

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 9581 - L2 Version 3
Chandra X-Ray Center

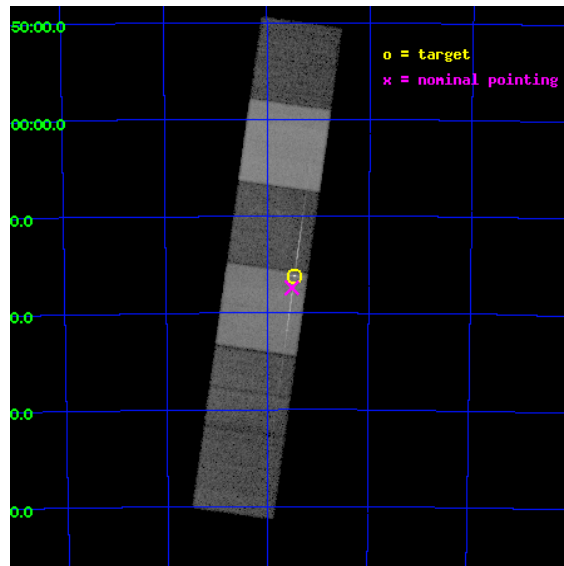
L2 Processing Date : Apr 30 2012

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	LETG Arm	17
A	Summary	19
A.1	Status	19
A.2	Comments	19

1 Front

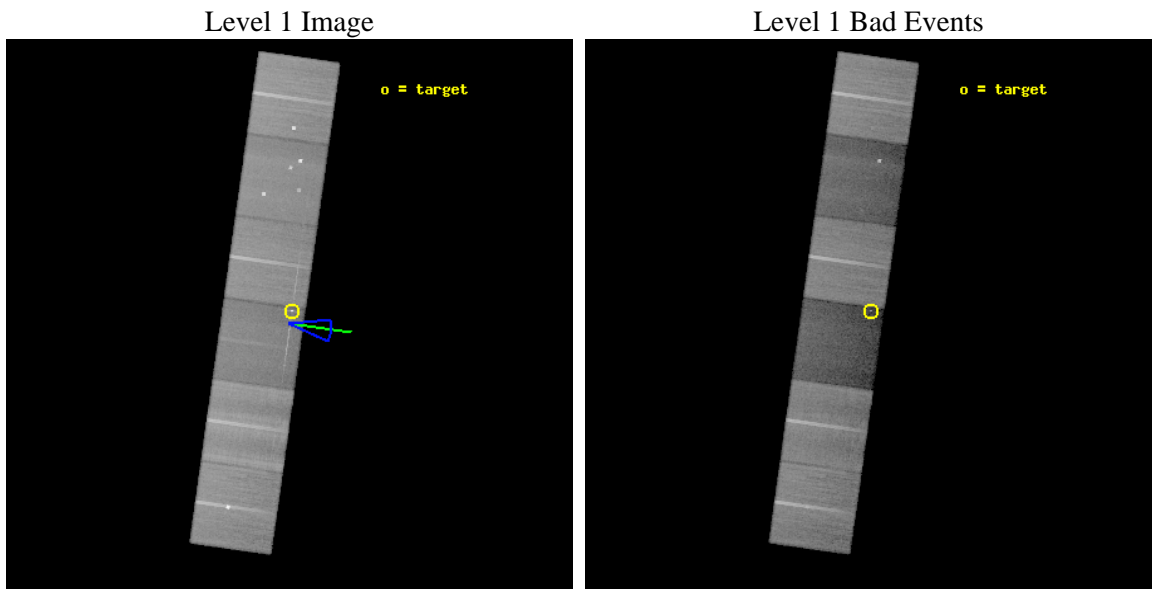
seq_num	500750	Sequence number
obs_id	9581	Observation id
title	SPATIALLY RESOLVED LETG SPECTROMETRY OF SNR1987A	Proposal title
observer	Dr. Richard McCray	Principal investigator
object	SNR1987A	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.866667	Observer's specified target RA [deg]
dec_targ	-69.26975	Observer's specified target Dec [deg]
ra_nom	83.879323638175	Nominal RA [deg]
dec_nom	-69.290210434999	Nominal Dec [deg]
roll_nom	98.06846588061	Nominal Roll [deg]
revision	3	Processing version of data
ontime	45538.37772131	Sum of GTIs [s]
livetime	44961.743362683	Livetime [s]
ontime4	45531.936820745	Sum of GTIs [s]
ontime5	45538.336681306	Sum of GTIs [s]
ontime6	45538.295641303	Sum of GTIs [s]
ontime7	45538.37772131	Sum of GTIs [s]
ontime8	45538.2546013	Sum of GTIs [s]
ontime9	45528.490789711	Sum of GTIs [s]
l2events	371315	Number of level 2 events



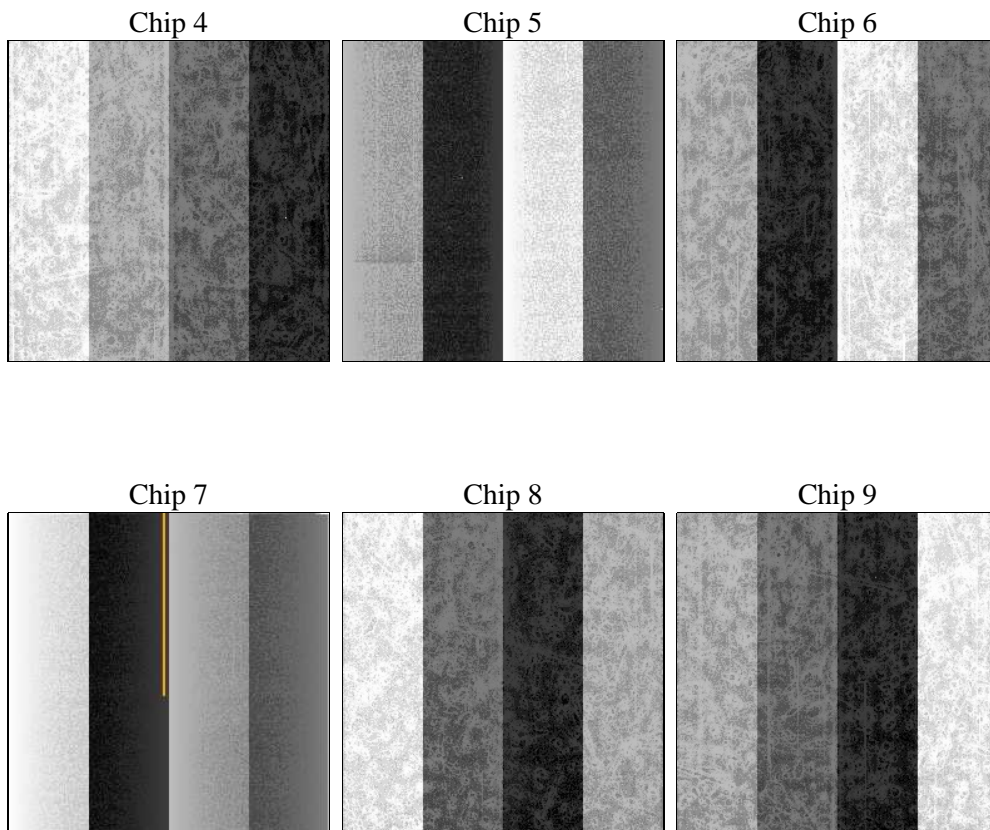
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	45500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	45538.37772131	Sum of GTIs [s]
caldbver	4.4.9	 	ontime4	45531.936820745	Sum of GTIs [s]
date	2012-04-30T15:41:46	Date and time of file creation	ontime5	45538.336681306	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	45538.295641303	Sum of GTIs [s]
			ontime7	45538.37772131	Sum of GTIs [s]
			ontime8	45538.2546013	Sum of GTIs [s]
			ontime9	45528.490789711	Sum of GTIs [s]
			l1events	1862784	Number of level 1 events

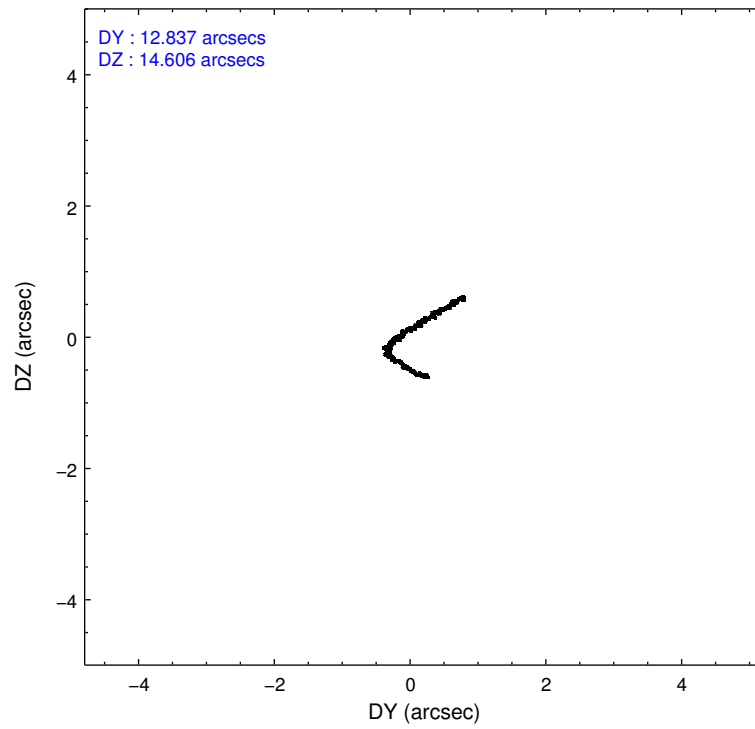
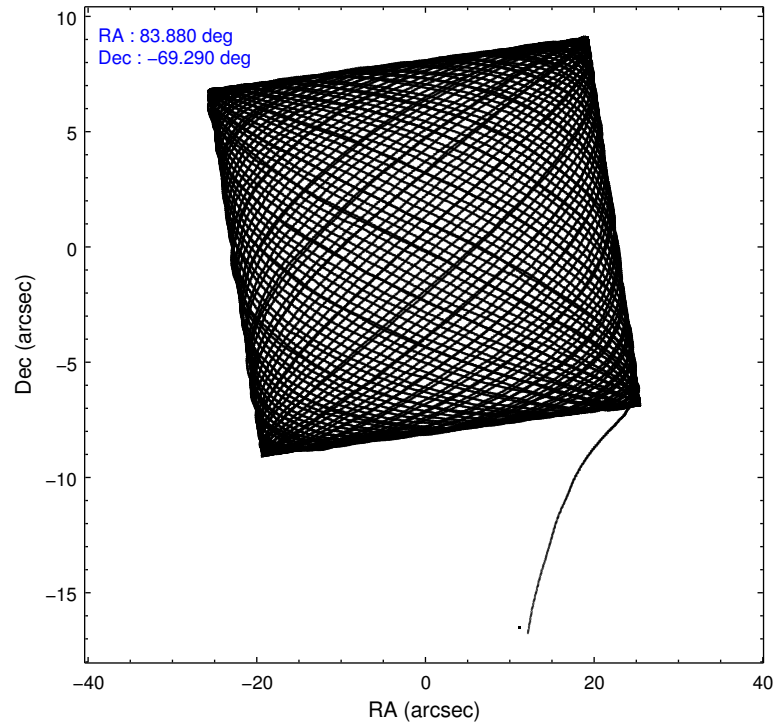
2.1.4 Events

