

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 3171 - L2 Version 002  
Chandra X-Ray Center

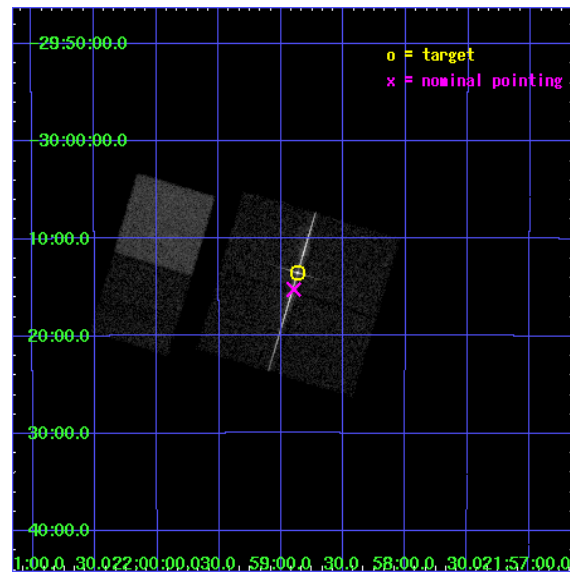
L2 Processing Date : Mar 8 2007

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# 1 Front

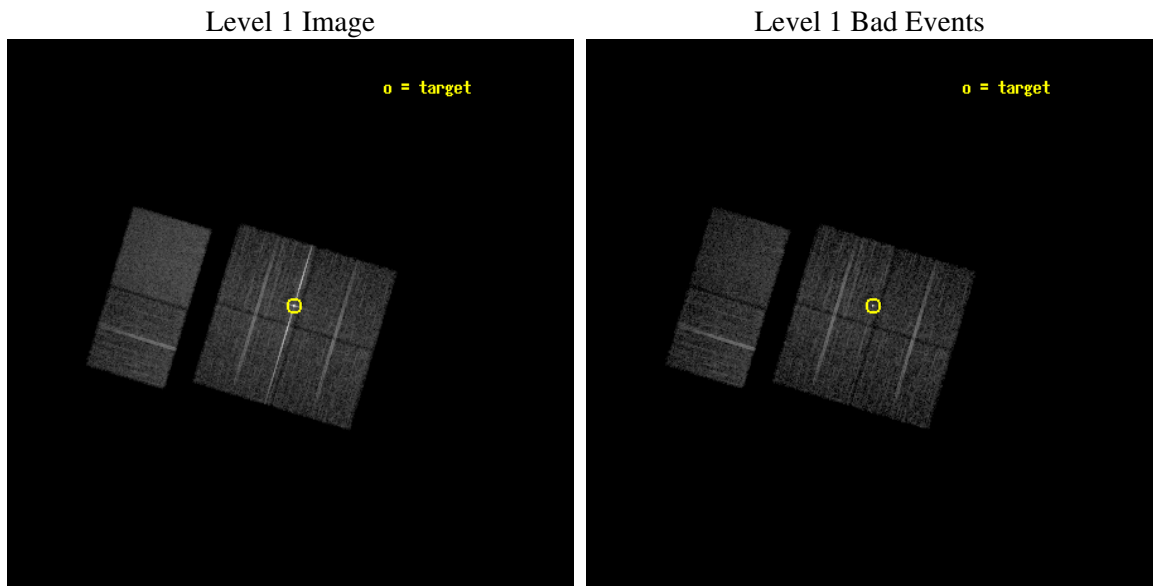
seq_num	790065
obs_id	3171
title	AO3 LETG/ACIS-I CALIBRATION OBSERVATIONS OF PKS2155-304
observer	Dr. CXC Calibration
object	PKS2155-304
dtcycle	0
cycle	P
ra_targ	329.716667
dec_targ	-30.225556
ra_nom	329.72437132475
dec_nom	-30.25416242719
roll_nom	286.9108533288
revision	4
ontime	8156.8000075966
livetime	8053.5136944651
ontime0	8156.8000075966
ontime1	8156.8000075966
ontime2	8156.8000075966
ontime3	8156.8000075966
ontime6	8156.8000075966
ontime7	8156.8000075966
l2events	85585



