

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 5520 - L2 Version 001  
Chandra X-Ray Center

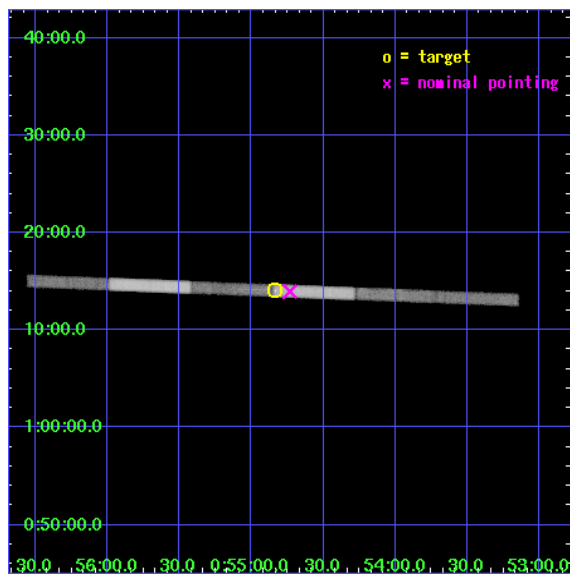
L2 Processing Date : Apr 19 2006

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# 1 Front

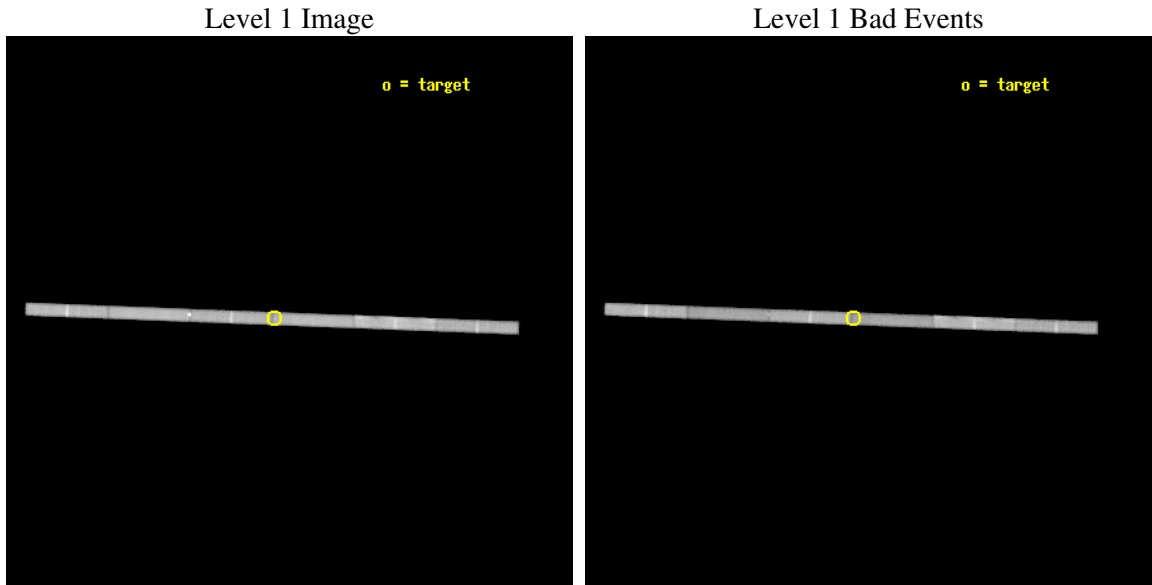
seq_num	500514
obs_id	5520
title	Observations of a Bright GRB
observer	Professor Gordon Garmire
object	GRB041006
dtcycle	0
cycle	P
ra_targ	13.70917
dec_targ	1.23528
ra_nom	13.683248596136
dec_nom	1.232705248078
roll_nom	2.1571919715966
revision	2
ontime	91354.898444235
livetime	86295.515641483
ontime4	91354.898444235
ontime5	91354.898444235
ontime6	91354.898444235
ontime7	91354.898444235
ontime8	91354.898444235
ontime9	91354.898444235
l2events	156403



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 4

Chip 5

Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.7.1
caldsver	3.2.1
date	2006-04-18T19:01:31
revision	2

sched_exp_time	91173.961000
ontime	92461.631702691
ontime4	92461.631702691
ontime5	92461.631702691
ontime6	92461.631702691
ontime7	92461.631702691
ontime8	92461.631702691
ontime9	92461.631702691
l1events	808543

### 2.1.4 Events

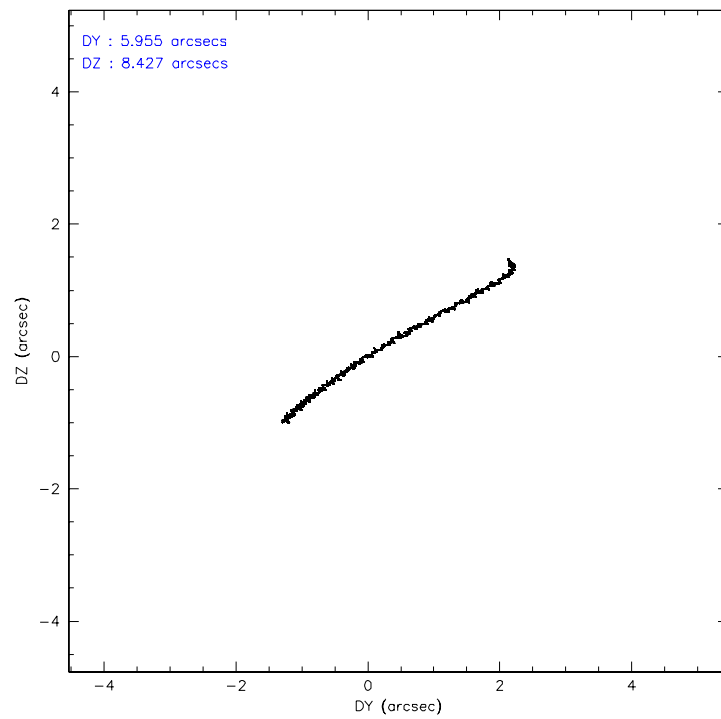
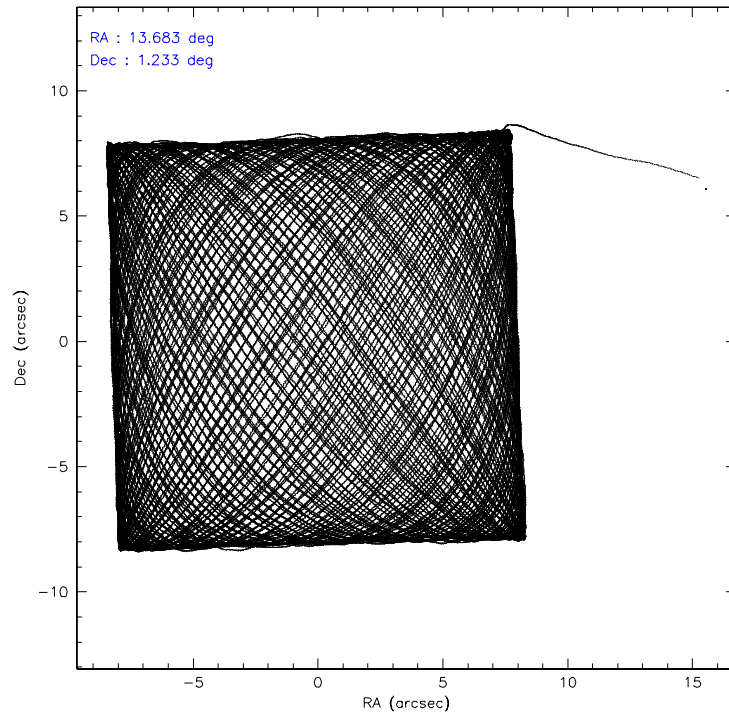
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	135313	145911	121005	127602	167716	110996
rejected events	121031	76647	107492	74737	137079	97819
rejected %	89%	52%	88%	58%	81%	88%

