

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 3418 - L2 Version _e1
Chandra X-Ray Center

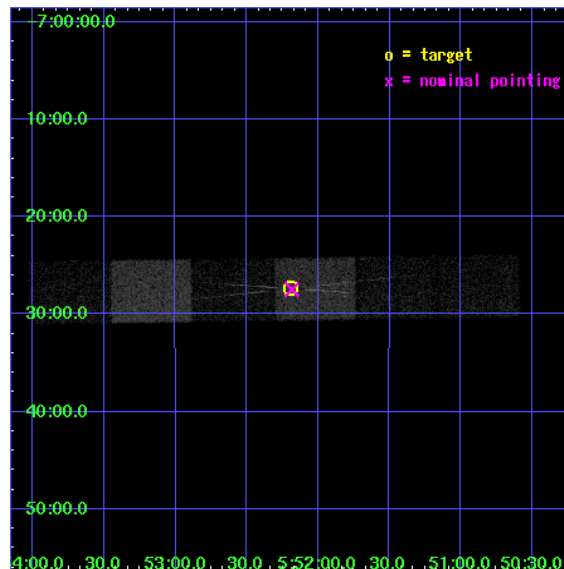
L2 Processing Date : Jan 18 2007

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1 Front

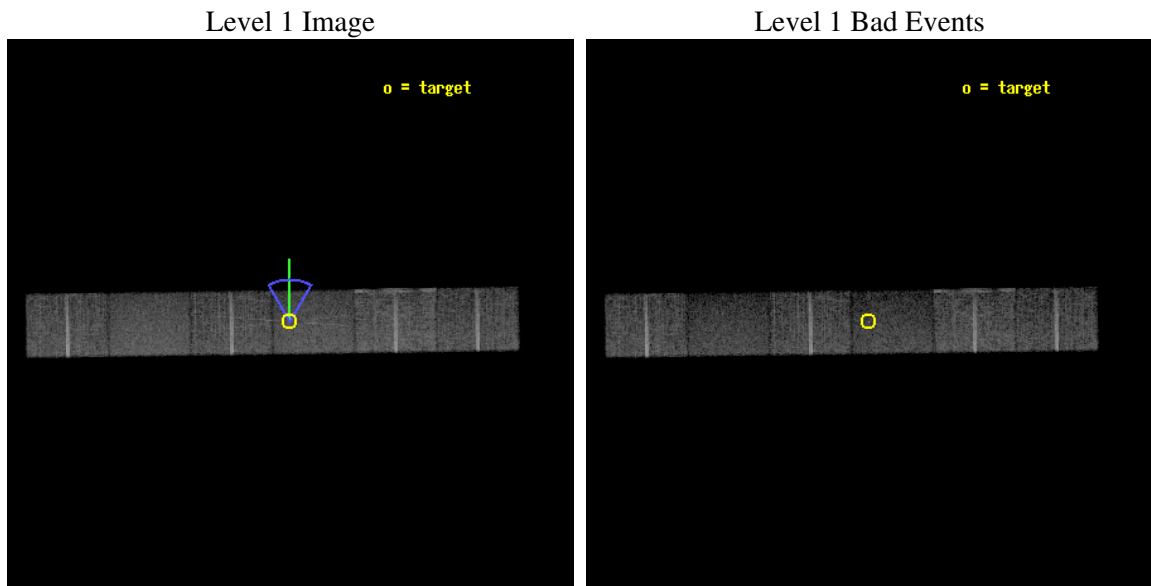
seq_num	700582
obs_id	3418
title	PROBING UNIFICATION WITH ACIS-HETG OBSERVATION OF COMPTON-THIN SEYFERT 2 NGC 2110
observer	Prof Julia Lee
object	NGC2110
dtcycle	0
cycle	P
ra_targ	88.0475
dec_targ	-7.456111
ra_nom	88.046025801283
dec_nom	-7.4577831835869
roll_nom	359.15643422536
revision	3
ontime	19261.88361153
livetime	4671.1612160637
ontime4	19261.88361153
ontime5	19261.88361153
ontime6	19261.88361153
ontime7	19261.88361153
ontime8	19261.88361153
ontime9	19261.88361153
l2events	54005



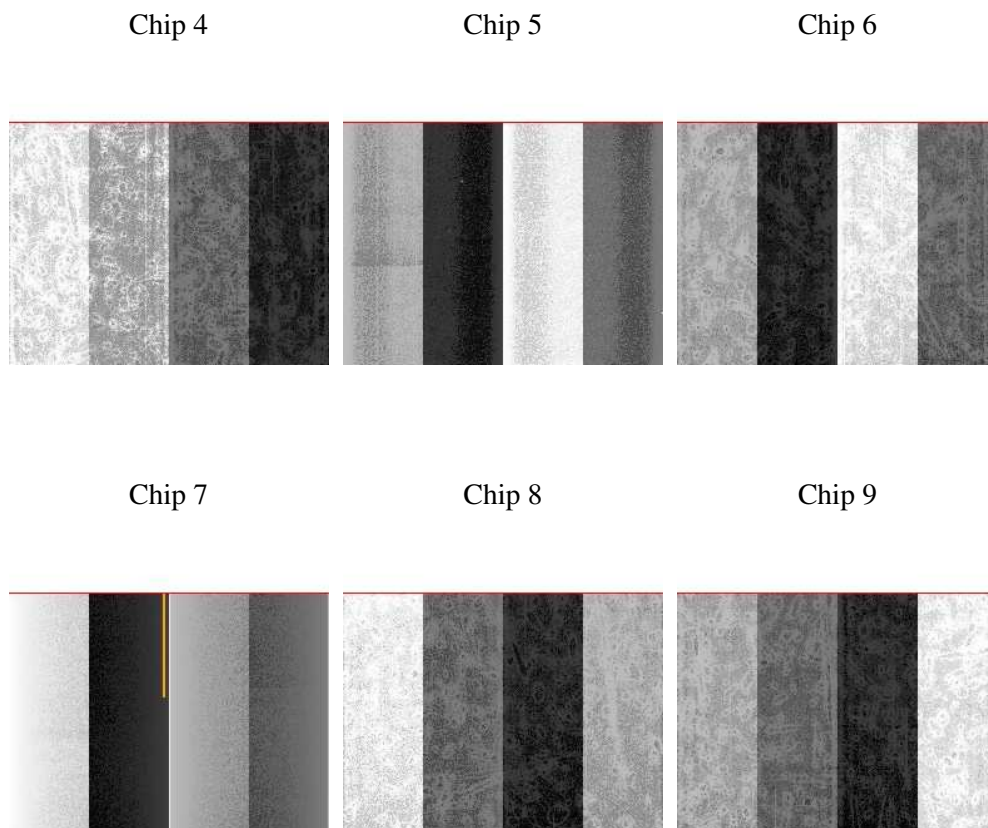
2 OBI Primary

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0
ascdsver	7.6.10
caldsver	3.3.0
date	2007-01-18T08:54:23
revision	3

sched_exp_time	76000.000000
ontime	19261.88361153
ontime4	19261.88361153
ontime5	19261.88361153
ontime6	19261.88361153
ontime7	19261.88361153
ontime8	19261.88361153
ontime9	19261.88361153
l1events	336920

2.1.4 Events

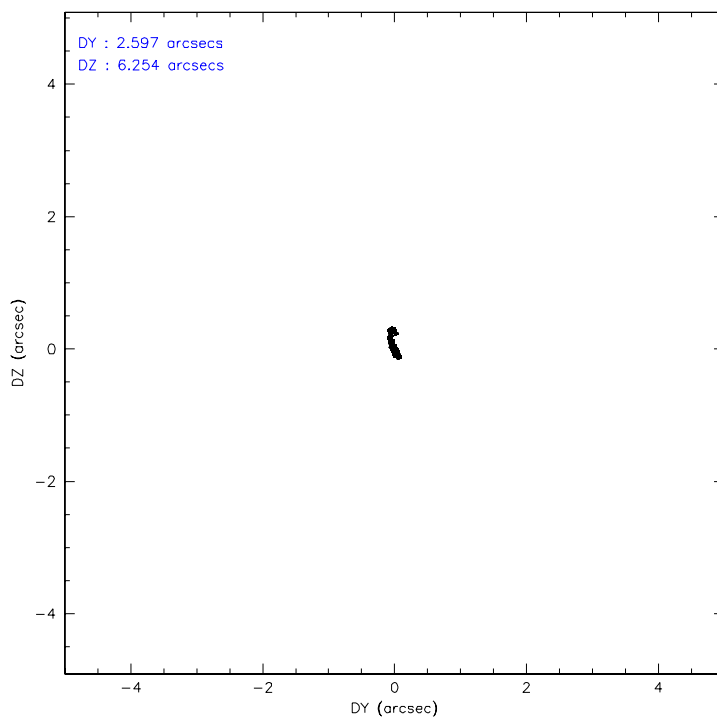
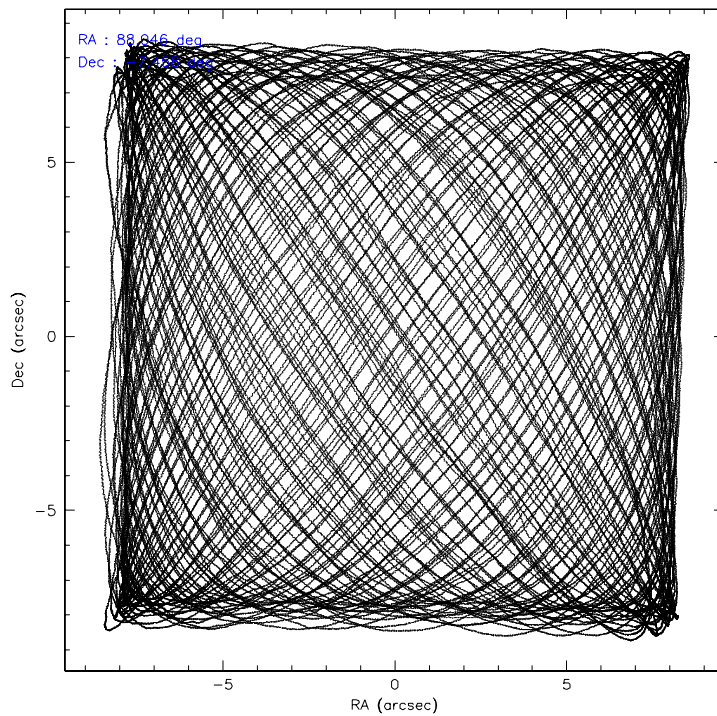
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	57302	53249	55246	53094	67011	51018
rejected events	52582	33431	49857	33643	56977	46577
rejected %	91%	62%	90%	63%	85%	91%

