

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 11965 - L2 Version 2
Chandra X-Ray Center

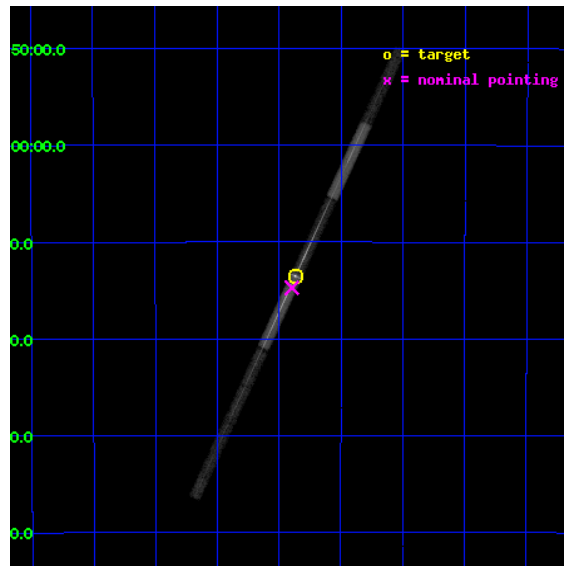
L2 Processing Date : Jun 24 2012

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Gratings	17
3.1	LETG Arm	17
A	Summary	19
A.1	Status	19
A.2	Comments	19

1 Front

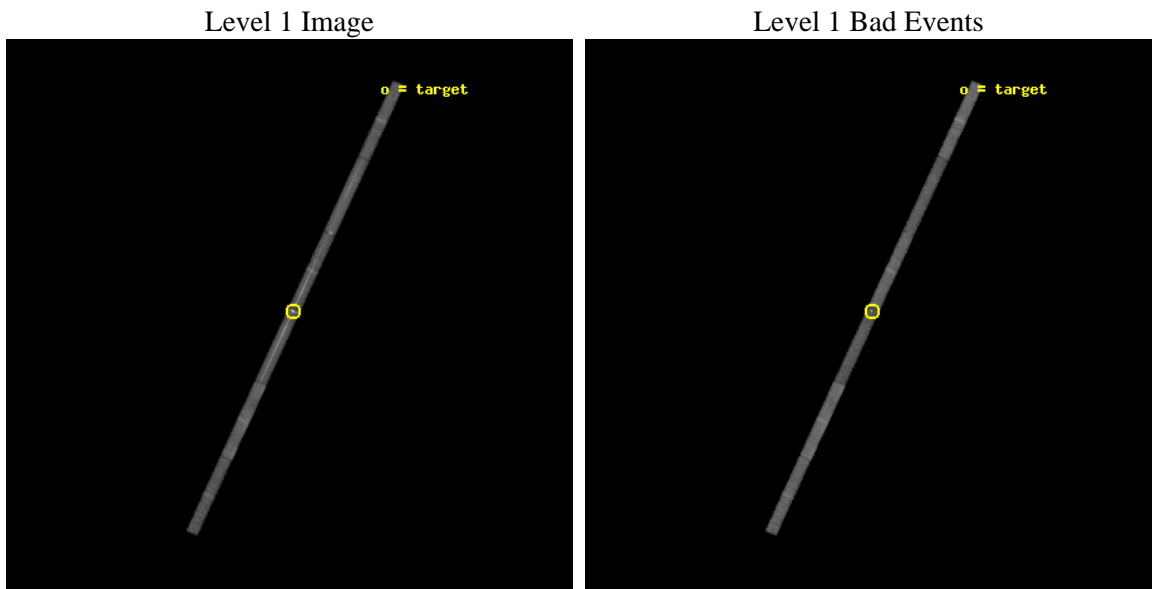
seq_num	790214	Sequence number
obs_id	11965	Observation id
title	AO-11 Calibration Observations of Mkn421	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	PKS2155-304	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	329.716667	Observer's specified target RA [deg]
dec_targ	-30.225556	Observer's specified target Dec [deg]
ra_nom	329.7240959376	Nominal RA [deg]
dec_nom	-30.245605980545	Nominal Dec [deg]
roll_nom	114.9011519151	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30064.925960958	Sum of GTIs [s]
livetime	28399.881480987	Livetime [s]
ontime4	30064.967000961	Sum of GTIs [s]
ontime5	30064.884920955	Sum of GTIs [s]
ontime6	30064.843880951	Sum of GTIs [s]
ontime7	30064.925960958	Sum of GTIs [s]
ontime8	30064.802840948	Sum of GTIs [s]
ontime9	30064.761800945	Sum of GTIs [s]
l2events	126279	Number of level 2 events



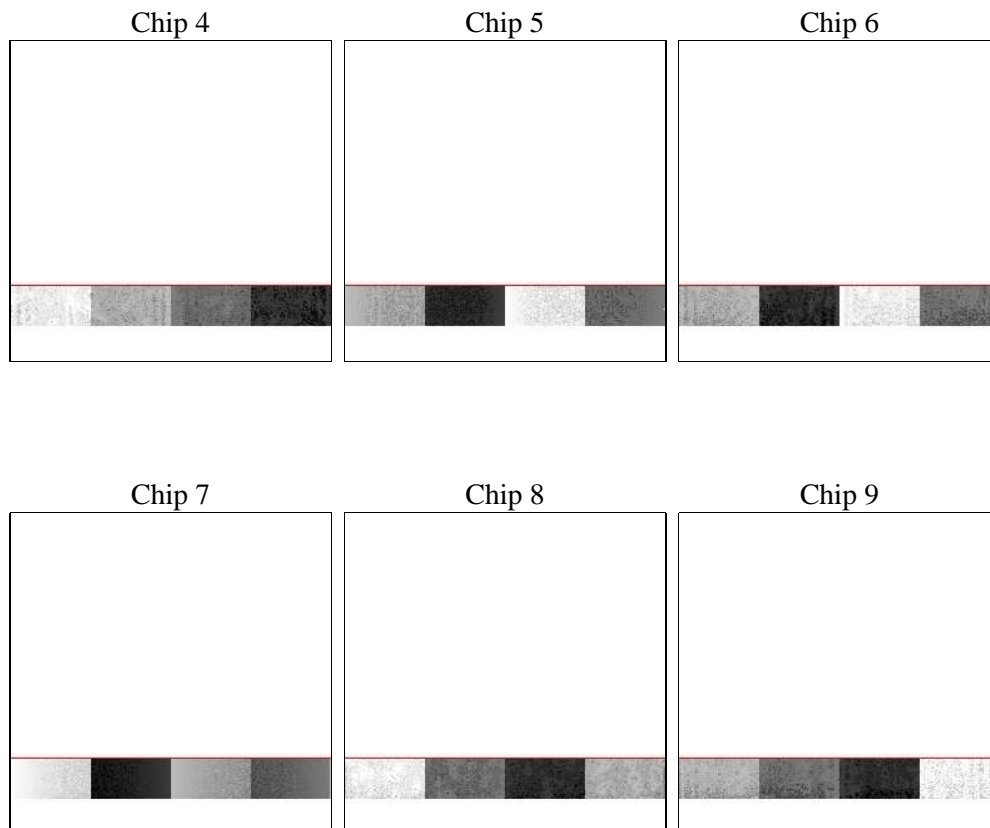
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	30064.925960958	Sum of GTIs [s]
caldbver	4.4.10	 	ontime4	30064.967000961	Sum of GTIs [s]
date	2012-06-24T23:24:16	Date and time of file creation	ontime5	30064.884920955	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	30064.843880951	Sum of GTIs [s]
			ontime7	30064.925960958	Sum of GTIs [s]
			ontime8	30064.802840948	Sum of GTIs [s]
			ontime9	30064.761800945	Sum of GTIs [s]
			l1events	329686	Number of level 1 events

2.1.4 Events

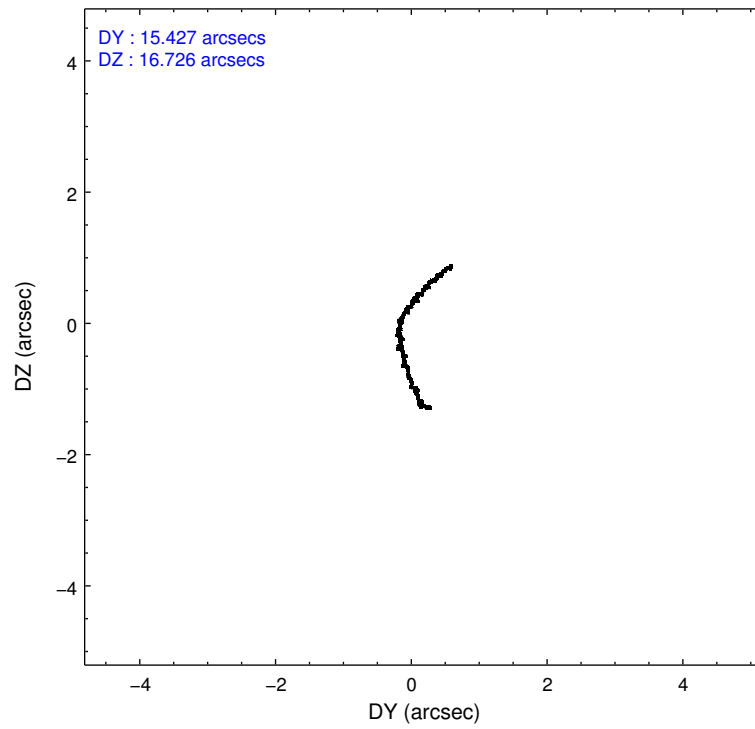
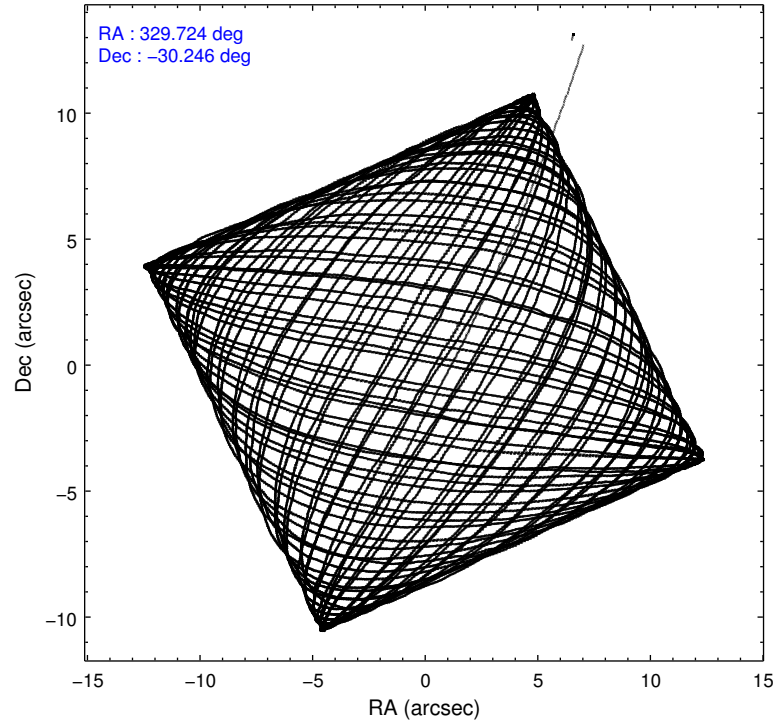
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	43805	51517	51855	92114	56203	34192
rejected events	38556	21164	32441	23478	41877	29529
rejected %	88%	41%	62%	25%	74%	86%