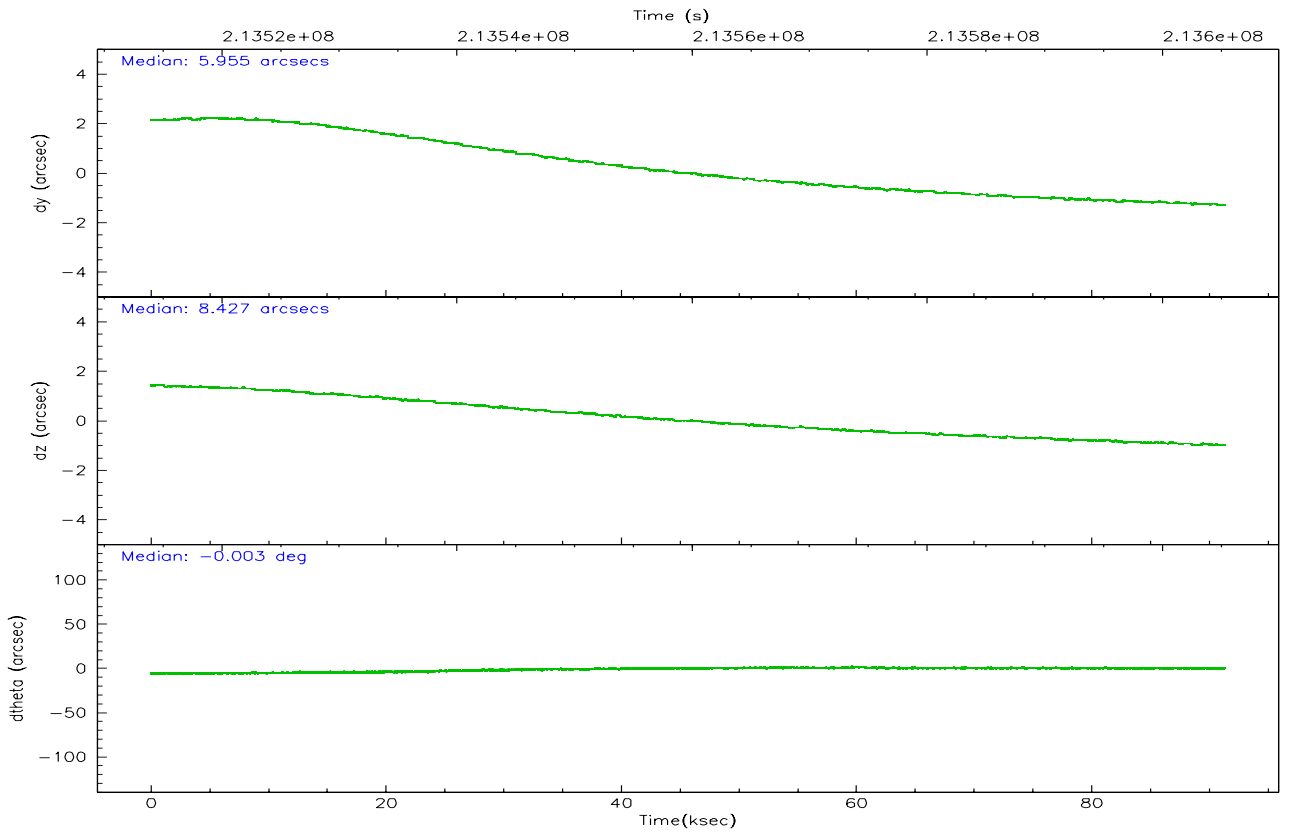
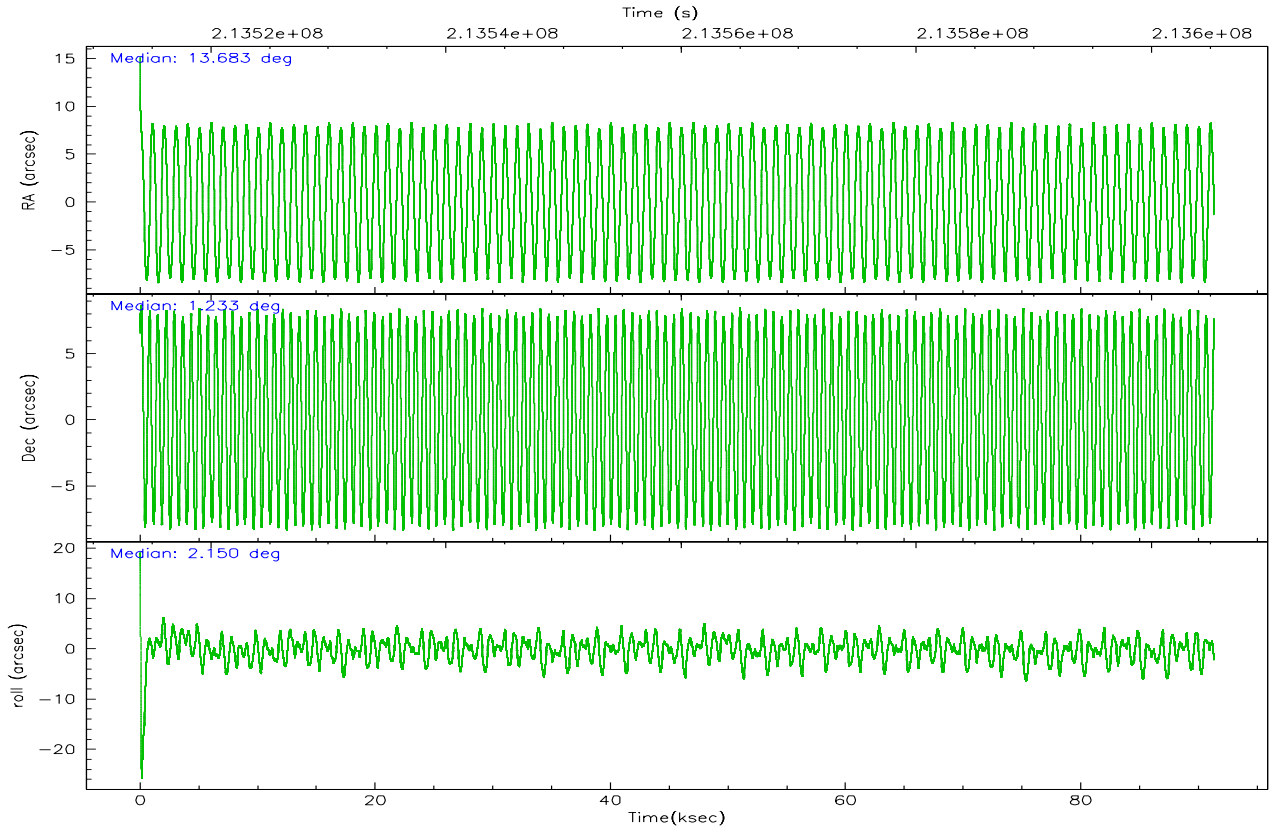
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	4961	10708	4591	3893	7739	4509
	3%	7%	3%	3%	4%	4%
grade 1 events	49	898	30	95	46	39
	0%	0%	0%	0%	0%	0%
grade 2 events	2919	18201	2287	11620	6090	2181
	2%	12%	1%	9%	3%	1%
grade 3 events	2195	3768	2287	4985	3871	2196
	1%	2%	1%	3%	2%	1%
grade 4 events	2082	3565	2247	4920	3708	2198
	1%	2%	1%	3%	2%	1%
grade 5 events	3750	8497	3922	10008	5108	4077
	2%	5%	3%	7%	3%	3%
grade 6 events	2270	34278	2250	28130	9742	2259
	1%	23%	1%	22%	5%	2%
grade 7 events	117087	65996	103391	63951	131412	93537
	86%	45%	85%	50%	78%	84%

## 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	LETG	LETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	CUSTOM	1/8
Pointing RA	13.660395	13.68324859613617	Subarray start row	113	113
Pointing Dec	1.217899	1.232705248078043	Subarray row count	128	128
Pointing Roll	2.001047	2.157191971596623	Alternating exposures requested	N	N
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Primary exposure time	0.000000	0.7
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-182.132523	-182.1370004450064			
SIM translation stage offset (mm)	-8	-7.995522138001405			
Observation start time	213514165.184000	213512761.85426			
Observation start date	2004-10-07T05:28:21	2004-10-07T05:06:01			
Observation end time	213605339.184000	213605549.47091			
Observation end date	2004-10-08T06:47:55	2004-10-08T06:52:29			
Read mode	TIMED	TIMED			