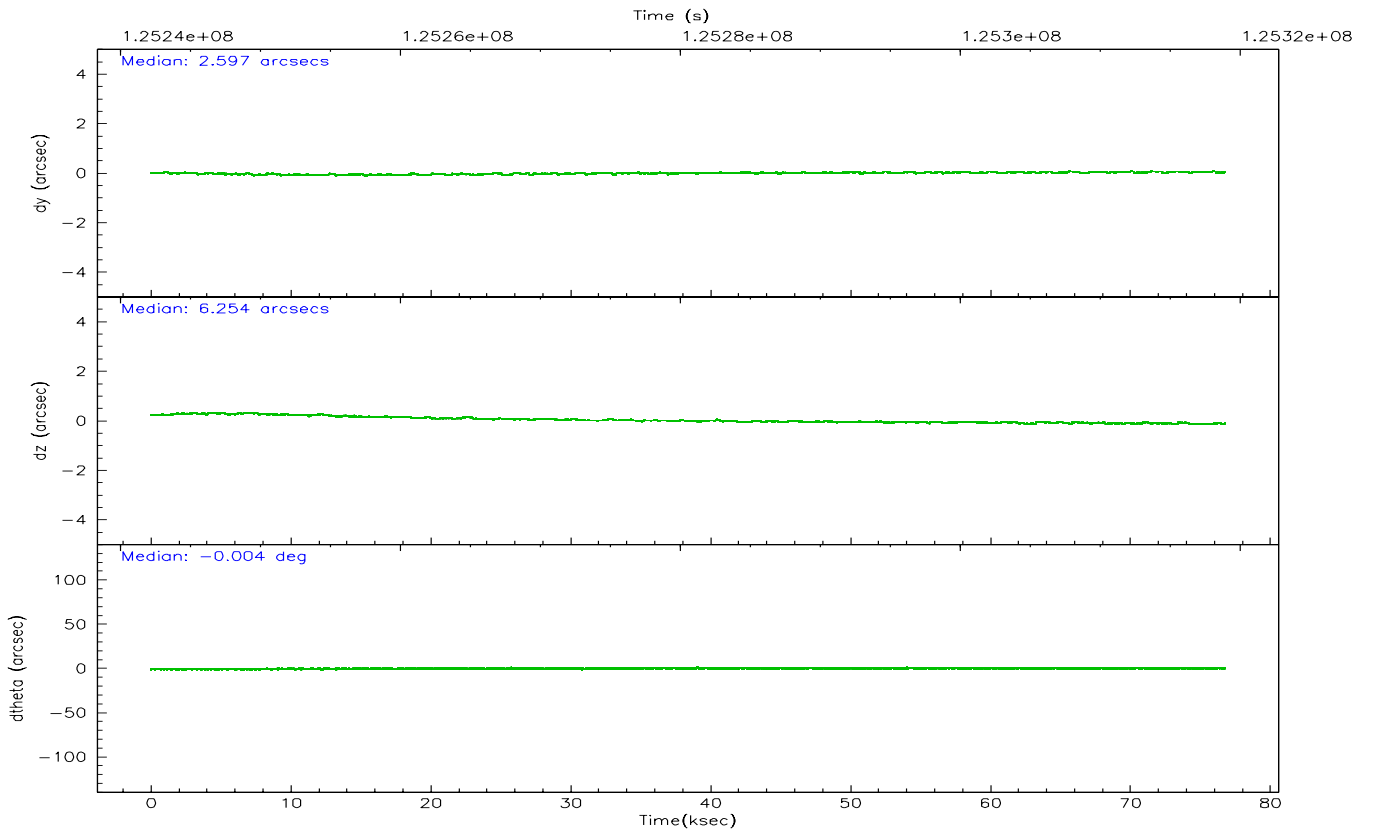
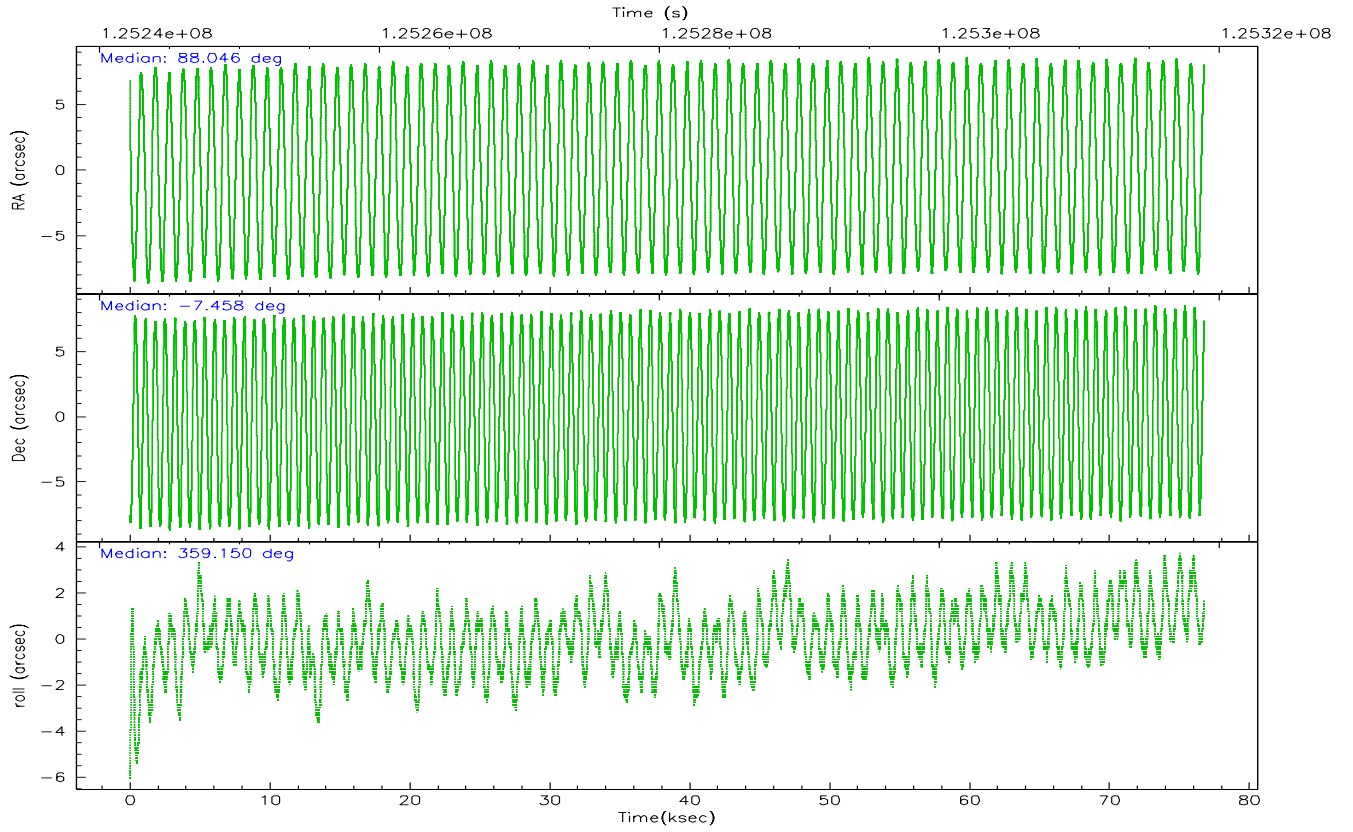
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	1596	1259	2001	1995	2776	1442
	2%	2%	3%	3%	4%	2%
grade 1 events	10	50	15	67	20	14
	0%	0%	0%	0%	0%	0%
grade 2 events	1063	5406	1021	4059	2203	876
	1%	10%	1%	7%	3%	1%
grade 3 events	615	1061	686	1904	1201	633
	1%	1%	1%	3%	1%	1%
grade 4 events	594	992	678	1874	1081	550
	1%	1%	1%	3%	1%	1%
grade 5 events	1467	3967	1722	4302	2097	1728
	2%	7%	3%	8%	3%	3%
grade 6 events	857	11103	1003	9627	2775	943
	1%	20%	1%	18%	4%	1%
grade 7 events	51100	29411	48120	29266	54858	44832
	89%	55%	87%	55%	81%	87%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	88.022184	88.04602580128265	Subarray requested	CUSTOM	CUSTOM
Pointing Dec	-7.471345	-7.457783183586894	Subarray start row	1	1
Pointing Roll	358.996706	359.1564342253635	Subarray row count	774	774
Roll angle	0.000000	0.000000	Alternating exposures requested	Y	Y
Roll tolerance	30.000000	30.000000	Primary exposure time	0.800000	0.8
Roll constraint allows 180D rotation	N	N	Secondary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Duty cycle	3	3
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-187.132523	-187.1228876879999			
SIM translation stage offset (mm)	-3	-3.009634895007935			
Observation start time	125242919.184000	125241670.24718			
Observation start date	2001-12-20T13:40:55	2001-12-20T13:21:10			
Observation end time	125318919.184000	125319599.9753			
Observation end date	2001-12-21T10:47:35	2001-12-21T10:59:59			
Read mode	TIMED	TIMED			