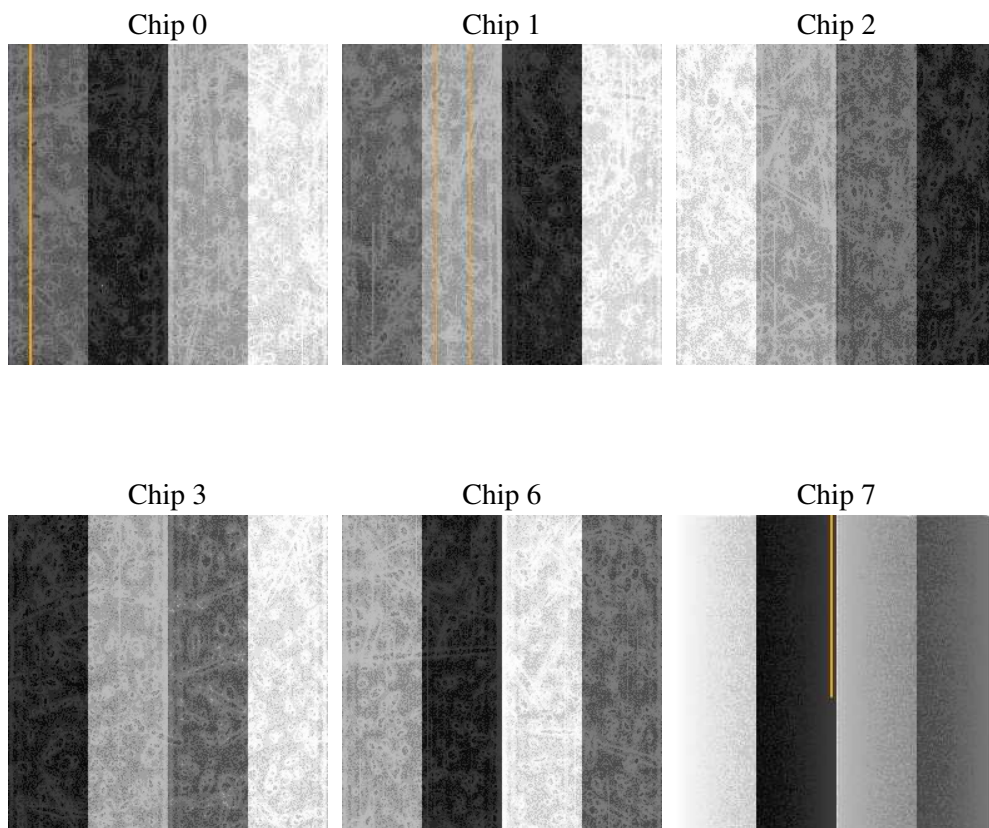
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1
ascdsver	7.6.10
caldsver	3.3.0
date	2007-01-22T13:53:30
revision	3

sched_exp_time	8000.000000
ontime	8156.8000075966
ontime0	8156.8000075966
ontime1	8156.8000075966
ontime2	8156.8000075966
ontime3	8156.8000075966
ontime6	8156.8000075966
ontime7	8156.8000075966
l1events	365999