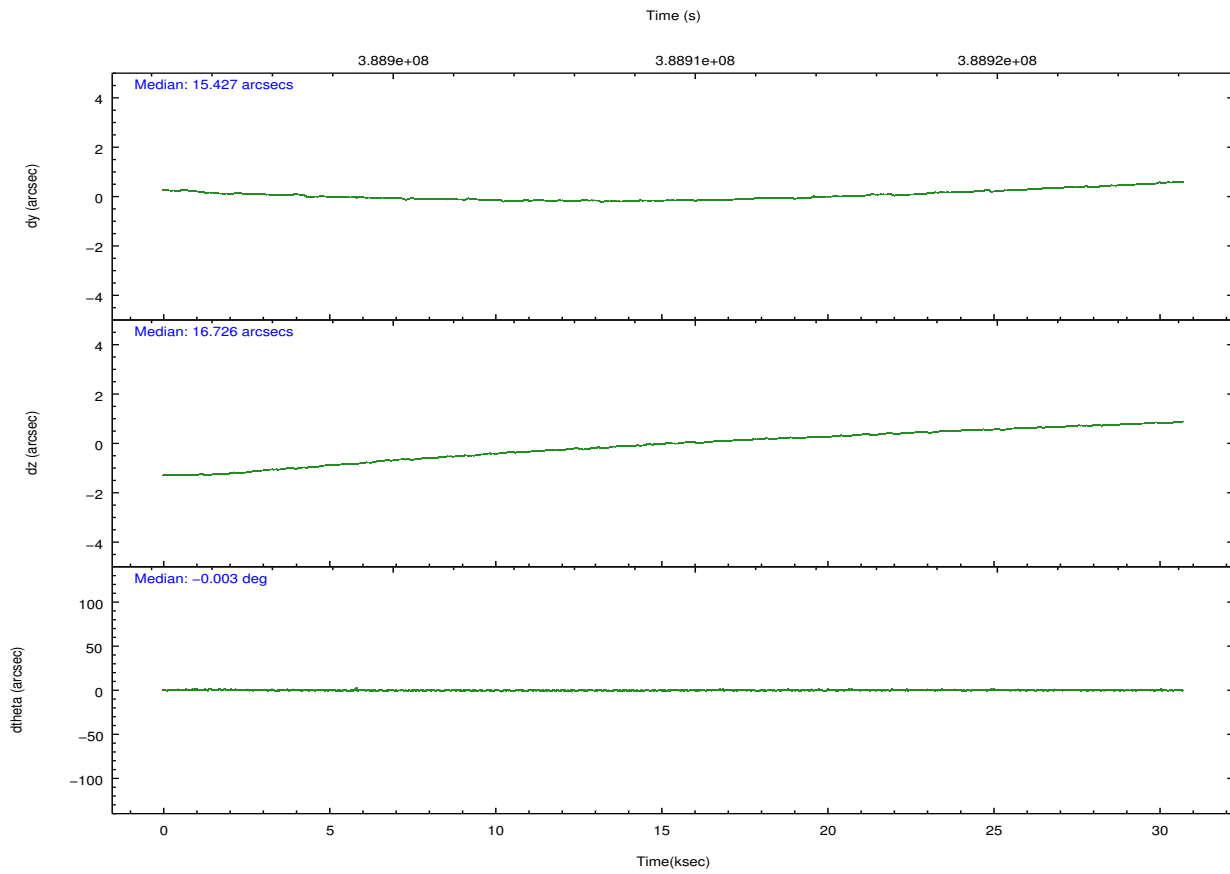
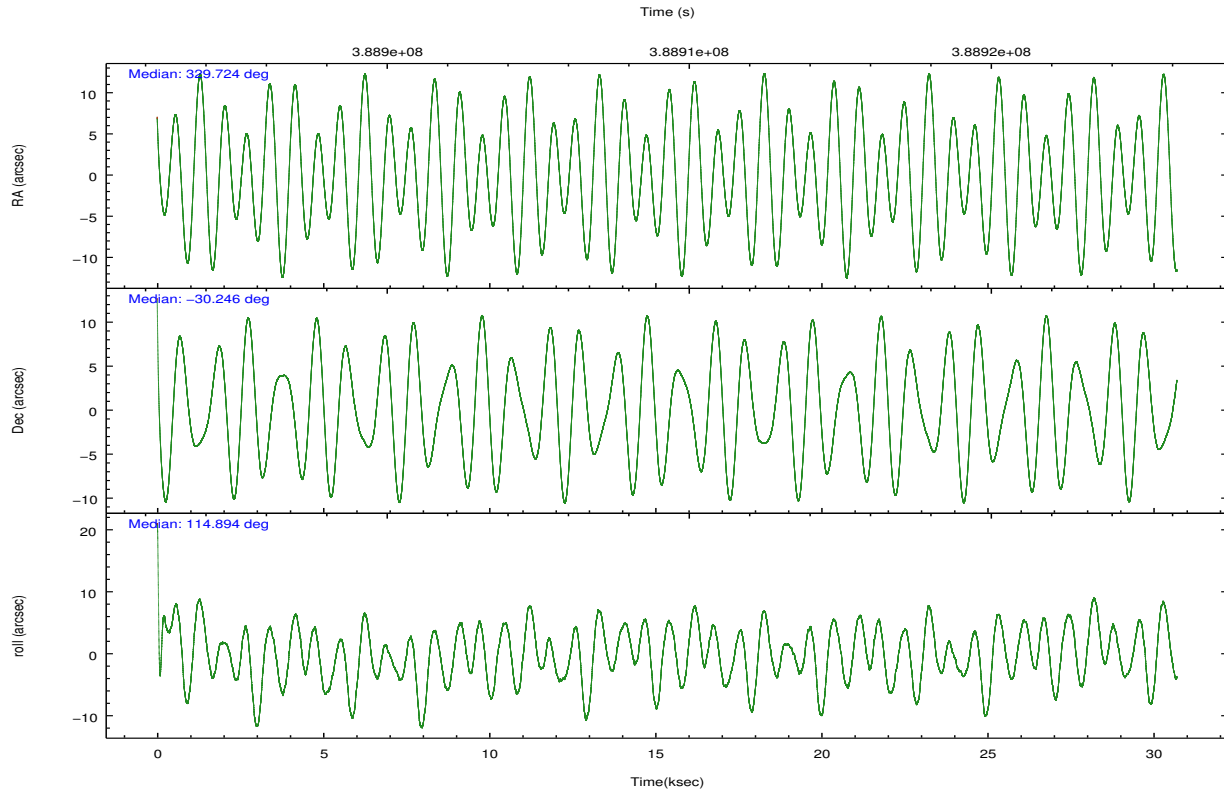
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	1995	7477	13898	17223	4466	1677
	4%	14%	26%	18%	7%	4%
grade 1 events	22	203	36	606	23	18
	0%	0%	0%	0%	0%	0%
grade 2 events	1041	6872	2198	16674	2670	808
	2%	13%	4%	18%	4%	2%
grade 3 events	748	2584	1128	7769	1586	709
	1%	5%	2%	8%	2%	2%
grade 4 events	671	2436	1154	7509	1524	775
	1%	4%	2%	8%	2%	2%
grade 5 events	1179	4230	1120	5590	1732	1221
	2%	8%	2%	6%	3%	3%
grade 6 events	794	10987	1038	19461	4080	694
	1%	21%	2%	21%	7%	2%
grade 7 events	37355	16728	31283	17282	40122	28290
	85%	32%	60%	18%	71%	82%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	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
[deg] Pointing RA	329.750239	329.7240959376037	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	-30.261005	-30.24560598054526	Subarray start row	113	113
[deg] Pointing Roll	114.757688	114.9011519150962	Subarray row count	128	128
[s] Window start time (MET)	386467266.184000	386467266.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	391651266.184000	391651266.184000	[s] Primary exposure time	0.000000	0.7
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-182.132523	-182.1344861297048			
[mm] SIM translation stage offset	-8	-7.998036453302973			
[s] Observation start time (MET)	388894608.184000	388892863.79158			
Observation start date	2010-04-29T02:15:42	2010-04-29T01:47:43			
[s] Observation end time (MET)	388924608.184000	388925619.20575			
Observation end date	2010-04-29T10:35:42	2010-04-29T10:53:39			
Read mode	TIMED	TIMED			

