

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22155 - L2 Version 1
Chandra X-Ray Center

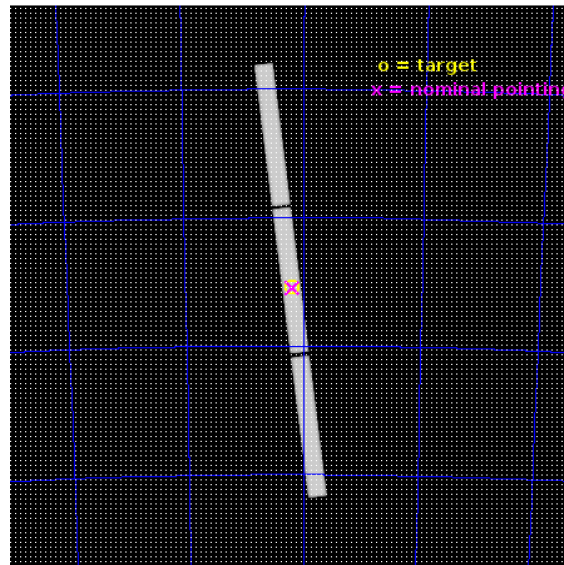
L2 Processing Date : Mar 24 2019

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1 Front

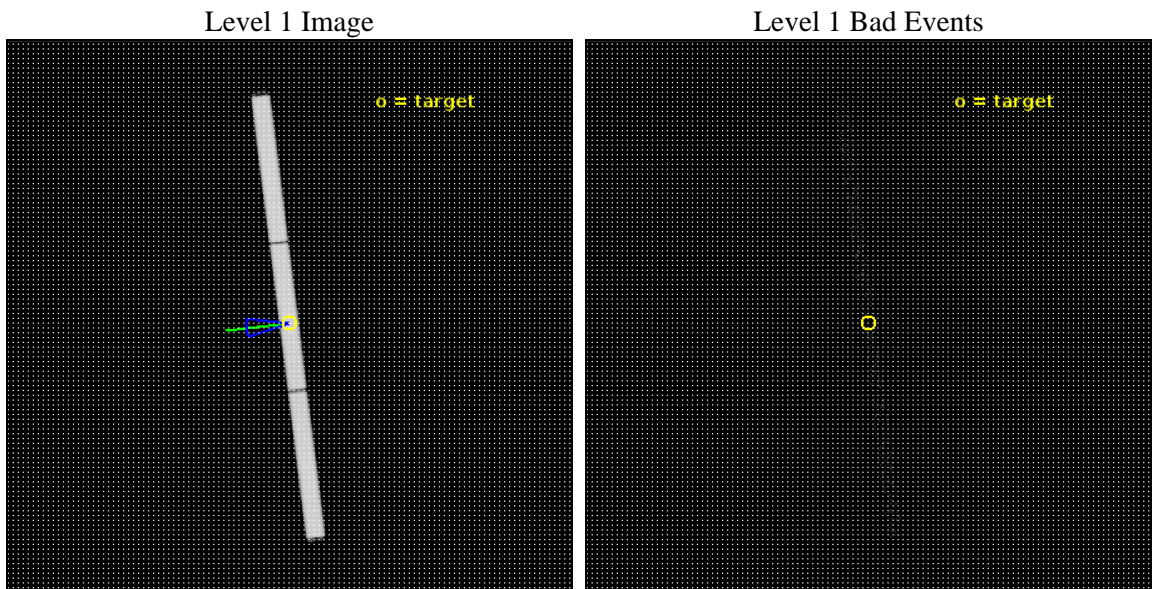
seq_num	503076	Sequence number
obs_id	22155	Observation id
title	CHANDRA CYCLE 20 SPATIAL AND SPECTRAL MONITORING OF SN1987A	Propos
observer	David Burrows	Principal investigator
object	SNR 1987A	Source name
ra_targ	83.866667	Observer's specified target RA [deg]
dec_targ	-69.26975	Observer's specified target Dec [deg]
ra_nom	83.876704413114	Nominal RA [deg]
dec_nom	-69.273780740002	Nominal Dec [deg]
roll_nom	263.07671731498	Nominal Roll [deg]
revision	1	Processing version of data
ontime	30136.026802659	[s]
livetime	29829.251757948	Ontime multiplied by DTCOR
l2events	2788053	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	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	30136.026802659	[s]
caldsver	4.8.2	 	l1events	3526390	Number of level 1 events
date	2019-03-24T04:40:43	Date and time of file creation	tgmethod	TGDETECT	Method used to create src1a file
revision	1	Processing version of data	zo_pos	(32866.39, 32873.35)	src1a sky pixel position

2.1.3 Events

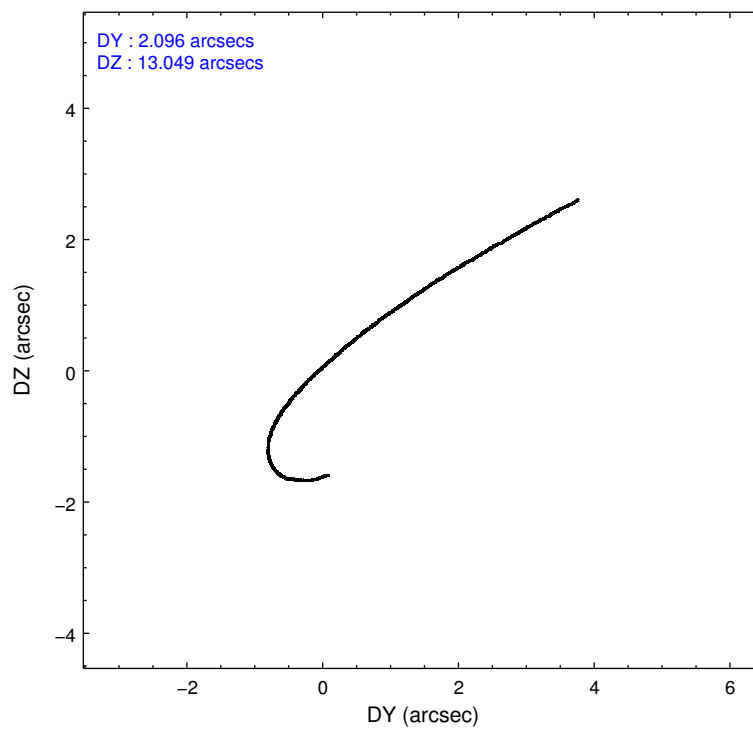
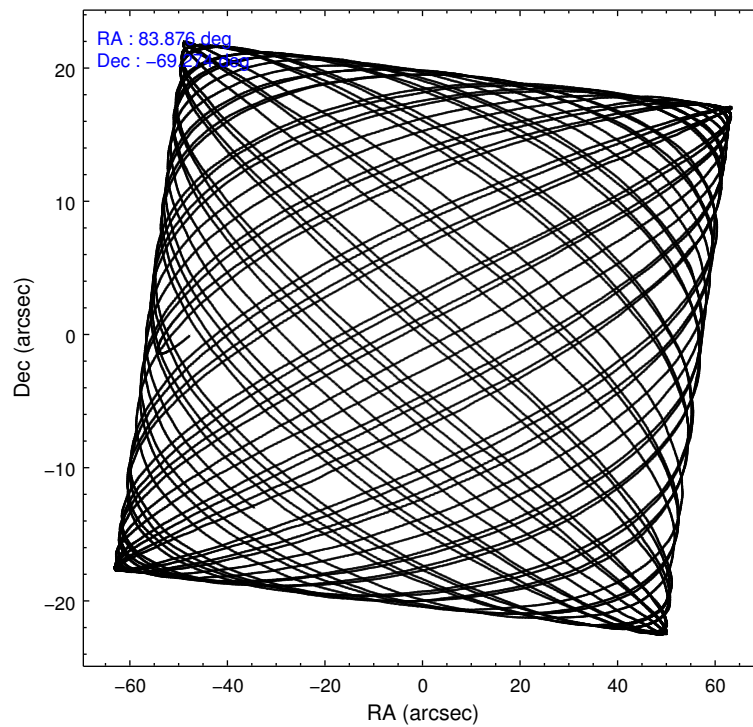
Level 1 Events

