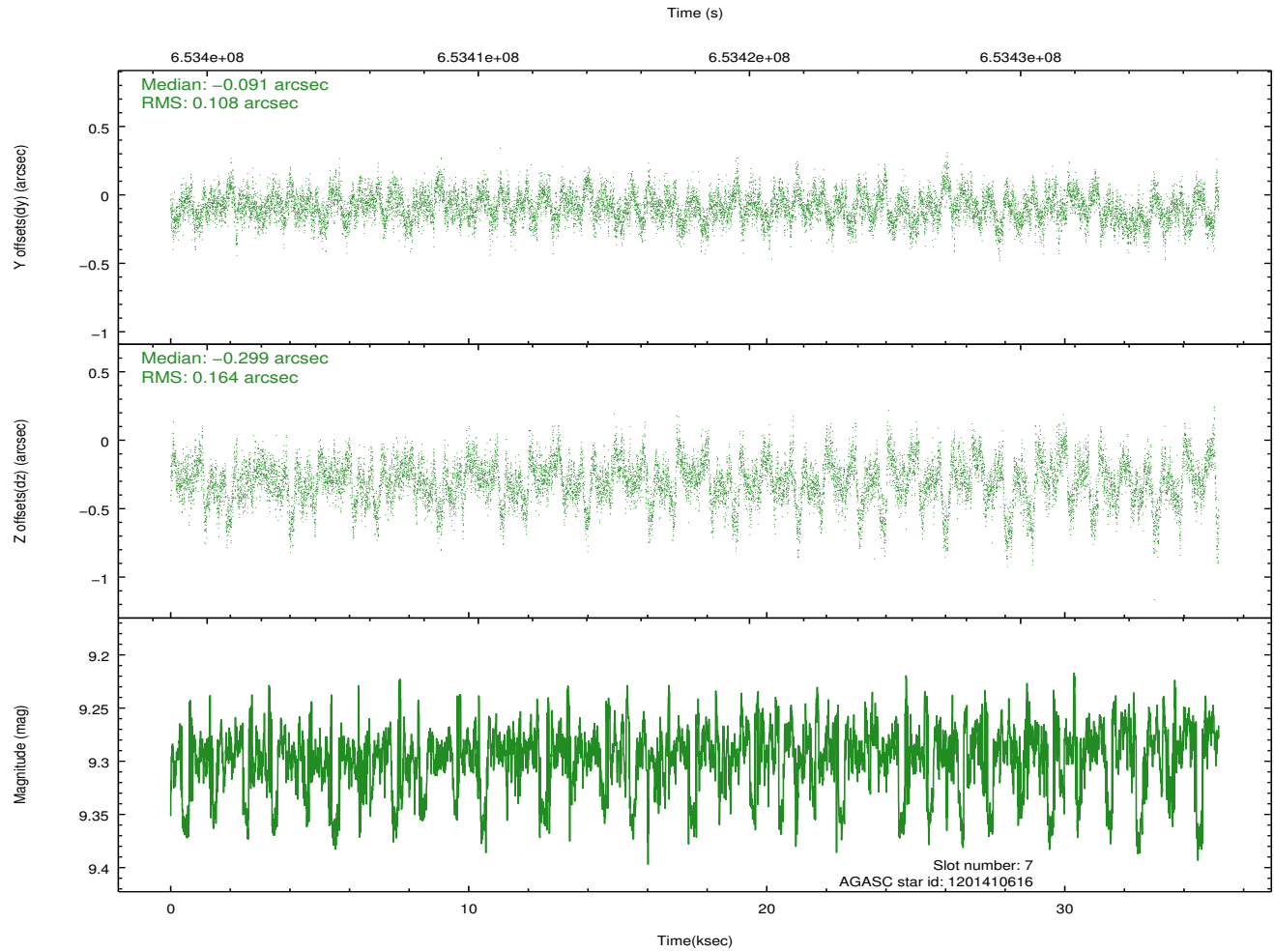
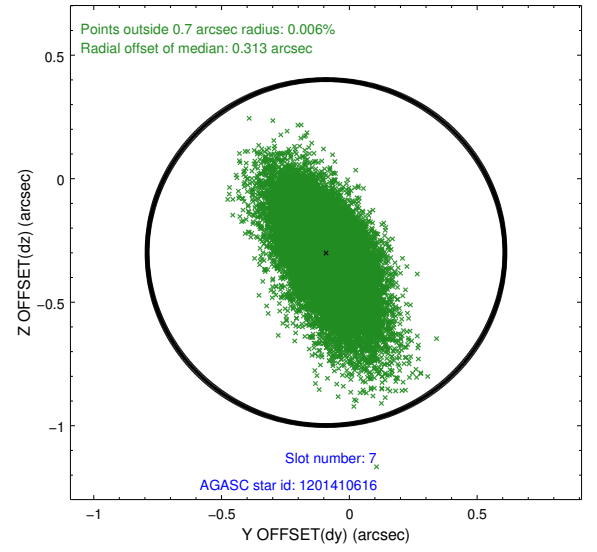
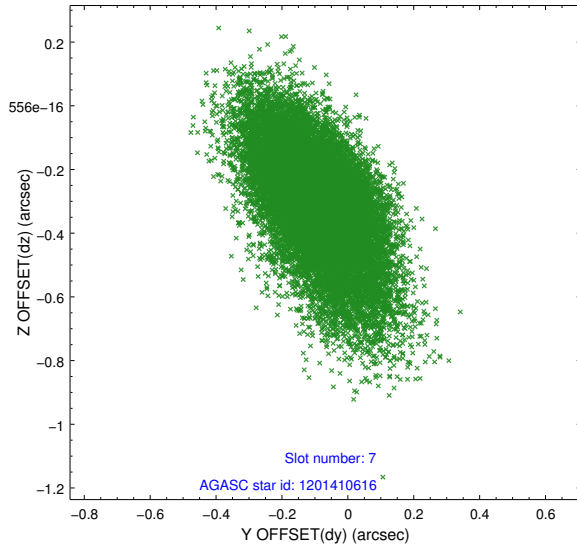
2.4.3 Slot 5