2.3 Aspect



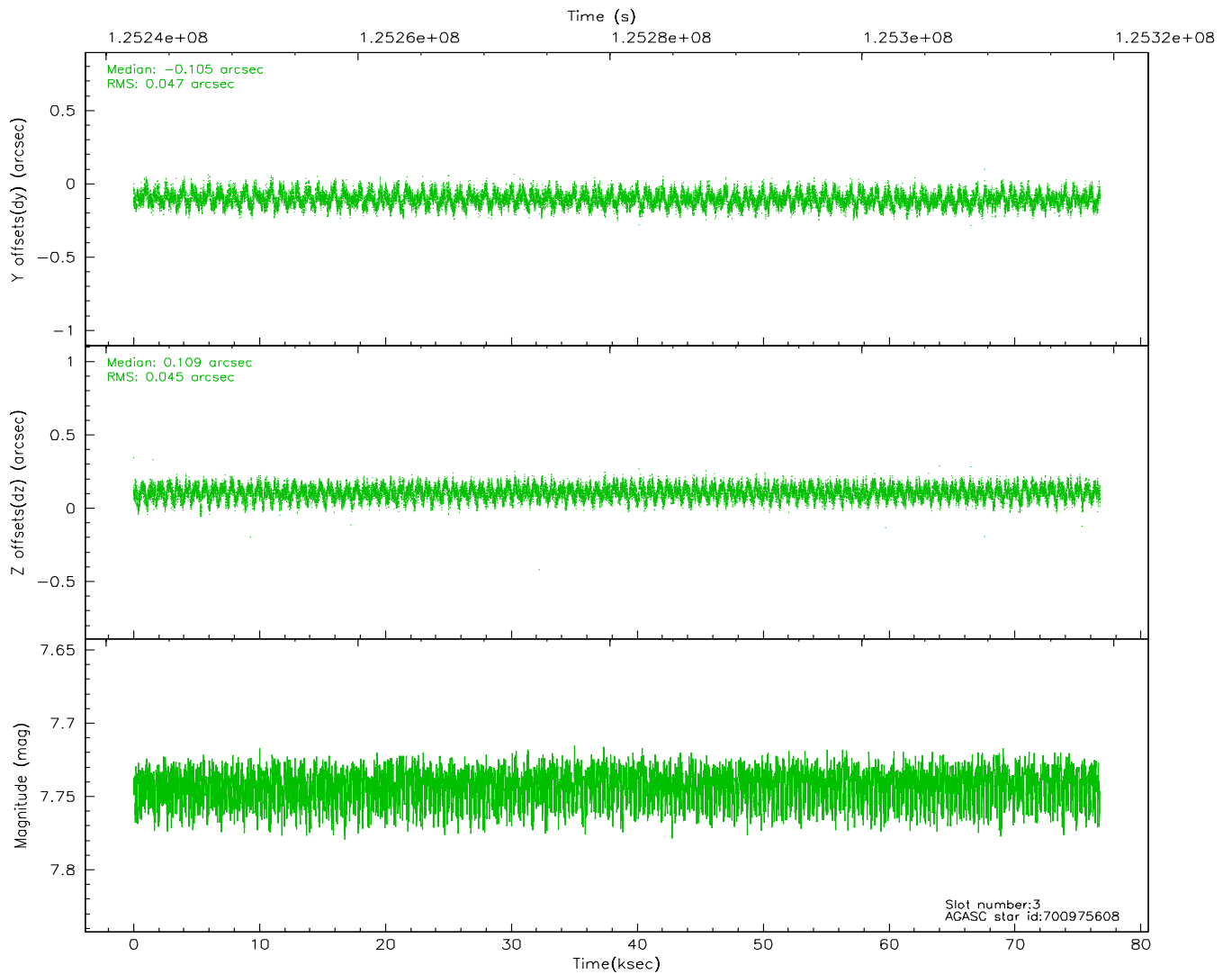
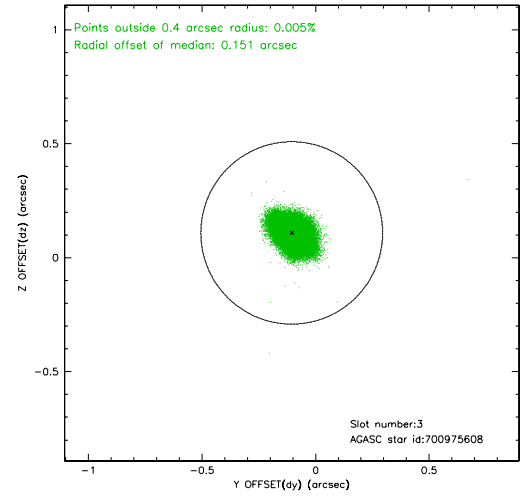
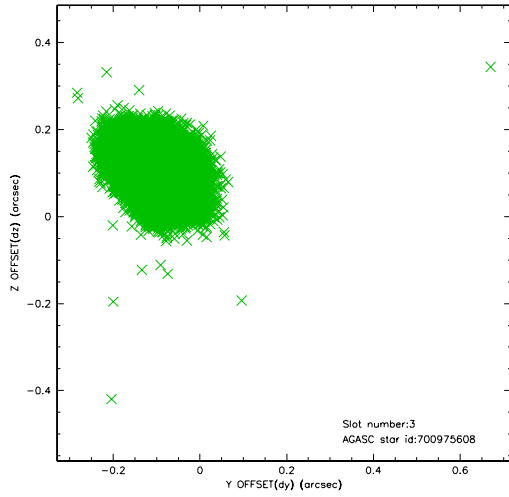


Slot Statistics

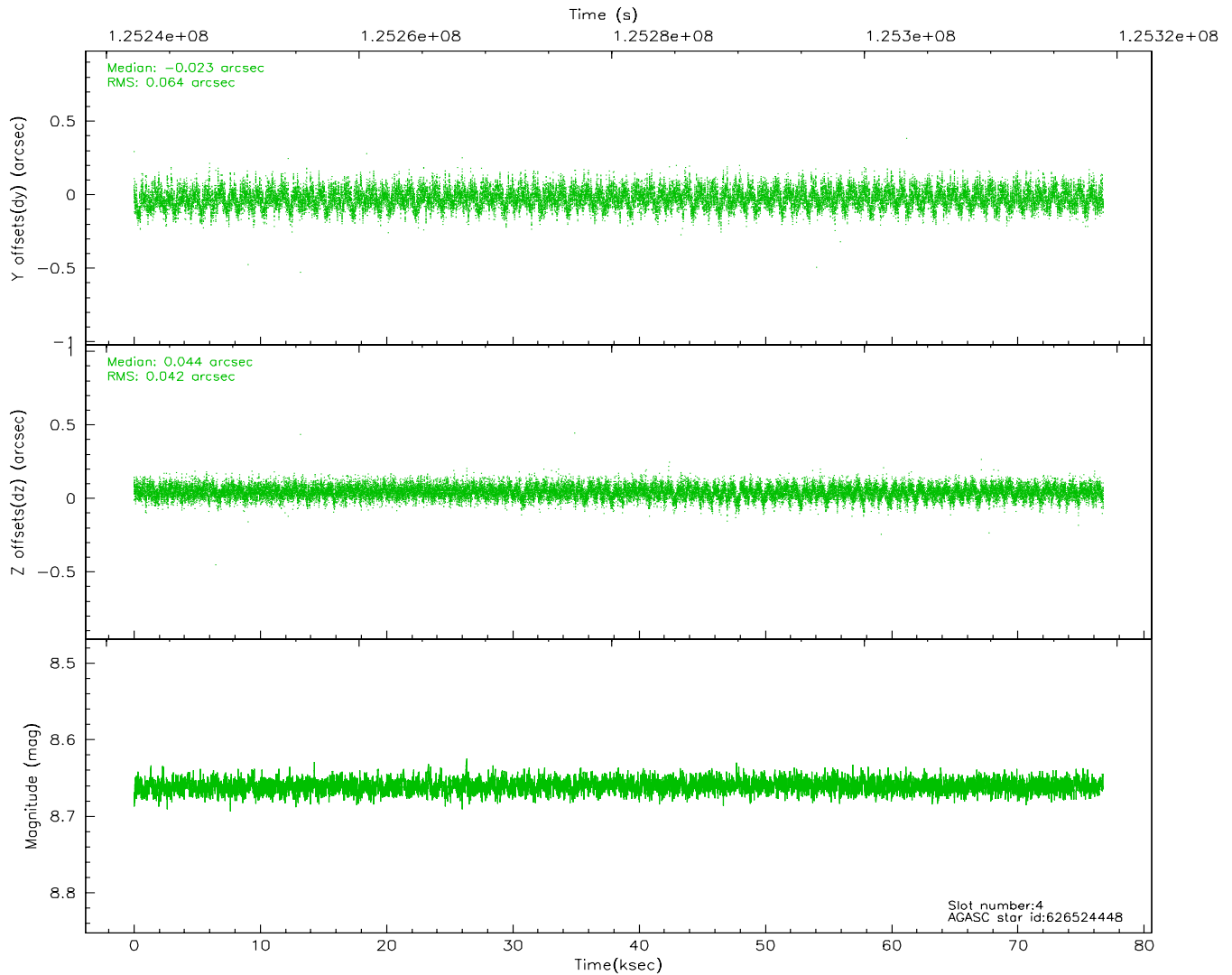
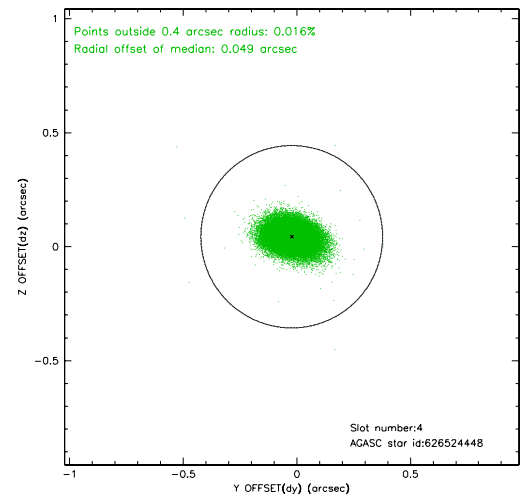
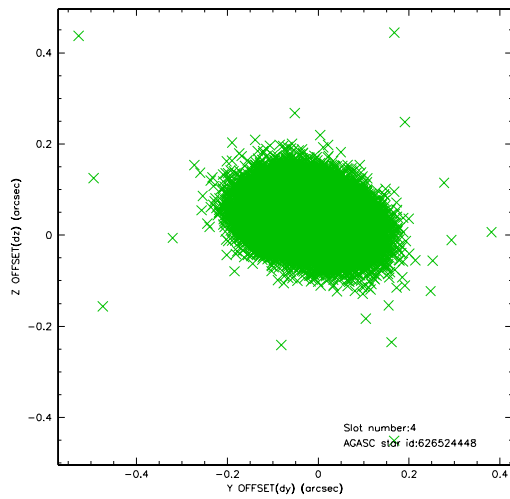
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	18721	-0.026	-0.046	0.007	0.012	0.000000	0.000000	-755.05	-1789.62
1	FID	ACIS-S-4	7.20	18722	-0.034	0.025	0.005	0.009	0.000000	0.000000	2158.26	118.99
2	FID	ACIS-S-5	7.23	18721	0.029	0.030	0.007	0.012	0.000000	0.000000	-1807.92	112.59
3	GUIDE	700975608	7.74	37442	-0.105	0.109	0.070	0.112	88.344260	-8.111712	1188.13	-2284.67
4	GUIDE	626524448	8.66	37430	-0.023	0.044	0.081	0.134	87.380980	-6.987266	-2321.58	1700.86
5	GUIDE	700844704	8.71	37429	0.098	-0.040	0.083	0.133	87.931803	-7.921073	-293.83	-1624.07
6	GUIDE	626527888	9.39	37368	0.001	-0.104	0.104	0.167	87.940640	-6.806336	-333.85	2388.77
7	GUIDE	626656280	9.52	37407	0.022	-0.006	0.133	0.219	88.685870	-7.378153	2363.10	375.88