### 2.1.4 Events

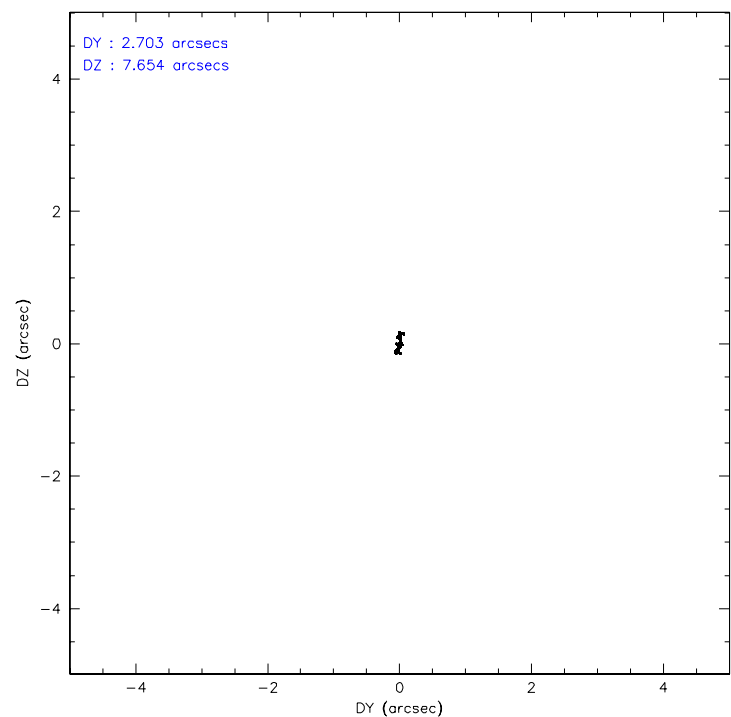
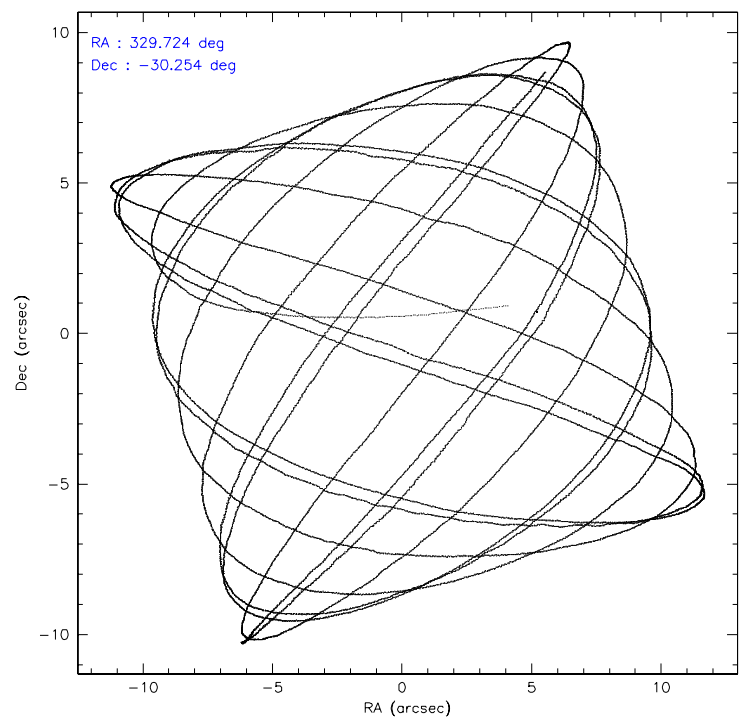
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	48983	49293	64055	78514	54643	70511
rejected events	42521	42263	46808	52557	48395	42412
rejected %	86%	85%	73%	66%	88%	60%