2.4.4 Slot 6

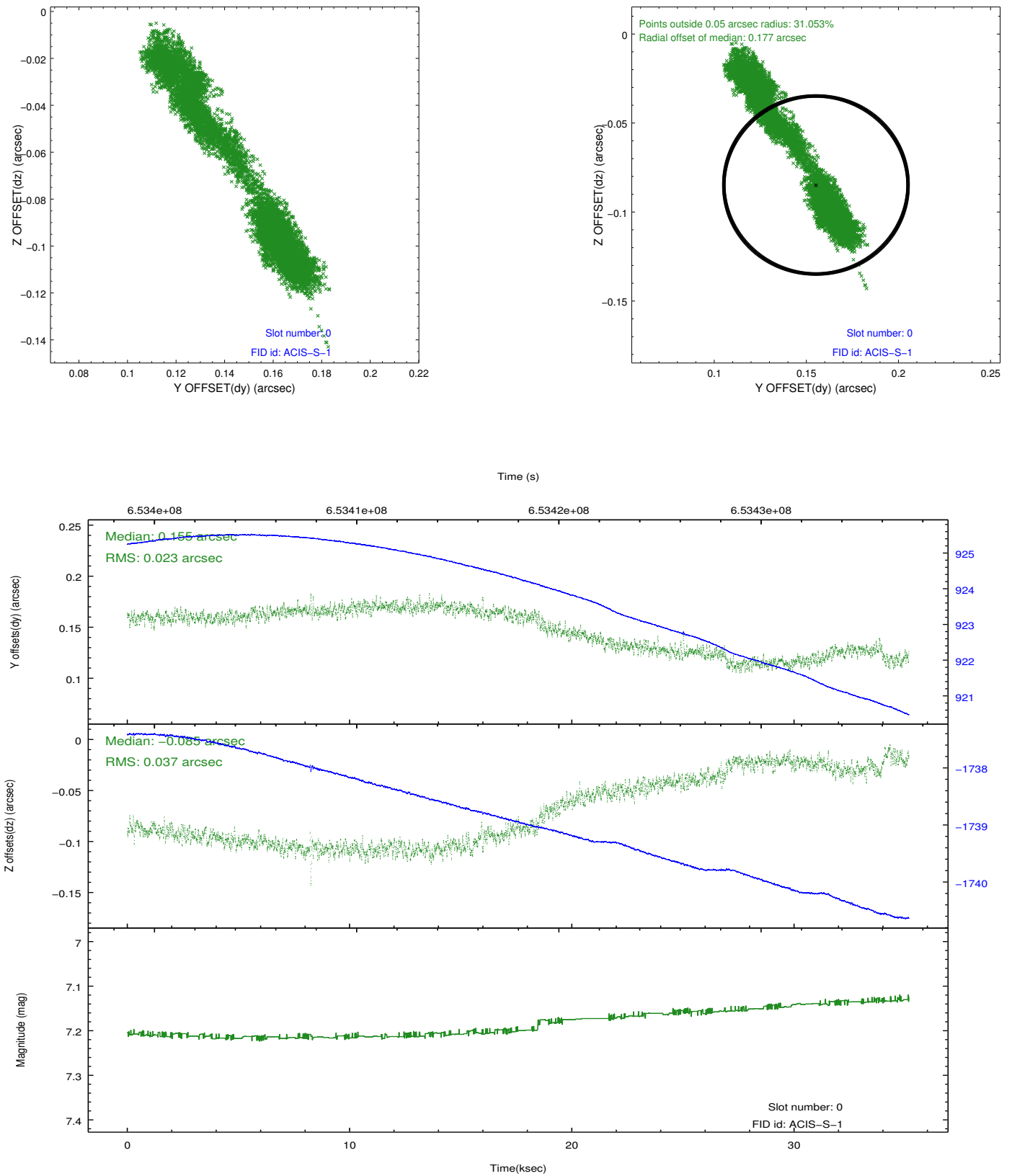


2.4.5 Slot 7

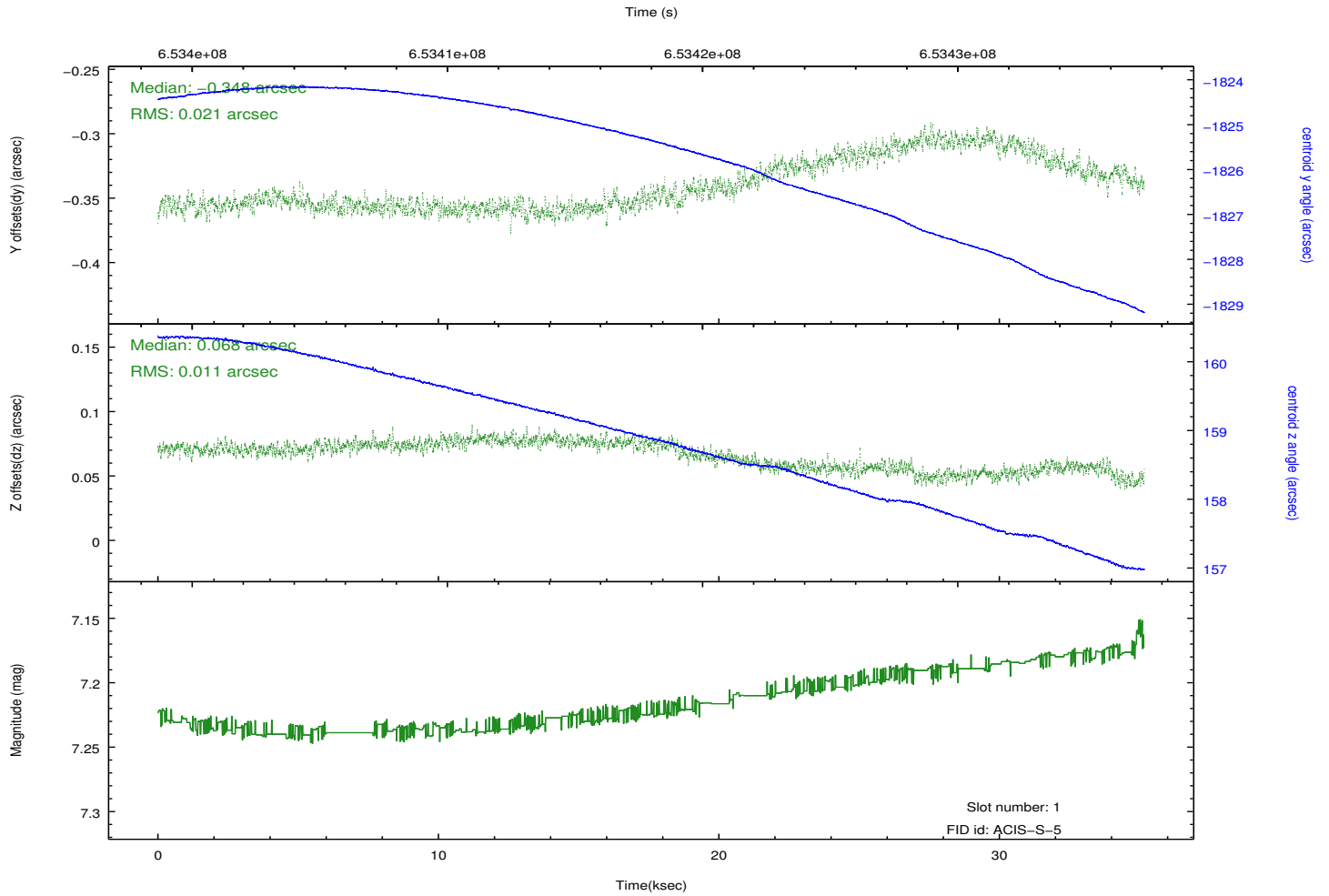