2.4 Star Slots

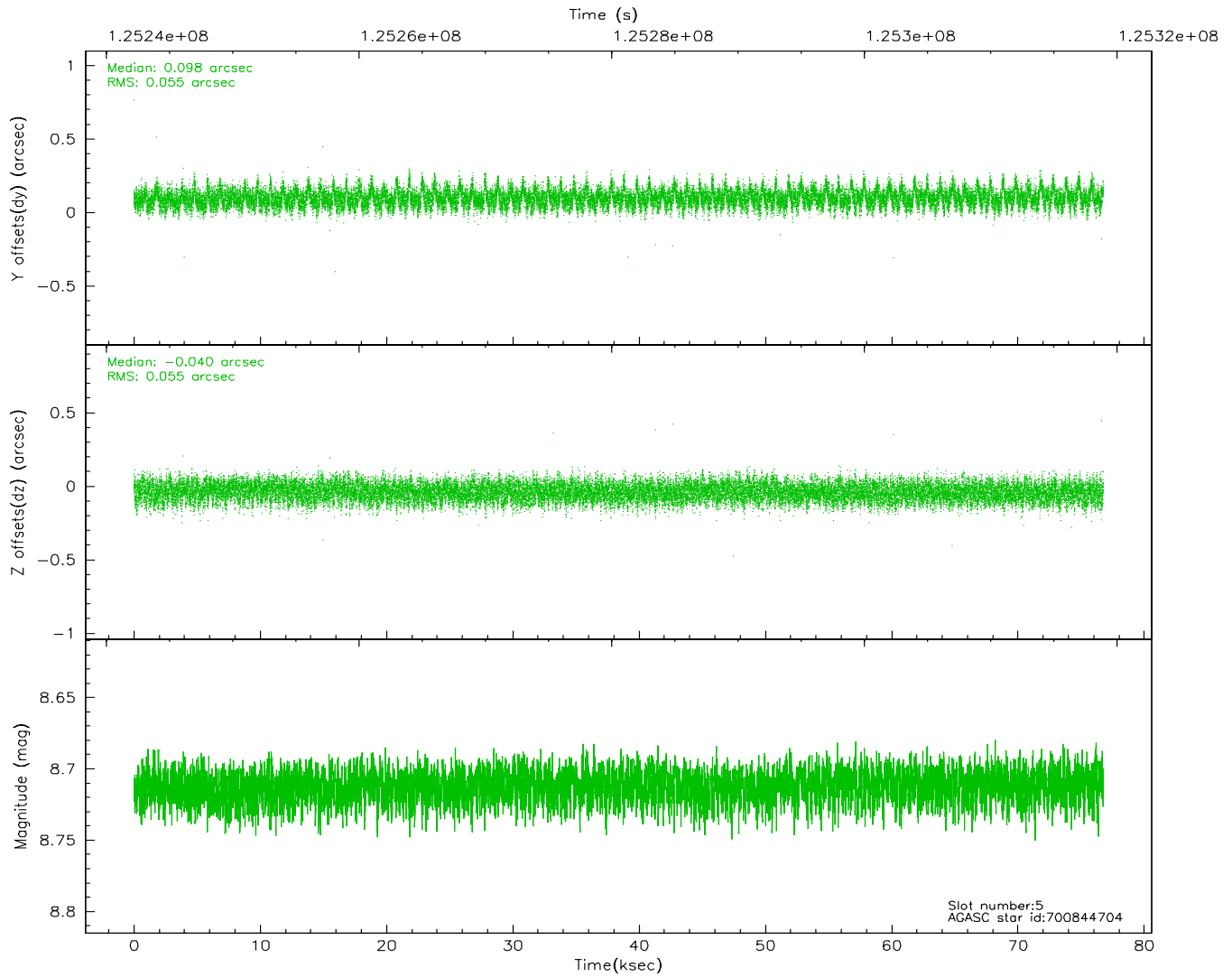
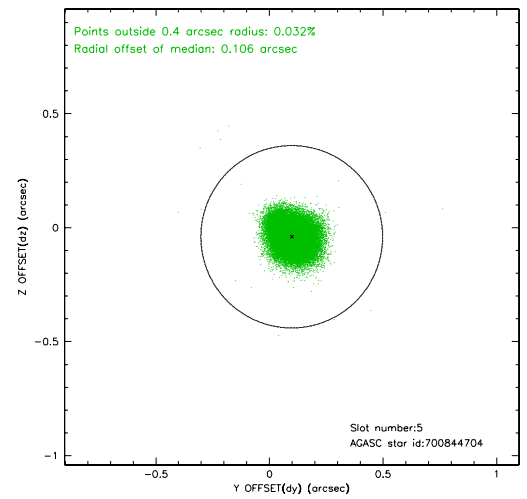
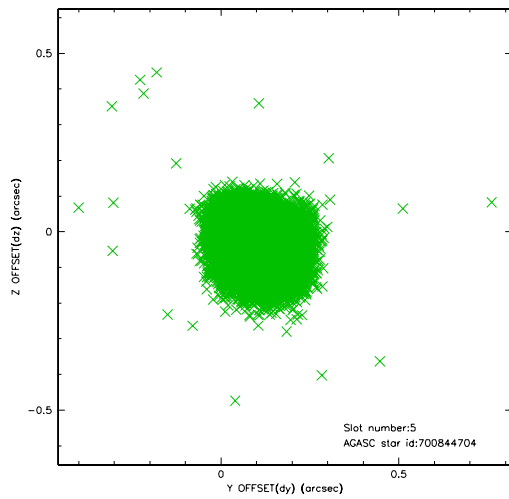
2.4.1 Slot 3



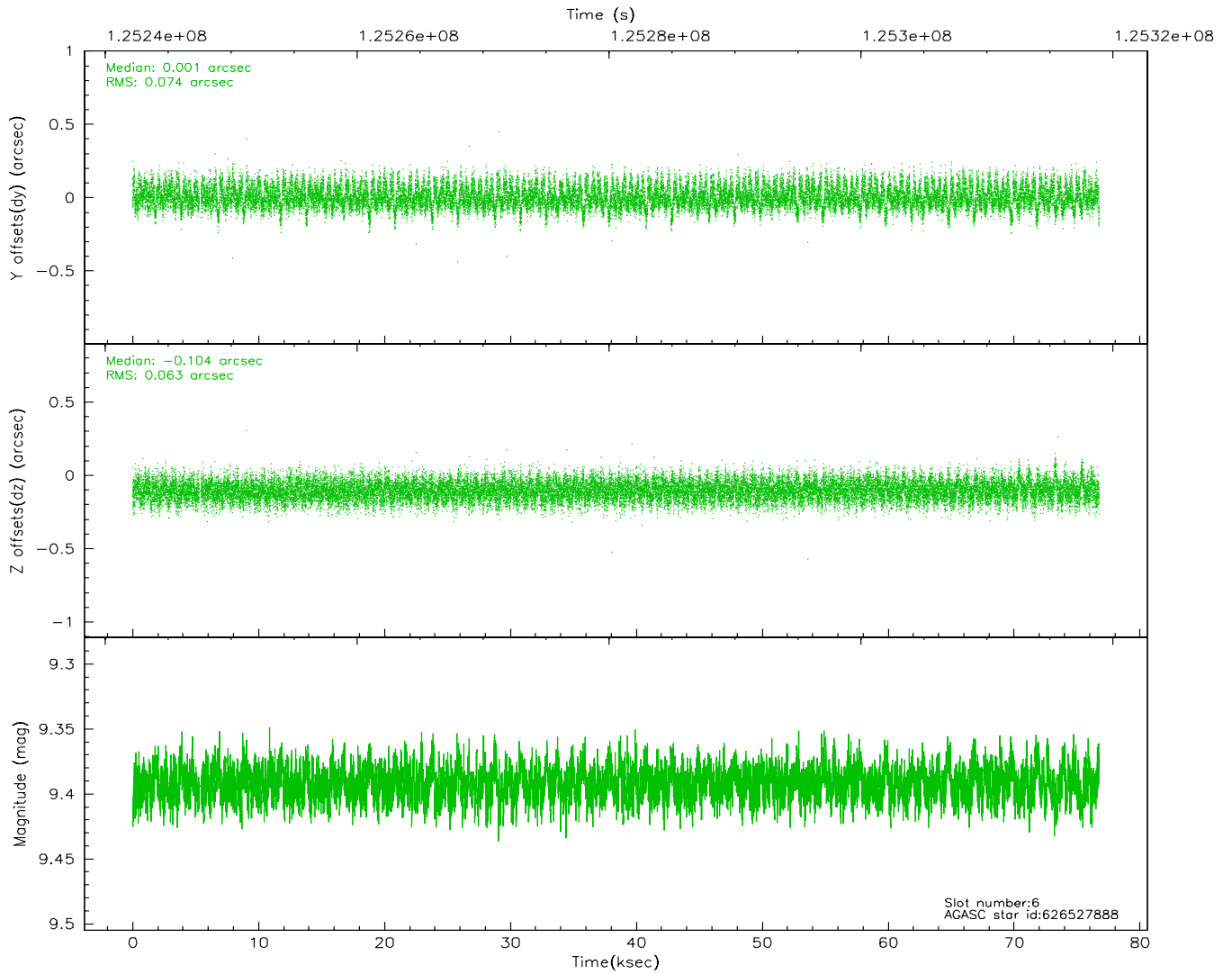
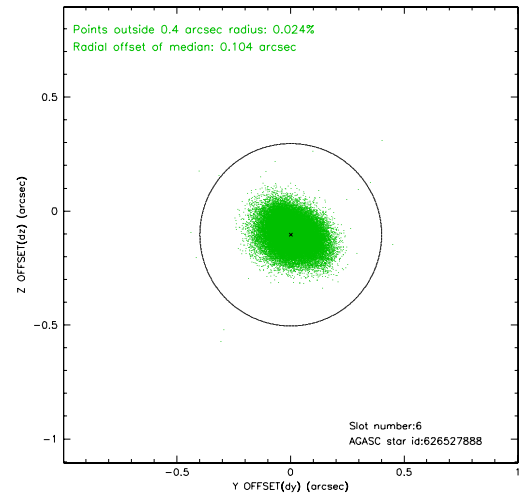
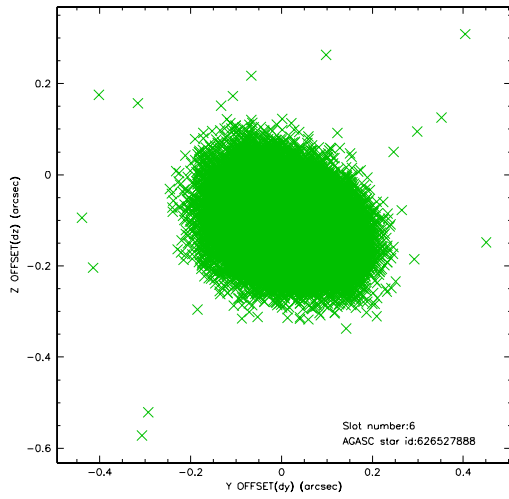
2.4.2 Slot 4