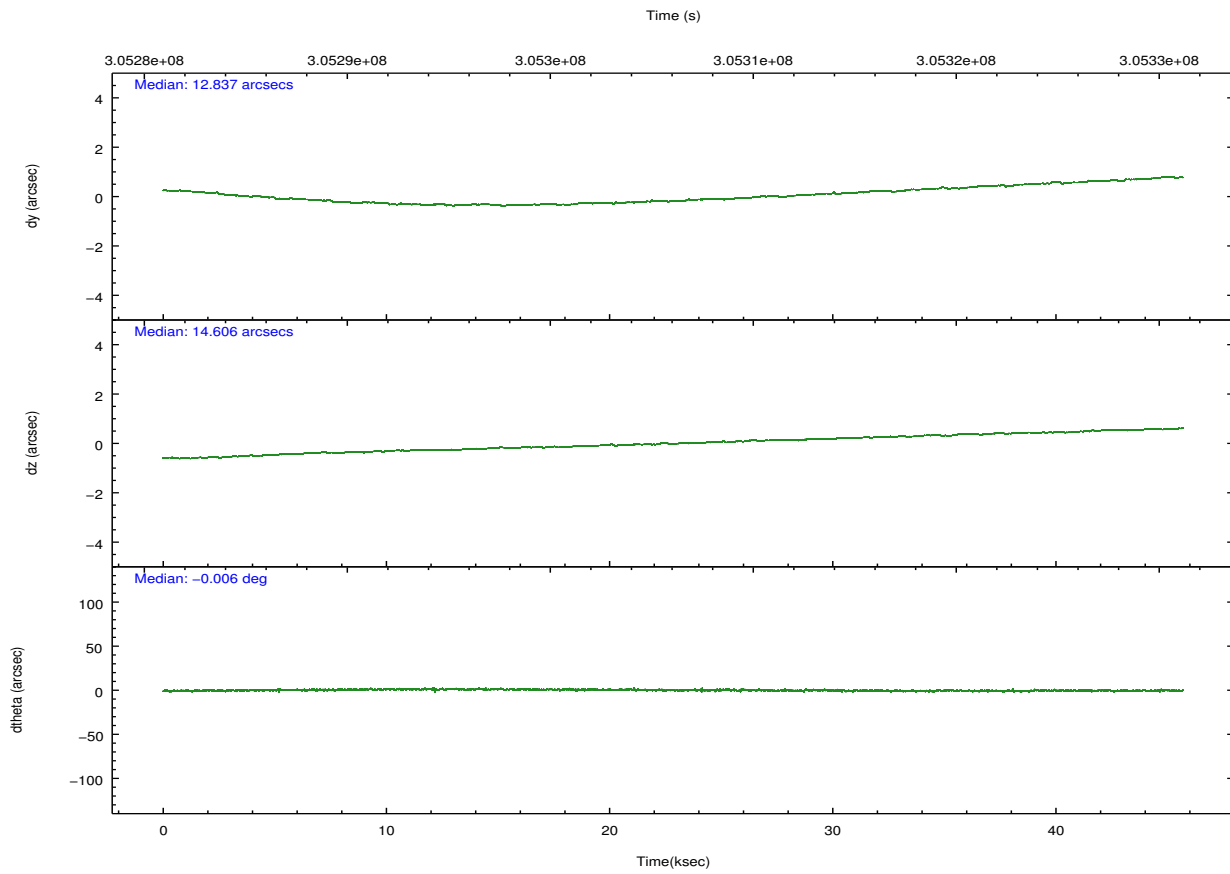
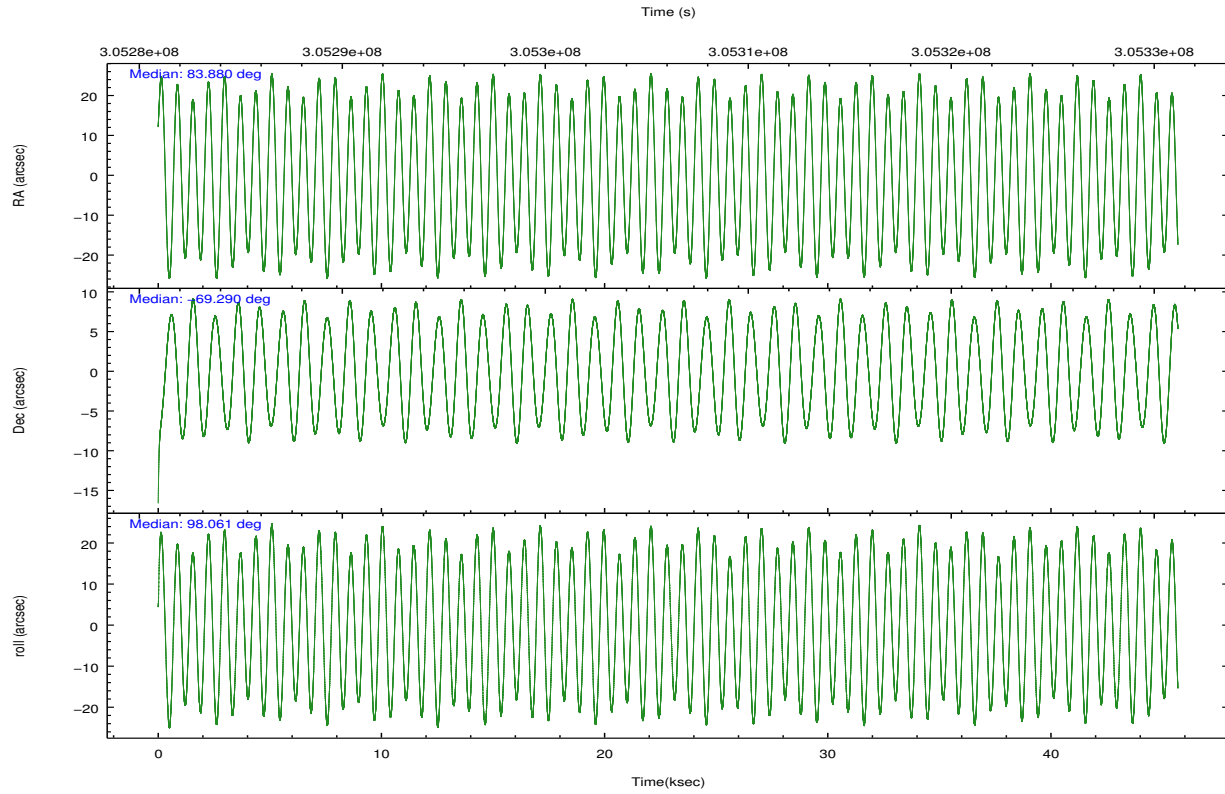
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	378036	290180	316306	198349	370644	309269	grade 0 events	21708	32631	17163	18981	28997	22078
rejected events	338609	111559	281645	76494	270980	270539		5%	11%	5%	9%	7%	7%
rejected %	89%	38%	89%	38%	73%	87%	grade 1 events	345	3705	189	504	304	350
								0%	1%	0%	0%	0%	0%
							grade 2 events	7438	55263	6626	29780	23307	5964
								1%	19%	2%	15%	6%	1%
							grade 3 events	3192	8725	3137	12804	10848	3118
								0%	3%	0%	6%	2%	1%
							grade 4 events	2978	8306	3171	12643	9959	2959
								0%	2%	1%	6%	2%	0%
							grade 5 events	6380	22560	5971	18918	10716	7141
								1%	7%	1%	9%	2%	2%
							grade 6 events	4111	73707	4566	47655	26553	4616
								1%	25%	1%	24%	7%	1%
							grade 7 events	331884	85283	275483	57064	259960	263043
								87%	29%	87%	28%	70%	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	LETG	LETG	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	83.927845	83.87932363817512	CCD I2 on	N	N
[deg] Pointing Dec	-69.311514	-69.29021043499921	CCD I3 on	N	N
[deg] Pointing Roll	97.957228	98.06846588060951	CCD S0 on	O1	Y
[deg] Roll angle	100.000000	100.000000	CCD S1 on	Y	Y
[deg] Roll tolerance	15.000000	15.000000	CCD S2 on	Y	Y
Roll constraint allows 180D rotation	N	N	CCD S3 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S4 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S5 on	O2	Y
[mm] SIM translation stage pos	-182.132523	-182.1344861297048	Number of optional ACIS chips dropped	0	0
[mm] SIM translation stage offset	-8	-7.998036453302973	On-chip summing requested	N	N
[s] Observation start time (MET)	305283388.184000	305282312.74575	Subarray requested	NONE	NONE
Observation start date	2007-09-04T08:55:23	2007-09-04T08:38:32	Alternating exposures requested	N	N
[s] Observation end time (MET)	305328888.184000	305329520.66052	[s] Primary exposure time	0.000000	3.2
Observation end date	2007-09-04T21:33:43	2007-09-04T21:45:20			
Read mode	TIMED	TIMED			