2.3 Aspect



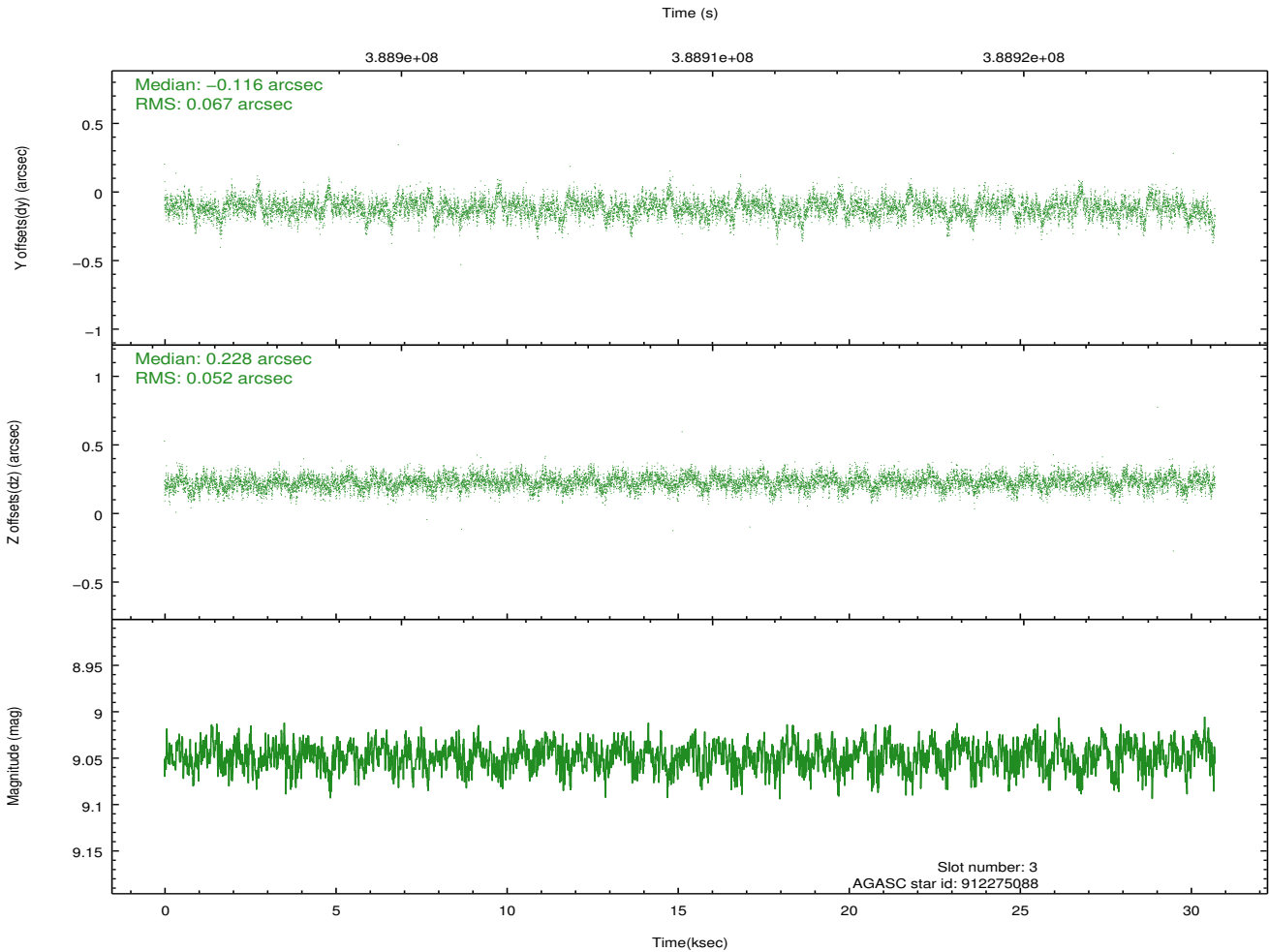
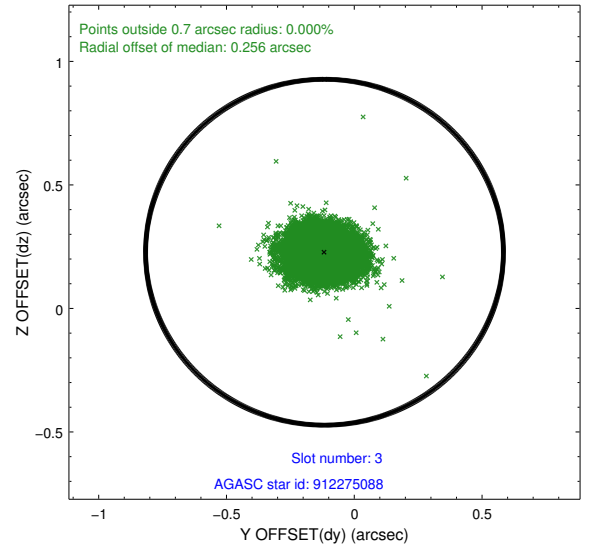
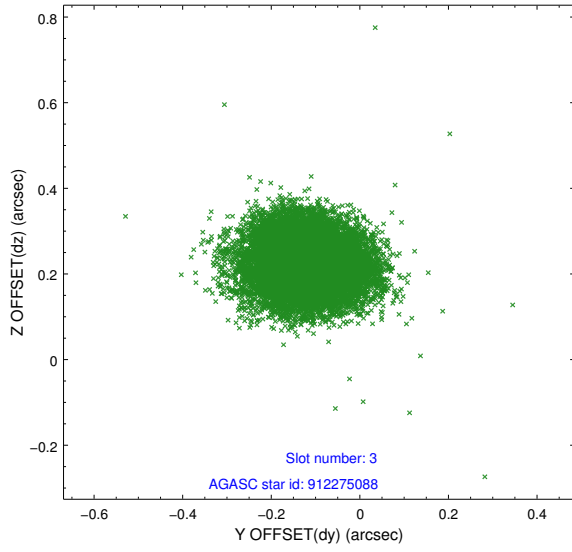


