

V&V Reference Report

L2 ASCDS Version : 10.1

Observation 16244 - L2 Version 3
Chandra X-Ray Center

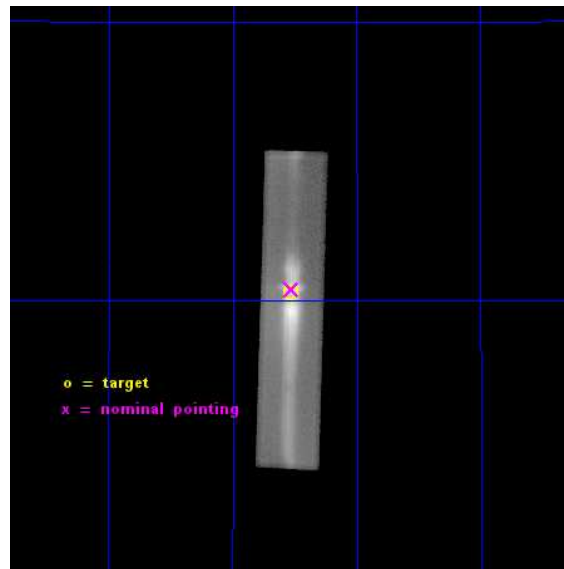
L2 Processing Date : Dec 19 2014

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1 Front

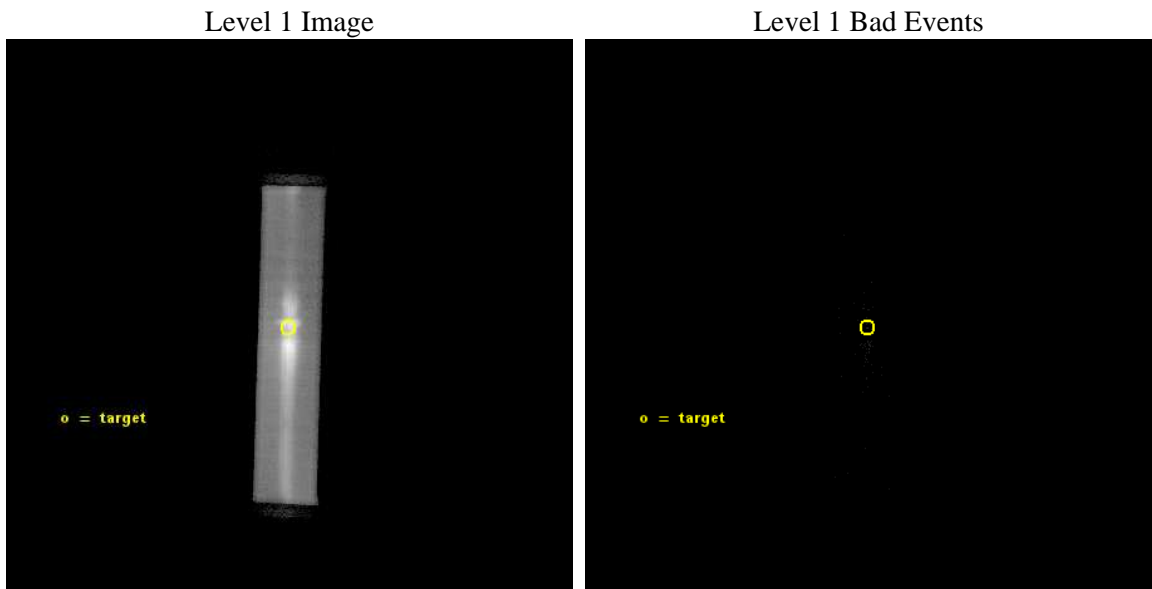
seq_num	502244	Sequence number
obs_id	16244	Observation id
title	Pre-Planned Target of Opportunity (ToO) Observations of the Crab Nebula upon the Occurrence of the Next Gamma-Ray Flare	Proposal titl
observer	Dr. Martin Weisskopf	Principal investigator
object	Crab	Source name
ra_targ	83.631667	Observer's specified target RA [deg]
dec_targ	22.015667	Observer's specified target Dec [deg]
ra_nom	83.631625536359	Nominal RA [deg]
dec_nom	22.020429703008	Nominal Dec [deg]
roll_nom	91.736950742151	Nominal Roll [deg]
revision	3	Processing version of data
ontime	20158.932353139	[s]
livetime	20048.098275875	Ontime multiplied by DTCOR
l2events	1453661	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	20158.932353139	[s]
caldbver	4.6.5	 	l1events	1641628	Number of level 1 events
date	2014-12-19T17:53:29	Date and time of file creation	tgmethod	TGDETECT	Method used to create src1a file
revision	3	Processing version of data	zo_pos	(32726.79, 32605.56)	src1a sky pixel position

2.1.3 Events

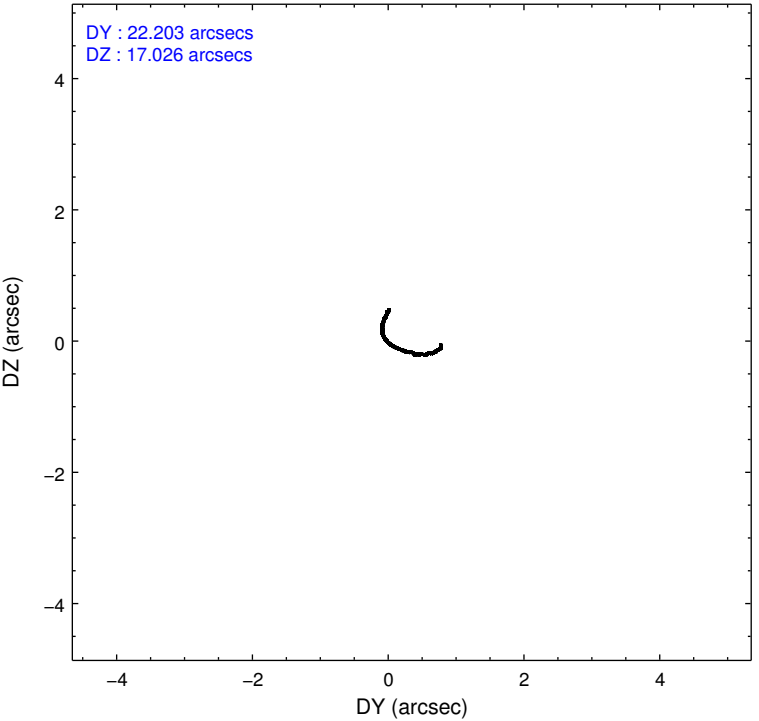
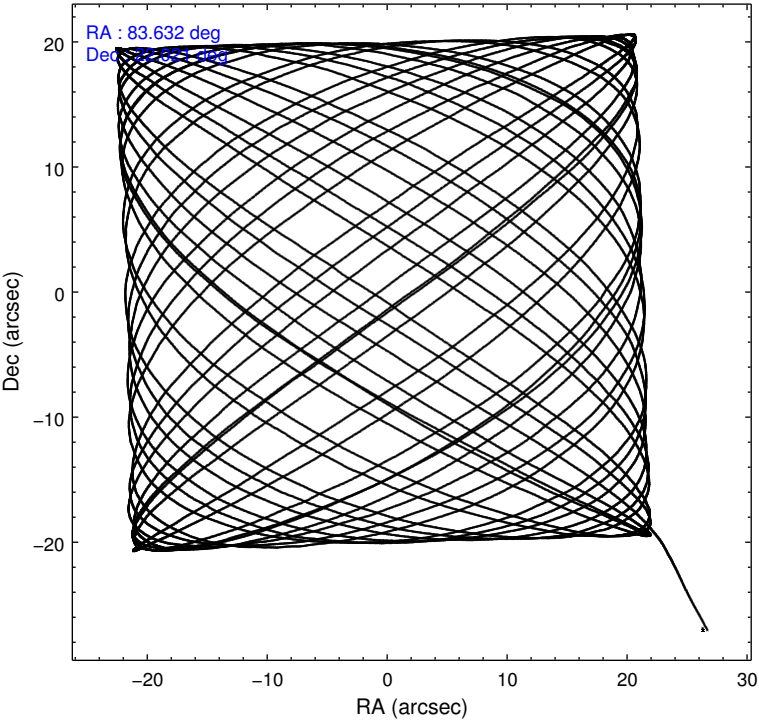
Level 1 Events

