

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 19720 - L2 Version 1
Chandra X-Ray Center

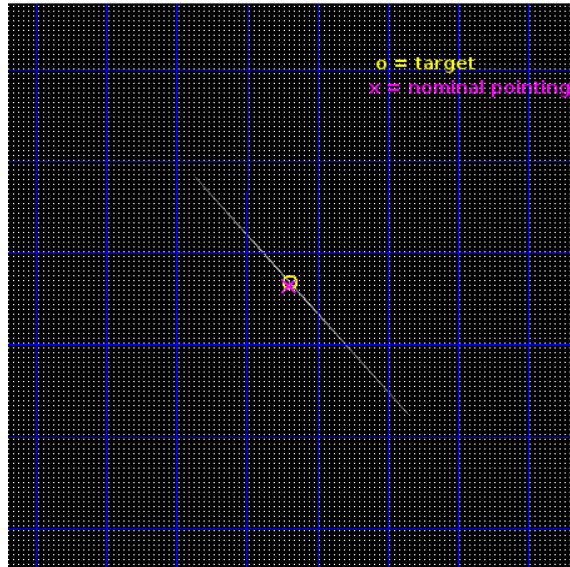
L2 Processing Date : Aug 10 2017

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1 Front

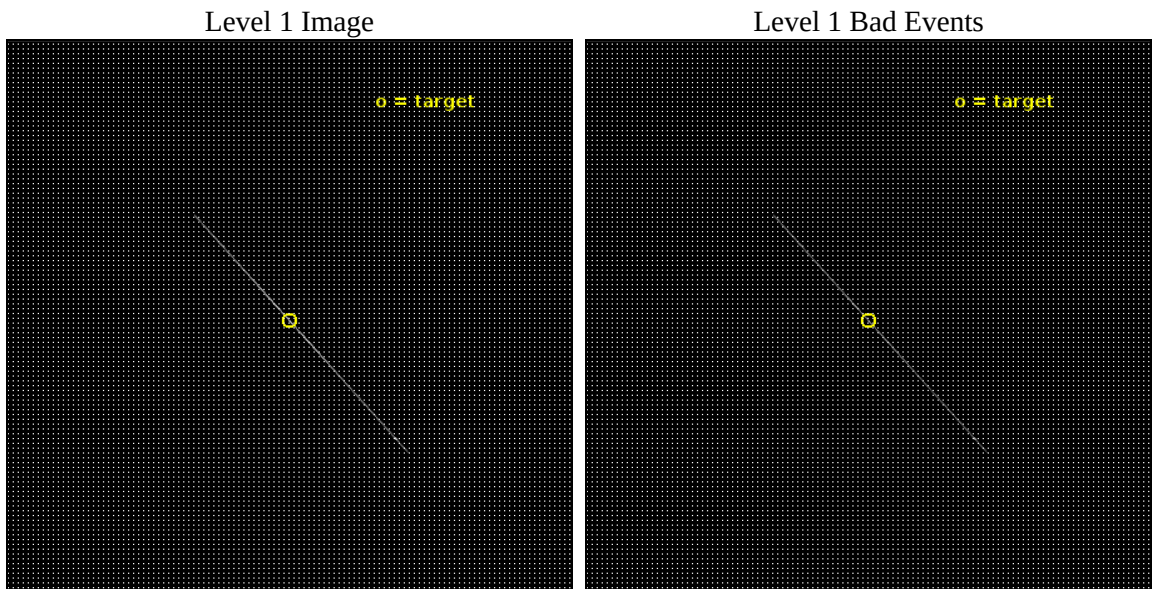
seq_num	401887	Sequence number
obs_id	19720	Observation id
title	A Chandra Legacy for GRS 1915+105	Proposal title
observer	Claude Canizares	Principal investigator
object	GRS 1915+105	Source name
ra_targ	288.798333	Observer's specified target RA [deg]
dec_targ	10.945778	Observer's specified target Dec [deg]
ra_nom	288.7992063039	Nominal RA [deg]
dec_nom	10.94038482789	Nominal Dec [deg]
roll_nom	229.16870836215	Nominal Roll [deg]
revision	1	Processing version of data
ontime	21880.938855171	Sum of GTIs [s]
livetime	21795.466437768	Livetime [s]
ontime5	26124.25	Sum of GTIs [s]
ontime6	21794.800583601	Sum of GTIs [s]
ontime7	21880.938855171	Sum of GTIs [s]
ontime8	26087.773833752	Sum of GTIs [s]
l2events	5519524	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	26000.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	21880.938855171	Sum of GTIs [s]
caldsver	4.7.5	 	ontime5	26124.25	Sum of GTIs [s]
date	2017-08-10T02:20:07	Date and time of file creation	ontime6	21794.800583601	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	21880.938855171	Sum of GTIs [s]
			ontime8	26087.773833752	Sum of GTIs [s]
			l1events	9952529	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4103.68, 4134.92)	src1a sky pixel position

2.1.3 Events

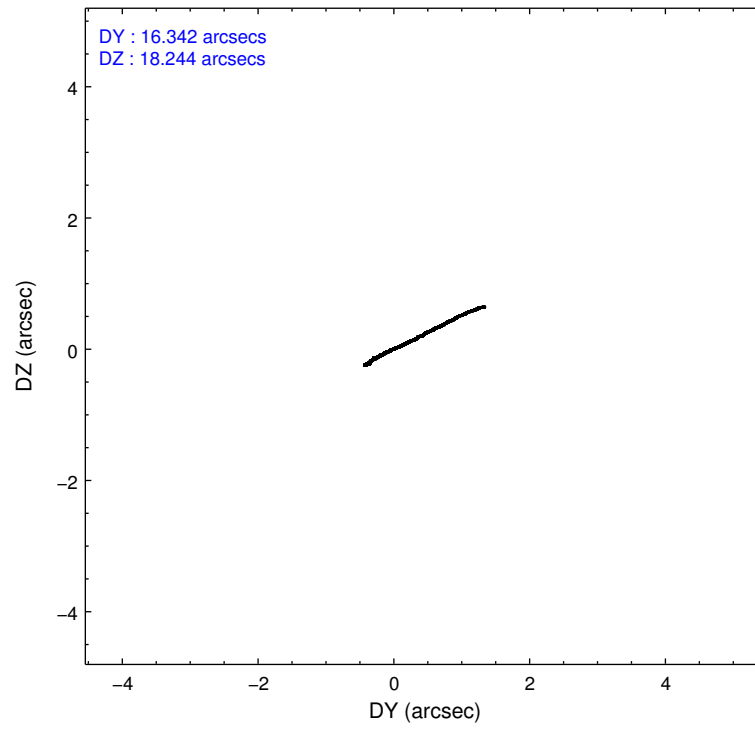
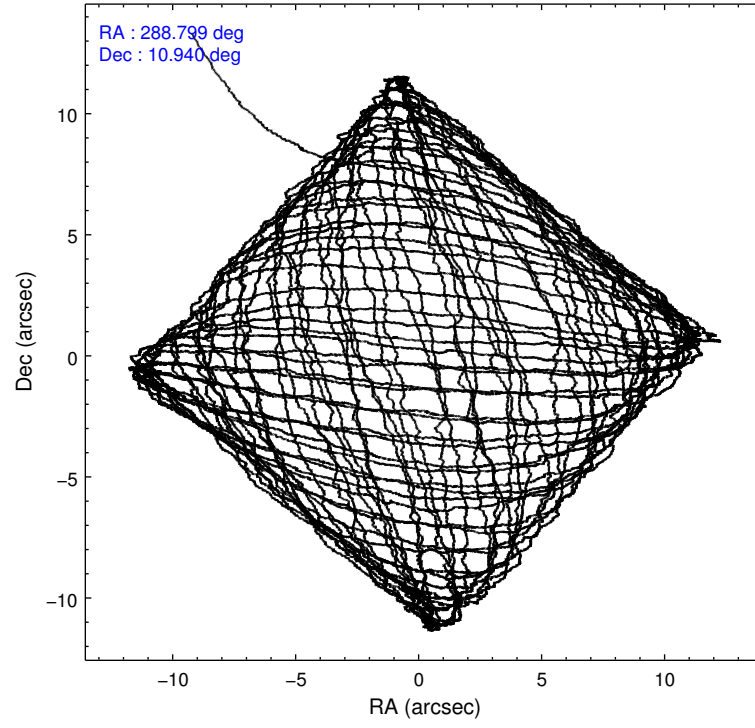
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	2044193	2146420	4889780	872136
rejected events	643495	437027	1477522	460326
rejected %	31%	20%	30%	52%