## 2.3 Aspect



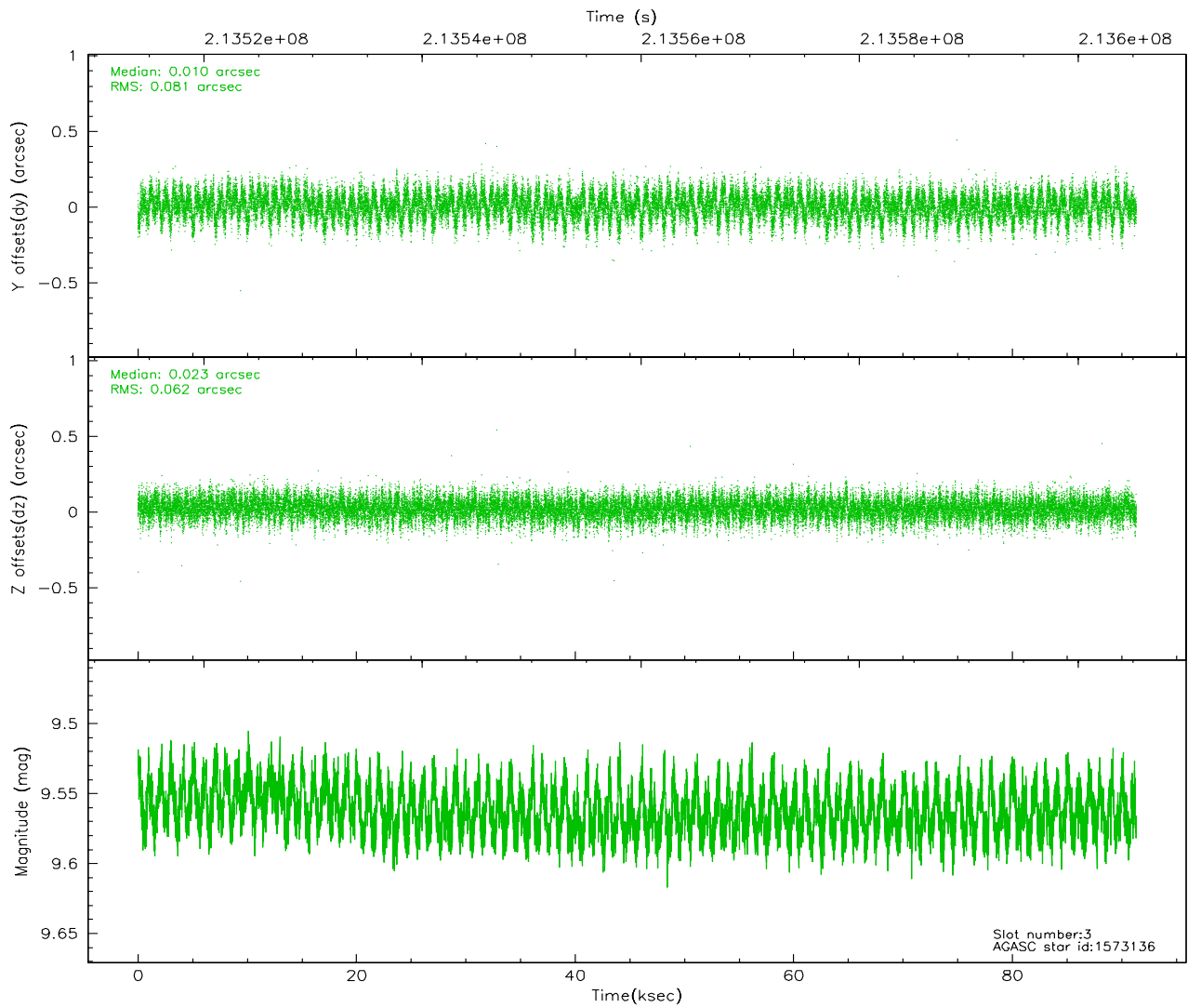
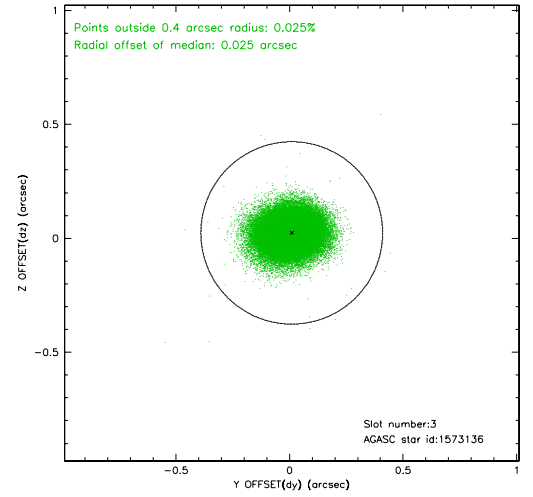
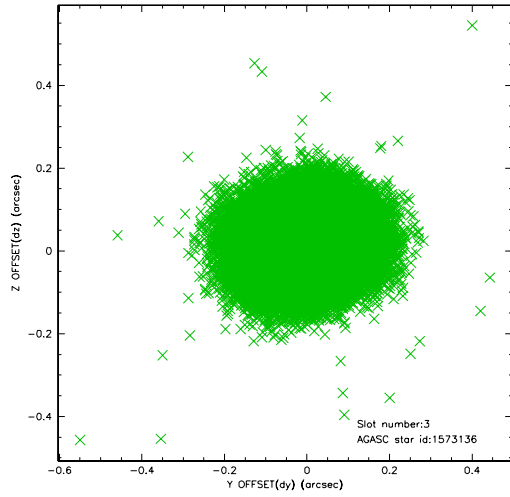


### Slot Statistics

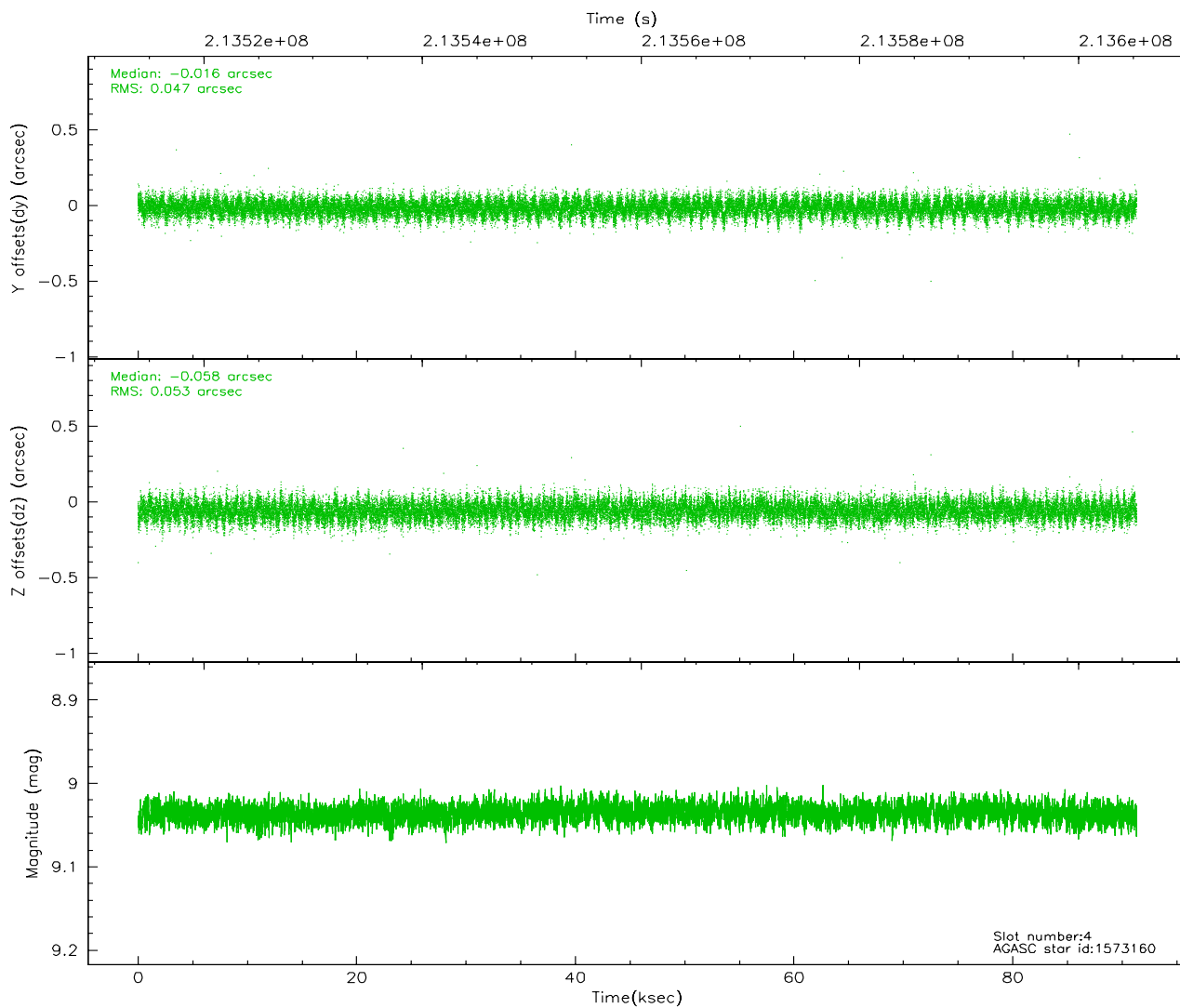
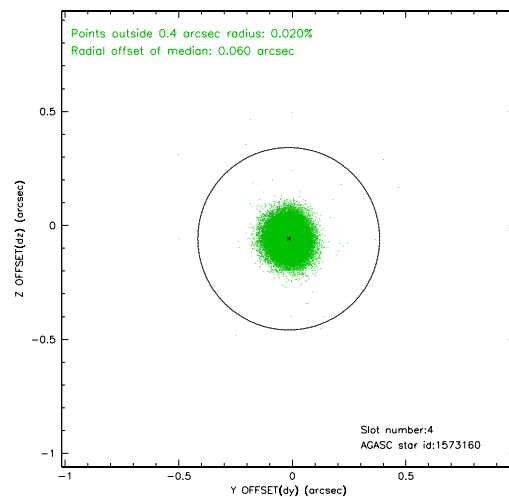
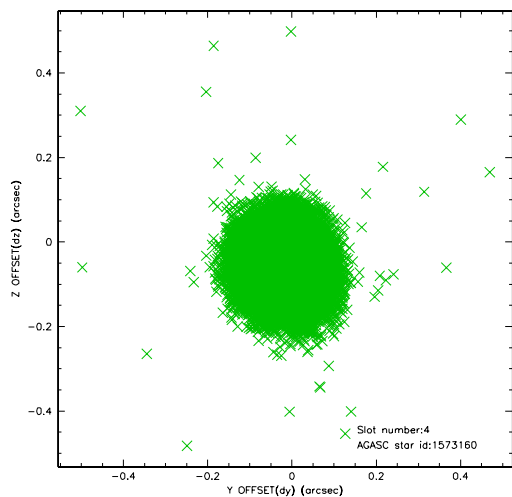
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	22282	-0.055	-0.132	0.040	0.075	0.000000	0.000000	-758.47	-1894.57
1	FID	ACIS-S-4	7.18	22281	0.120	0.064	0.038	0.067	0.000000	0.000000	2155.03	14.11
2	FID	ACIS-S-5	7.22	22282	-0.091	0.074	0.046	0.067	0.000000	0.000000	-1811.41	7.76
3	GUIDE	1573136	9.56	44528	0.010	0.023	0.109	0.175	13.115854	1.099009	-1973.26	-359.32
4	GUIDE	1573160	9.04	44541	-0.016	-0.058	0.075	0.120	13.702913	1.100807	138.40	-426.67
5	GUIDE	1573696	7.94	44553	-0.019	-0.068	0.058	0.093	13.755831	0.789553	289.83	-1553.38
6	GUIDE	1578704	8.83	44545	-0.047	0.068	0.064	0.103	14.213044	1.680901	2045.79	1596.87
7	GUIDE	1581504	9.32	44541	0.081	0.036	0.088	0.142	14.179515	1.875214	1949.54	2300.09

