

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 10852 - L2 Version 2
Chandra X-Ray Center

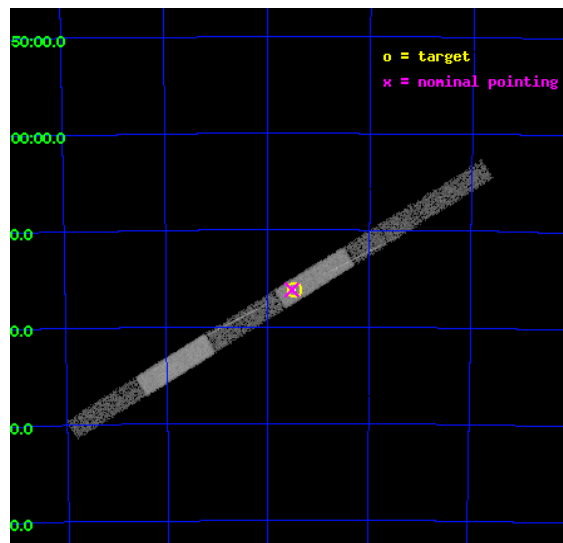
L2 Processing Date : May 29 2012

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1 Front

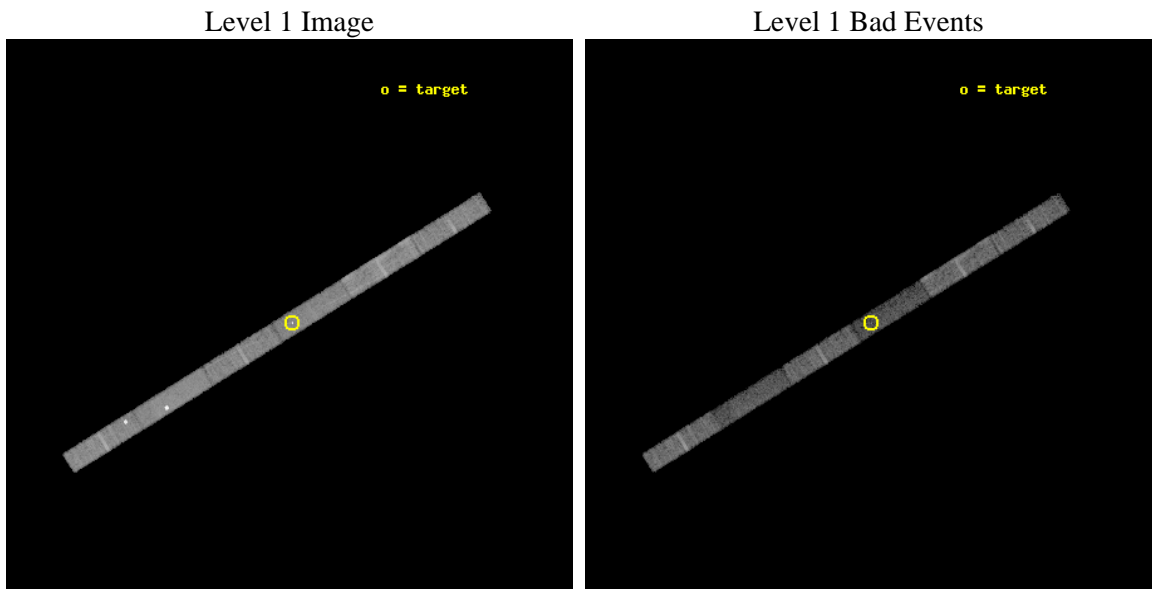
seq_num	501148	Sequence number
obs_id	10852	Observation id
title	Chandra Cycle 10 Spatial and Spectral Monitoring of SNR 1987A	Prop
observer	Prof. David Burrows	Principal investigator
object	SNR 1987A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.866667	Observer's specified target RA [deg]
dec_targ	-69.26975	Observer's specified target Dec [deg]
ra_nom	83.880390866398	Nominal RA [deg]
dec_nom	-69.269770456836	Nominal Dec [deg]
roll_nom	328.16945712617	Nominal Roll [deg]
revision	2	Processing version of data
ontime	11181.500242352	Sum of GTIs [s]
livetime	10779.33312293	Livetime [s]
ontime4	11181.500242352	Sum of GTIs [s]
ontime5	11181.500242352	Sum of GTIs [s]
ontime6	11181.500242352	Sum of GTIs [s]
ontime7	11181.500242352	Sum of GTIs [s]
ontime8	11181.500242352	Sum of GTIs [s]
ontime9	11181.500242352	Sum of GTIs [s]
l2events	38737	Number of level 2 events



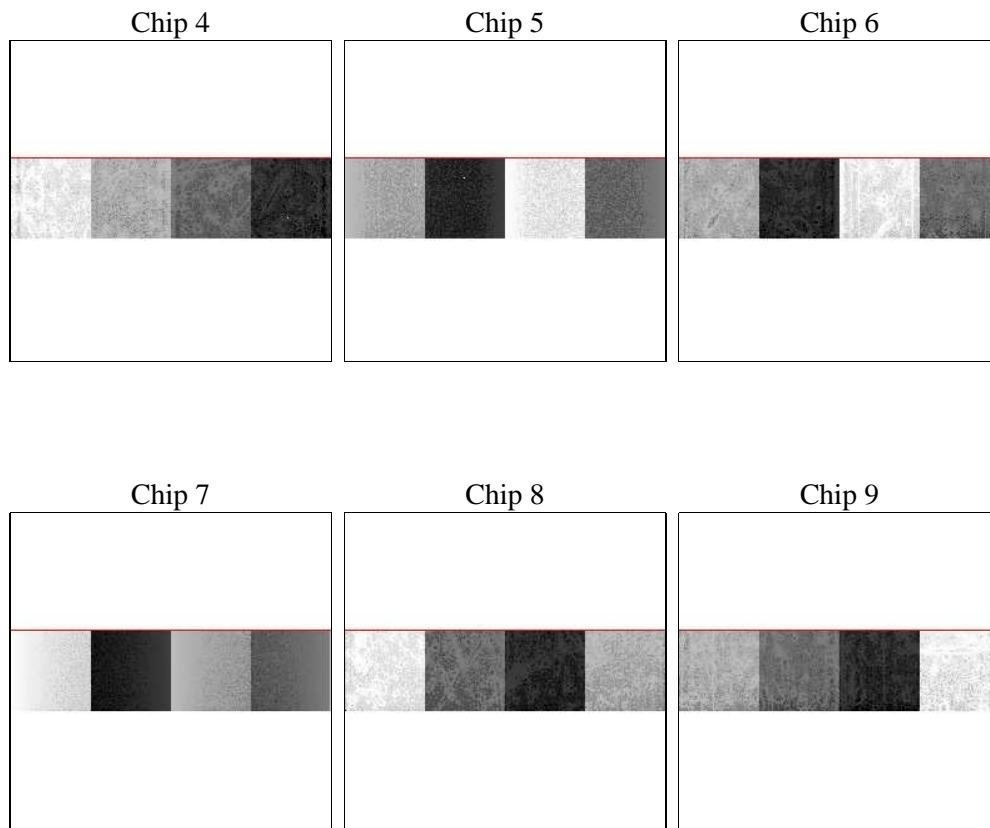
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	11000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	11181.500242352	Sum of GTIs [s]
caldsver	4.4.9	 	ontime4	11181.500242352	Sum of GTIs [s]
date	2012-05-29T01:26:21	Date and time of file creation	ontime5	11181.500242352	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	11181.500242352	Sum of GTIs [s]
			ontime7	11181.500242352	Sum of GTIs [s]
			ontime8	11181.500242352	Sum of GTIs [s]
			ontime9	11181.500242352	Sum of GTIs [s]
			l1events	193840	Number of level 1 events

2.1.4 Events

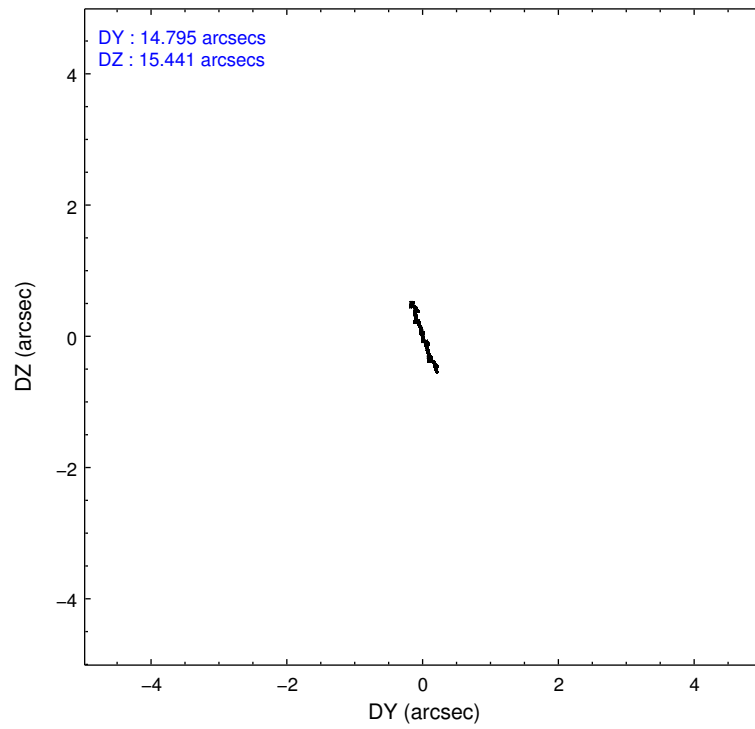
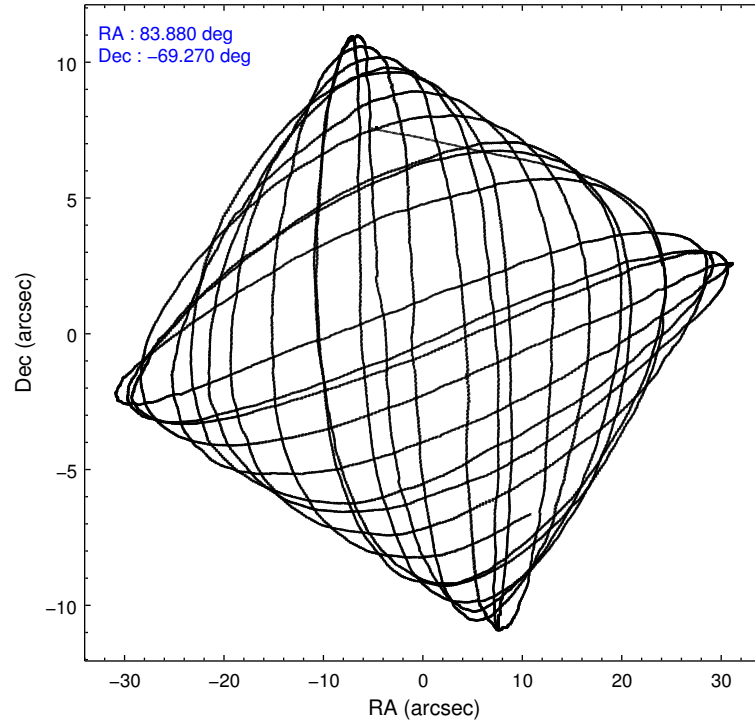
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	37038	40562	26668	26061	37540	25971
rejected events	29006	15421	23083	12319	28670	23287
rejected %	78%	38%	86%	47%	76%	89%