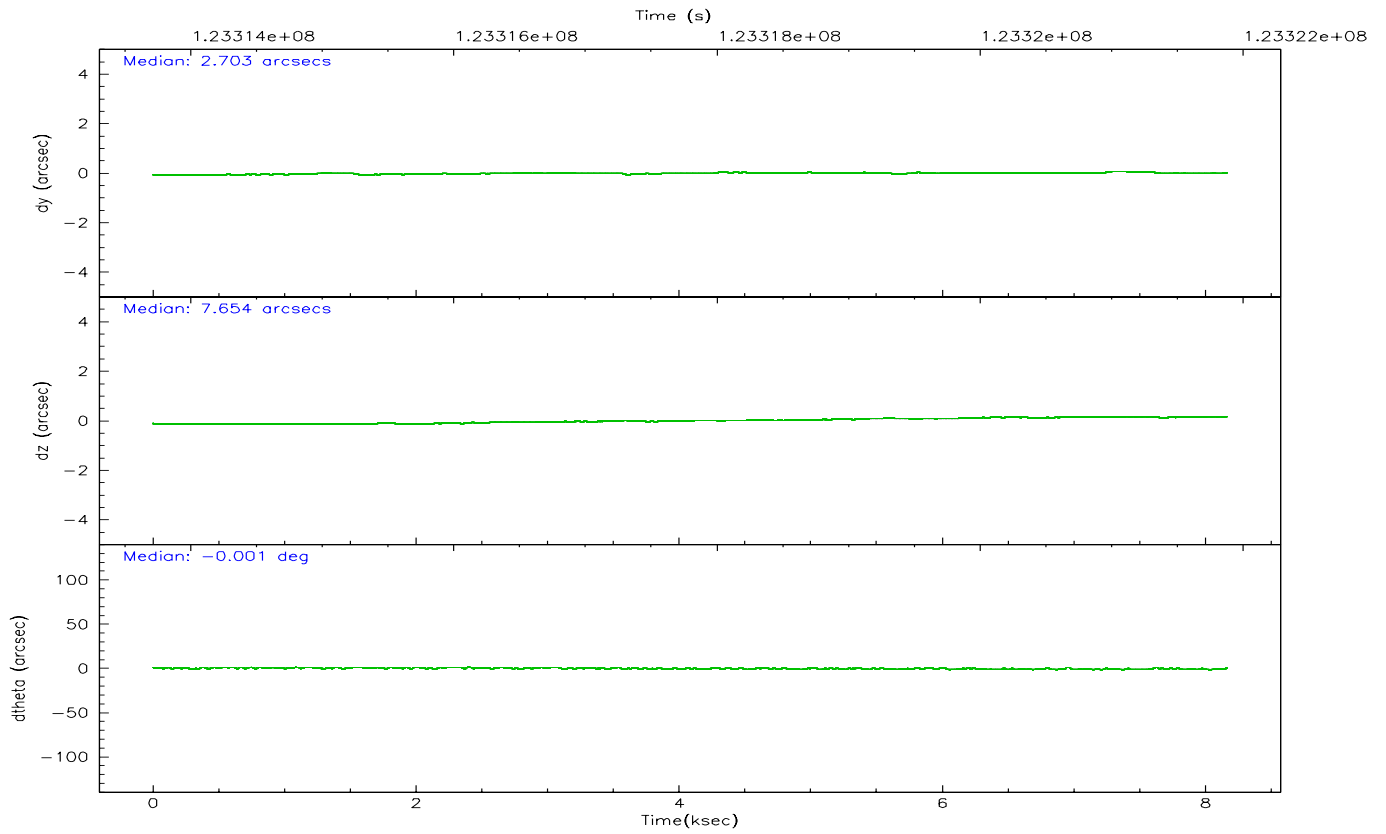
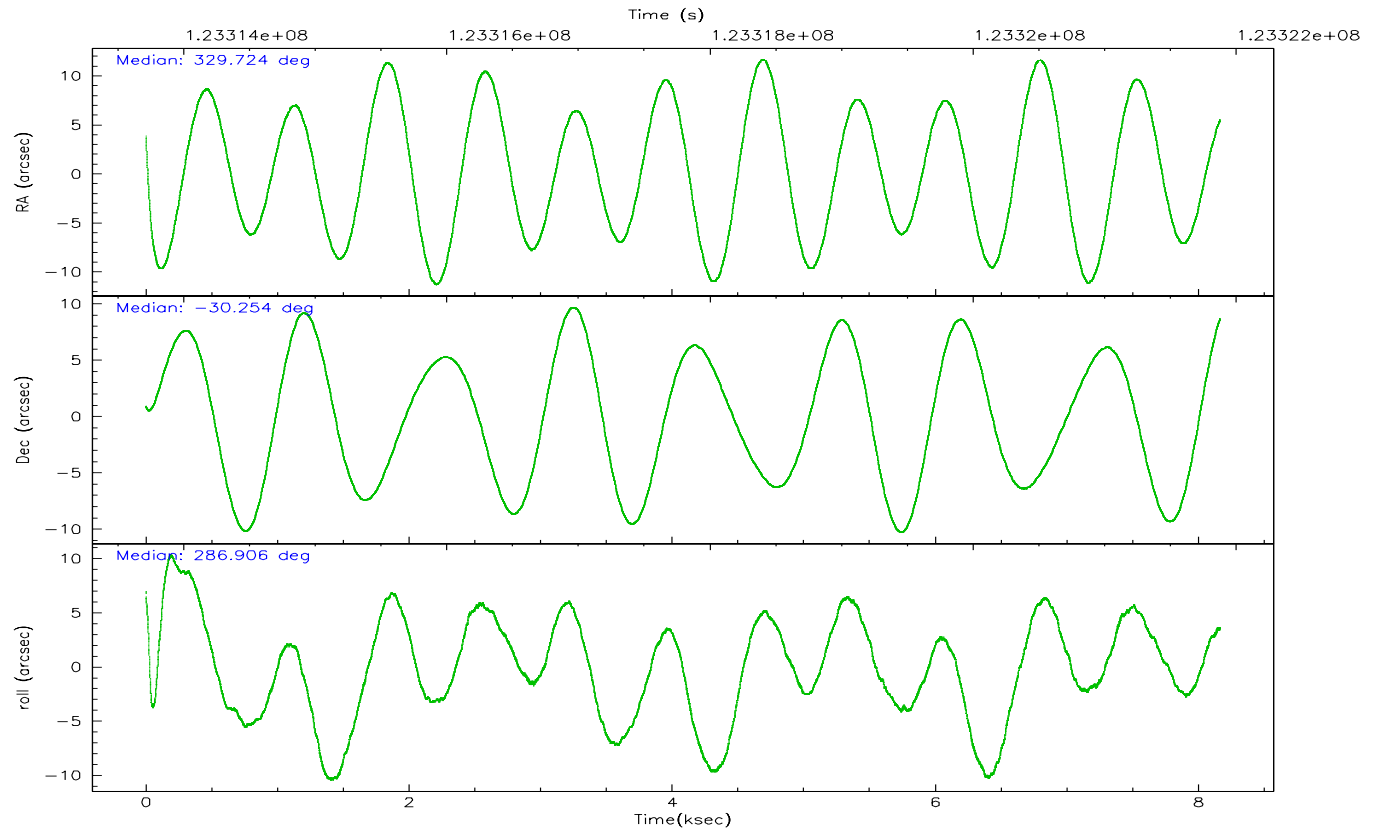
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	2882	3171	12287	18489	2532	2725
	5%	6%	19%	23%	4%	3%
grade 1 events	17	21	95	513	28	68
	0%	0%	0%	0%	0%	0%
grade 2 events	1478	1491	2356	3415	1363	5922
	3%	3%	3%	4%	2%	8%
grade 3 events	616	703	807	1270	628	2648
	1%	1%	1%	1%	1%	3%
grade 4 events	554	643	851	1144	590	2604
	1%	1%	1%	1%	1%	3%
grade 5 events	2008	1991	1853	2858	2319	6648
	4%	4%	2%	3%	4%	9%
grade 6 events	1192	1289	1286	2110	1385	15797
	2%	2%	2%	2%	2%	22%
grade 7 events	40236	39984	44520	48715	45798	34099
	82%	81%	69%	62%	83%	48%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-012367	ACIS-012367	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
Pointing RA	329.701183	329.7243713247522	Subarray requested	NONE	NONE
Pointing Dec	-30.235484	-30.25416242718957	Alternating exposures requested	N	N
Pointing Roll	286.690488	286.9108533288023	Primary exposure time	0.000000	3.2
Window start time	120960064.184000	120960064.184000			
Window stop time	126144064.184000	126144064.184000			
SIM focus pos (mm)	-0.782348	-0.7809083437167272			
SIM defocus (mm)	0	0.001439871863259334			
SIM translation stage pos (mm)	-233.592463	-233.5874344608287			
SIM translation stage offset (mm)	0	-0.005018542100998502			
Observation start time	123313878.184000	123312605.30744			
Observation start date	2001-11-28T05:50:14	2001-11-28T05:30:05			
Observation end time	123321878.184000	123322012.24531			
Observation end date	2001-11-28T08:03:34	2001-11-28T08:06:52			
Read mode	TIMED	TIMED			