## 2.4 Star Slots

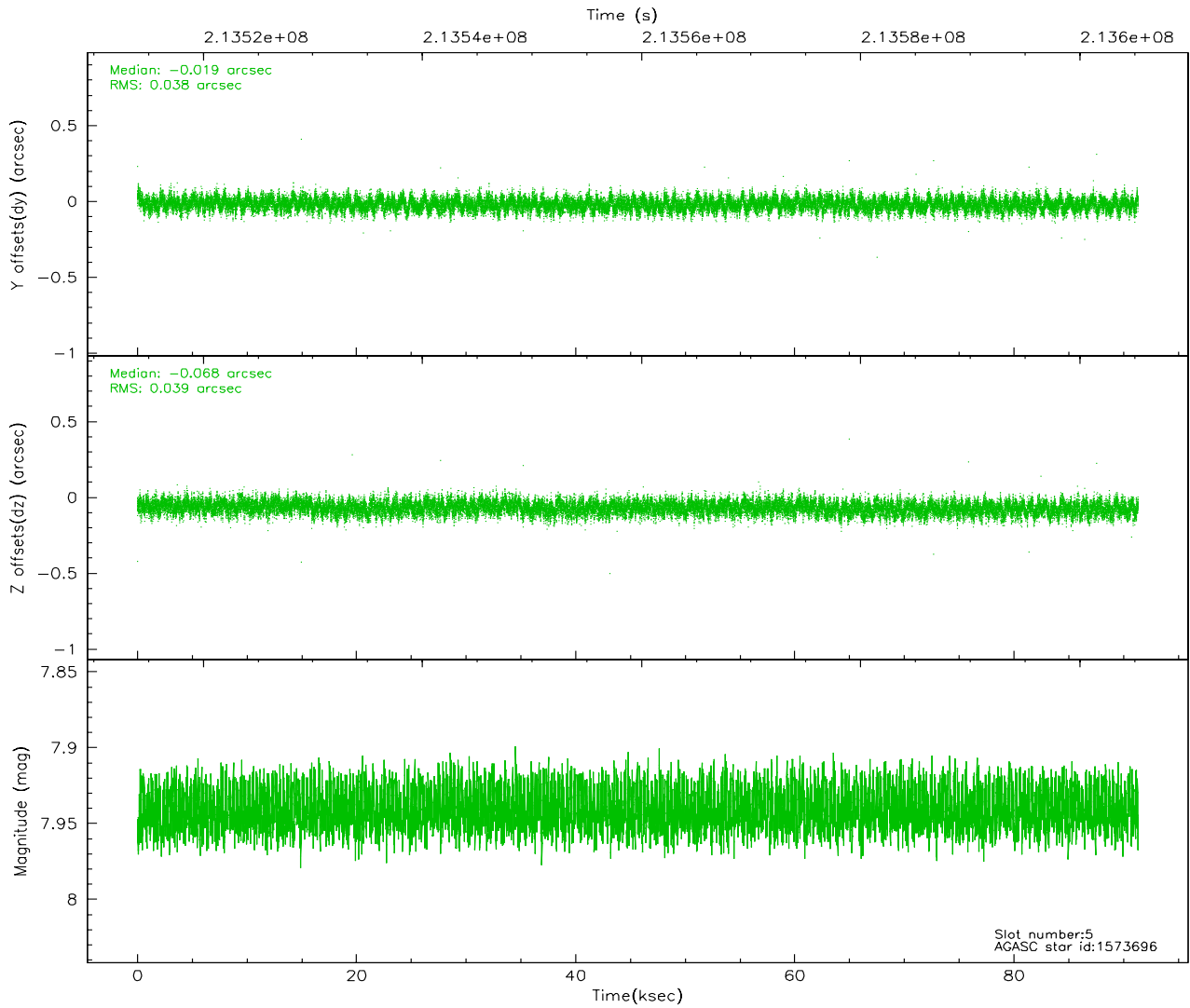
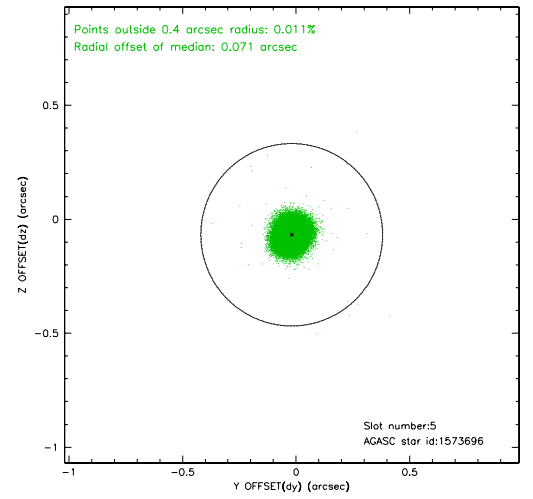
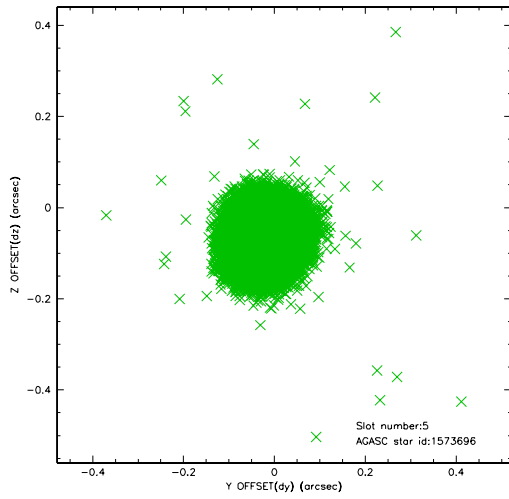
### 2.4.1 Slot 3