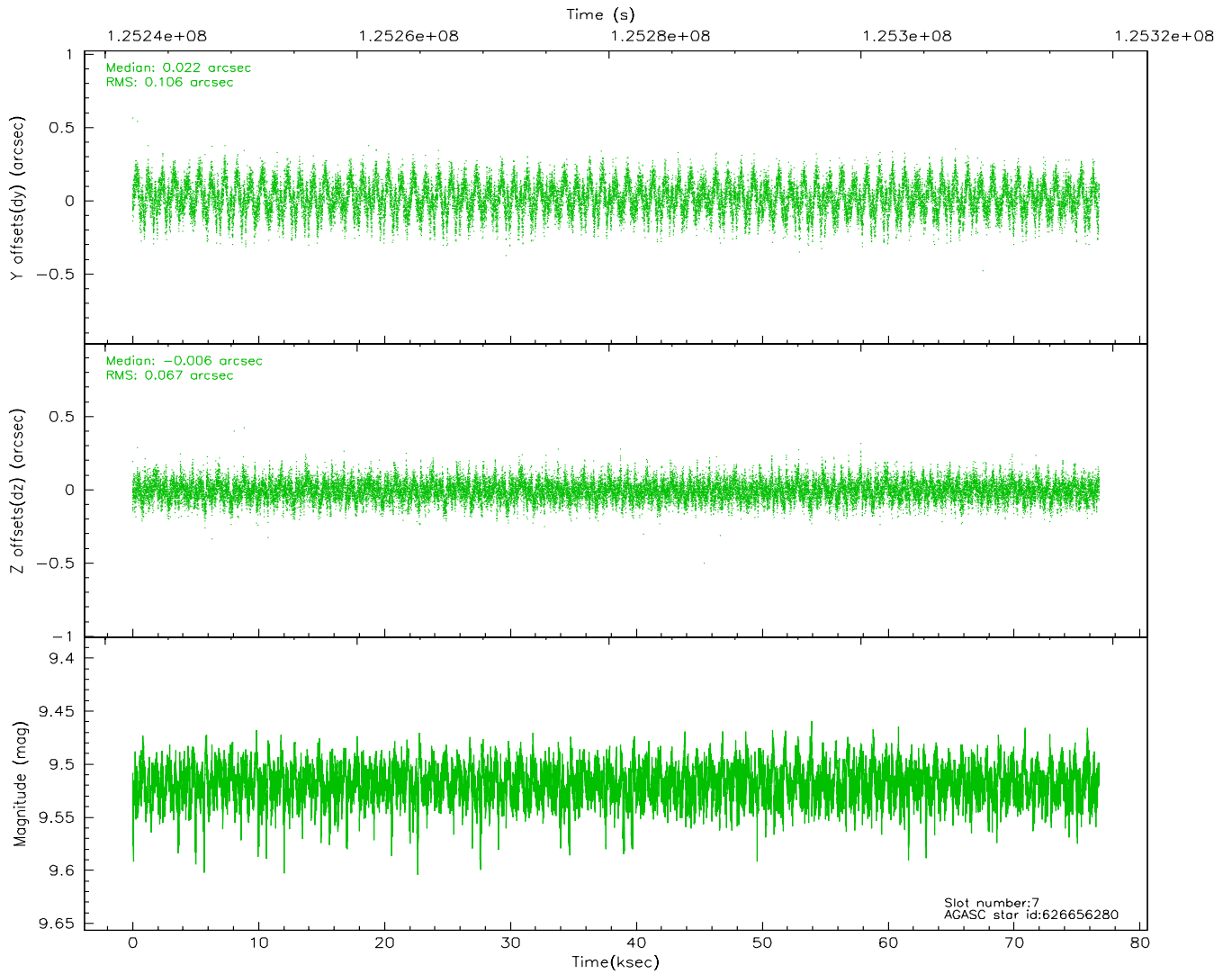
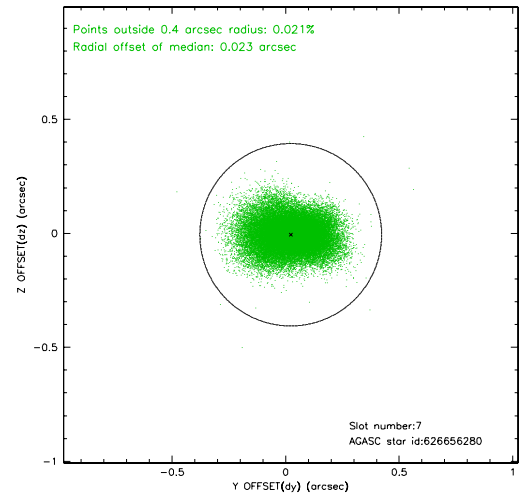
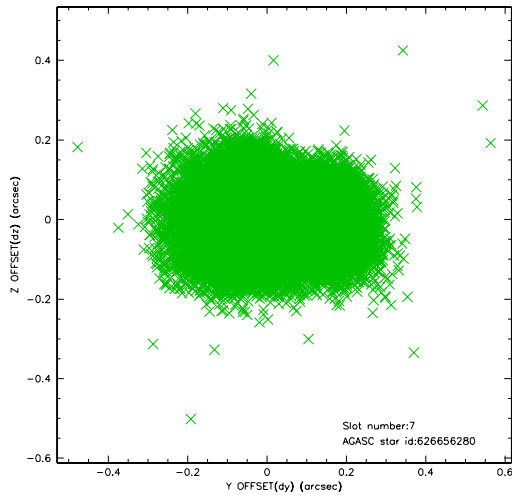
2.4.3 Slot 5



2.4.4 Slot 6

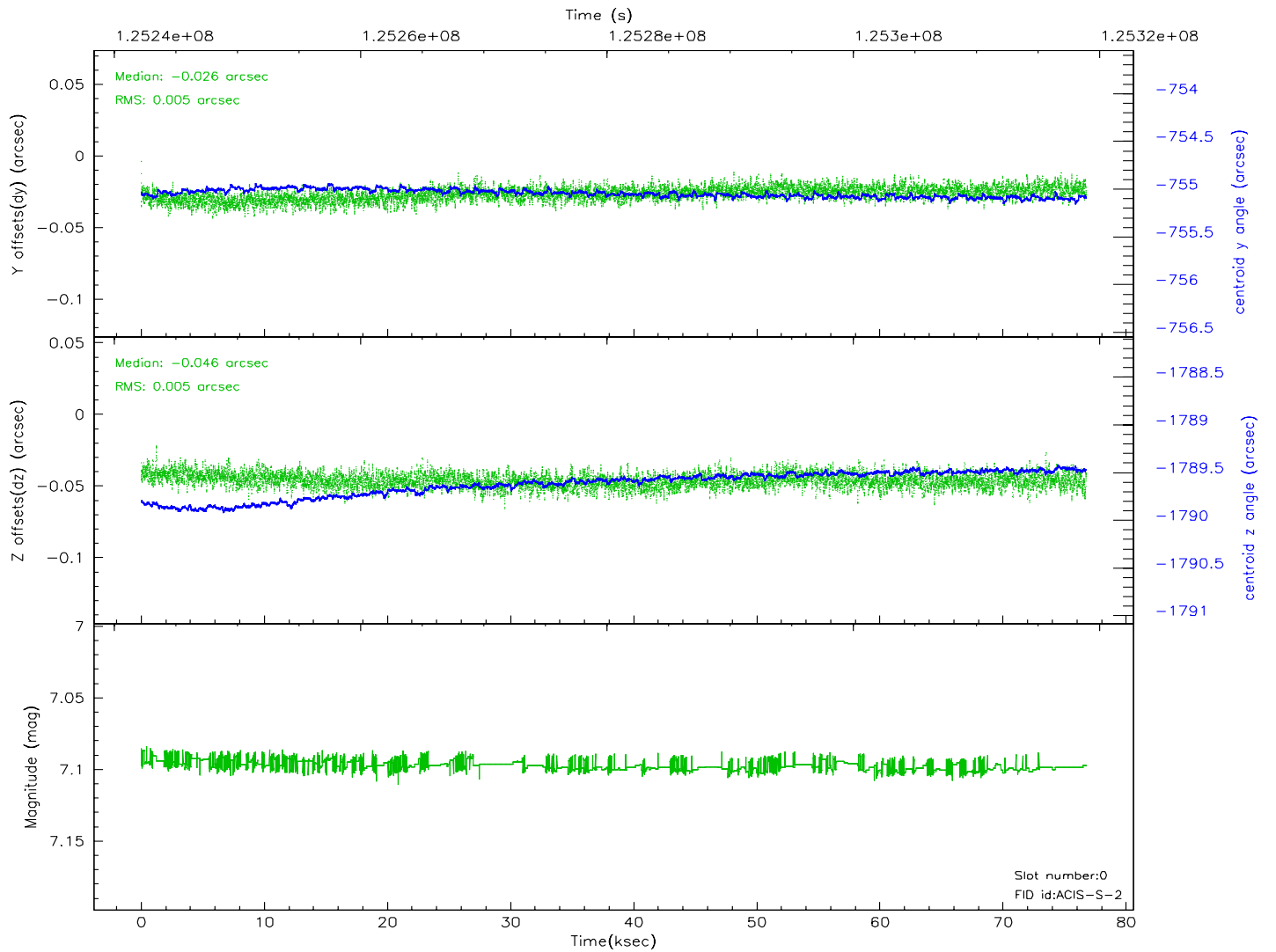
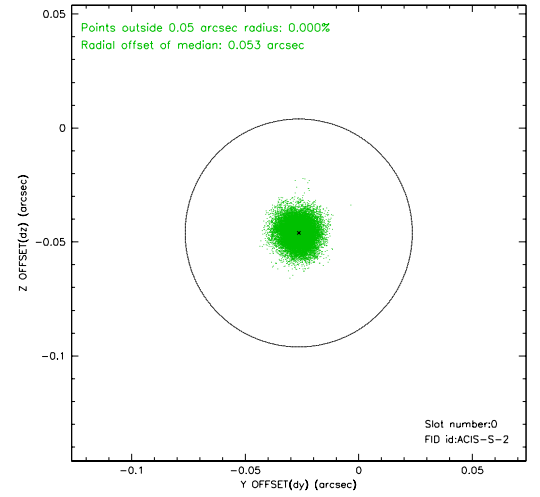
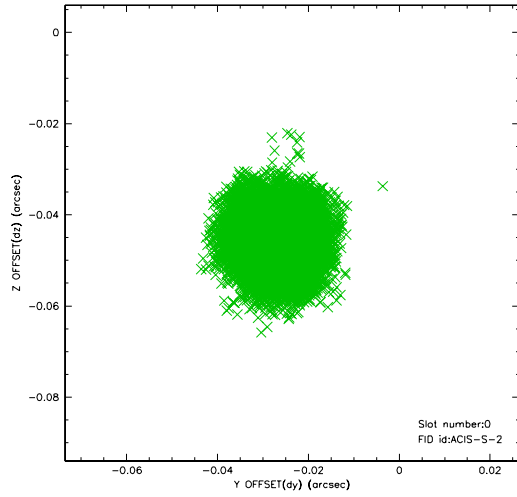


