

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13735 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Mar 29 2012

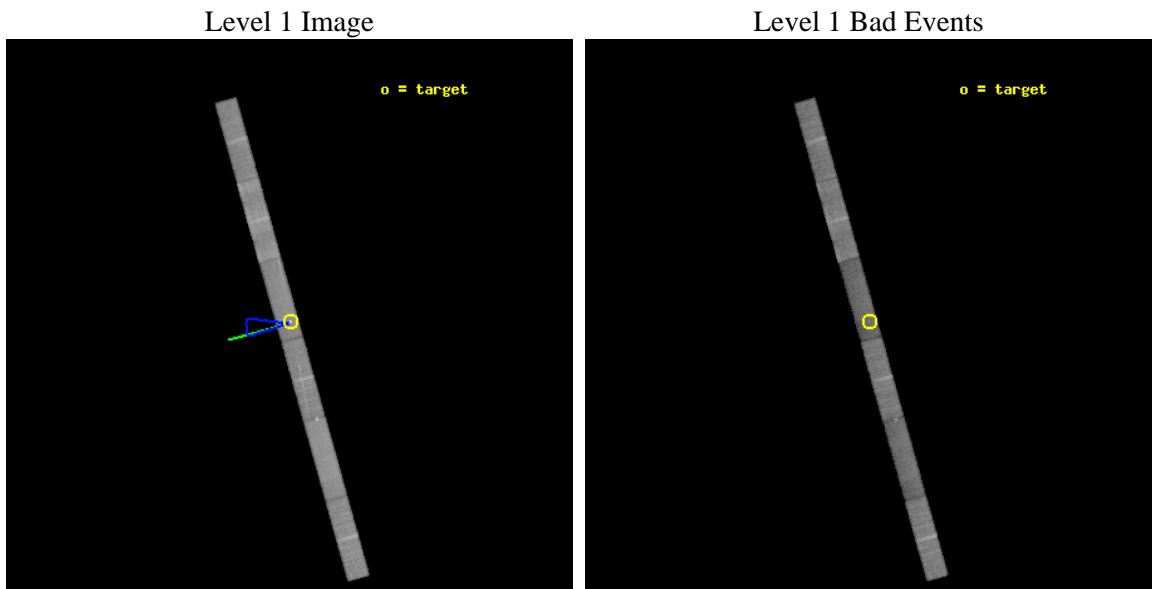
Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

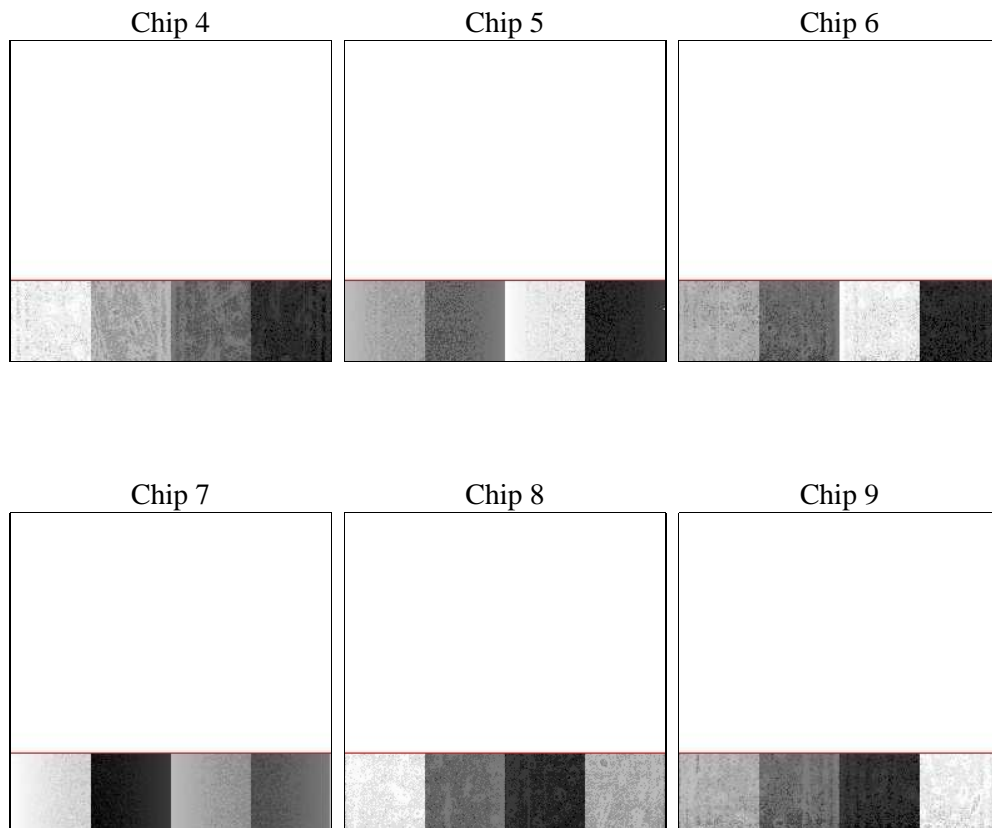
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	44500.313000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	44676.0	Sum of GTIs [s]
caldbver	4.4.8	 	ontime4	44676.0	Sum of GTIs [s]
date	2012-03-29T19:39:15	Date and time of file creation	ontime5	44676.0	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	44676.0	Sum of GTIs [s]
			ontime7	44676.0	Sum of GTIs [s]
			ontime8	44676.0	Sum of GTIs [s]
			ontime9	44676.0	Sum of GTIs [s]
			l1events	486305	Number of level 1 events

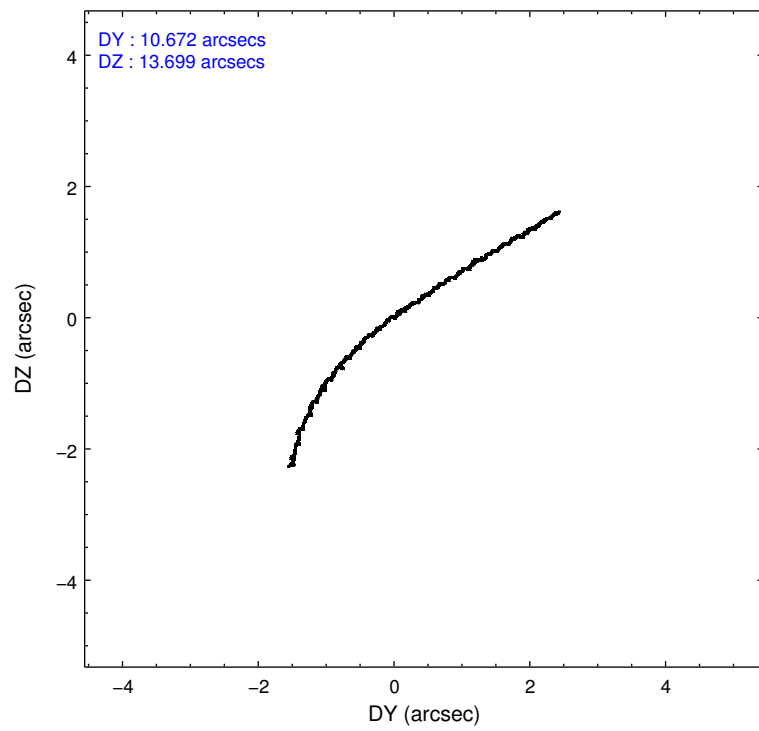
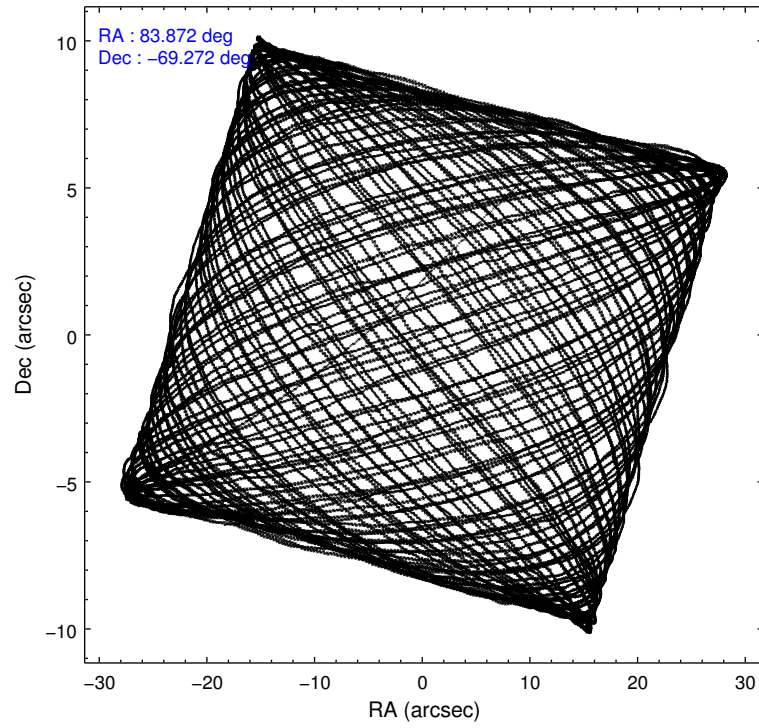
2.1.4 Events