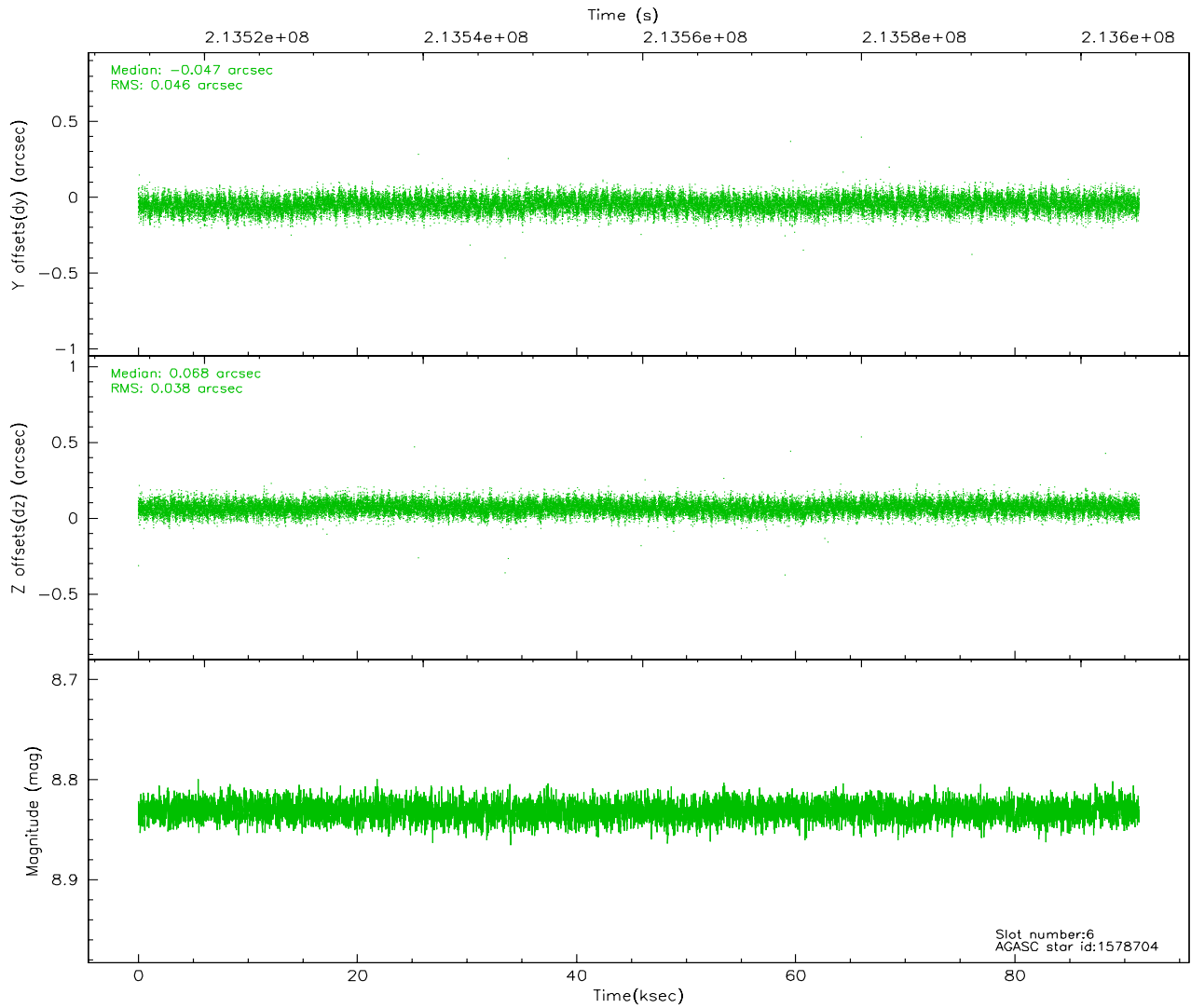
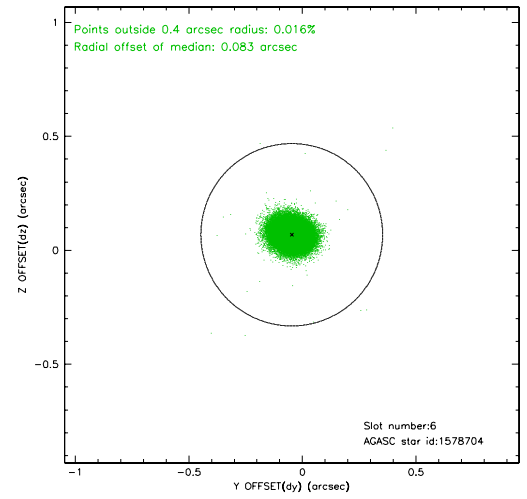
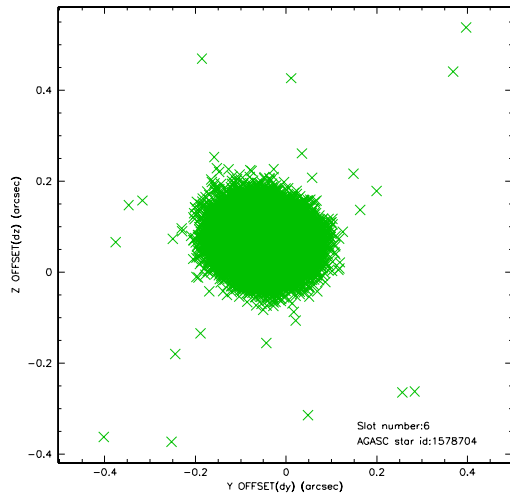
## 2.4.2 Slot 4



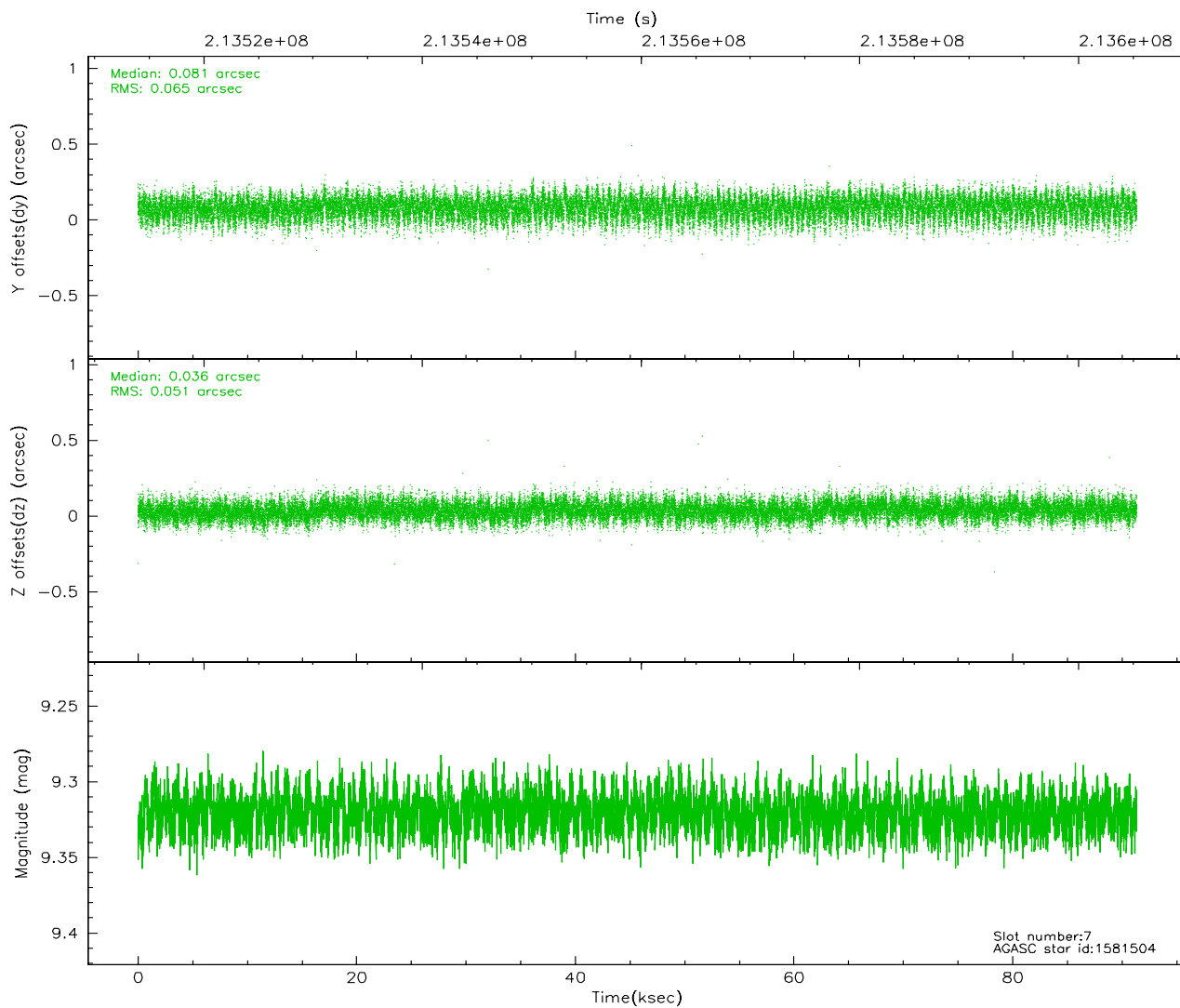
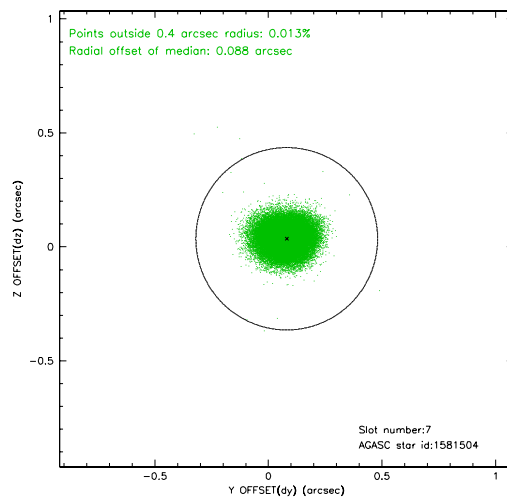
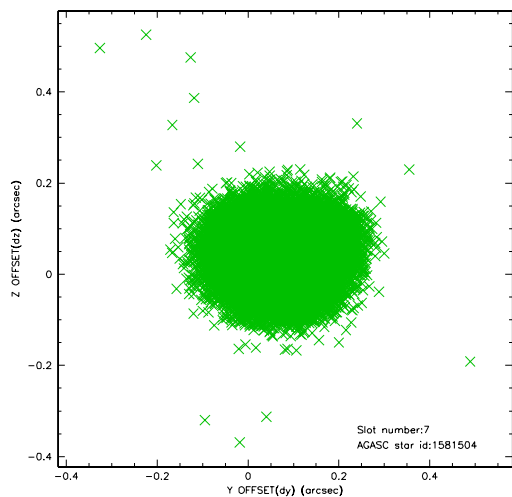
### 2.4.3 Slot 5