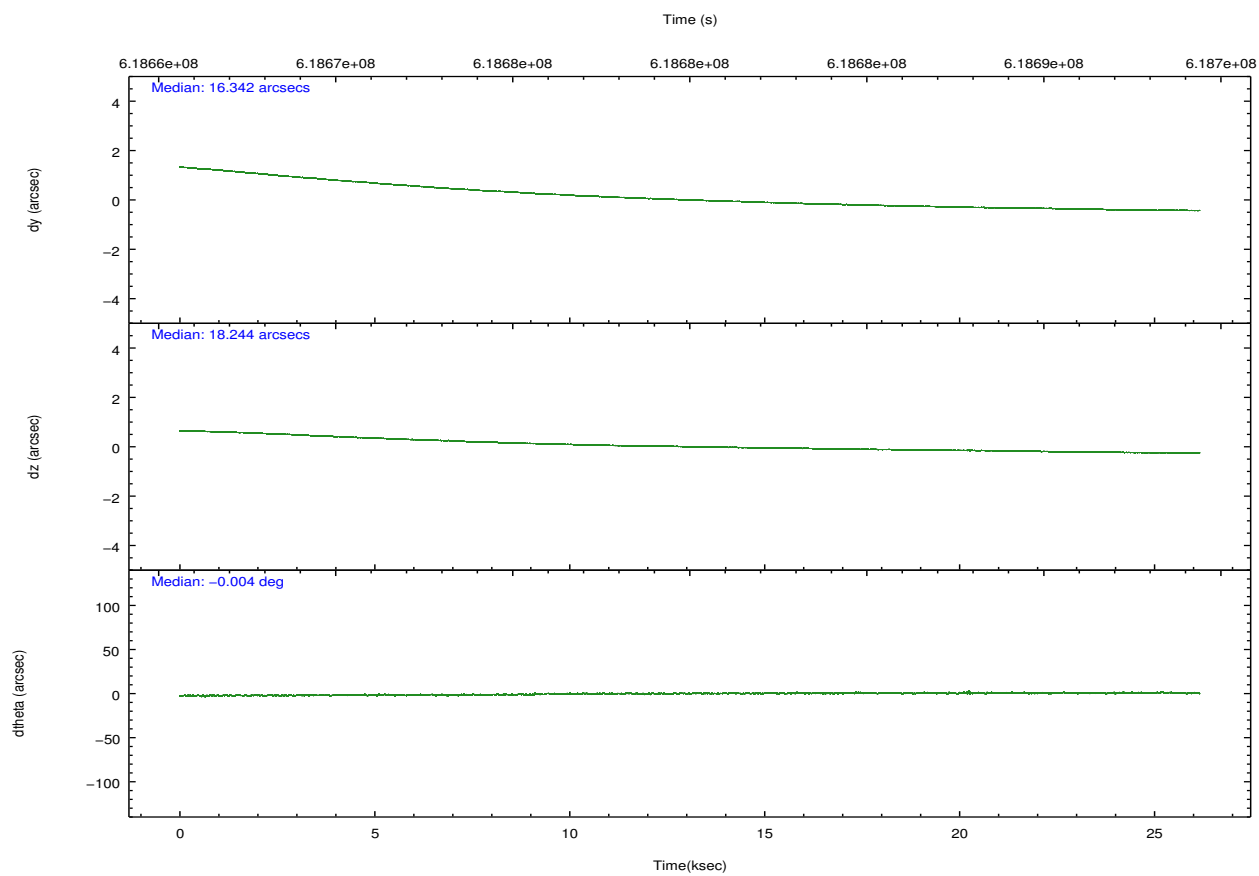
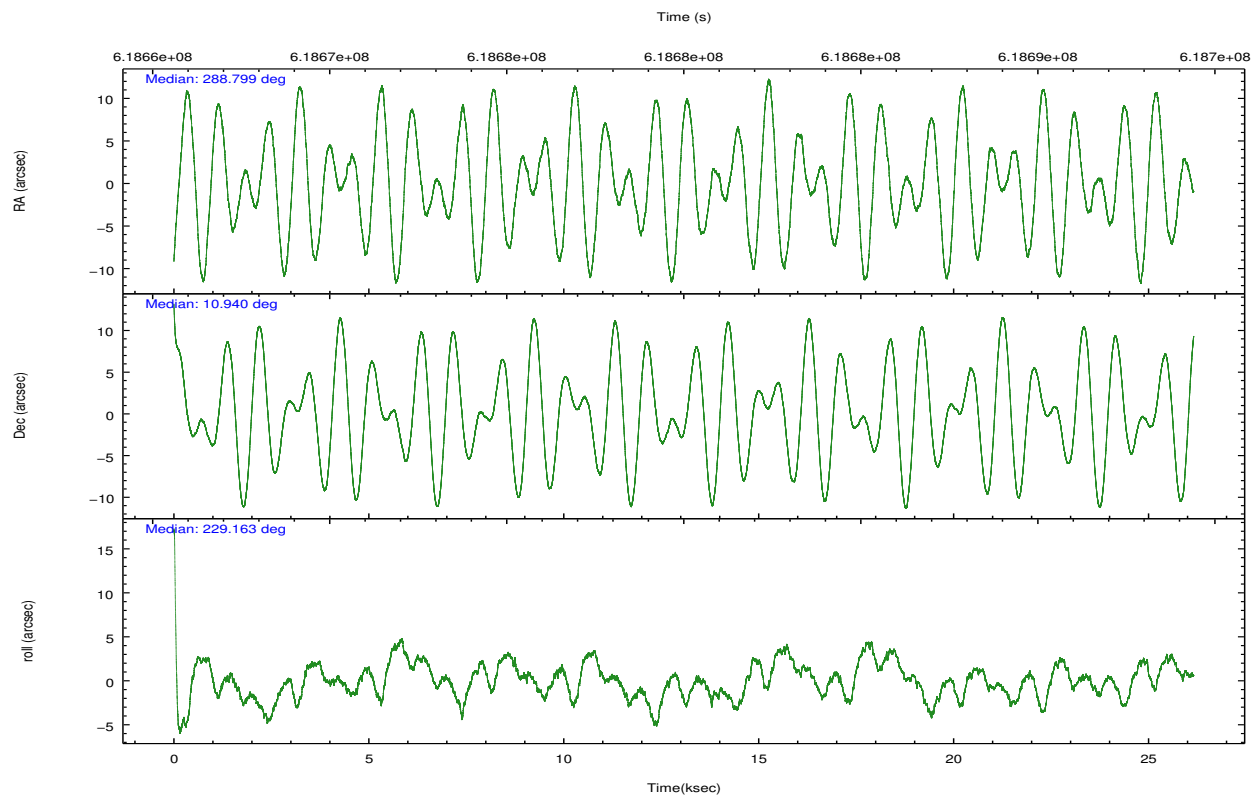
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	458317	10636	311345	26331
	22%	0%	6%	3%
grade 1 events	641	141	33871	315
	0%	0%	0%	0%
grade 2 events	786910	1454349	1317997	312433
	38%	67%	26%	35%
grade 3 events	4928	3748	143378	8356
	0%	0%	2%	0%
grade 4 events	4612	3435	141333	8205
	0%	0%	2%	0%
grade 5 events	17408	15529	166634	14372
	0%	0%	3%	1%
grade 6 events	146370	237547	1498801	56636
	7%	11%	30%	6%
grade 7 events	625007	421035	1276421	445488
	30%	19%	26%	51%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	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	288.804082	288.7992063038965	CCD I2 on	N	N
[deg] Pointing Dec	10.967403	10.94038482789007	CCD I3 on	N	N
[deg] Pointing Roll	229.011147	229.1687083621531	CCD S0 on	N	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	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	618667079.184000	618665966.72031	CCD S5 on	O1	N
Observation start date	2017-08-09T11:56:50	2017-08-09T11:39:26	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	618693079.184000	618694260.82197	On-chip summing requested	N	N
Observation end date	2017-08-09T19:10:10	2017-08-09T19:31:00	Subarray requested	NONE	NONE
Read mode	CONTINUOUS	CONTINUOUS	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0

2.3 Aspect



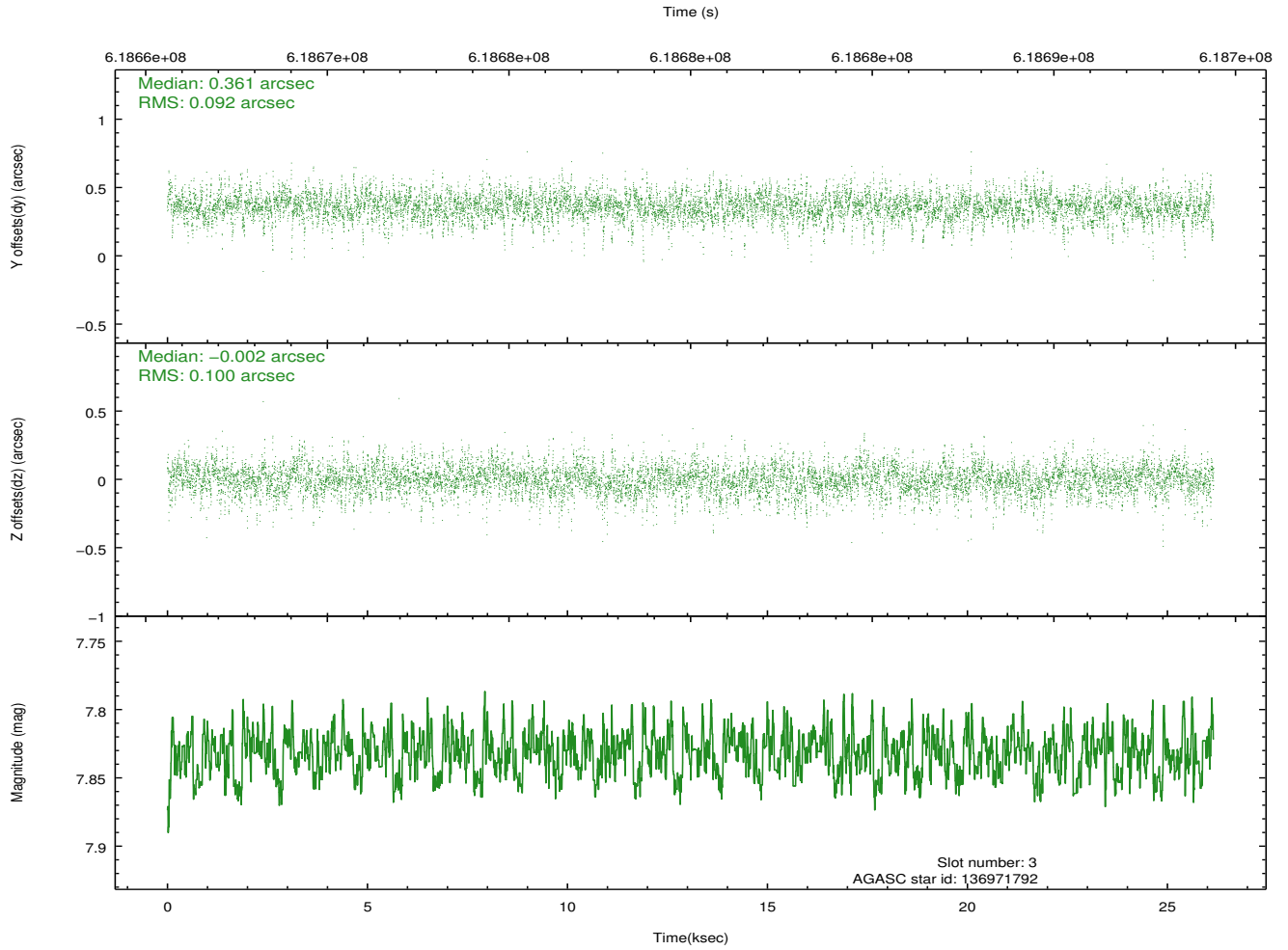
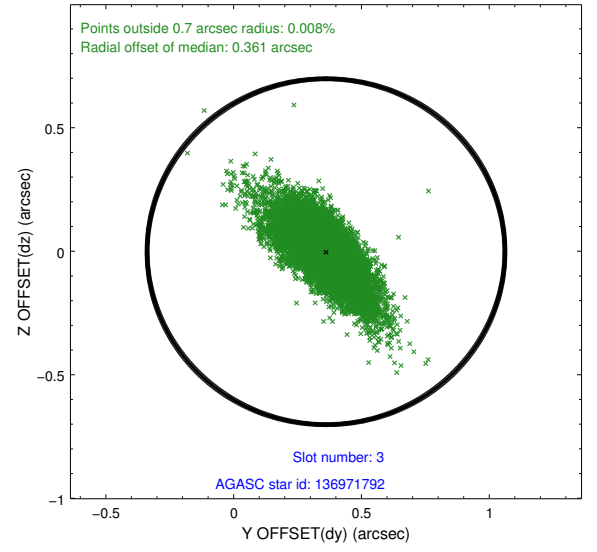
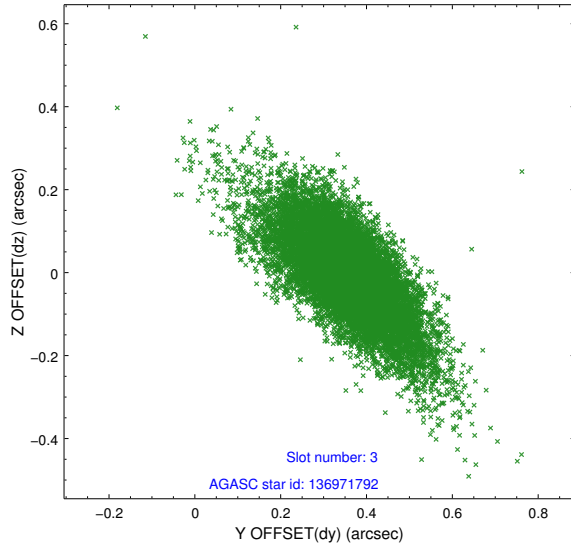