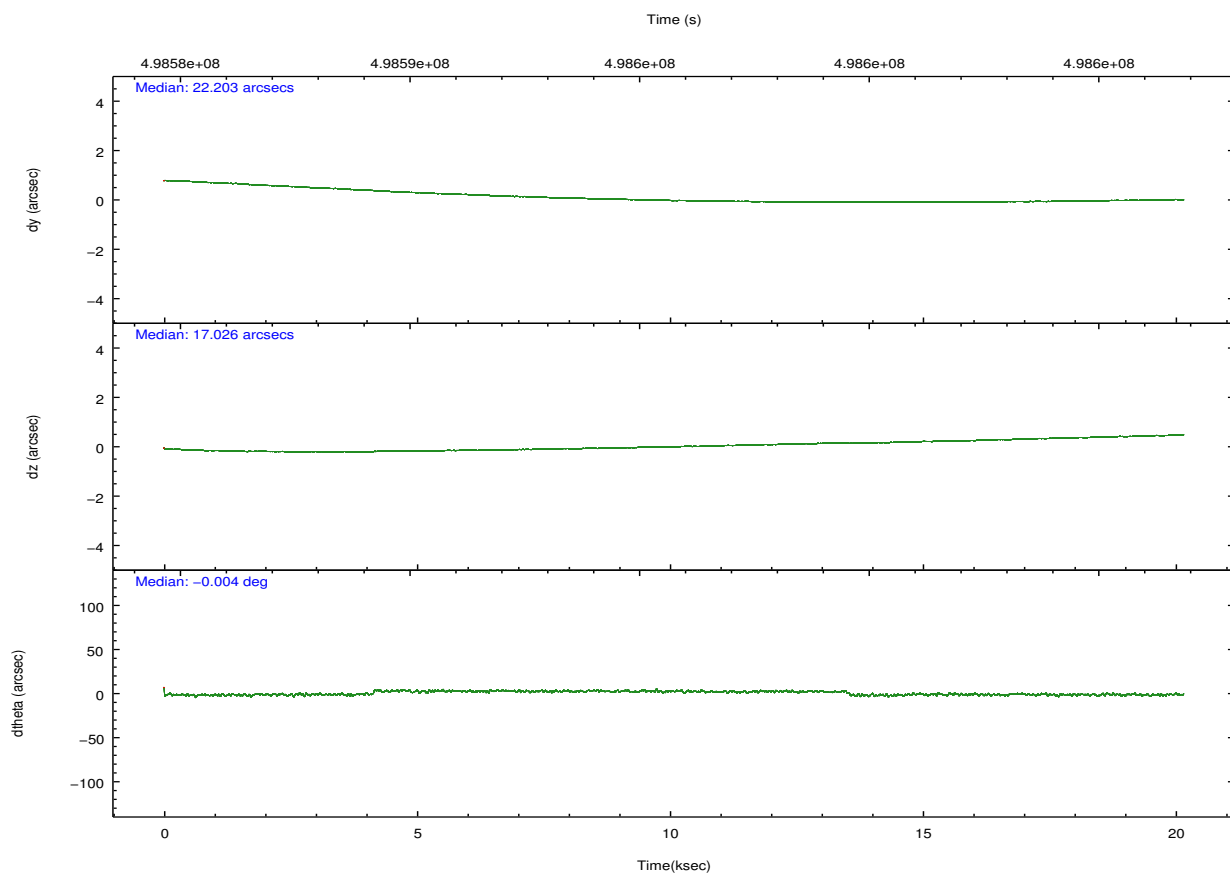
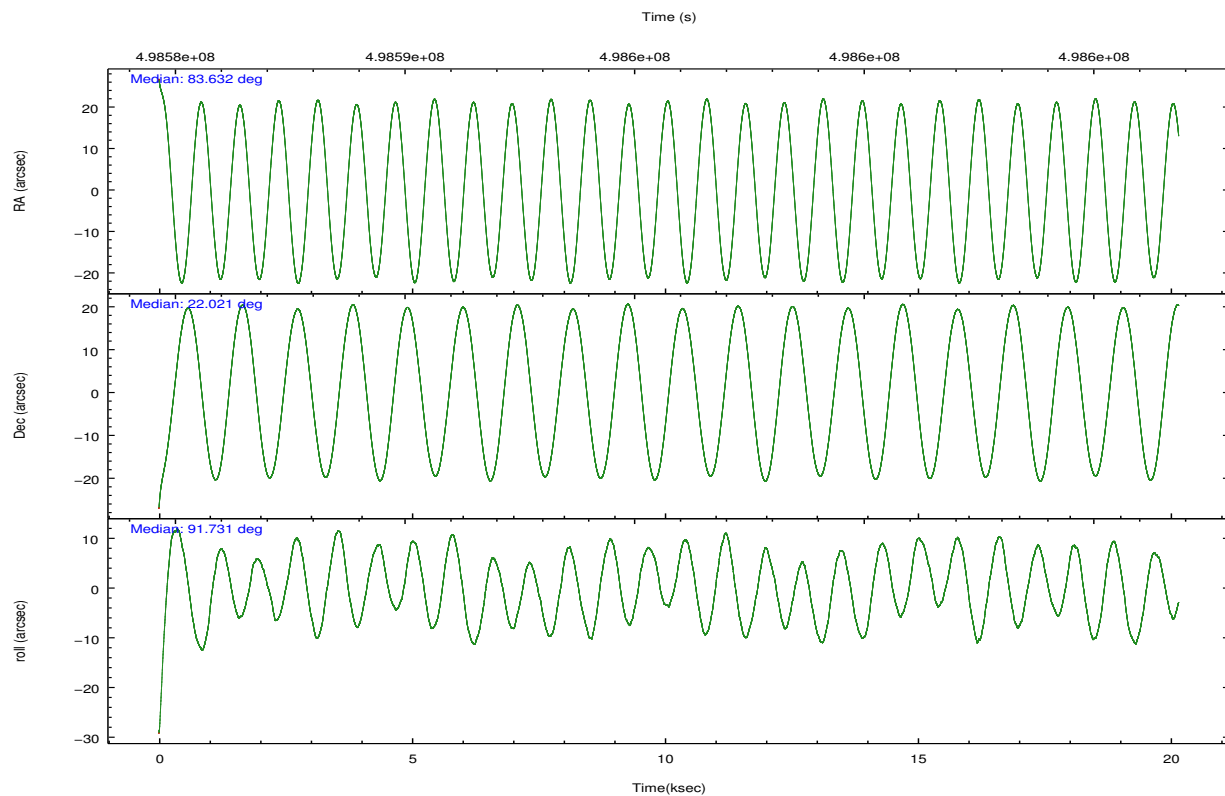
	segment 1	segment 2	segment 3
level 1 events	325	1641293	10
rejected events	11	23877	9
rejected %	3%	1%	90%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	HRC	HRC	Obspar format version number	7	7
Detector	HRC-S	HRC-S	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	Obspar update status	NONE	UPDATED
Data mode	OBSERVING	OBSERVING			
Observation mode	POINTING	POINTING			
[deg] Pointing RA	83.649167	83.63162553635921			
[deg] Pointing Dec	21.996798	22.02042970300839			
[deg] Pointing Roll	91.663057	91.73695074215136			
[mm] SIM focus pos	-1.429586	-1.428180813131781			
[mm] SIM defocus	0.1037507710433287	0.1051558262725154			
[mm] SIM translation stage pos	250.455976	250.466033080201			
[mm] SIM translation stage offset	0	-0.01005468664627074			
[s] Observation start time (MET)	498585810.184000	498584865.03411			
Observation start date	2013-10-19T16:02:23	2013-10-19T15:47:45			
[s] Observation end time (MET)	498605810.184000	498606073.82277			
Observation end date	2013-10-19T21:35:43	2013-10-19T21:41:13			