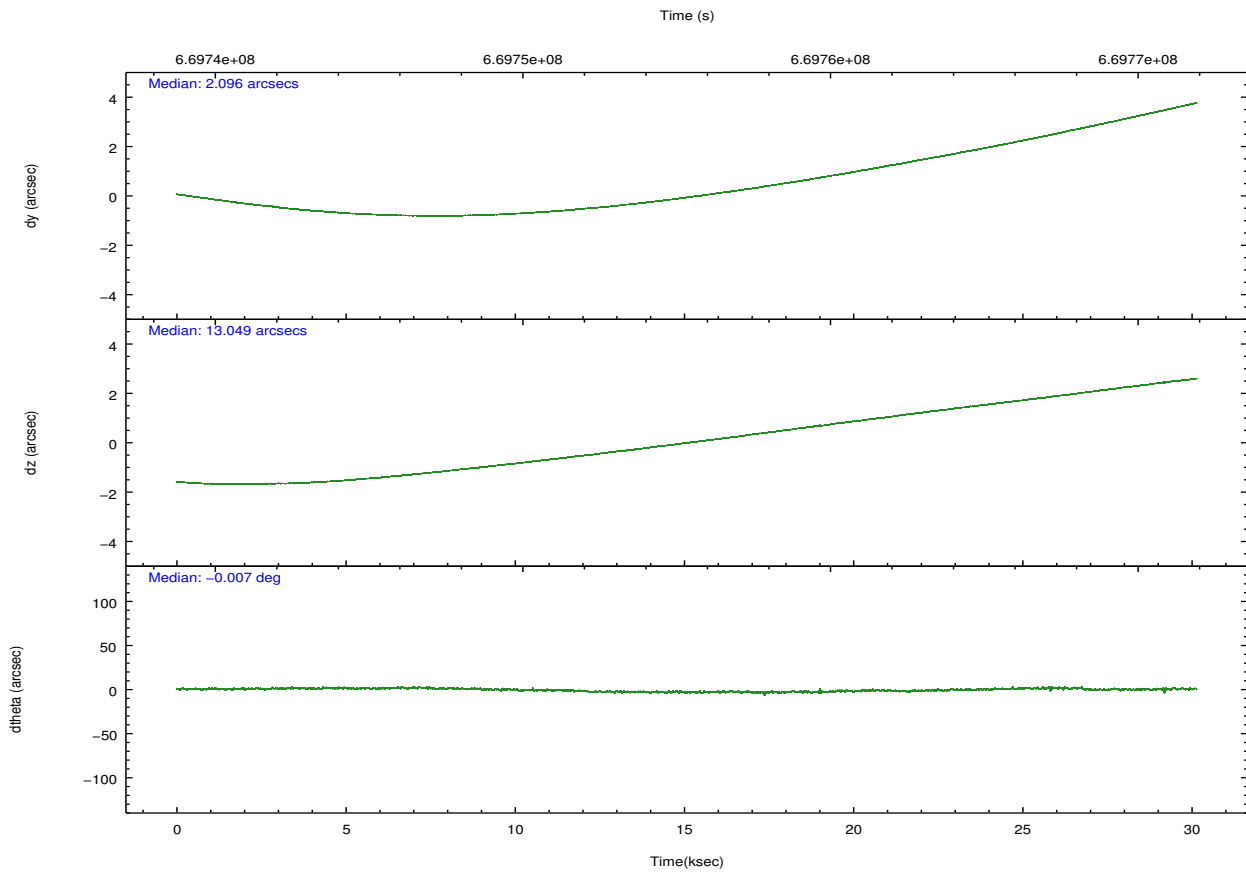
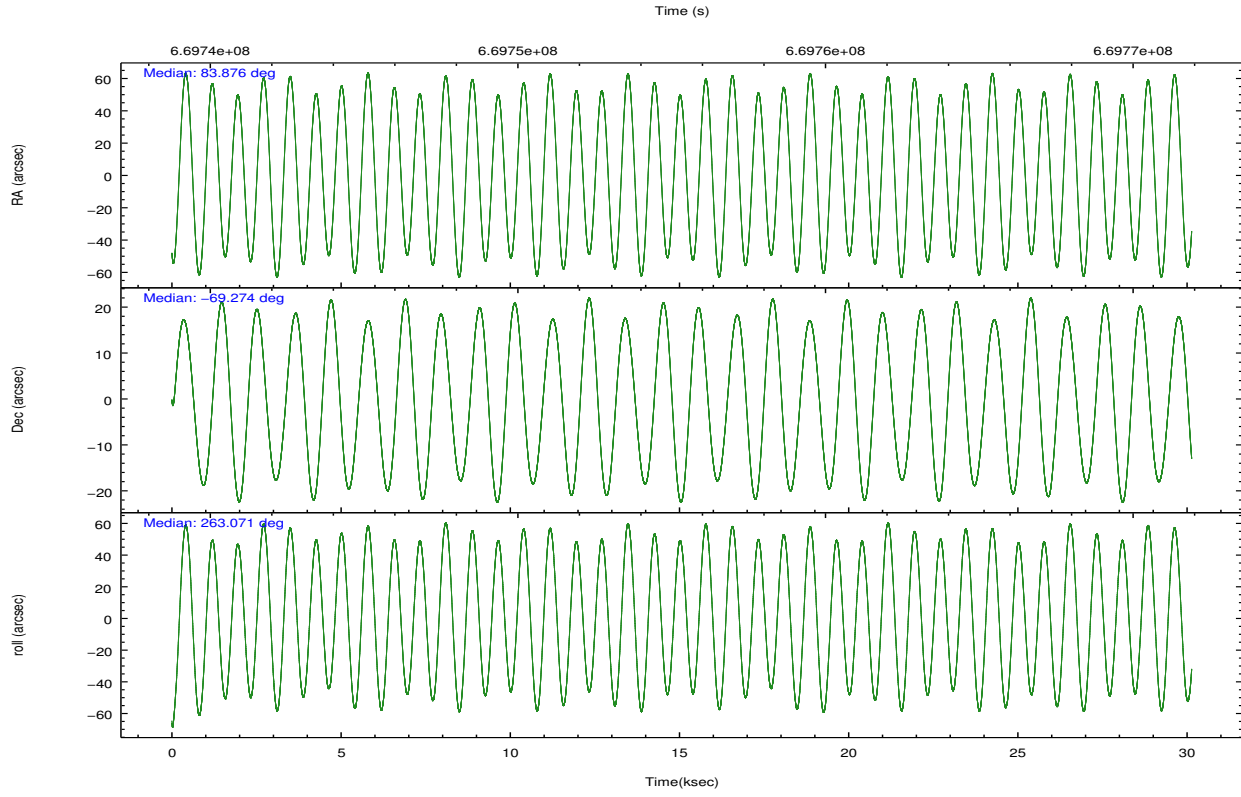
	segment 1	segment 2	segment 3
level 1 events	1172295	1182539	1171556
rejected events	37289	37334	37097
rejected %	3%	3%	3%

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	83.841237	83.8767044131145			
[deg] Pointing Dec	-69.247836	-69.27378074000241			
[deg] Pointing Roll	262.976220	263.0767173149843			
[deg] Roll angle	264.000000	264.000000			
[deg] Roll tolerance	12.000000	12.000000			
Roll constraint allows 180D rotation	N	N			
[s] Window start time (MET)	668476869.184000	668476869.184000			
[s] Window stop time (MET)	670464069.184000	670464069.184000			
[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)	669740404.184000	669739304.40848			
Observation start date	2019-03-23T14:58:55	2019-03-23T14:41:44			
[s] Observation end time (MET)	669770404.184000	669771281.33539			
Observation end date	2019-03-23T23:18:55	2019-03-23T23:34:41			