Slot Statistics

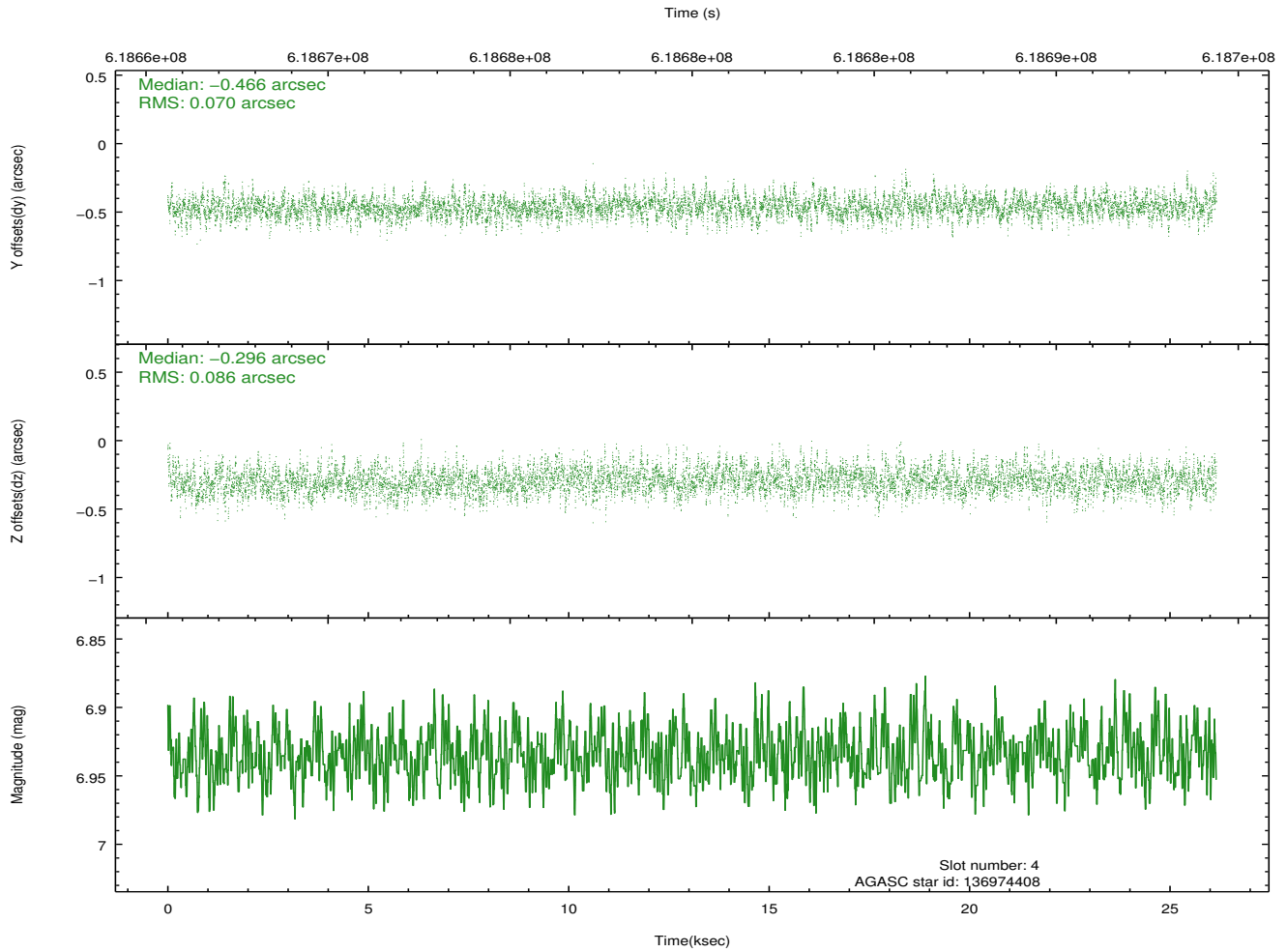
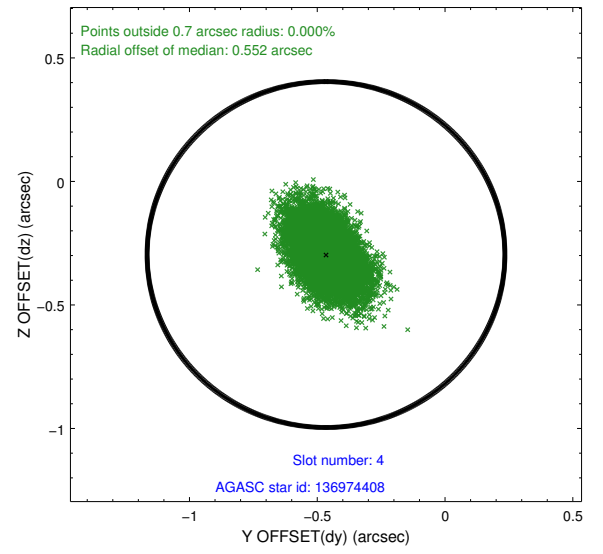
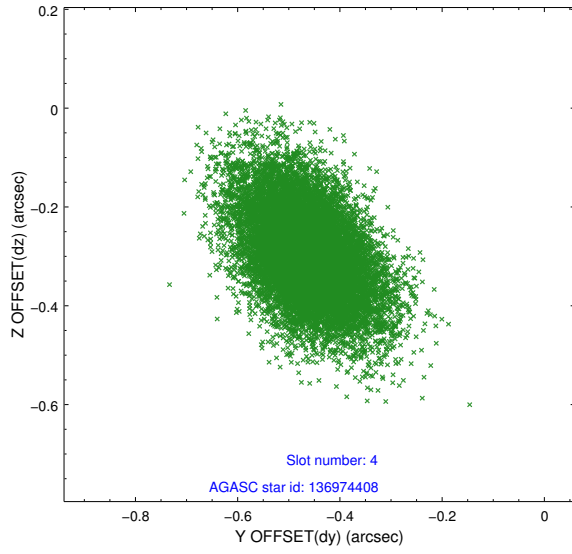
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.13	6380	-0.202	-0.147	0.008	0.014	0.000000	0.000000	-769.70	-1739.89
1	FID		ACIS-S-4	7.25	6380	0.515	0.137	0.009	0.023	0.000000	0.000000	2144.24	168.79
2	FID		ACIS-S-5	7.24	6379	-0.344	0.019	0.010	0.020	0.000000	0.000000	-1822.56	162.44
3	GUIDE	used	136971792	7.83	12760	0.361	-0.002	0.131	0.258	287.875355	10.894240	2350.14	-2307.55
4	GUIDE	used	136974408	6.93	12757	-0.466	-0.296	0.115	0.199	288.806802	10.212409	2045.30	1789.87
5	GUIDE	used	136977584	8.39	12681	-0.110	-0.128	0.127	0.214	288.635599	10.555283	1511.29	523.15
6	GUIDE	used	137497048	7.95	12756	0.151	0.503	0.125	0.209	288.896055	11.554718	-1807.84	-1137.19
7	GUIDE	used	136979152	8.74	12753	0.058	-0.074	0.144	0.234	288.538081	10.461256	1993.05	484.15