2.4.5 Slot 7

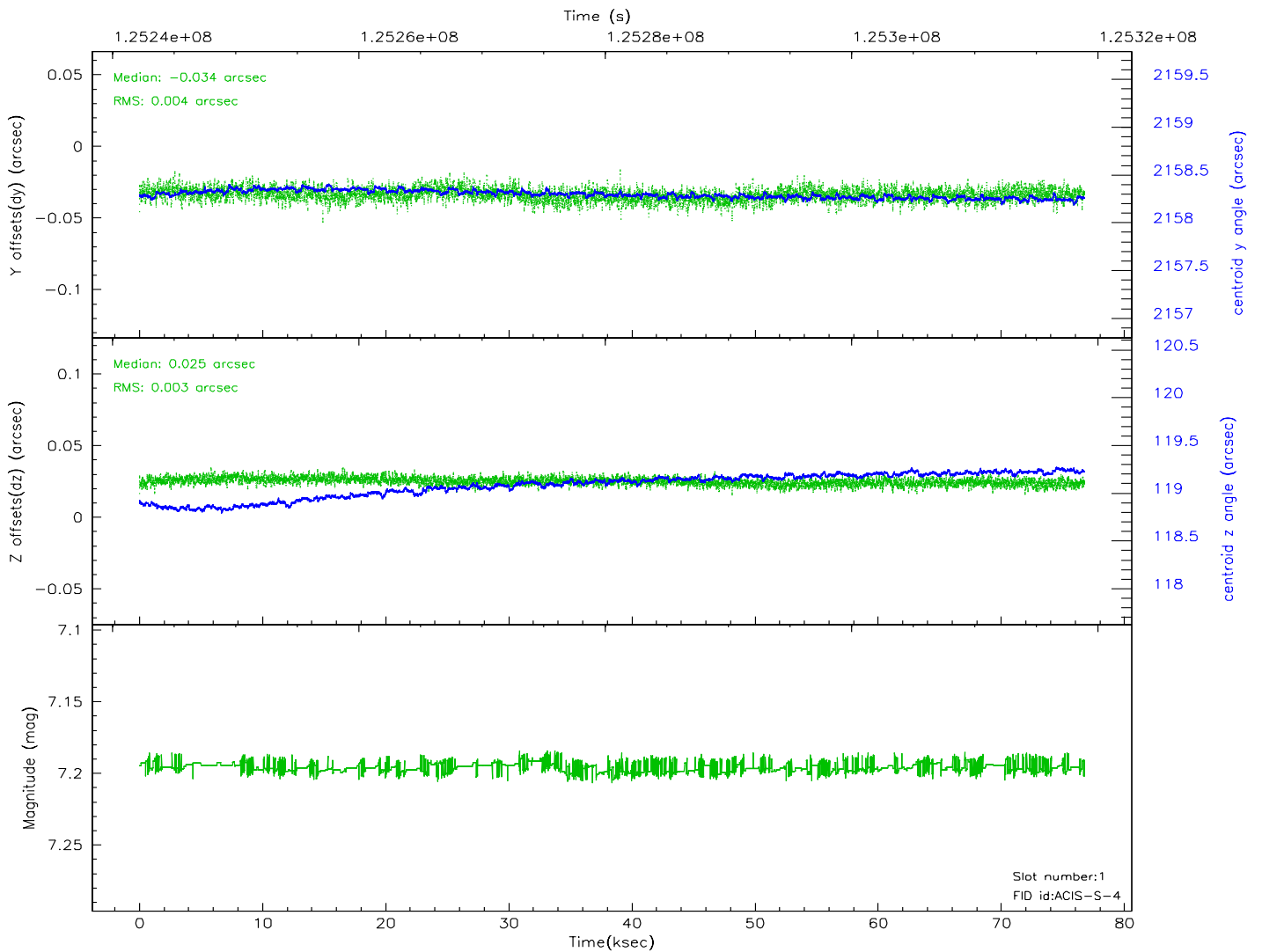
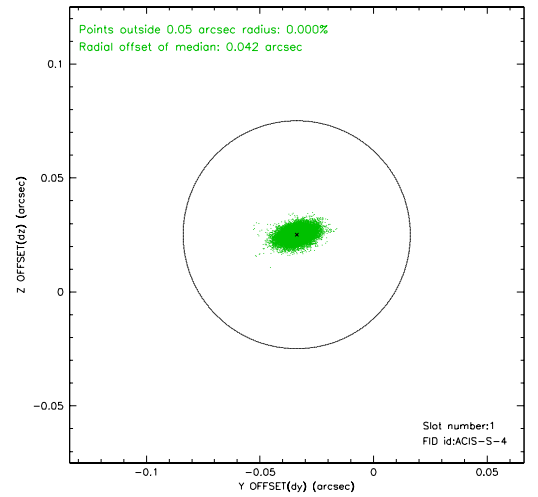
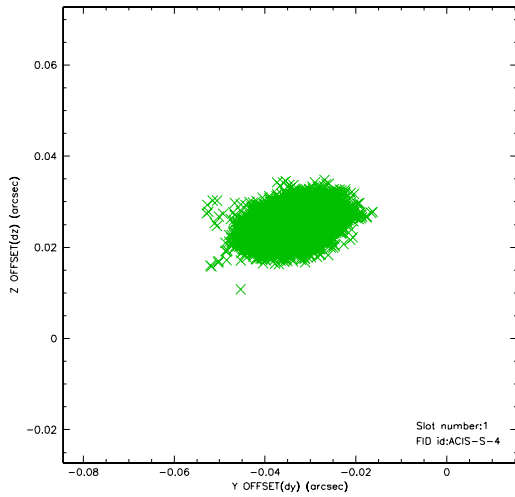


2.5 FID Slots

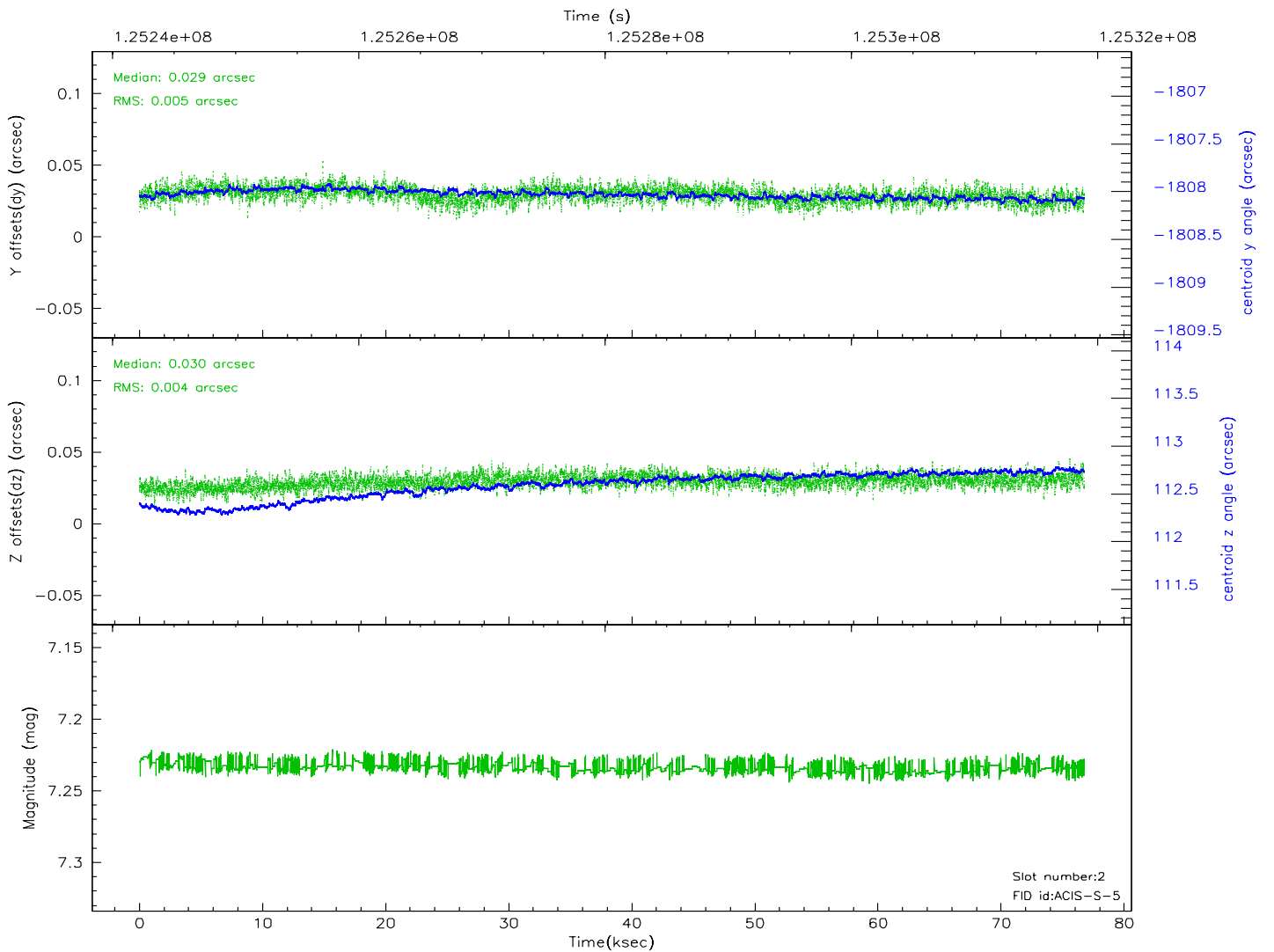
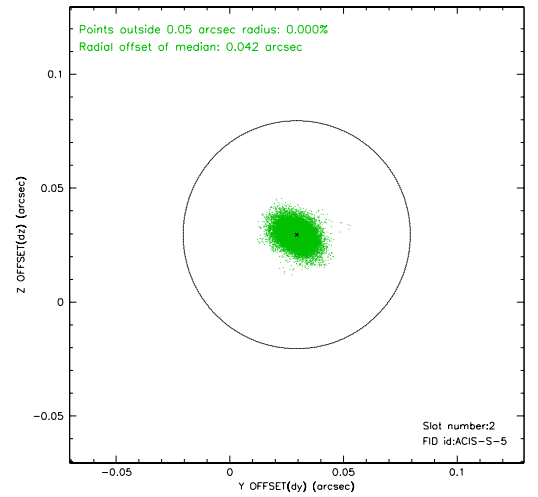
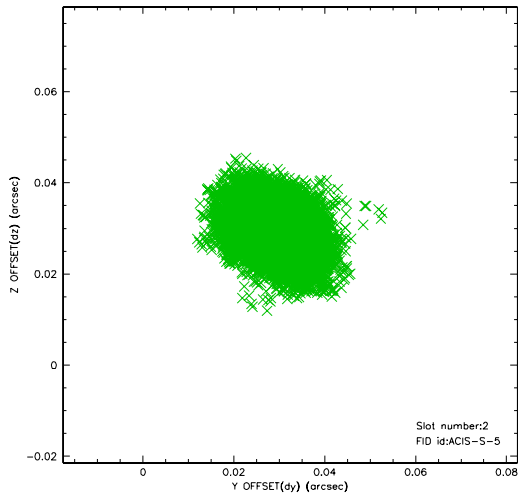
2.5.1 Slot 0