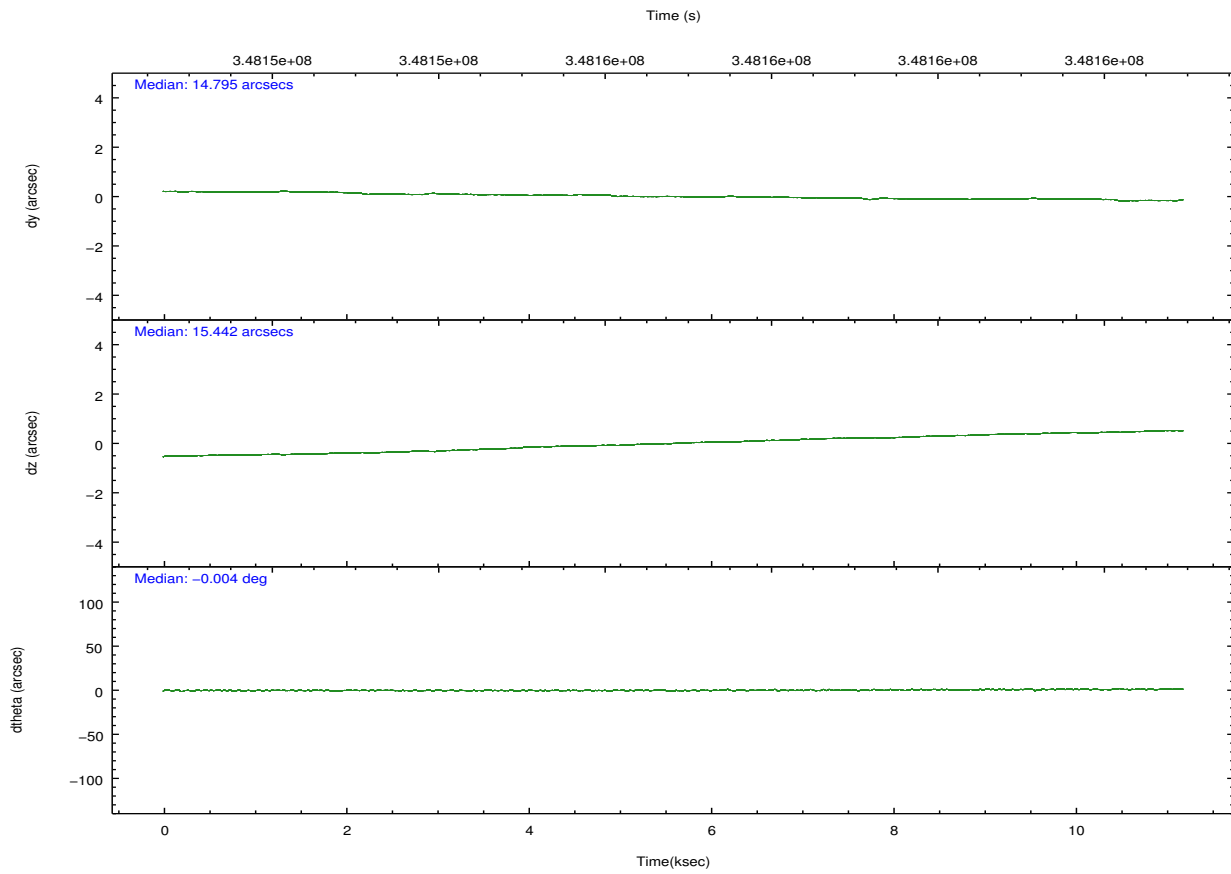
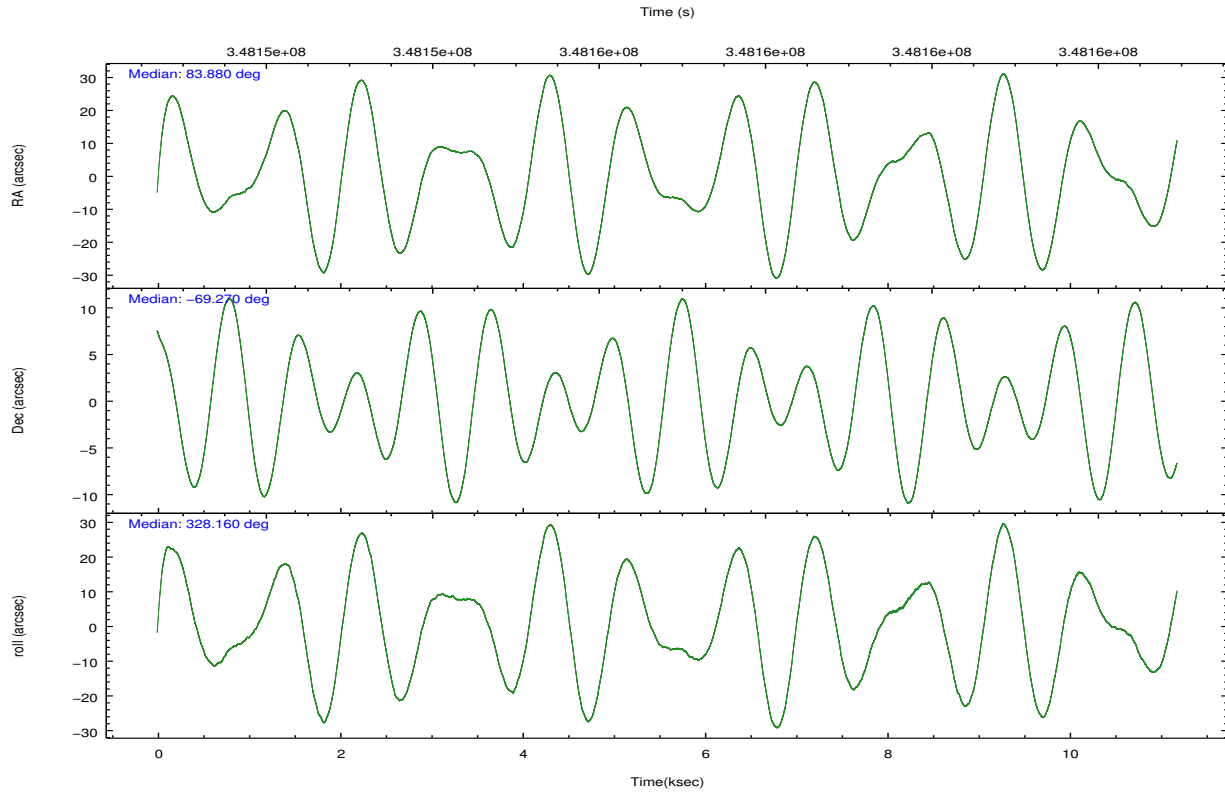
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	6213	10710	1669	1893	2499	853
	16%	26%	6%	7%	6%	3%
grade 1 events	42	119	13	51	20	7
	0%	0%	0%	0%	0%	0%
grade 2 events	656	5310	590	3232	2013	544
	1%	13%	2%	12%	5%	2%
grade 3 events	475	1150	432	1604	1045	471
	1%	2%	1%	6%	2%	1%
grade 4 events	443	1013	448	1502	986	437
	1%	2%	1%	5%	2%	1%
grade 5 events	879	2781	821	2653	1330	862
	2%	6%	3%	10%	3%	3%
grade 6 events	510	7822	551	5977	2685	480
	1%	19%	2%	22%	7%	1%
grade 7 events	27820	11657	22144	9149	26962	22317
	75%	28%	83%	35%	71%	85%

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	83.803119	83.88039086639805	CCD I2 on	N	N
[deg] Pointing Dec	-69.269250	-69.26977045683637	CCD I3 on	N	N
[deg] Pointing Roll	327.940565	328.1694571261677	CCD S0 on	O1	Y
[s] Window start time (MET)	347155266.184000	347155266.184000	CCD S1 on	Y	Y
[s] Window stop time (MET)	349747266.184000	349747266.184000	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	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	348151402.184000	348150369.93439	On-chip summing requested	N	N
Observation start date	2009-01-12T12:42:16	2009-01-12T12:26:09	Subarray requested	CUSTOM	1/4
[s] Observation end time (MET)	348162402.184000	348163382.31003	Subarray start row	393	393
Observation end date	2009-01-12T15:45:36	2009-01-12T16:03:02	Subarray row count	256	256
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.1