2.3 Aspect



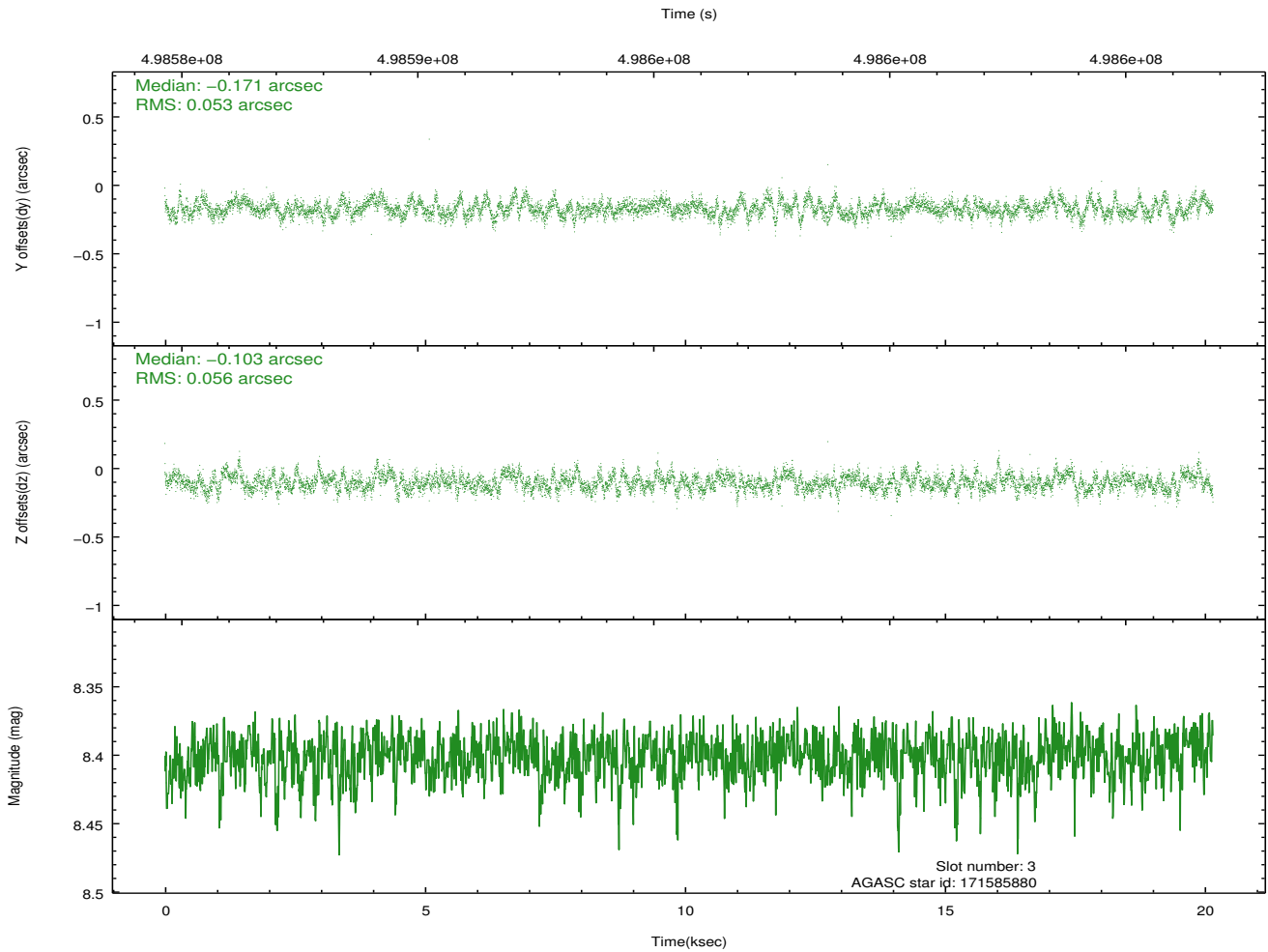
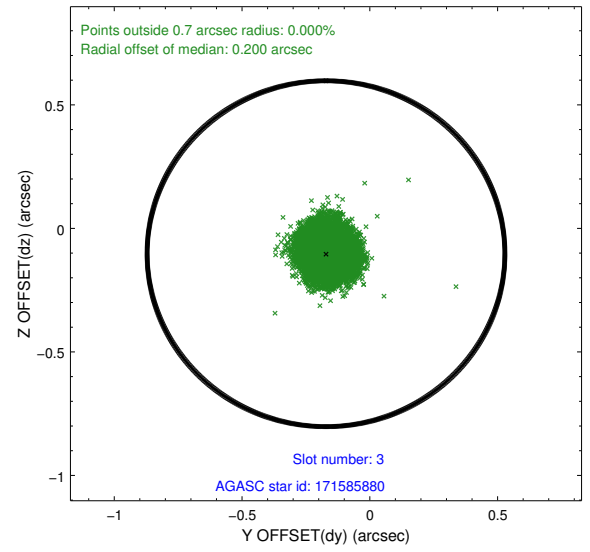
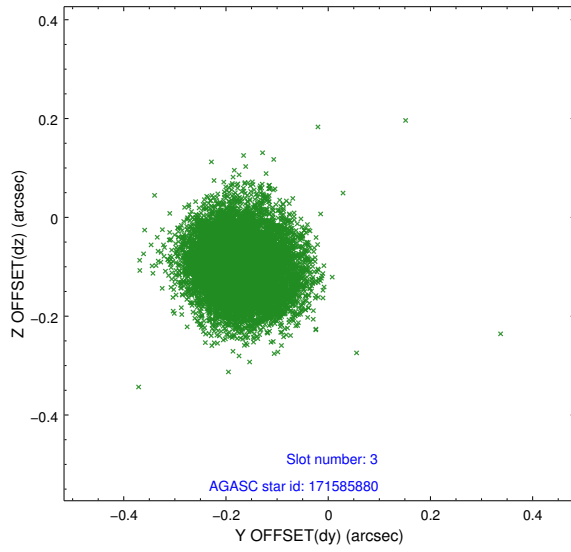


Slot Statistics

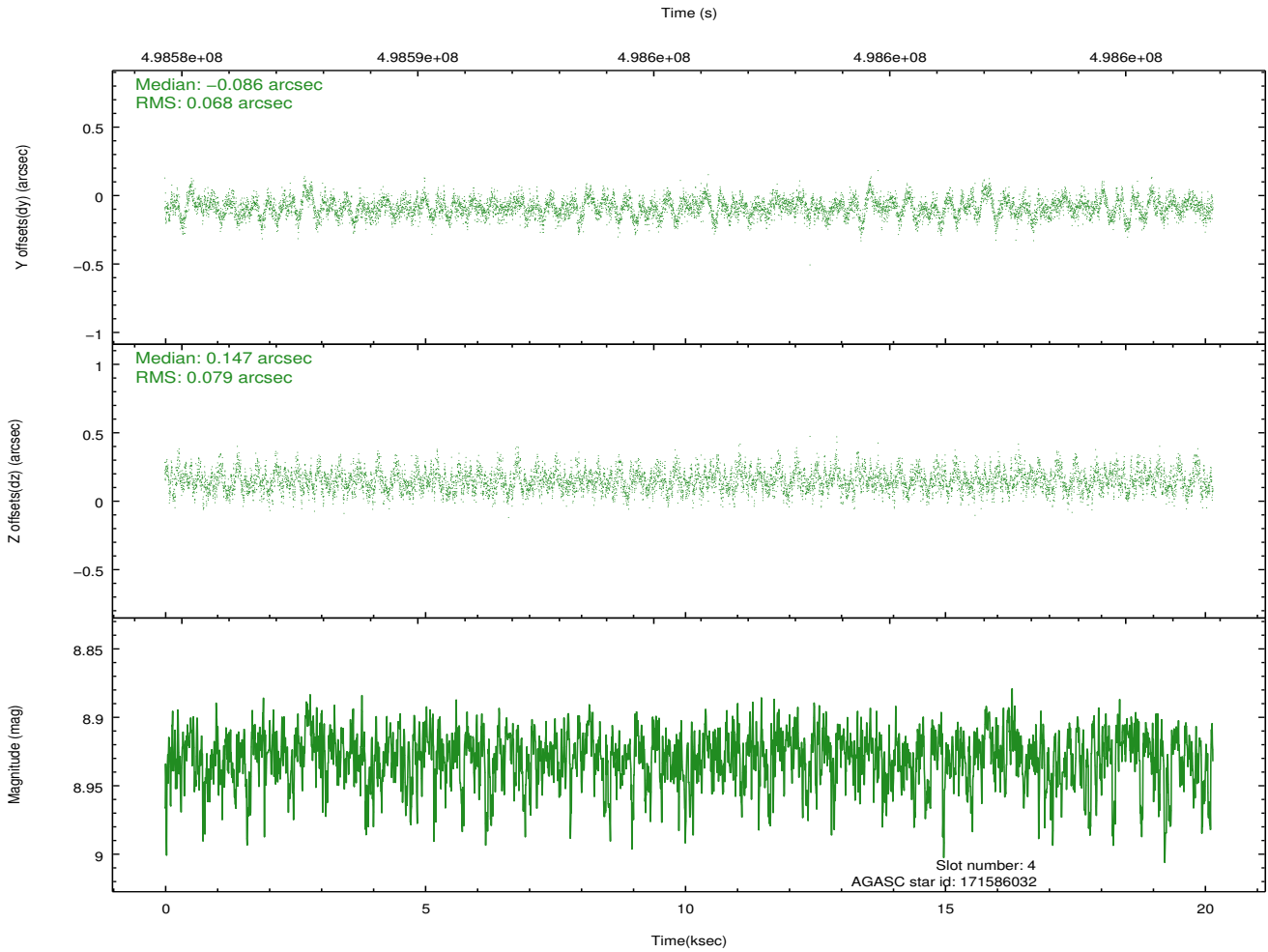
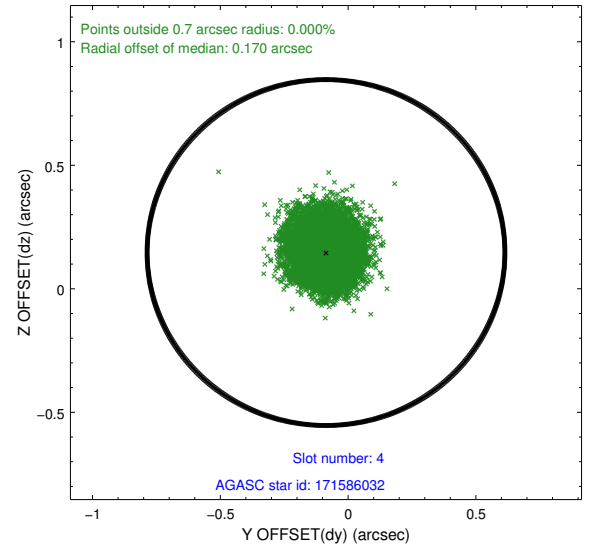
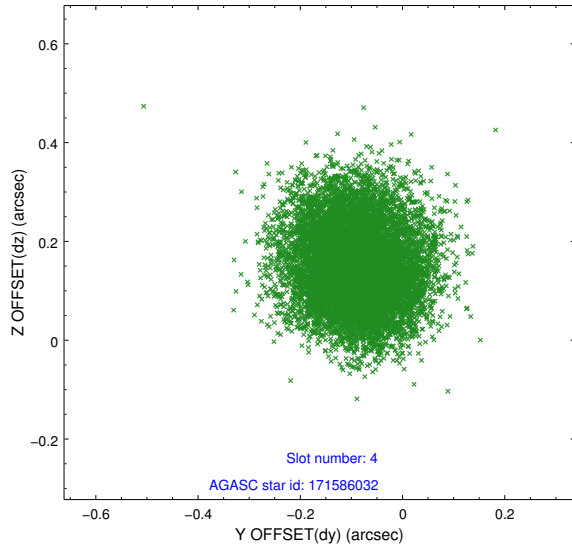
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		HRC-S-1	7.02	4918	-0.093	-0.179	0.007	0.013	0.000000	0.000000	-1177.11	-466.04
1	FID		HRC-S-2	7.00	4918	0.184	-0.120	0.033	0.043	0.000000	0.000000	1222.60	-458.69
2	FID		HRC-S-4	6.96	4918	0.313	-0.001	0.036	0.045	0.000000	0.000000	1221.80	566.14
3	GUIDE	used	171585880	8.40	9834	-0.171	-0.103	0.083	0.130	83.676260	22.176319	643.52	-108.70
4	GUIDE	used	171586032	8.93	9811	-0.086	0.147	0.112	0.177	83.950197	22.083225	283.21	-1012.29
5	GUIDE	used	171597832	9.13	9824	0.334	-0.241	0.114	0.190	83.183230	21.366702	-2219.27	1627.07
6	GUIDE	used	171721904	9.19	9791	0.061	0.223	0.156	0.252	84.272676	22.116922	376.54	-2090.46
7	GUIDE	used	243941560	8.30	9832	-0.134	-0.021	0.091	0.149	83.733264	22.568598	2049.58	-338.67