2.5.2 Slot 1



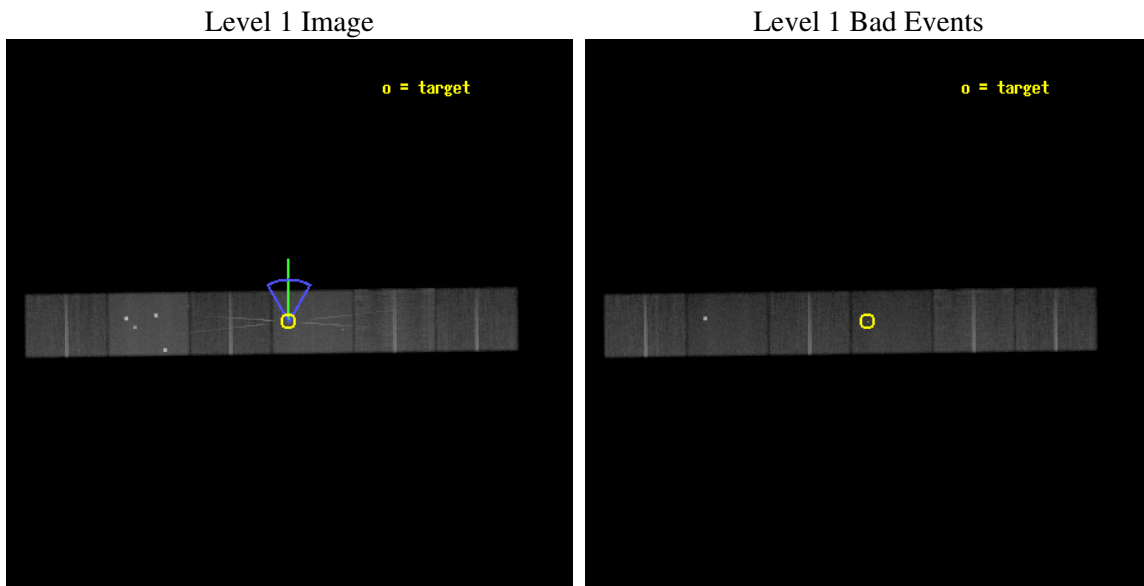
2.5.3 Slot 2



3 OBI Secondary

3.1 OBI

3.1.1 Images

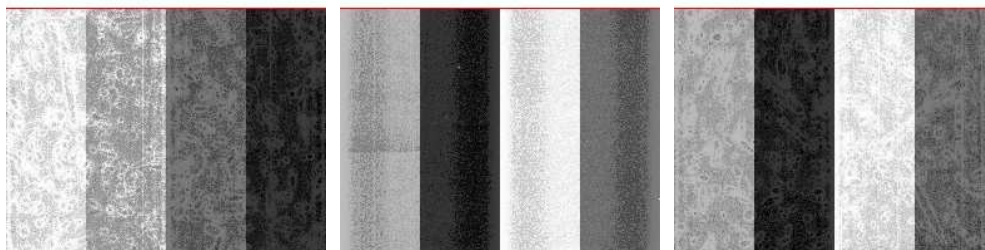


3.1.2 Bias

Chip 4

Chip 5

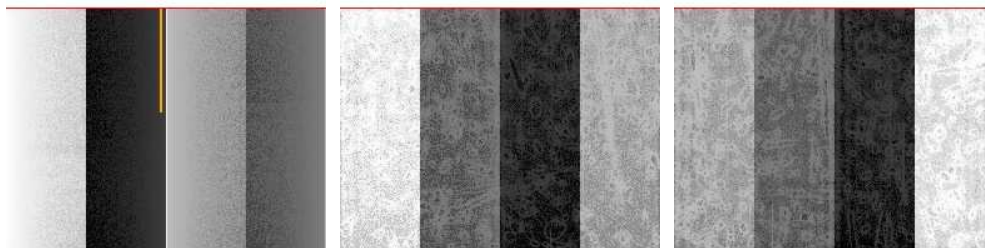
Chip 6



Chip 7

Chip 8

Chip 9



3.1.3 Parameters

obi_num	0
ascdsver	7.6.10
caldsver	3.3.0
date	2007-01-18T09:09:08
revision	3

sched_exp_time	76000.000000
ontime	56789.352399811
ontime4	56789.352111444
ontime5	56789.351981744
ontime6	56789.352011278
ontime7	56789.352399811
ontime8	56789.351522997
ontime9	56789.35173206
l1events	1951358

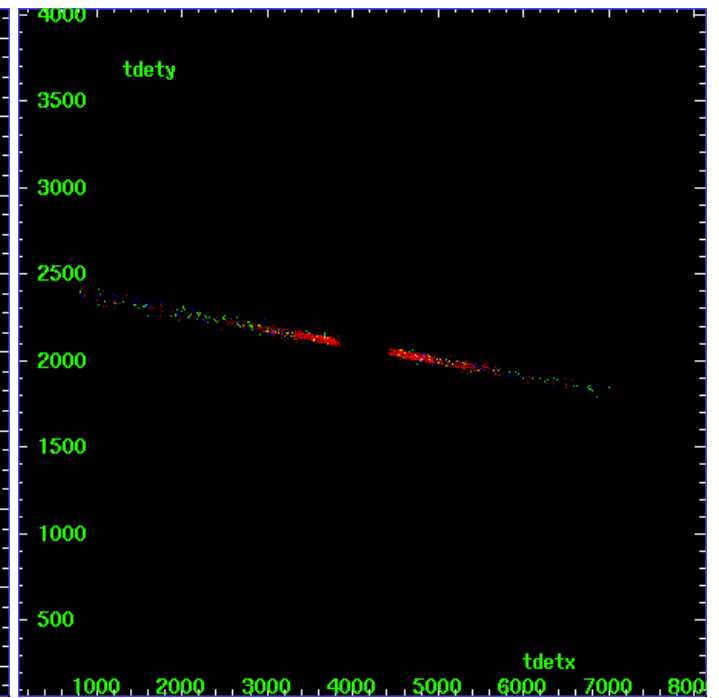
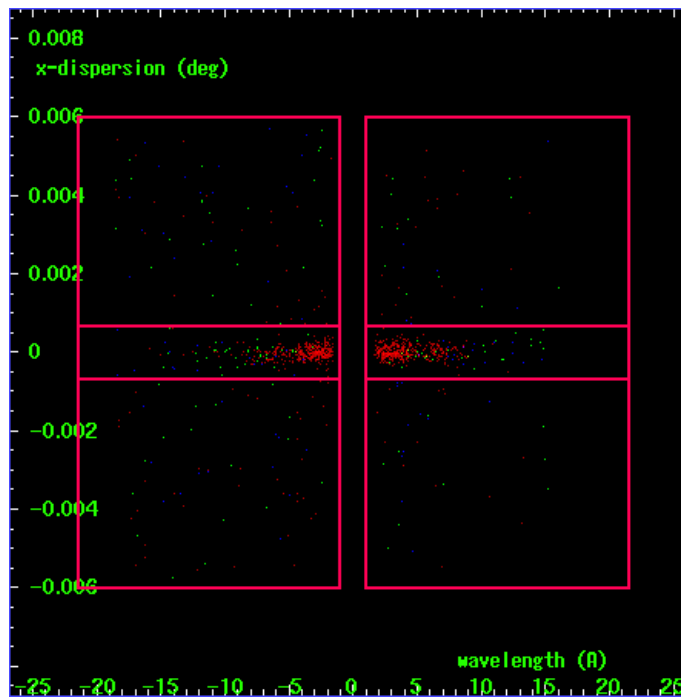
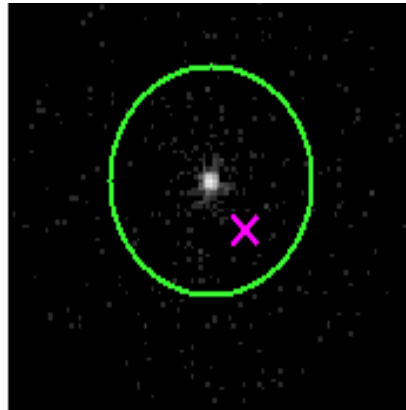
3.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	285921	429136	268094	374436	334992	258779
rejected events	252635	214484	226291	200561	259271	226077
rejected %	88%	49%	84%	53%	77%	87%

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	13472	49893	19866	17610	24080	13357
	4%	11%	7%	4%	7%	5%
grade 1 events	122	455	137	546	217	109
	0%	0%	0%	0%	0%	0%
grade 2 events	8002	52445	7865	35152	15918	6454
	2%	12%	2%	9%	4%	2%
grade 3 events	3054	11664	3638	16197	8228	3298
	1%	2%	1%	4%	2%	1%
grade 4 events	3096	7937	3556	16143	7524	3181
	1%	1%	1%	4%	2%	1%
grade 5 events	9566	38691	11387	34962	14600	11682
	3%	9%	4%	9%	4%	4%
grade 6 events	5664	92726	6880	88785	19971	6415
	1%	21%	2%	23%	5%	2%
grade 7 events	242945	175325	214765	165041	244454	214283
	84%	40%	80%	44%	72%	82%