2.3 Aspect





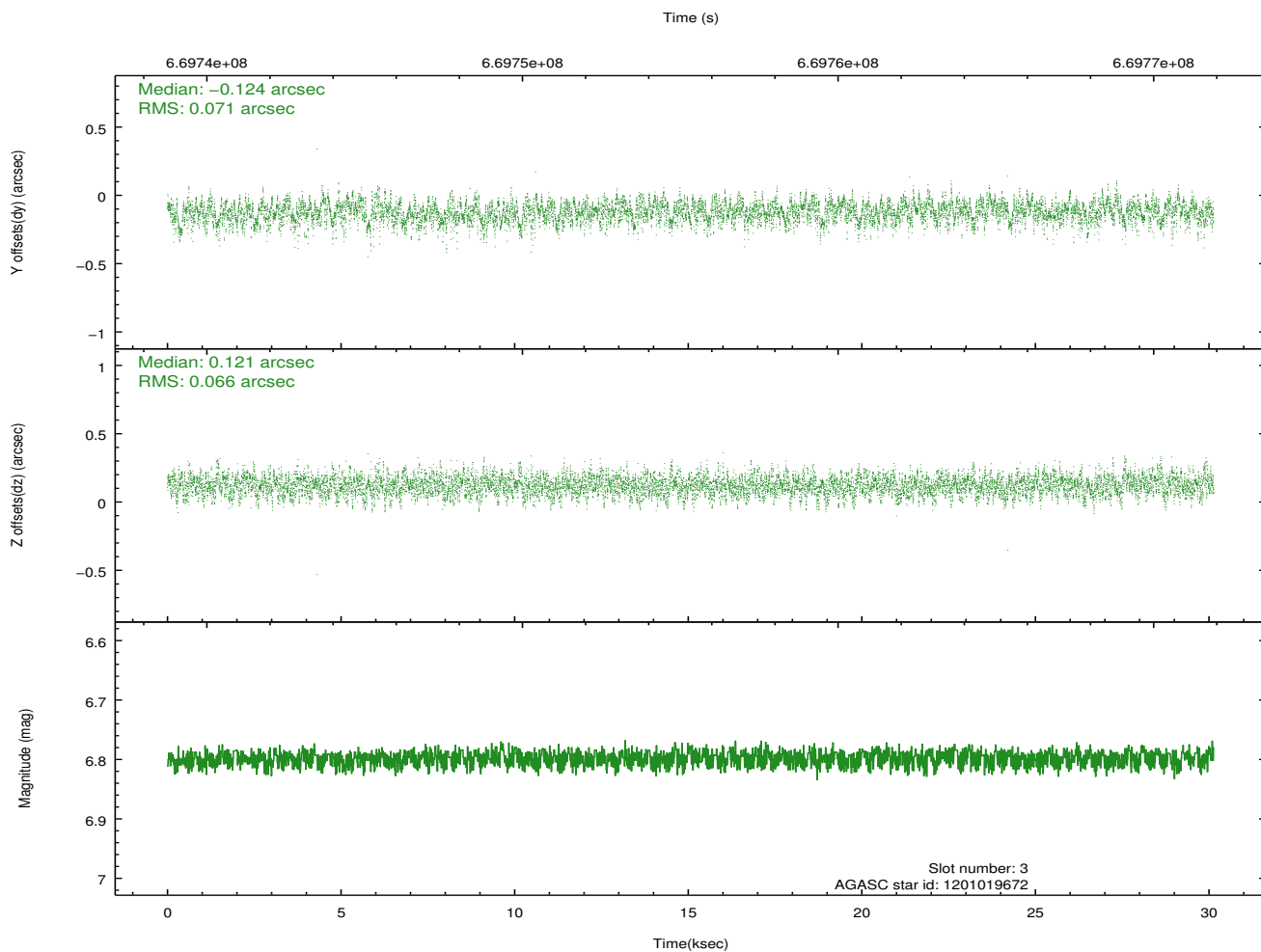
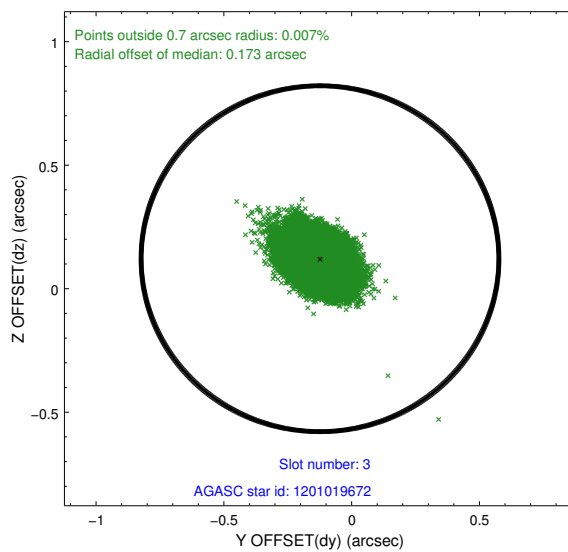
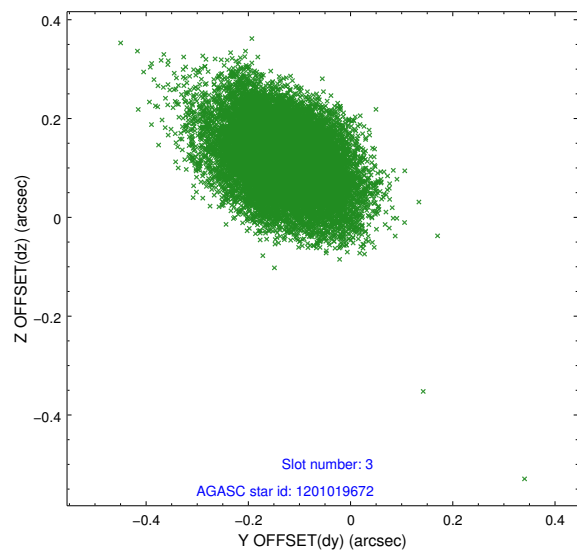
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-S-1	7.04	7350	1.000	-0.042	-0.155	0.040	0.071	0.000000	0.000000	-1156.82	-462
1	FID		HRC-S-2	7.03	7351	1.000	0.436	-0.155	0.033	0.069	0.000000	0.000000	1243.16	-454
2	FID		HRC-S-3	7.04	7351	1.000	-0.000	0.011	0.036	0.056	0.000000	0.000000	-1159.40	567
3	GUIDE	used	1201019672	6.80	14698	1.000	-0.124	0.121	0.101	0.169	85.312192	-68.770187	-1918.22	1695
4	GUIDE	used	1201020040	8.56	14695	1.000	0.094	-0.064	0.102	0.173	85.379163	-68.879396	-1535.40	1820
5	GUIDE	used	1201406992	9.23	14686	1.000	0.121	0.175	0.170	0.276	83.682859	-69.471866	825.56	-99
6	GUIDE	used	1201542672	8.17	14697	1.000	-0.261	-0.340	0.100	0.164	84.492488	-69.957531	2438.47	1111
7	GUIDE	used	1201410616	9.31	14677	1.000	0.169	0.117	0.206	0.333	82.516808	-69.784406	2136.81	-1396

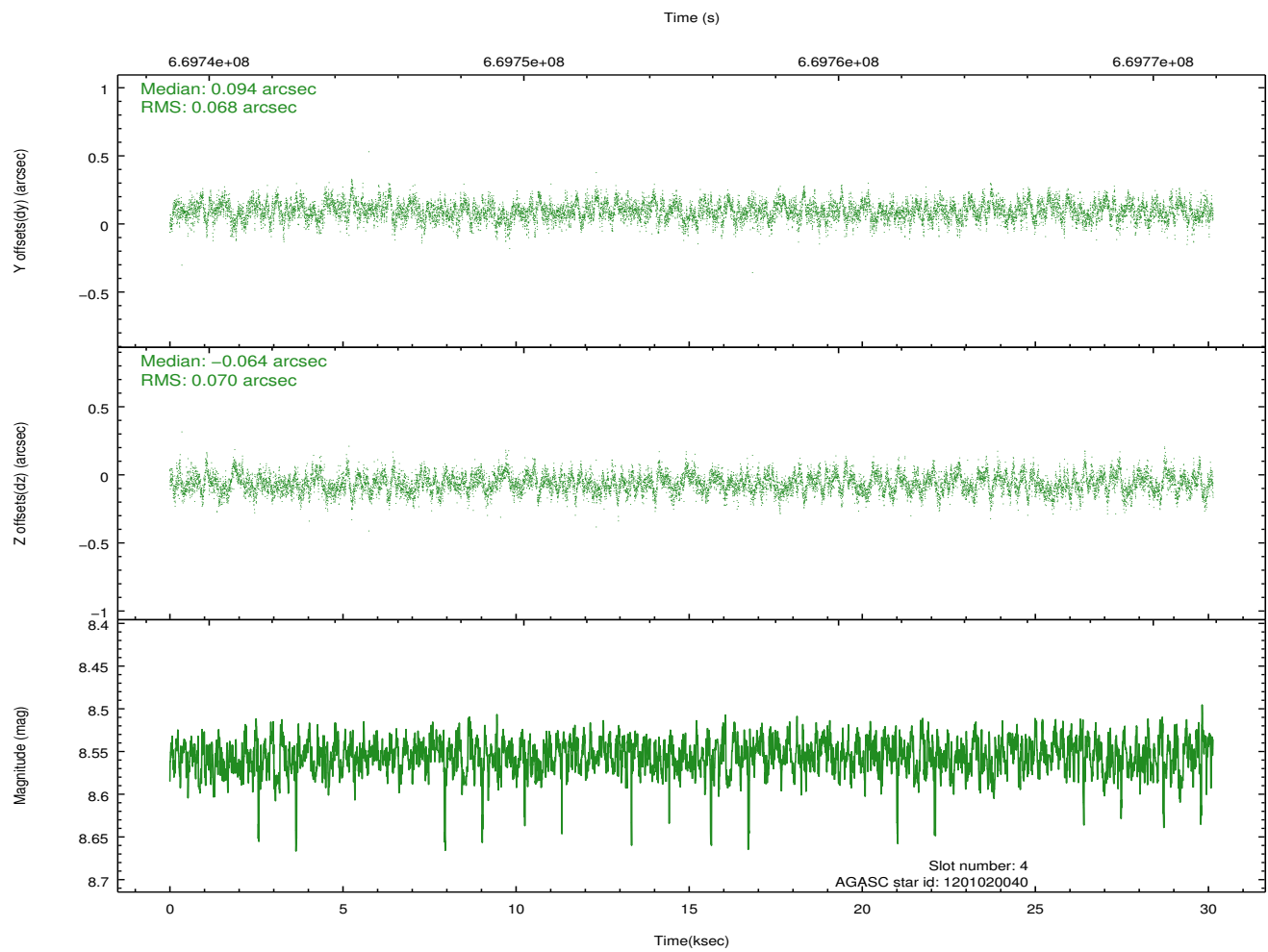
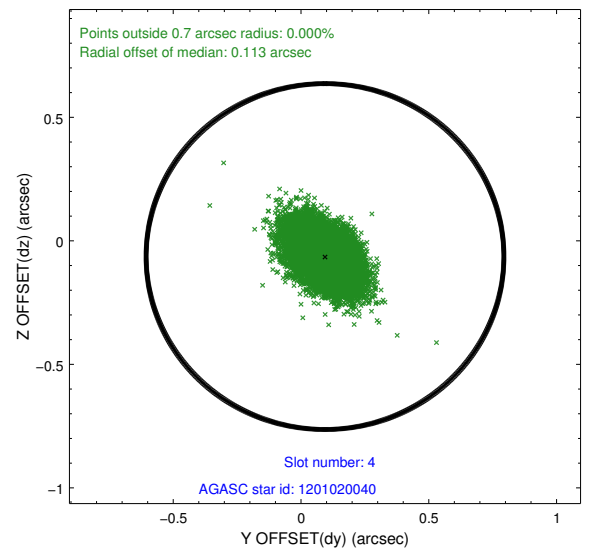
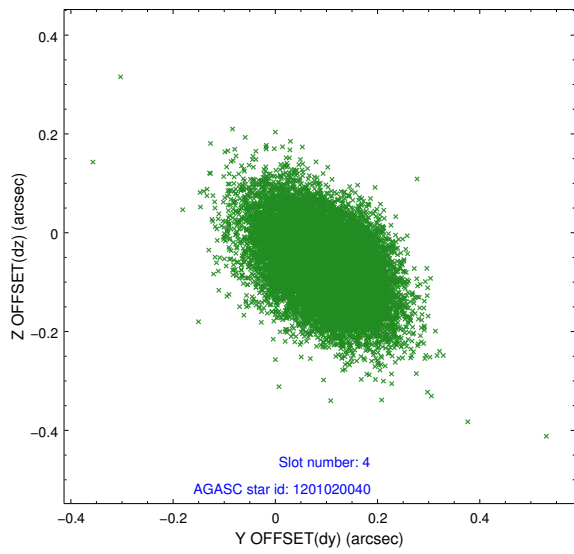
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2.4 Star Slots