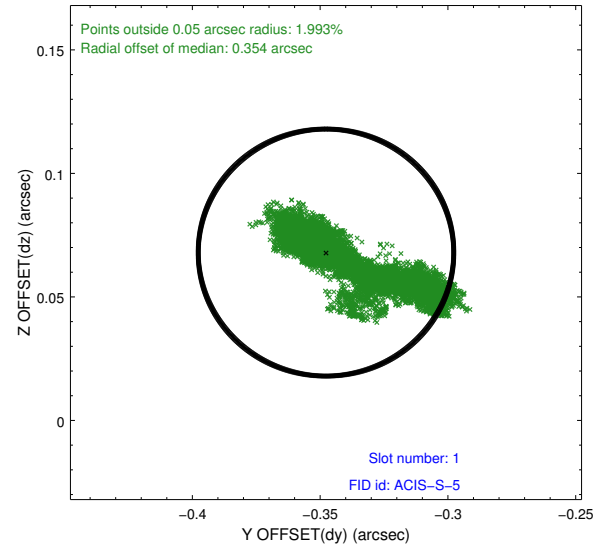
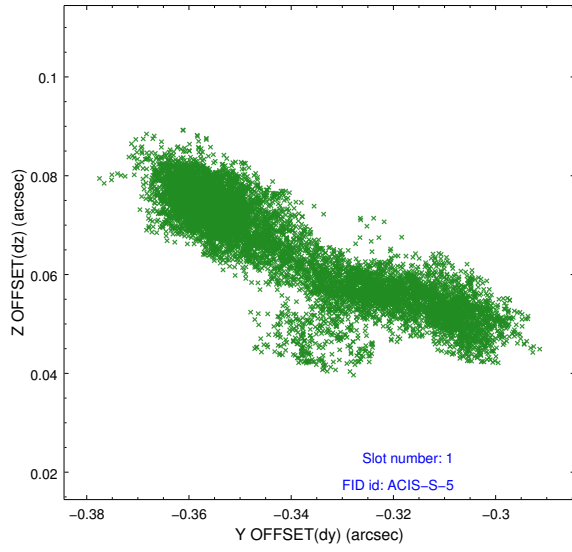