2.4 Star Slots

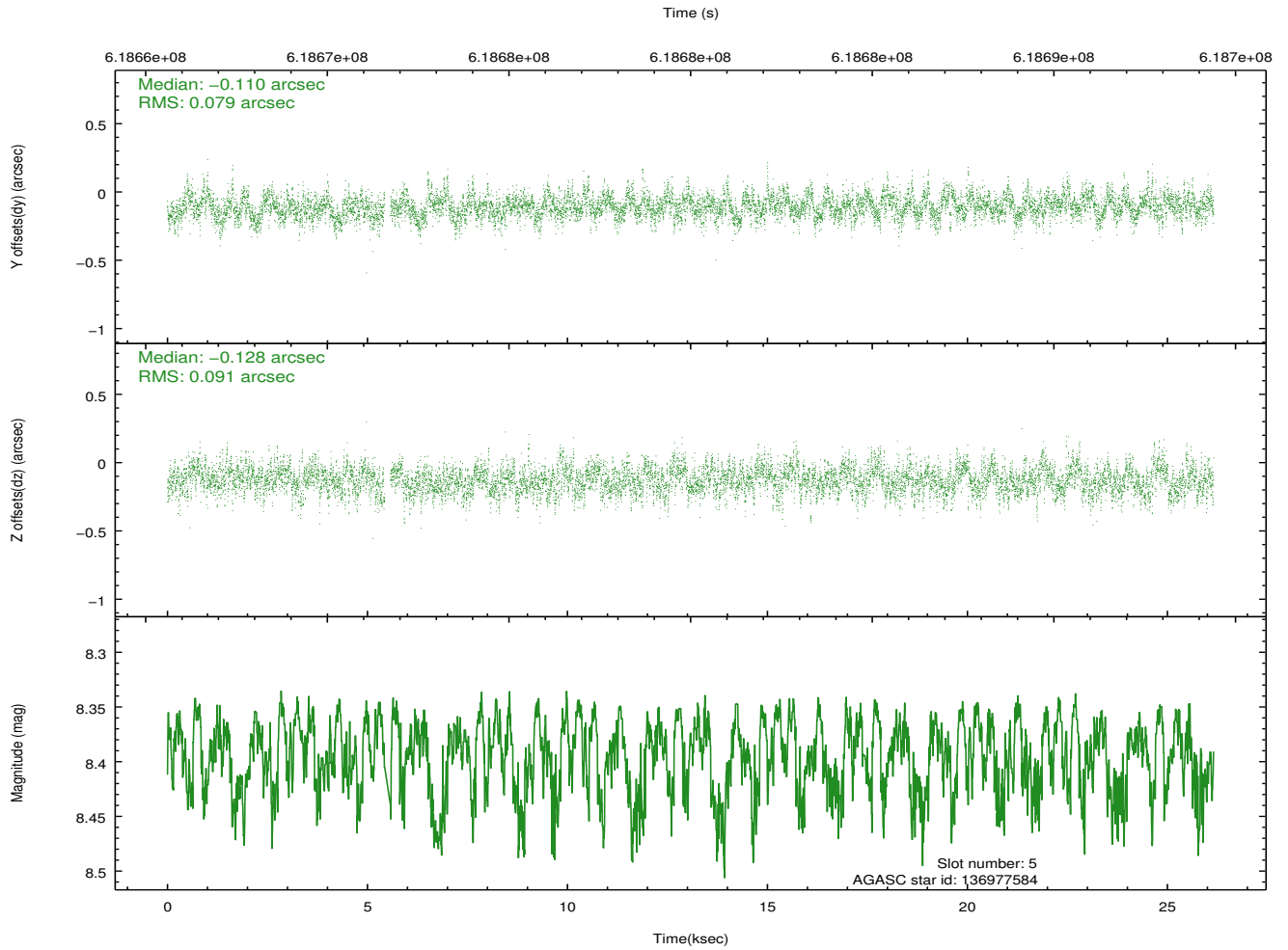
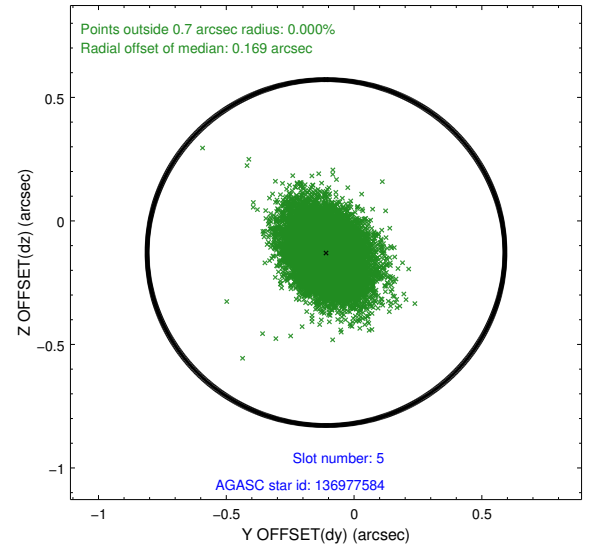
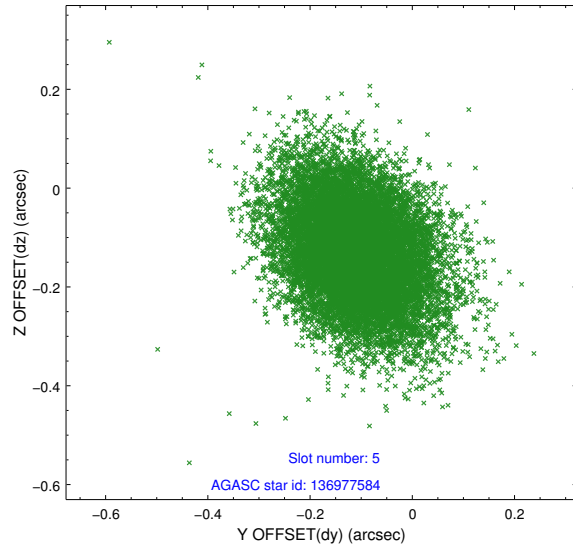
2.4.1 Slot 3



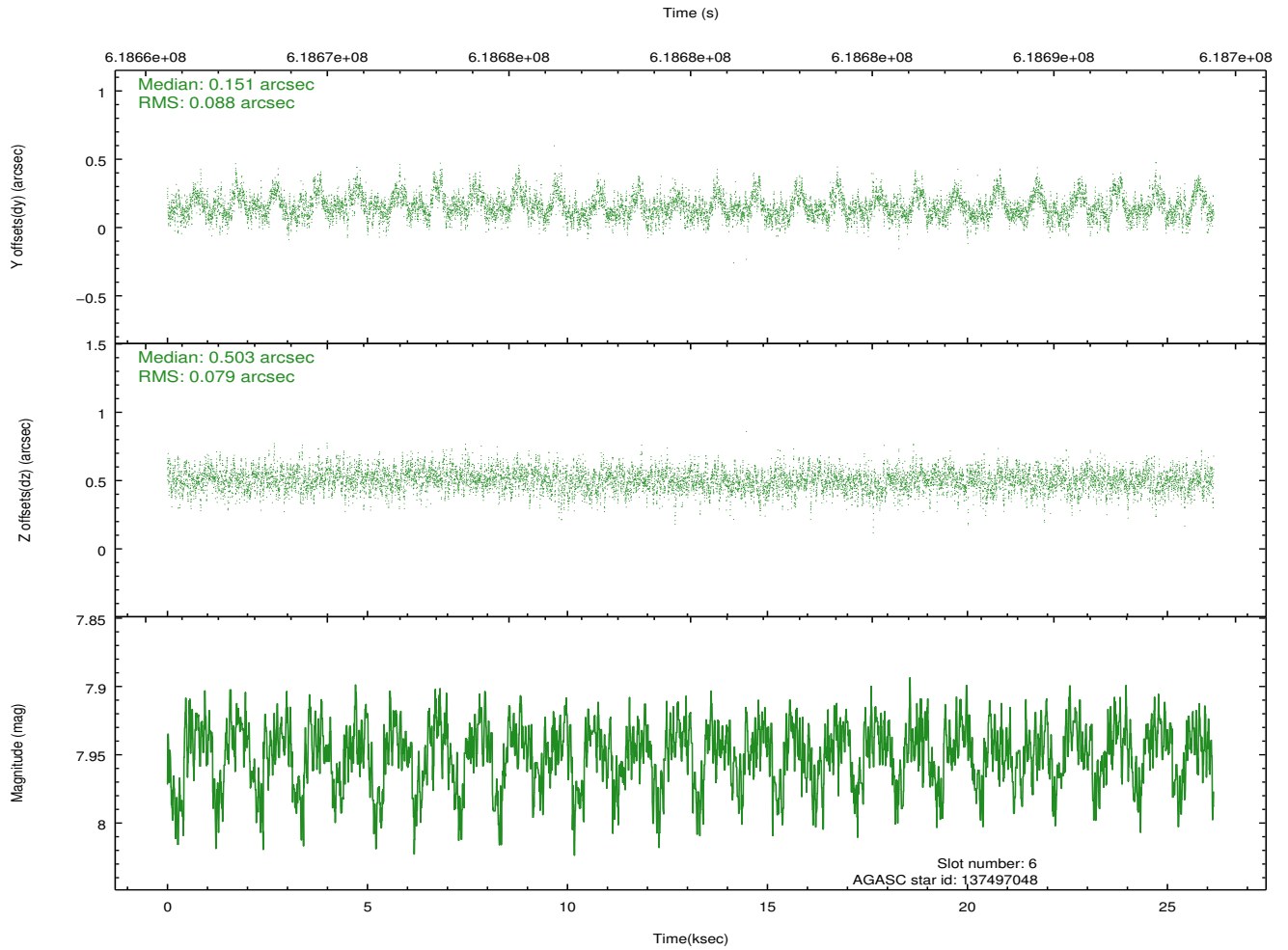
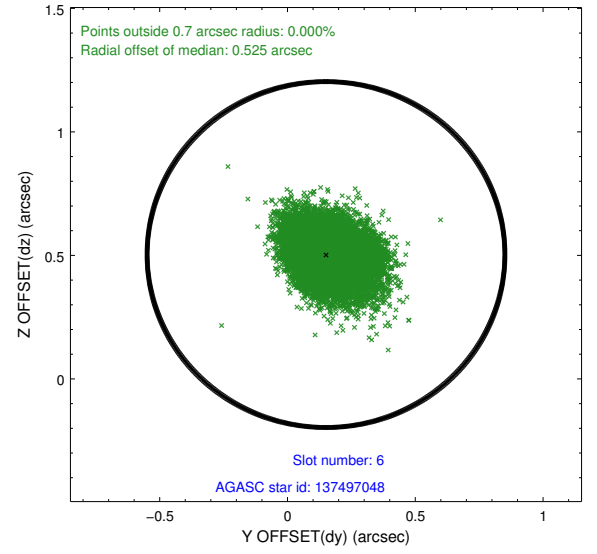
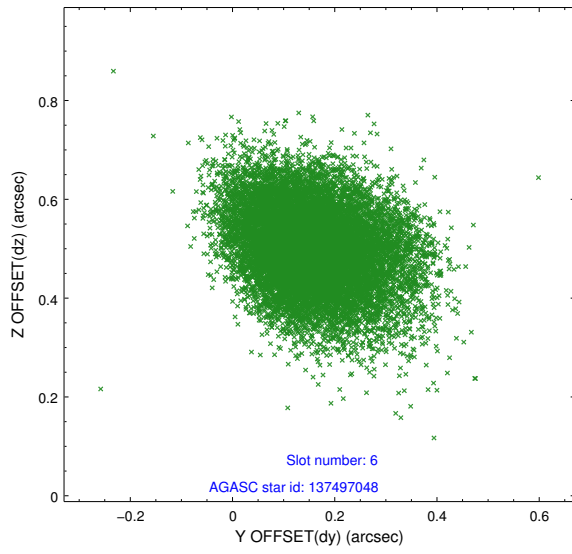
2.4.2 Slot 4