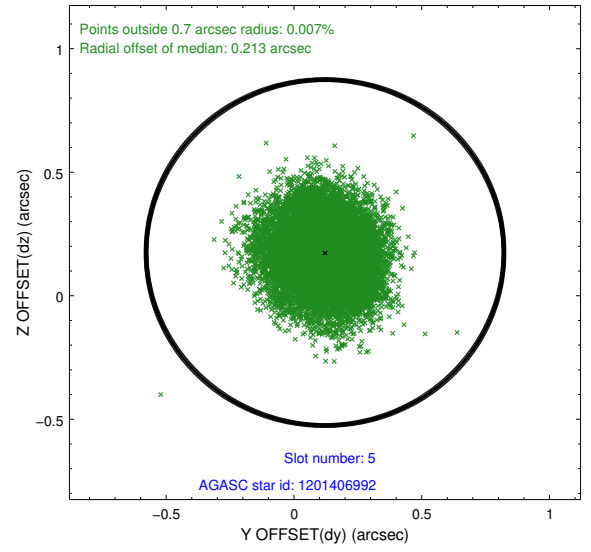
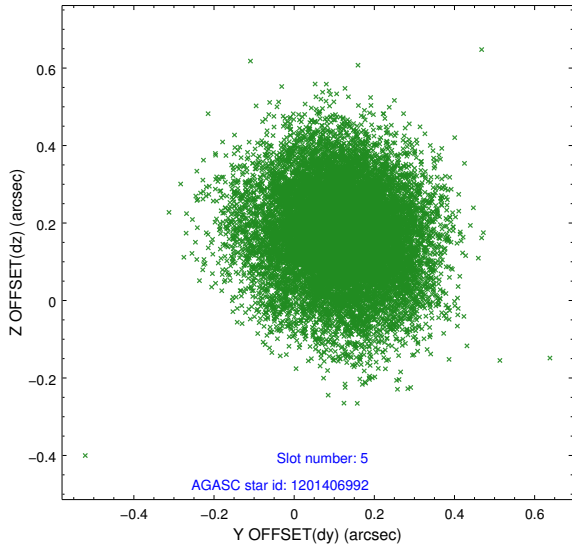
2.4.1 Slot 3