2.3 Aspect



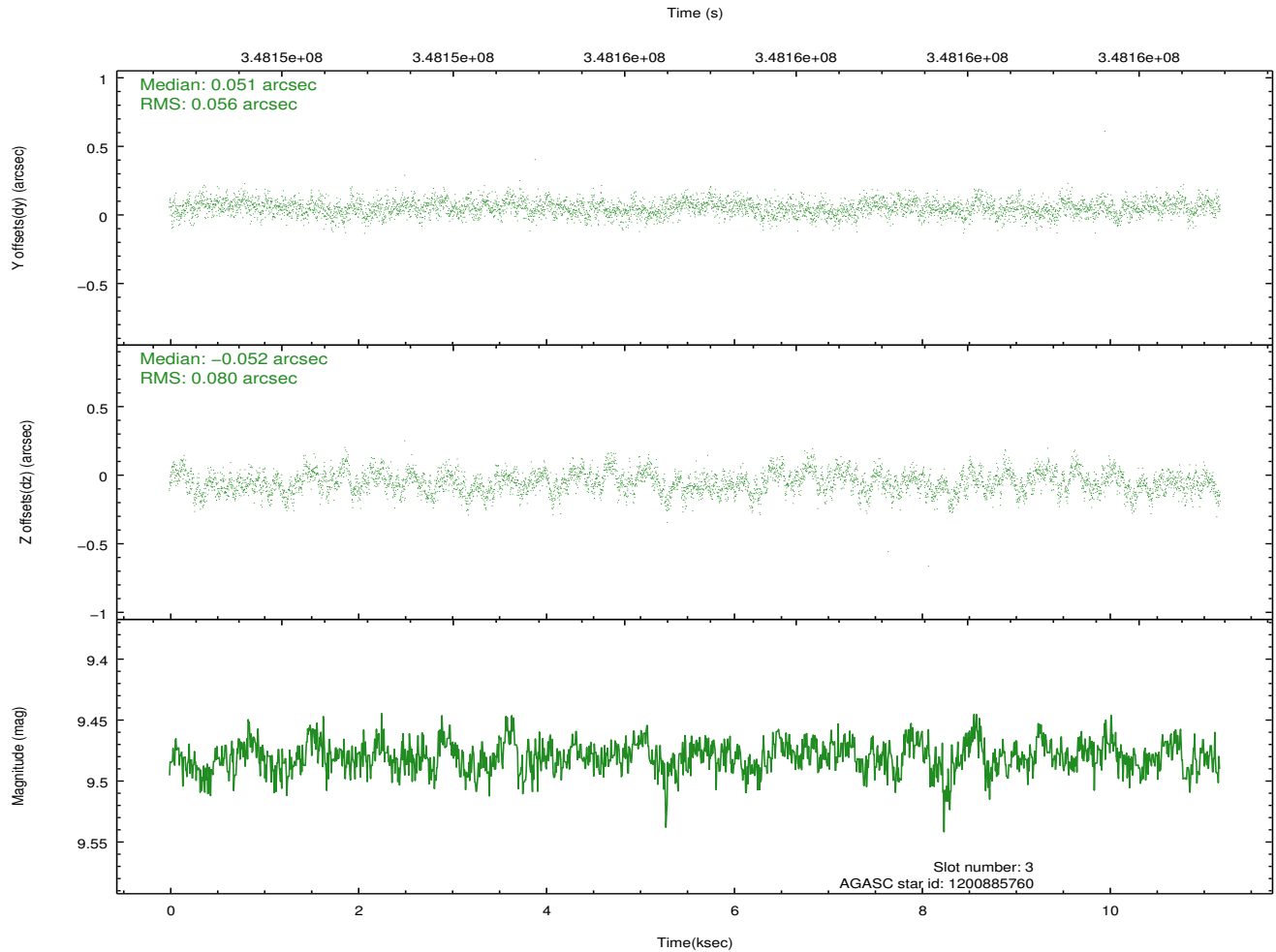
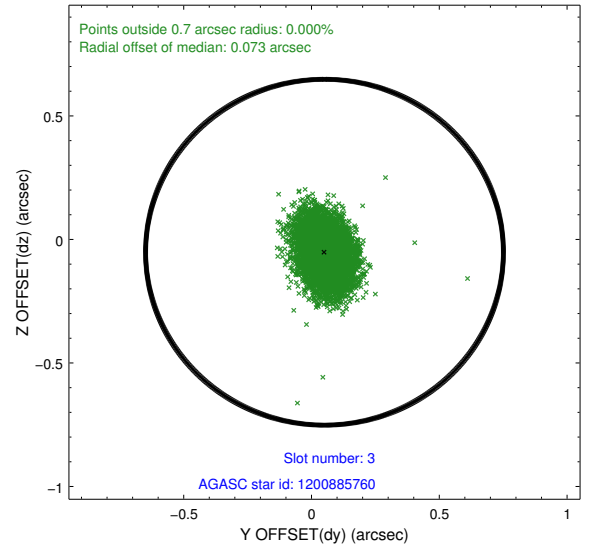
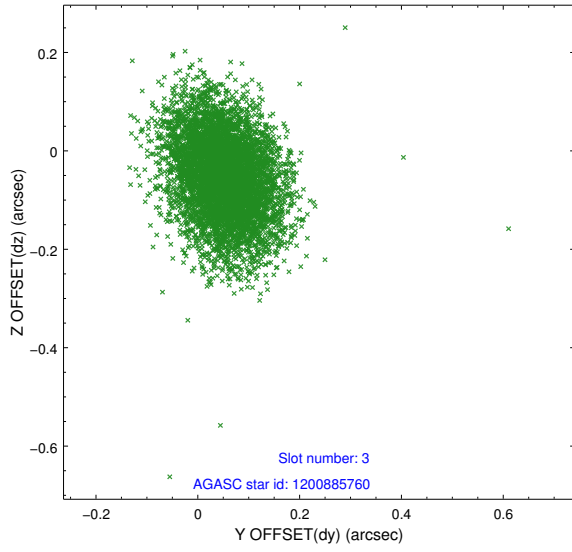


Slot Statistics

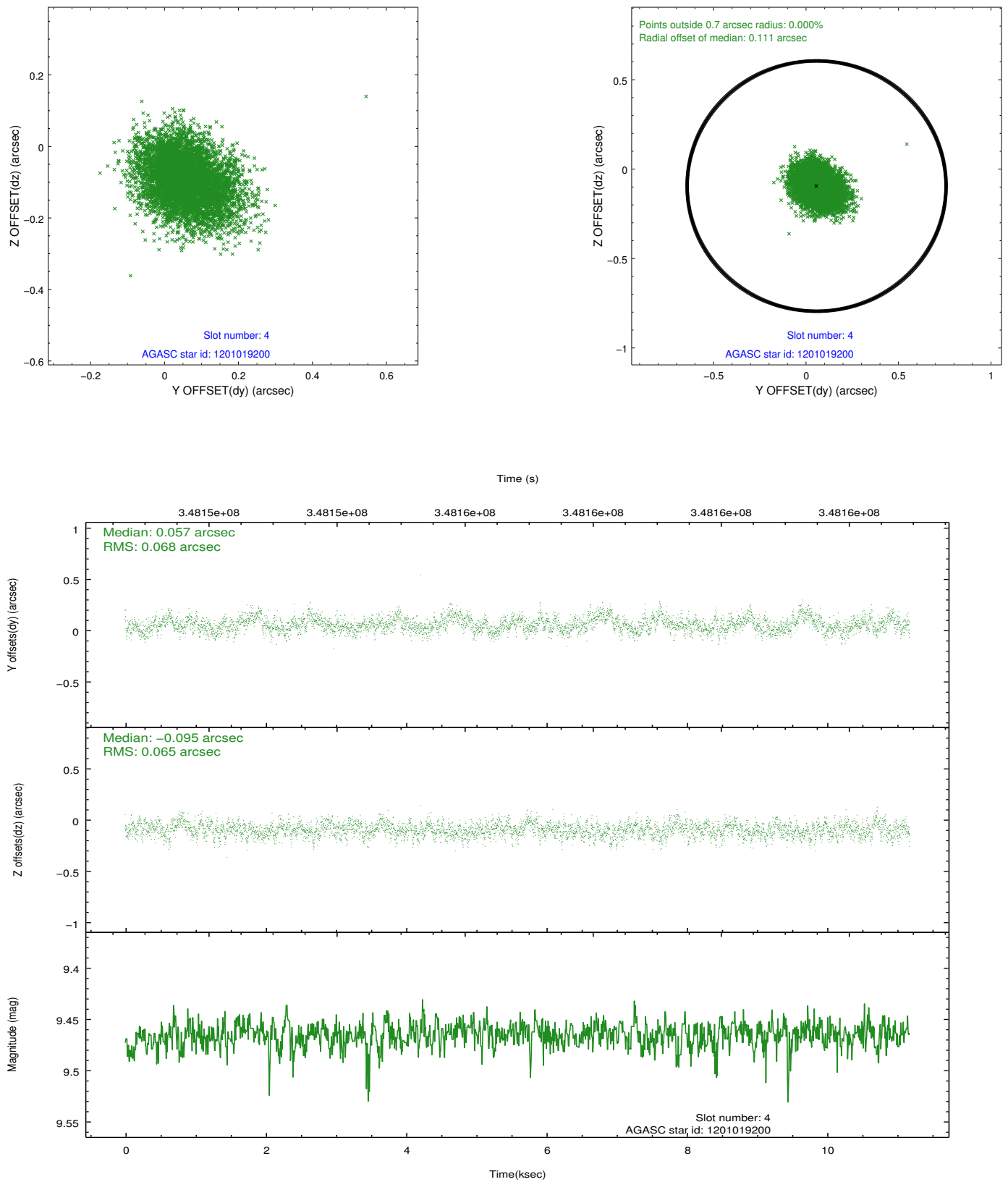
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.94	2728	-0.095	-0.024	0.008	0.013	0.000000	0.000000	-767.86	-1736.80
1	FID	ACIS-S-4	7.03	2728	0.212	0.052	0.006	0.011	0.000000	0.000000	2145.50	171.29
2	FID	ACIS-S-5	7.06	2728	-0.150	-0.019	0.007	0.012	0.000000	0.000000	-1820.18	165.40
3	GUIDE	1200885760	9.48	5447	0.051	-0.052	0.102	0.173	83.723637	-68.777667	-1027.05	1444.74
4	GUIDE	1201019200	9.47	5453	0.057	-0.095	0.100	0.162	84.213591	-68.777384	-485.90	1783.41
5	GUIDE	1201542672	8.20	5455	-0.083	0.042	0.078	0.130	84.492488	-69.957531	2038.45	-1650.14
6	GUIDE	1200884248	9.47	5452	-0.010	-0.221	0.120	0.185	83.880915	-68.565170	-1258.43	2202.23
7	GUIDE	1201410616	9.33	5449	-0.017	0.328	0.130	0.201	82.516808	-69.784406	-362.49	-2434.42