### 2.4.4 Slot 6

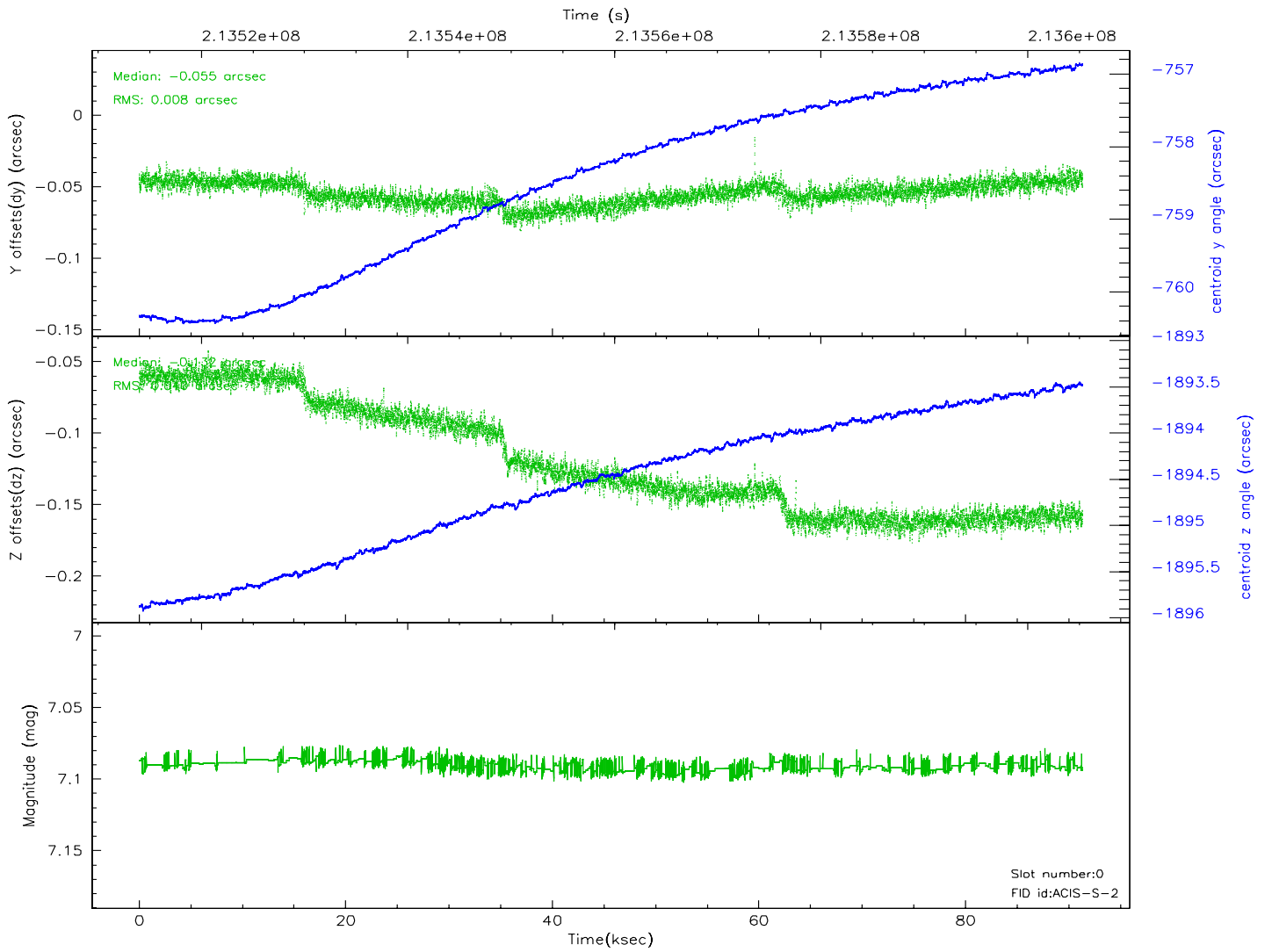
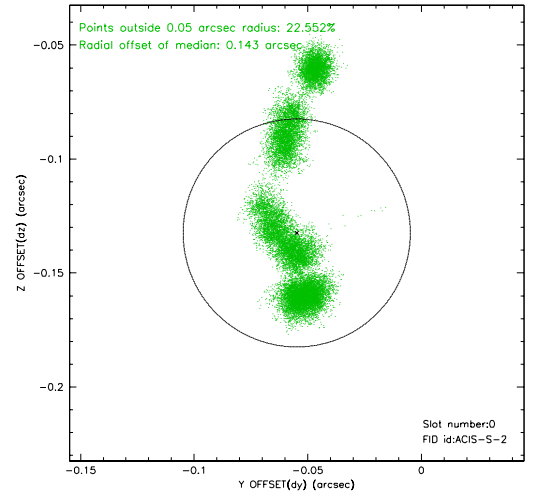
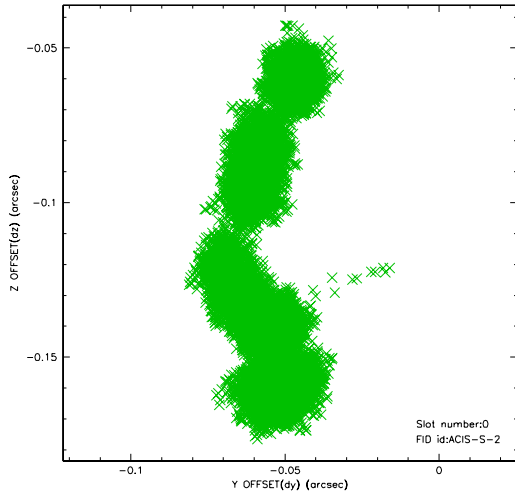


## 2.4.5 Slot 7

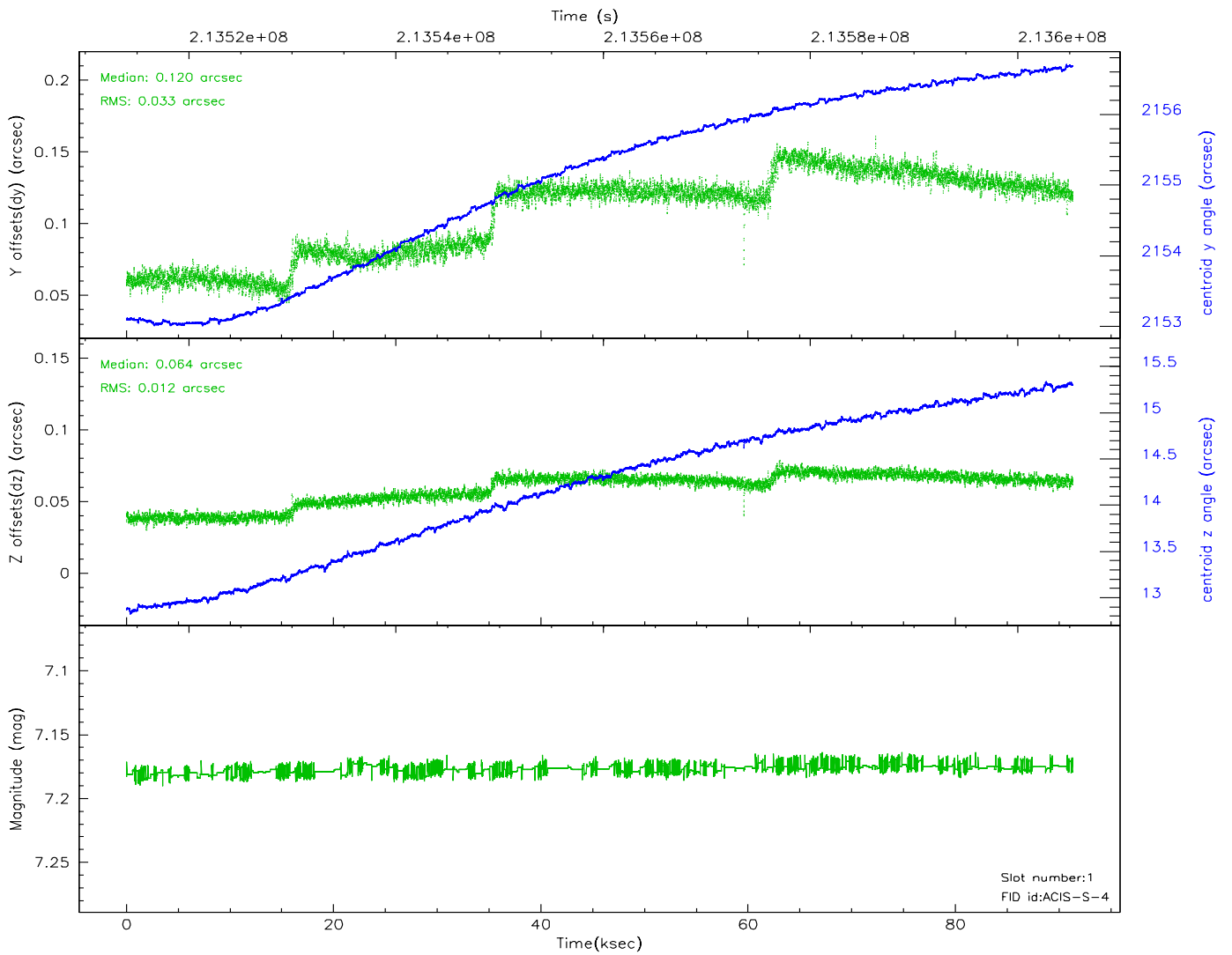
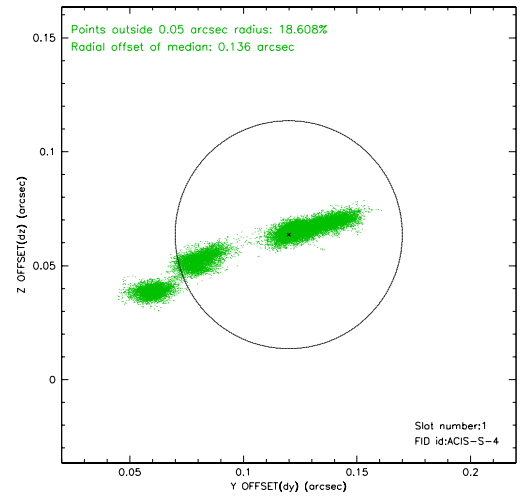
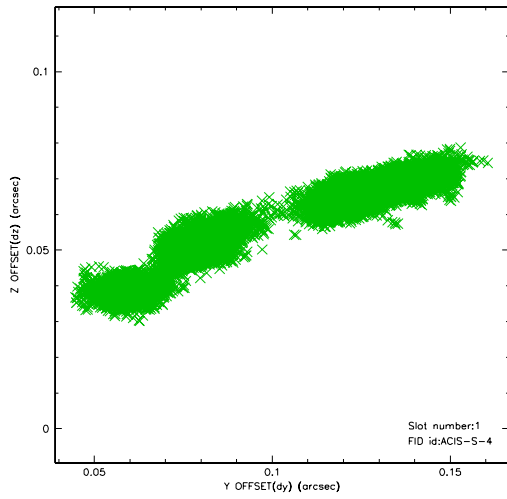