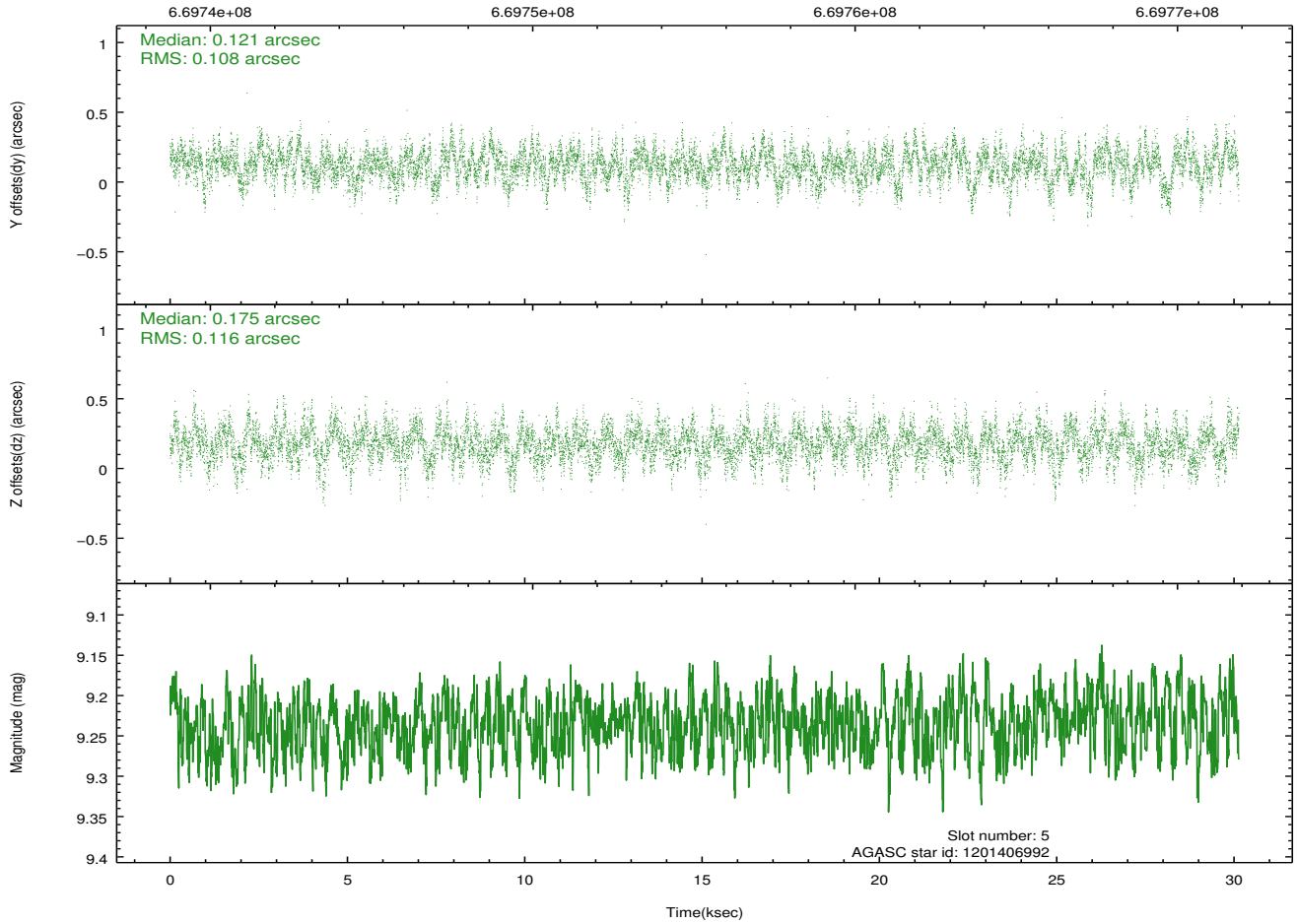
2.4.2 Slot 4



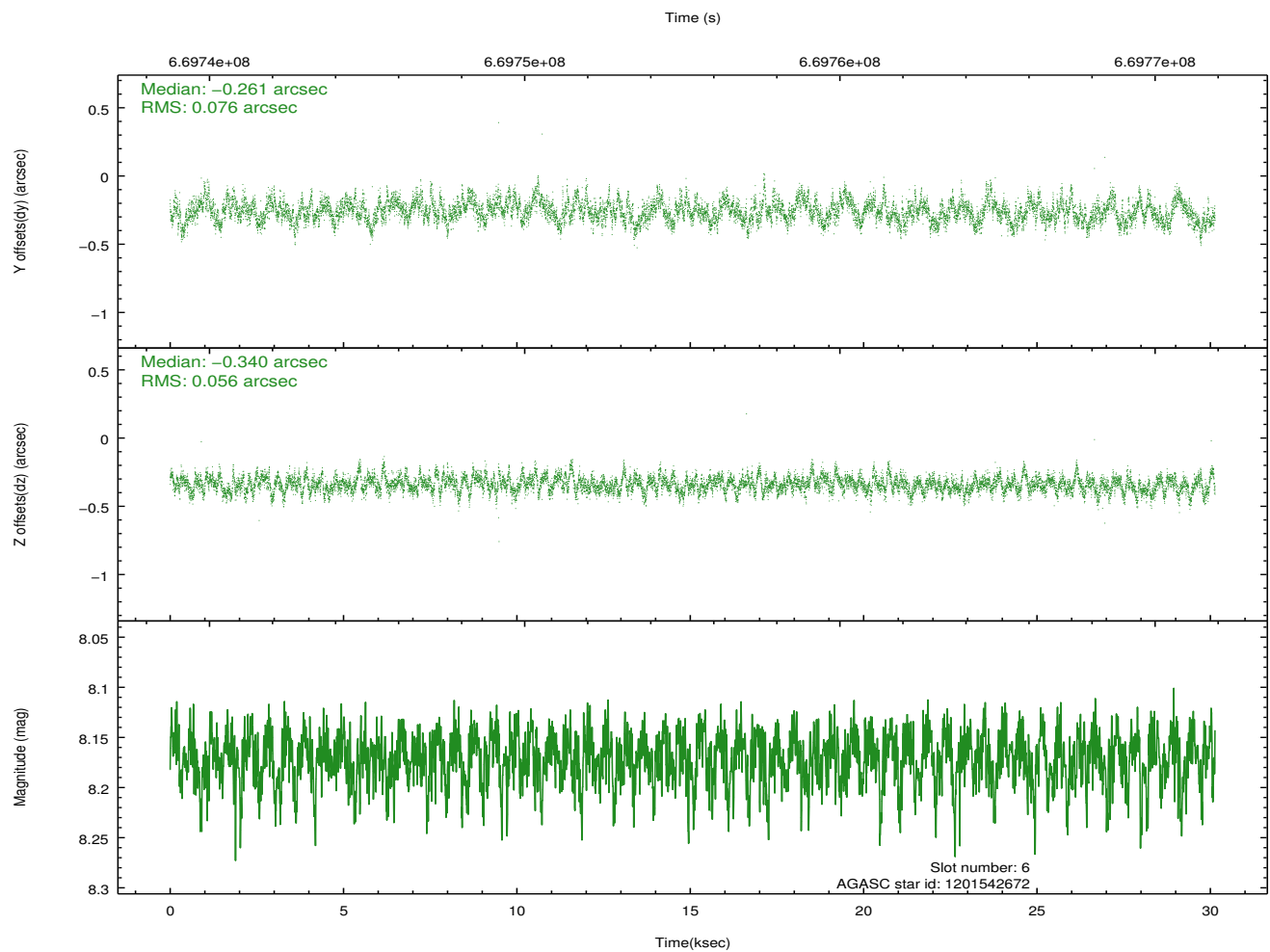
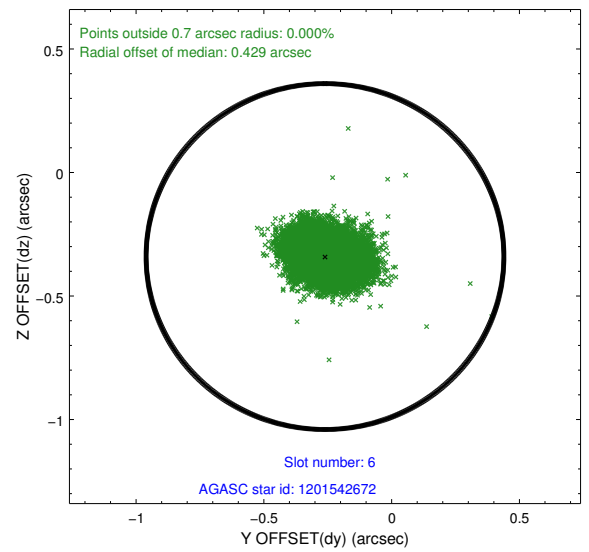
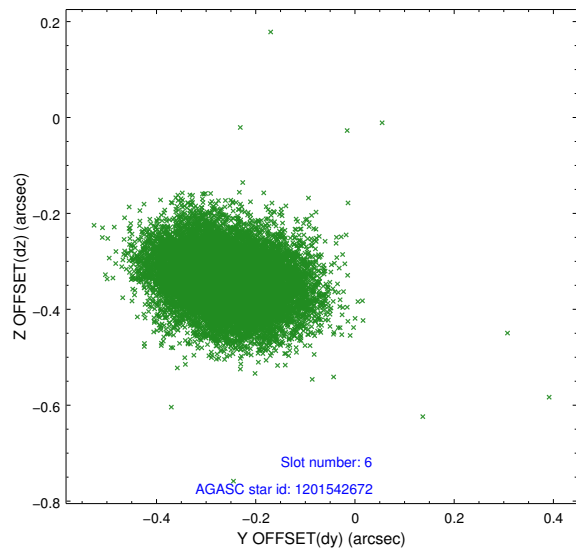
2.4.3 Slot 5



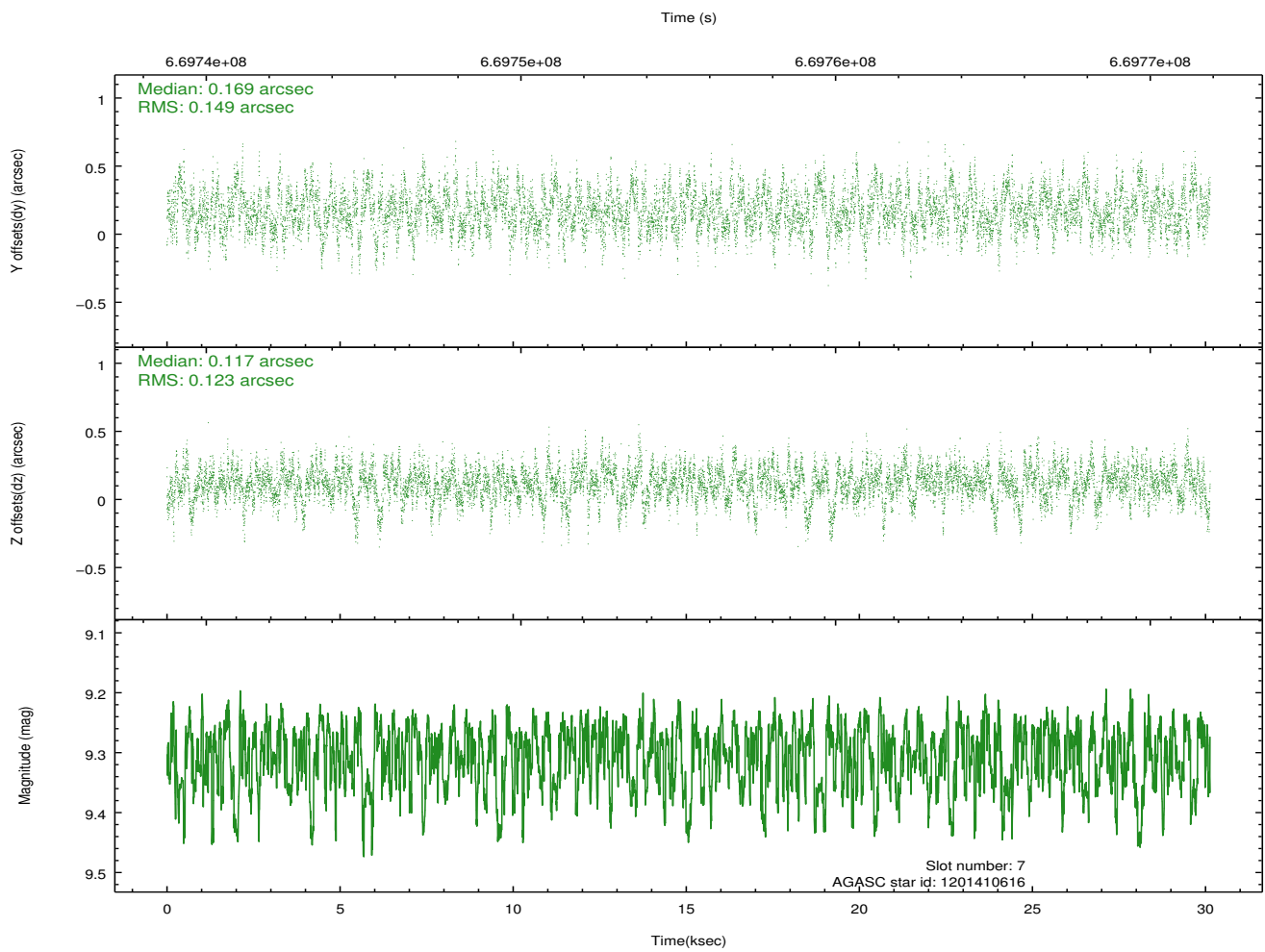
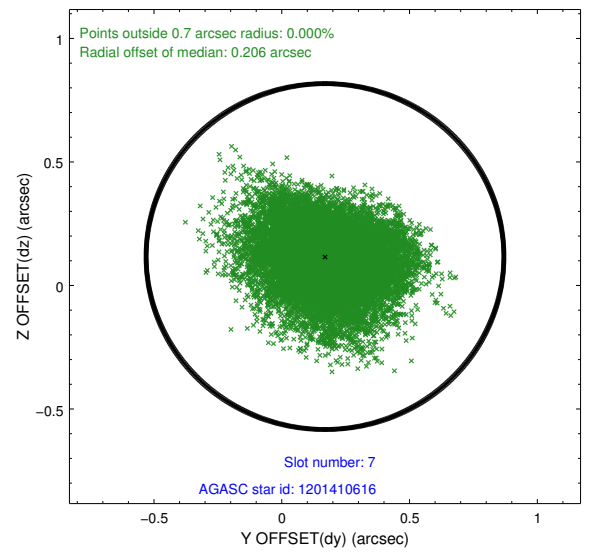
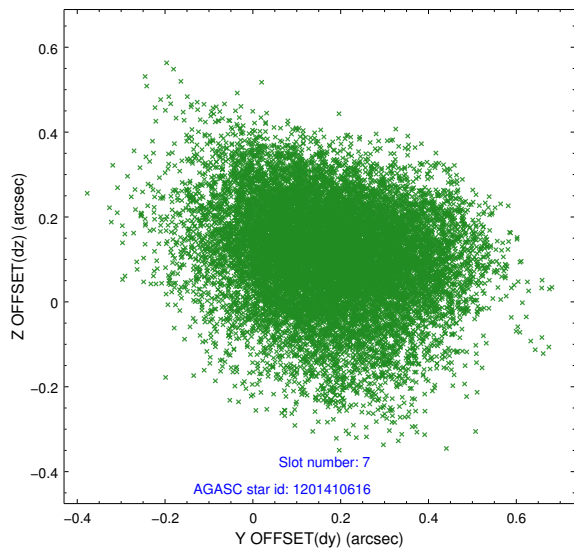
Time (s)