2.5 FID Slots

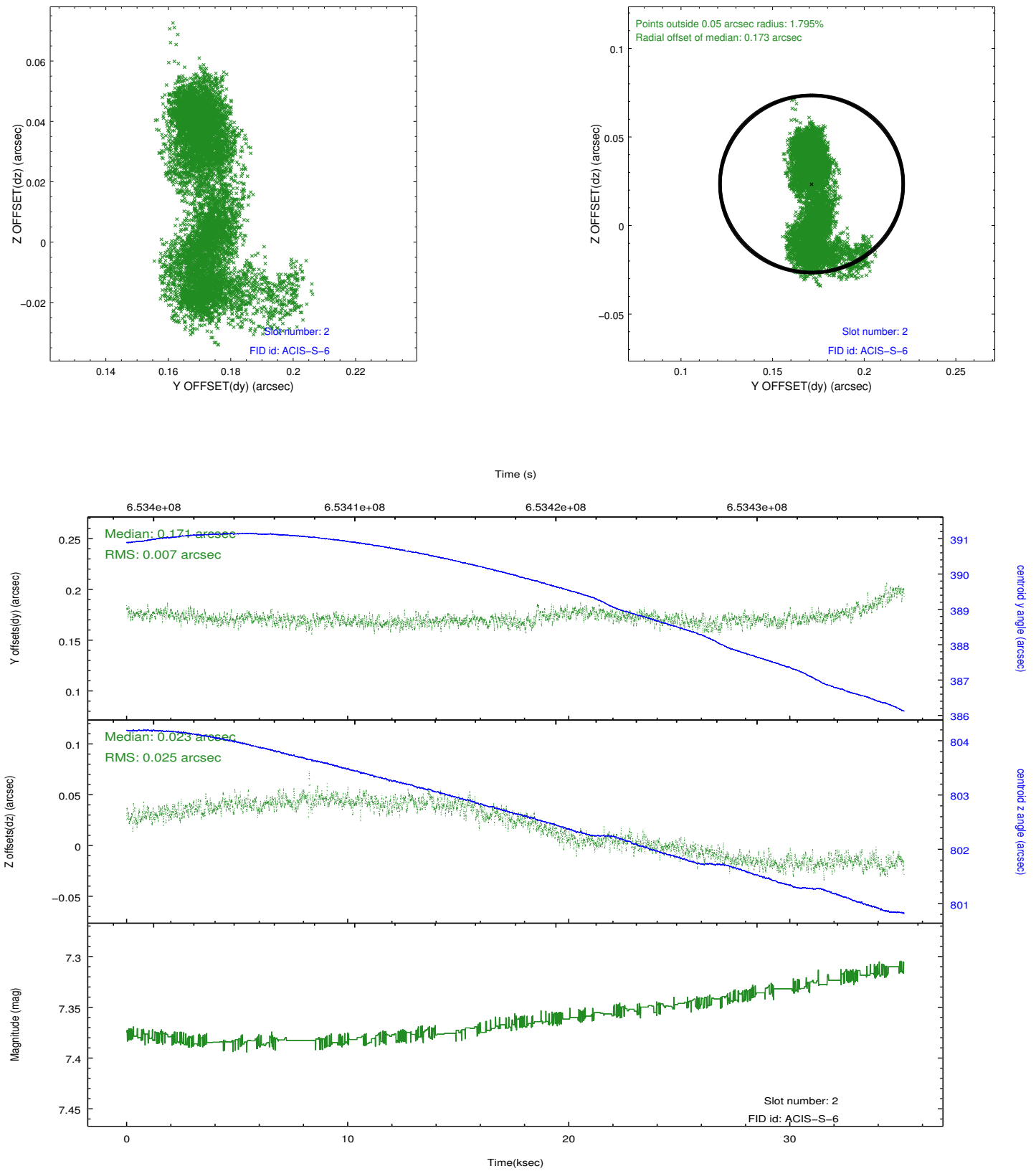
2.5.1 Slot 0



2.5.2 Slot 1

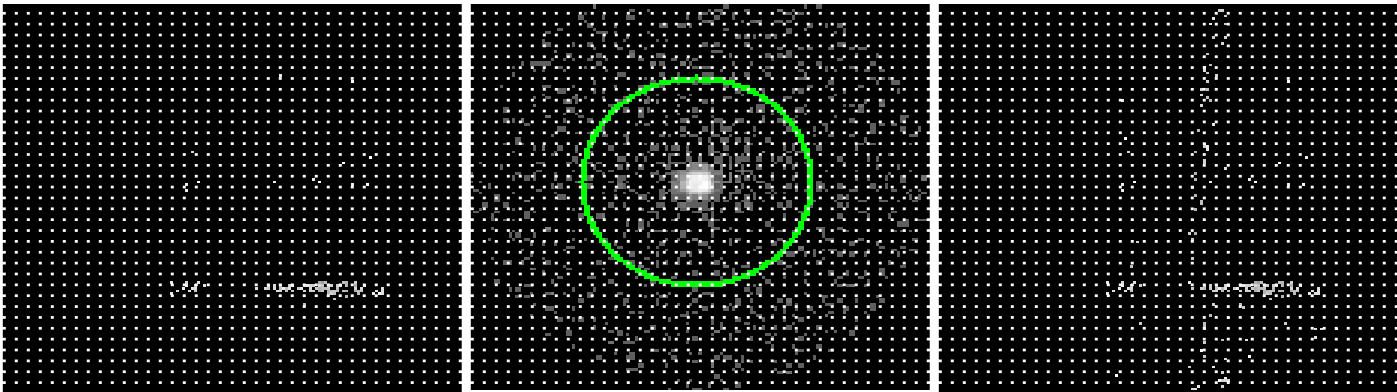


2.5.3 Slot 2



3 Gratings

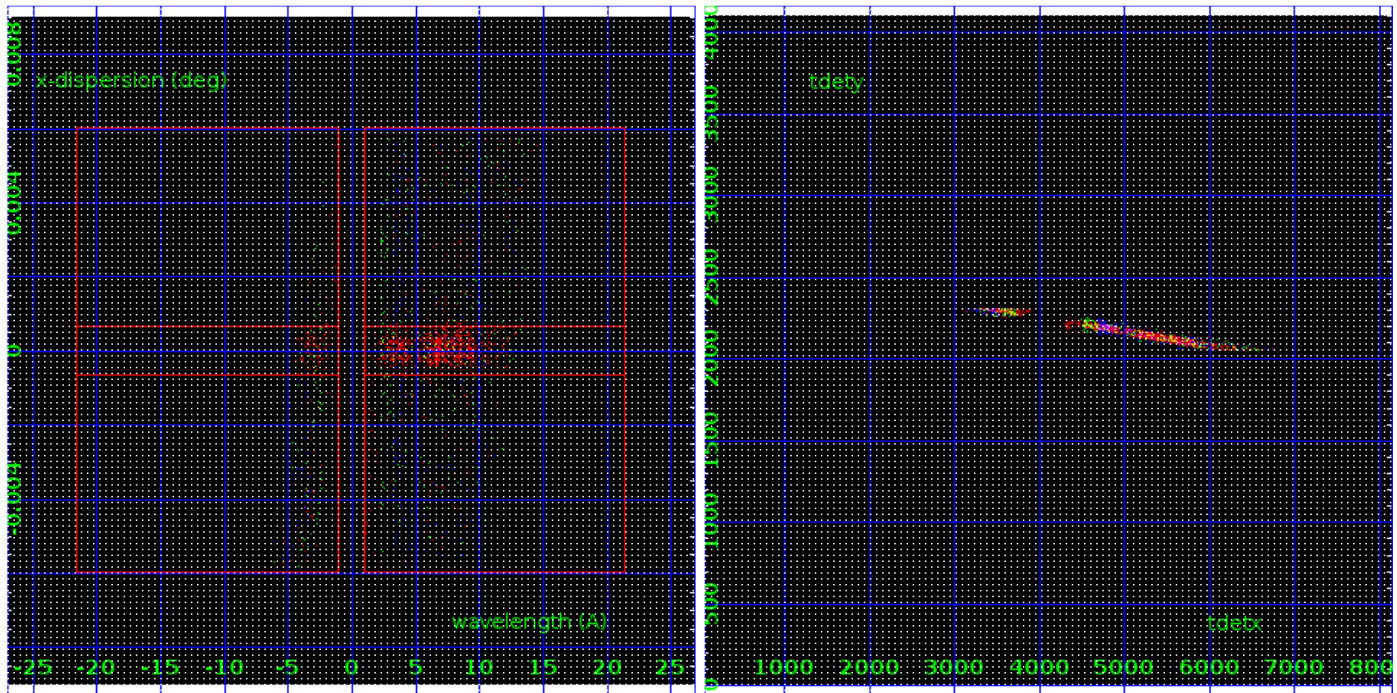
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