2.3 Aspect



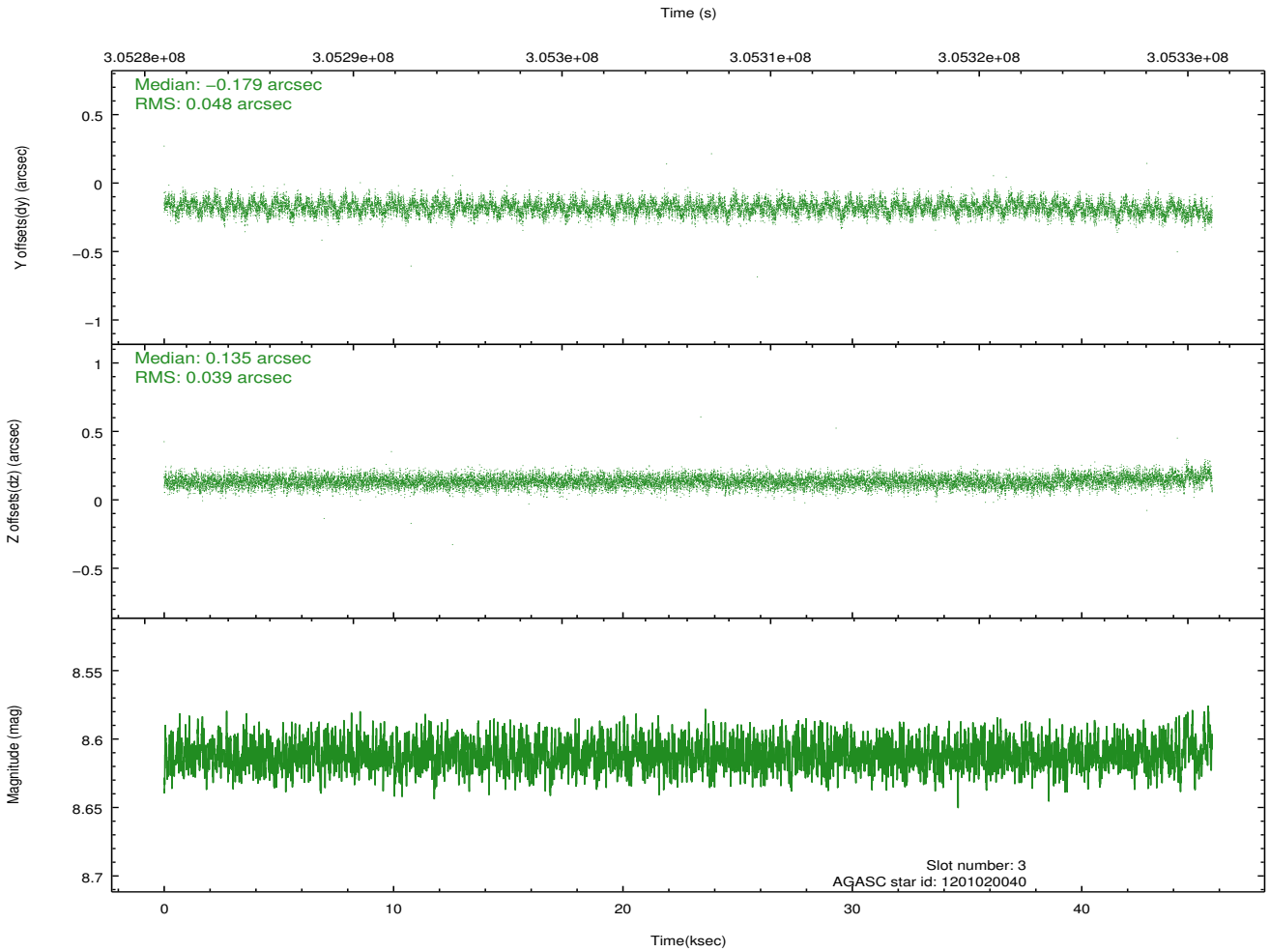
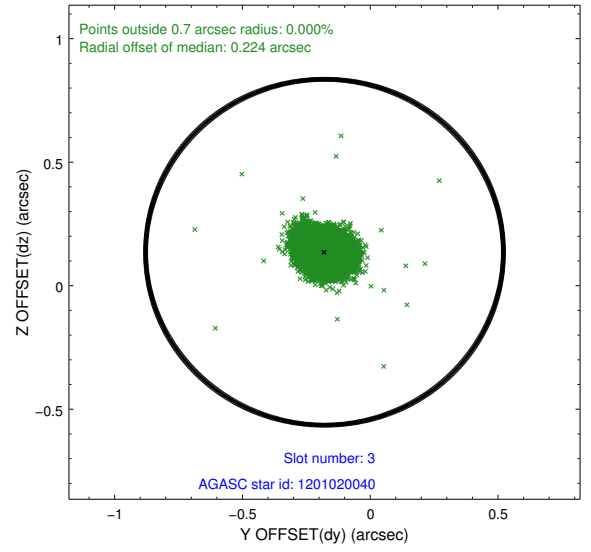
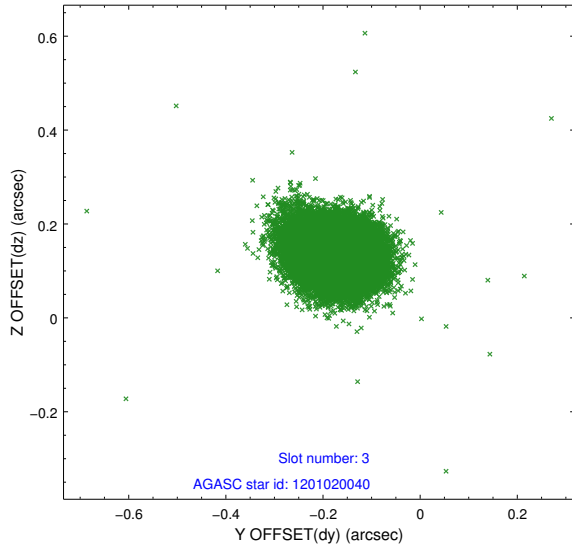


Slot Statistics

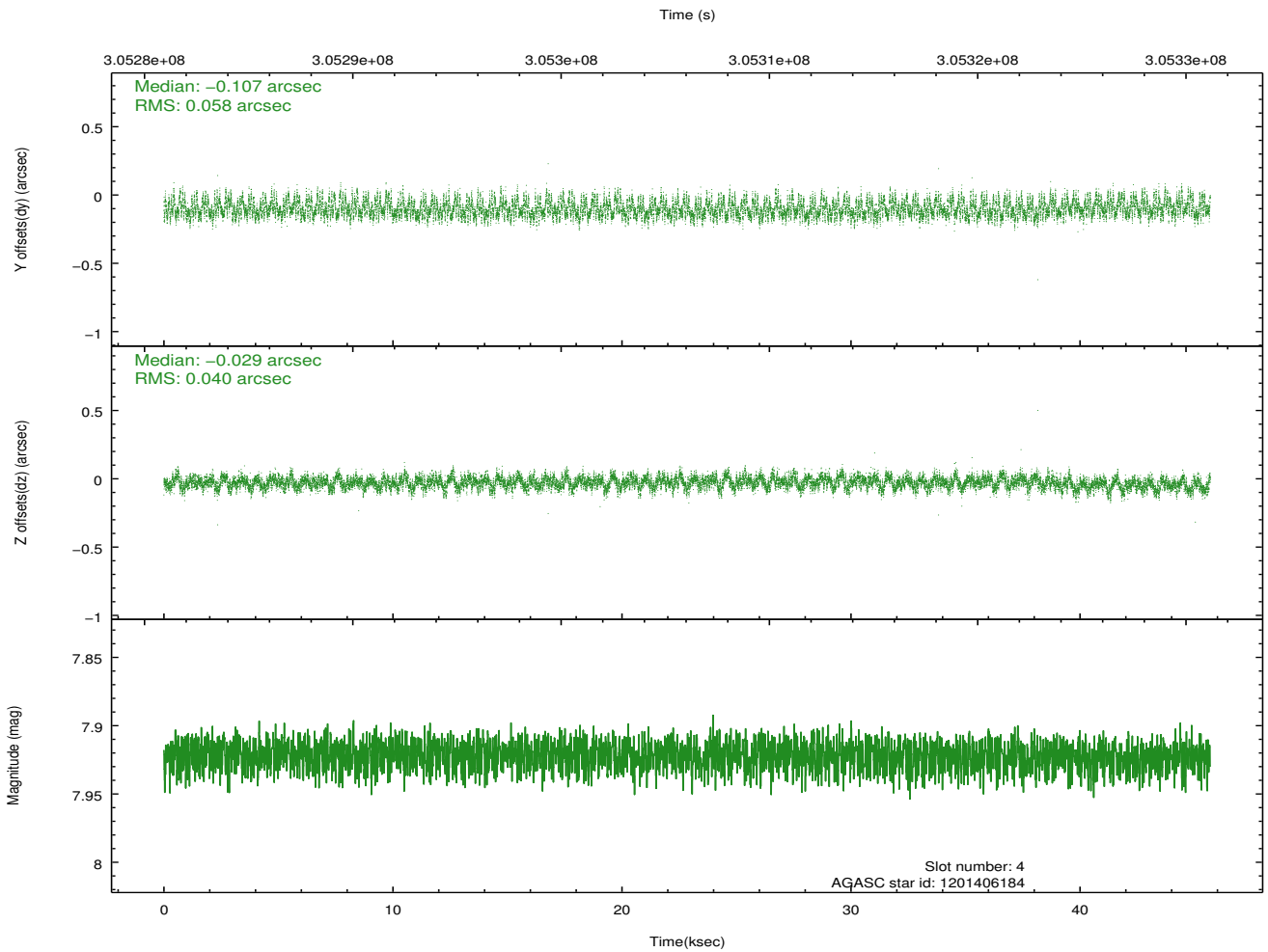
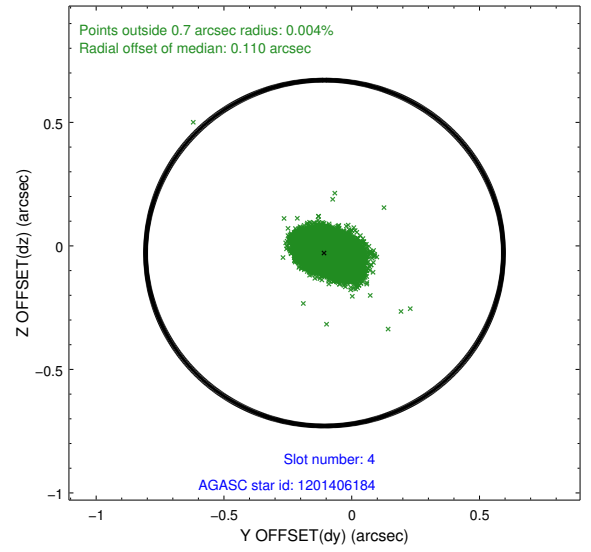
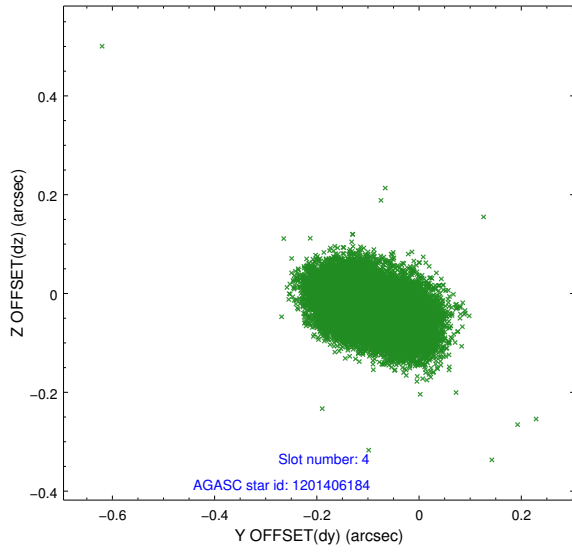
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.17	11144	0.068	0.120	0.014	0.021	0.000000	0.000000	930.90	-1896.24
1	FID	ACIS-S-2	7.08	11144	-0.152	-0.102	0.008	0.013	0.000000	0.000000	-765.23	-1901.05
2	FID	ACIS-S-6	7.39	11144	0.064	-0.016	0.013	0.023	0.000000	0.000000	396.52	644.93
3	GUIDE	1201020040	8.61	22285	-0.179	0.135	0.065	0.106	85.379163	-68.879396	1258.25	-2075.96
4	GUIDE	1201406184	7.92	22288	-0.107	-0.029	0.074	0.124	82.503234	-69.975517	-2144.76	2072.79
5	GUIDE	1201540776	9.58	22253	0.165	0.081	0.103	0.169	85.107945	-69.858480	-2166.27	-1173.99
6	GUIDE	1201410616	9.33	22257	0.182	-0.226	0.103	0.164	82.516808	-69.784406	-1463.22	1976.68
7	GUIDE	1201019672	6.85	22289	-0.067	0.043	0.055	0.091	85.312192	-68.770187	1660.37	-2053.37