## 2.5 FID Slots

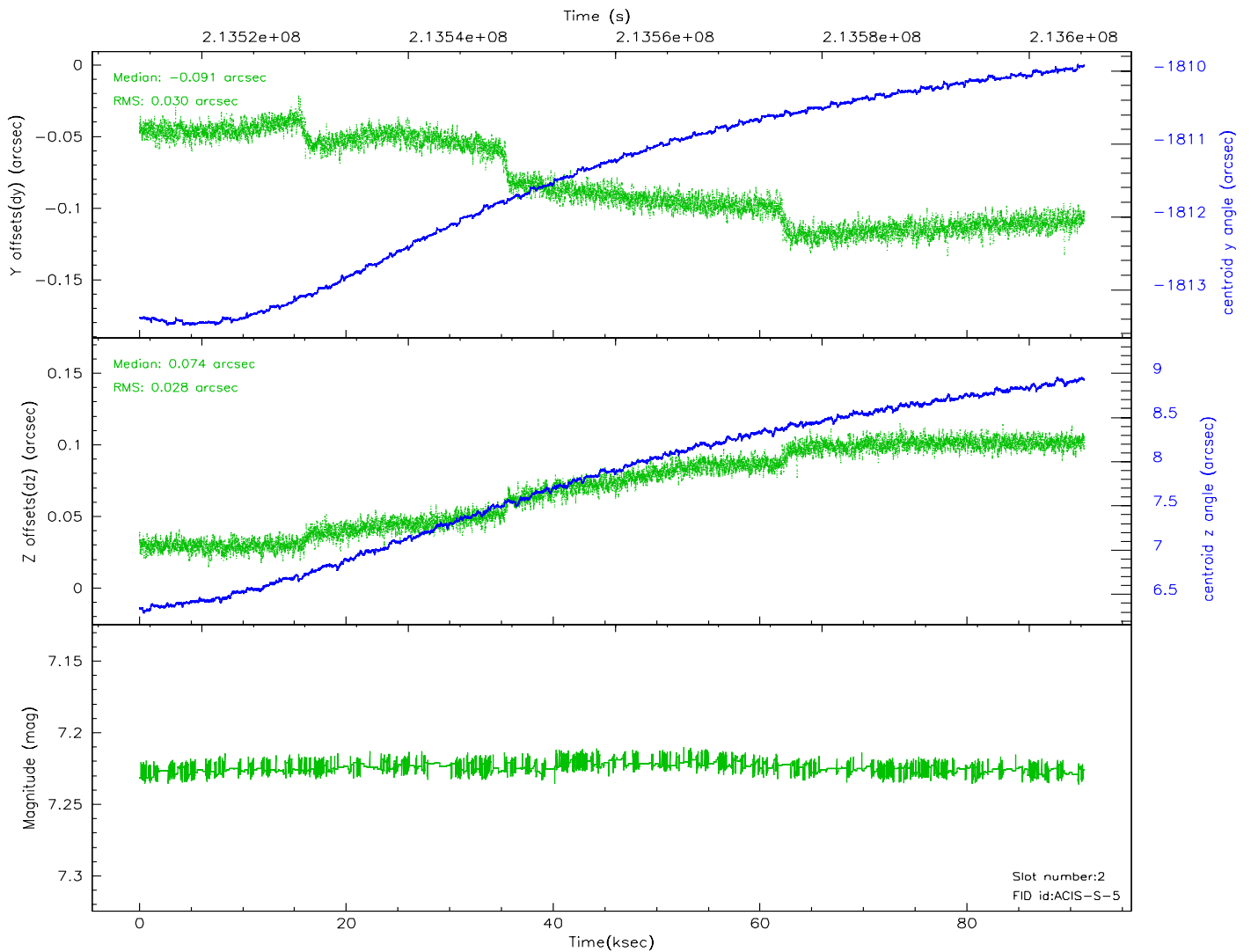
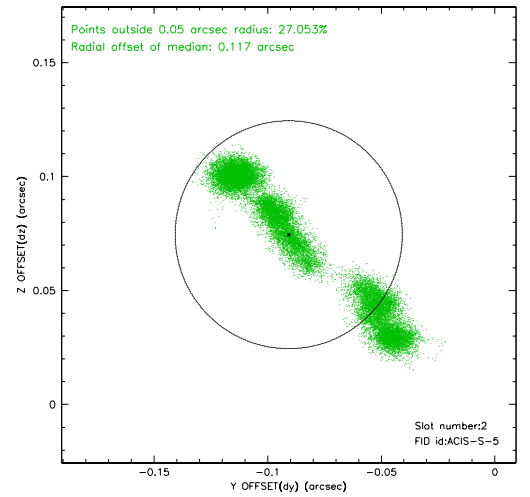
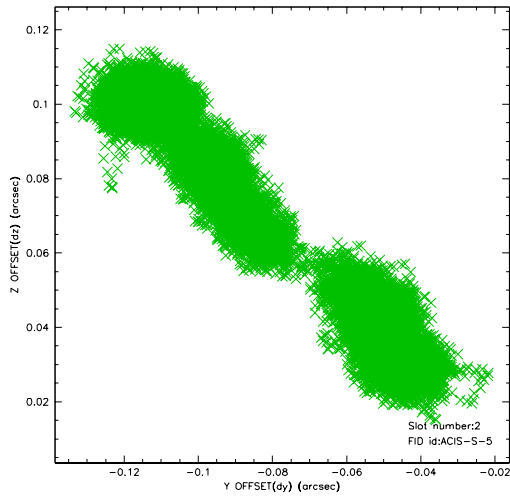
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