### 2.3 Aspect





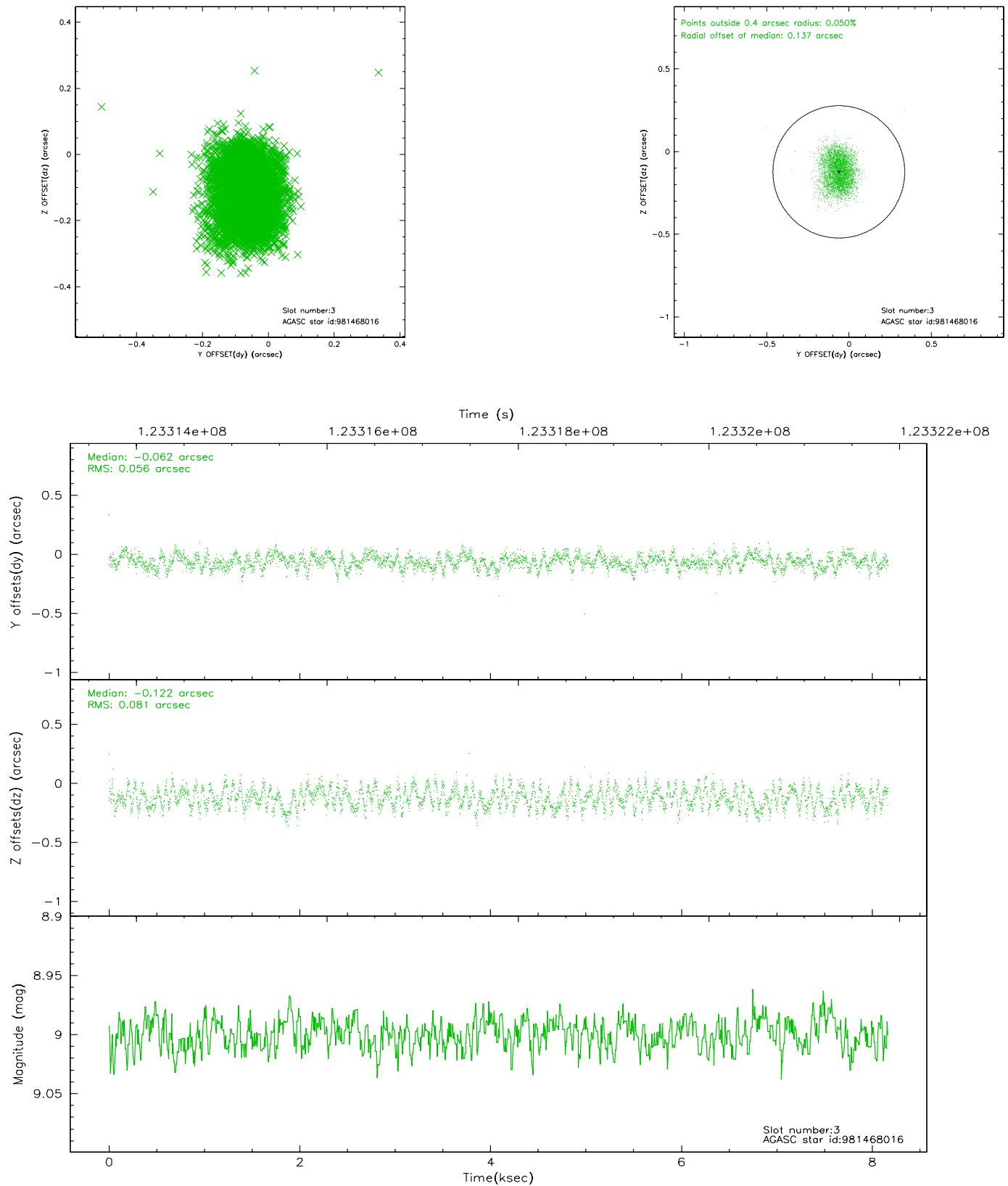
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.24	1992	-0.050	0.039	0.005	0.010	0.000000	0.000000	937.04	-831.05
1	FID	ACIS-I-5	7.24	1992	-0.011	0.011	0.005	0.010	0.000000	0.000000	-1810.62	1066.12
2	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
3	GUIDE	981468016	9.00	3984	-0.062	-0.122	0.106	0.164	328.842457	-30.034984	-1449.26	-2358.57
4	GUIDE	912275088	9.06	3984	-0.043	0.017	0.074	0.123	329.619228	-29.738698	-1785.99	268.32
5	GUIDE	981478152	9.40	3981	-0.008	0.116	0.093	0.150	329.415589	-30.057192	-868.71	-667.45
6	GUIDE	981468128	9.36	3981	0.029	-0.001	0.088	0.142	329.756350	-30.158334	-215.84	244.90
7	GUIDE	981469488	9.60	3979	0.087	-0.008	0.083	0.138	329.261199	-30.045155	-1046.44	-1116.54

