

V&V Reference Report

L2 ASCDS Version : 10.5.1.1

Observation 19904 - L2 Version 1
Chandra X-Ray Center

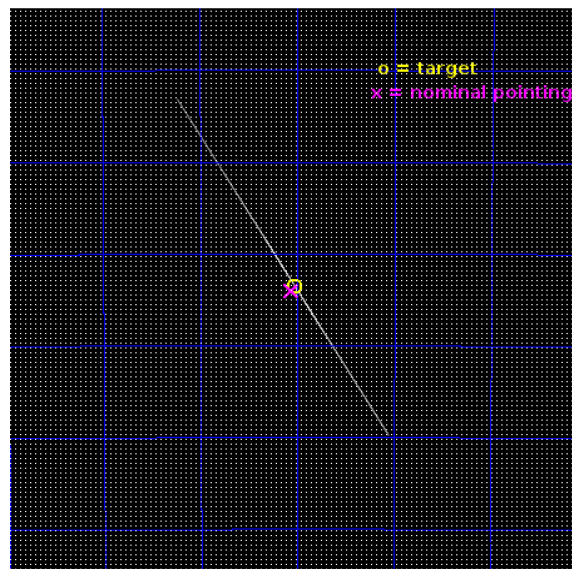
L2 Processing Date : Oct 22 2016

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1 Front

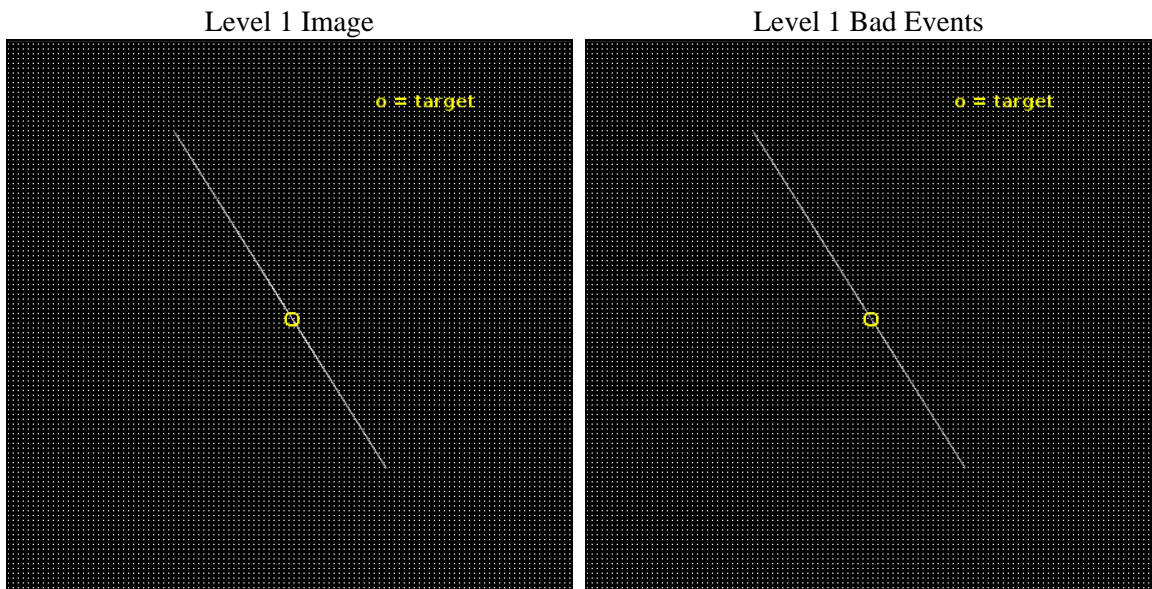
seq_num	401890	Sequence number
obs_id	19904	Observation id
title	Probing disk wind and other properties of 4U 1630-47	Proposal titl
observer	Sudip Bhattacharyya	Principal investigator
object	4U 1630-47	Source name
ra_targ	248.506667	Observer's specified target RA [deg]
dec_targ	-47.393	Observer's specified target Dec [deg]
ra_nom	248.51549175945	Nominal RA [deg]
dec_nom	-47.400650576633	Nominal Dec [deg]
roll_nom	238.8215191874	Nominal Roll [deg]
revision	1	Processing version of data
ontime	31052.75	Sum of GTIs [s]
livetime	30931.450195312	Livetime [s]
ontime5	31052.75	Sum of GTIs [s]
ontime6	31052.75	Sum of GTIs [s]
ontime7	31052.75	Sum of GTIs [s]
ontime8	31052.75	Sum of GTIs [s]
ontime9	31052.75	Sum of GTIs [s]
l2events	2132593	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	31000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.1.1	Processing system revision	ontime	31052.75	Sum of GTIs [s]
caldbver	4.7.2	 	ontime5	31052.75	Sum of GTIs [s]
date	2016-10-22T05:43:56	Date and time of file creation	ontime6	31052.75	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	31052.75	Sum of GTIs [s]
			ontime8	31052.75	Sum of GTIs [s]
			ontime9	31052.75	Sum of GTIs [s]
			l1events	3845788	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4139.98, 4152.87)	src1a sky pixel position

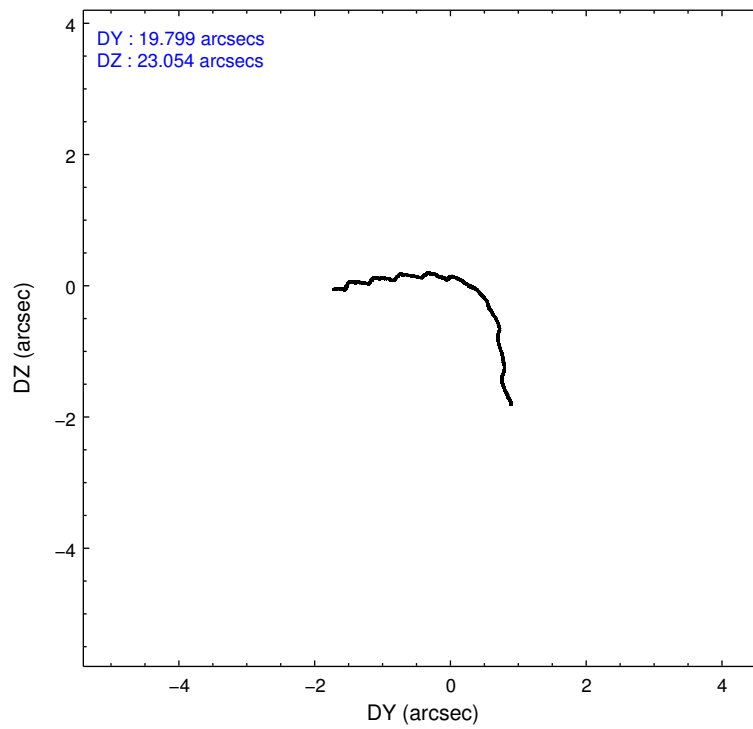
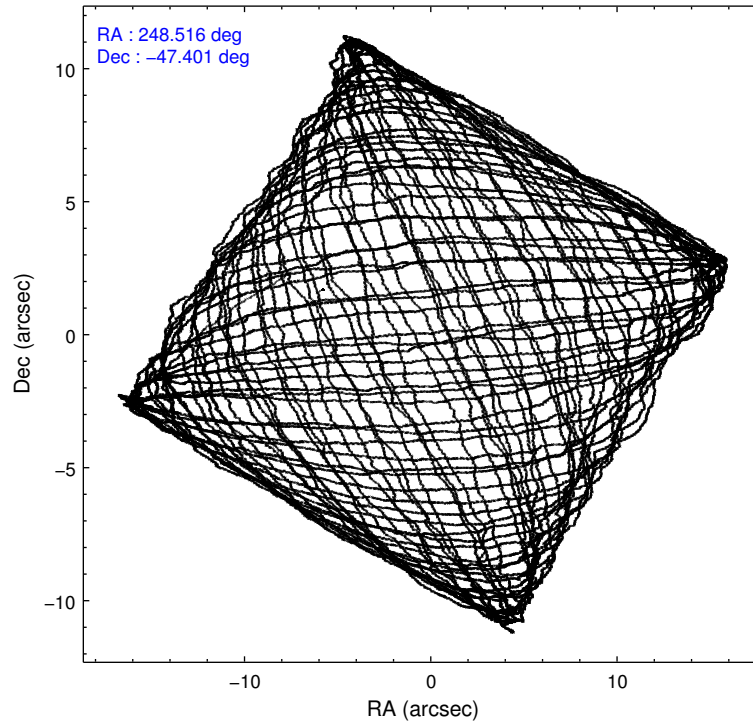
2.1.3 Events