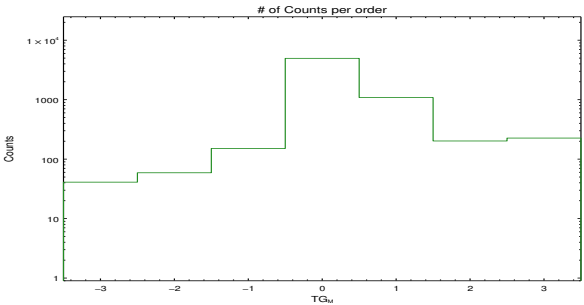
HEG Order Sort ALL

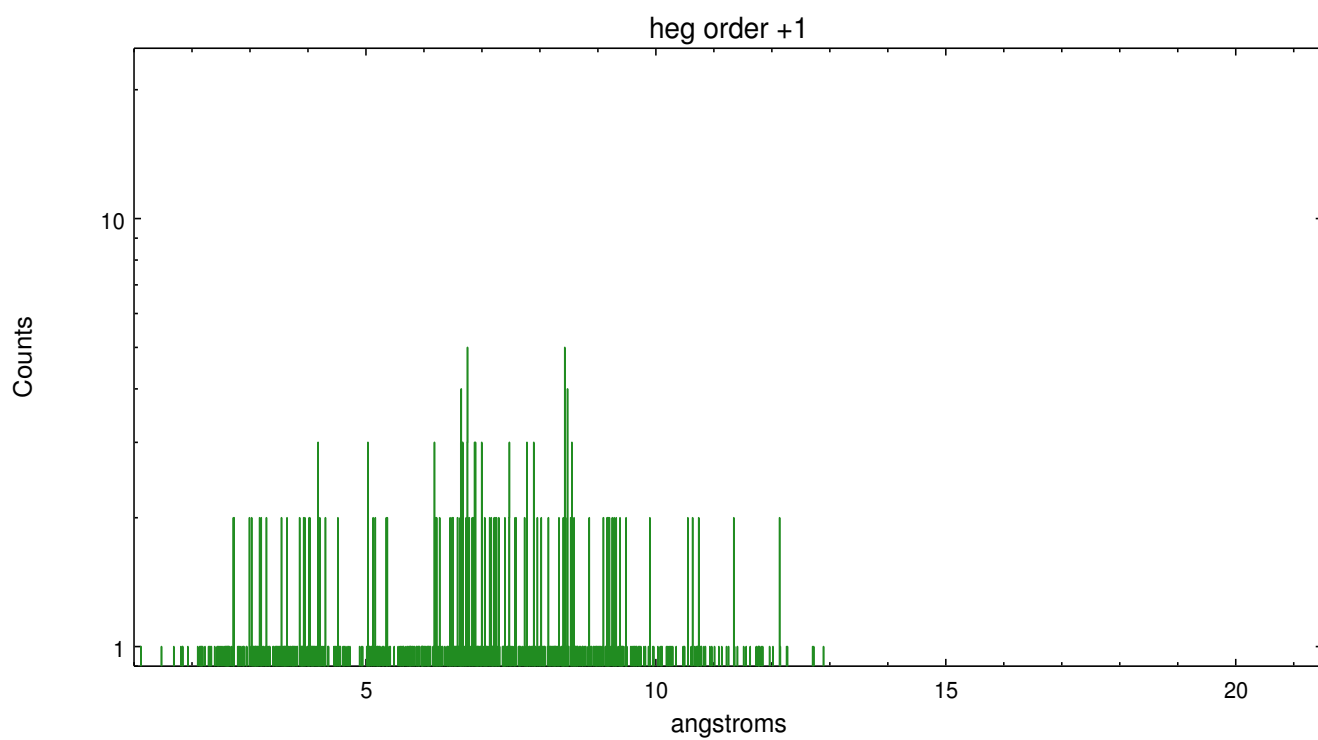
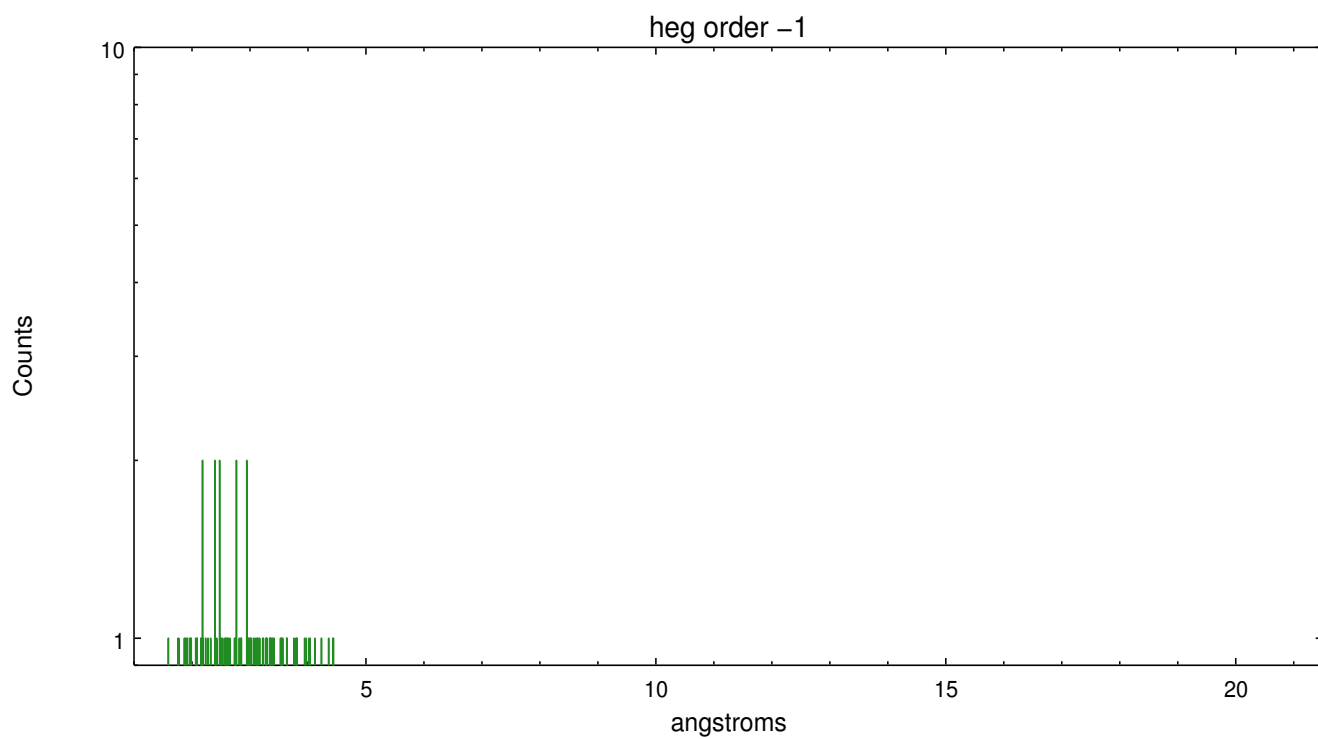