2.4 Star Slots

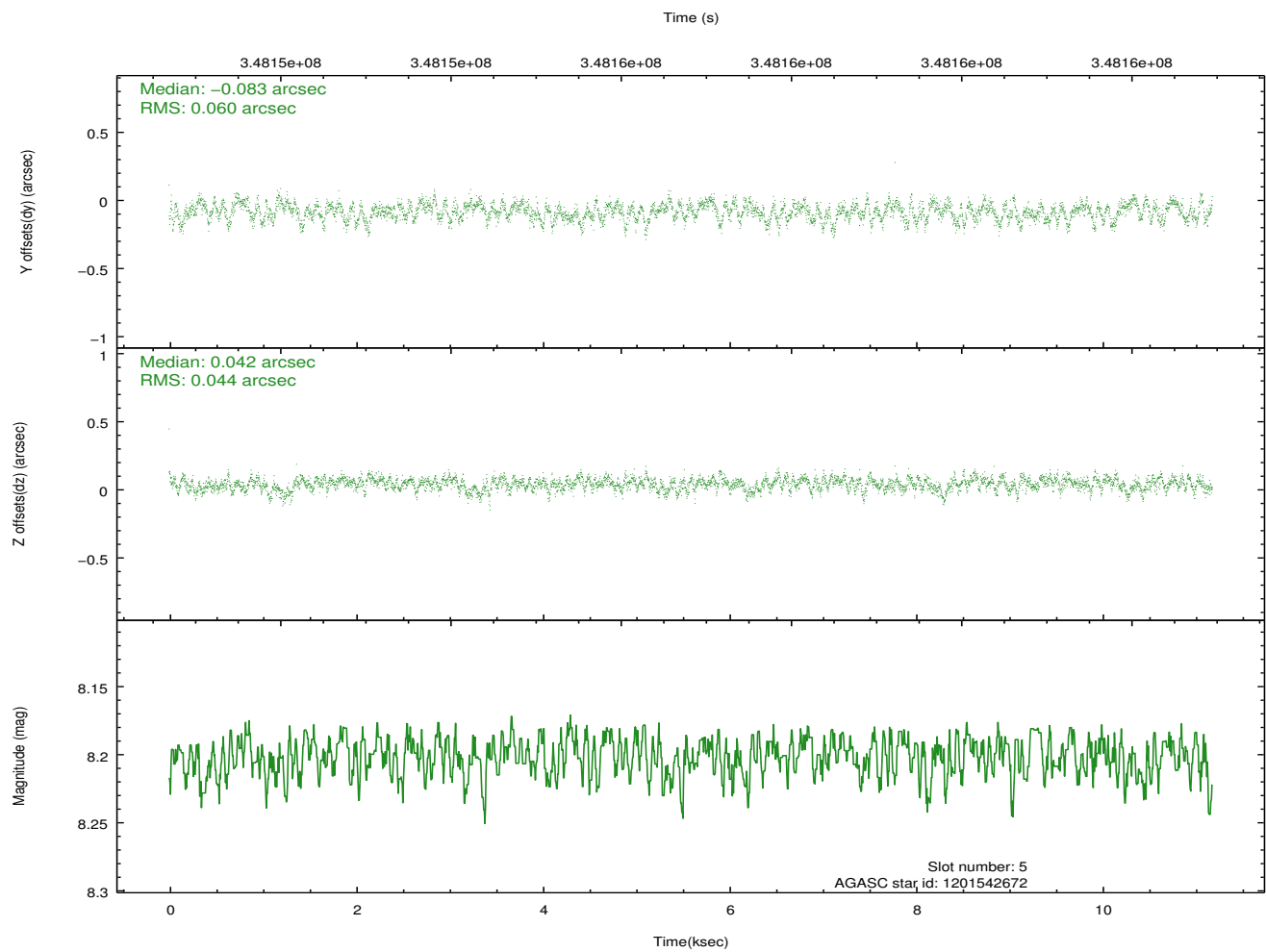
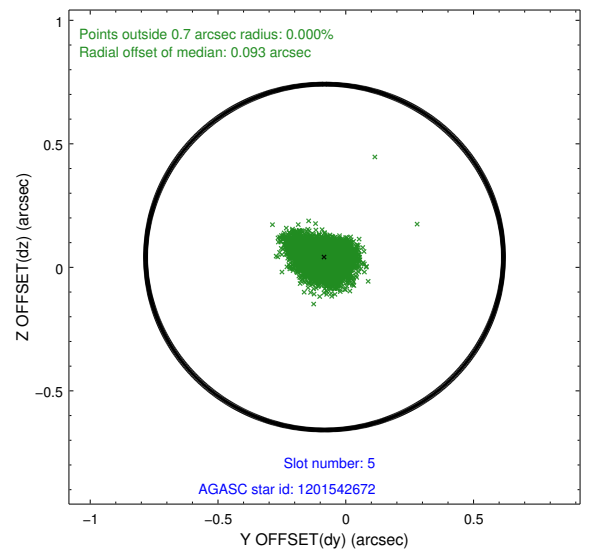
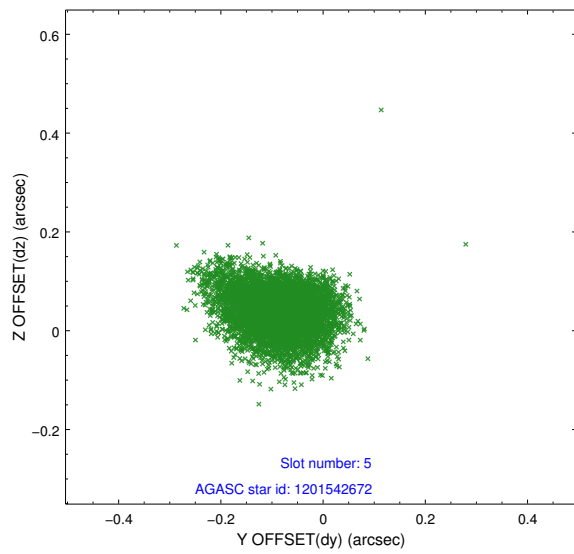
2.4.1 Slot 3