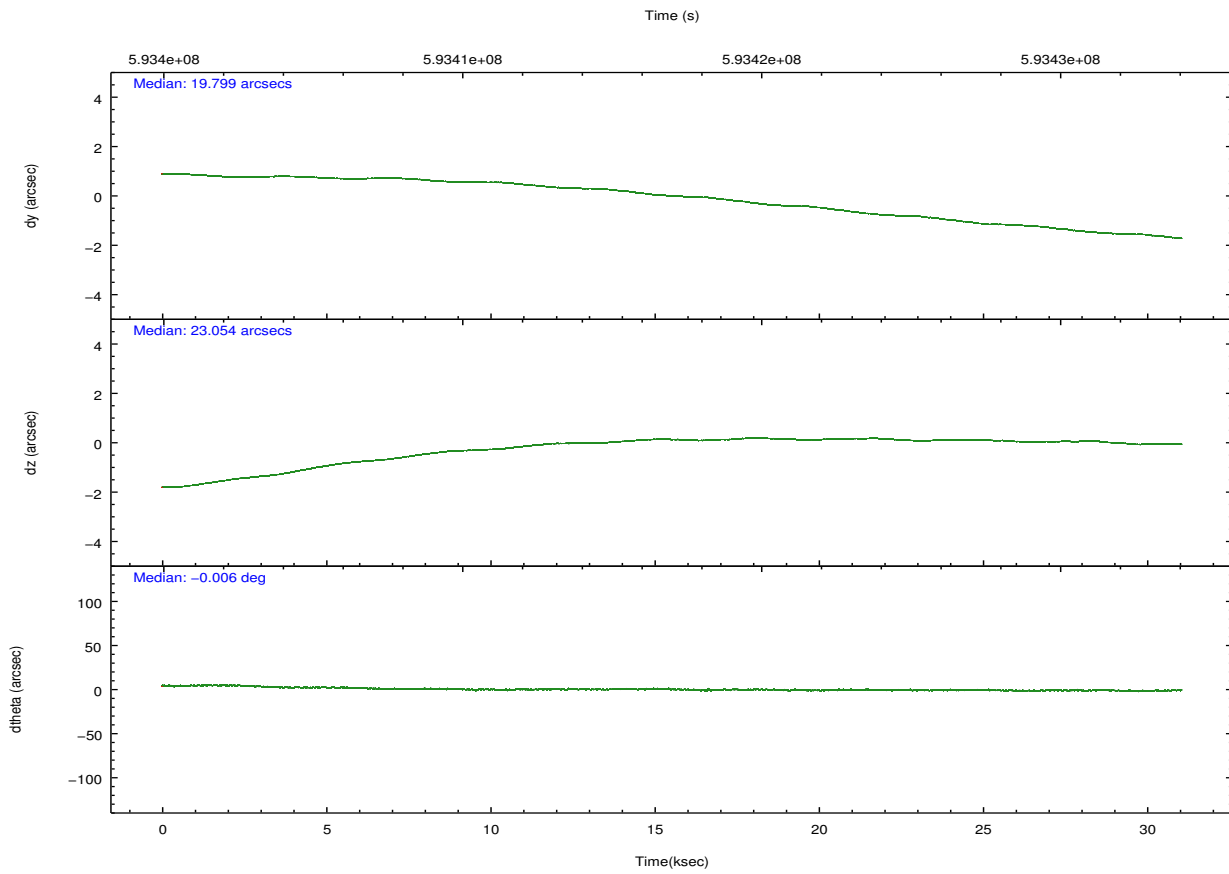
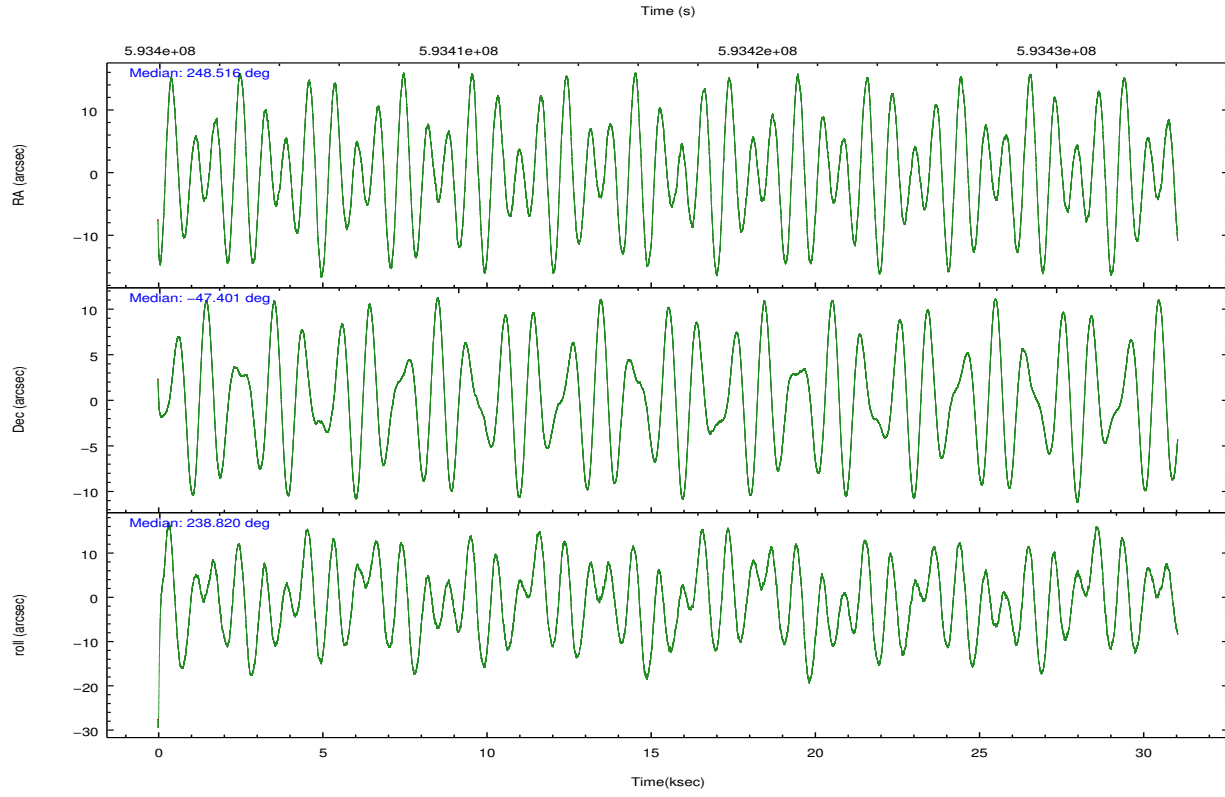
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	325978	1130876	1440025	609105	339804	grade 0 events	4332	16099	89643	41490	8241
rejected events	169375	359654	324175	410285	289208		1%	1%	6%	6%	2%
rejected %	51%	31%	22%	67%	85%	grade 1 events	91	212	844	407	176
							0%	0%	0%	0%	0%
						grade 2 events	66476	635860	425993	102376	25848
							20%	56%	29%	16%	7%
						grade 3 events	4069	5023	55244	11529	4193
							1%	0%	3%	1%	1%
						grade 4 events	3913	4720	54375	11071	4650
							1%	0%	3%	1%	1%
						grade 5 events	11543	8625	25903	9916	6323
							3%	0%	1%	1%	1%
						grade 6 events	78048	110476	491932	32638	7733
							23%	9%	34%	5%	2%
						grade 7 events	157506	349861	296091	399678	282640
							48%	30%	20%	65%	83%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	CC33_GRADED	CC33_GRADED	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	248.515794	248.5154917594544	CCD I2 on	N	N
[deg] Pointing Dec	-47.373206	-47.4006505766326	CCD I3 on	N	N
[deg] Pointing Roll	238.665131	238.8215191873967	CCD S0 on	O1	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-183.992523	-183.985022191653	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-6.14	-6.147500391354811	CCD S4 on	Y	Y
[s] Observation start time (MET)	593401506.184000	593400366.64192	CCD S5 on	Y	Y
Observation start date	2016-10-21T01:43:58	2016-10-21T01:26:06	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	593432506.184000	593433756.01885	On-chip summing requested	N	N
Observation end date	2016-10-21T10:20:38	2016-10-21T10:42:36	Subarray requested	NONE	NONE
Read mode	CONTINUOUS	CONTINUOUS	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0

2.3 Aspect





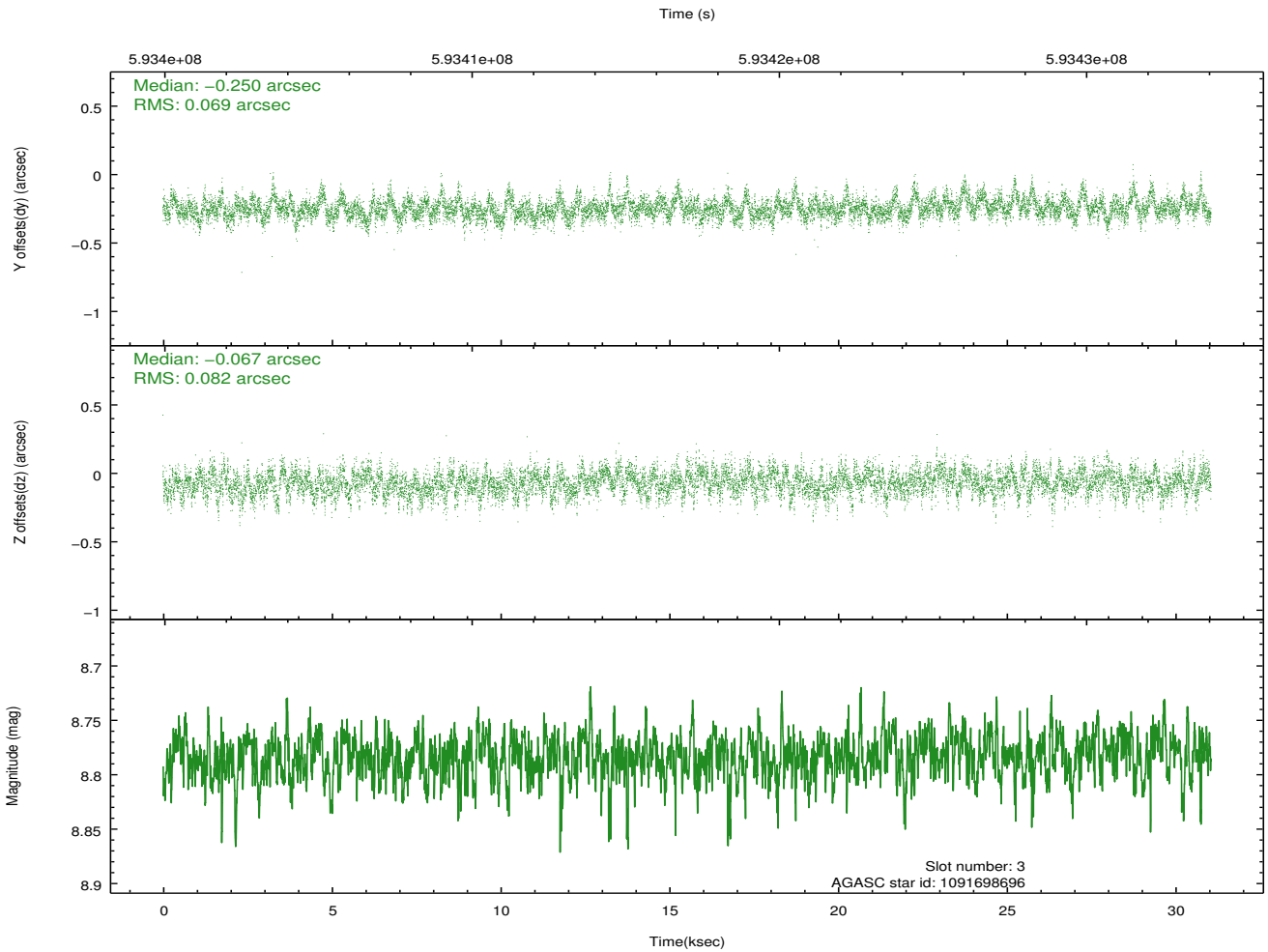
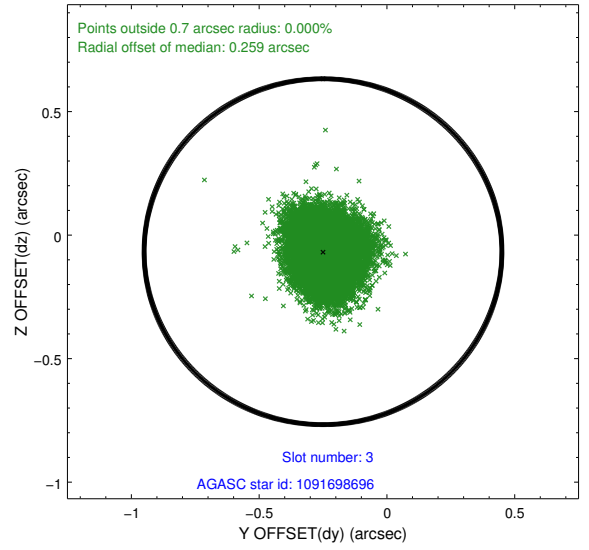
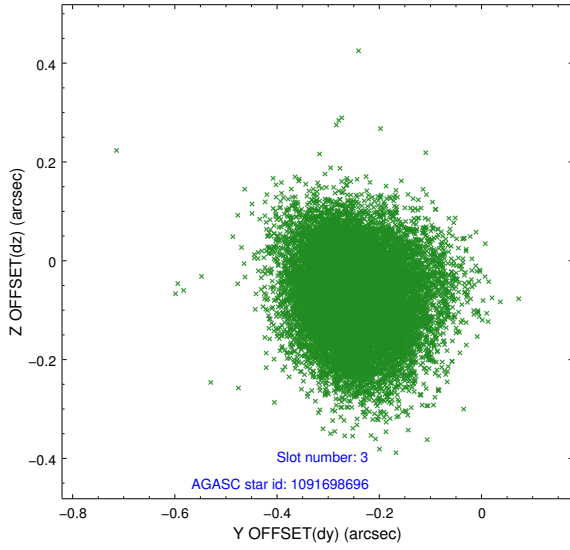
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.00	7576	-0.271	-0.094	0.032	0.048	0.000000	0.000000	-772.53	-1871.19
1	FID		ACIS-S-4	7.12	7576	0.542	0.160	0.030	0.081	0.000000	0.000000	2141.46	37.52
2	FID		ACIS-S-5	7.15	7576	-0.291	-0.049	0.021	0.034	0.000000	0.000000	-1825.36	30.97
3	GUIDE	used	1091698696	8.78	15135	-0.250	-0.067	0.113	0.186	248.529134	-48.079711	2156.20	1350.37
4	GUIDE	used	1091699360	7.43	15149	0.100	0.105	0.125	0.206	248.660725	-47.004364	-1318.41	-386.11
5	GUIDE	used	1091702440	8.71	15148	0.070	-0.251	0.152	0.254	248.295809	-47.683380	1232.28	125.61
6	GUIDE	used	1091198192	8.83	15146	0.354	0.293	0.133	0.211	248.317554	-46.532724	-2327.89	-1992.20
7	GUIDE	used	1091705224	9.16	15132	-0.278	-0.091	0.131	0.214	248.613211	-47.940846	1623.50	1263.42