2.4.4 Slot 6

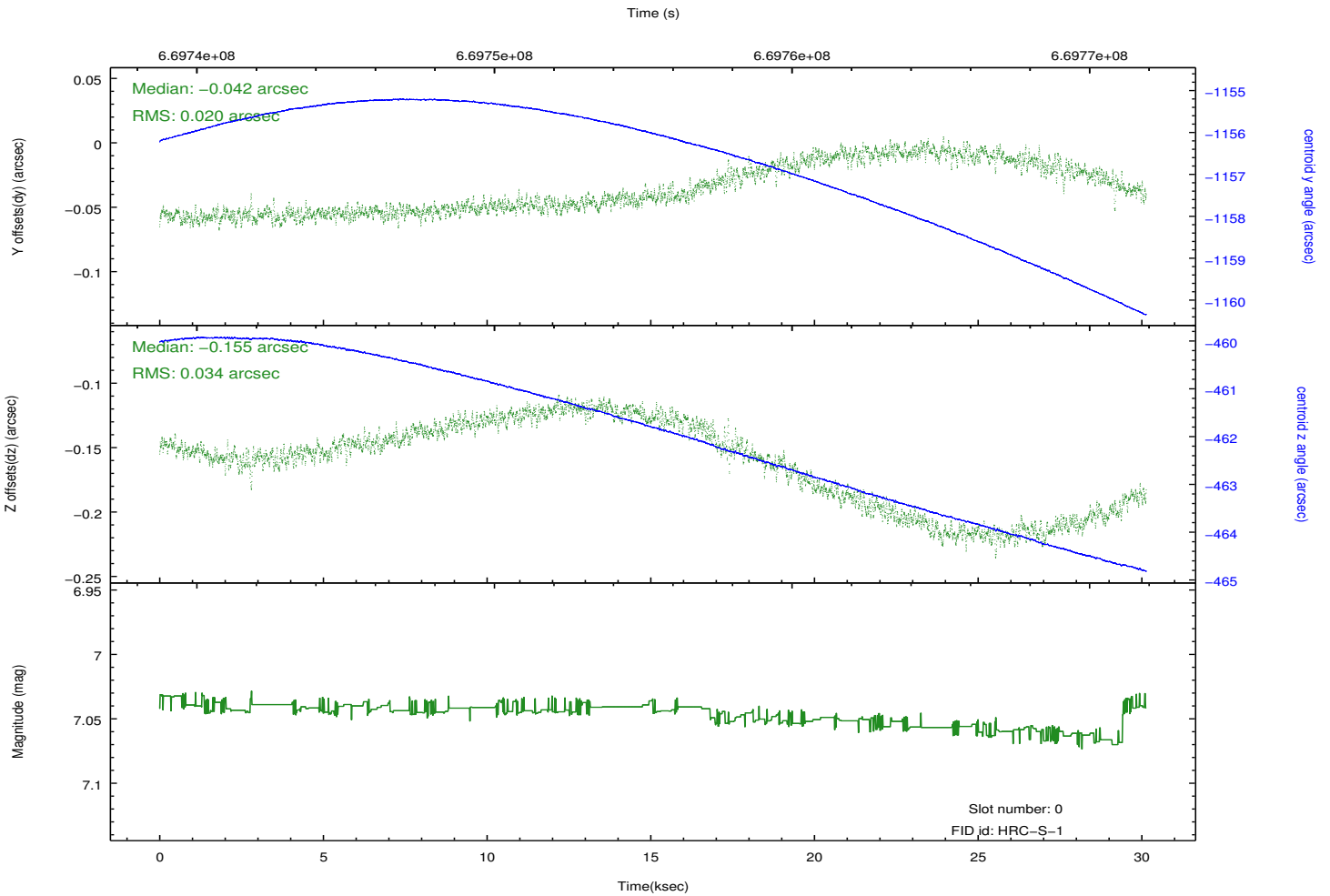
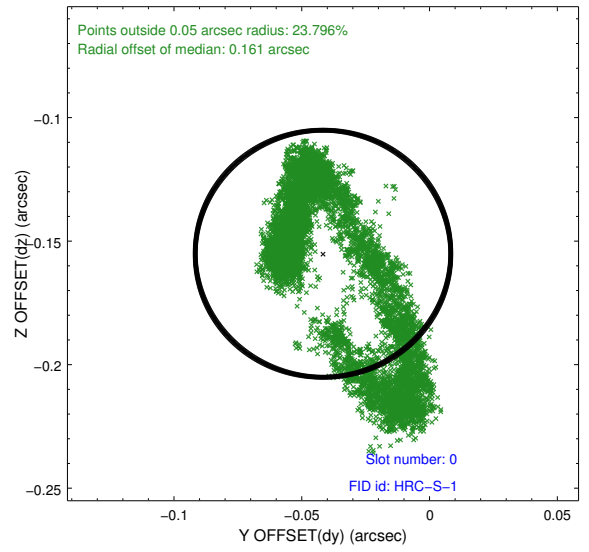
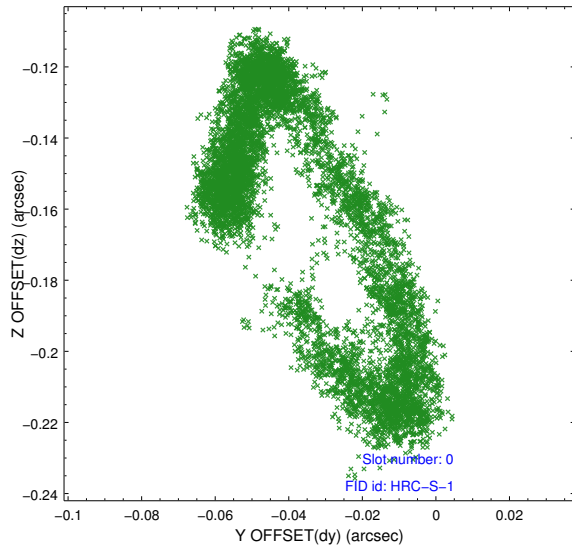