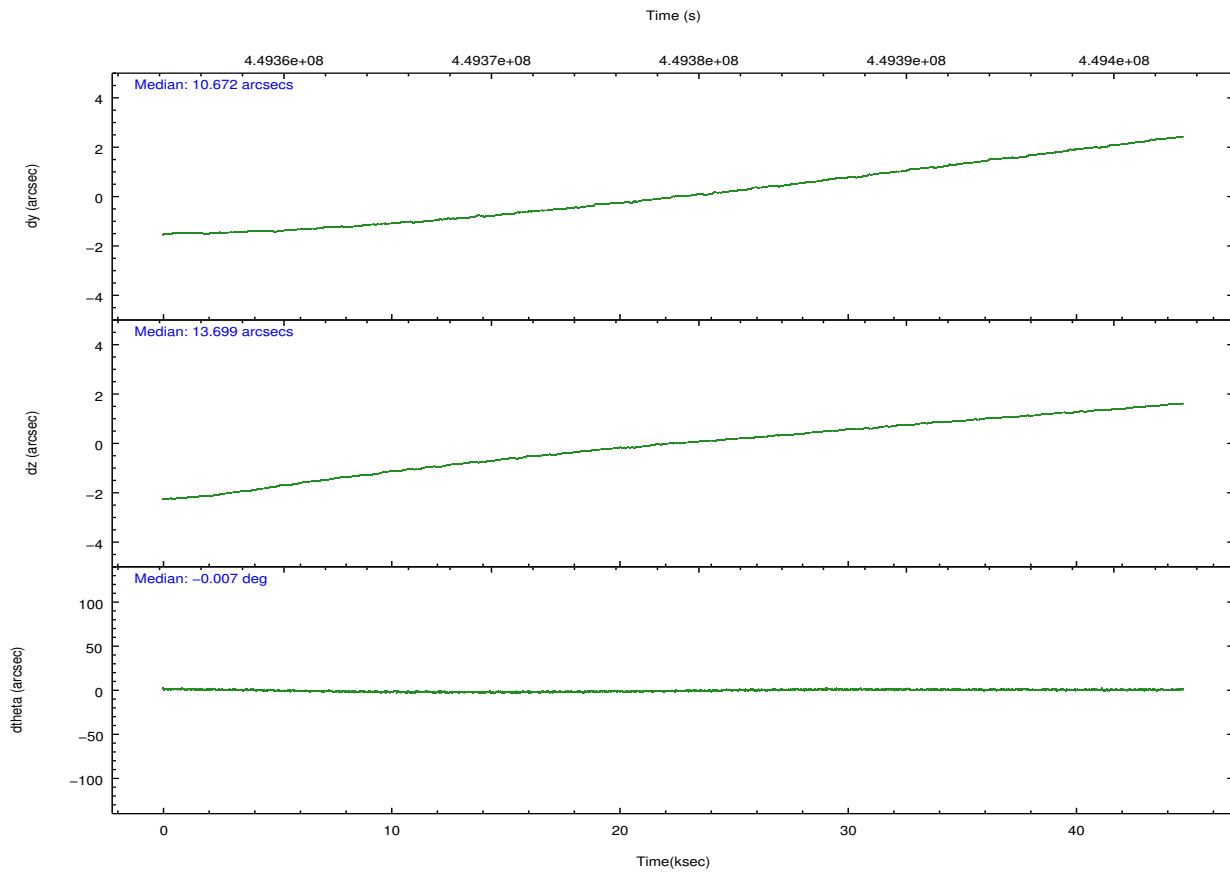
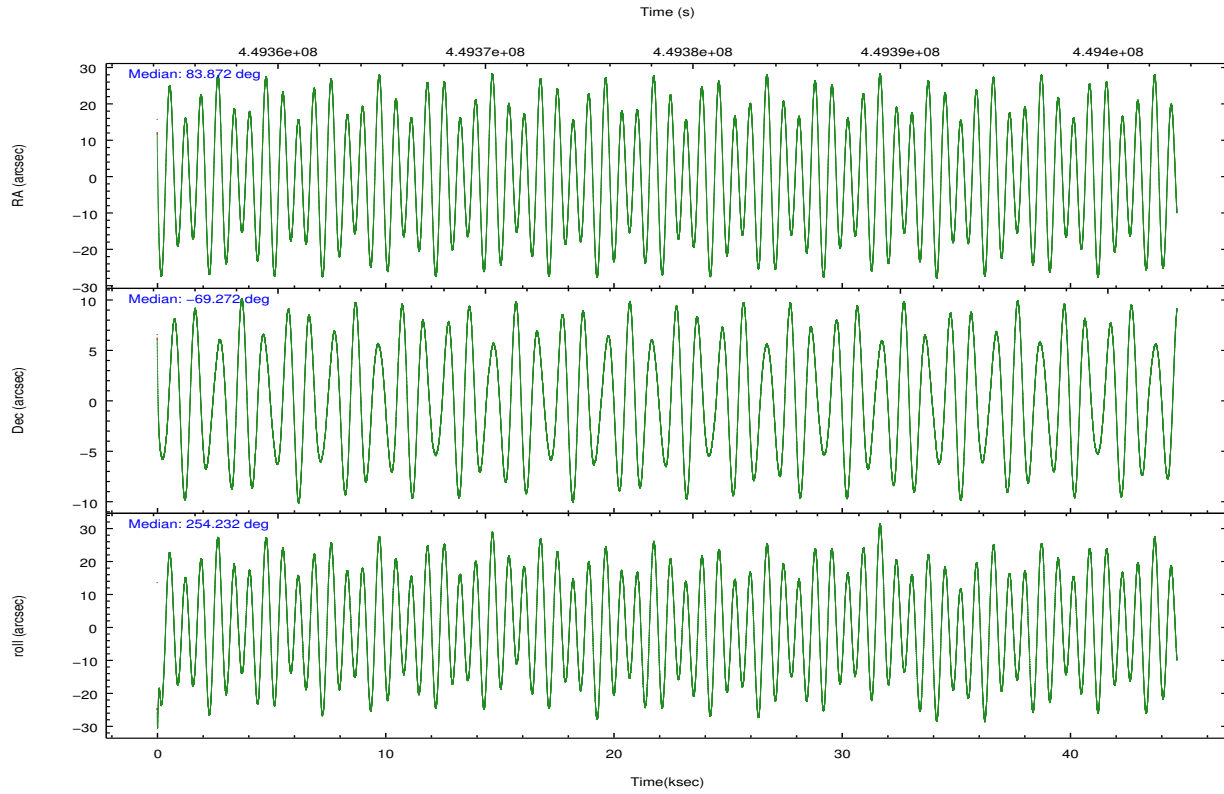
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	81005	90186	73150	78598	98363	65003	grade 0 events	2679	5341	5633	5844	8221	2508
rejected events	72251	40965	61205	34184	70365	57042		3%	5%	7%	7%	8%	3%
rejected %	89%	45%	83%	43%	71%	87%	grade 1 events	33	381	24	109	51	30
								0%	0%	0%	0%	0%	0%
							grade 2 events	2179	13333	2081	10220	5754	1608
								2%	14%	2%	13%	5%	2%
							grade 3 events	1240	3888	1331	4941	3362	1139
								1%	4%	1%	6%	3%	1%
							grade 4 events	1143	3851	1318	4811	3120	1122
								1%	4%	1%	6%	3%	1%
							grade 5 events	2245	8400	2310	7111	3541	2430
								2%	9%	3%	9%	3%	3%
							grade 6 events	1513	22825	1589	18616	7568	1590
								1%	25%	2%	23%	7%	2%
							grade 7 events	69973	32167	58864	26946	66746	54576
								86%	35%	80%	34%	67%	83%

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	83.852381	83.87234264628972	CCD I2 on	N	N
[deg] Pointing Dec	-69.245596	-69.27201359708131	CCD I3 on	N	N
[deg] Pointing Roll	254.056648	254.2319259701162	CCD S0 on	O1	Y
[deg] Roll angle	264.000000	264.000000	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)	447638466.184000	447638466.184000	CCD S4 on	Y	Y
[s] Window stop time (MET)	449712006.184000	449712006.184000	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	-181.712523	-181.7145954743443	Subarray requested	CUSTOM	1/4
[mm] SIM translation stage offset	-8.42	-8.417927108663491	Subarray start row	1	1
[s] Observation start time (MET)	449356579.184000	449355593.51021	Subarray row count	256	256
Observation start date	2012-03-28T21:15:13	2012-03-28T20:59:53	Alternating exposures requested	N	N
[s] Observation end time (MET)	449401079.184000	449401302.87514	[s] Primary exposure time	0.000000	1
Observation end date	2012-03-29T09:36:53	2012-03-29T09:41:42			
Read mode	TIMED	TIMED			

2.3 Aspect





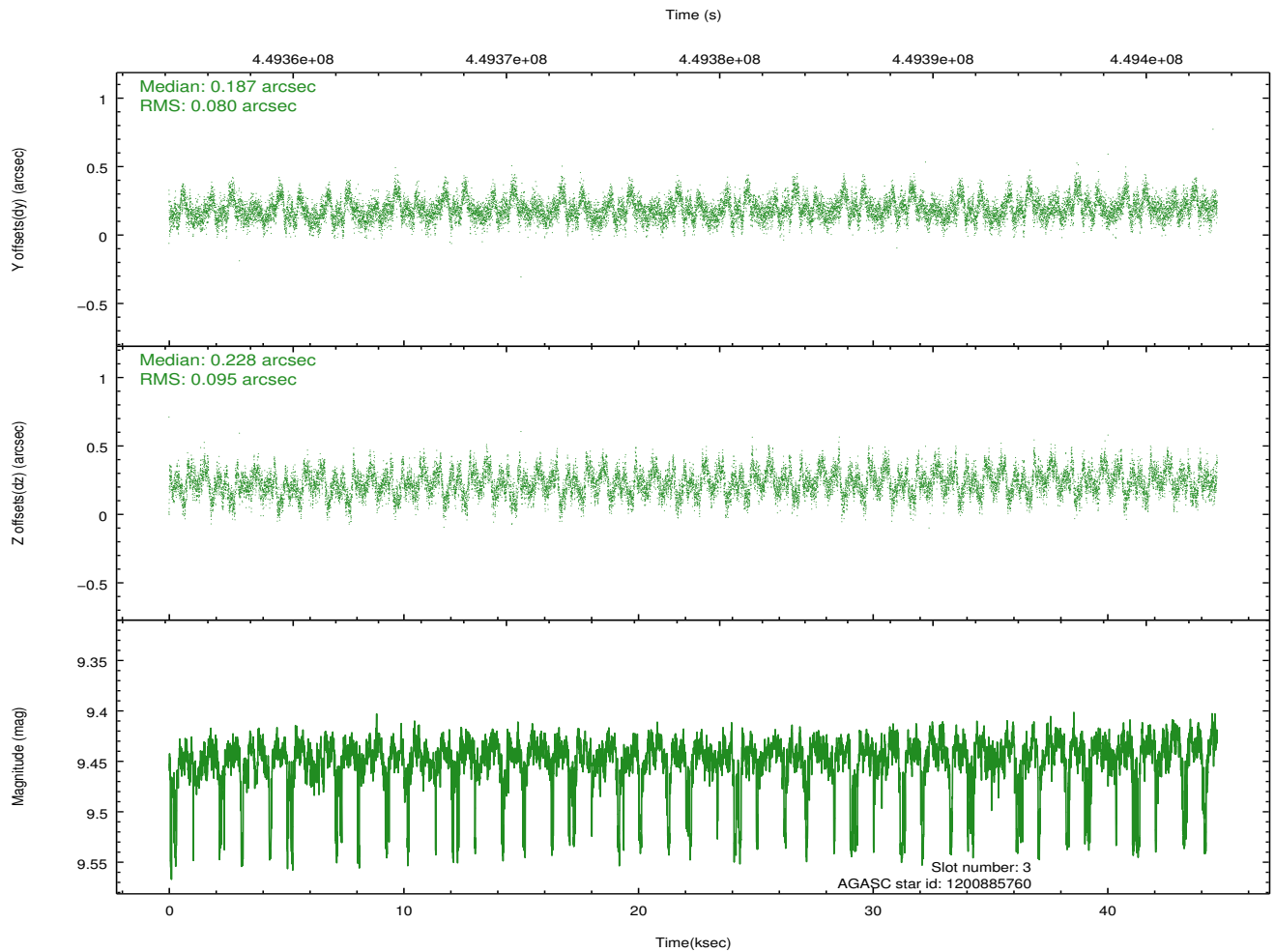
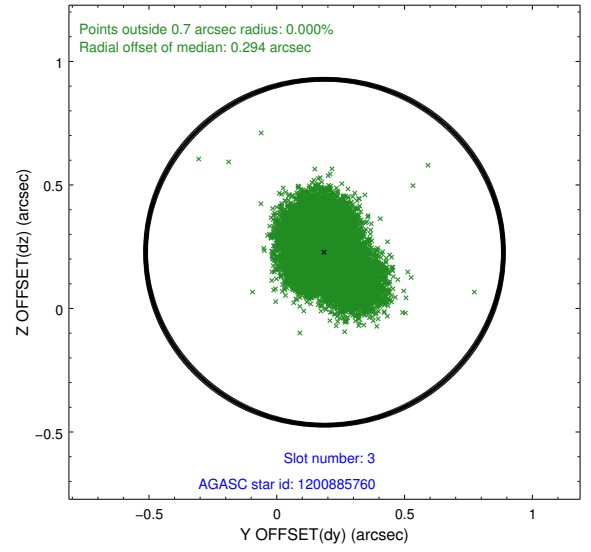
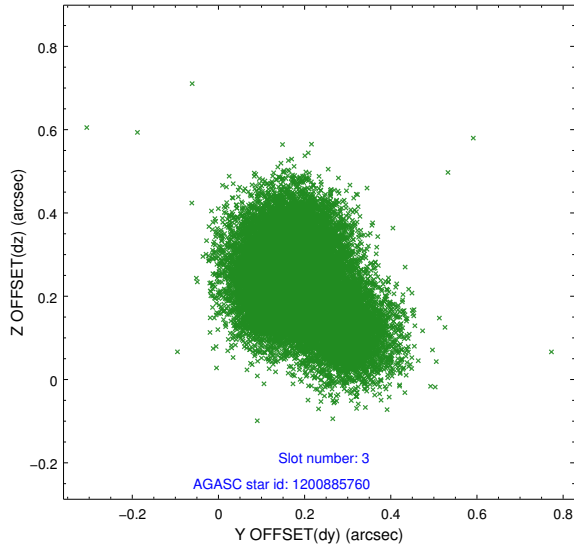
Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.06	10898	0.100	0.152	0.029	0.057	0.000000	0.000000	933.15	-1903.76
1	FID	ACIS-S-2	6.95	10898	-0.196	-0.127	0.034	0.046	0.000000	0.000000	-763.05	-1908.64
2	FID	ACIS-S-6	7.26	10898	0.082	-0.014	0.029	0.036	0.000000	0.000000	398.72	637.37
3	GUIDE	1200885760	9.45	21749	0.187	0.228	0.131	0.218	83.723637	-68.777667	-1573.13	-623.45
4	GUIDE	1201019672	6.82	21794	-0.077	-0.078	0.077	0.135	85.312192	-68.770187	-2146.67	1365.87
5	GUIDE	1201020040	8.58	21792	0.137	-0.120	0.065	0.107	85.379163	-68.879396	-1787.80	1548.98
6	GUIDE	1201542672	8.18	21789	-0.120	-0.134	0.069	0.116	84.492488	-69.957531	2249.15	1464.77
7	GUIDE	1201410616	9.32	21777	-0.137	0.104	0.141	0.228	82.516808	-69.784406	2338.92	-1059.36