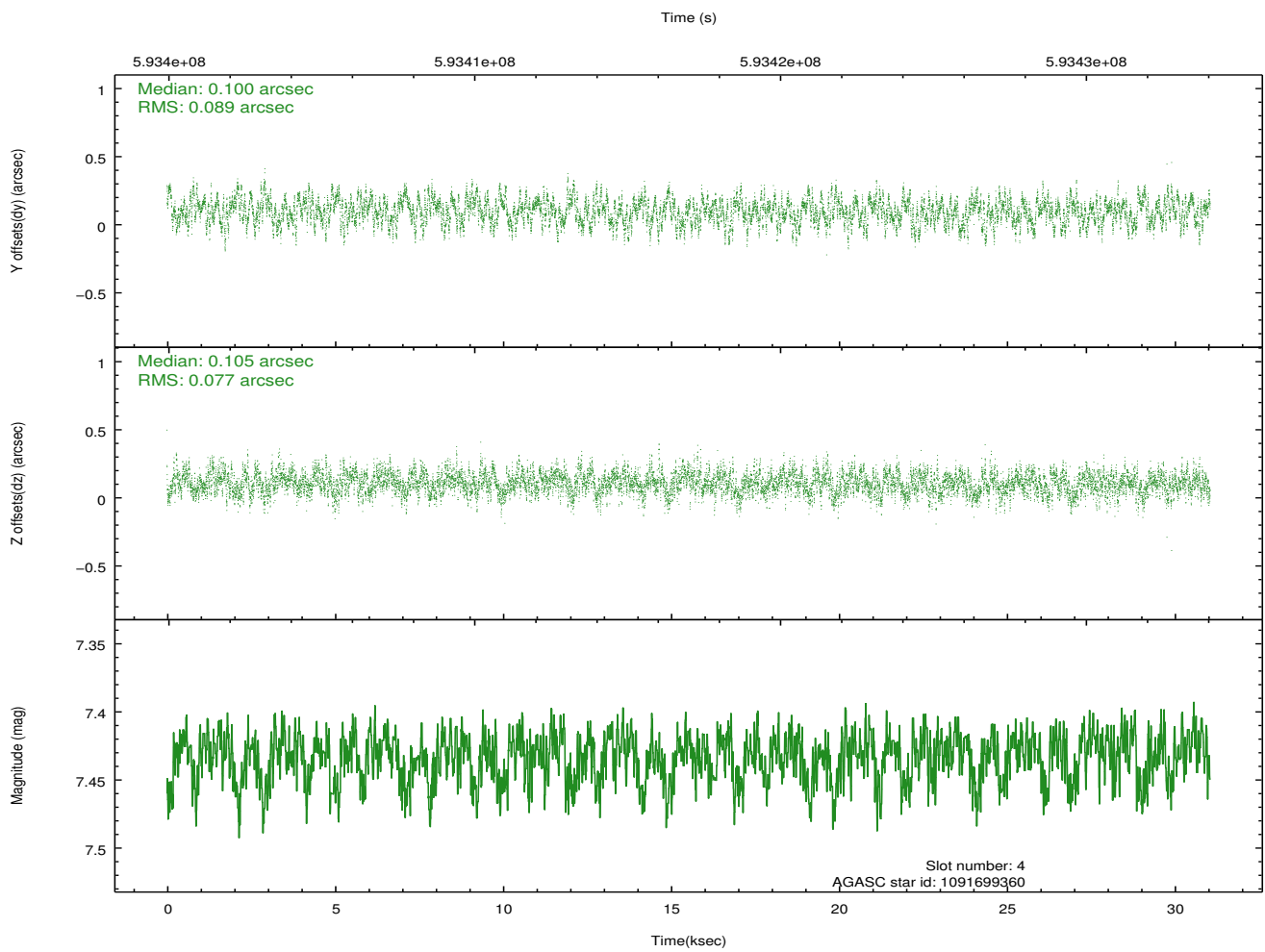
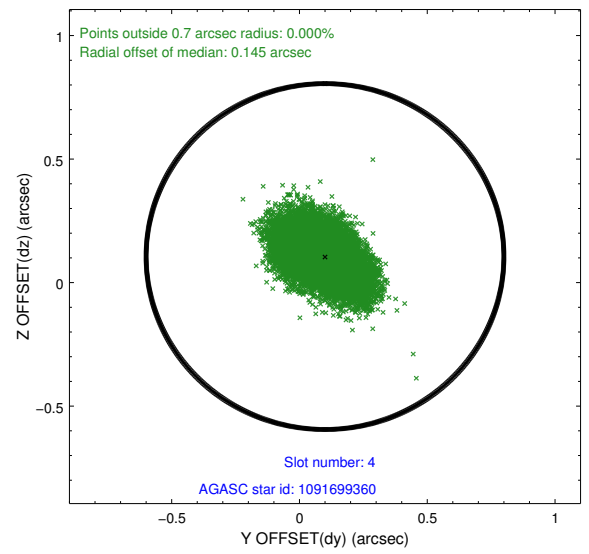
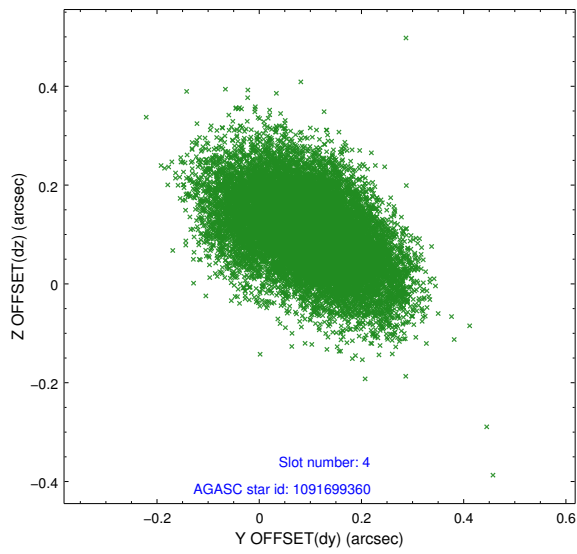
∞