Slot Statistics

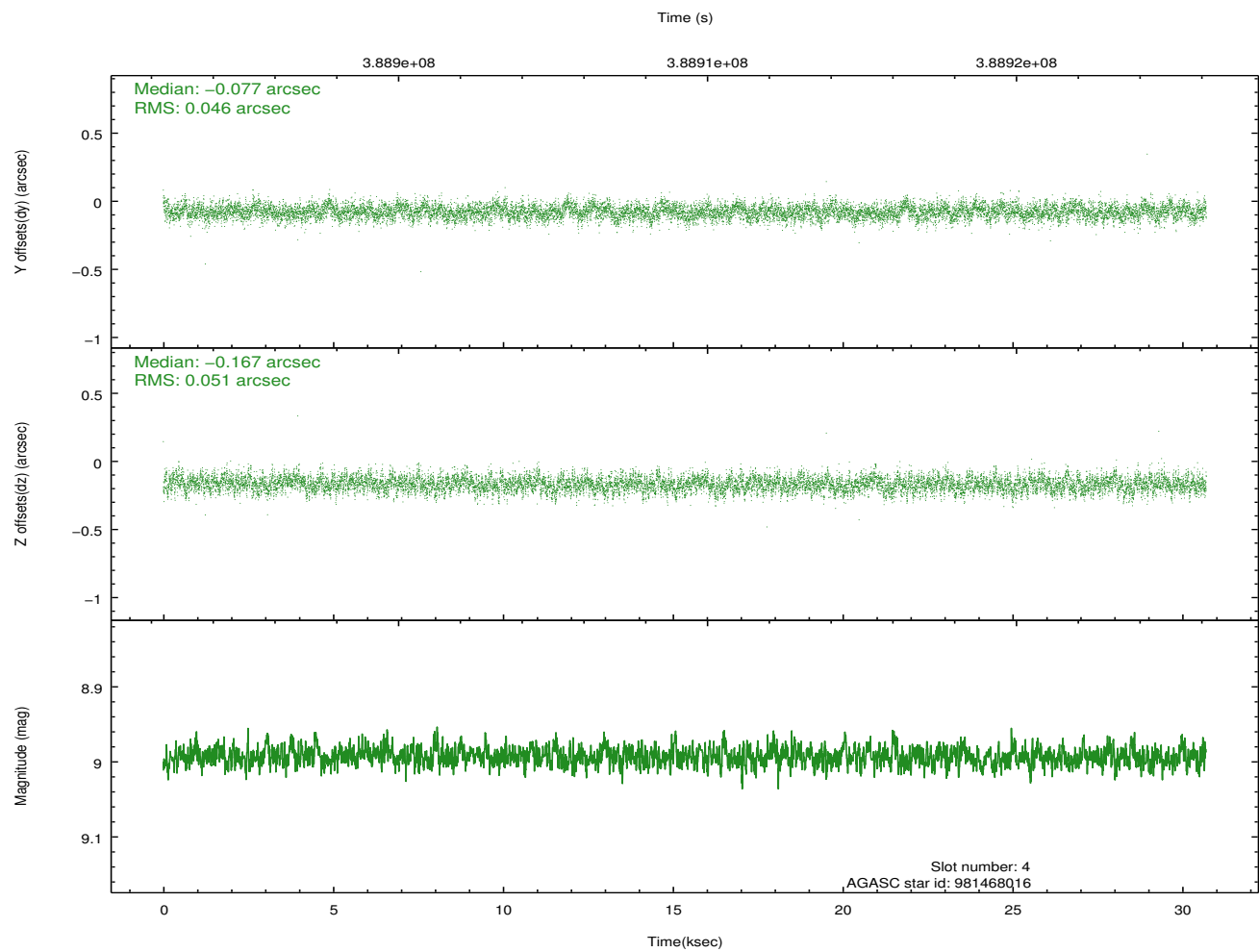
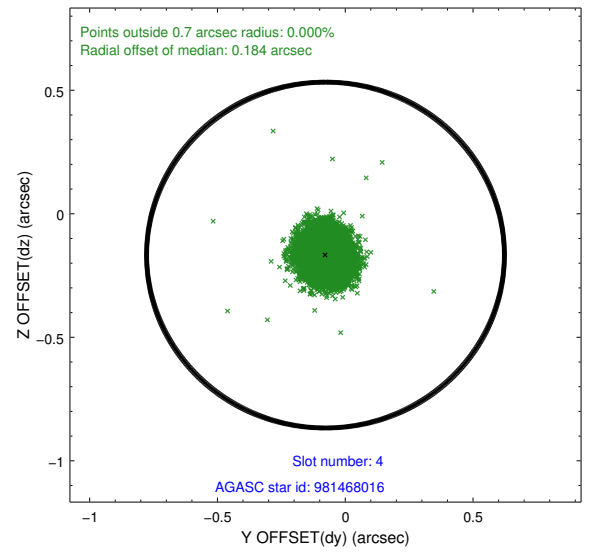
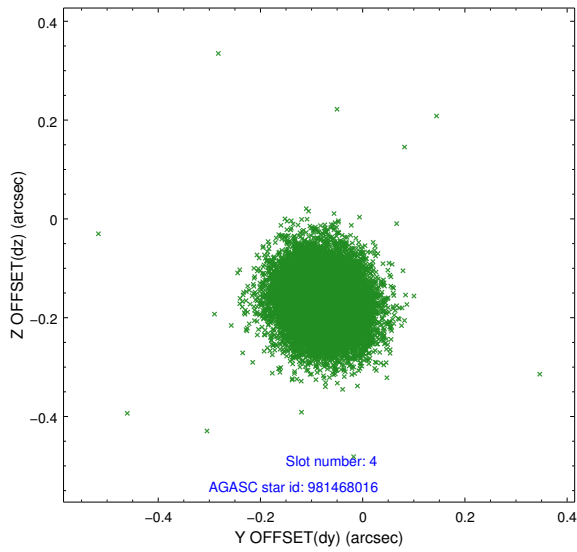
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.88	7490	-0.179	-0.149	0.009	0.018	0.000000	0.000000	-768.12	-1902.94
1	FID	ACIS-S-4	6.95	7490	0.149	0.095	0.009	0.017	0.000000	0.000000	2145.50	5.61
2	FID	ACIS-S-6	7.18	7488	0.002	0.061	0.012	0.034	0.000000	0.000000	394.19	643.08
3	GUIDE	912275088	9.05	14962	-0.116	0.228	0.088	0.147	329.619228	-29.738698	1879.11	-415.04
4	GUIDE	981468016	8.99	14964	-0.077	-0.167	0.073	0.117	328.842457	-30.034984	1913.58	2233.11
5	GUIDE	981468128	9.35	14953	0.168	0.192	0.108	0.174	329.756350	-30.158334	328.16	-171.84
6	GUIDE	981478152	9.40	14902	0.059	-0.185	0.094	0.154	329.415589	-30.057192	1101.99	640.18
7	GUIDE	912131856	9.73	14913	-0.034	-0.069	0.109	0.180	328.758728	-29.933690	2352.98	2321.15

2.4 Star Slots

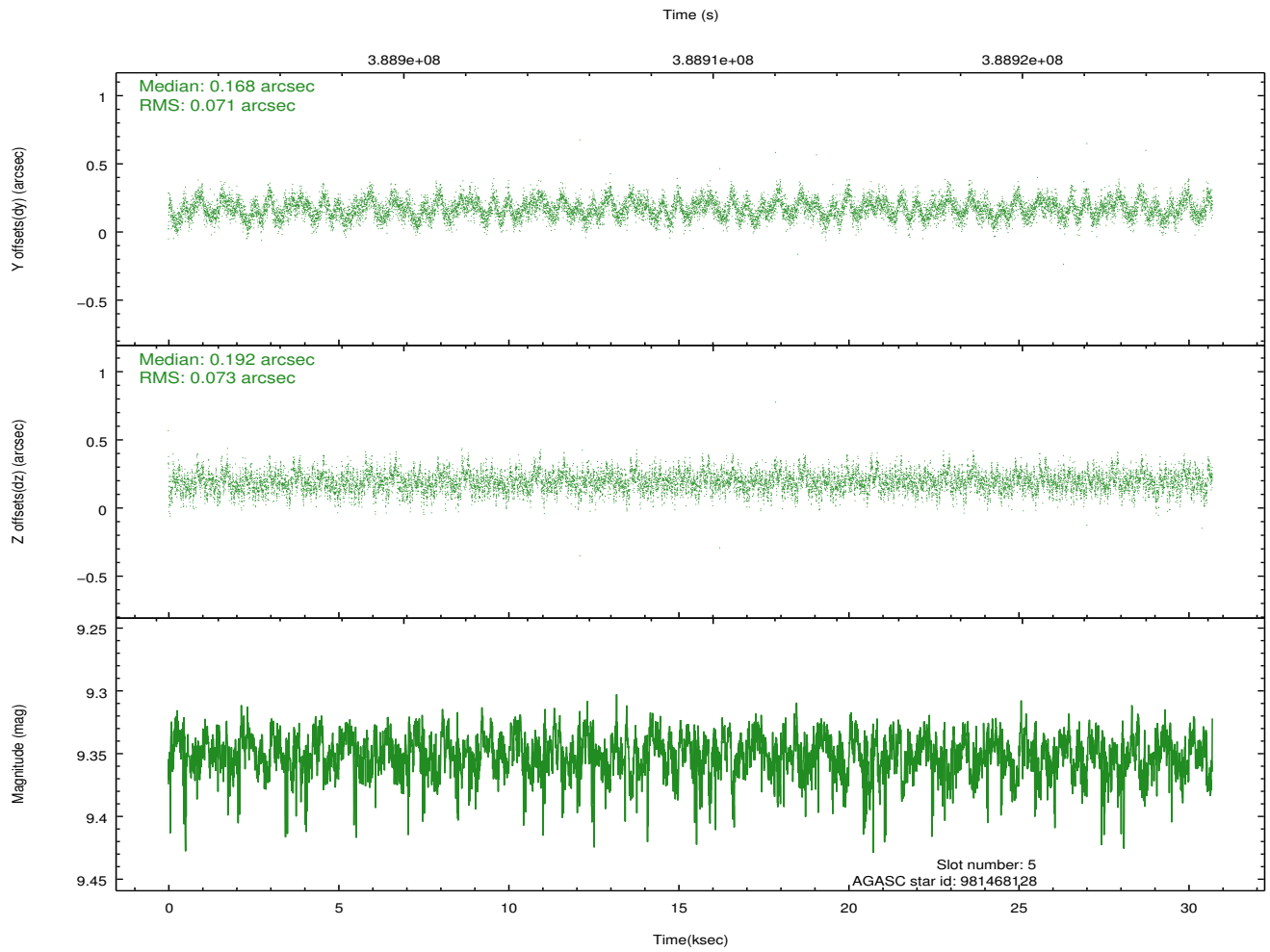
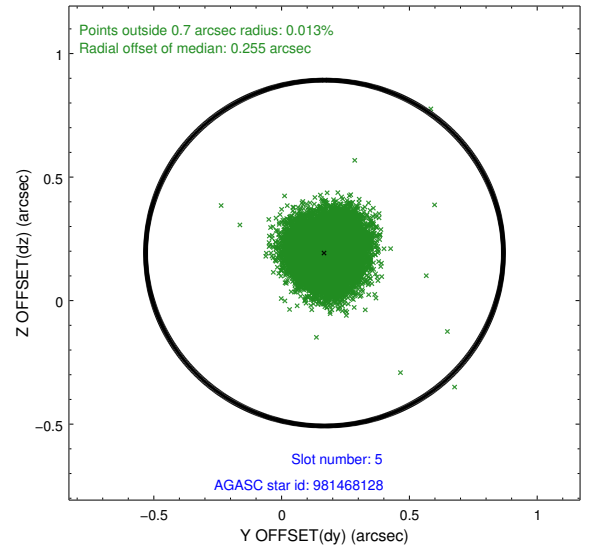
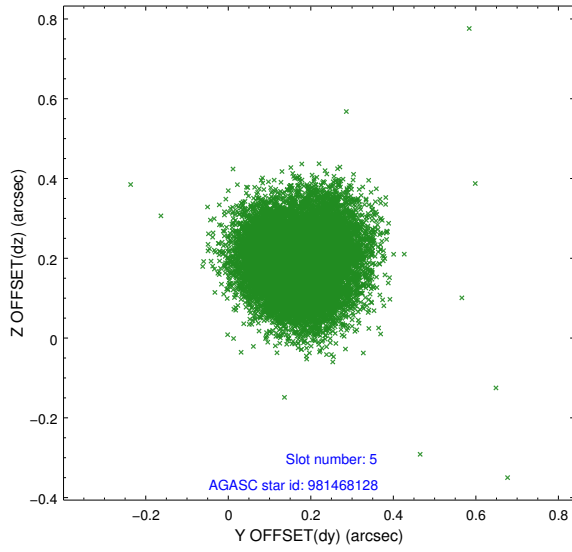
2.4.1 Slot 3