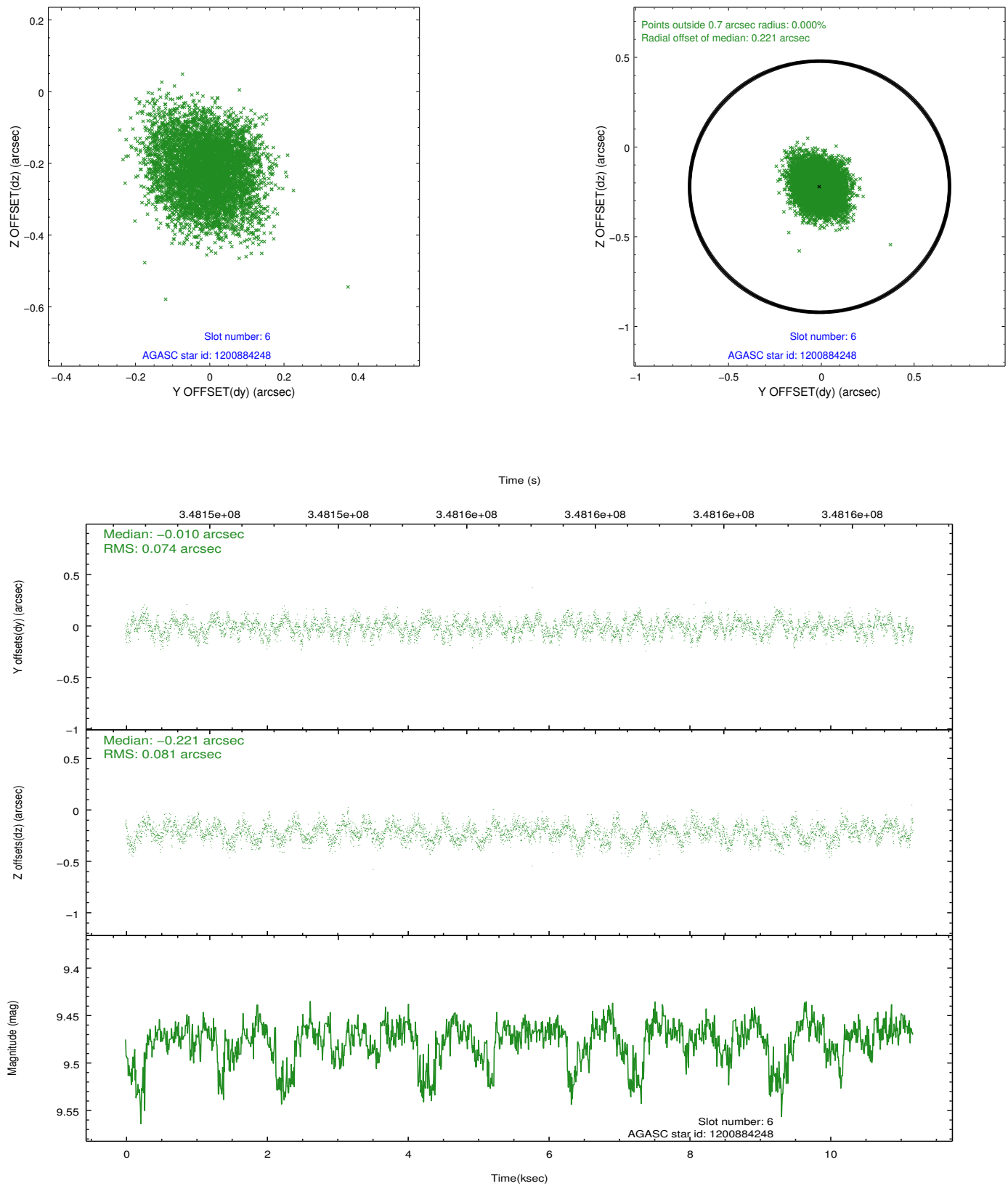
2.4.2 Slot 4



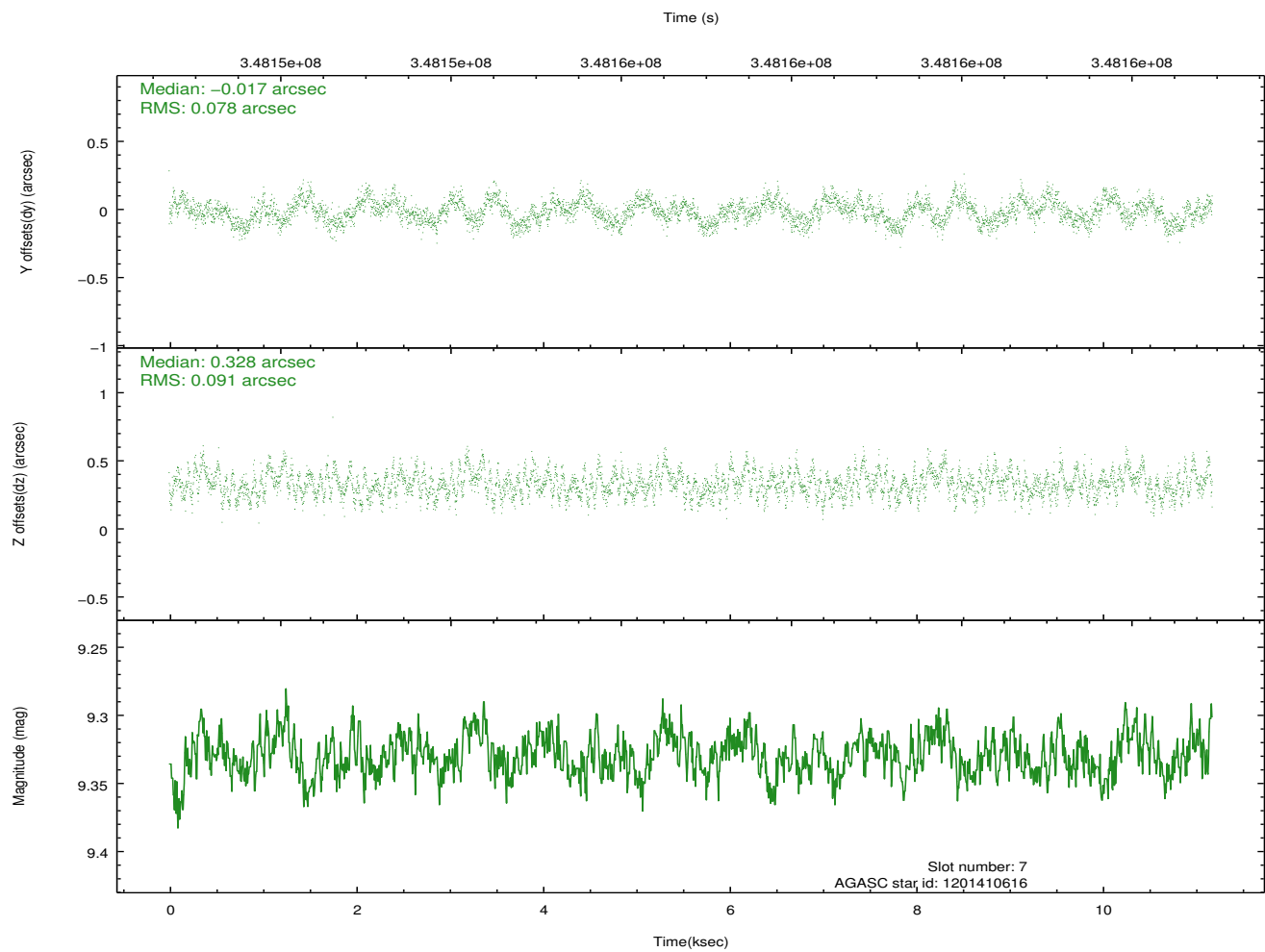
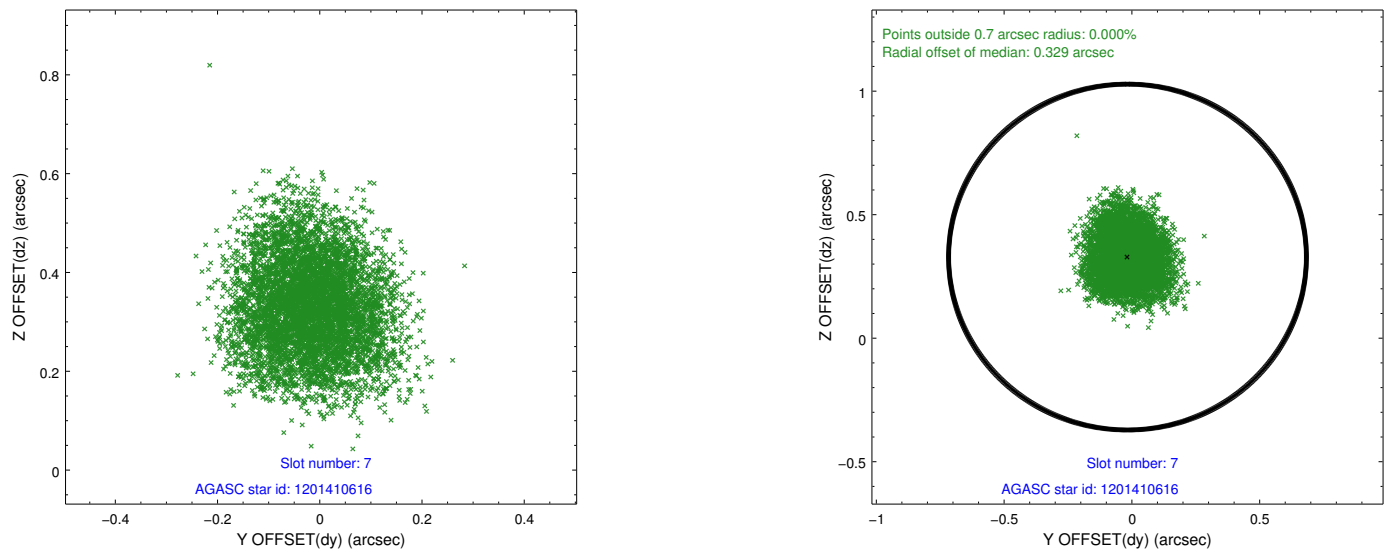
2.4.3 Slot 5



2.4.4 Slot 6

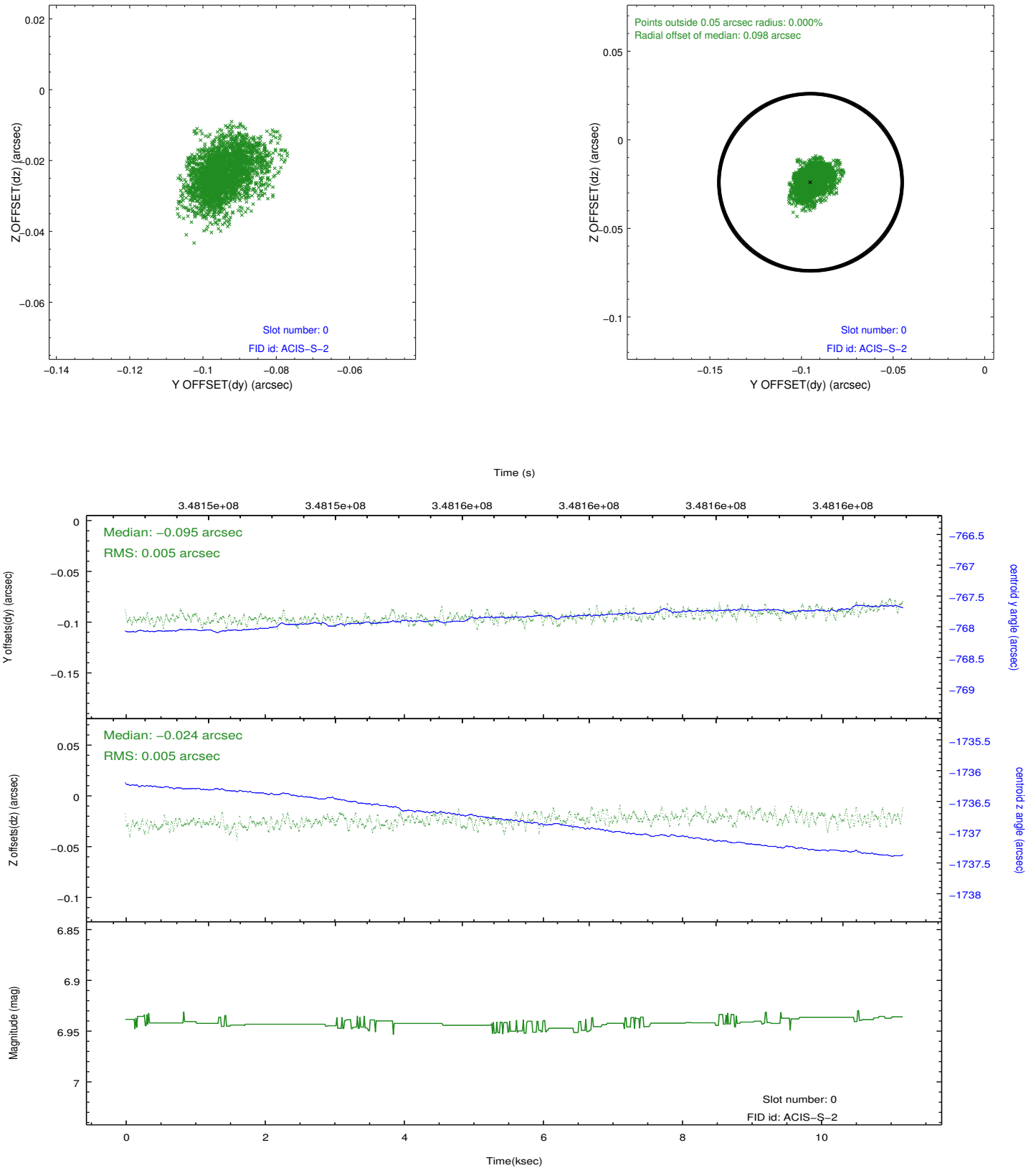


2.4.5 Slot 7

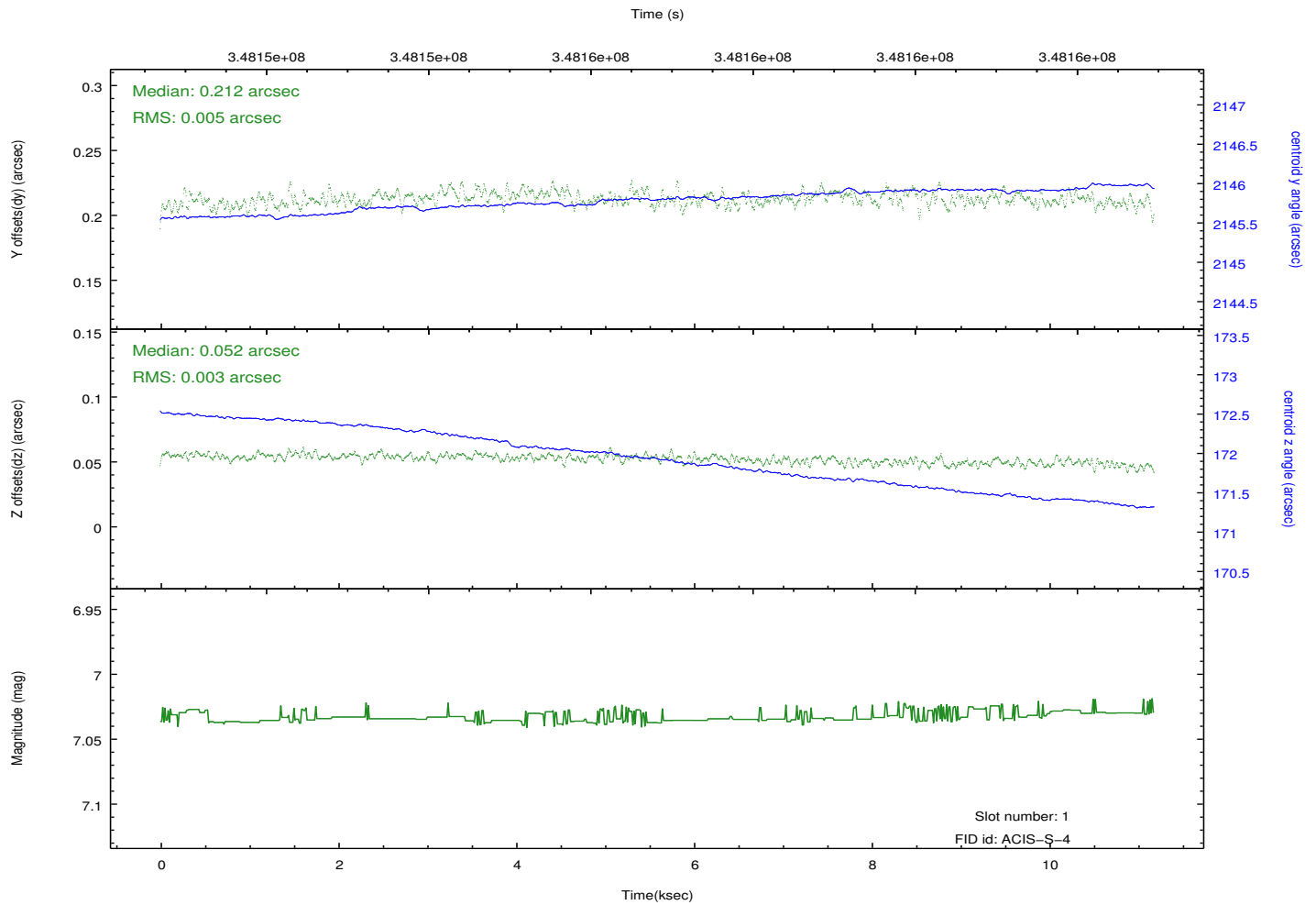
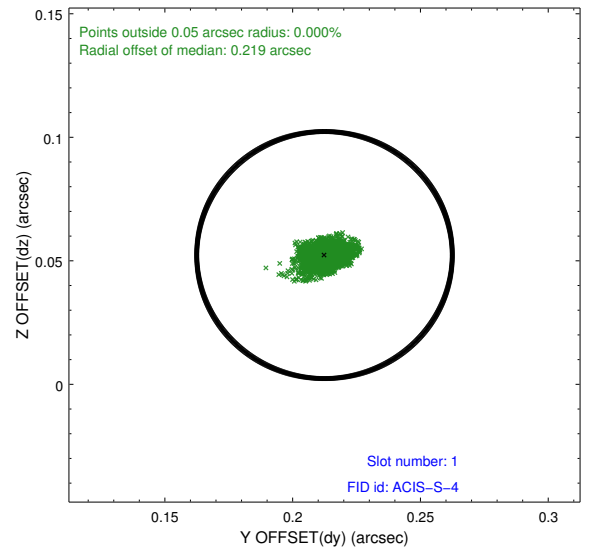
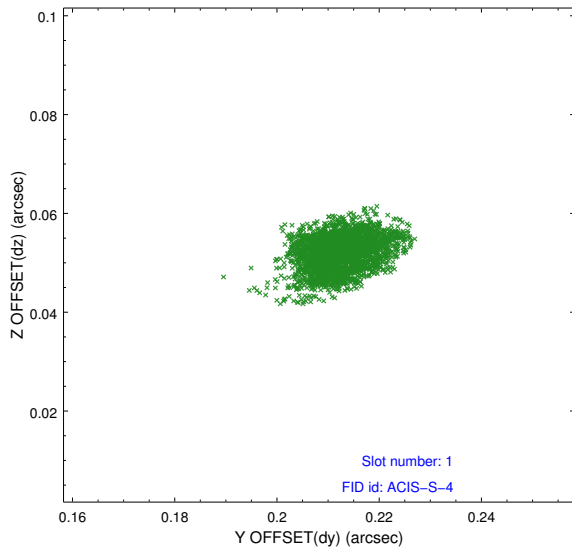