2.4 Star Slots

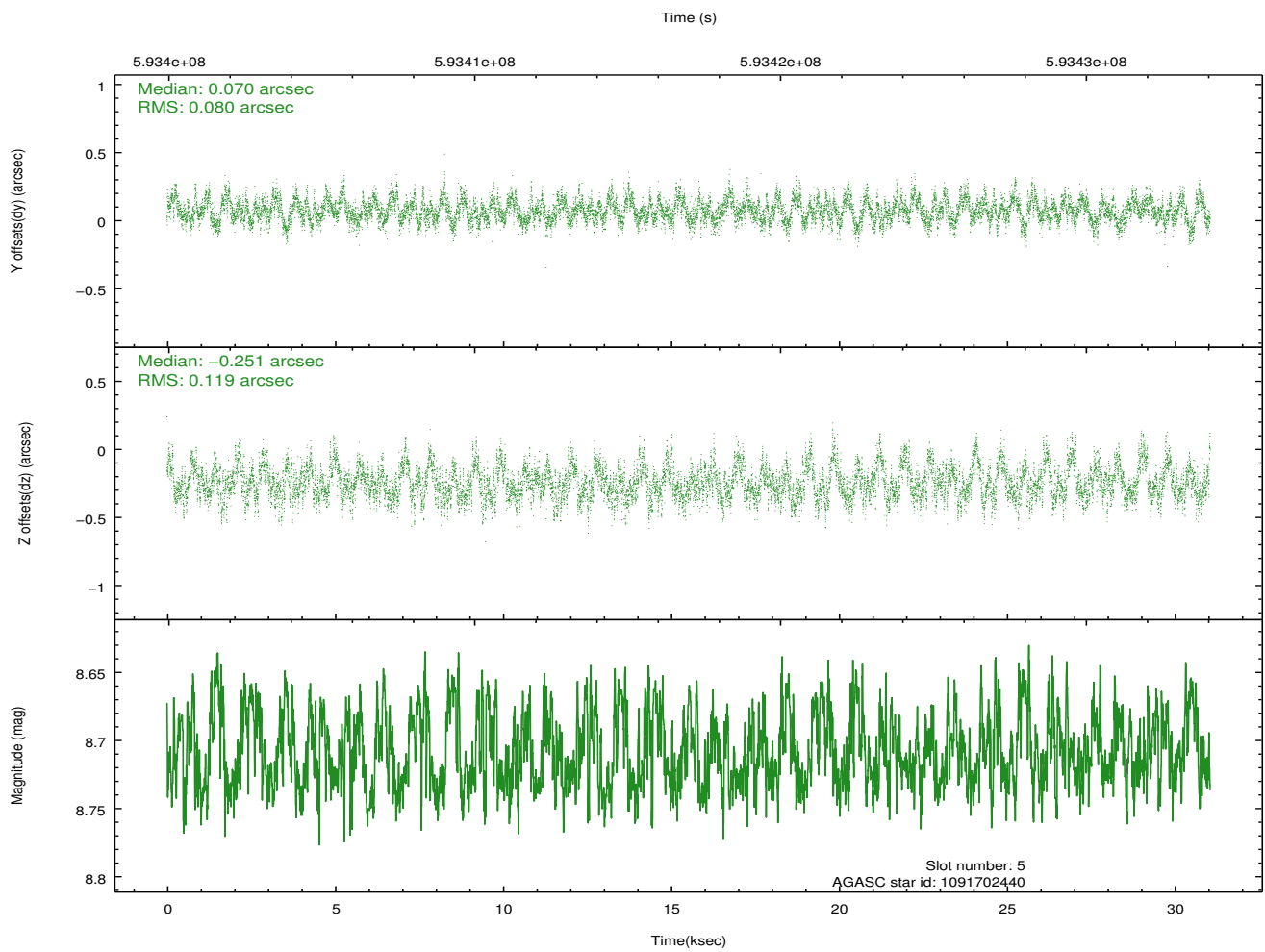
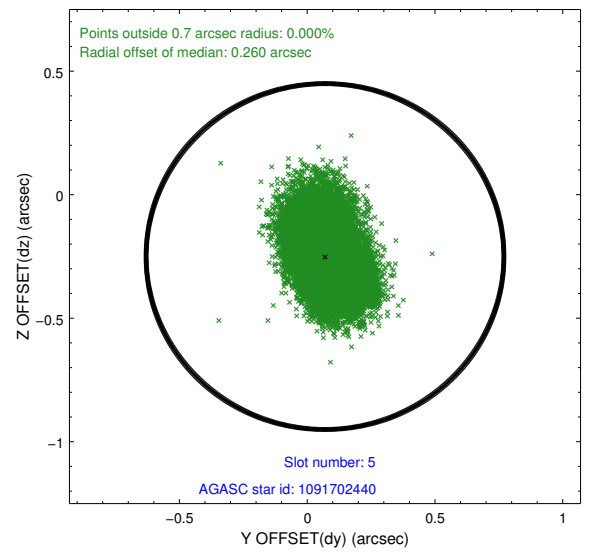
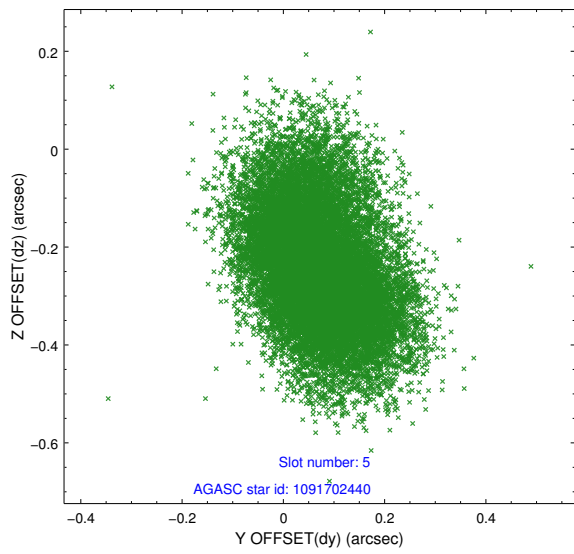
2.4.1 Slot 3



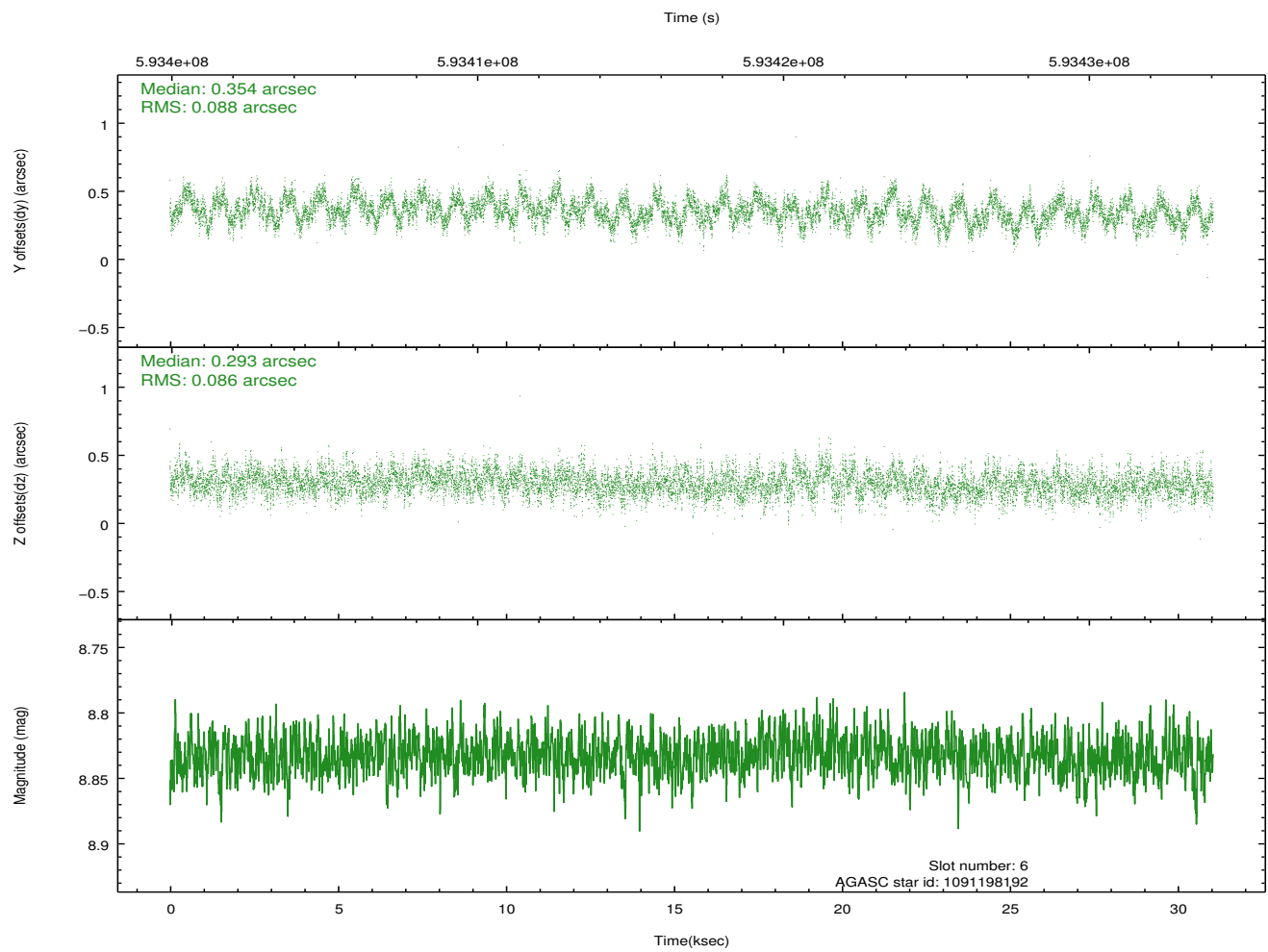
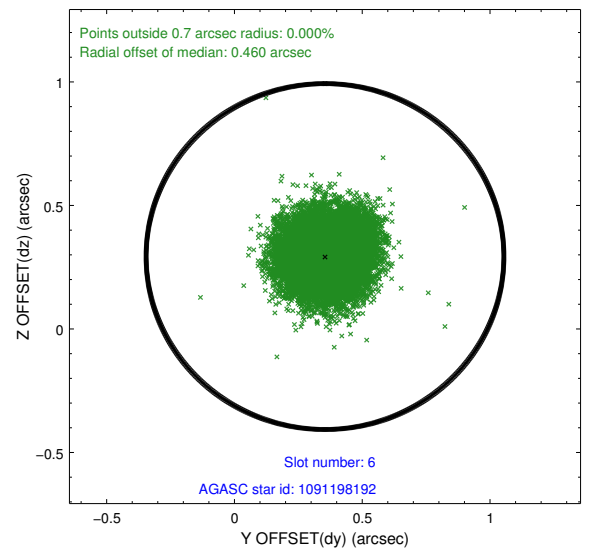
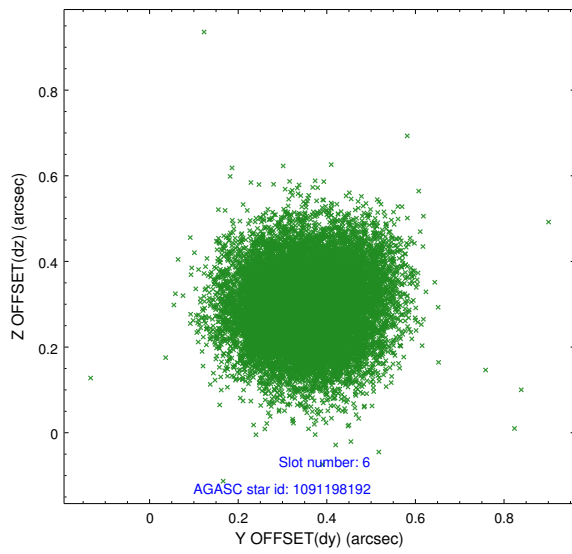
2.4.2 Slot 4