Spot Image HEG

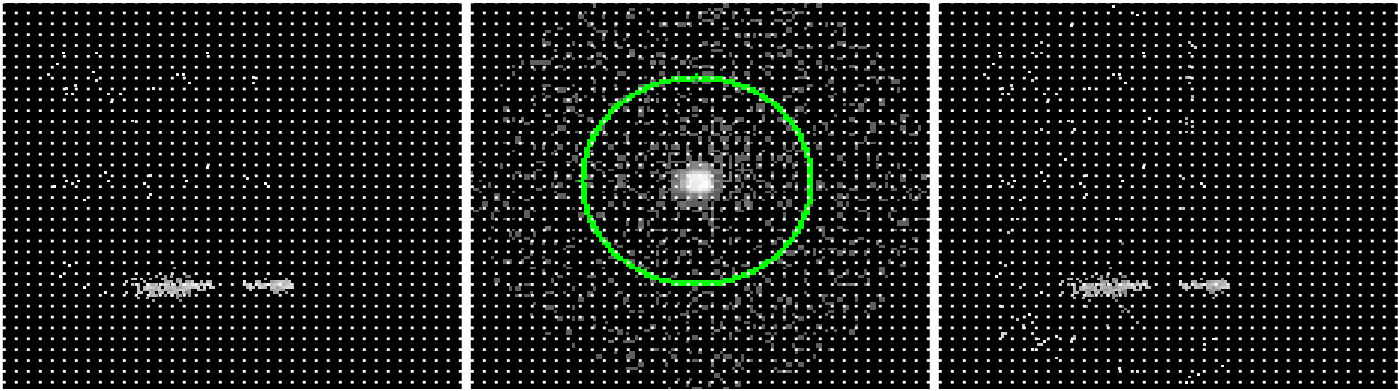
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	41	59	151	4952	1085	202	226