2.4 Star Slots

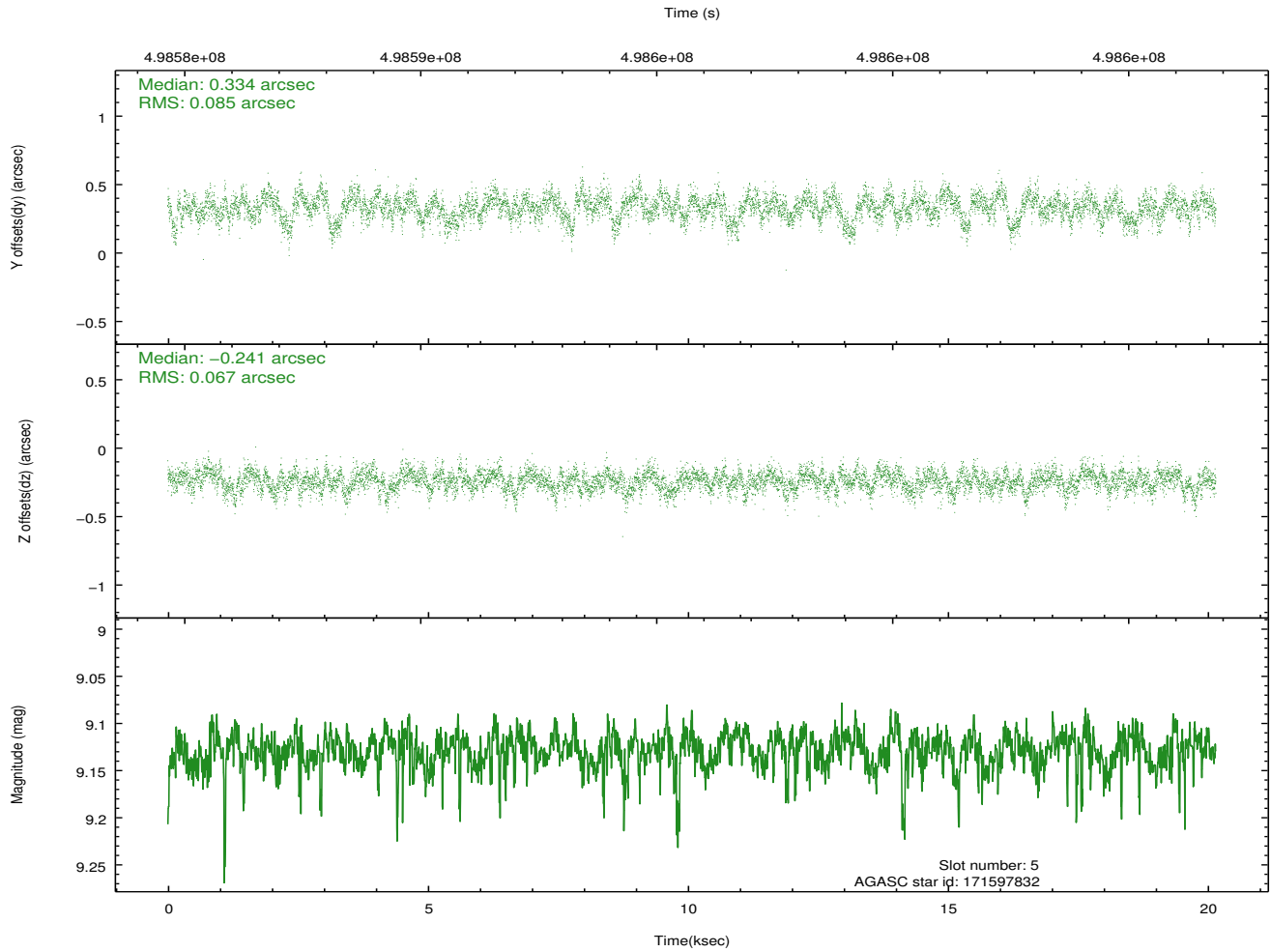
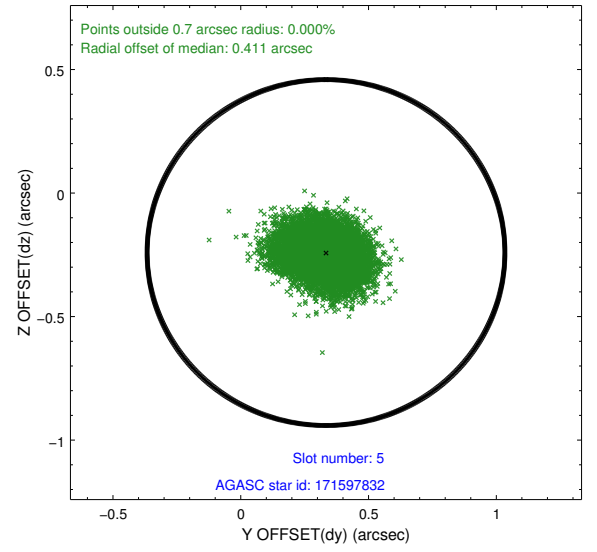
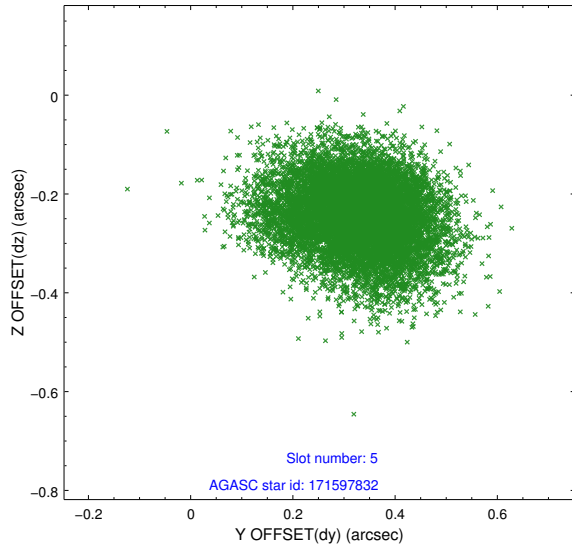
2.4.1 Slot 3