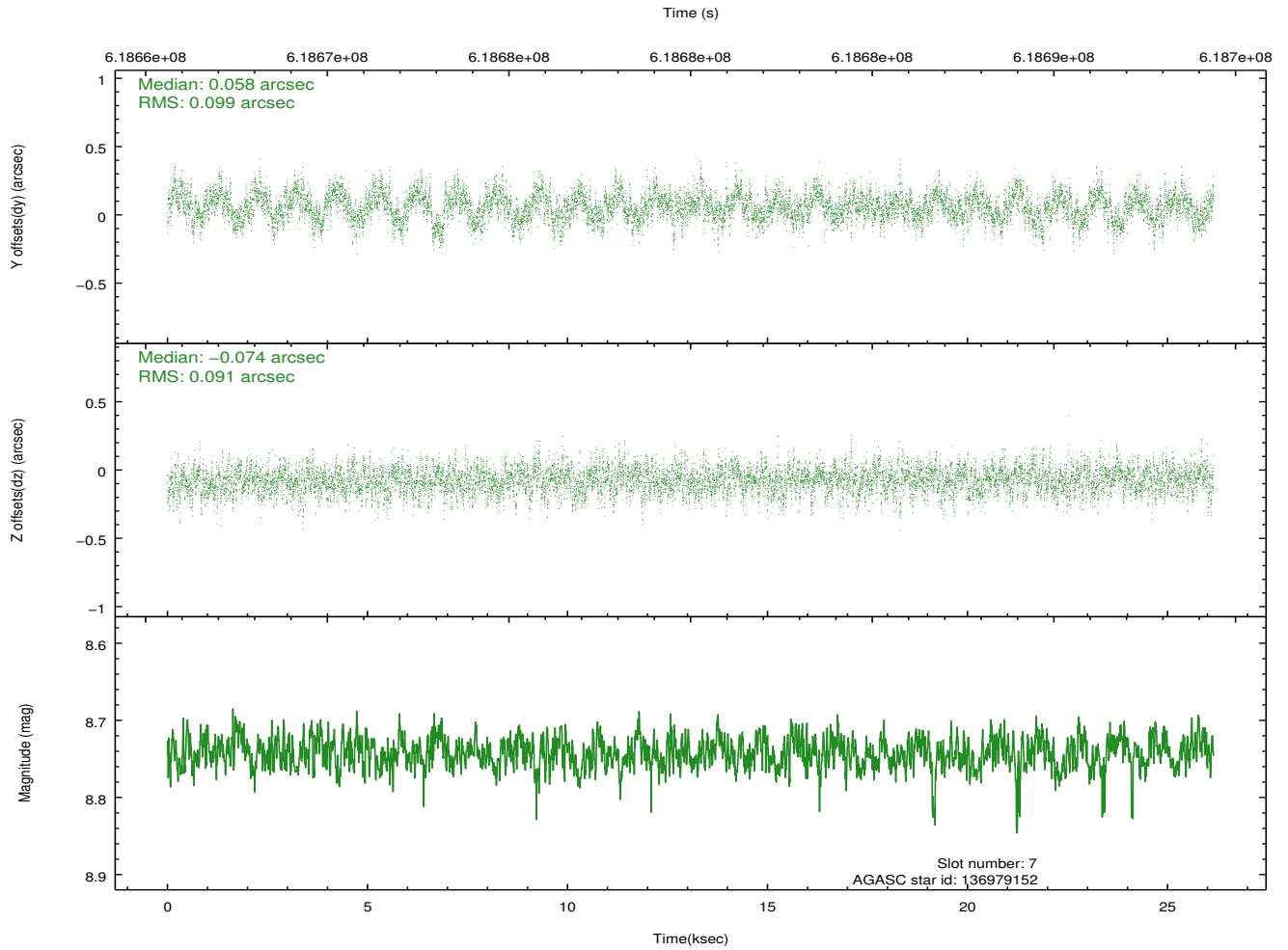
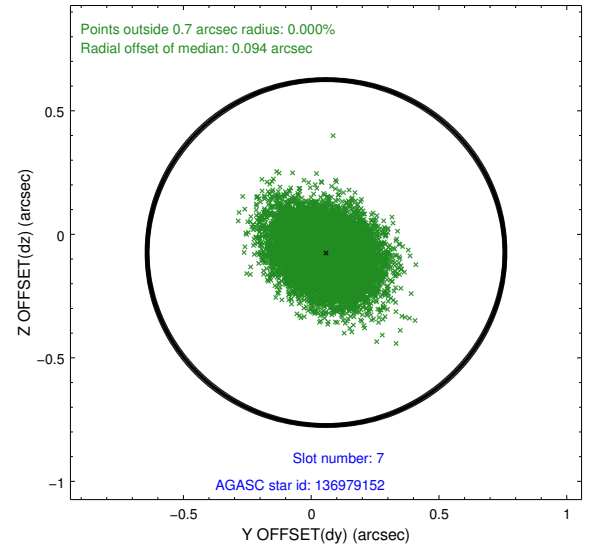
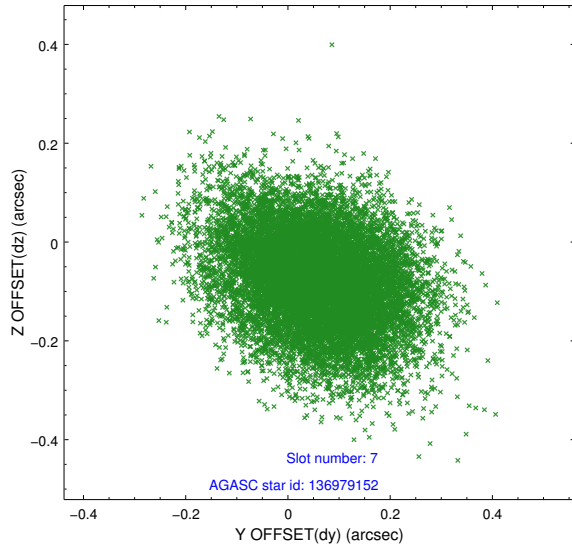
2.4.3 Slot 5



2.4.4 Slot 6

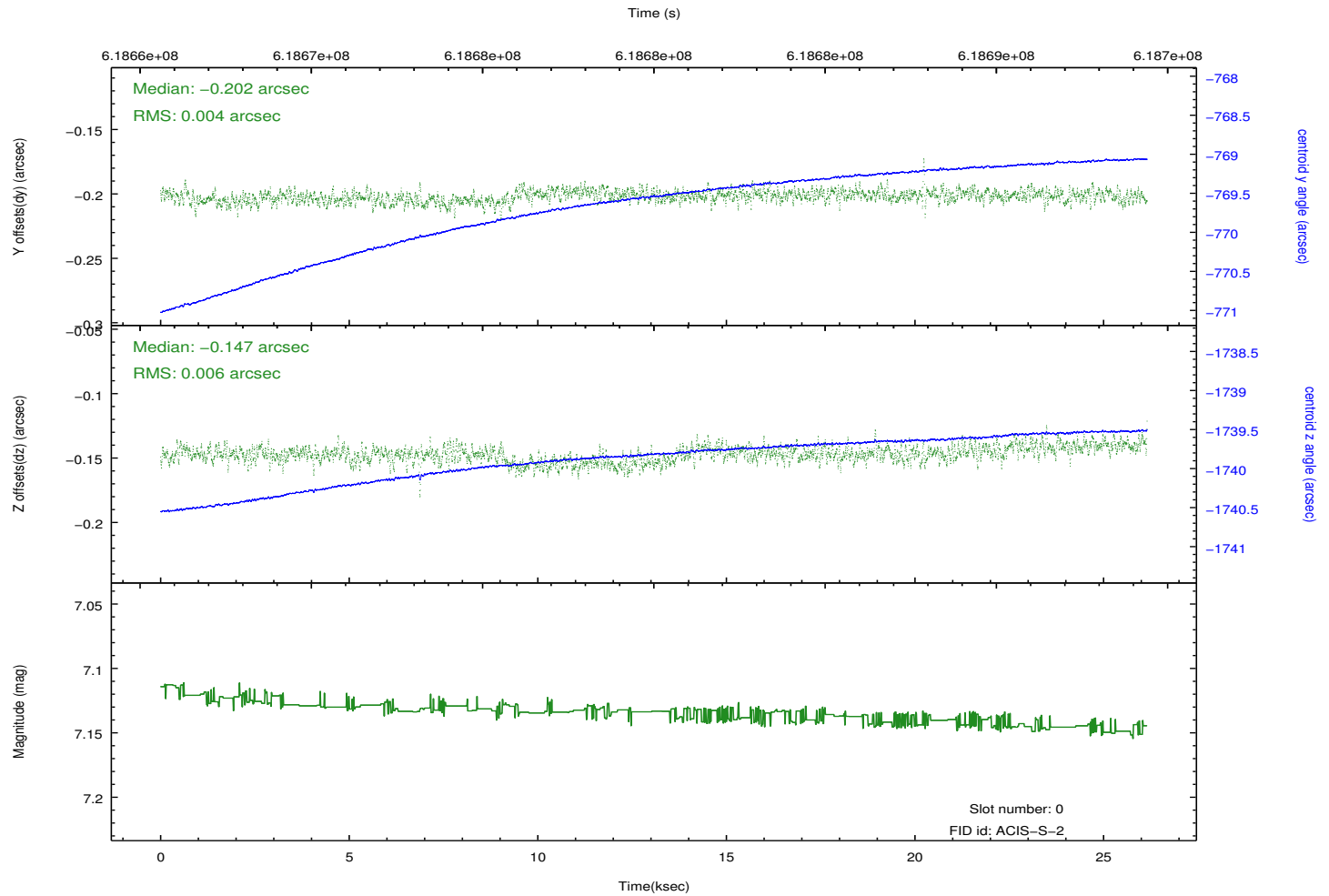
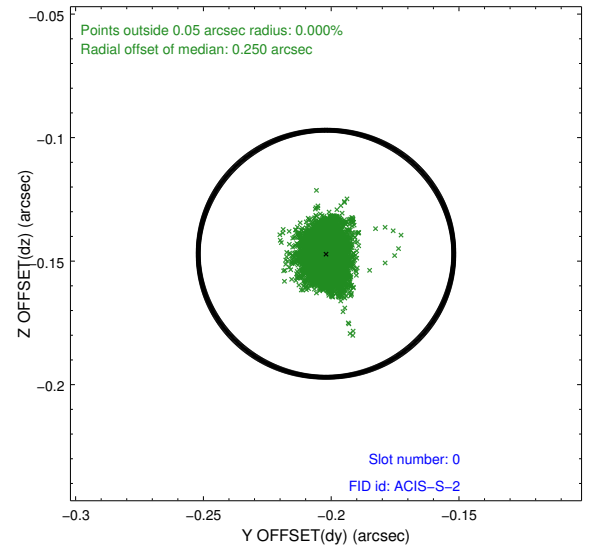
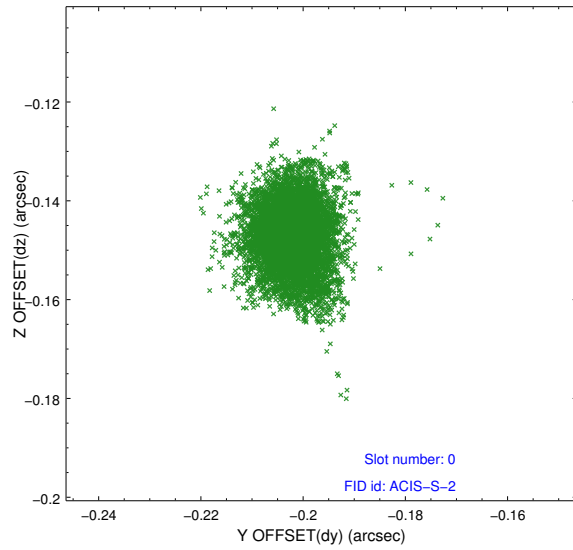