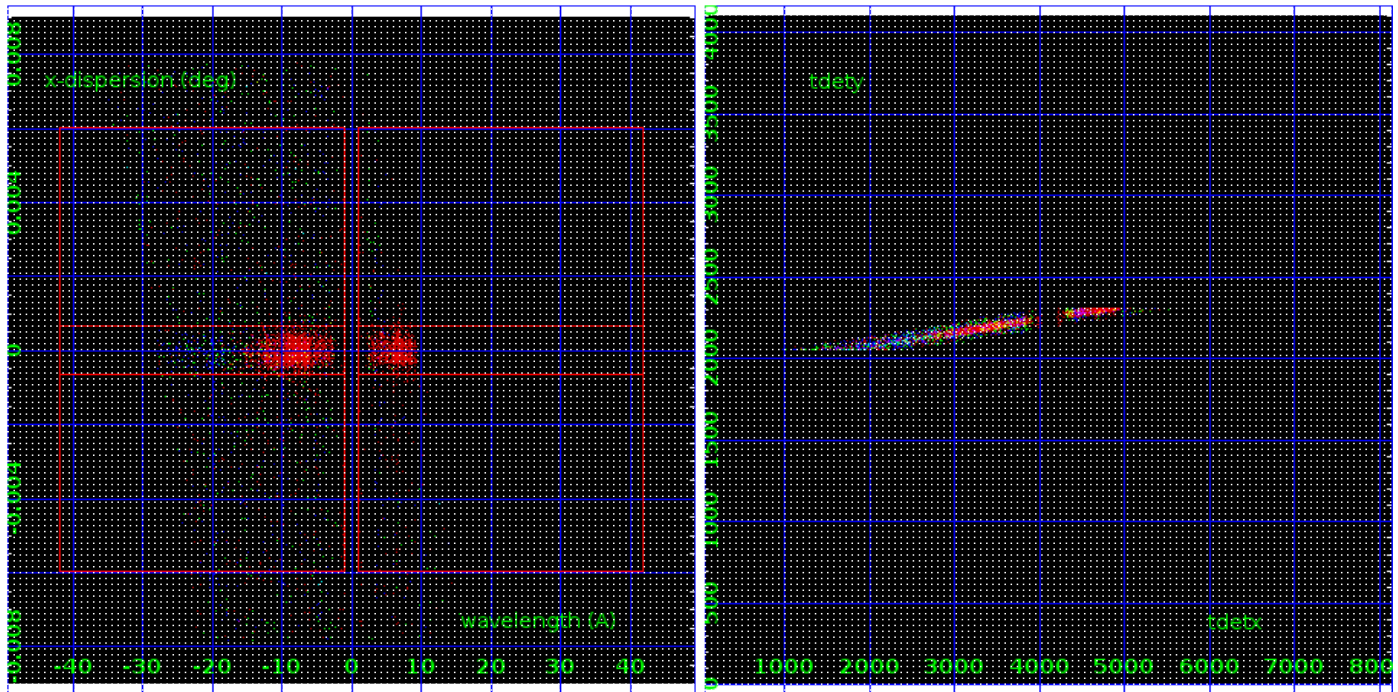
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