4 Gratings

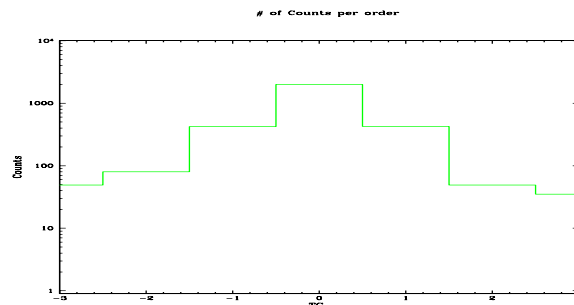
4.1 HEG Arm



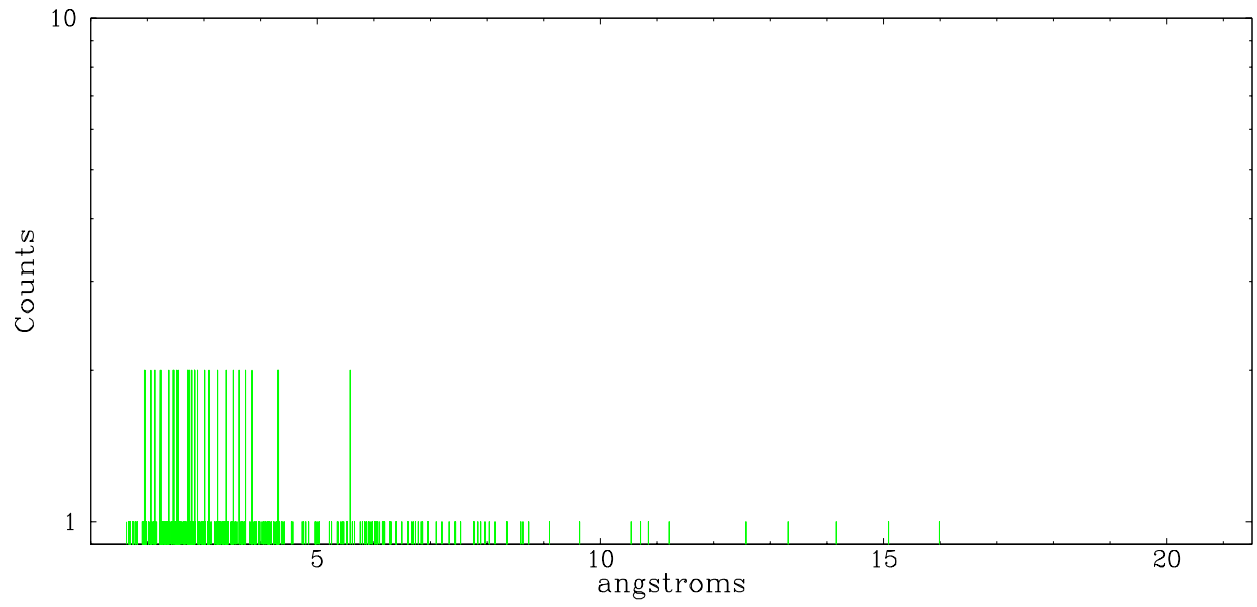
Spot Image HEG

Full Detector HEG

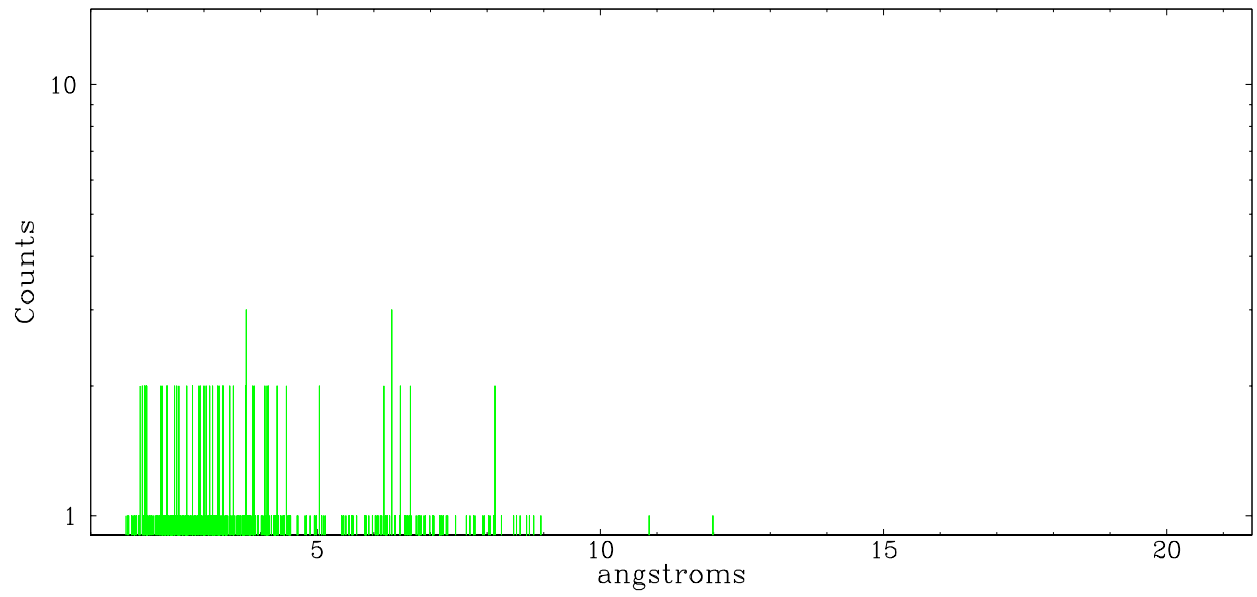
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	49	80	421	2004	425	49	35



heg order -1



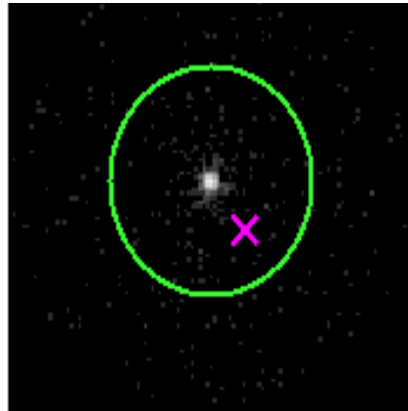
heg order +1



4.2 MEG Arm



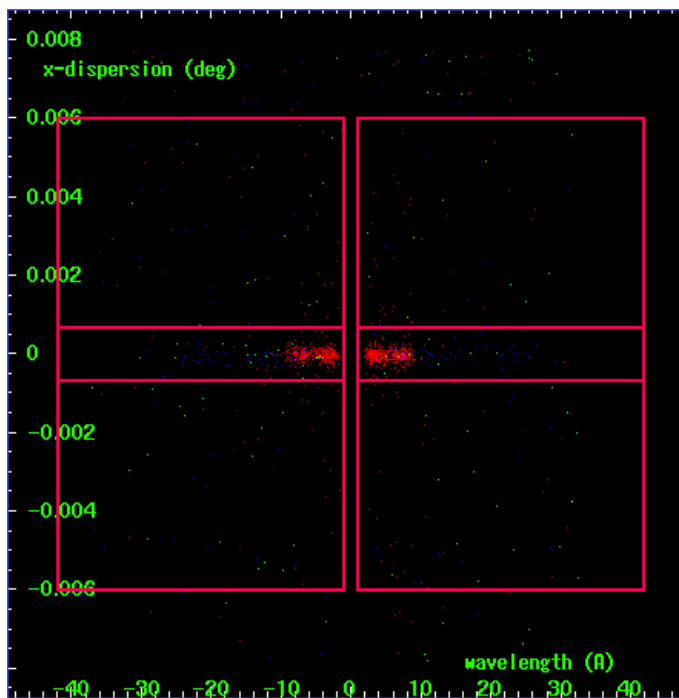
MEG Order Sort 123



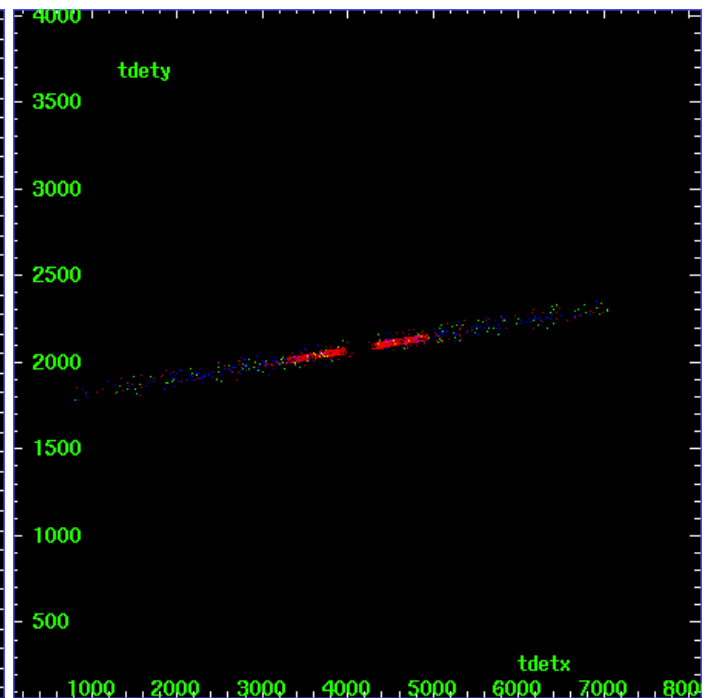
MEG Zero Order



MEG Order Sort ALL

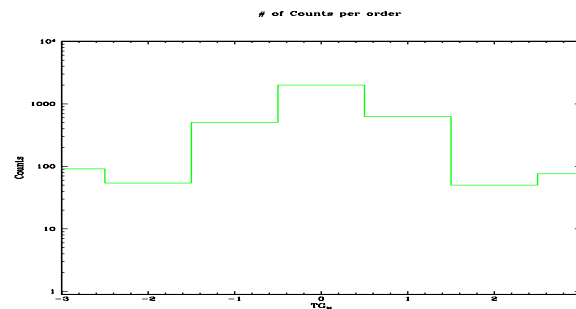


Spot Image MEG

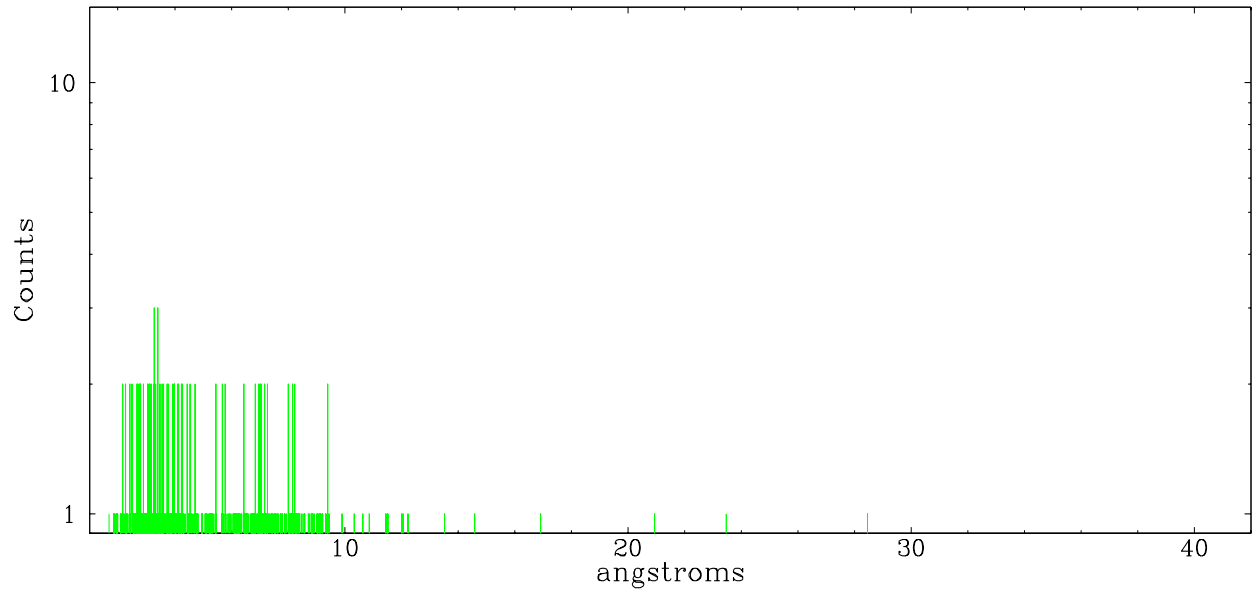


Full Detector MEG

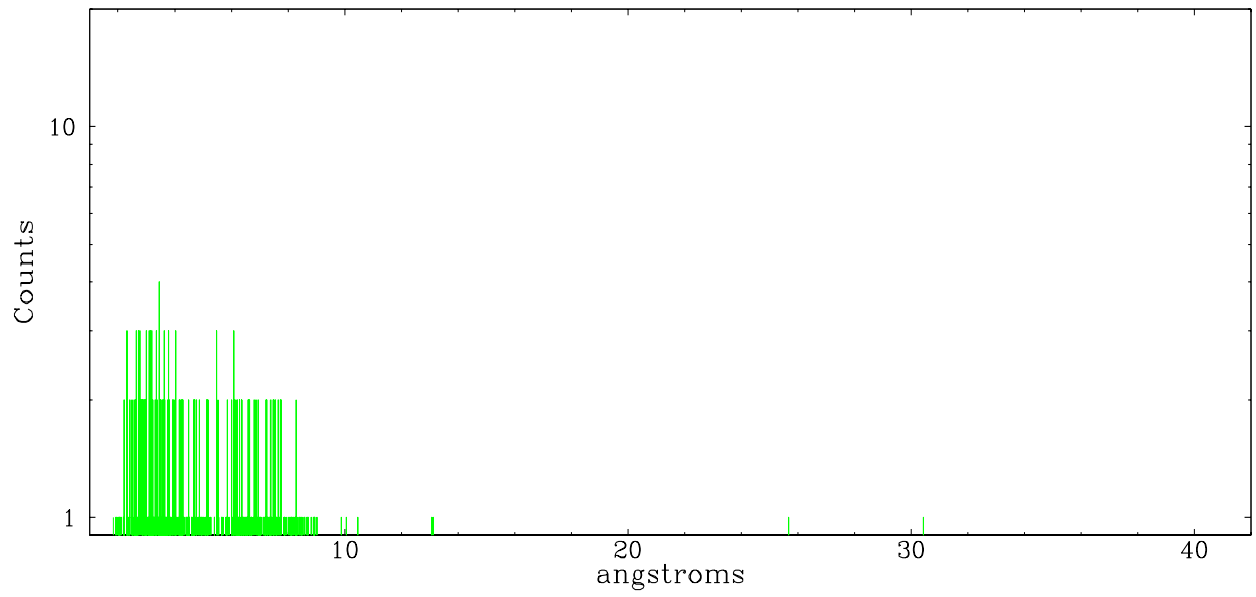
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	91	54	504	2004	626	50	76



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2007.03.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	76.053

A.2 Comments