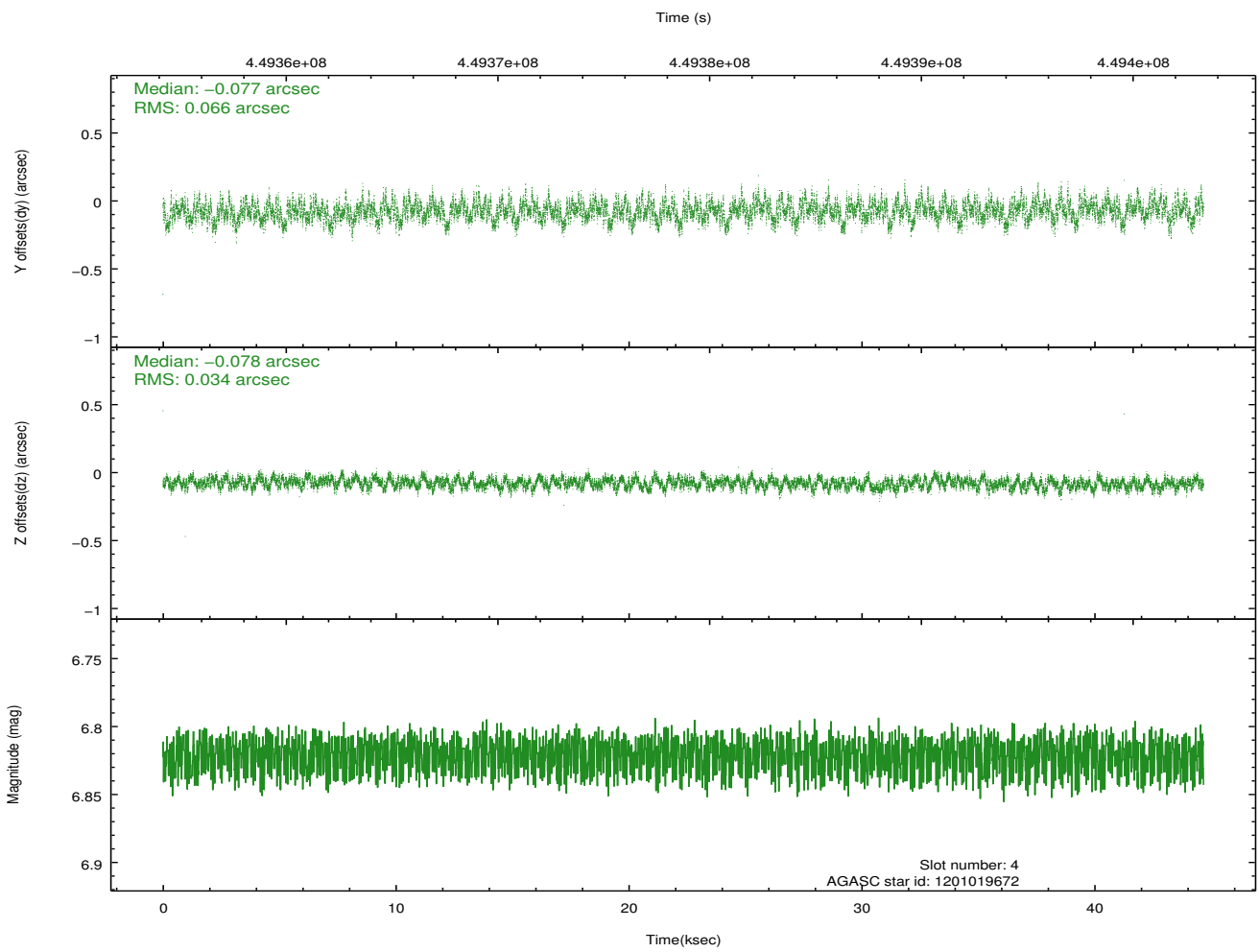
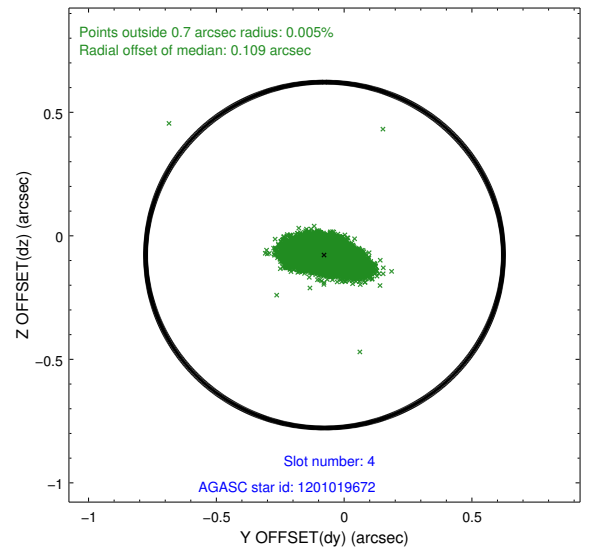
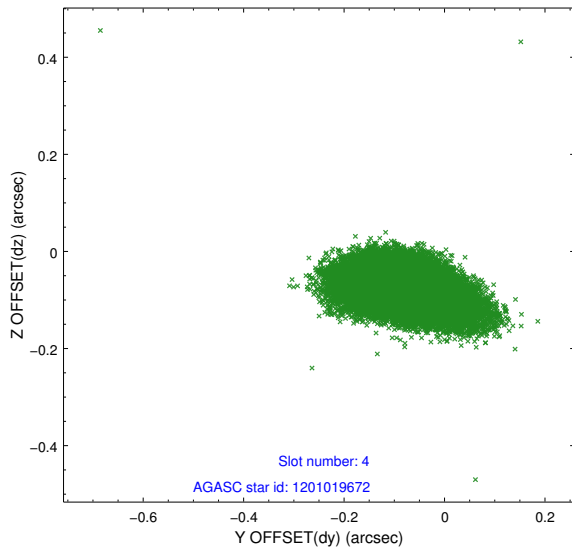
∞