2.4 Star Slots

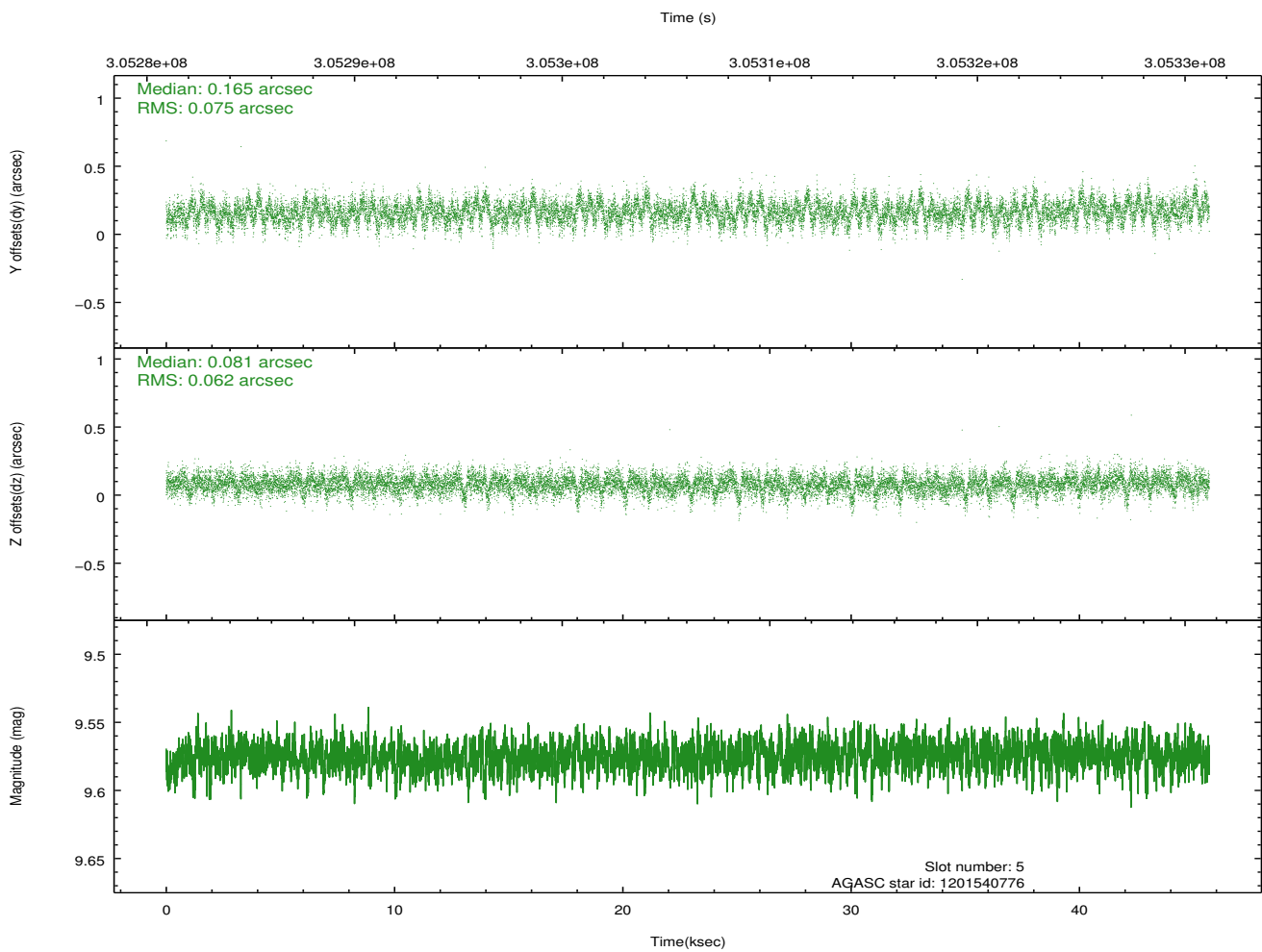
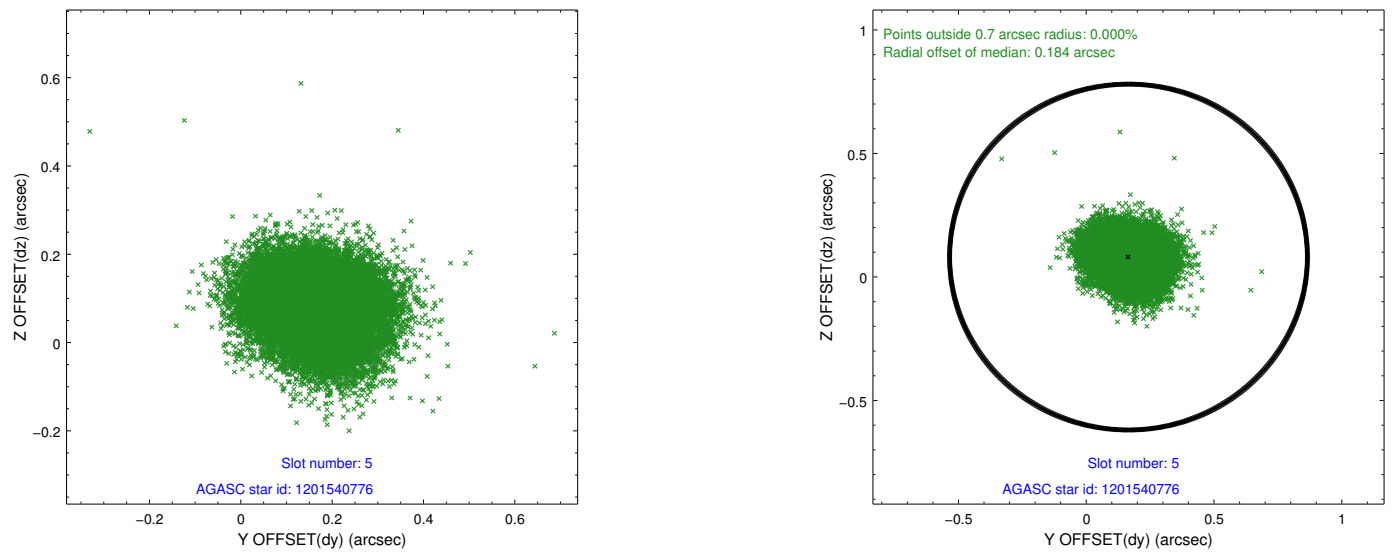
2.4.1 Slot 3