2.4.5 Slot 7

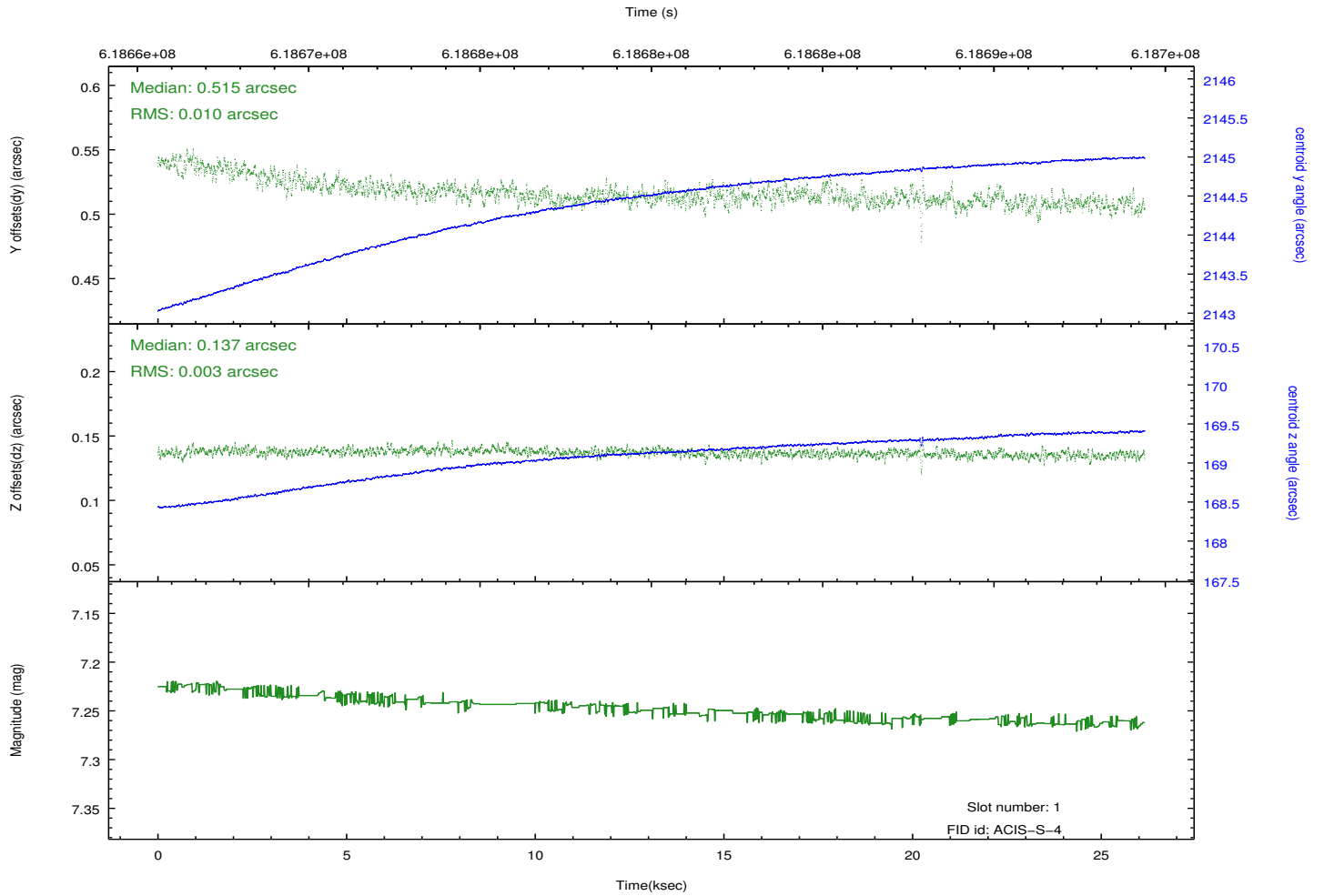
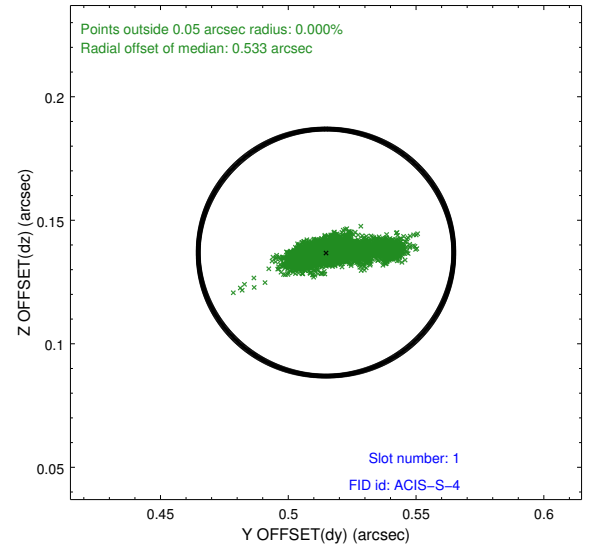
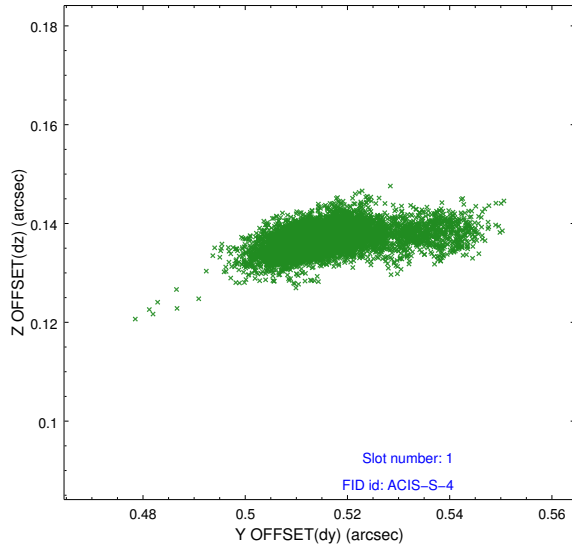