2.4 Star Slots

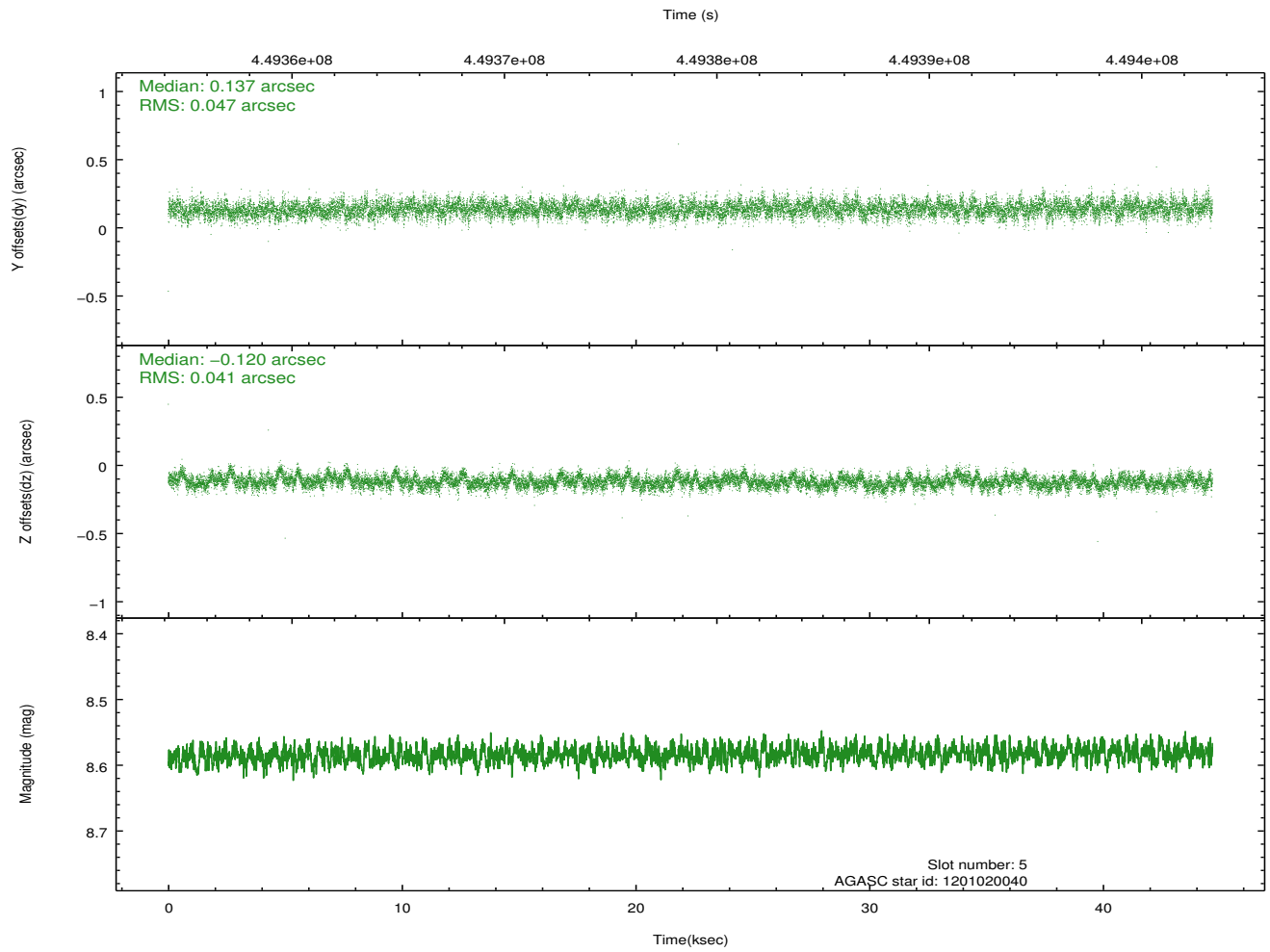
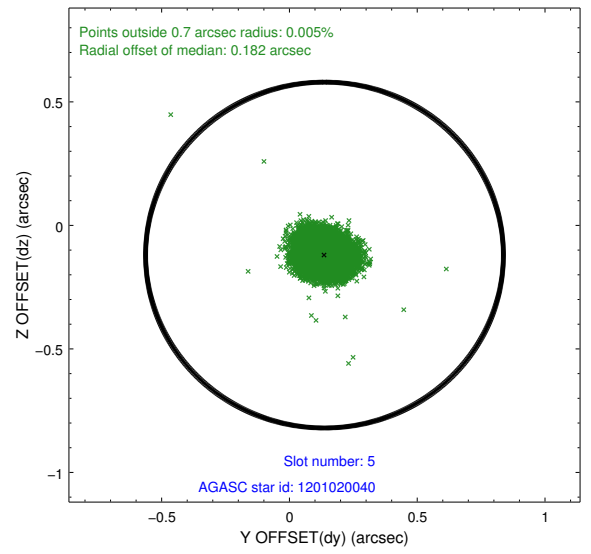
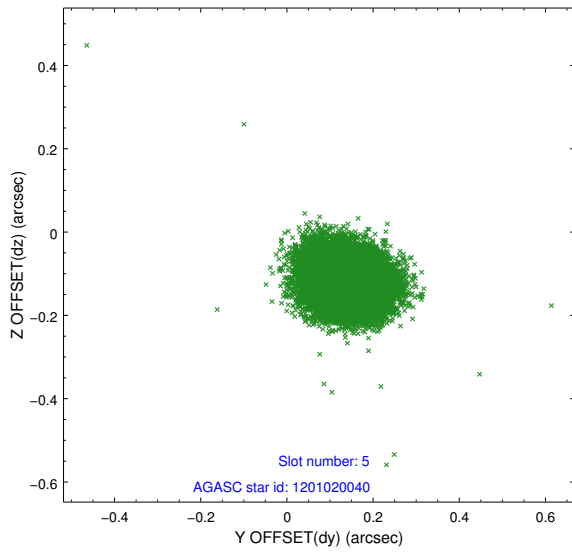
2.4.1 Slot 3



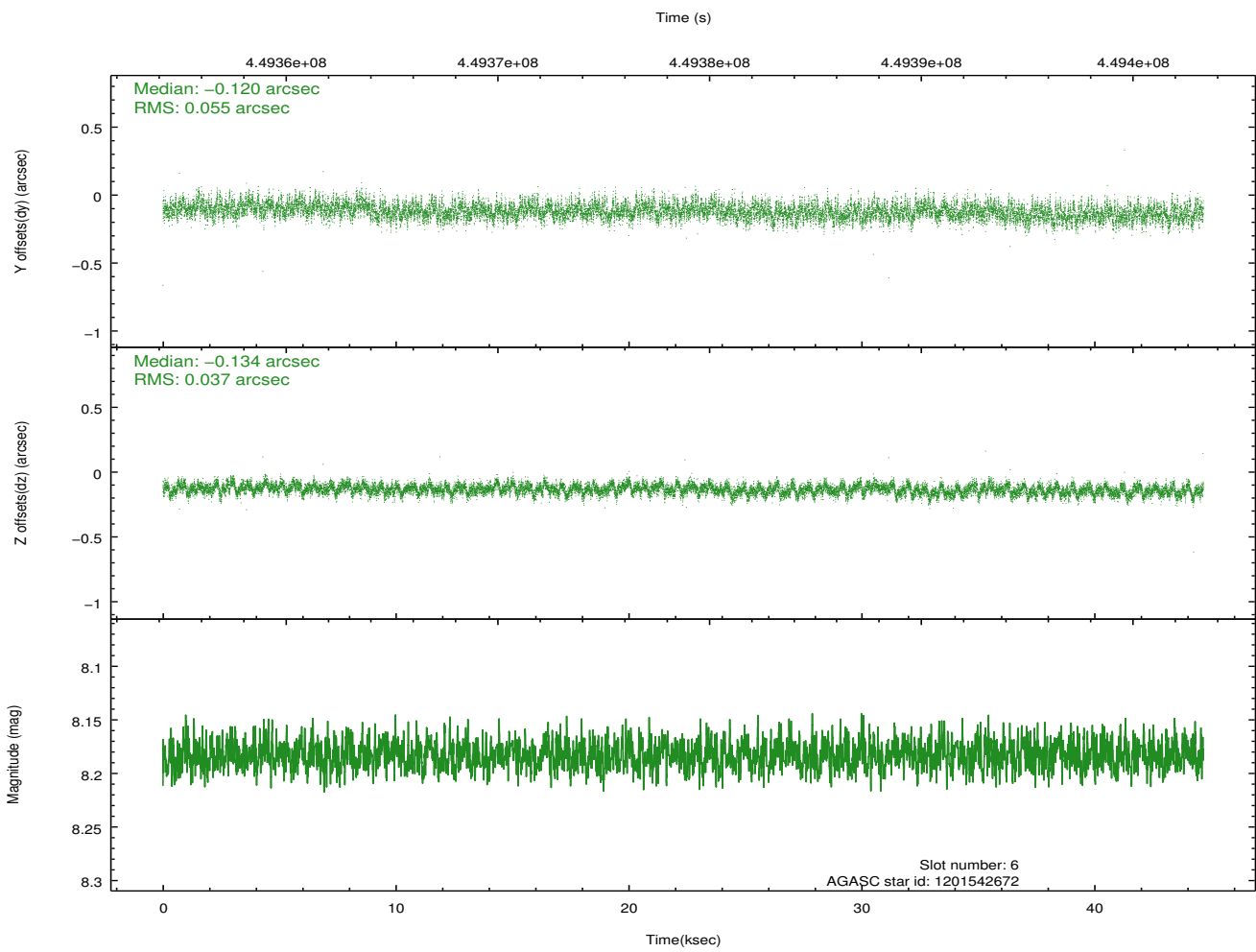
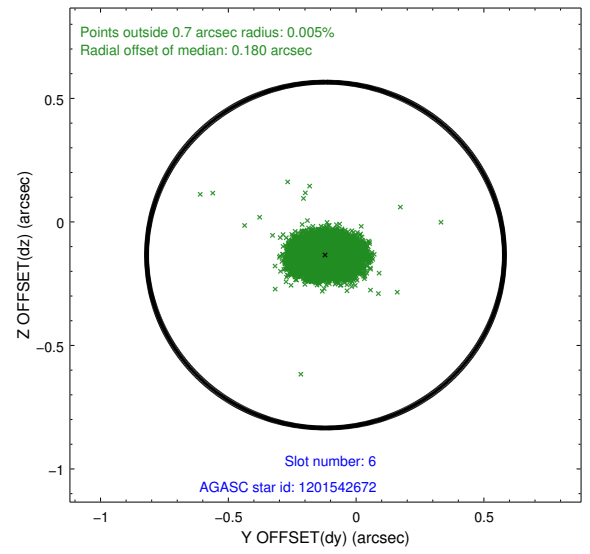
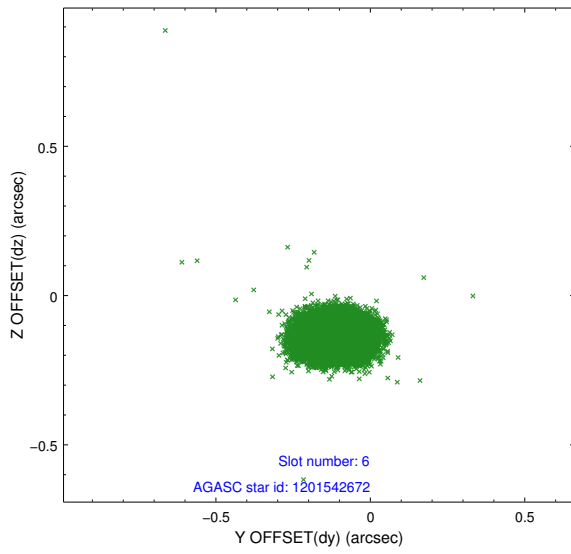
2.4.2 Slot 4