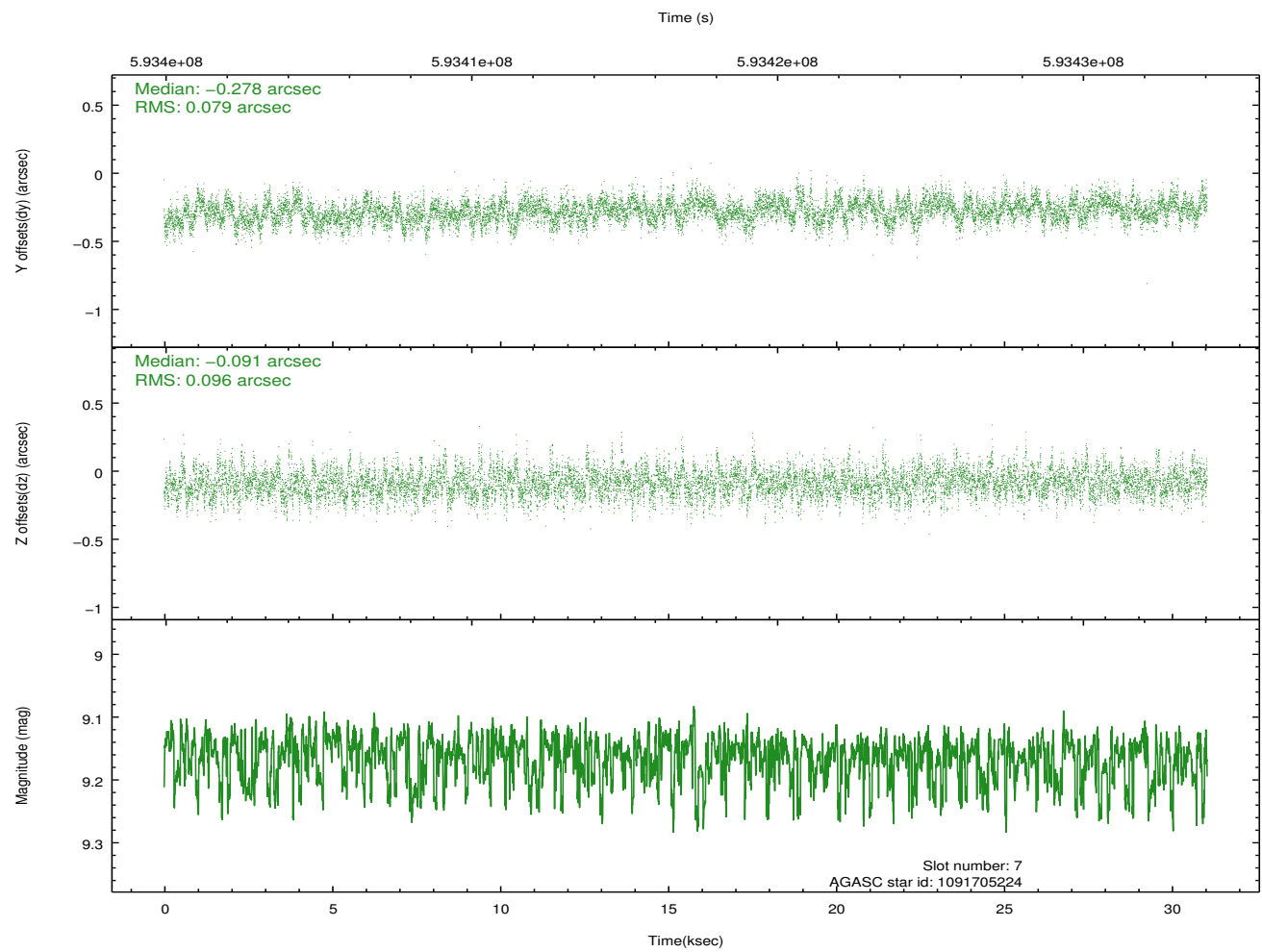
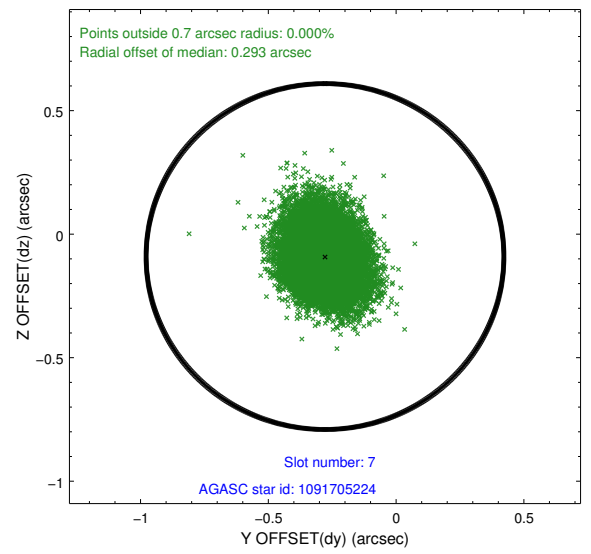
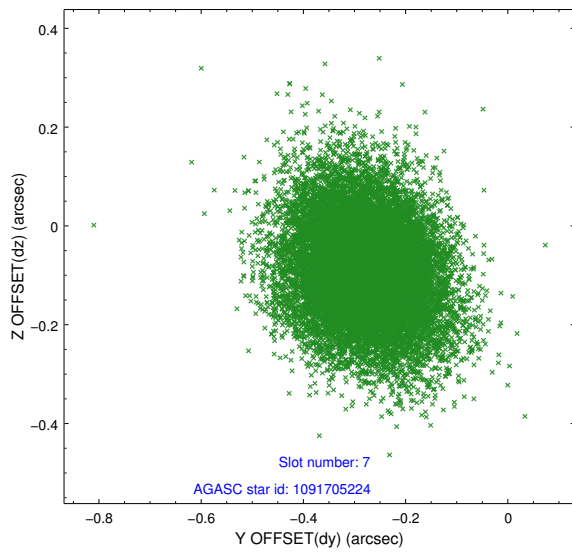
2.4.3 Slot 5



2.4.4 Slot 6

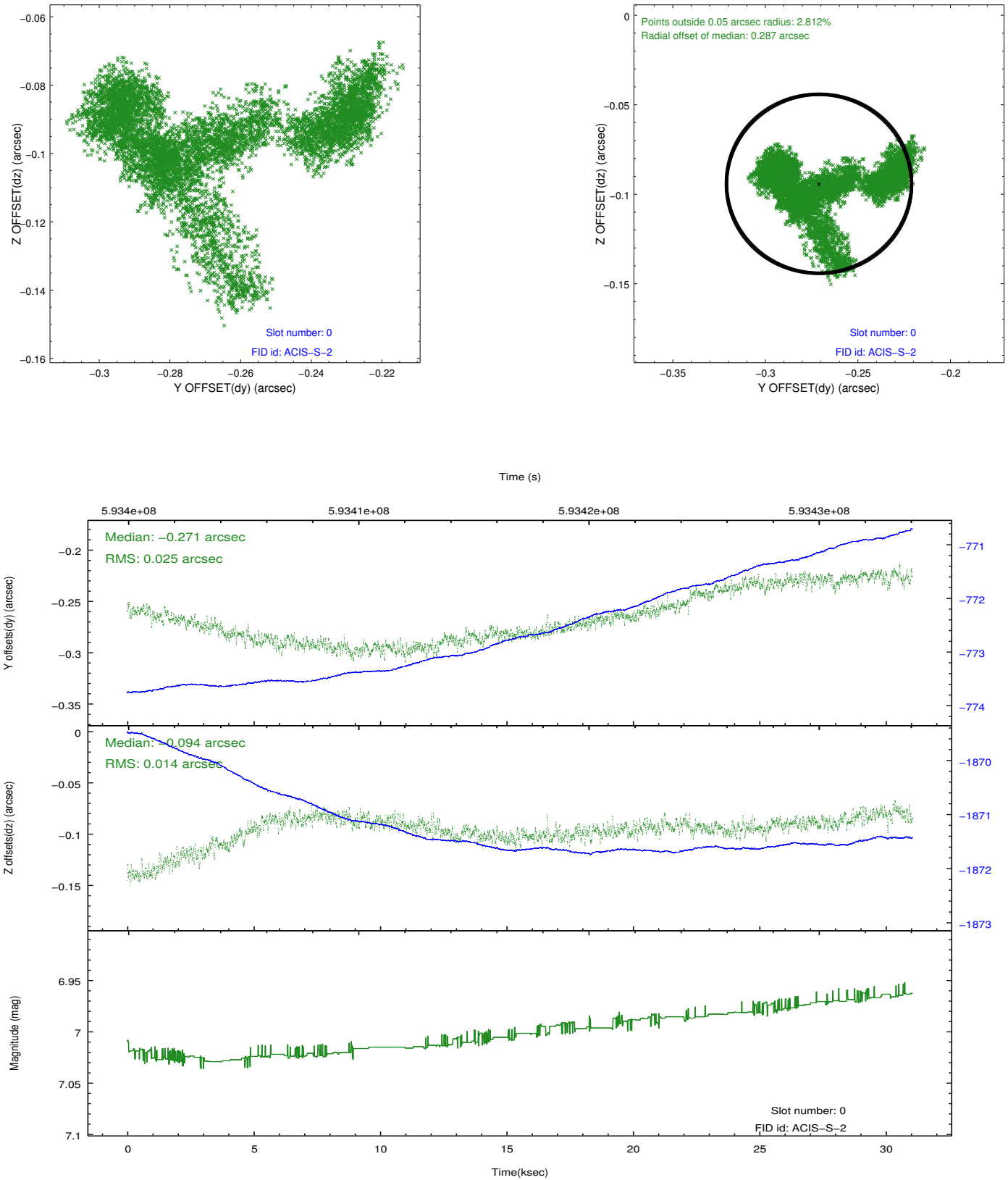


2.4.5 Slot 7

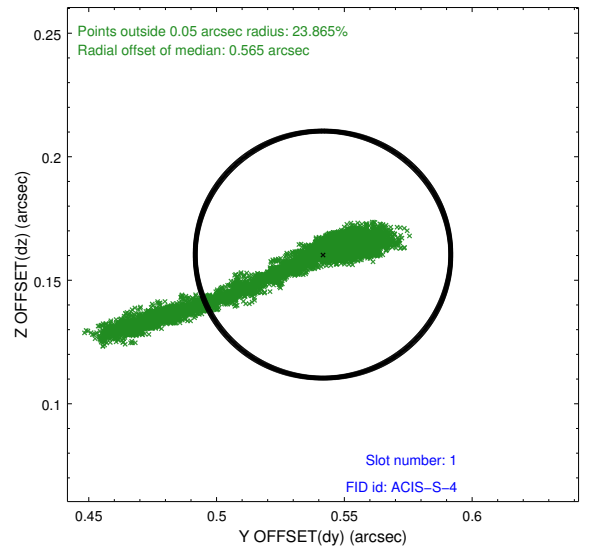
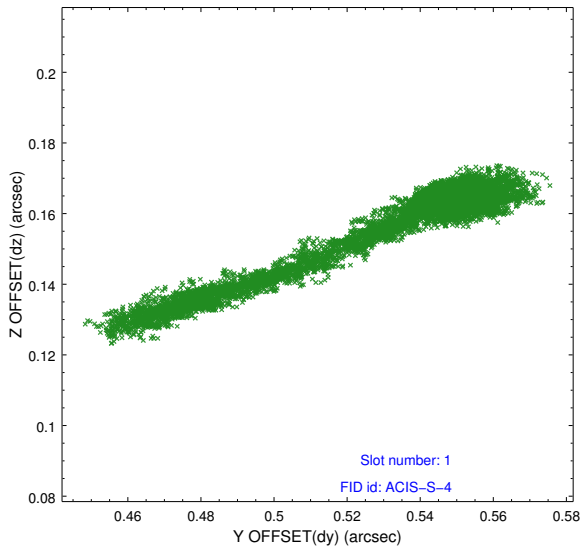