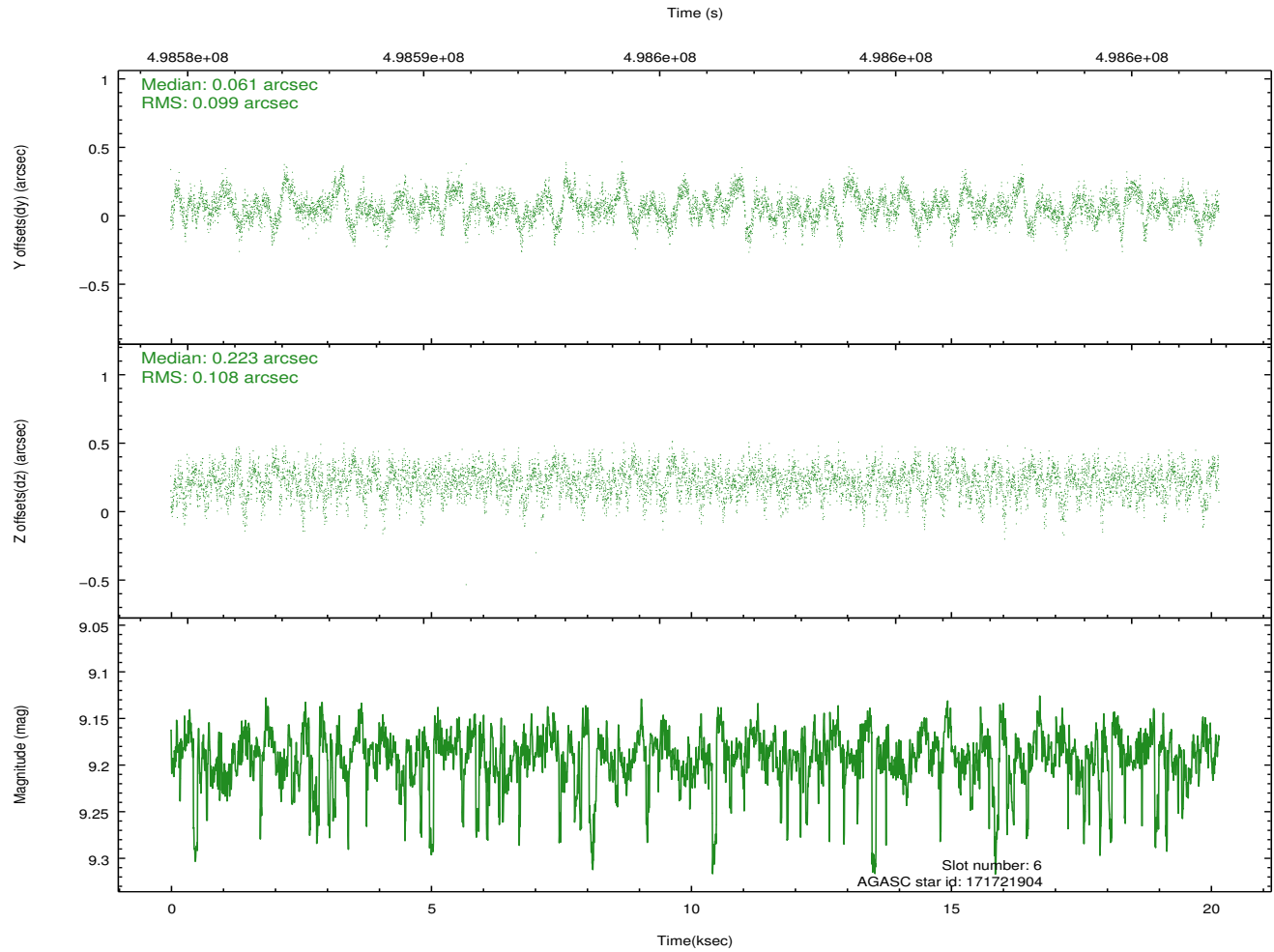
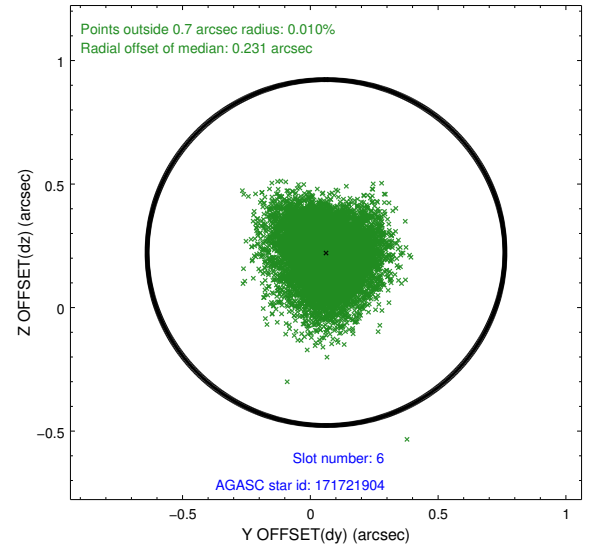
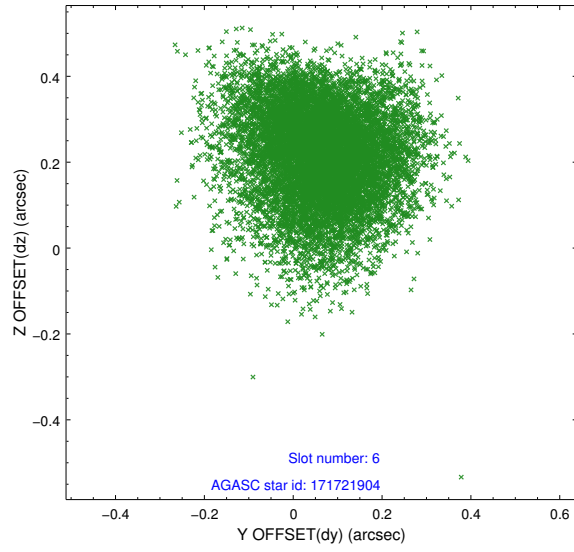
2.4.2 Slot 4