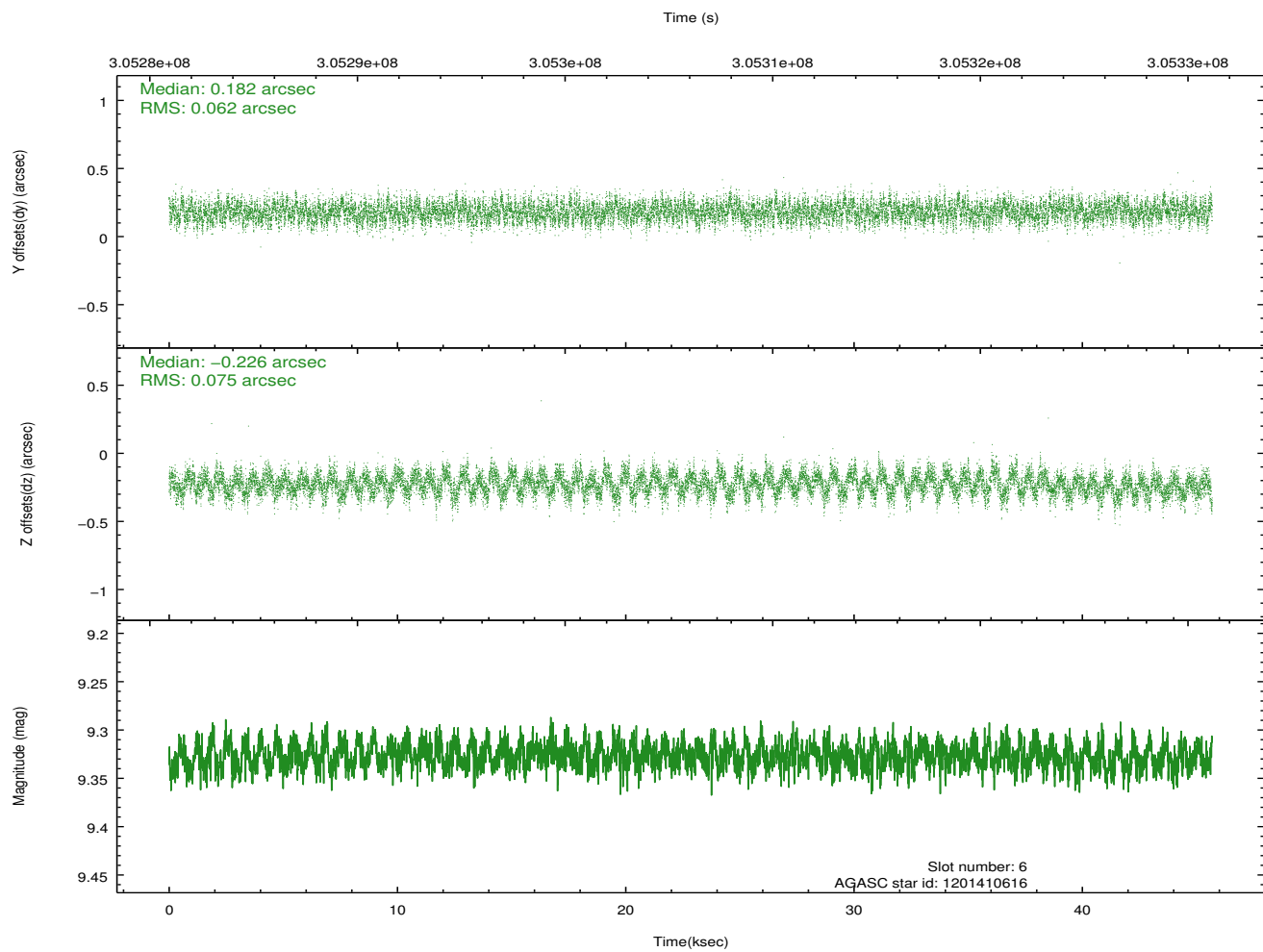
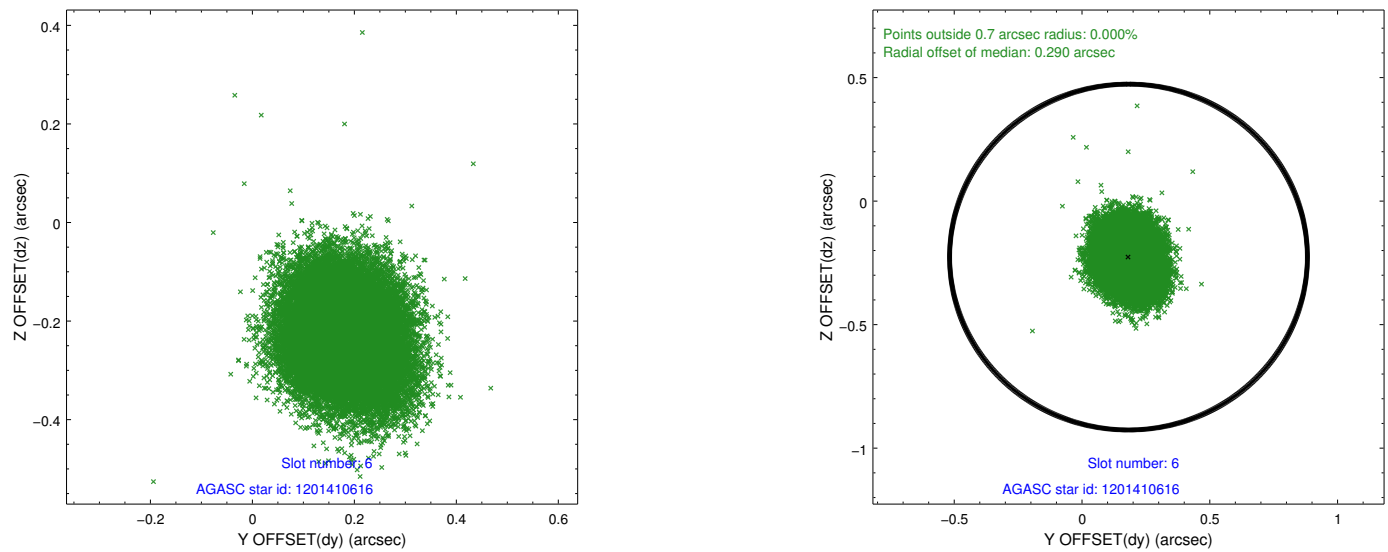
2.4.2 Slot 4



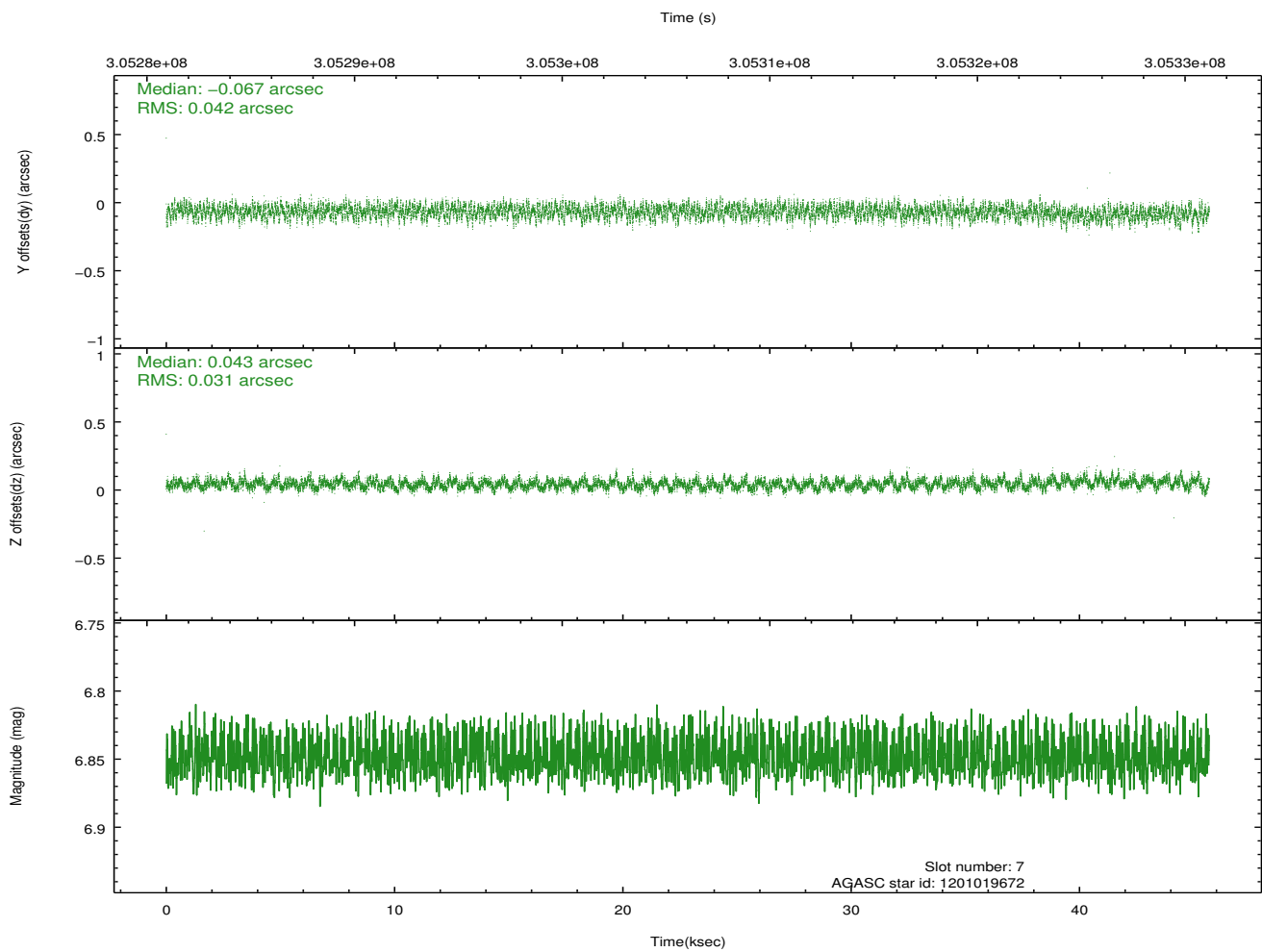
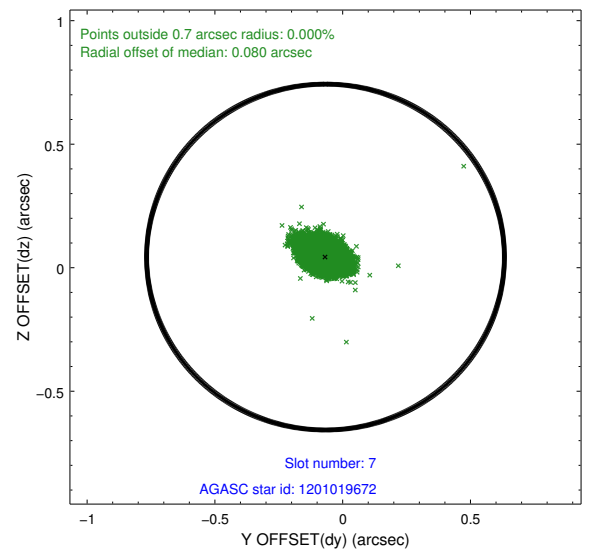
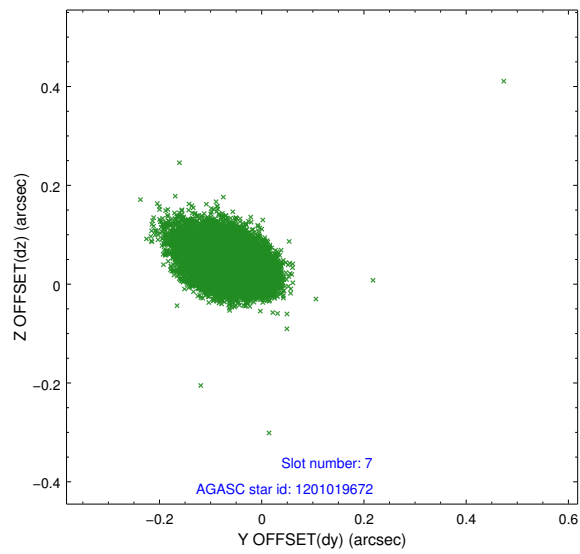
2.4.3 Slot 5