2.5 FID Slots

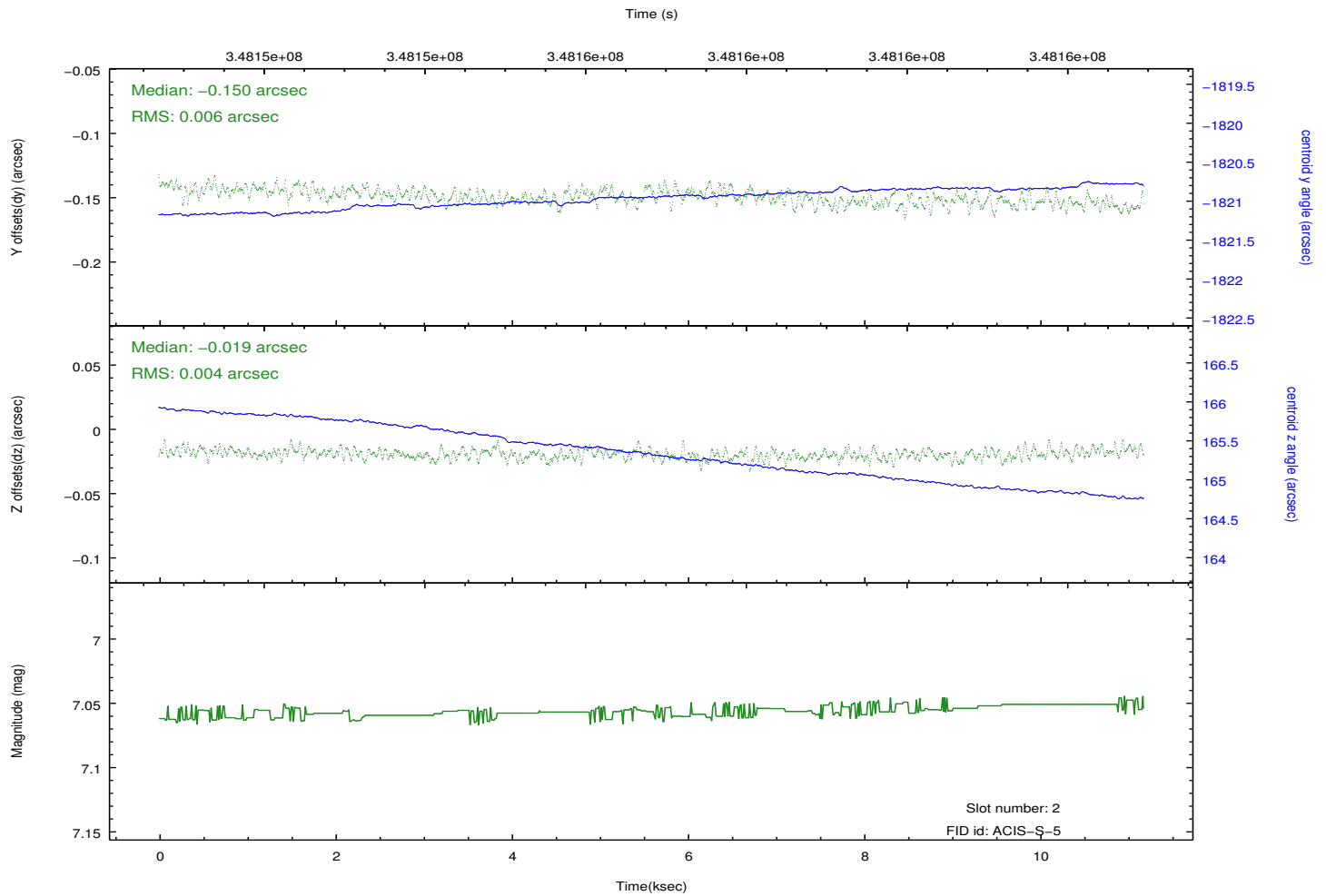
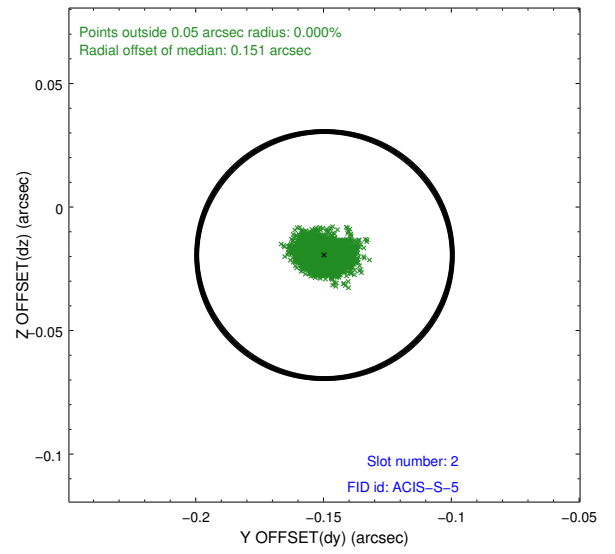
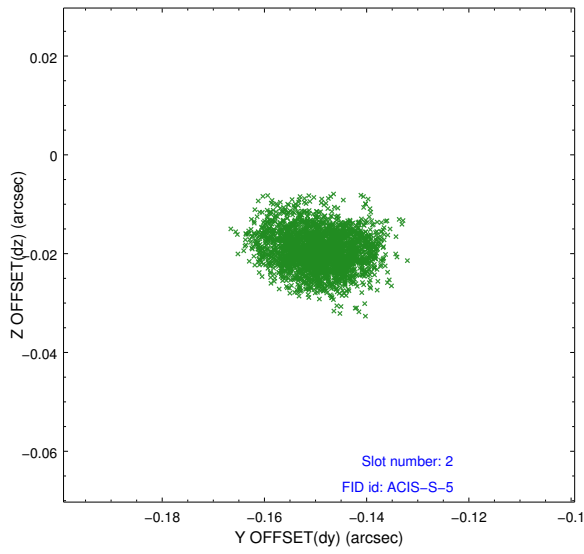
2.5.1 Slot 0