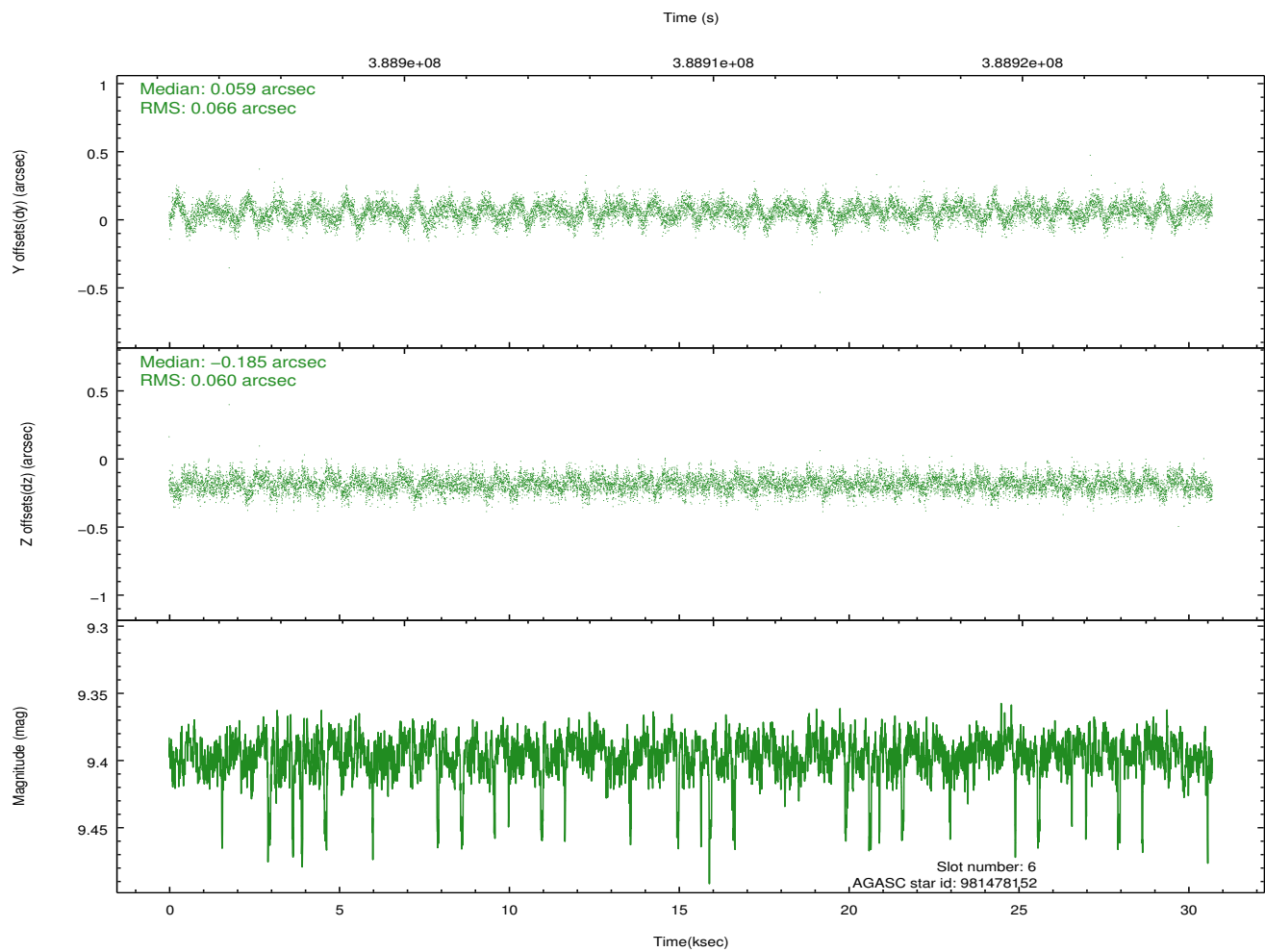
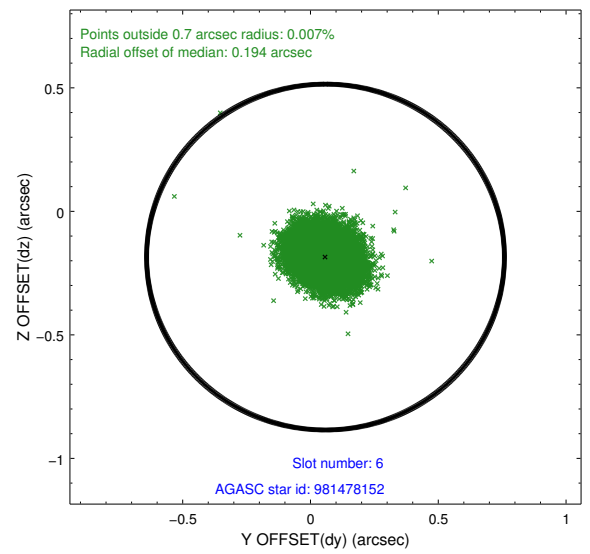
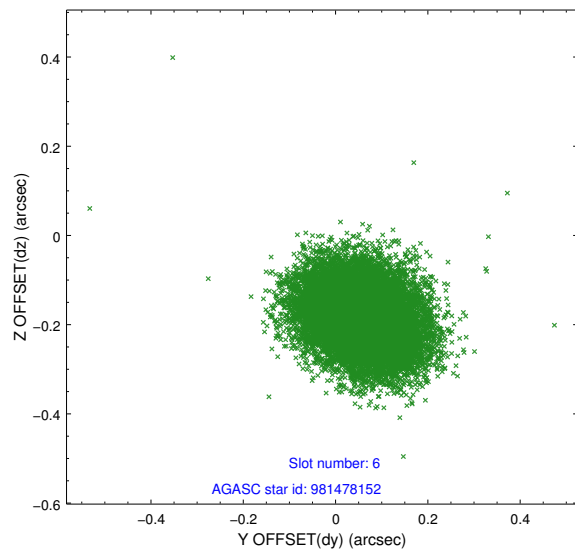
2.4.2 Slot 4



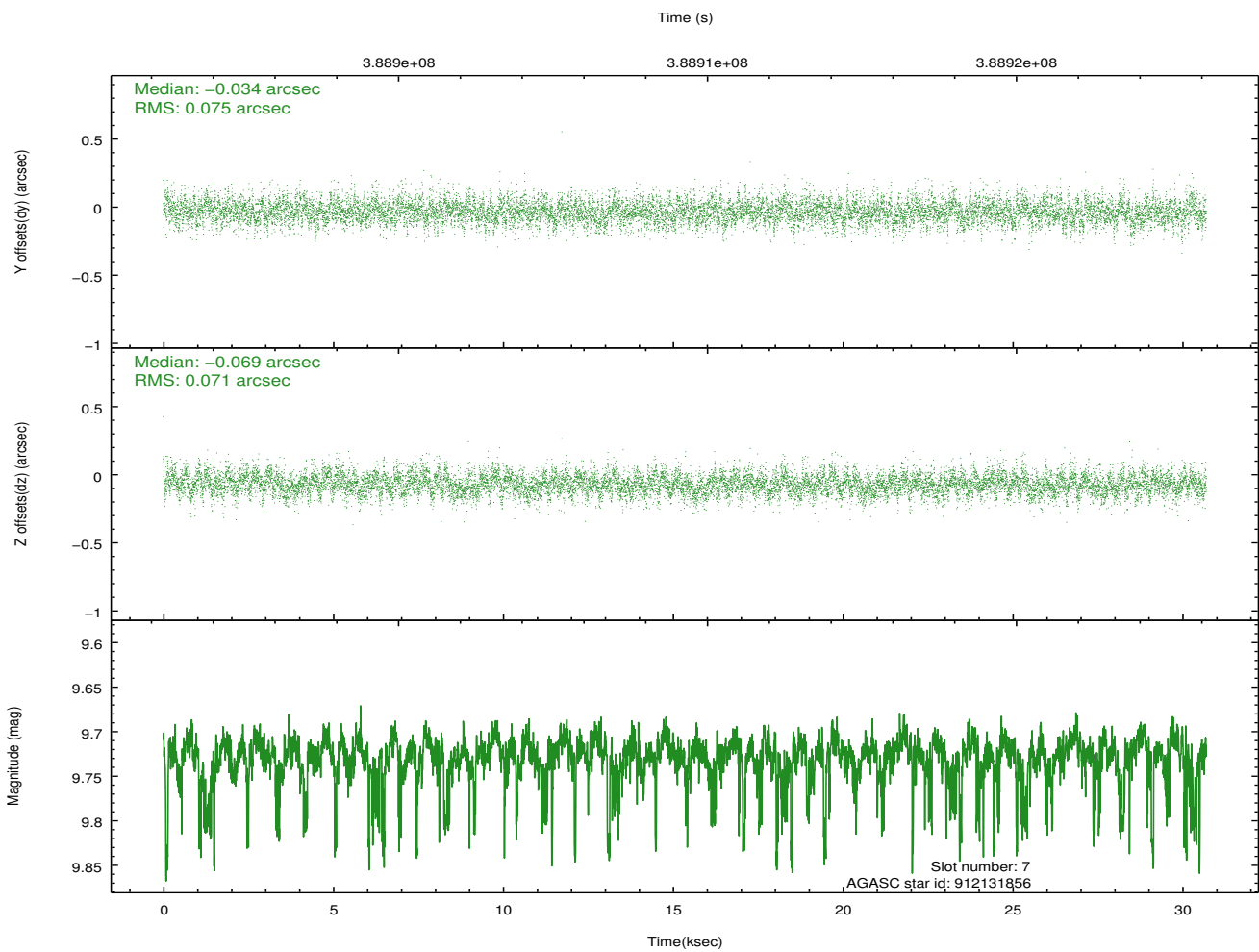
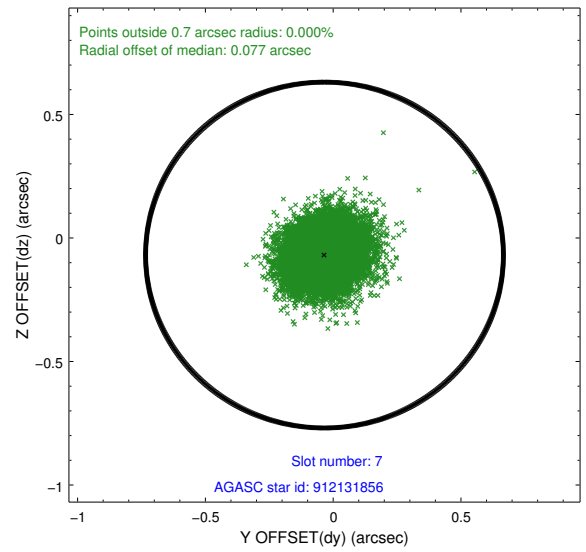
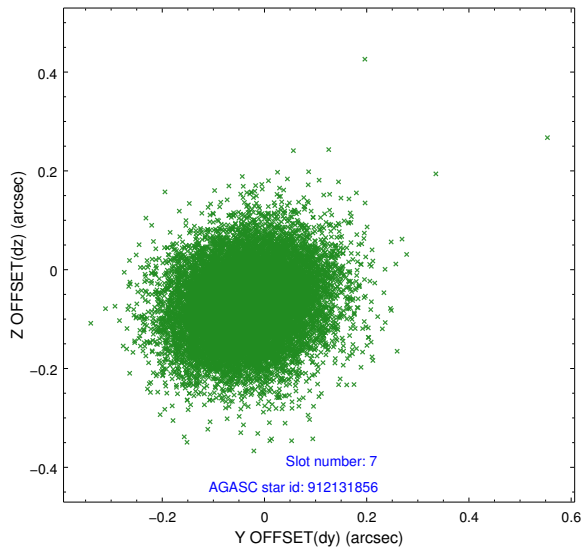
2.4.3 Slot 5