2.4.4 Slot 6

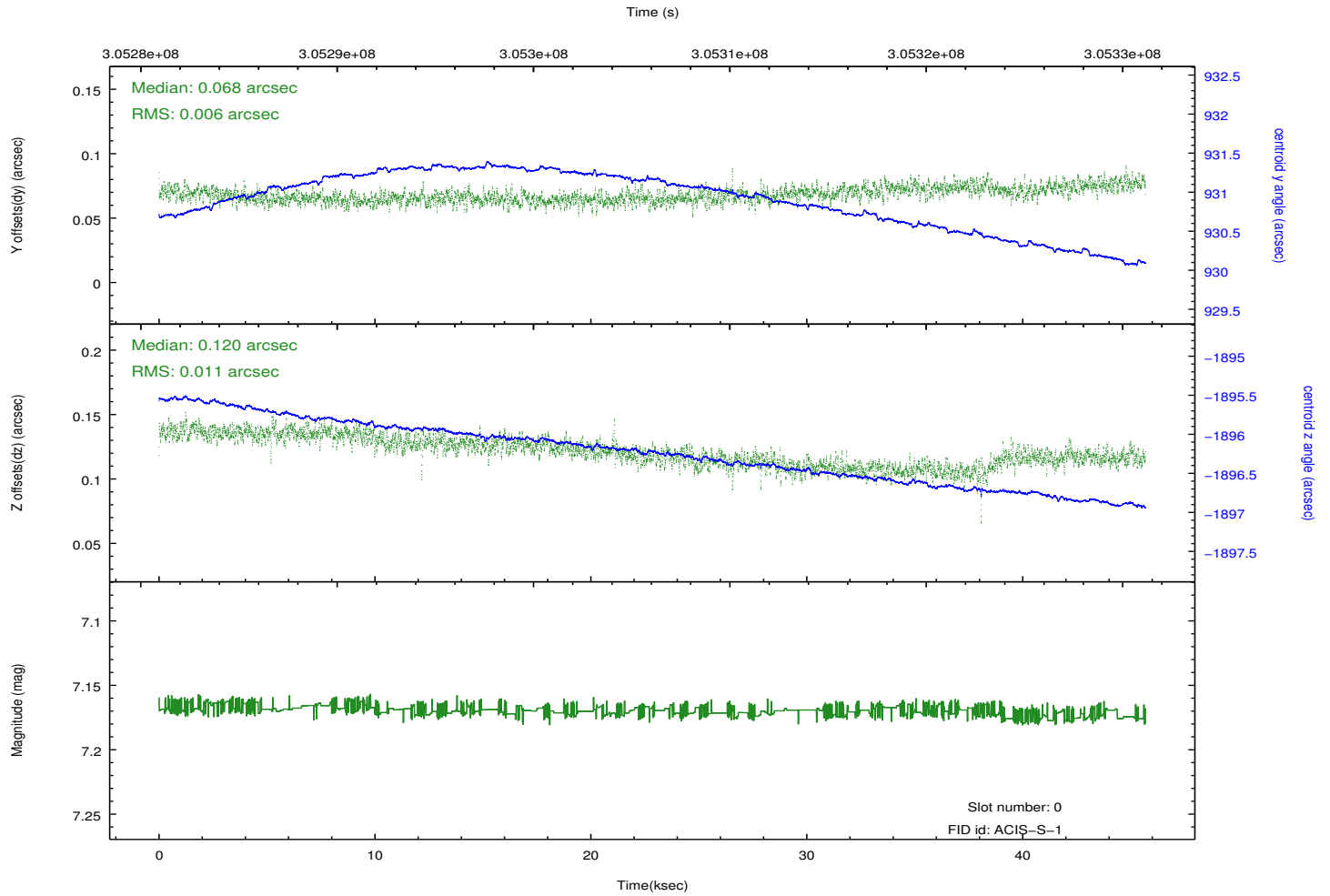
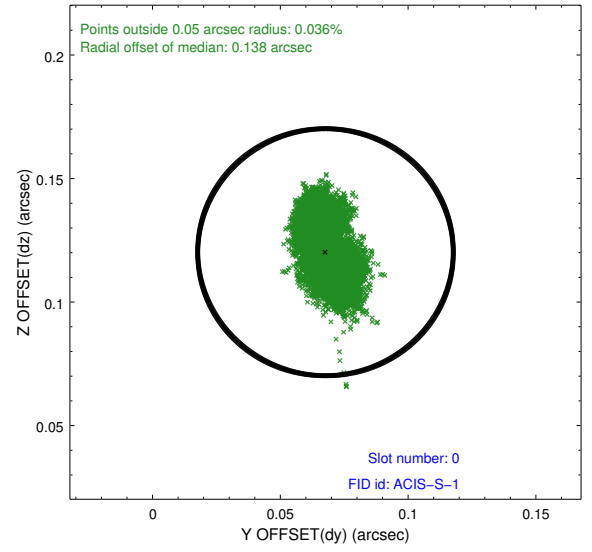
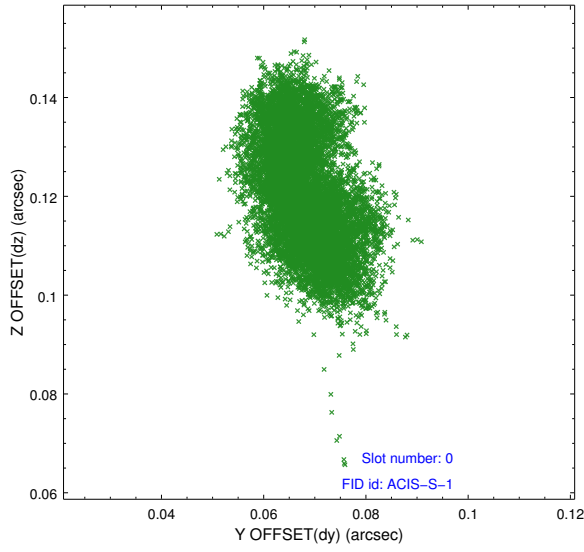


2.4.5 Slot 7

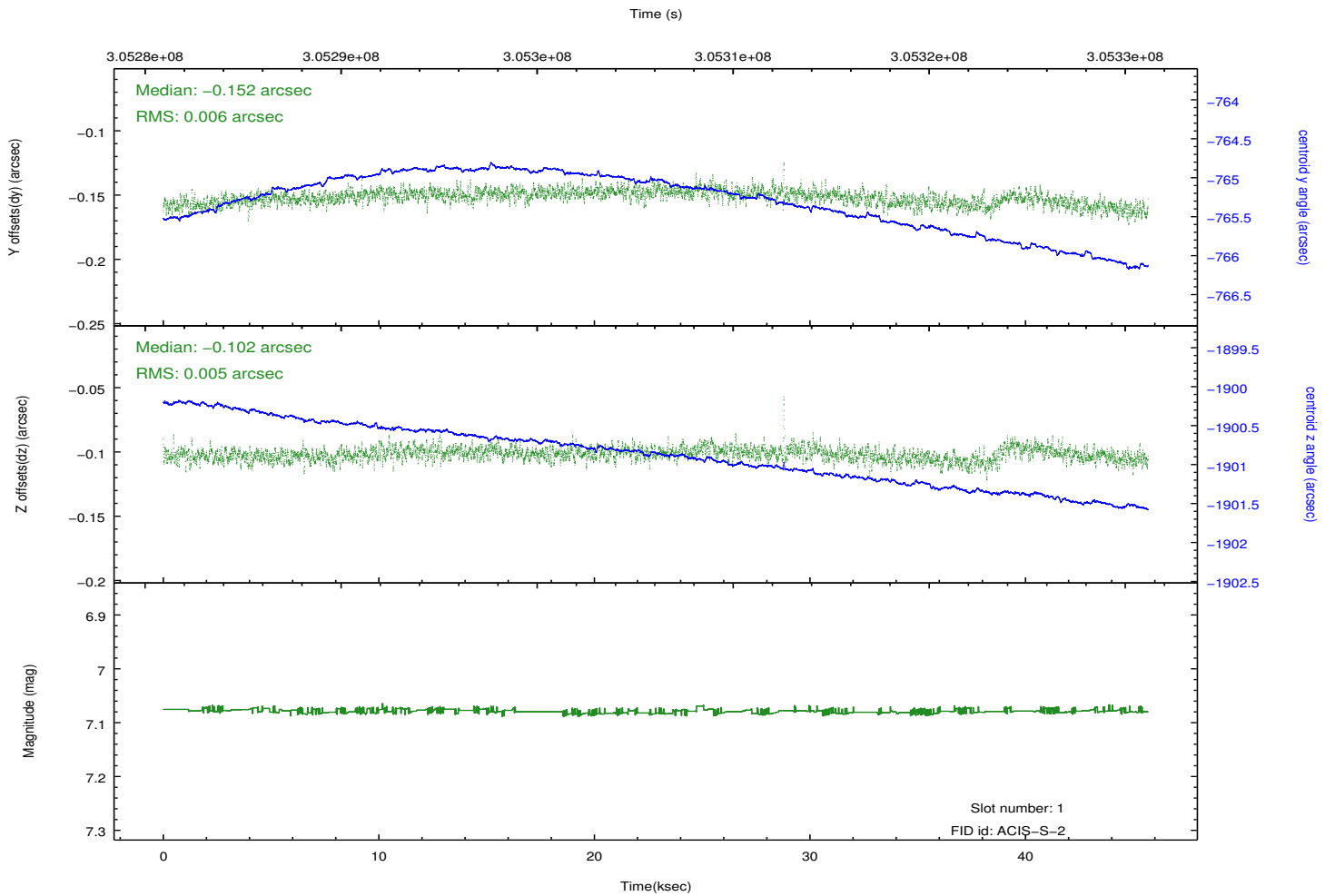
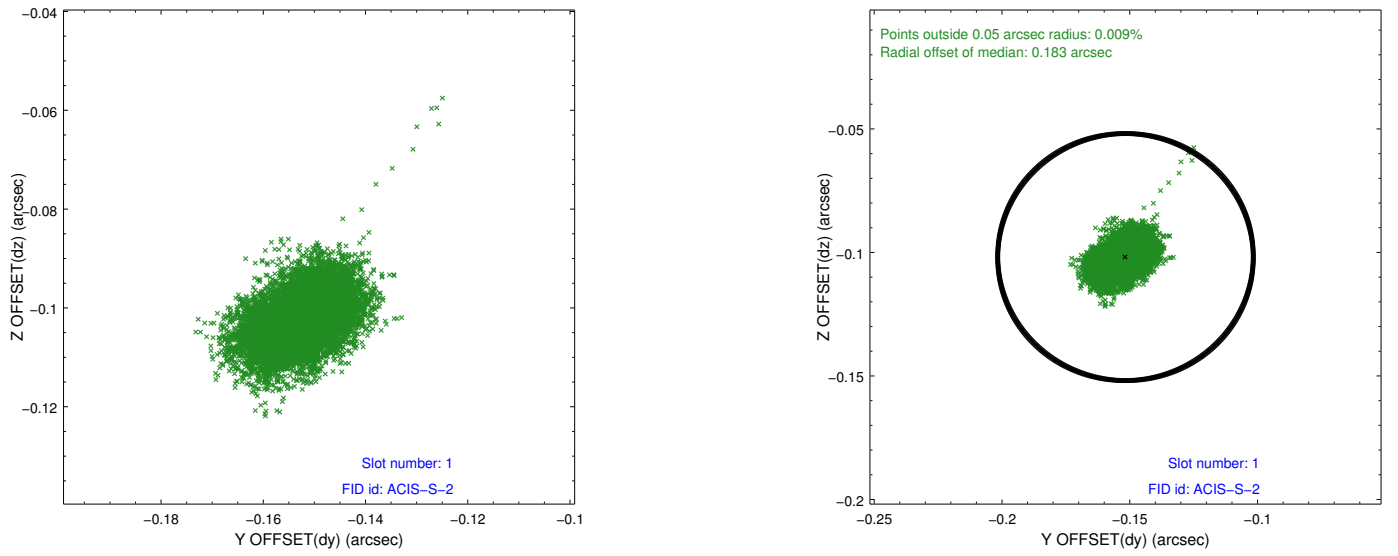