2.5.2 Slot 1

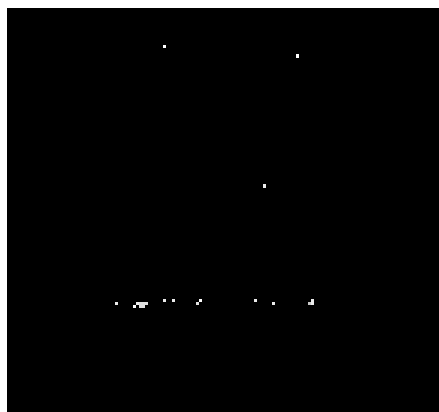


2.5.3 Slot 2

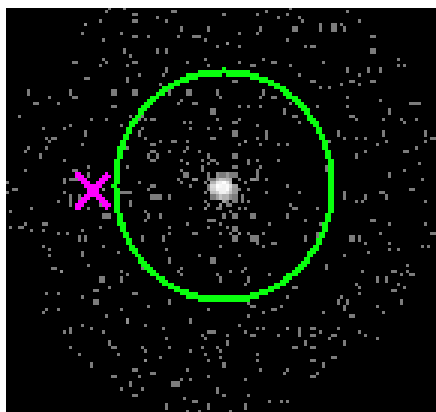


3 Gratings

3.1 HEG Arm



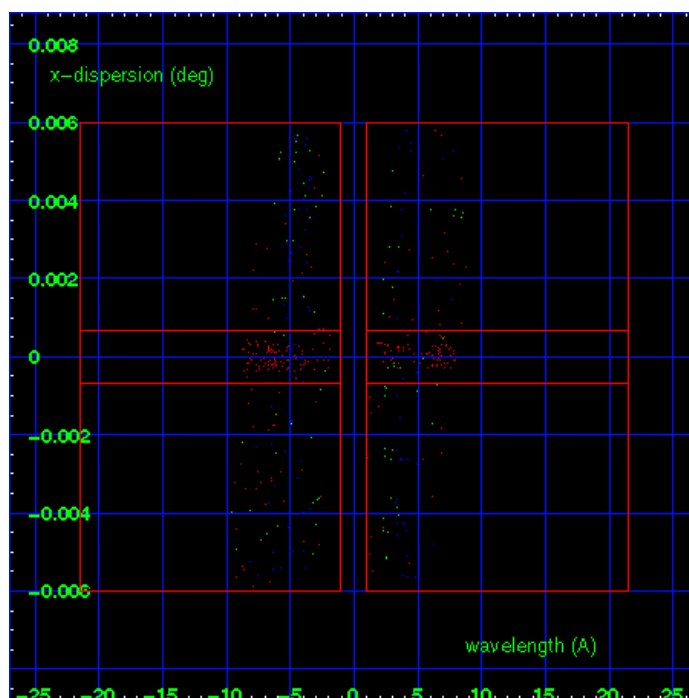
HEG Order Sort 123



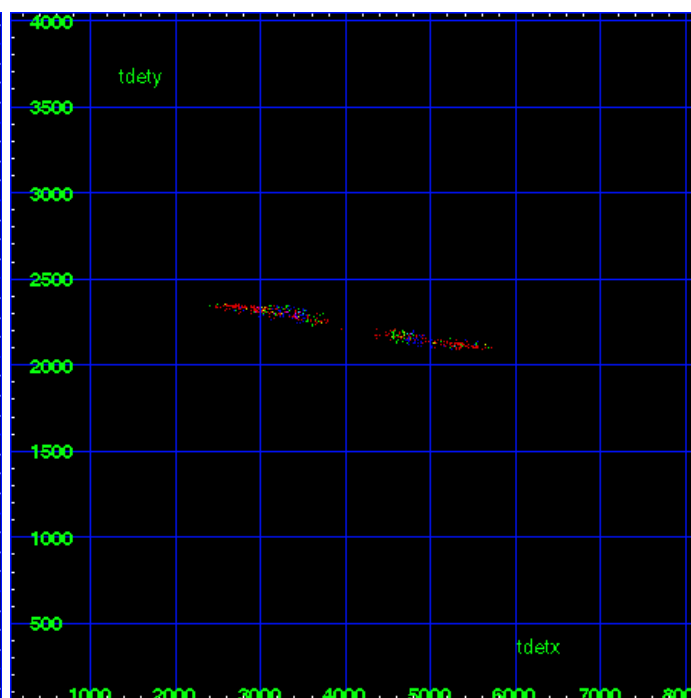
HEG Zero Order



HEG Order Sort ALL

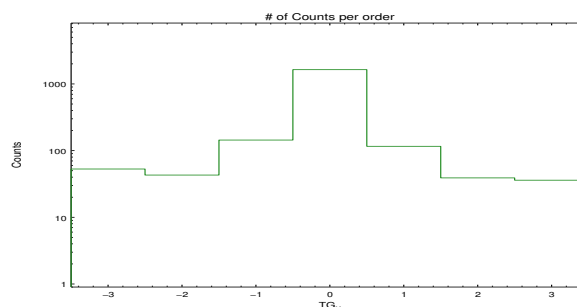


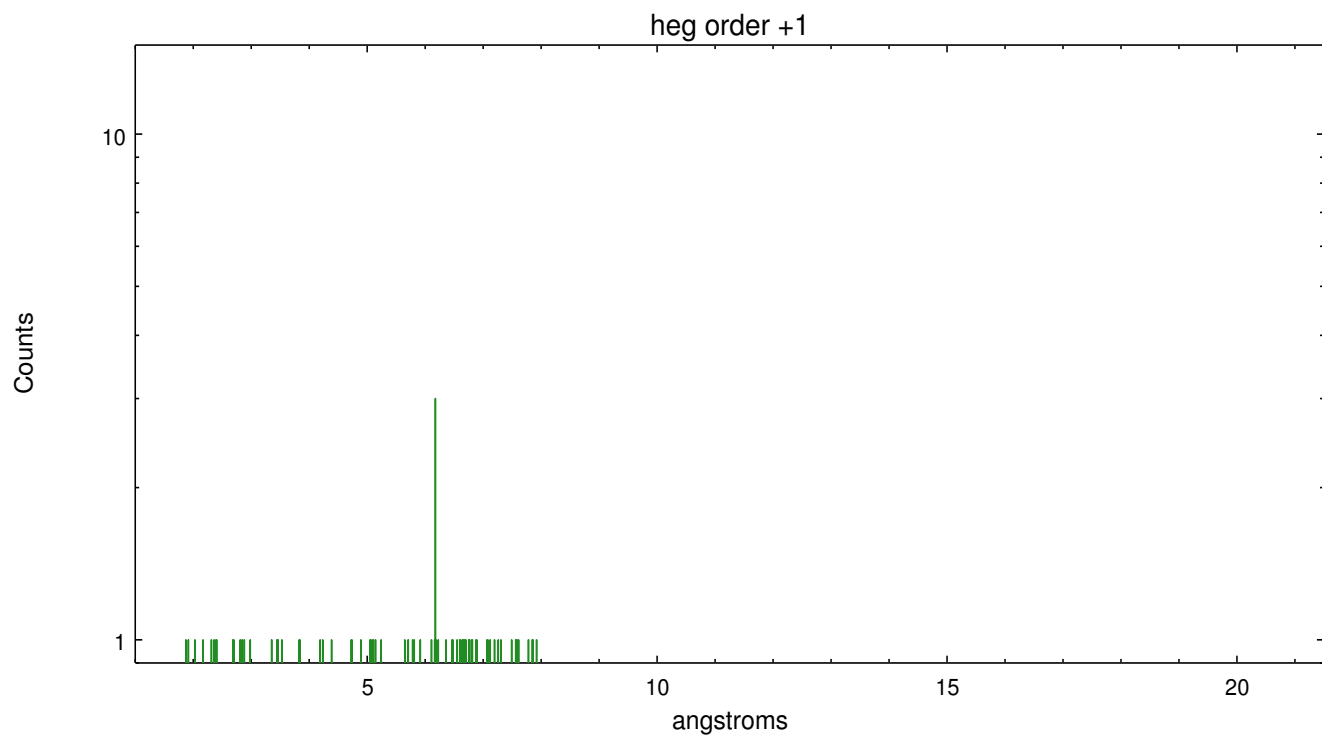
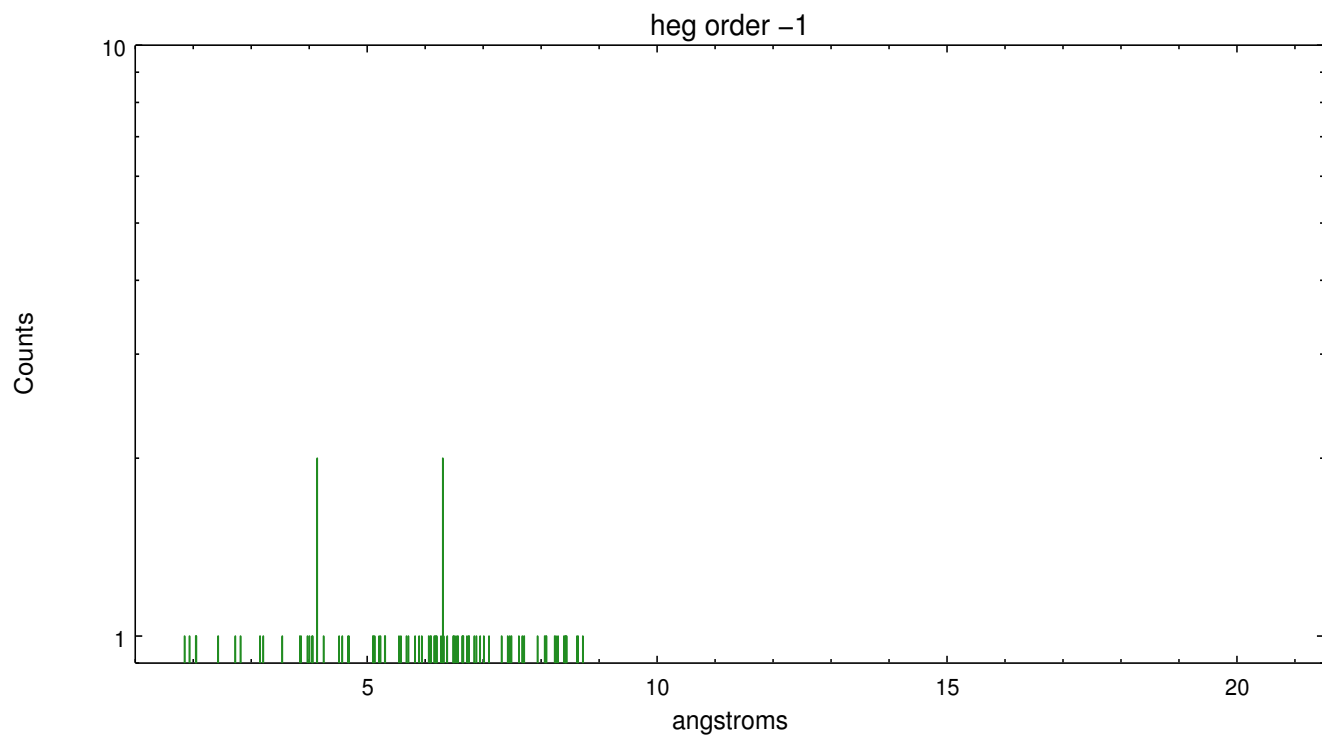
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	53	43	144	1637	116	39	36