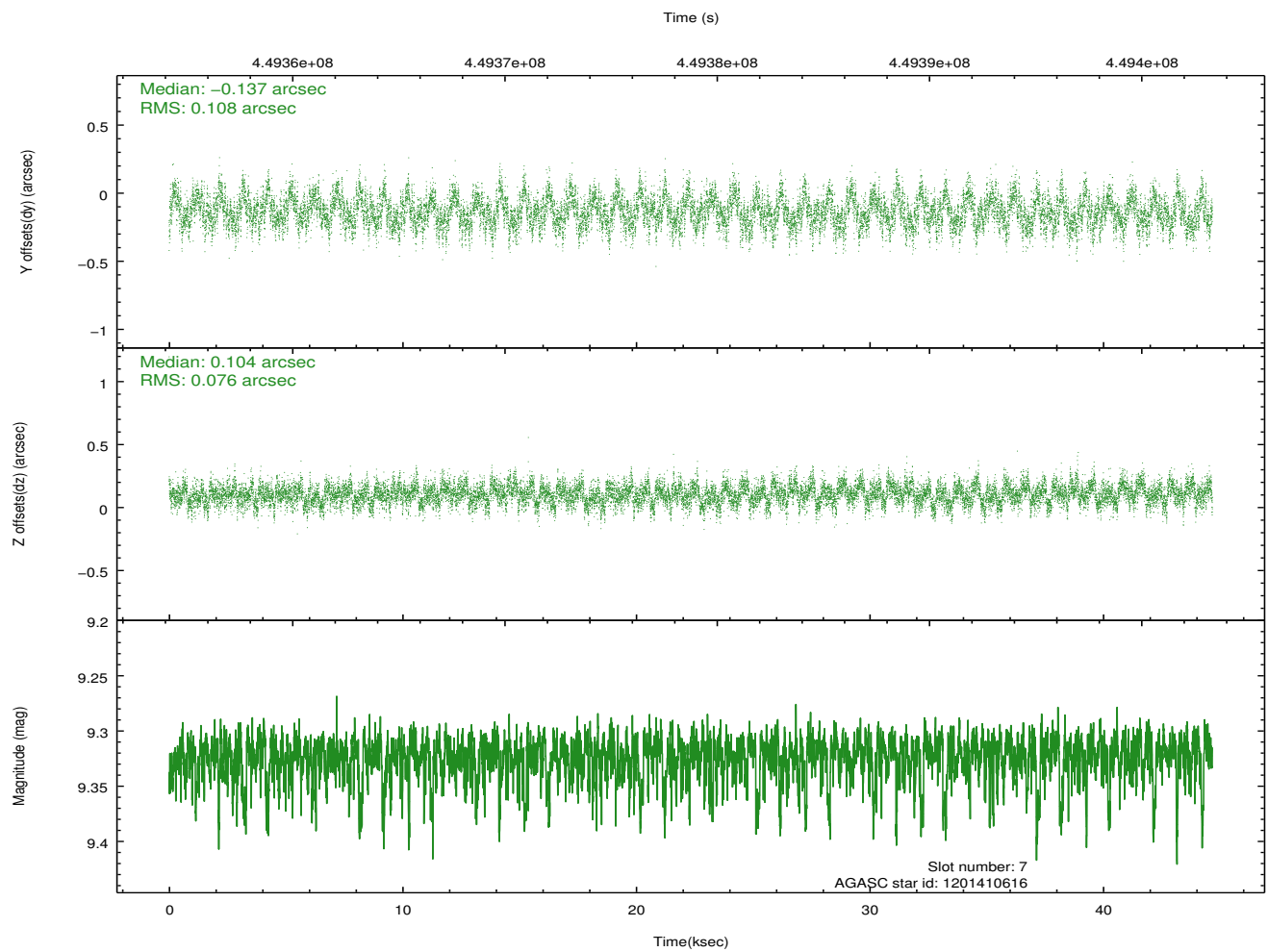
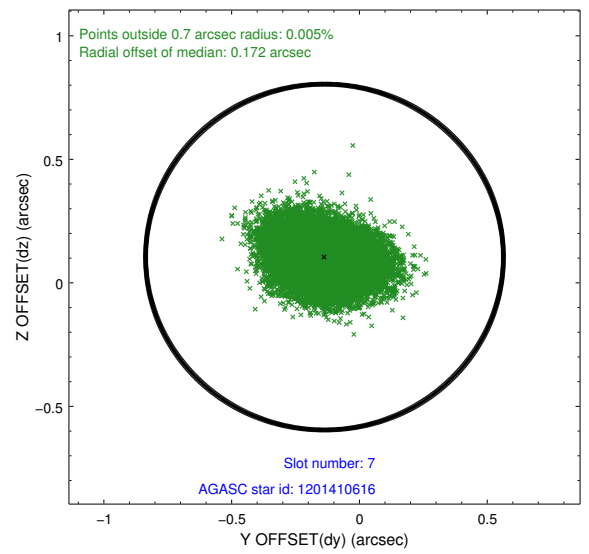
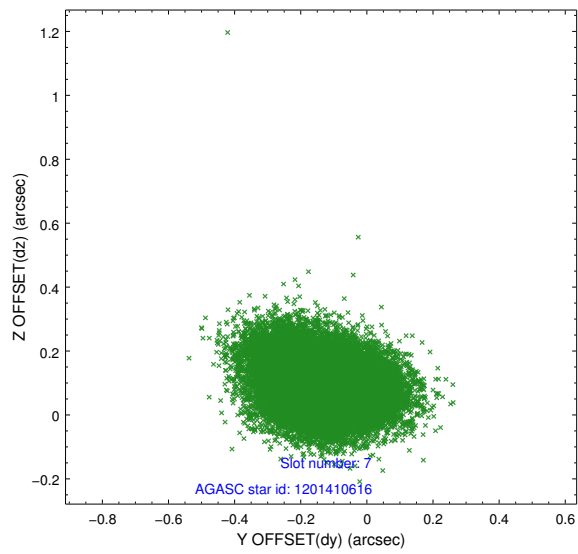
2.4.3 Slot 5



2.4.4 Slot 6

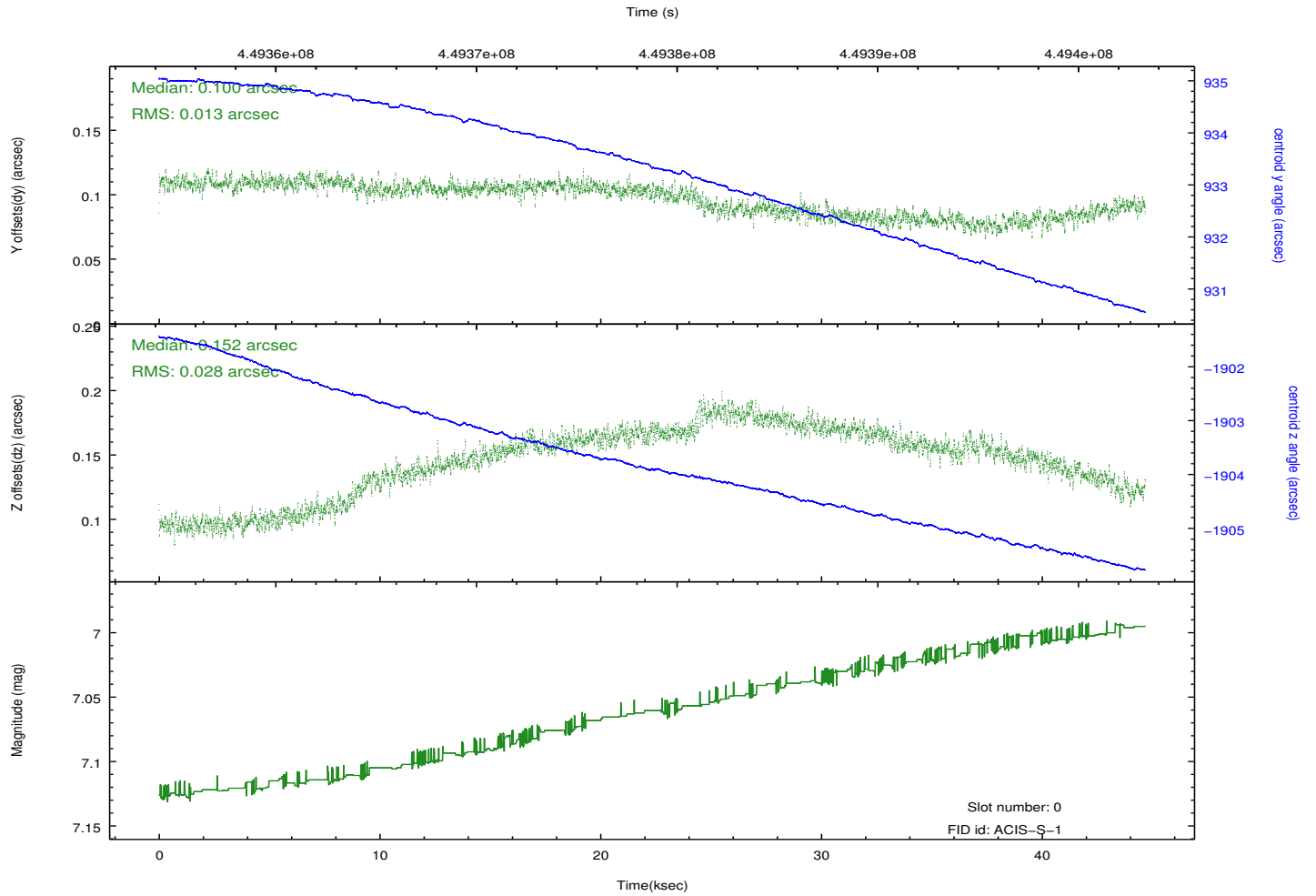
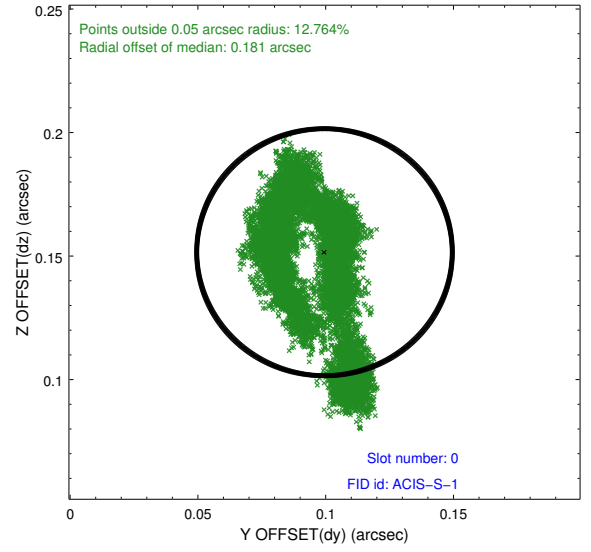
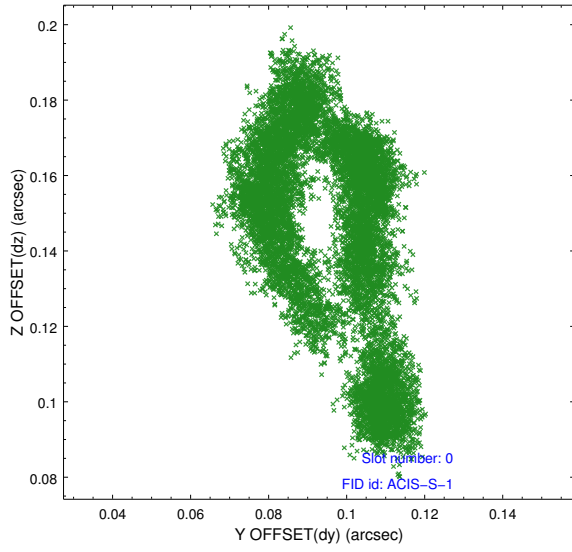