2.4.5 Slot 7

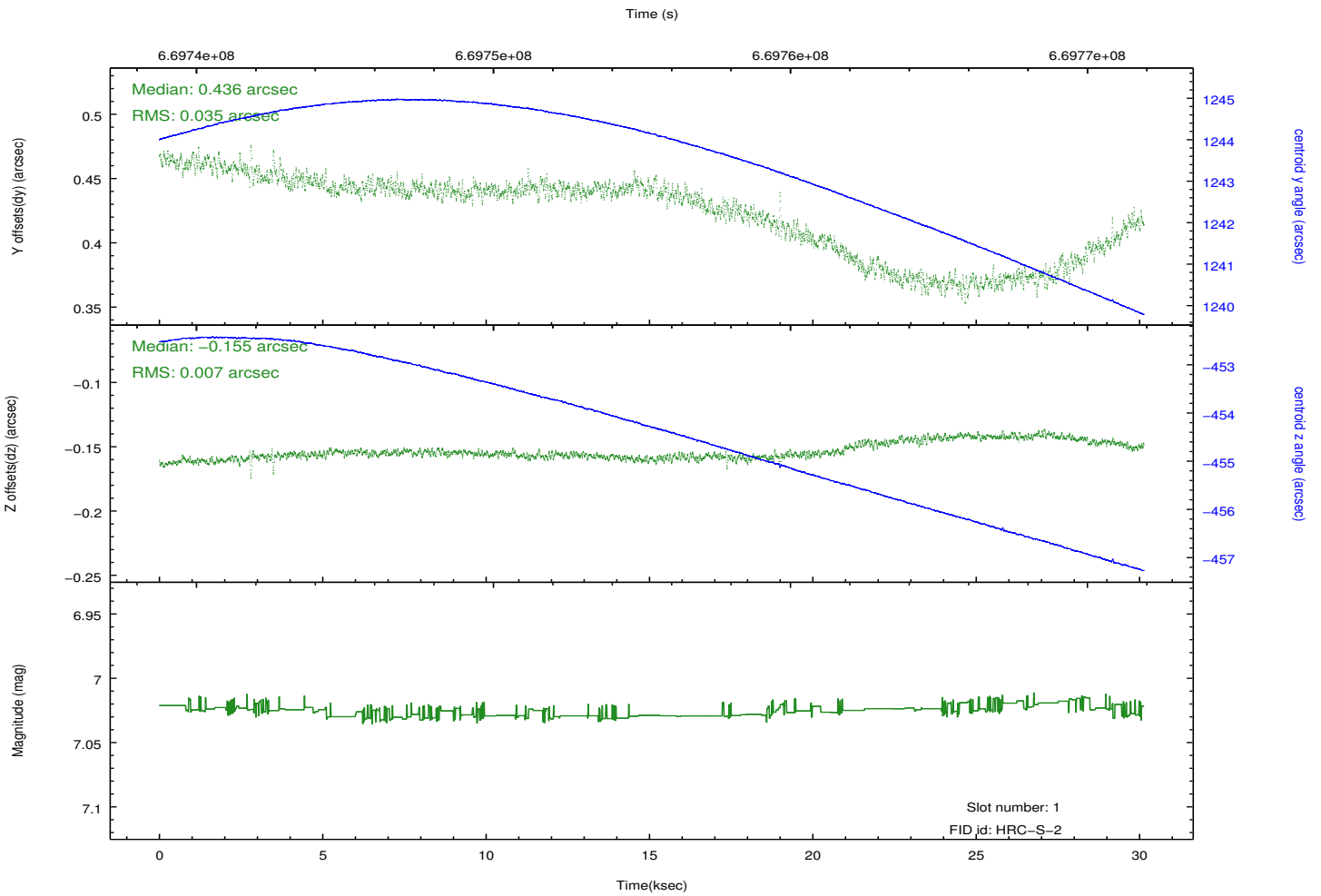
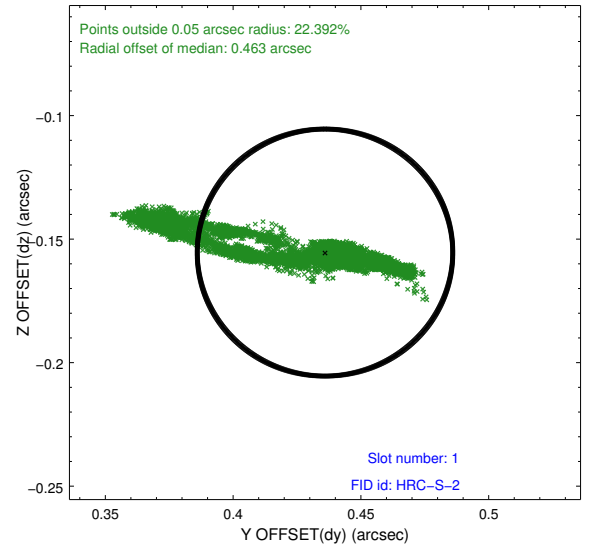
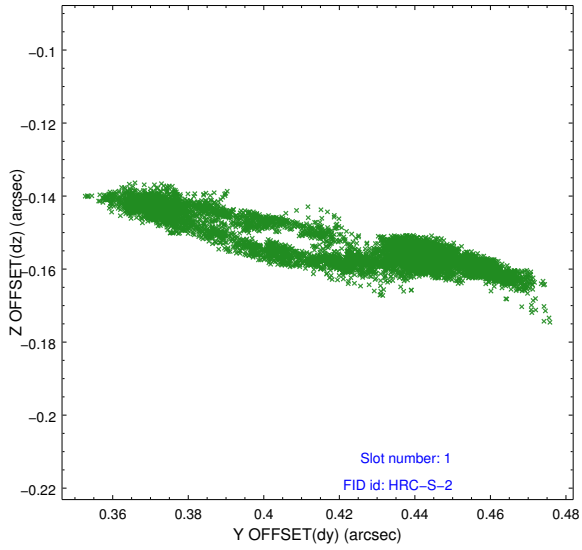


2.5 FID Slots

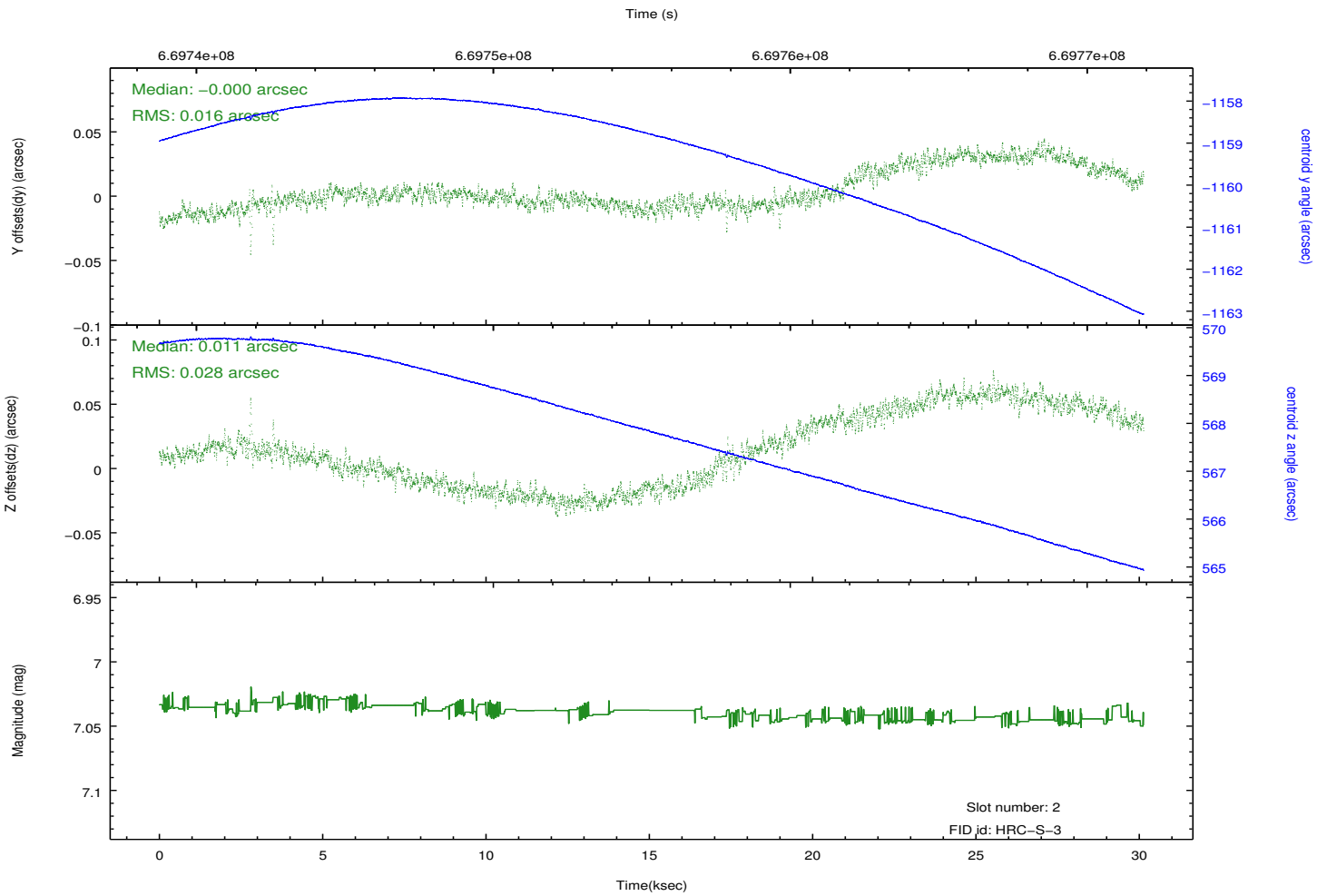
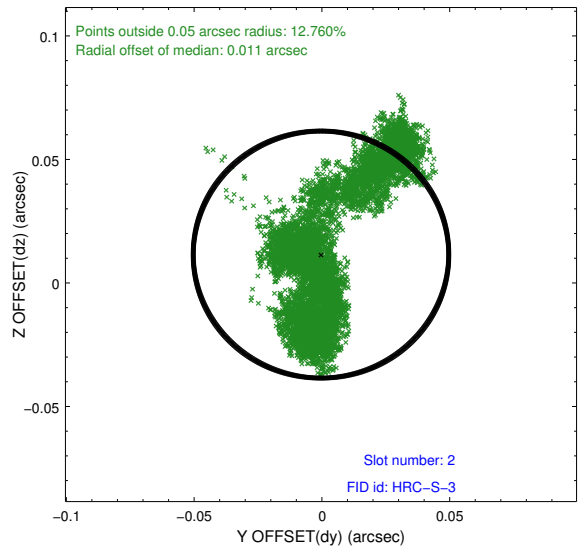
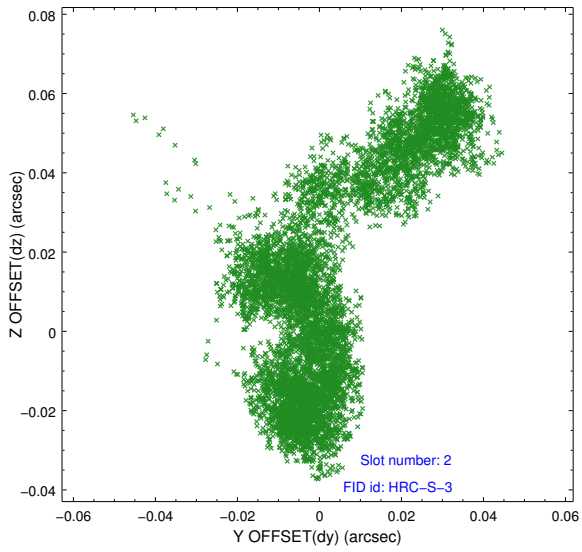
2.5.1 Slot 0