2.5 FID Slots

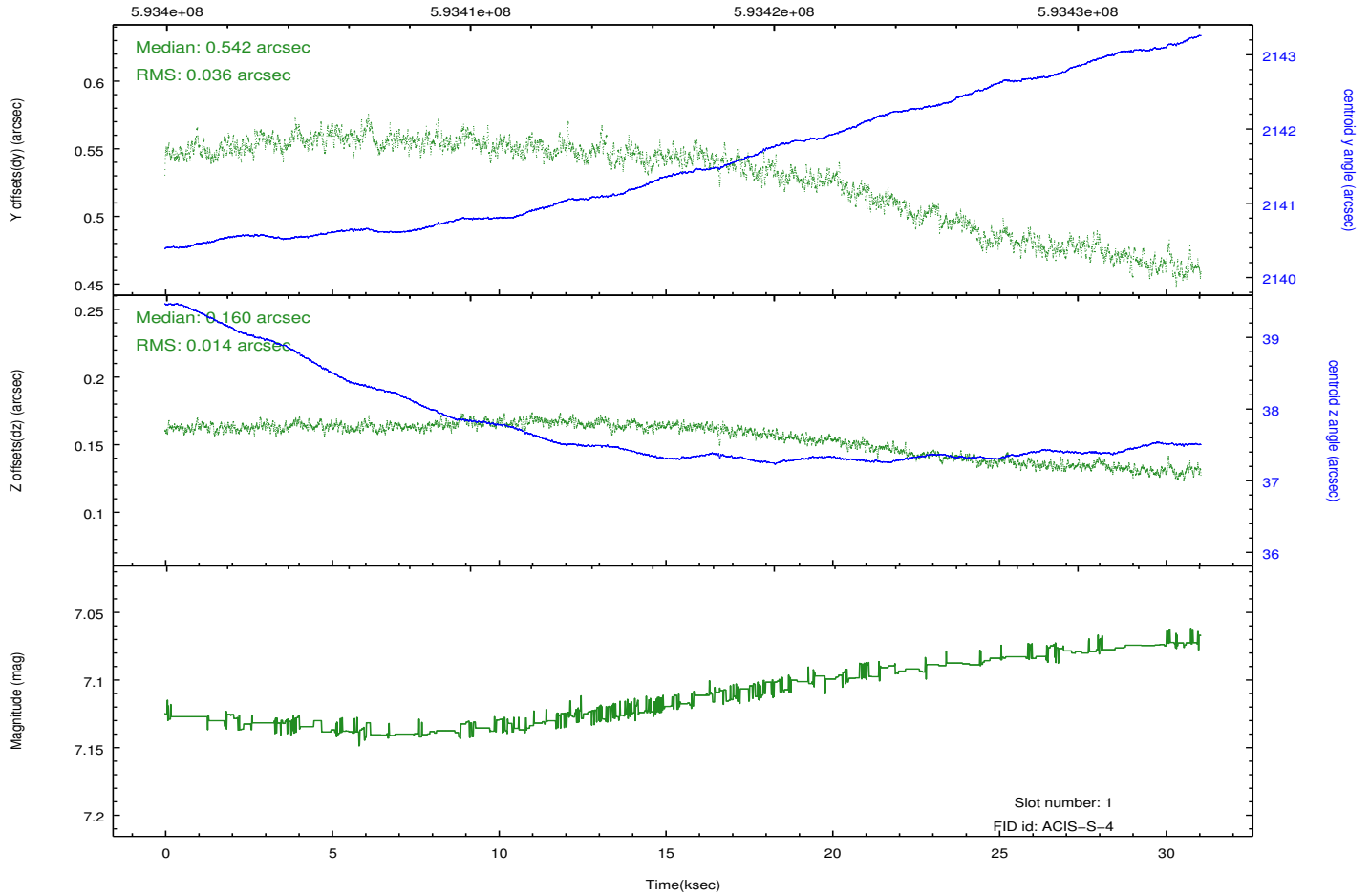
2.5.1 Slot 0



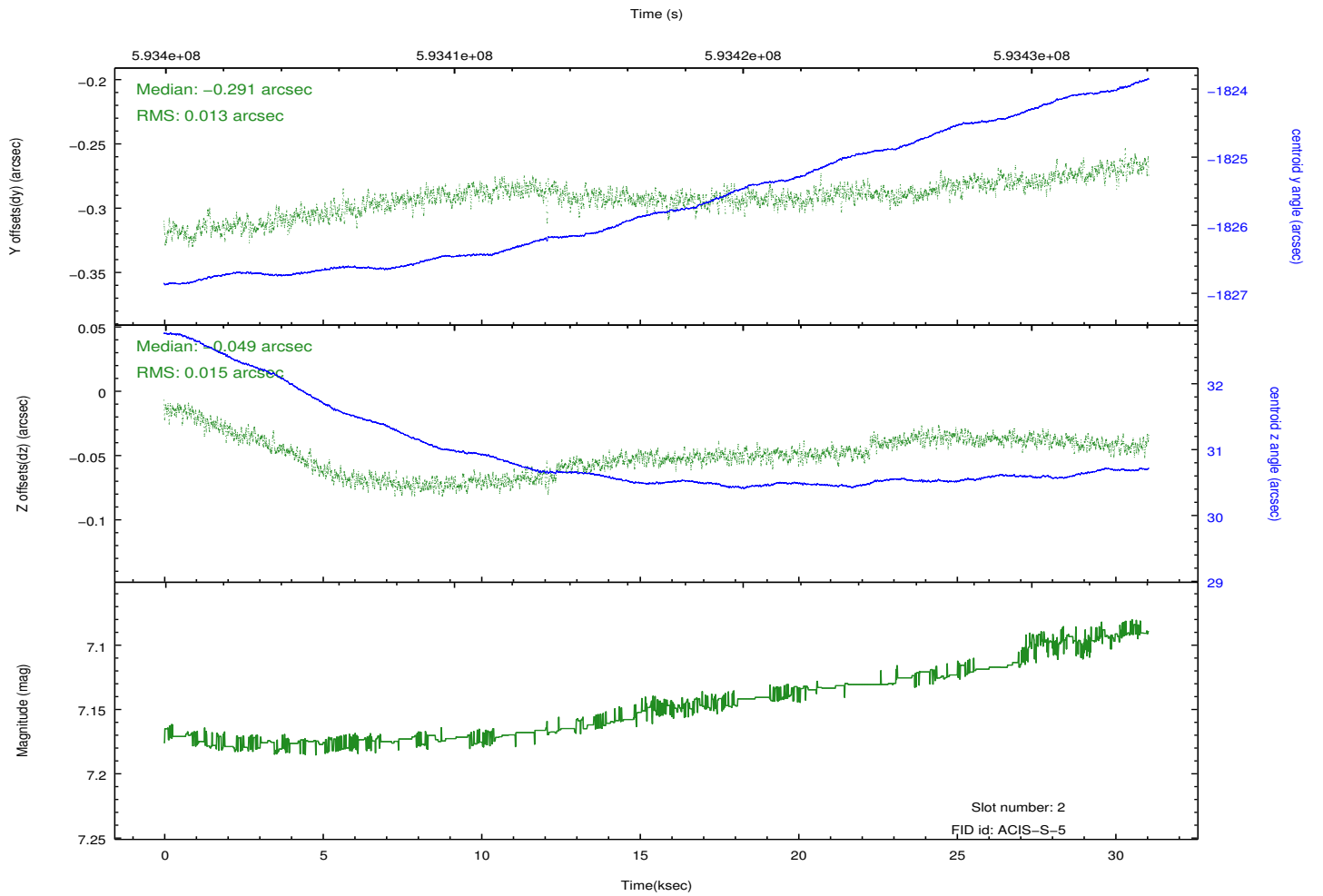
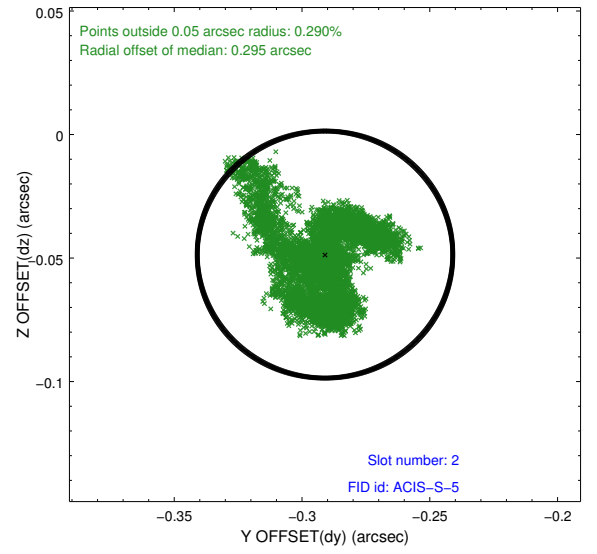
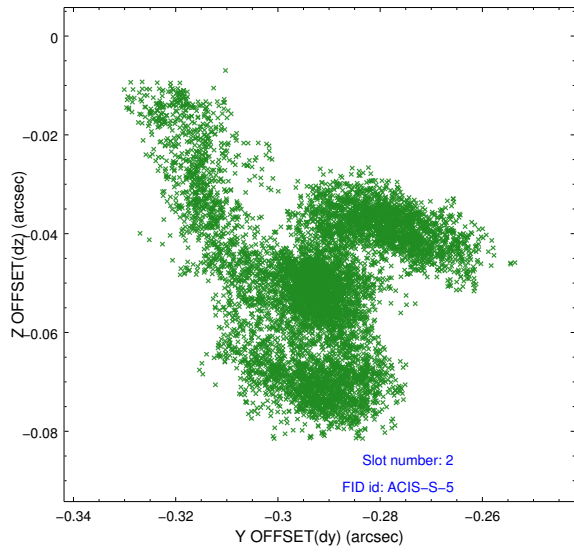
2.5.2 Slot 1



Time (s)