2.4.5 Slot 7

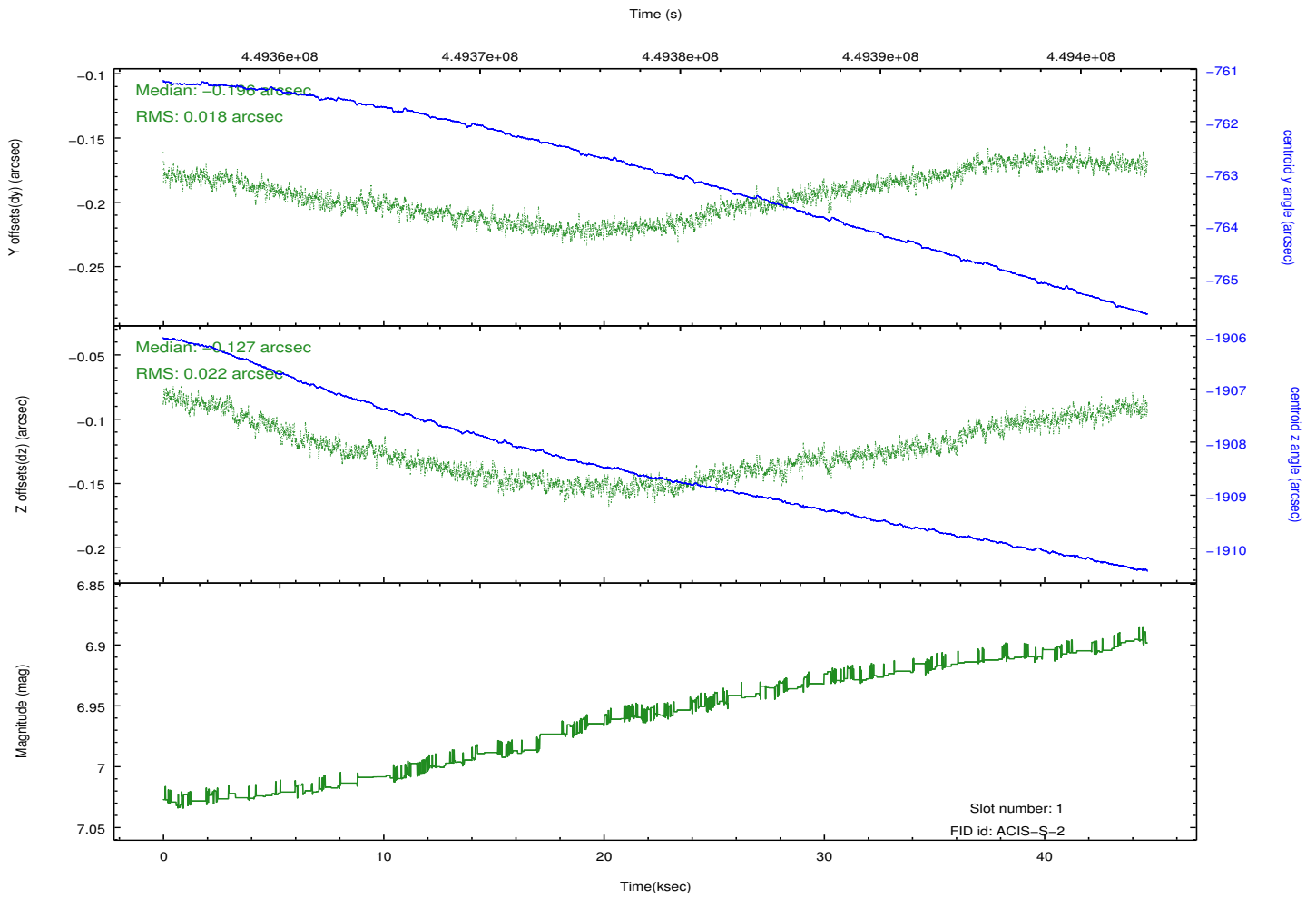
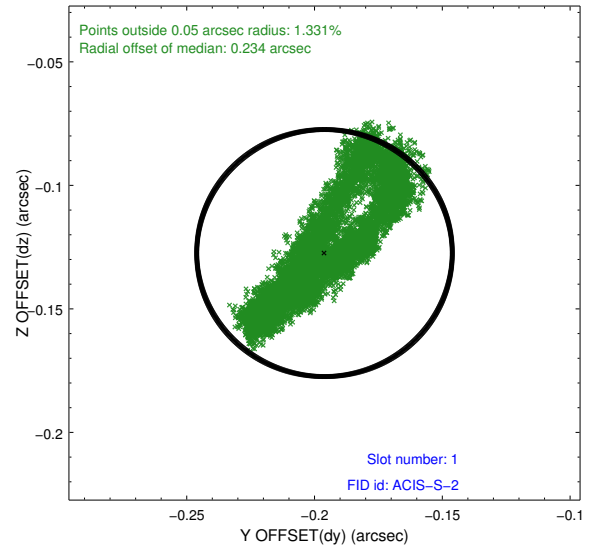
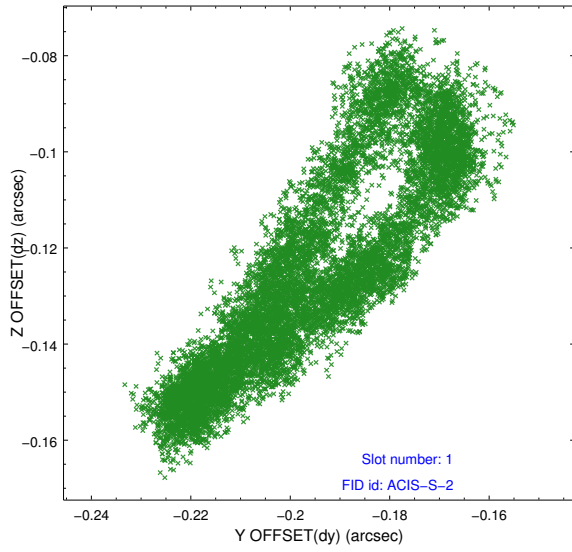


2.5 FID Slots

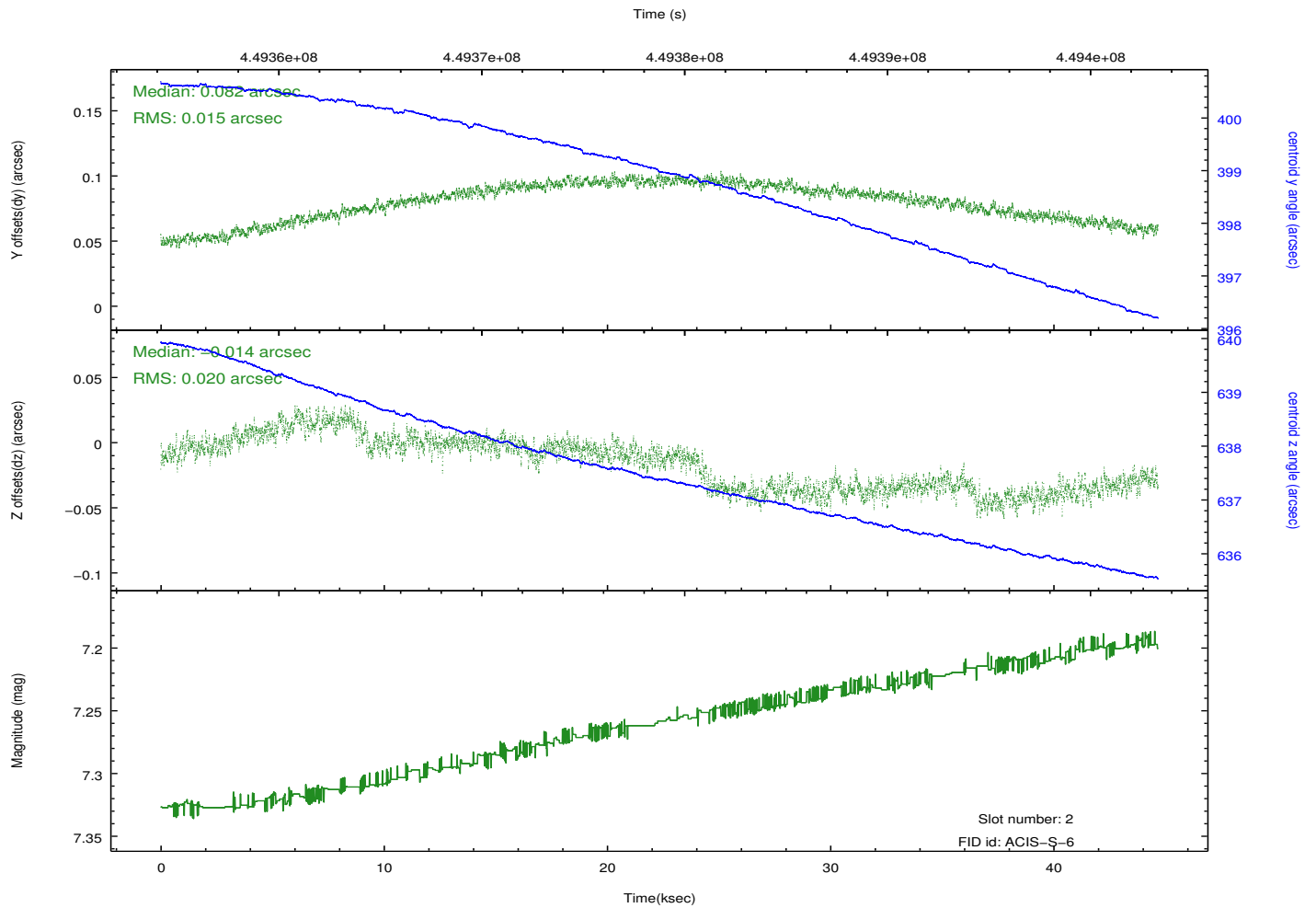
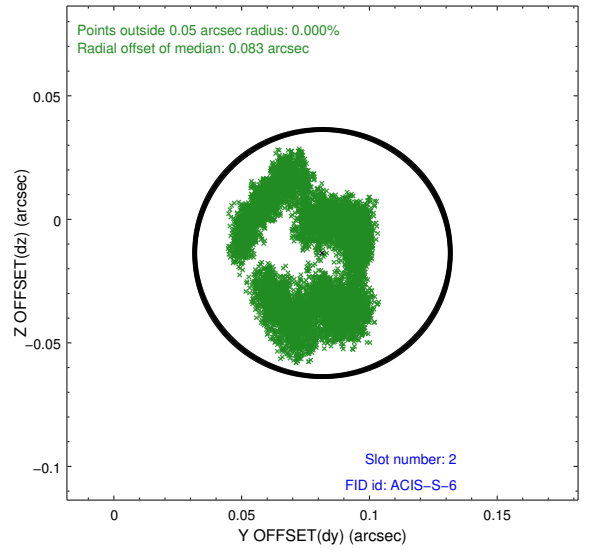
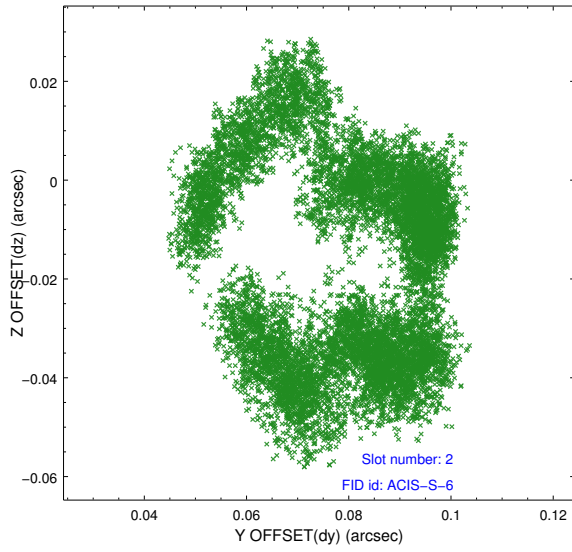
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