2.5.2 Slot 1

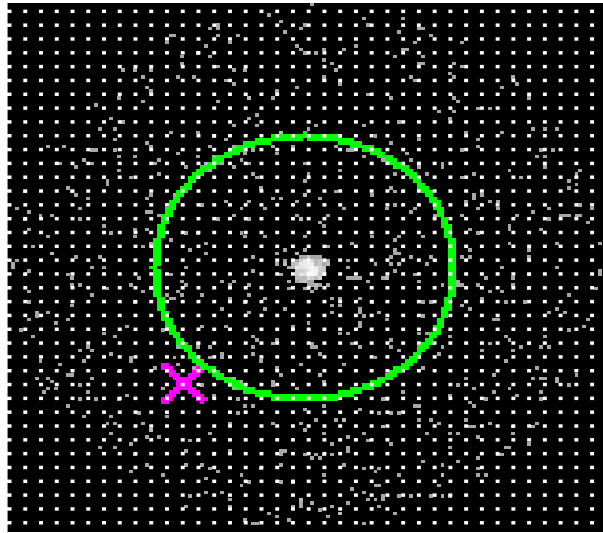


2.5.3 Slot 2



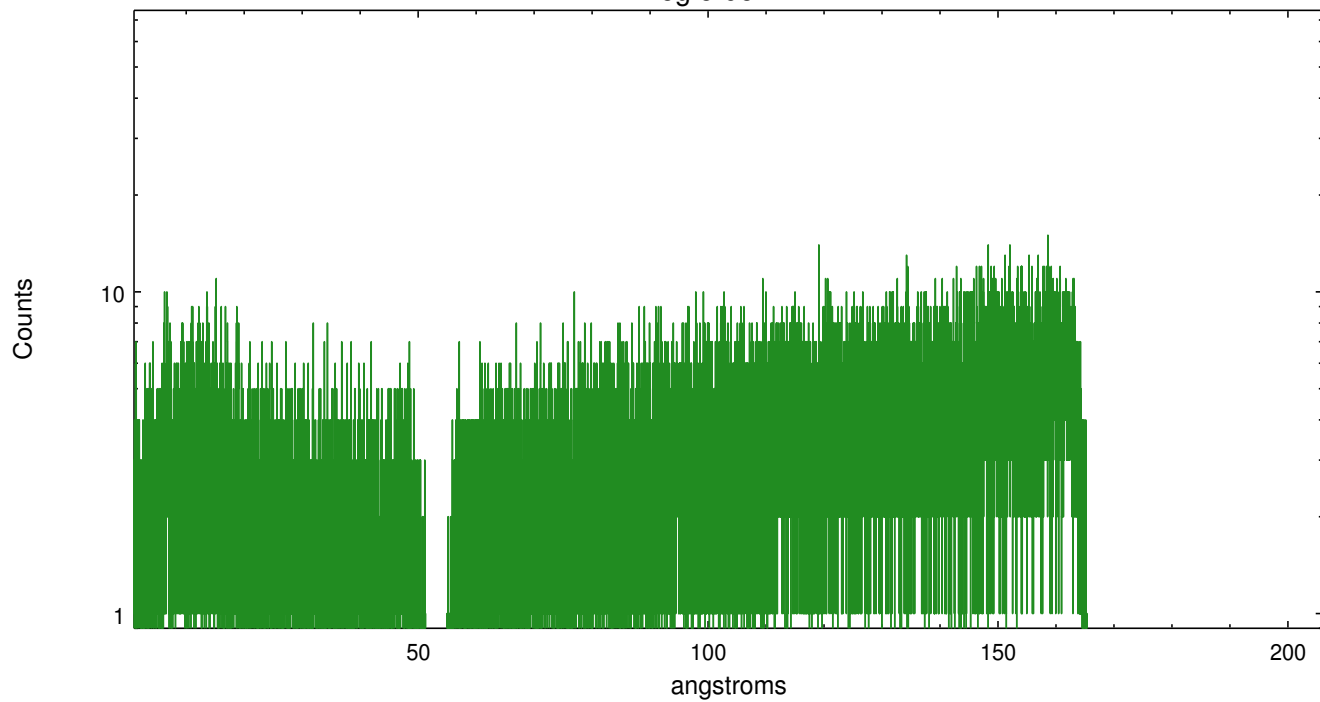
3 Gratings

3.1 LETG Arm

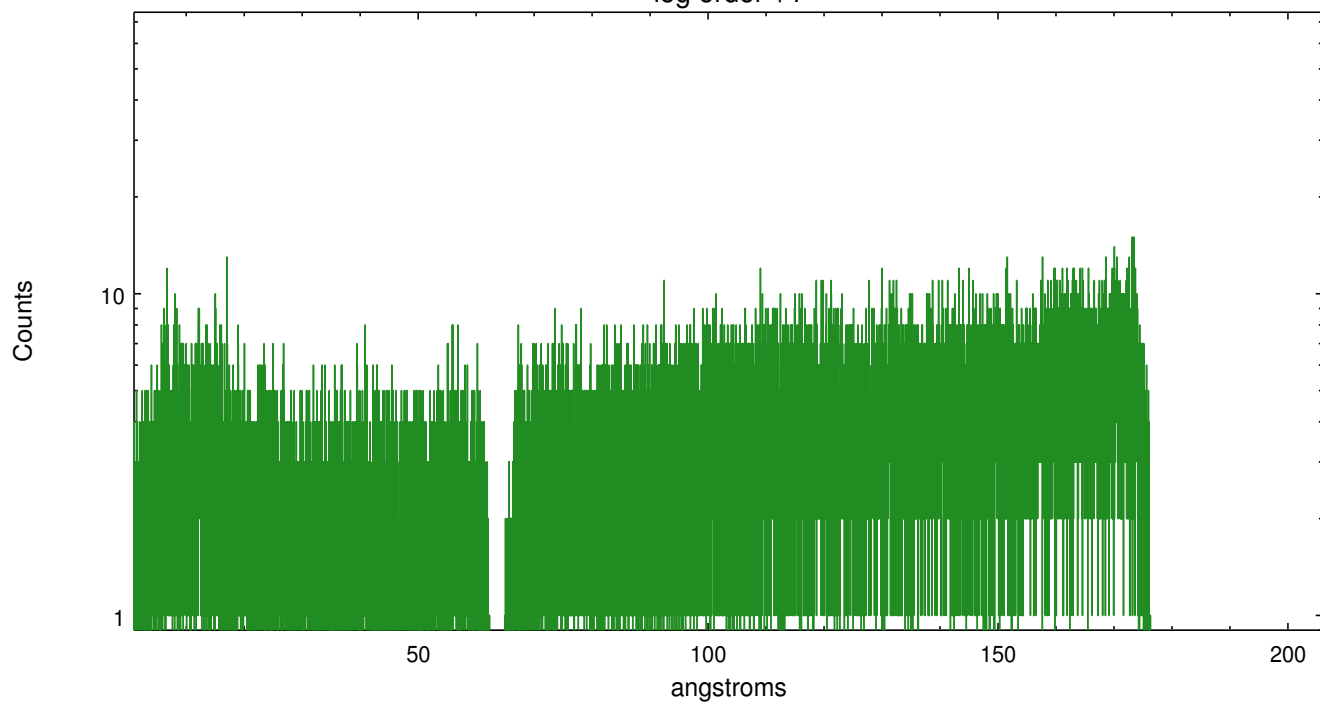


LETG Zero Order

leg order -1



leg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2019.03.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.136026802659

A.2 Comments

Roll constraint met.

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WARNING: Zeroth order selected by pipeline tools is not well-centered in the supernova remnant nor is it 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.

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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.