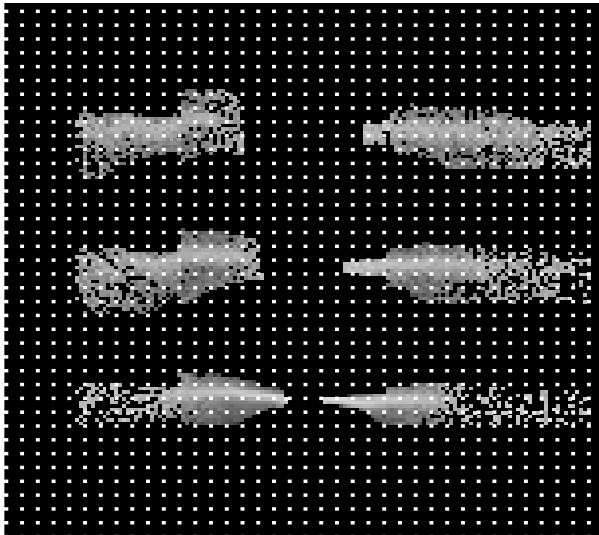


2.5.3 Slot 2

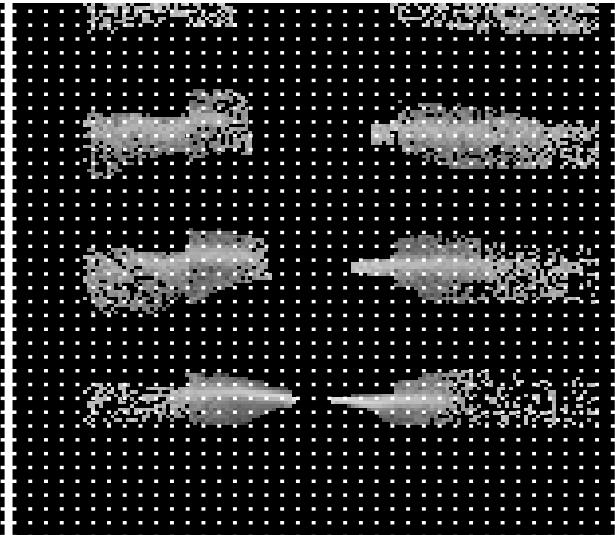


3 Gratings

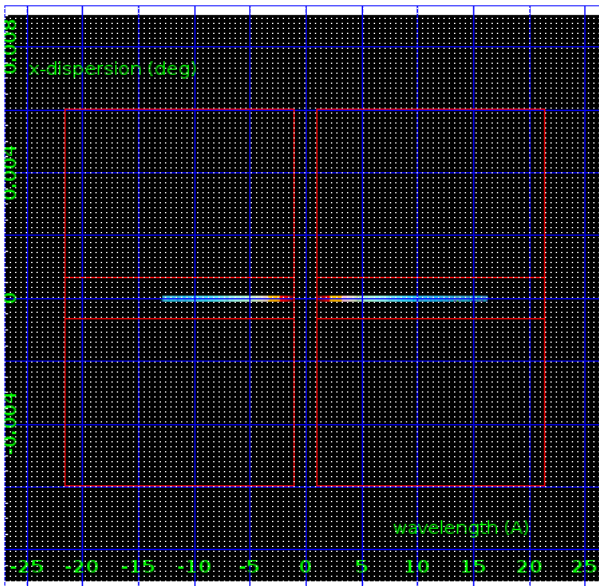
3.1 HEG Arm



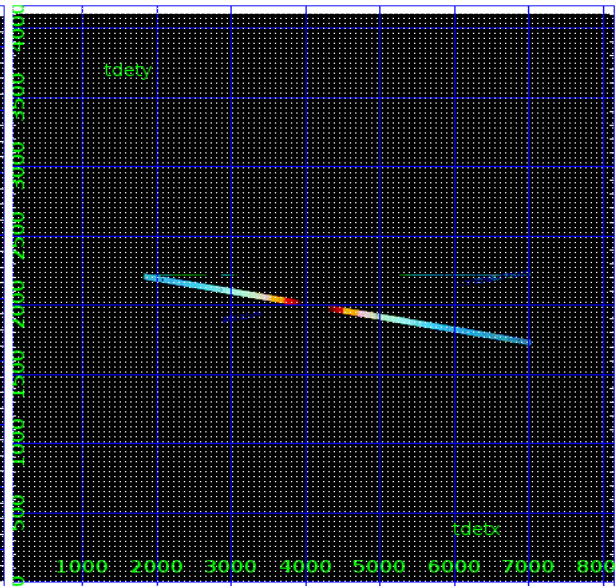
HEG Order Sort 123



HEG Order Sort ALL

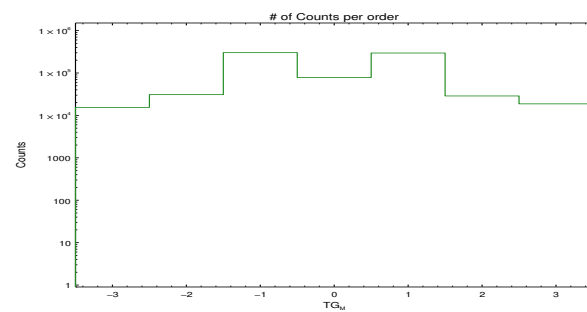


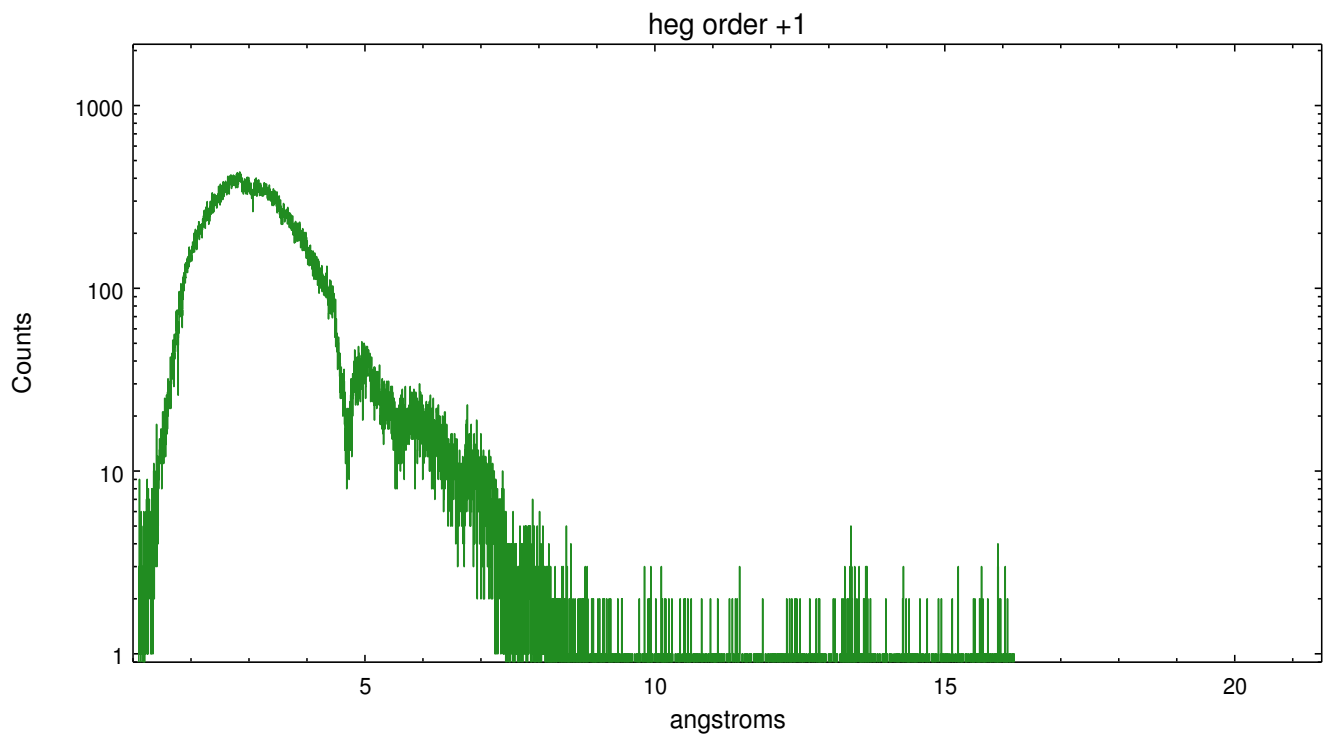
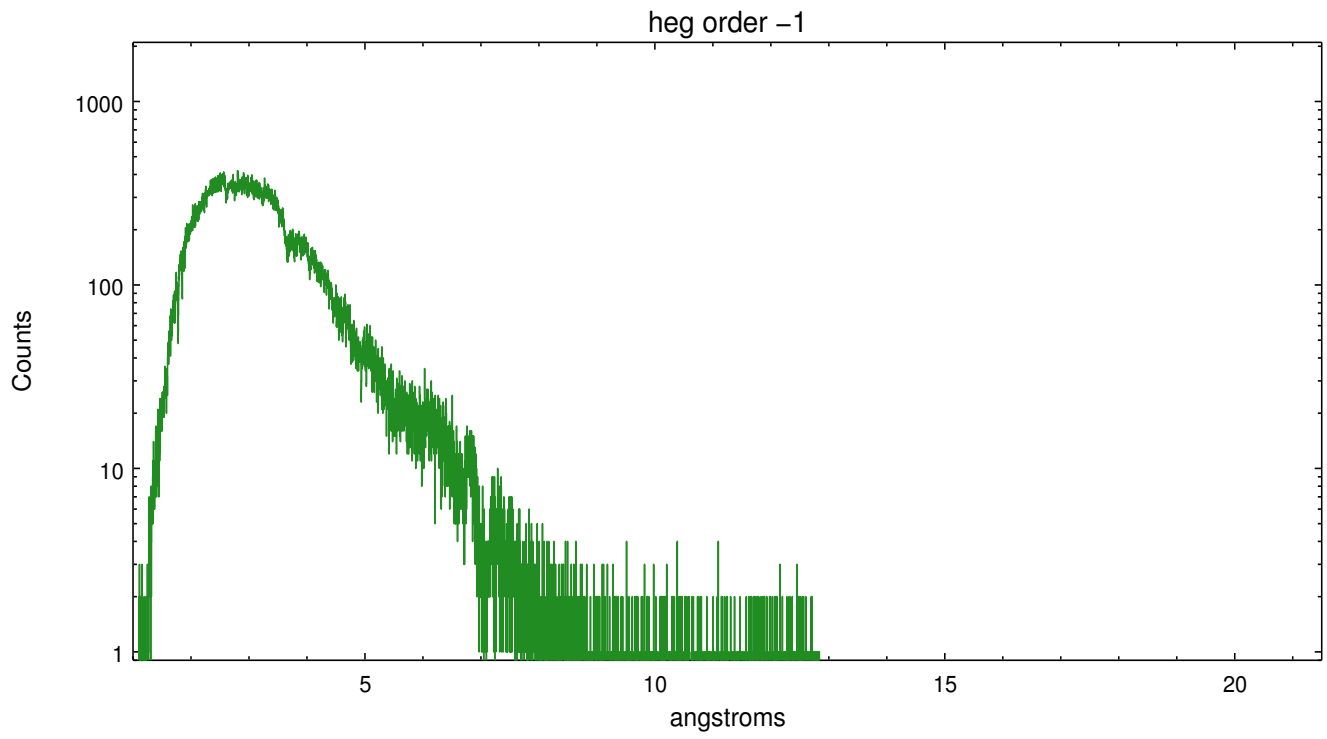
Spot Image HEG