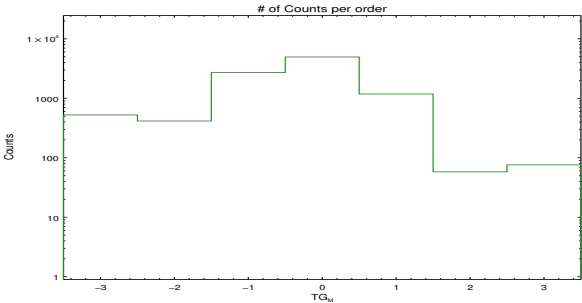
MEG Order Sort ALL

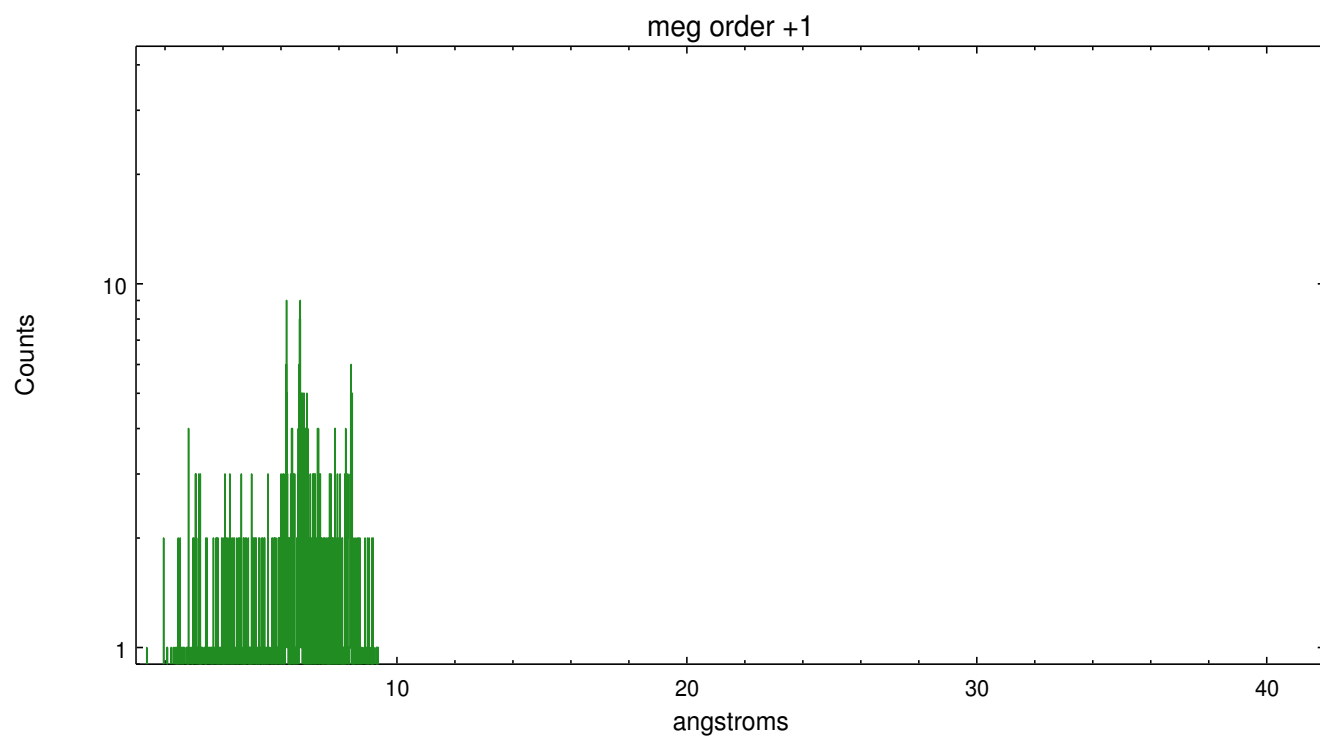
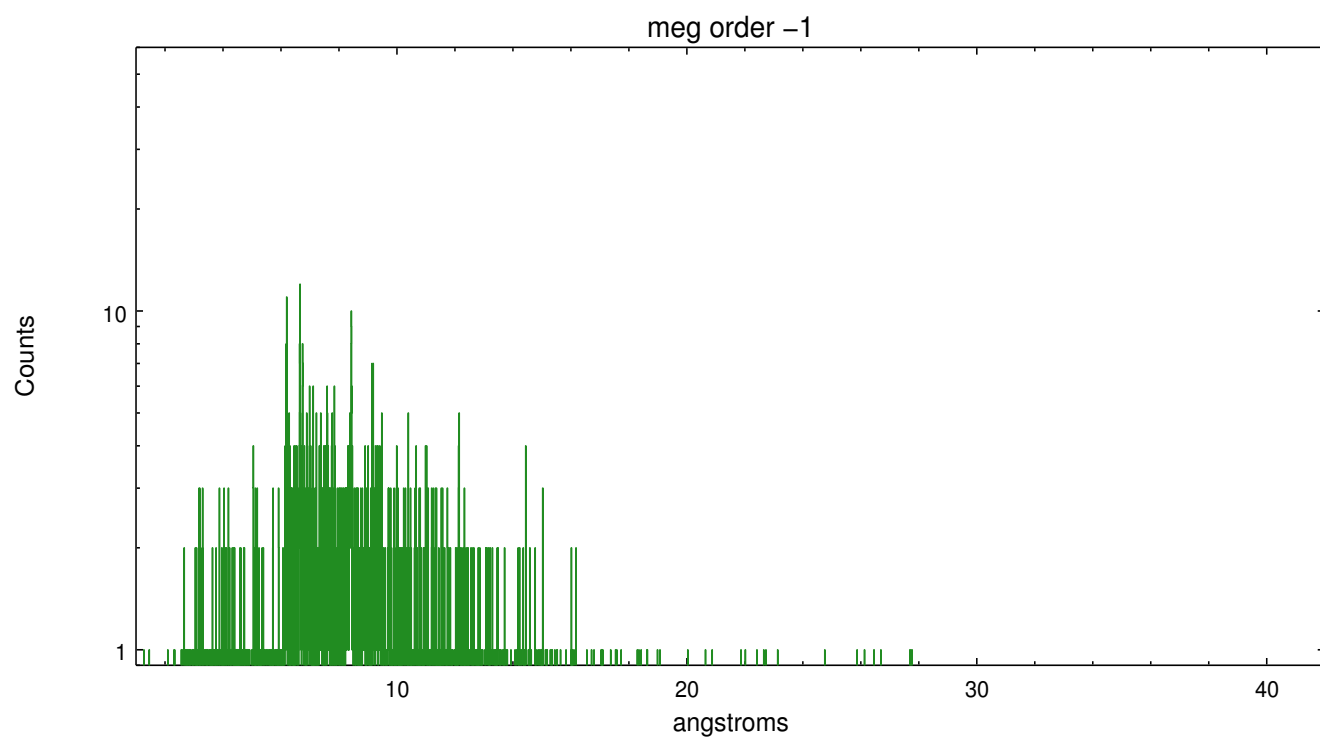


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	526	415	2708	4952	1182	58	76





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2018.09.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.087487230539

A.2 Comments

Roll constraint met.

===WARNING: Zeroth order selected by pipeline tools is well-centered in the supernova remnant but is not at the position(s) of brightest emission. The user may want to select a region or source of interest, then use software tools such as CIAO to specify the coordinates of the zeroth order source of interest before running the tools to resolve the dispersed events.