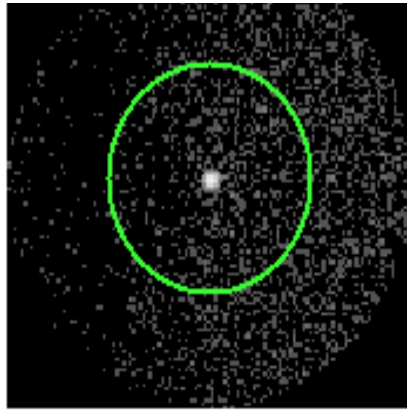


# 3 Gratings

## 3.1 LETG Arm



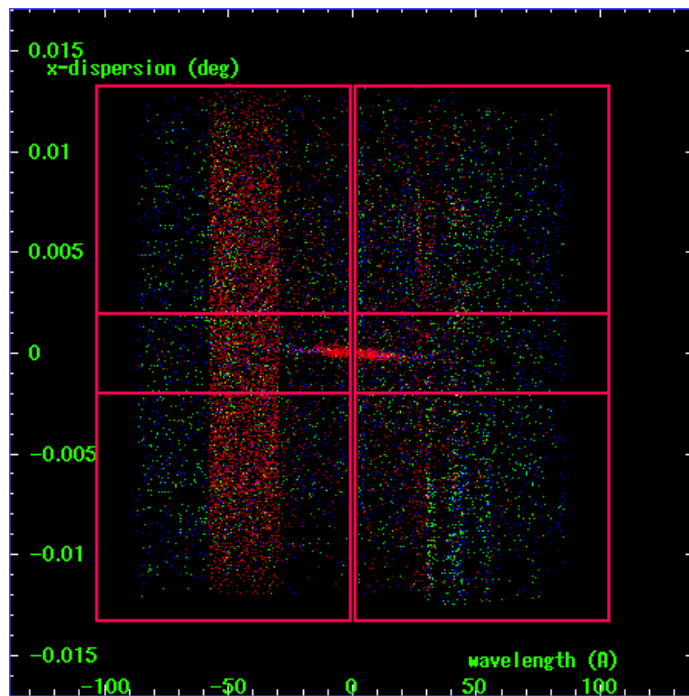
LETG Order Sort 123



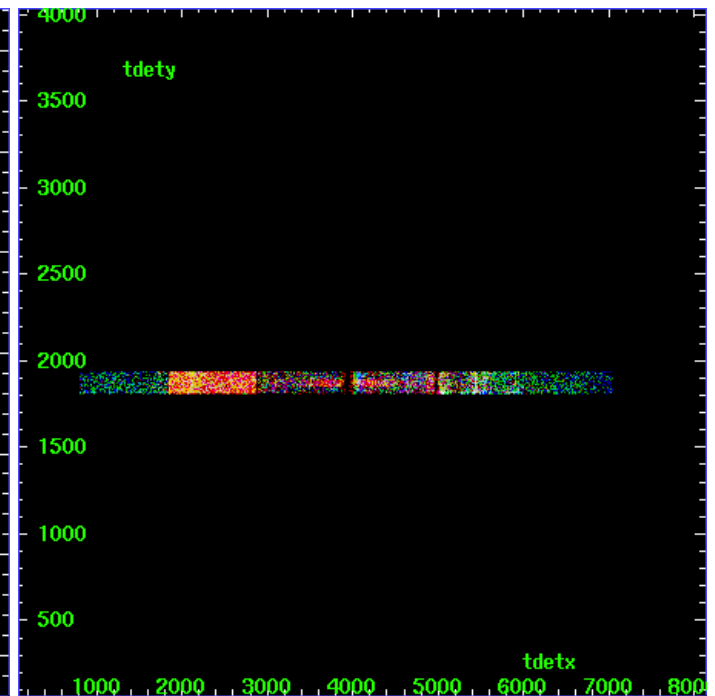
LETG Zero Order



LETG Order Sort ALL

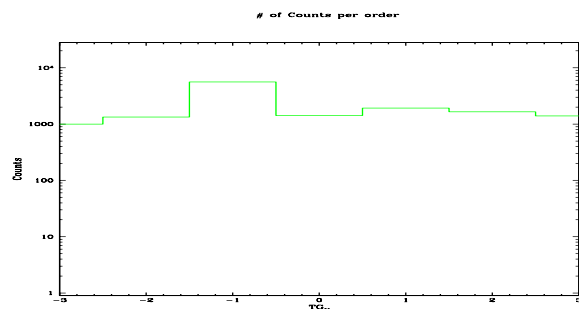


Spot Image LETG

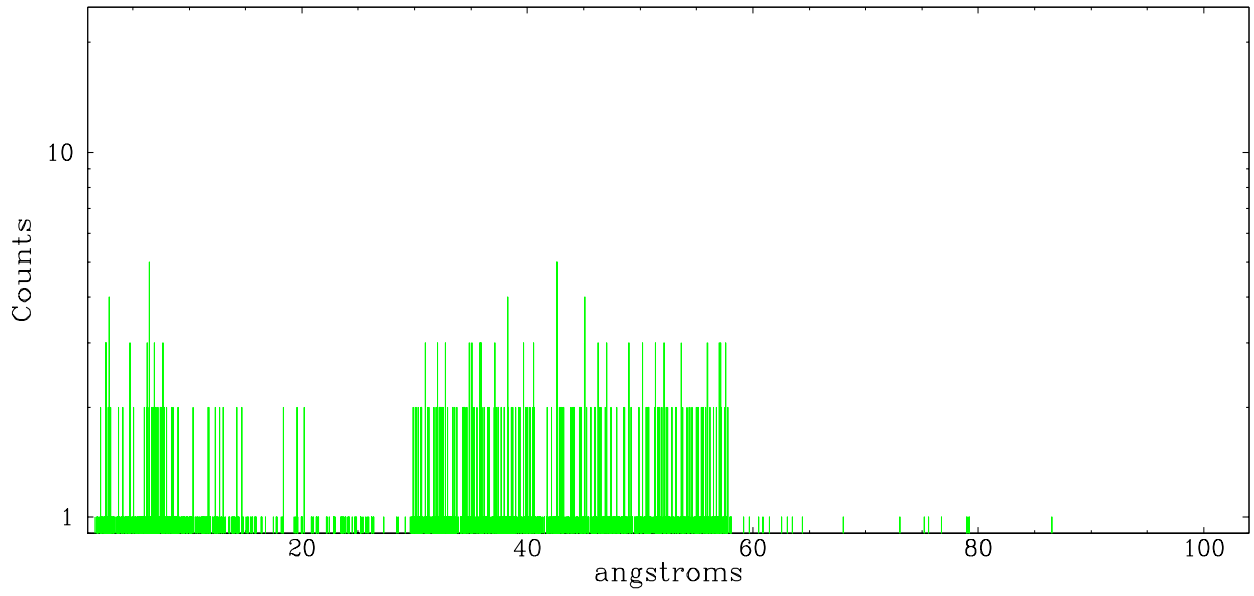


Full Detector LETG

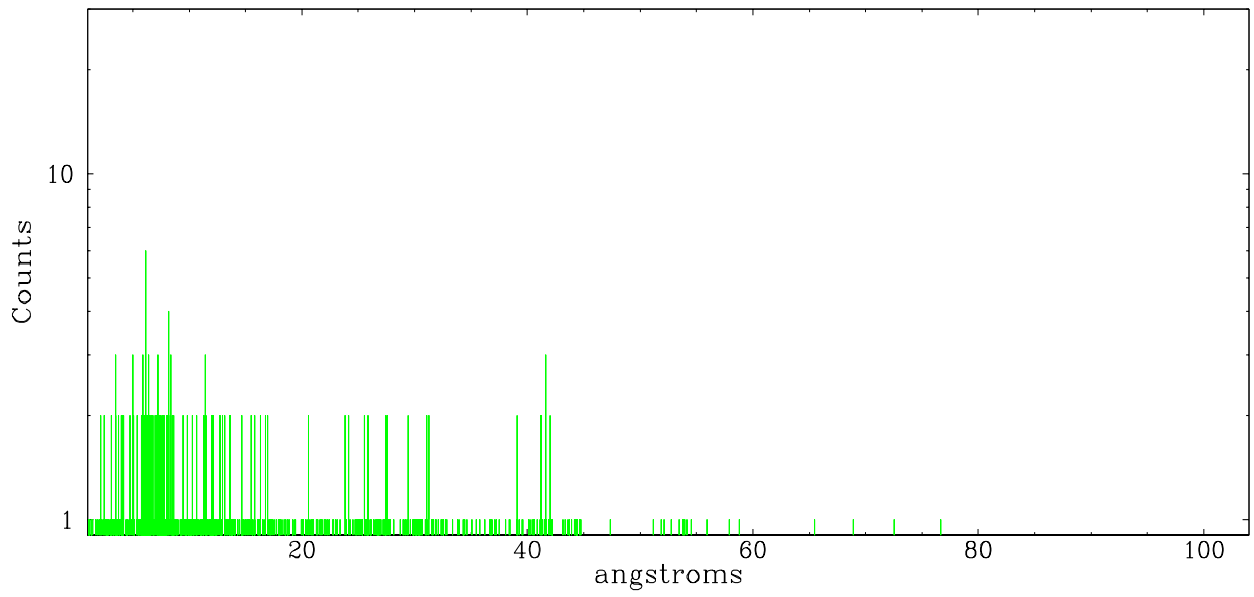
	order	order	order	order	order	order	order
	-3	-2	-1	0	1	2	3
Events	995	1335	5589	1413	1920	1648	1392



leg order -1



leg order +1



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.04.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	91.354

## A.2 Comments

Target is very close to CCD chip edge and may have dithered into the chip edge.

Care should be taken in determining the flux and any variability.