2.4.4 Slot 6

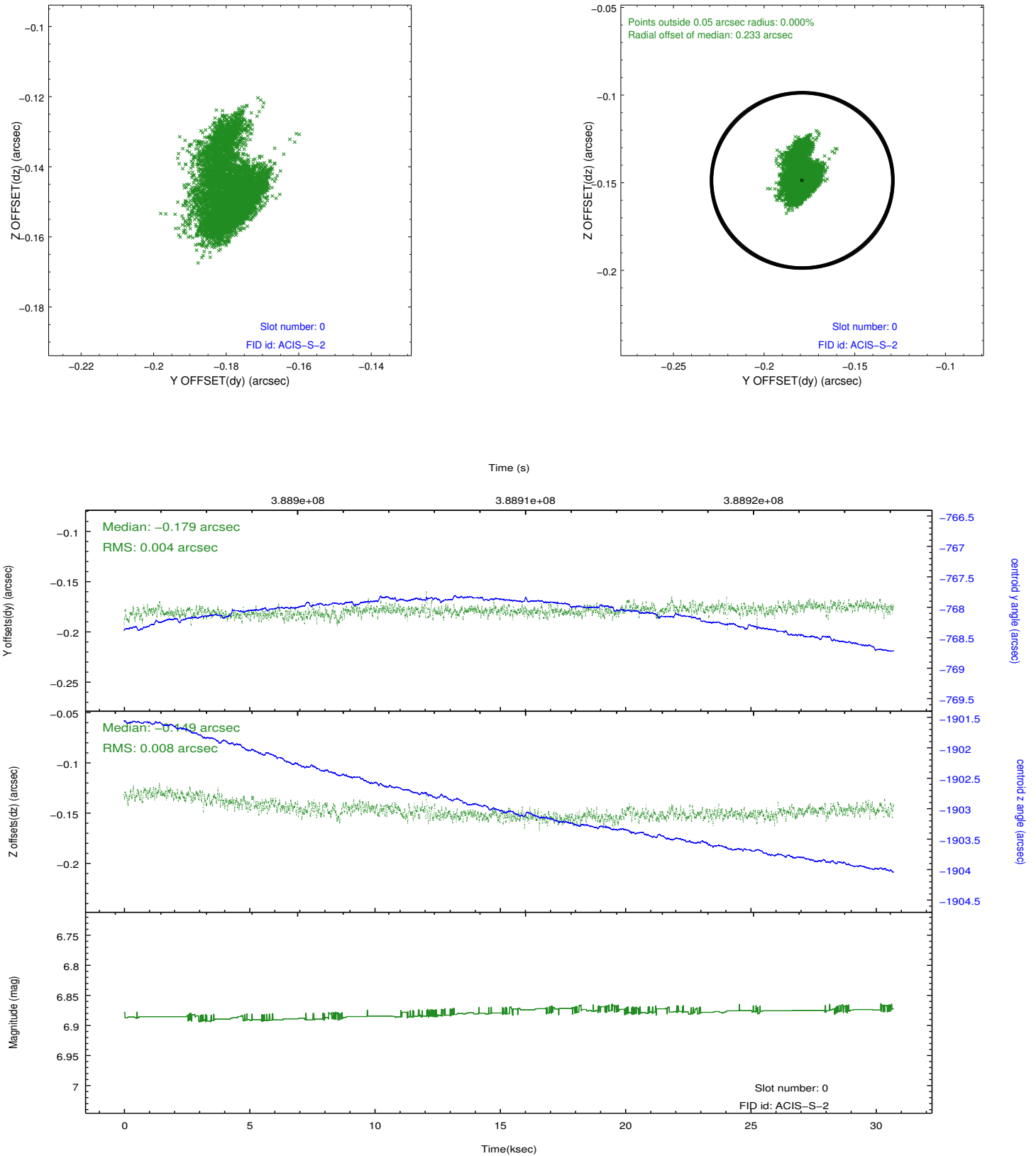


2.4.5 Slot 7

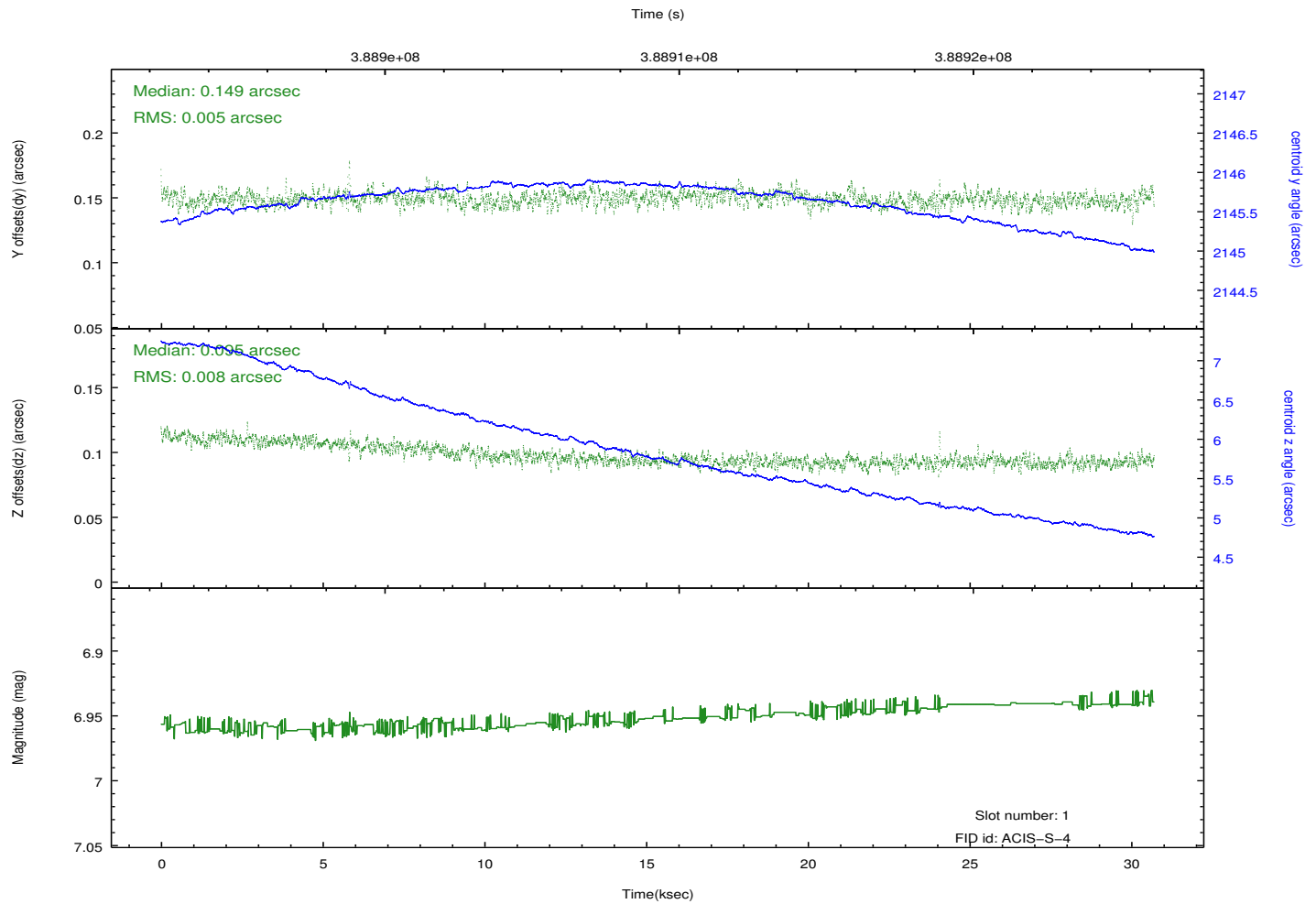
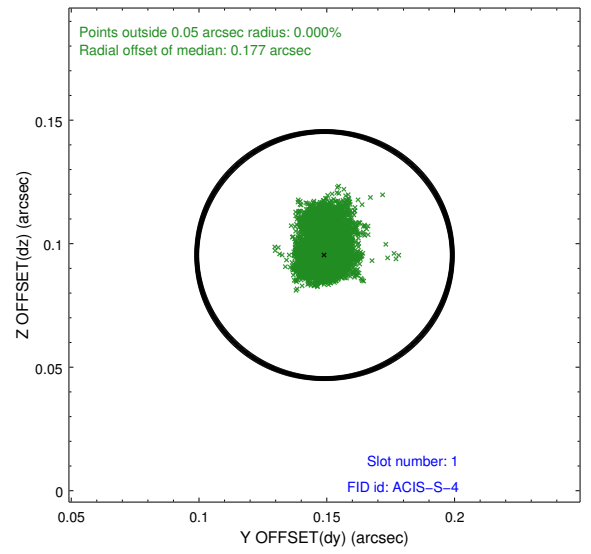
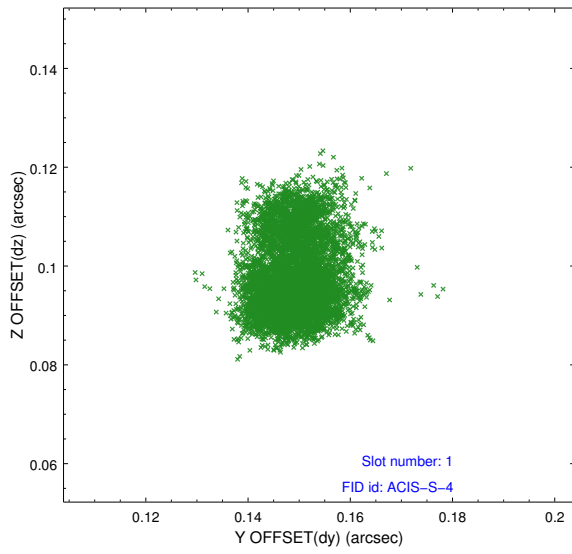