2.5 FID Slots

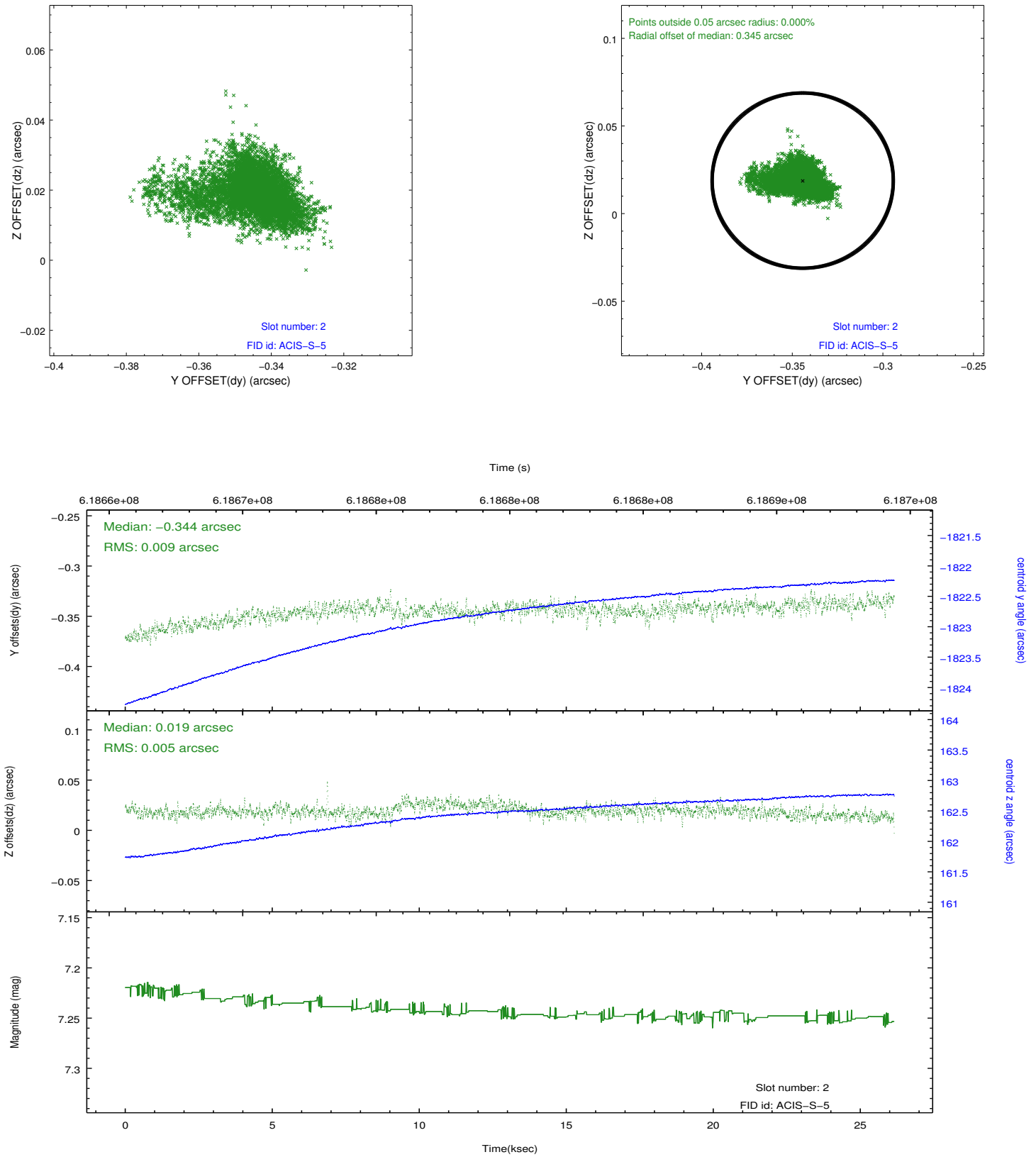
2.5.1 Slot 0



2.5.2 Slot 1

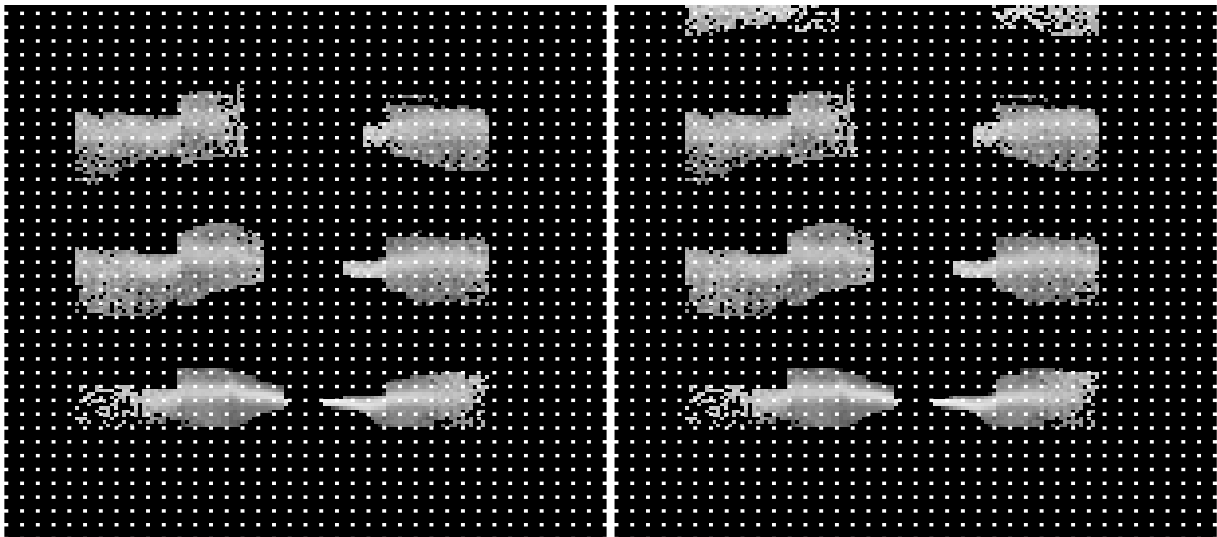


2.5.3 Slot 2



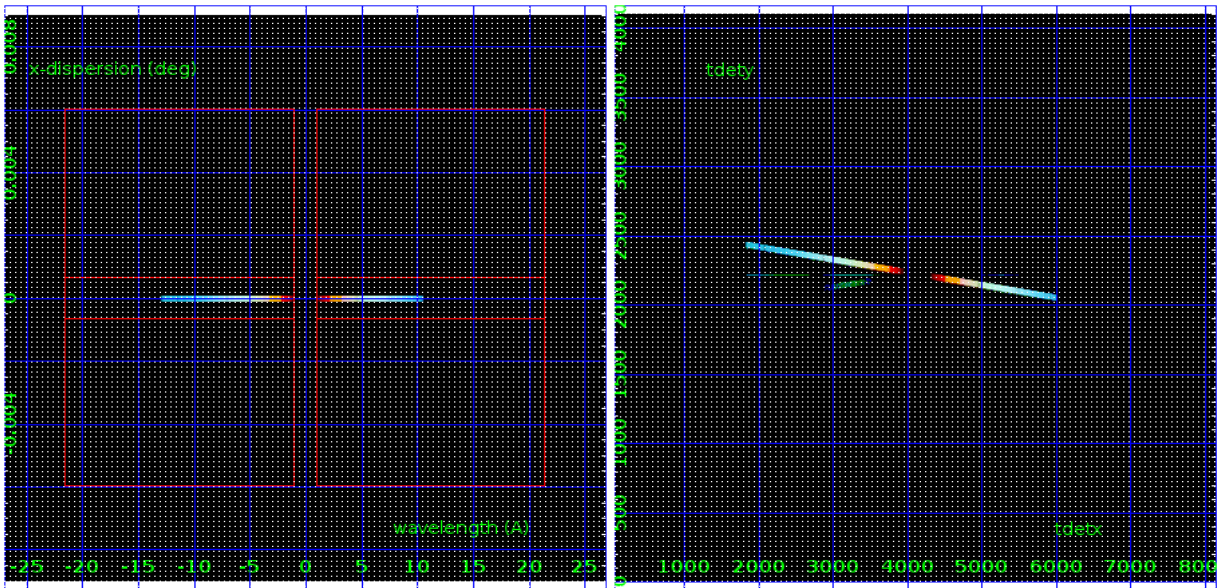
3 Gratings

3.1 HEG Arm



HEG Order Sort 123

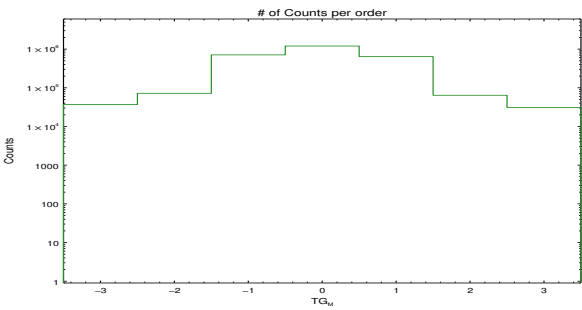
HEG Order Sort ALL

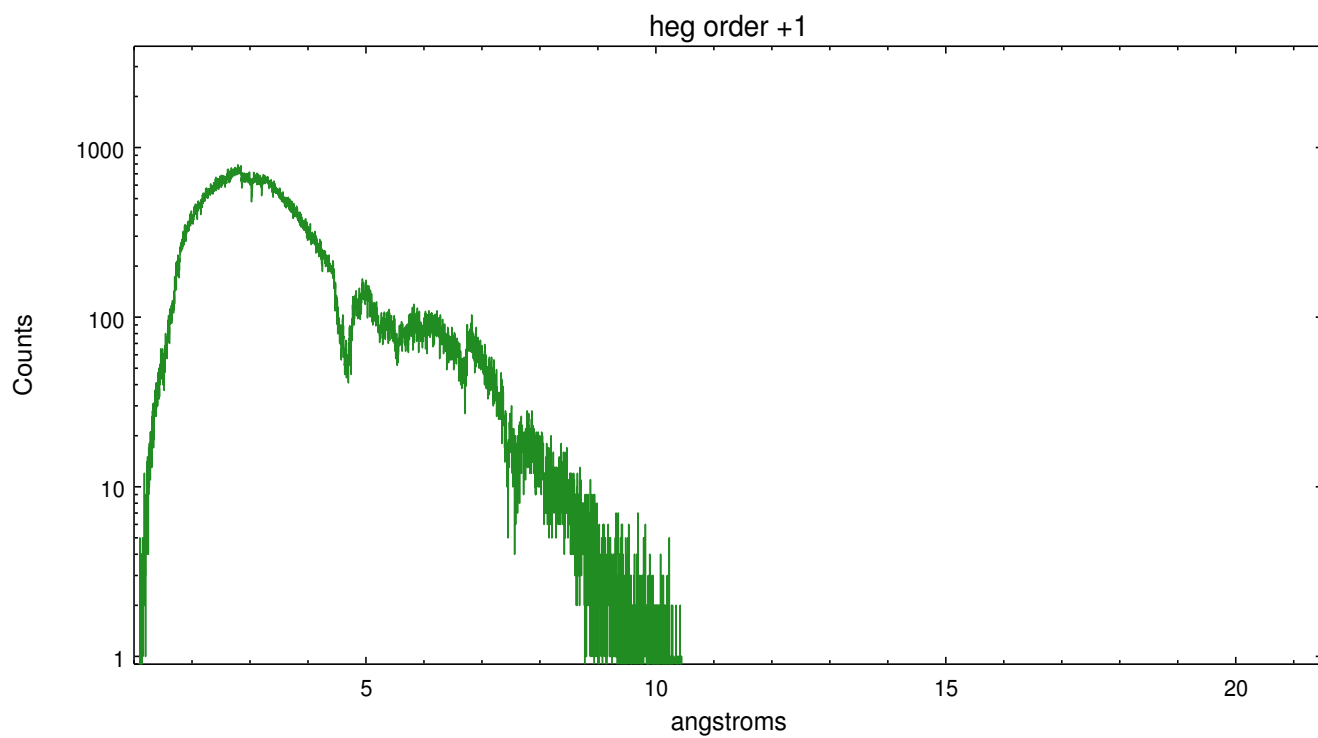
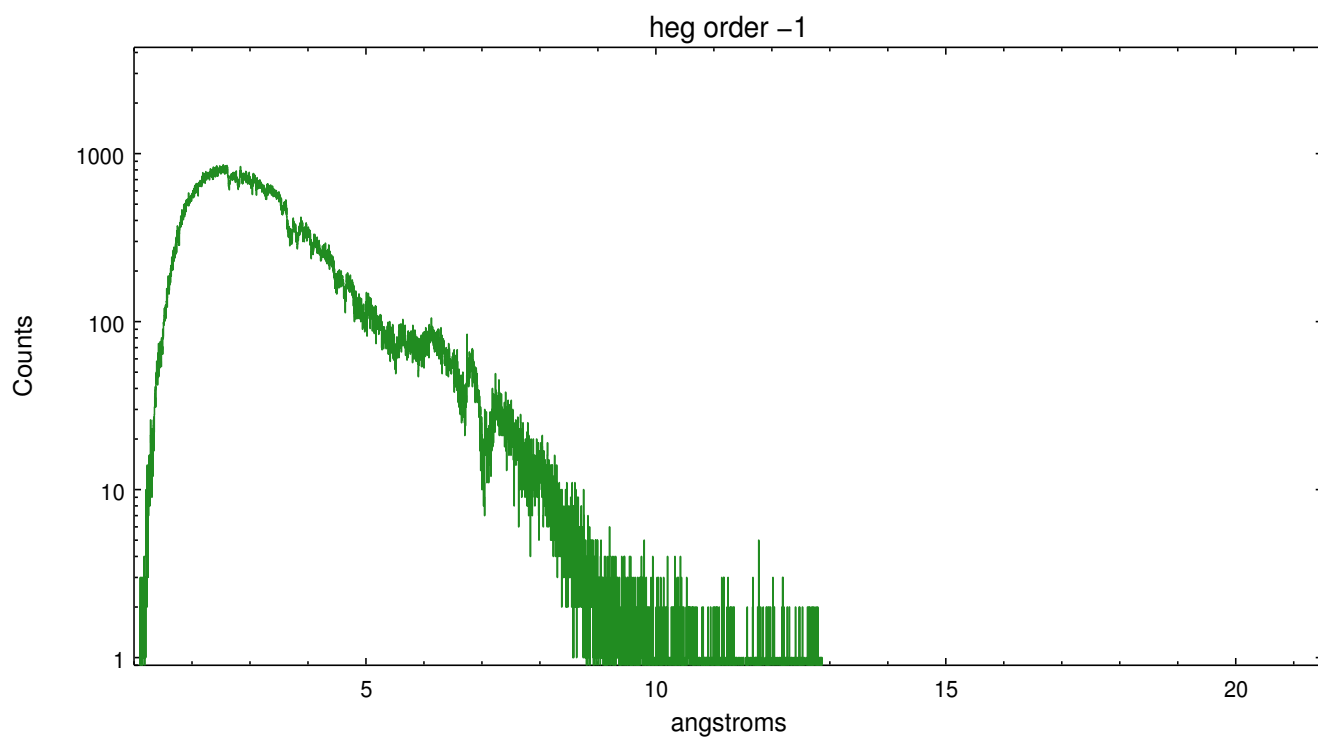