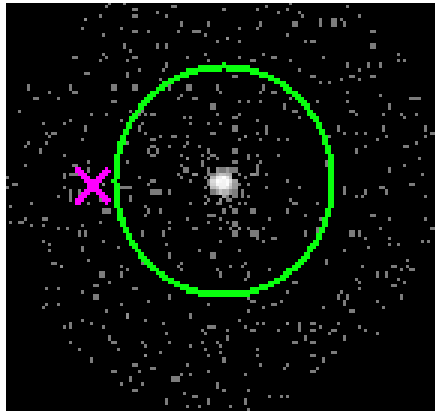




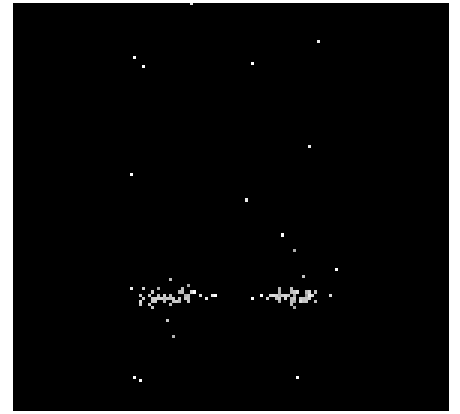
3.2 MEG Arm



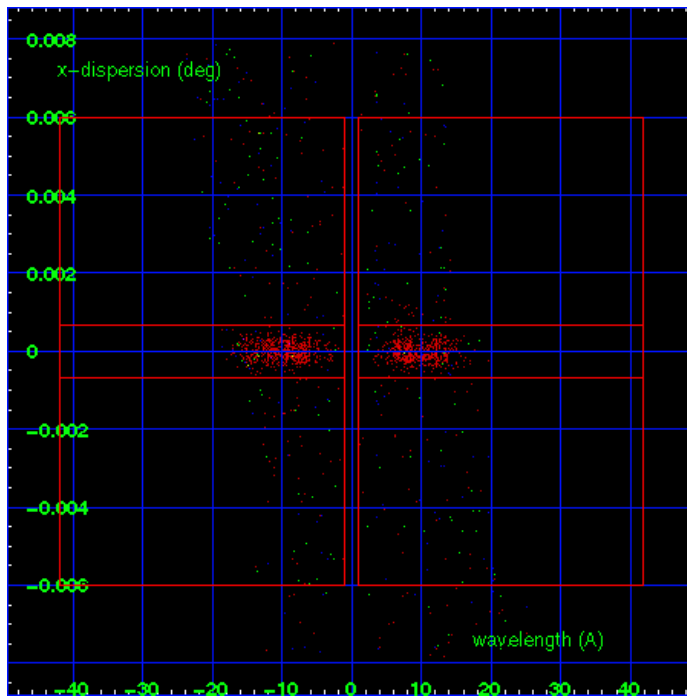
MEG Order Sort 123



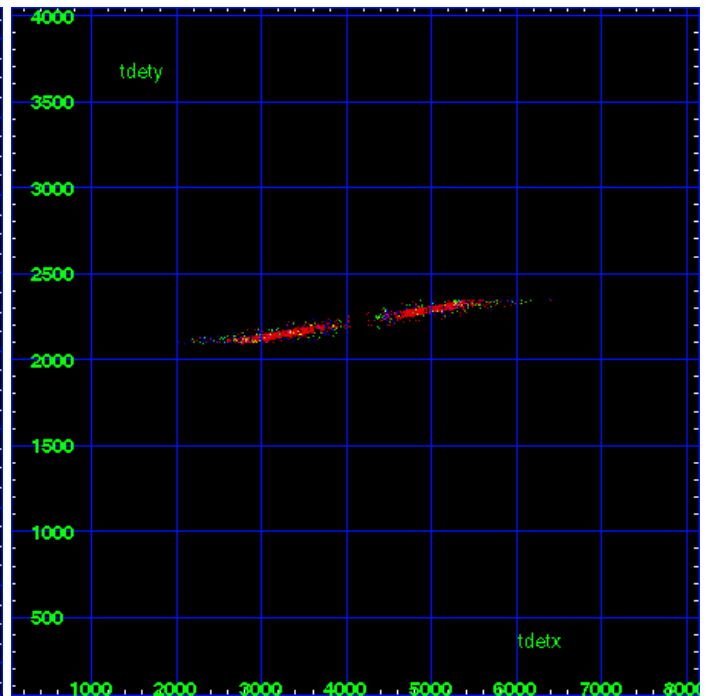
MEG Zero Order



MEG Order Sort ALL

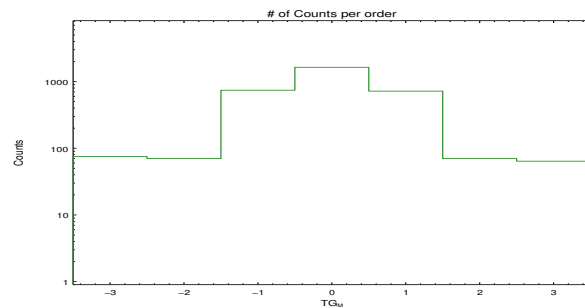


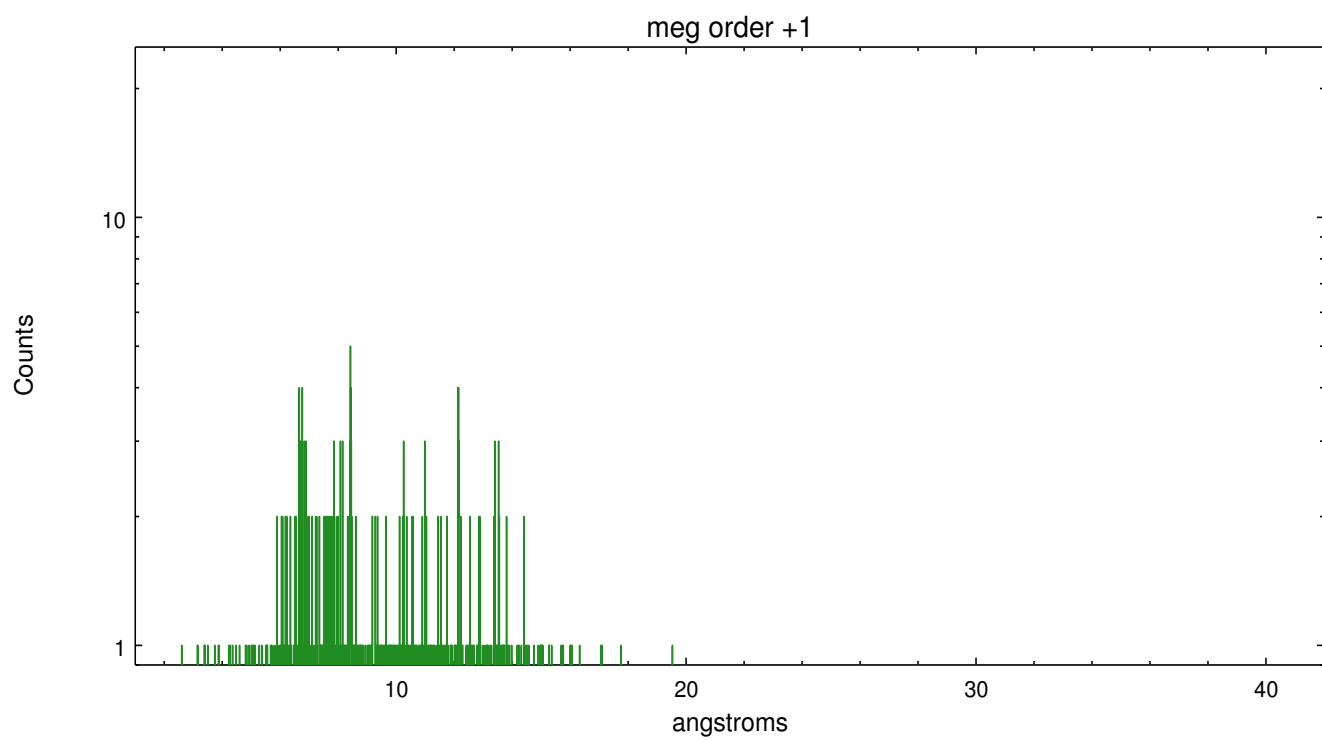
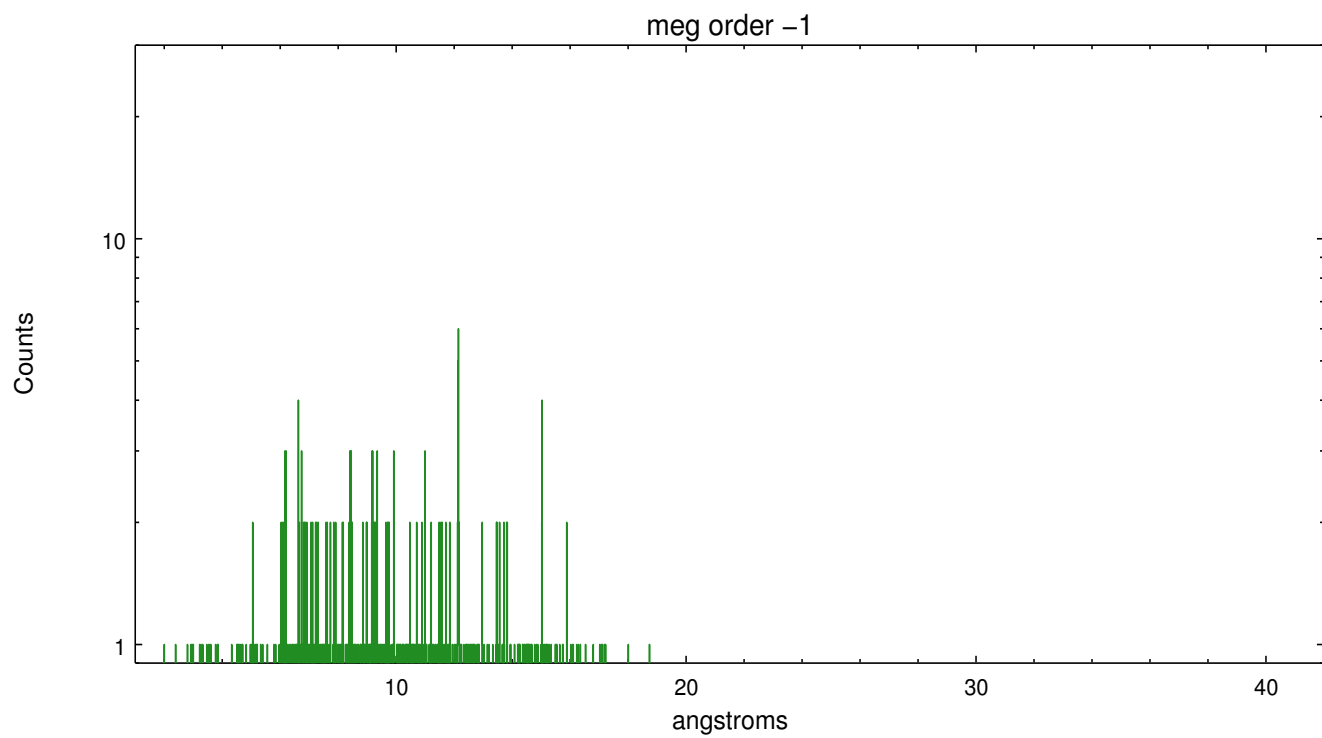
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	75	70	742	1637	719	70	64





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	11.1815002

A.2 Comments

Source is extended with structure. The zeroth order used for extracting the spectral data in this processing is located at the centroid of the SNR, but is not located at the position of the brightest X-ray emission in the supernova remnant. 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.

===

The sub-array configuration chosen eliminates counts from the soft ends of the spectral arms for both HEG (>9A) and MEG (>19A).

===Obsid 10130 used for cross-calibration purposes. ===