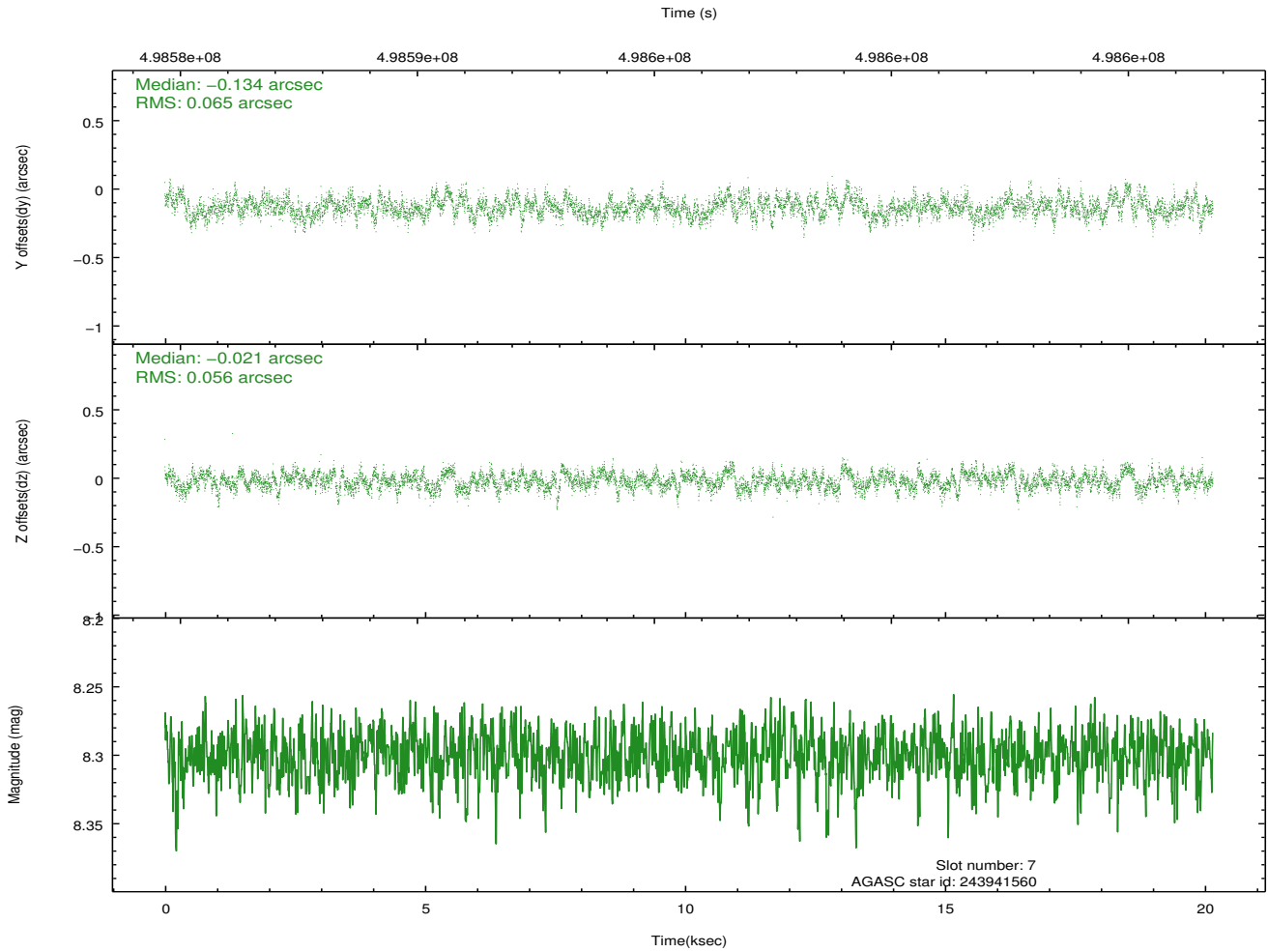
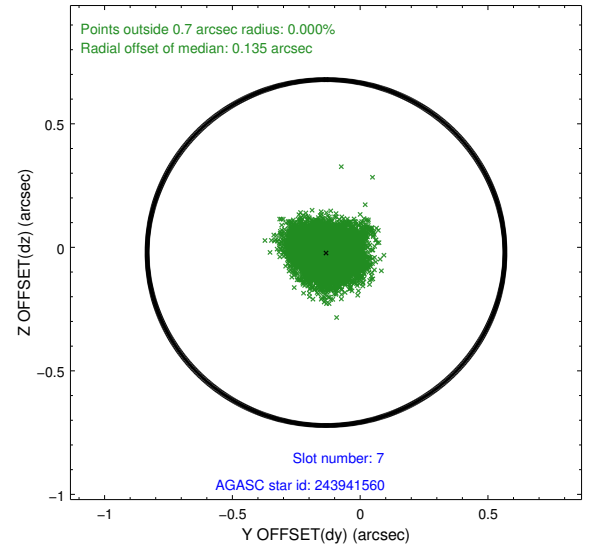
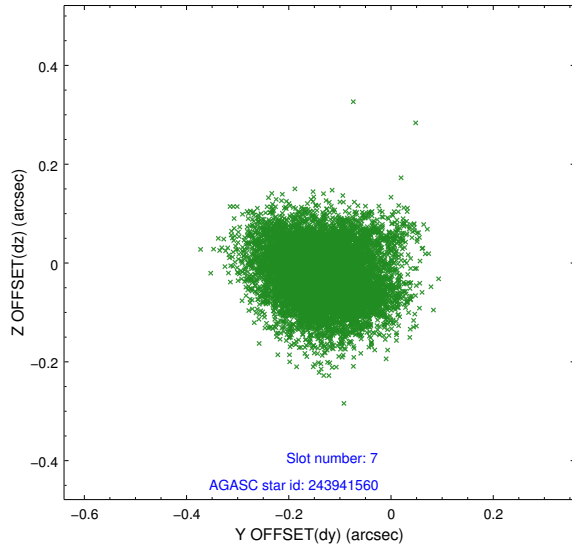
2.4.3 Slot 5