Spot Image HEG

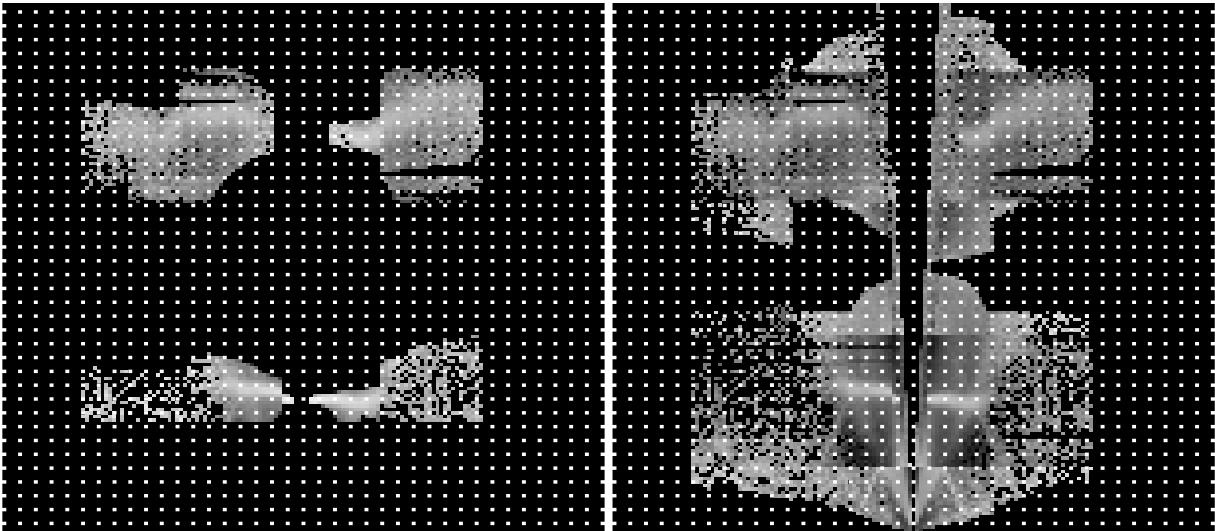
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	36888	72045	708931	1201334	639185	64052	31048



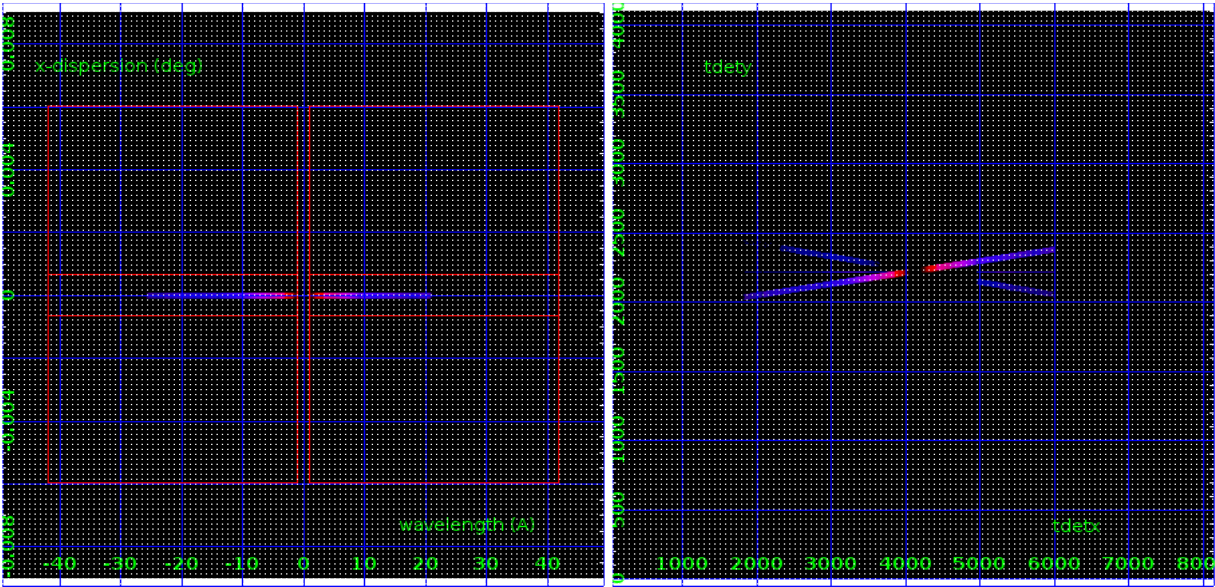


3.2 MEG Arm



MEG Order Sort 123

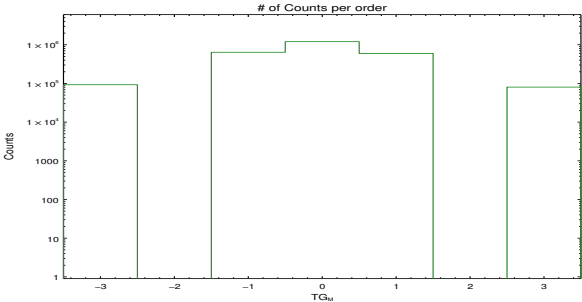
MEG Order Sort ALL

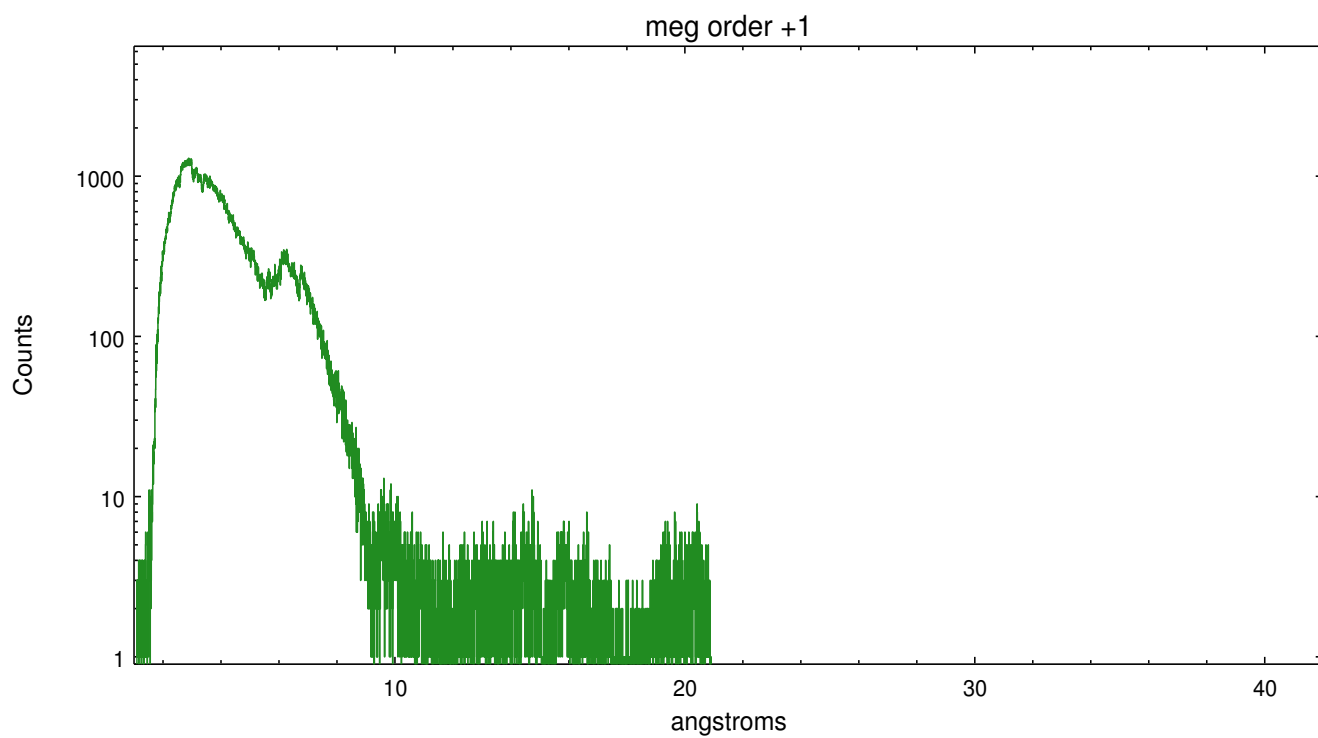
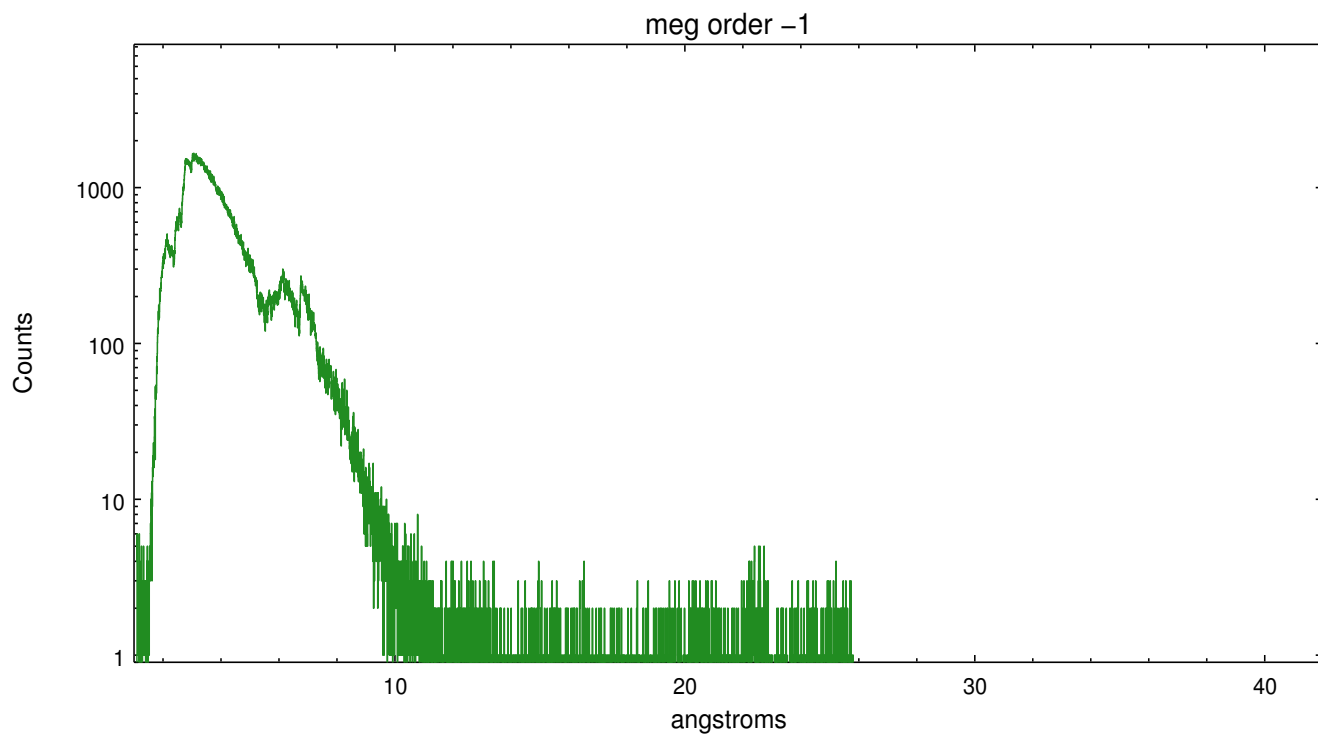


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	92567	0	639102	1201334	594736	0	80373





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2017.08.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	26.124

A.2 Comments

Charge time:

ONTIME of 21880.938855171 seconds is less than 85% of expected scheduled time of 26000 seconds

Apparent reduced exposure time is due to saturation by high event rate, and dropped frames. This is expected. Adjusted Charge Time to exposure of CCD 5.