2.5 FID Slots

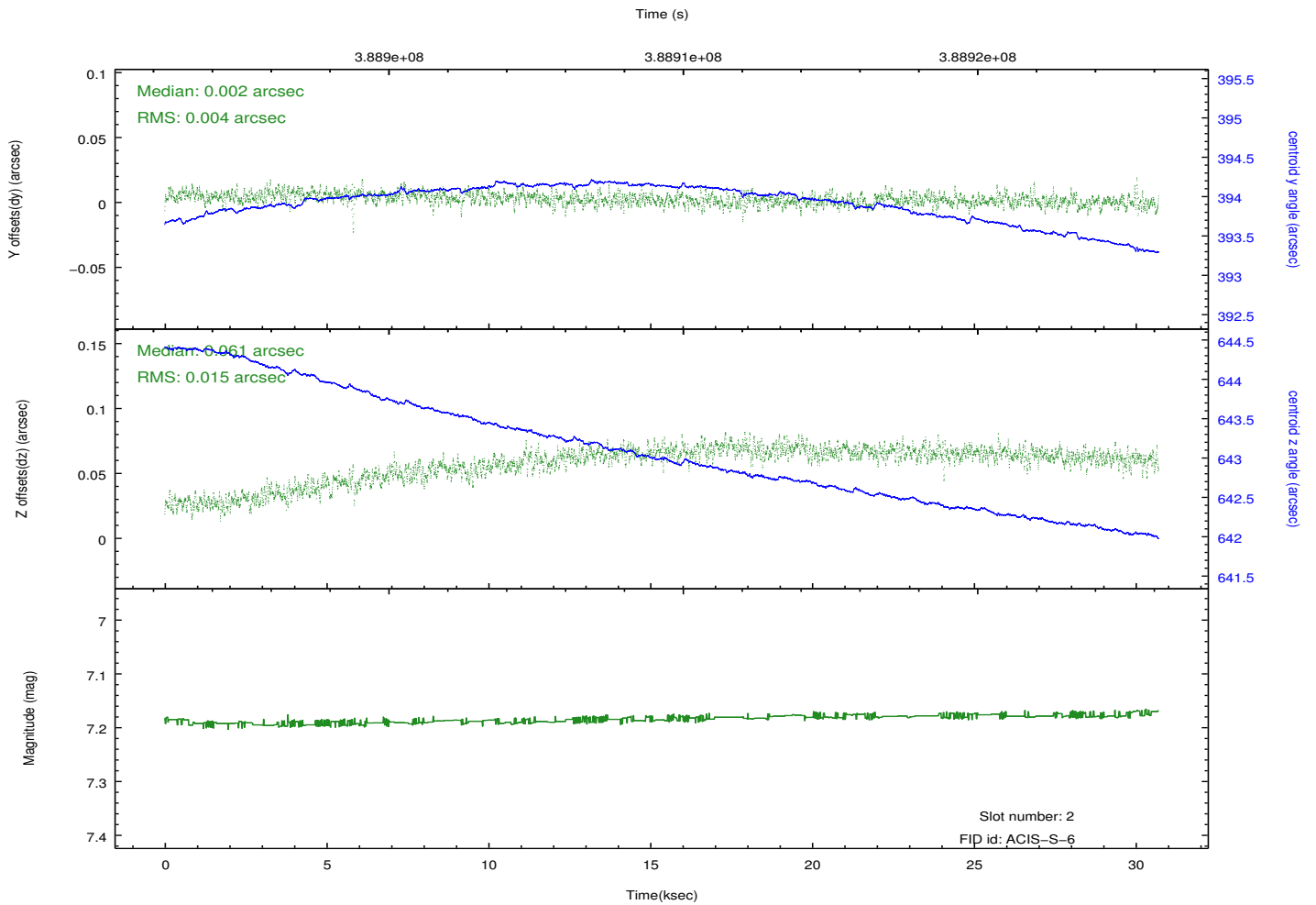
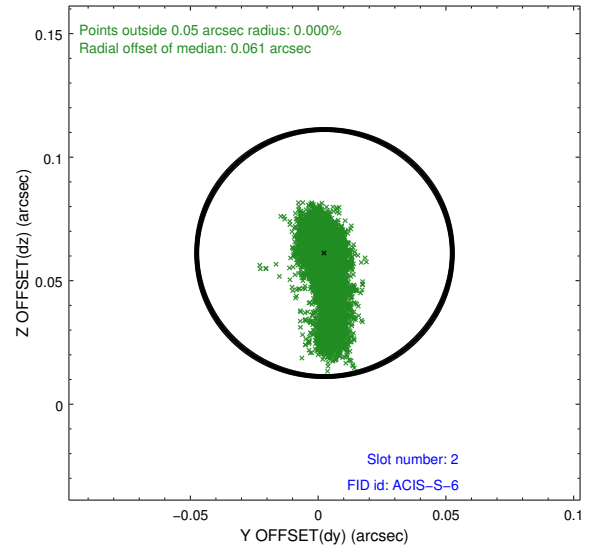
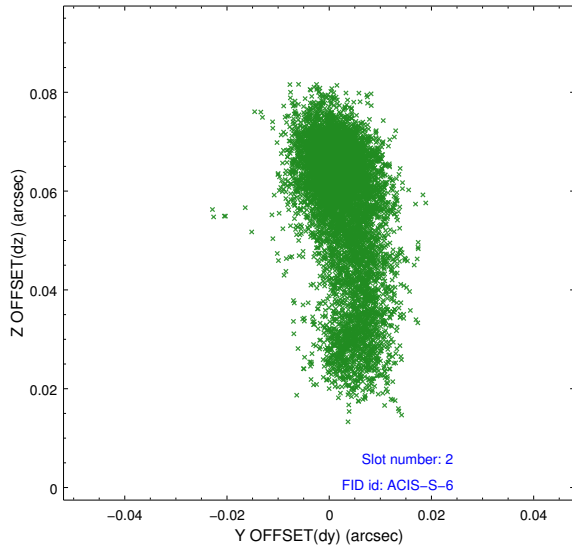
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