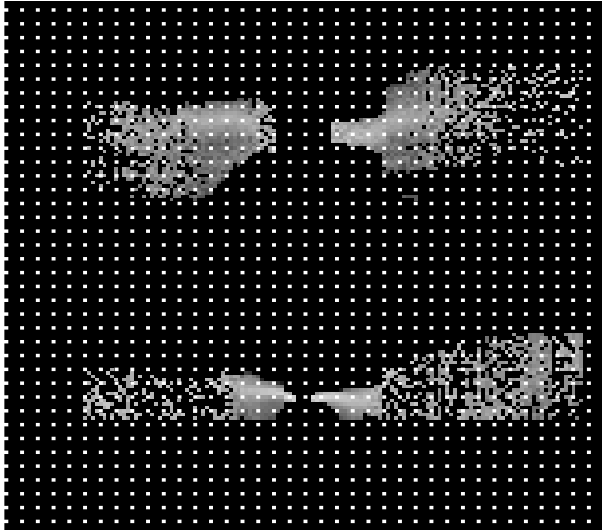
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	15438	30890	301870	78082	295683	28745	18718





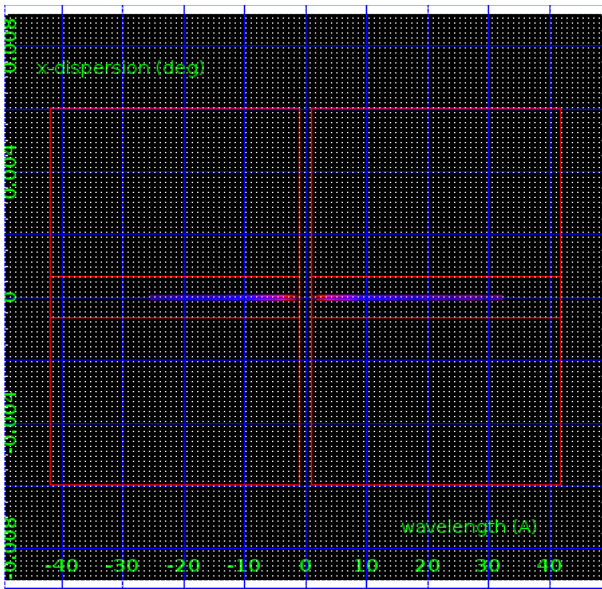
3.2 MEG Arm



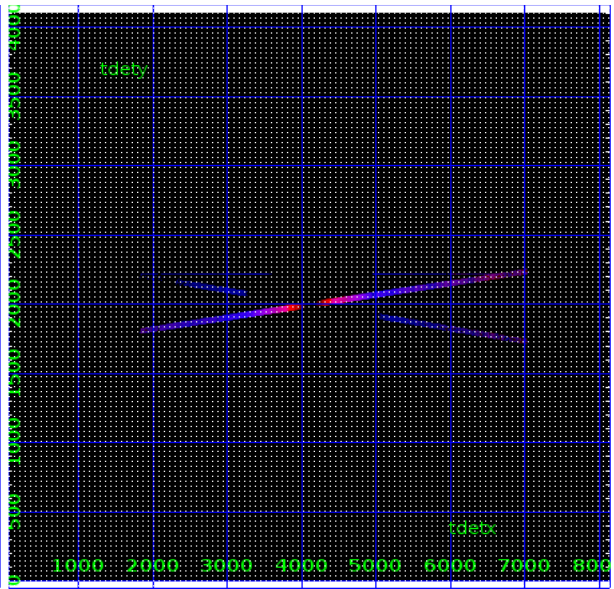
MEG Order Sort 123



MEG Order Sort ALL

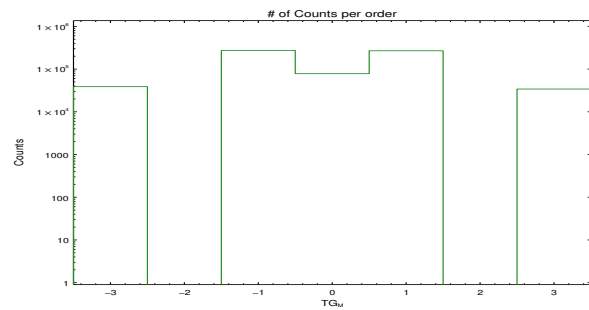


Spot Image MEG

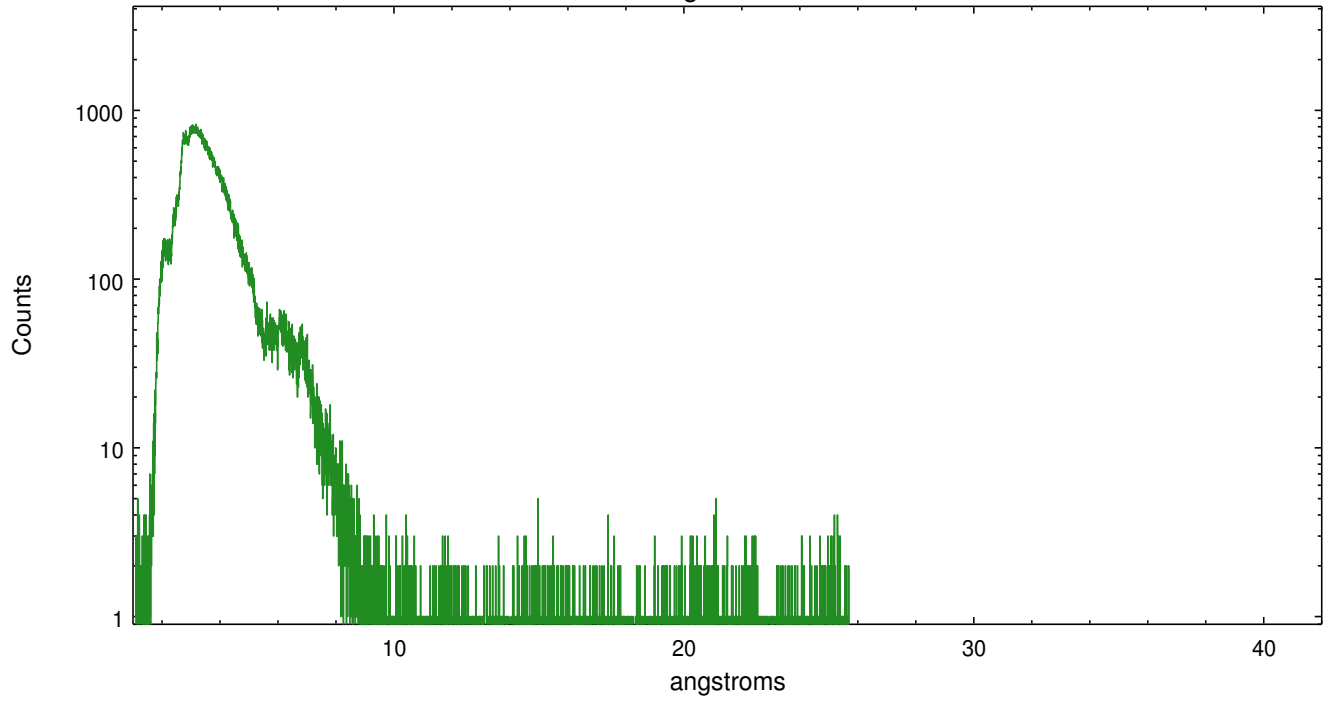


Full Detector MEG

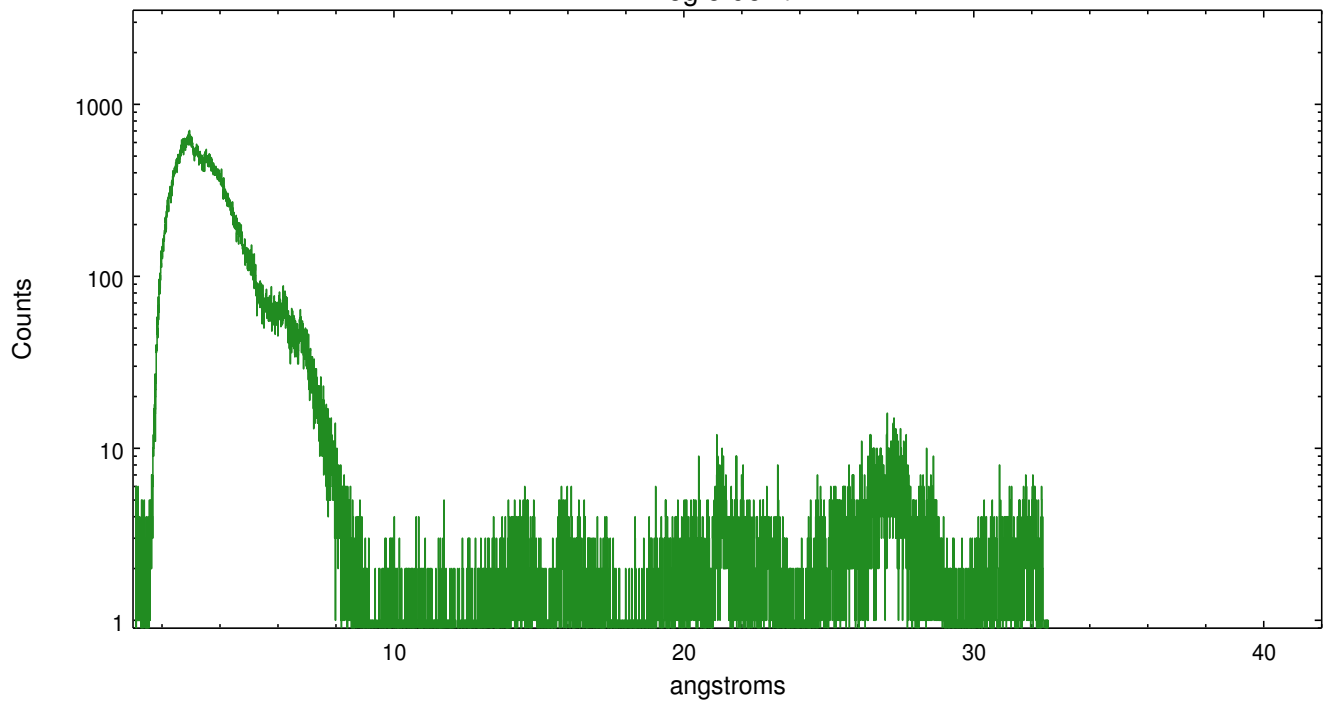
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	38791	0	272602	78082	268352	0	34136



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2016.10.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.05275

A.2 Comments

Comments for Obi 0

Fid in slot 1 radial offset > 0.550000 arcsec

The fid slot 1 radial offset of 0.565 arcsec is acceptable.