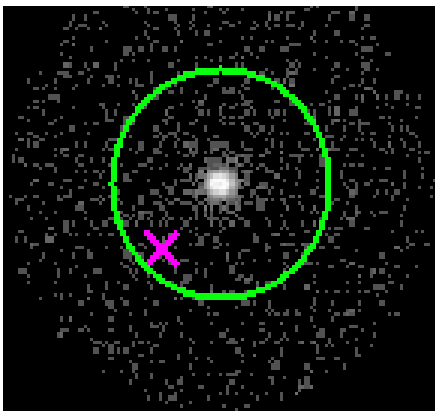


3 Gratings

3.1 HEG Arm



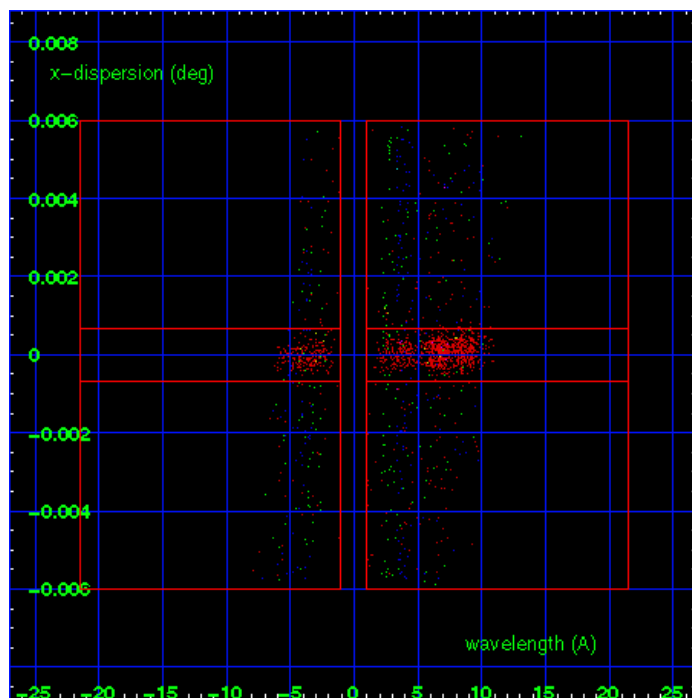
HEG Order Sort 123



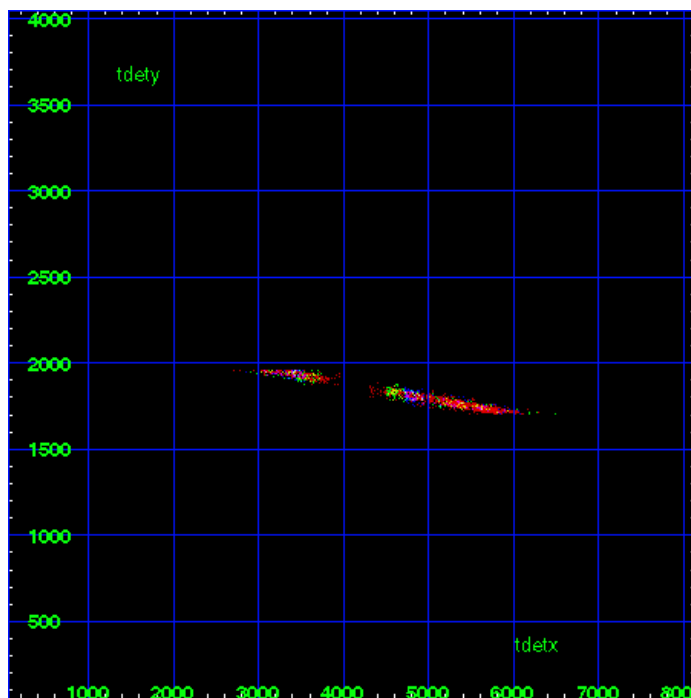
HEG Zero Order



HEG Order Sort ALL

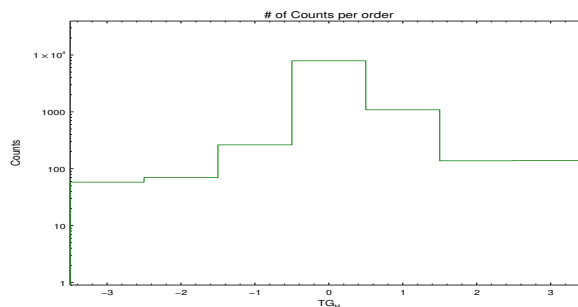


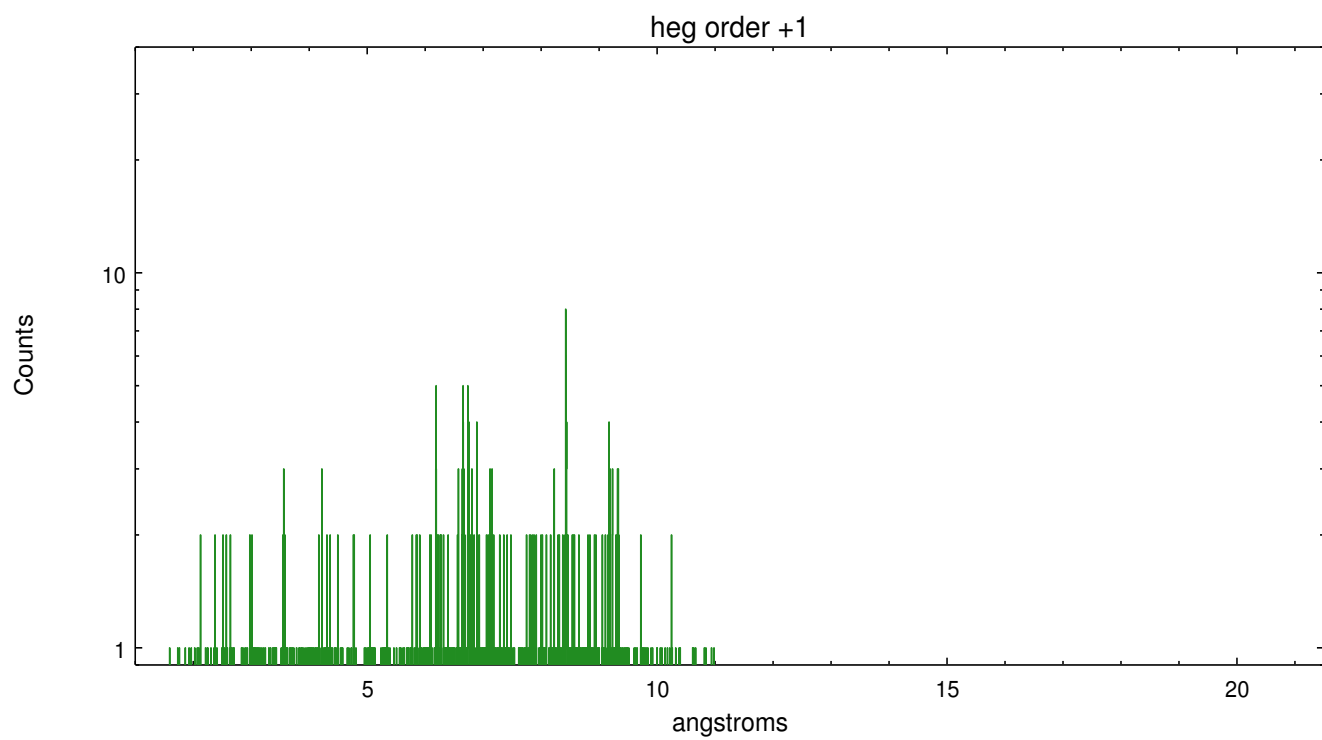
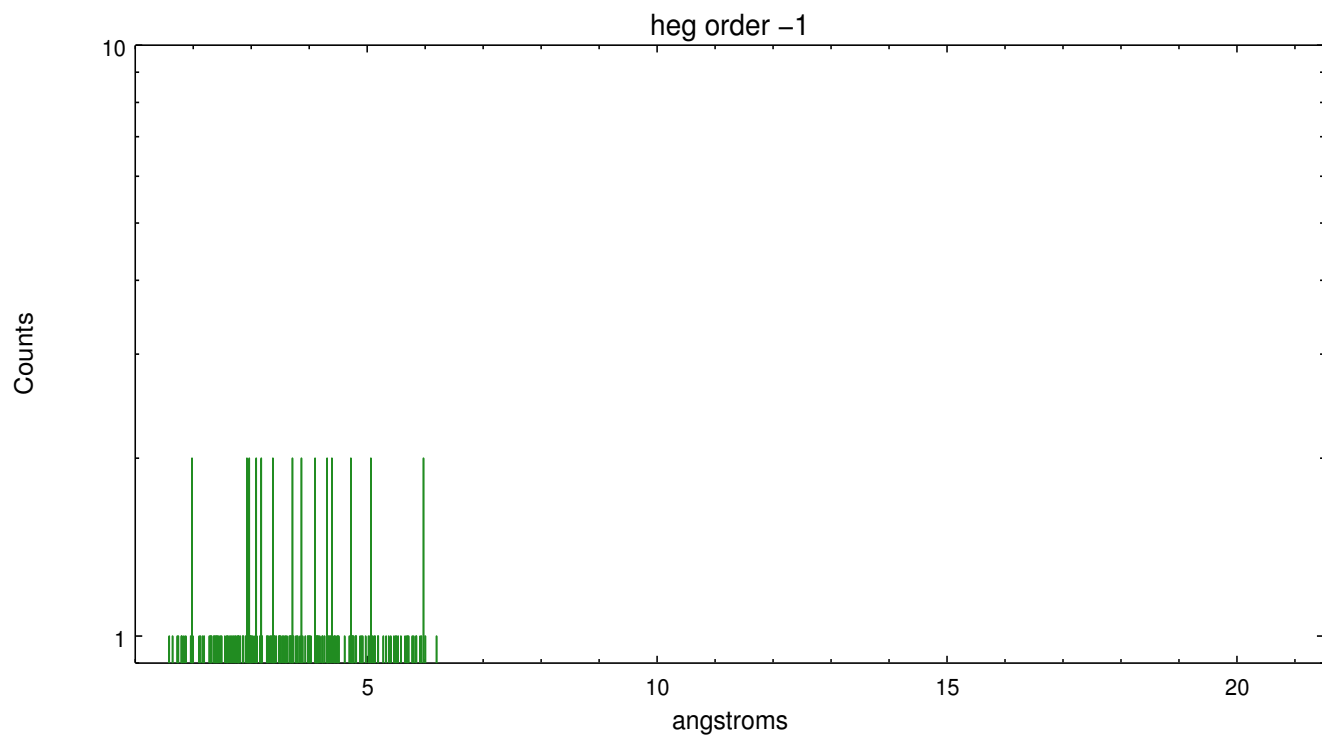
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	58	70	263	7909	1087	138	139