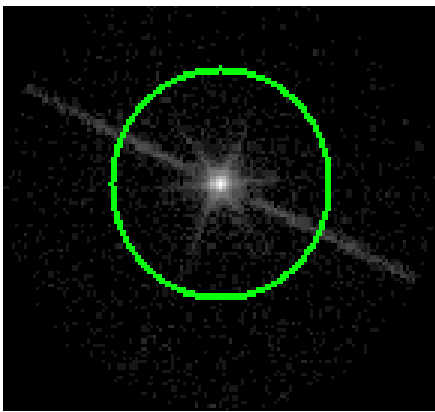


3 Gratings

3.1 LETG Arm



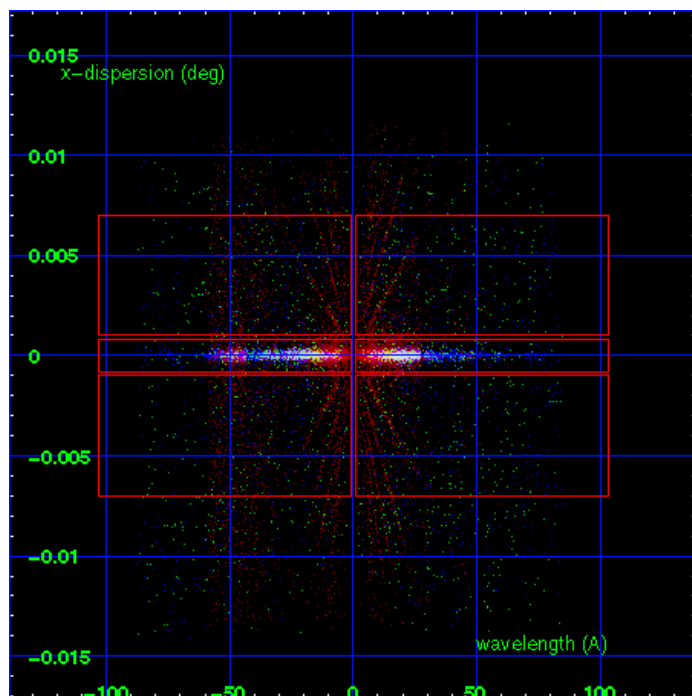
LETG Order Sort 123



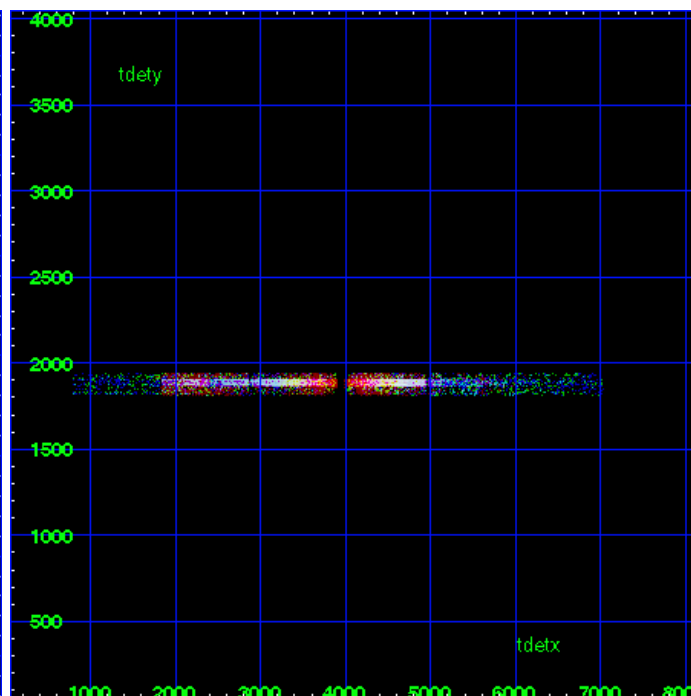
LETG Zero Order



LETG Order Sort ALL

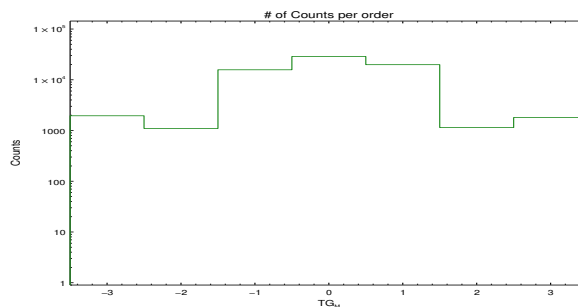


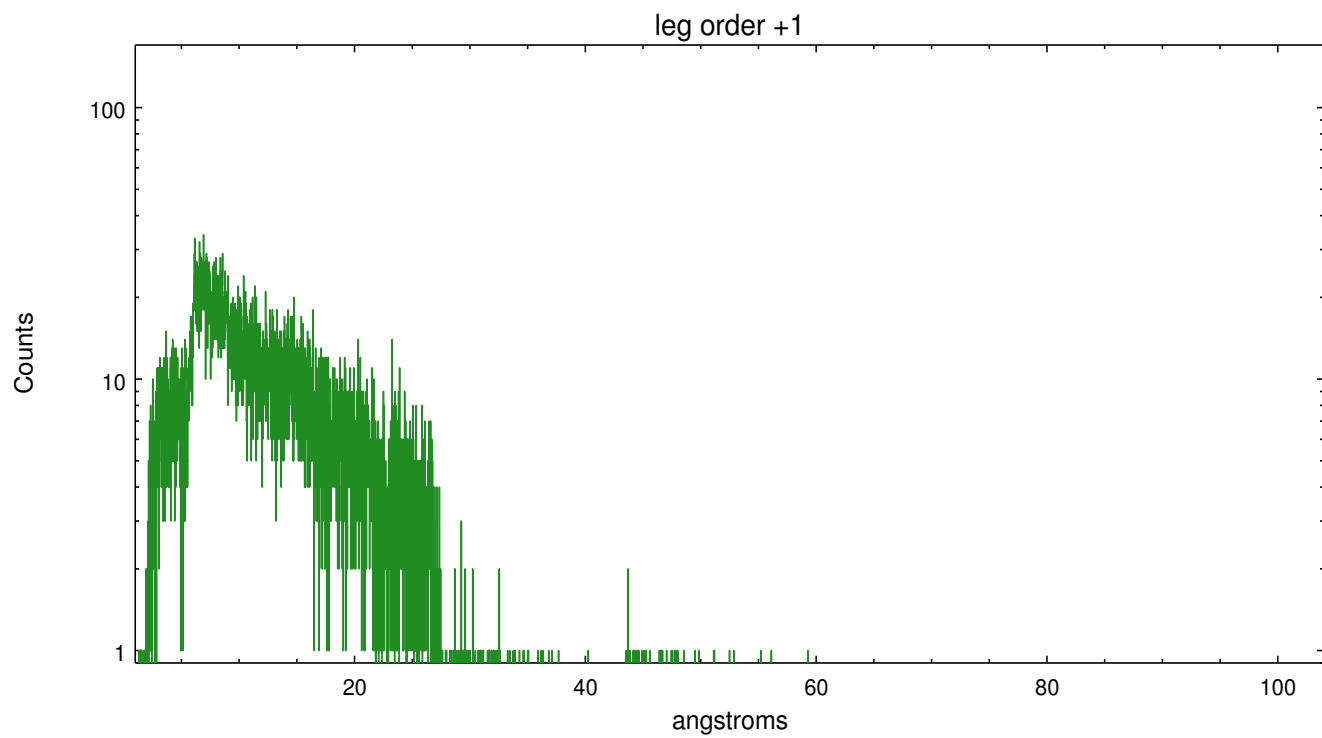
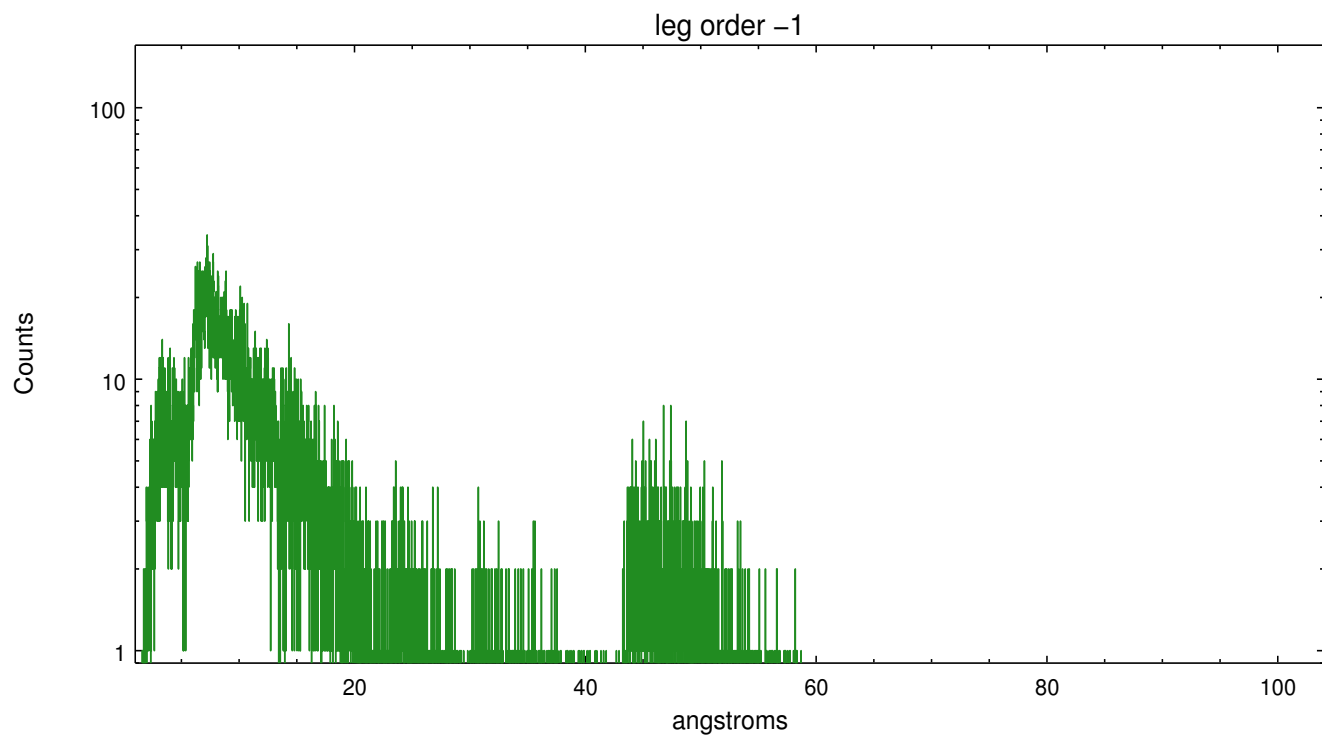
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1953	1097	15741	28736	19853	1143	1802





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.06.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.064925961077

A.2 Comments

Gain and CTI correction are not well calibrated on CCD_ID 5 (ACIS-S1). Default order sorting can clip some regions, particularly longward of 30A (first order). User-specified custom processing parameters may be required in `tg_resolve_events` (`osipfile=None`, `osort_lo`, `osort_hi ~0.5`) though this can allow more zeroth order background at short wavelengths.