2.4.4 Slot 6

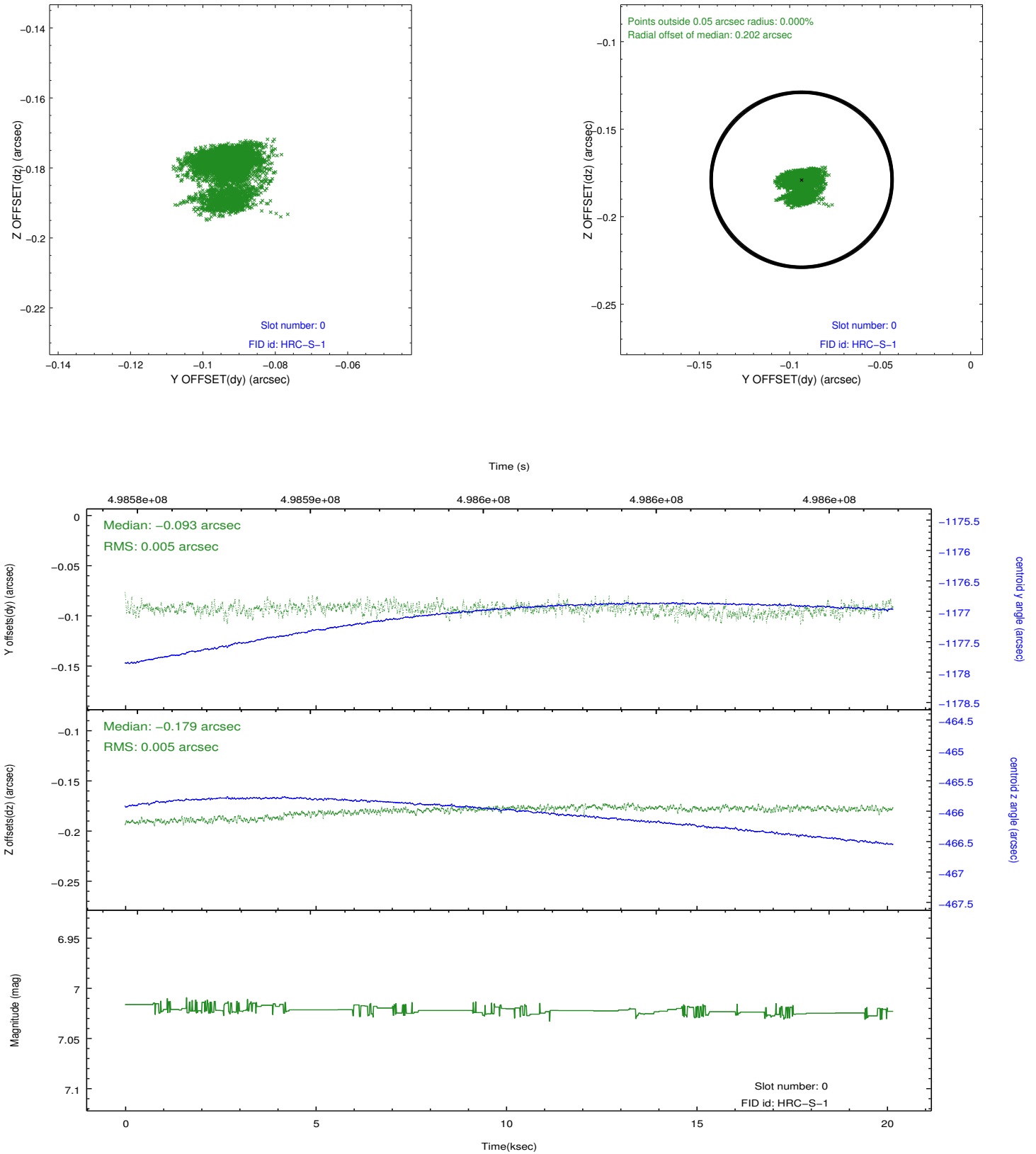


2.4.5 Slot 7

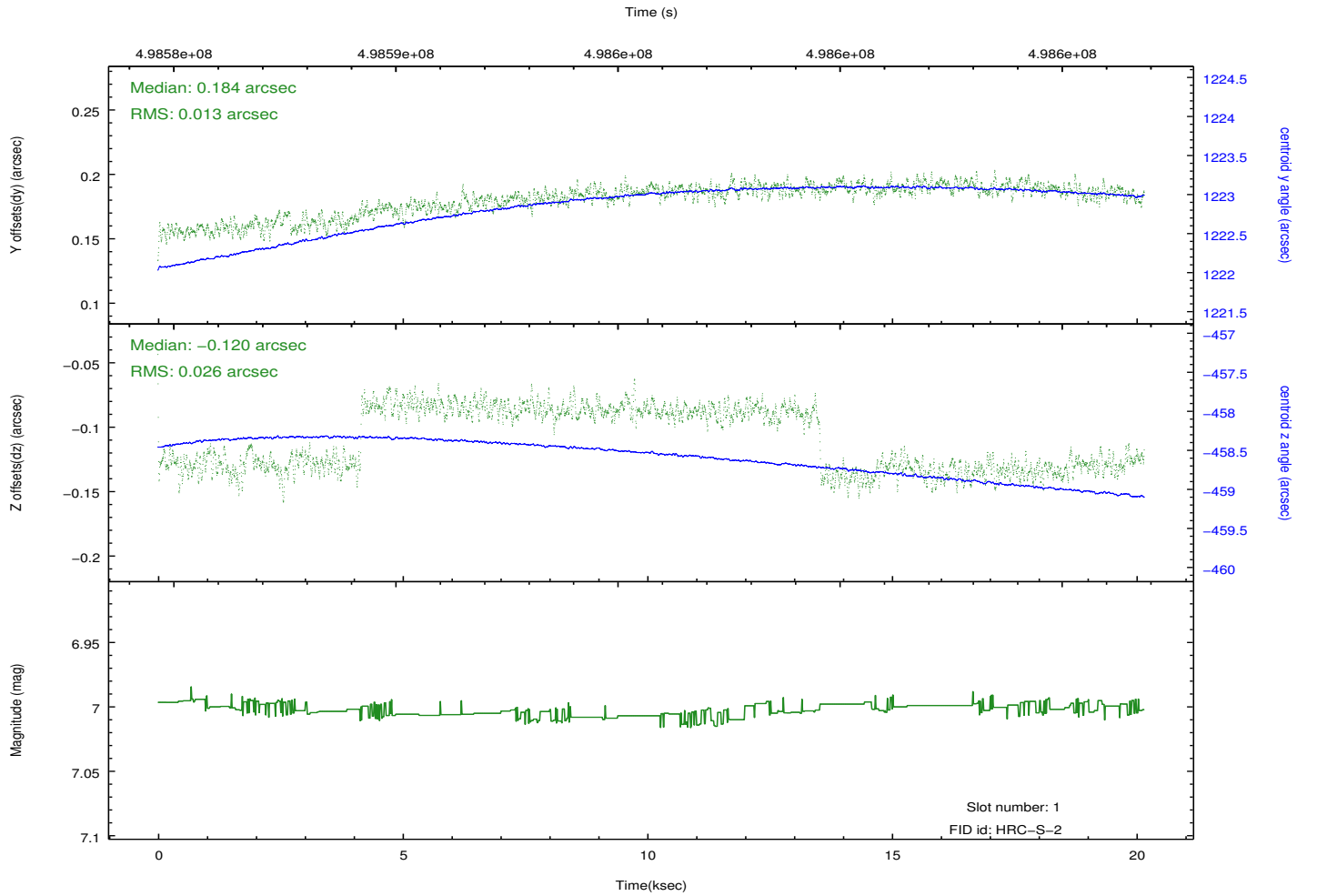
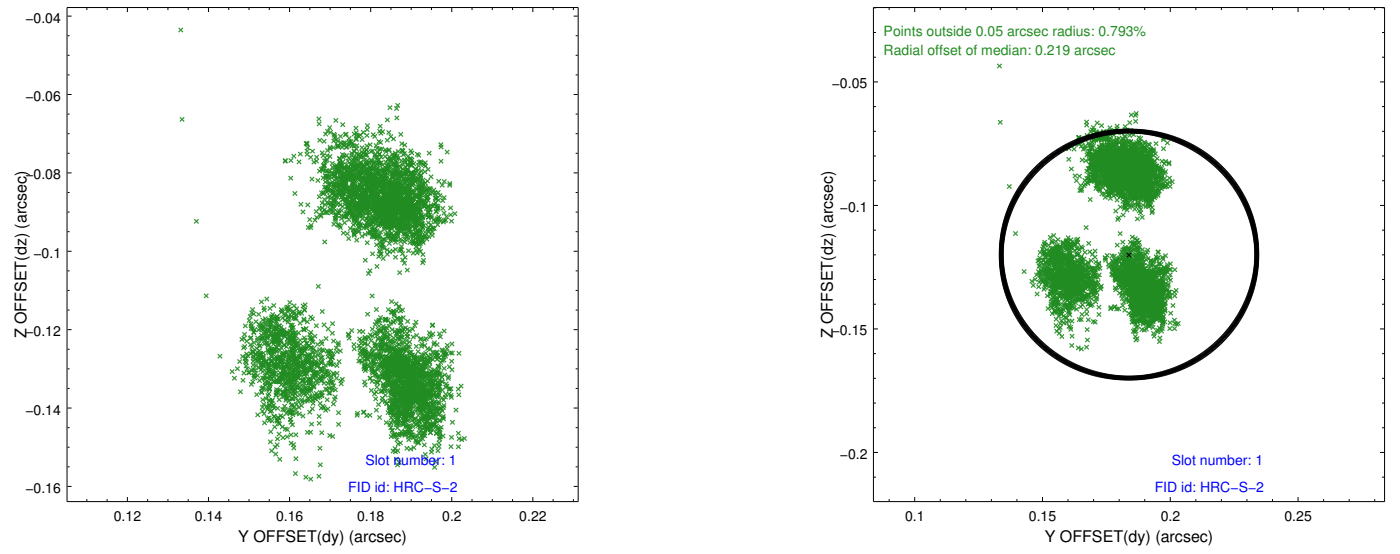