2.5 FID Slots

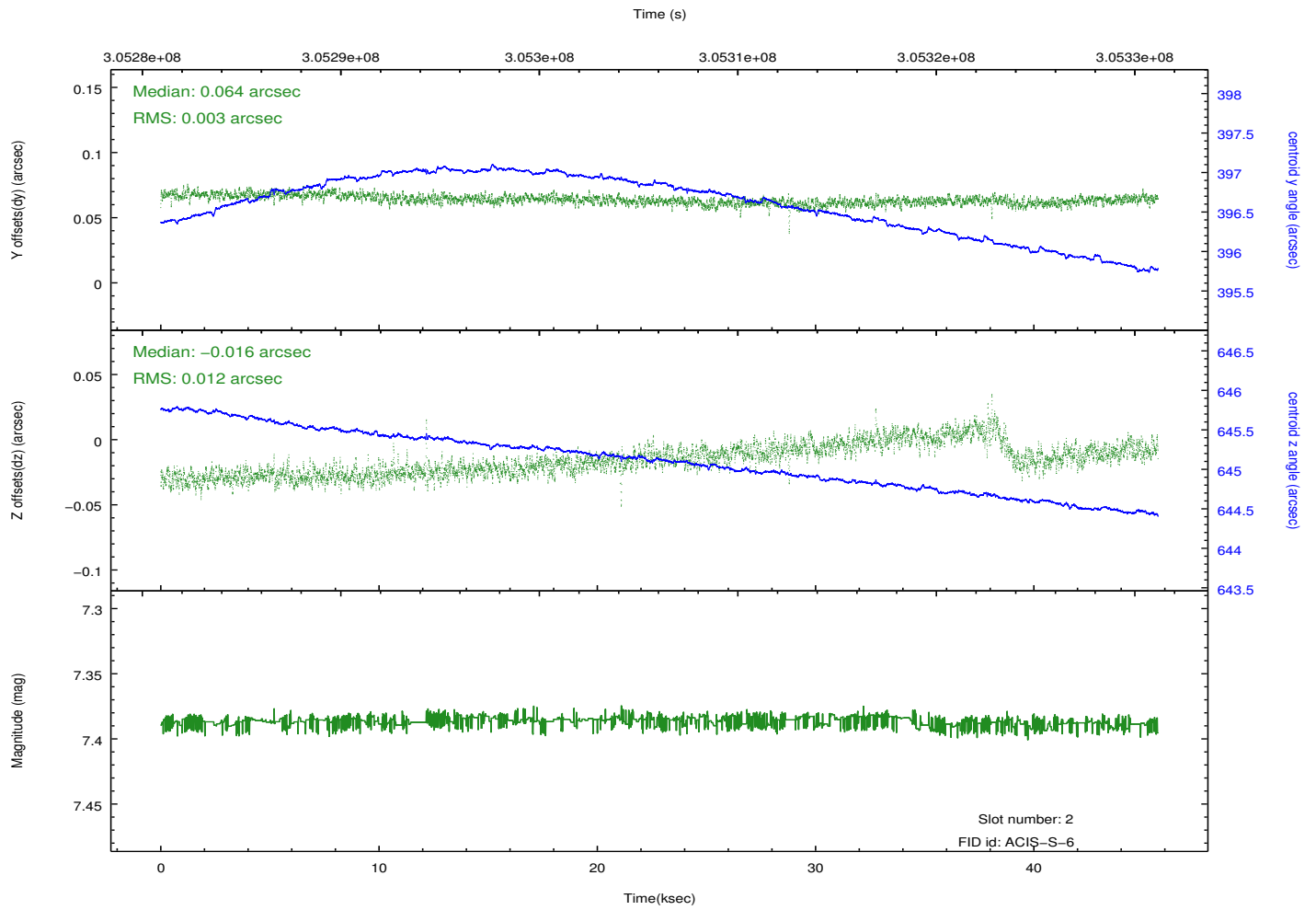
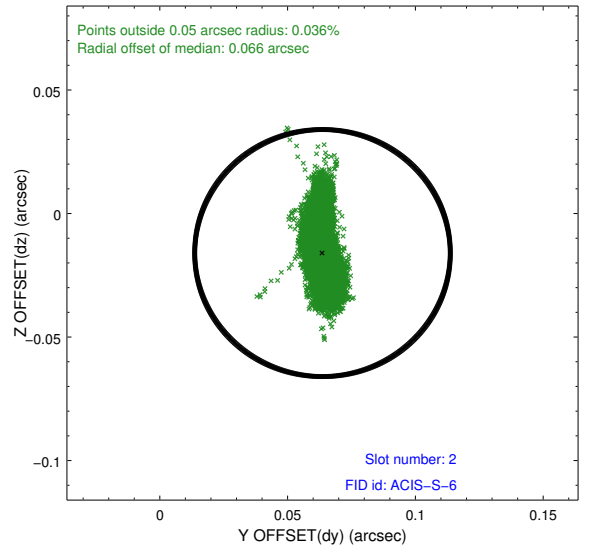
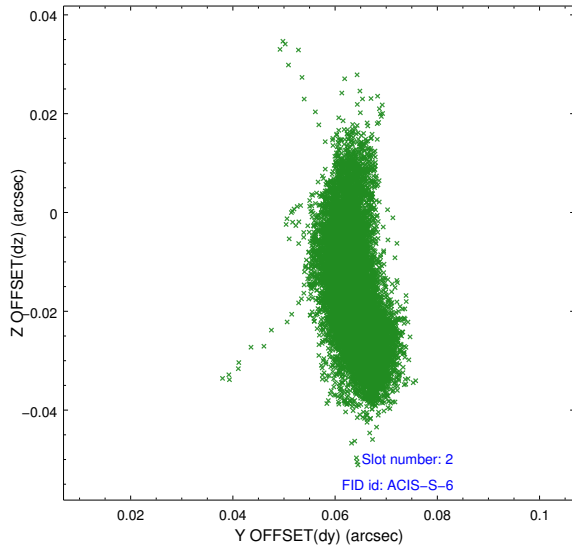
2.5.1 Slot 0