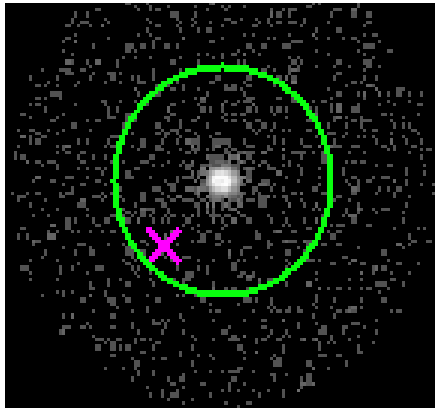




3.2 MEG Arm



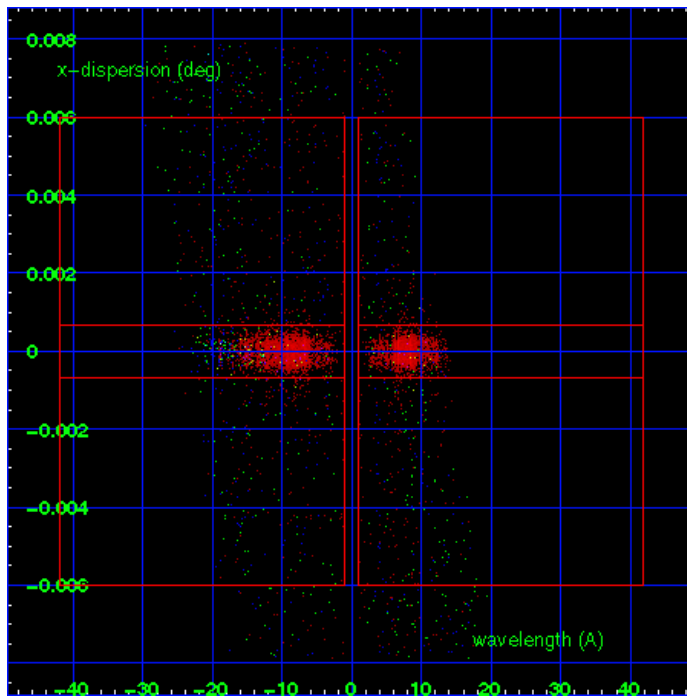
MEG Order Sort 123



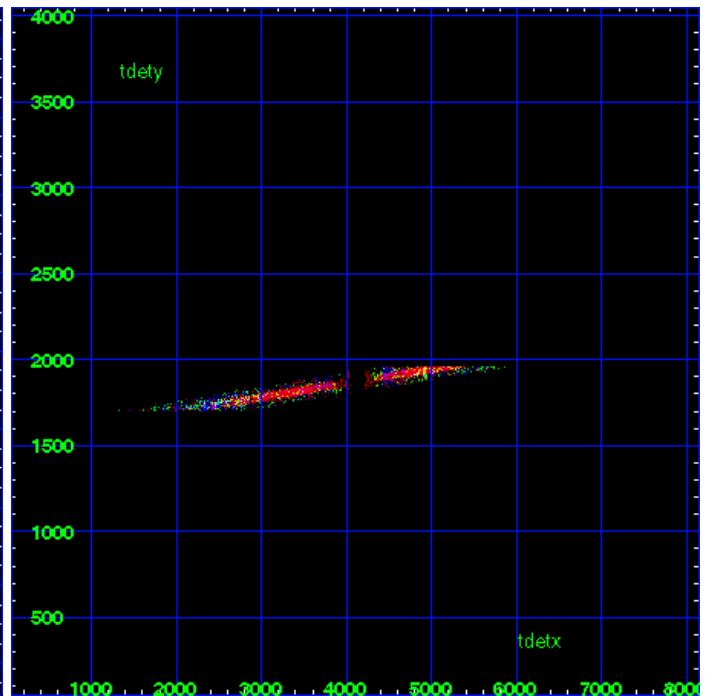
MEG Zero Order



MEG Order Sort ALL

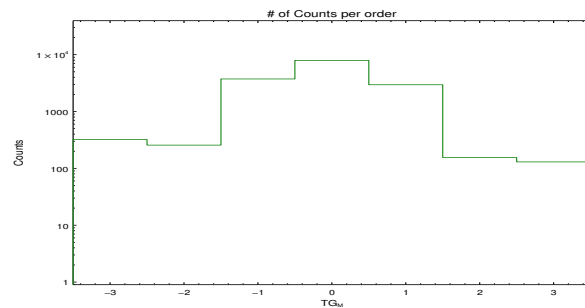


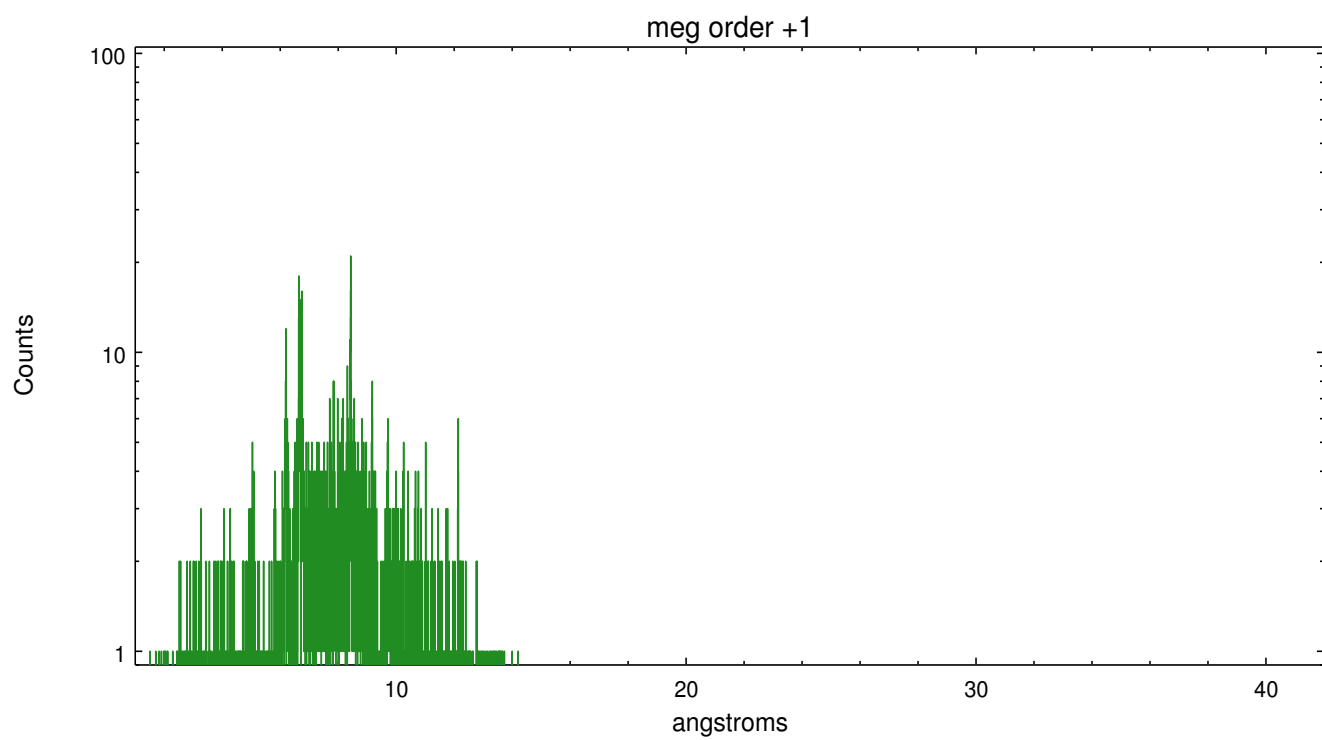
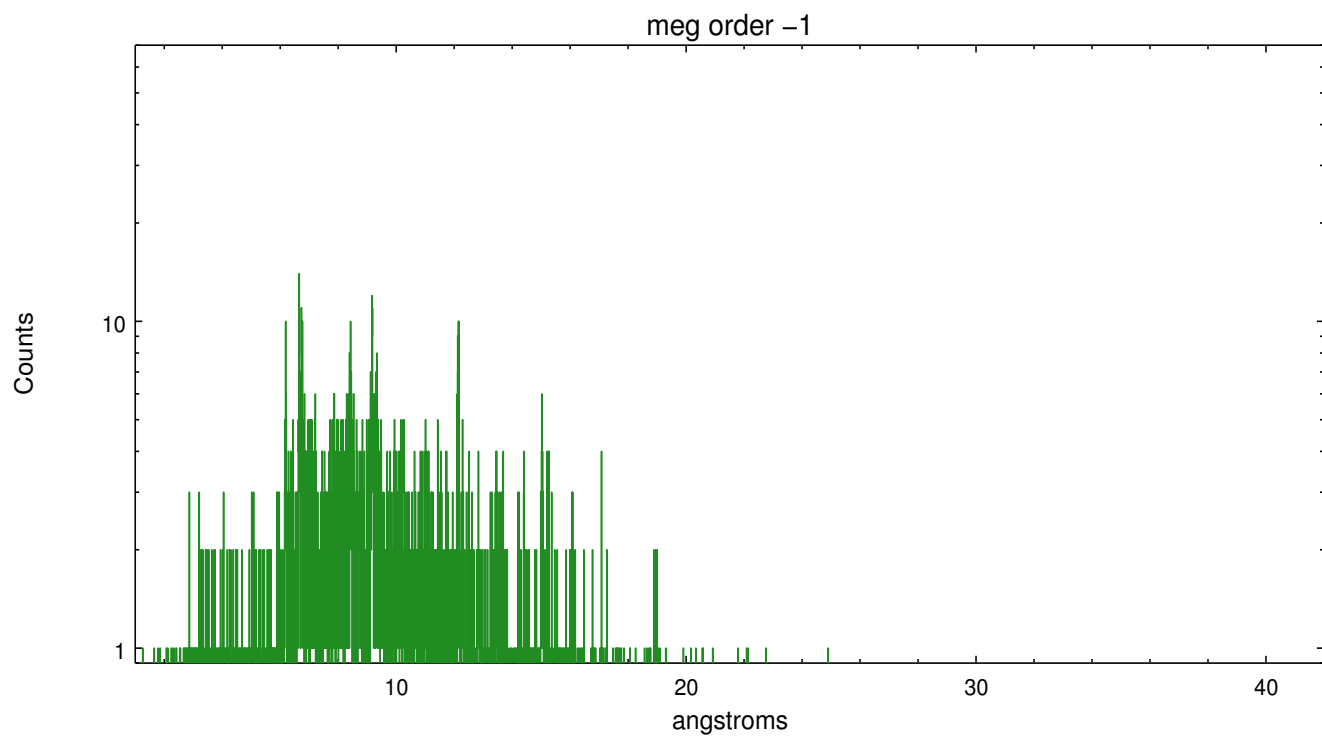
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	321	256	3736	7909	2956	155	130





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.03.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	44.676

A.2 Comments

Time constraint met. Roll constraint met. Offset in aim point is intended to put the aimpoint at row 162 in order to get the HET/MEG spectra centered in the bottom 1/4 subarray of the ACIS-S array with the OVIII line in the MEG minus spectrum onto the subarray.

==== 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.

==== WARNING: there are no standard ciao tools for analysis of grating spectra from extended sources. The shape of an emission 'line' will be the shape of the zero order spatial structure convolved with the instrumental LSF. Grating extractions can be used, but need to be combined with custom spatial-spectral analysis, since wavelength is multi-valued at any particular diffraction angle.