2.5 FID Slots

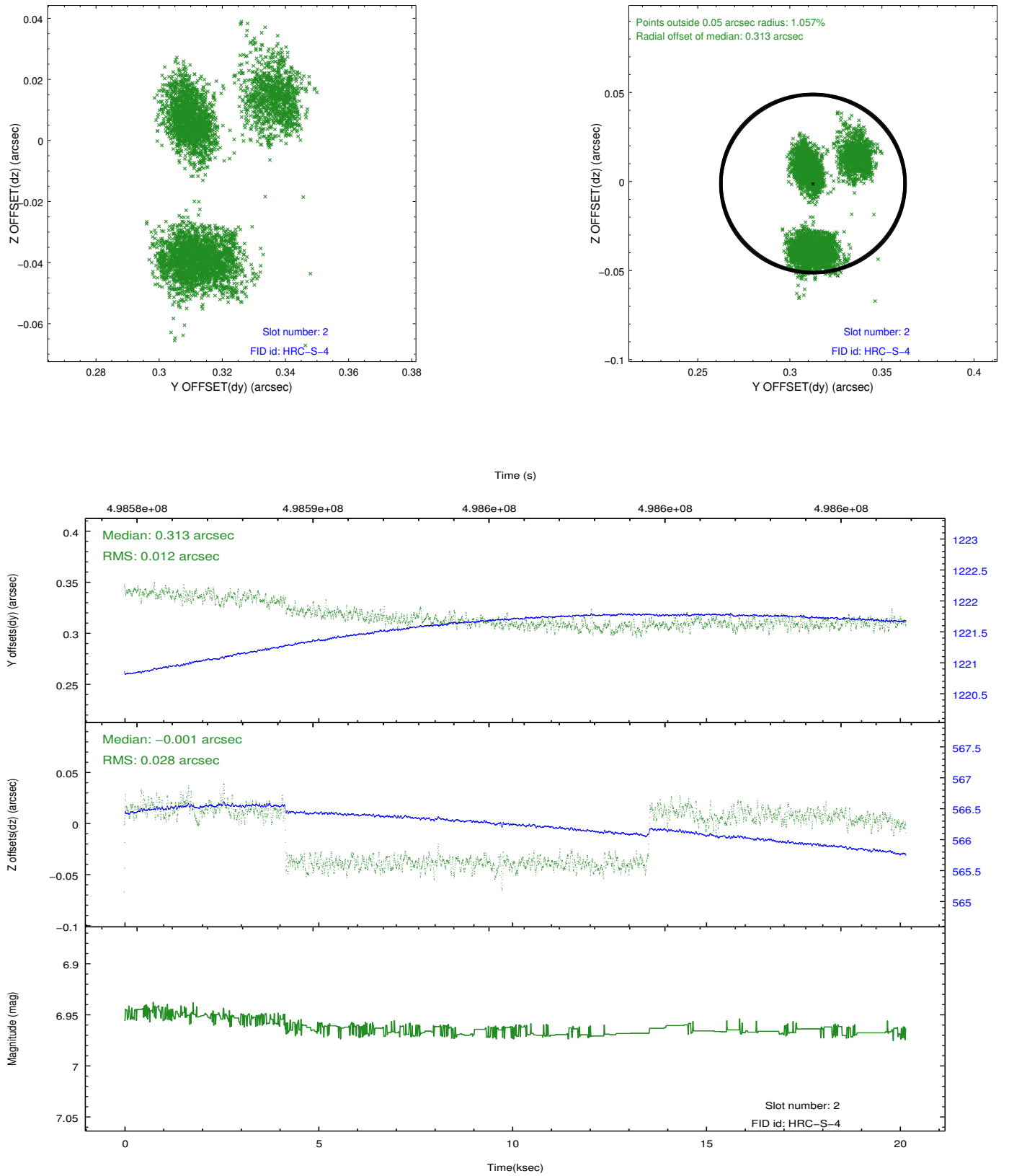
2.5.1 Slot 0



2.5.2 Slot 1

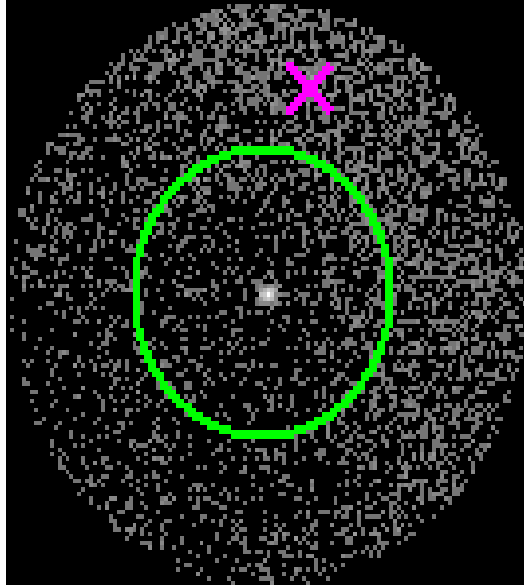


2.5.3 Slot 2

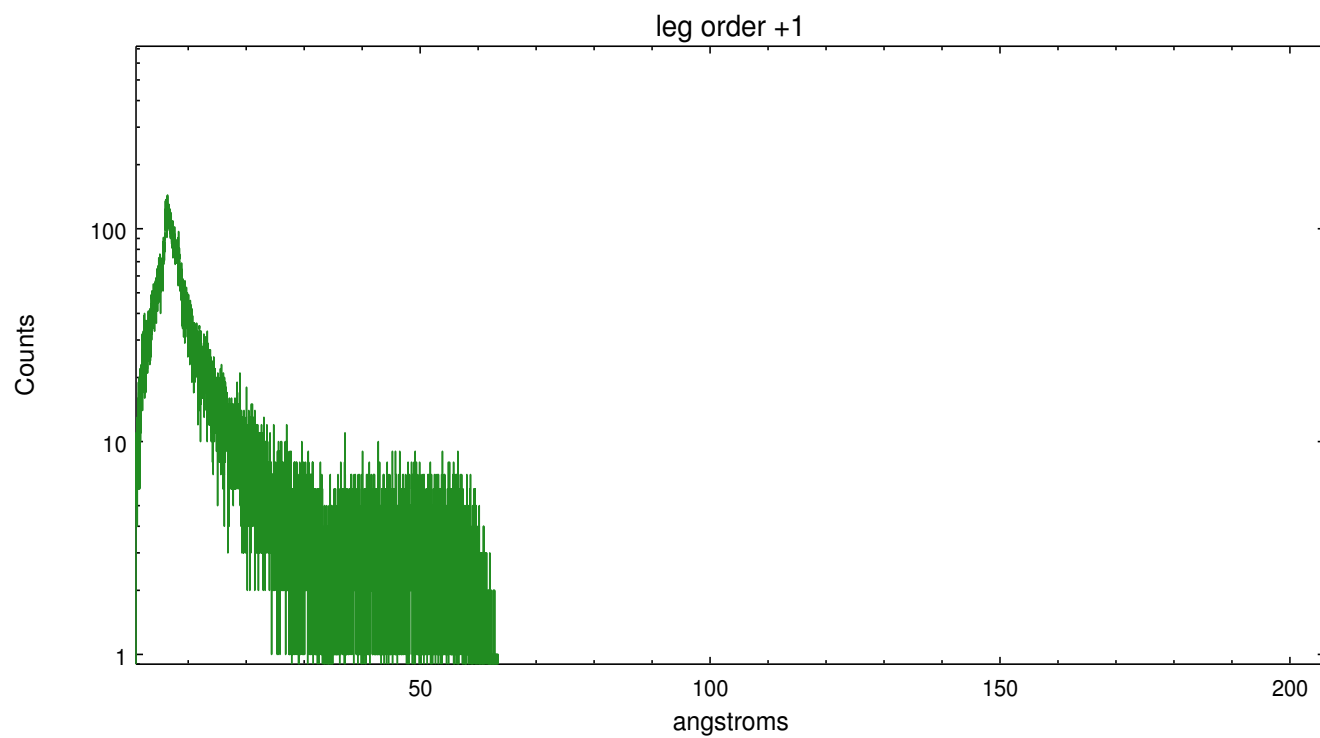
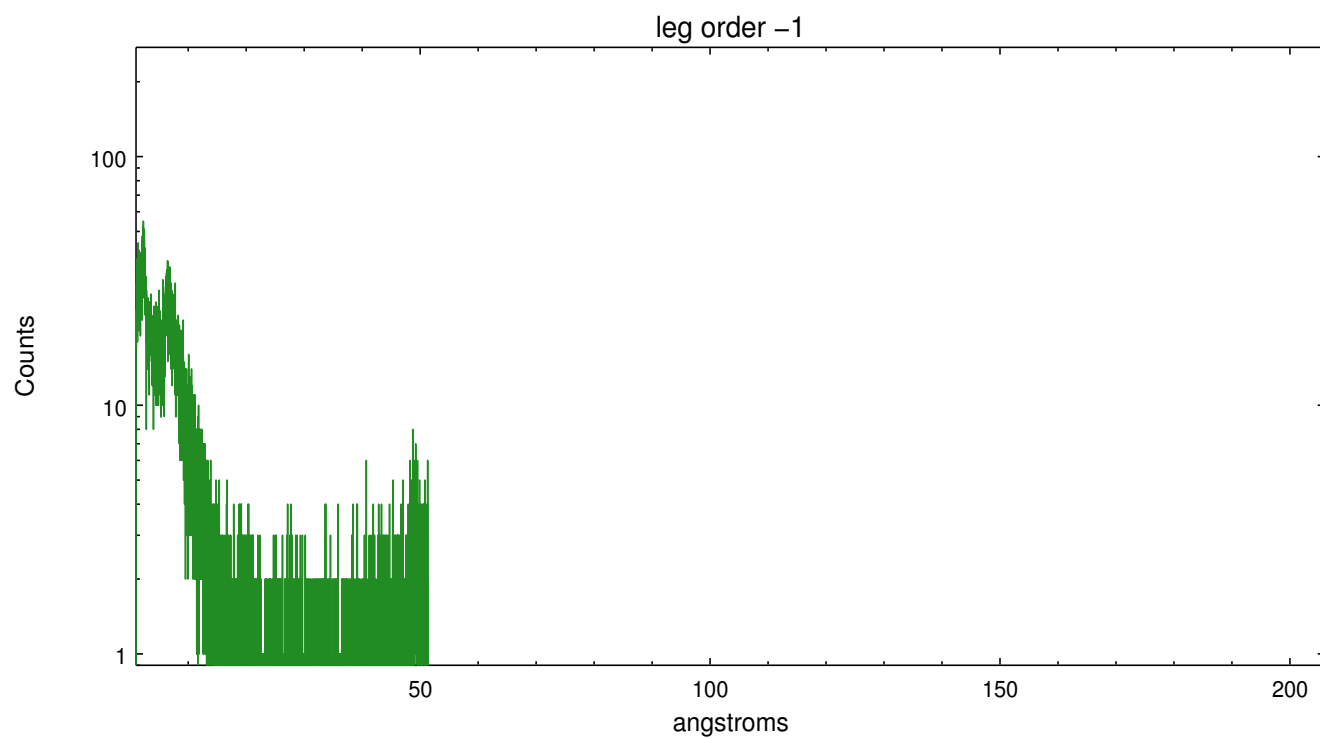


3 Gratings

3.1 LETG Arm



LETG Zero Order



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.12.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.158932353139

A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.

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The MCP HV levels and the trigger threshold of the instrument were set to non-standard values and as such the instrument is no longer 'calibrated'. Use of the LETG grating with HRC for an extended source results in a degradation of the spectral resolution. There is no longer a unique mapping between position of an event on the focal plane and wavelength. === Non-standard MCP HV setting used for this observation. The setting used is top=91, bottom=103. This setting is intermediate between the original default HV setting for HRC and the 2012 revised default HV setting. THERE IS NO DETECTOR GAIN CALIBRATION FOR THIS HV SETTING. This observation was processed with custom gti-limit parameters to allow events from non-standard voltages to be included in gti. LETG grating inserted as a filter only.