2.5.2 Slot 1

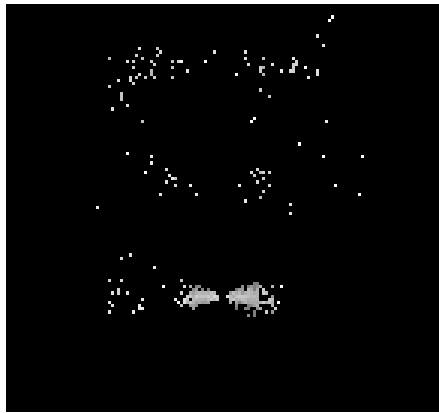


2.5.3 Slot 2

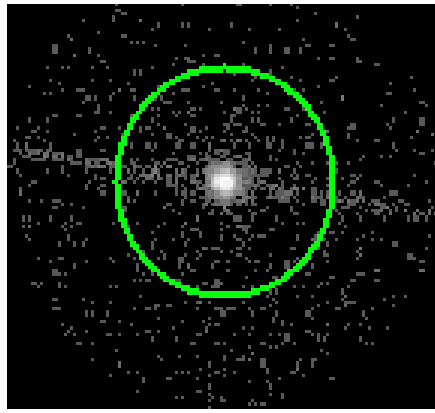


3 Gratings

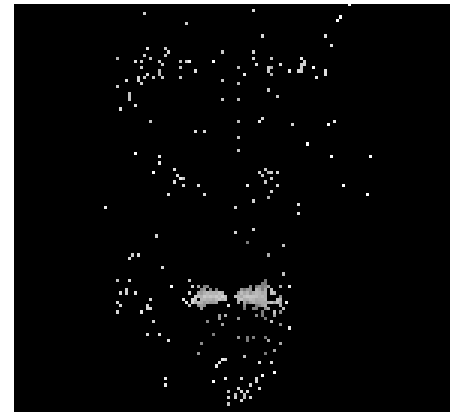
3.1 LETG Arm



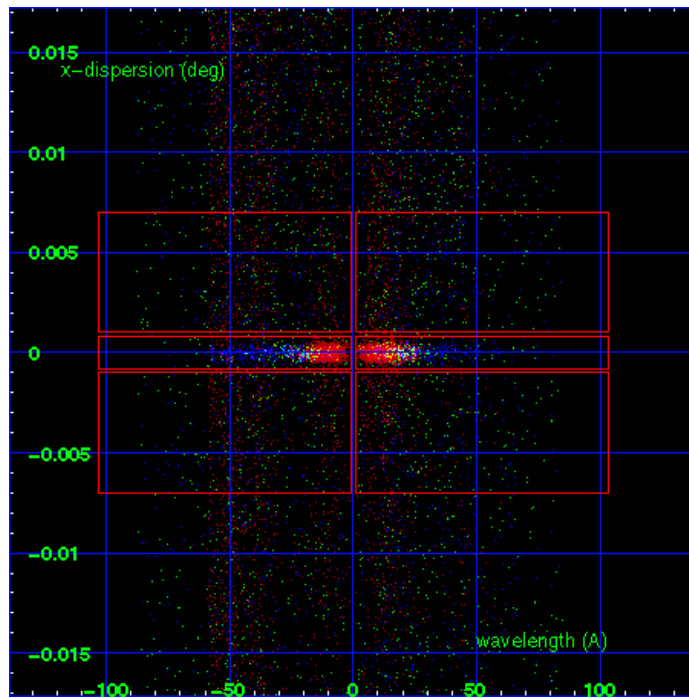
LETG Order Sort 123



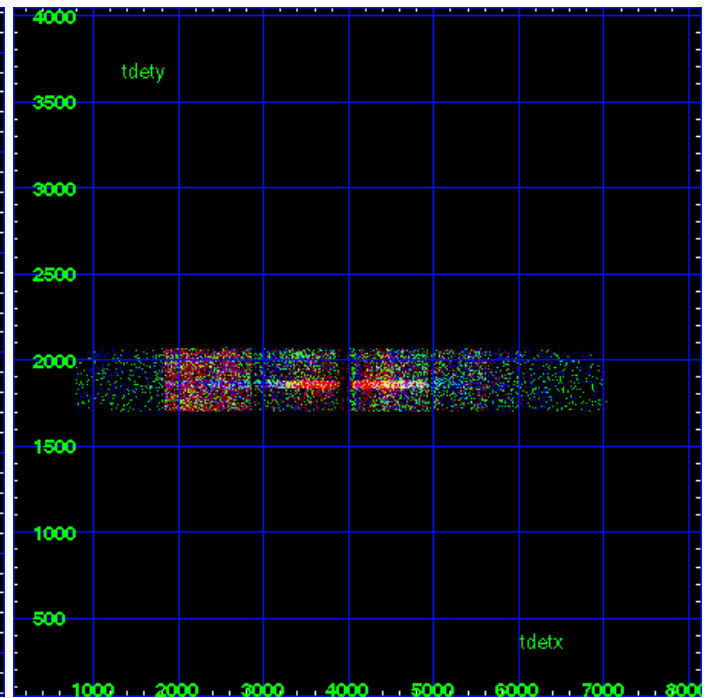
LETG Zero Order



LETG Order Sort ALL

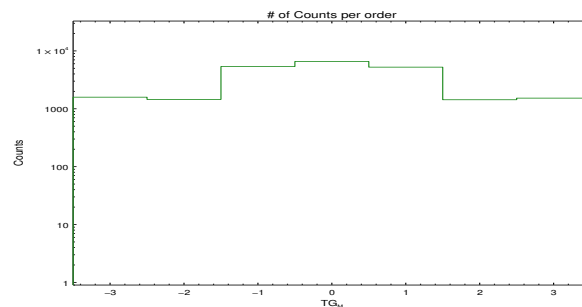


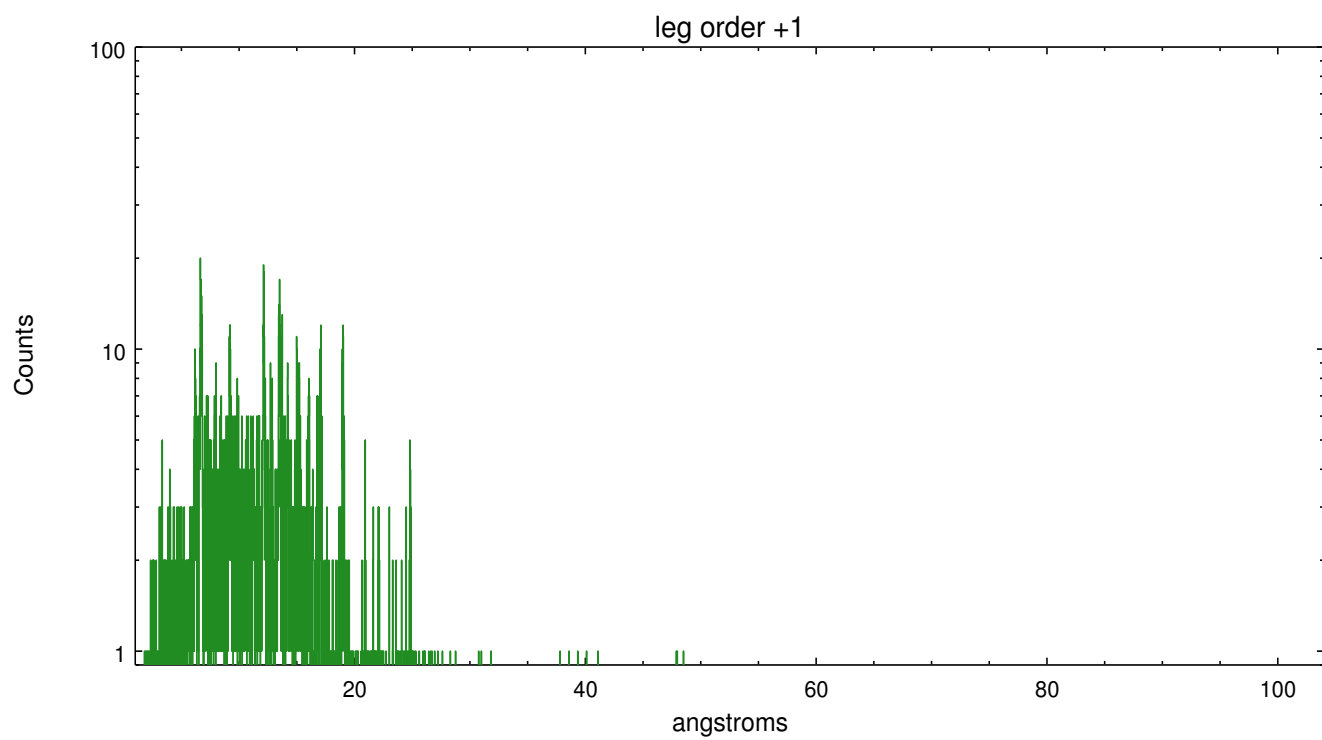
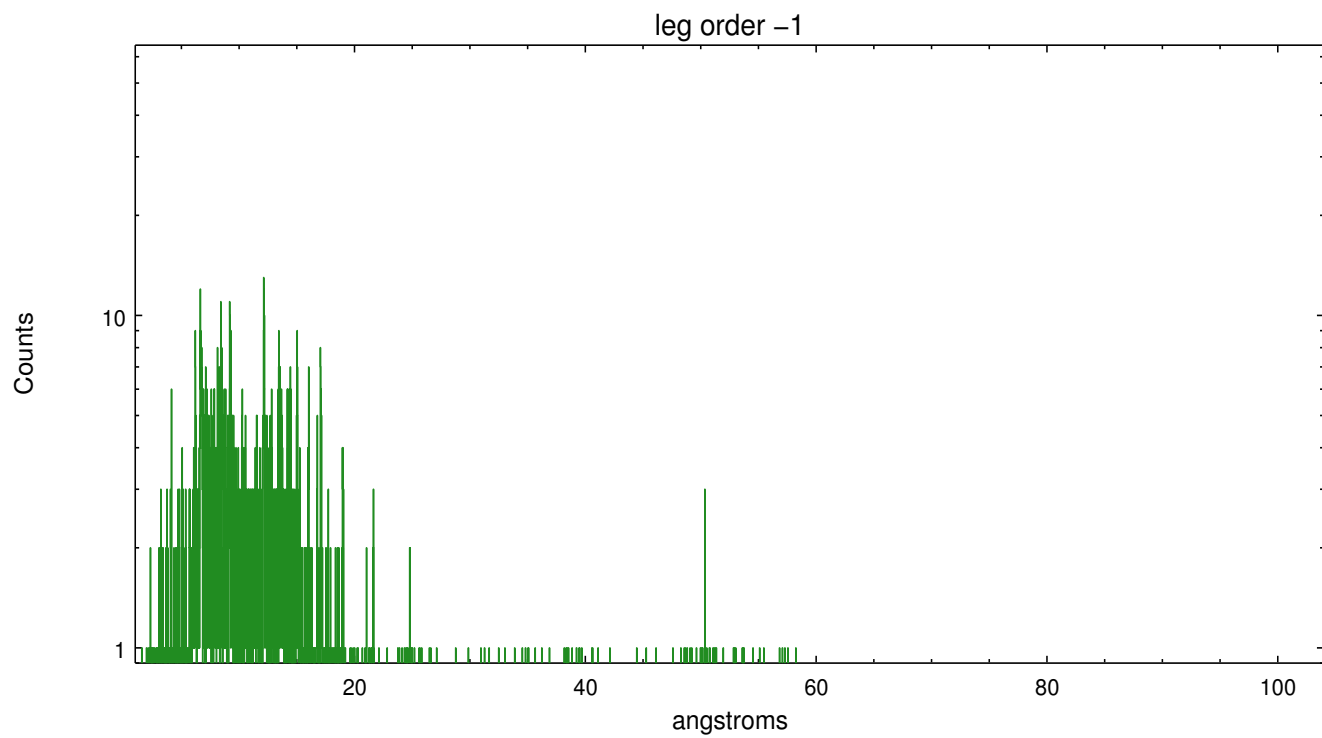
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1586	1452	5370	6561	5238	1433	1527





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.5391998

A.2 Comments

Warning: Extended source, dia ~ 3 arc seconds; nominal extraction includes whole source and could be narrowed to reduce background. Background events dominate below 30A. Extraction is centered in supernova remnant, but is not positioned at the brightest region.

===

Gain and CTI correction are not well calibrated on CCD_ID 5 (ACIS-S1). Default order sorting can clip some regions, particularly longward of 30A (first order). User-specified custom processing parameters may be required in `tg_resolve_events` (`osipfile=None`, `osort_lo`, `osort_hi ~0.5`) though this can allow more zeroth order background at short wavelengths.