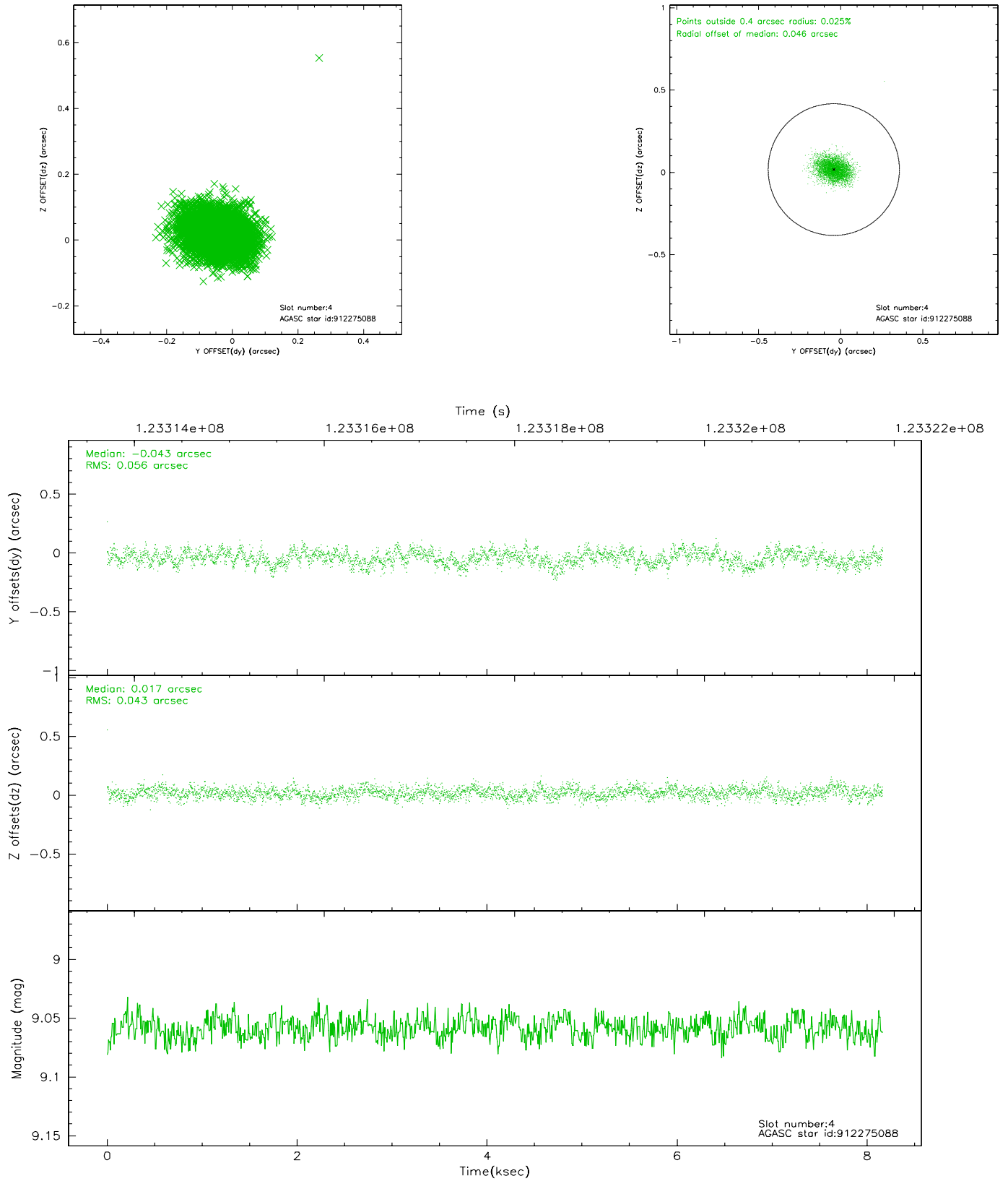


## 2.4 Star Slots

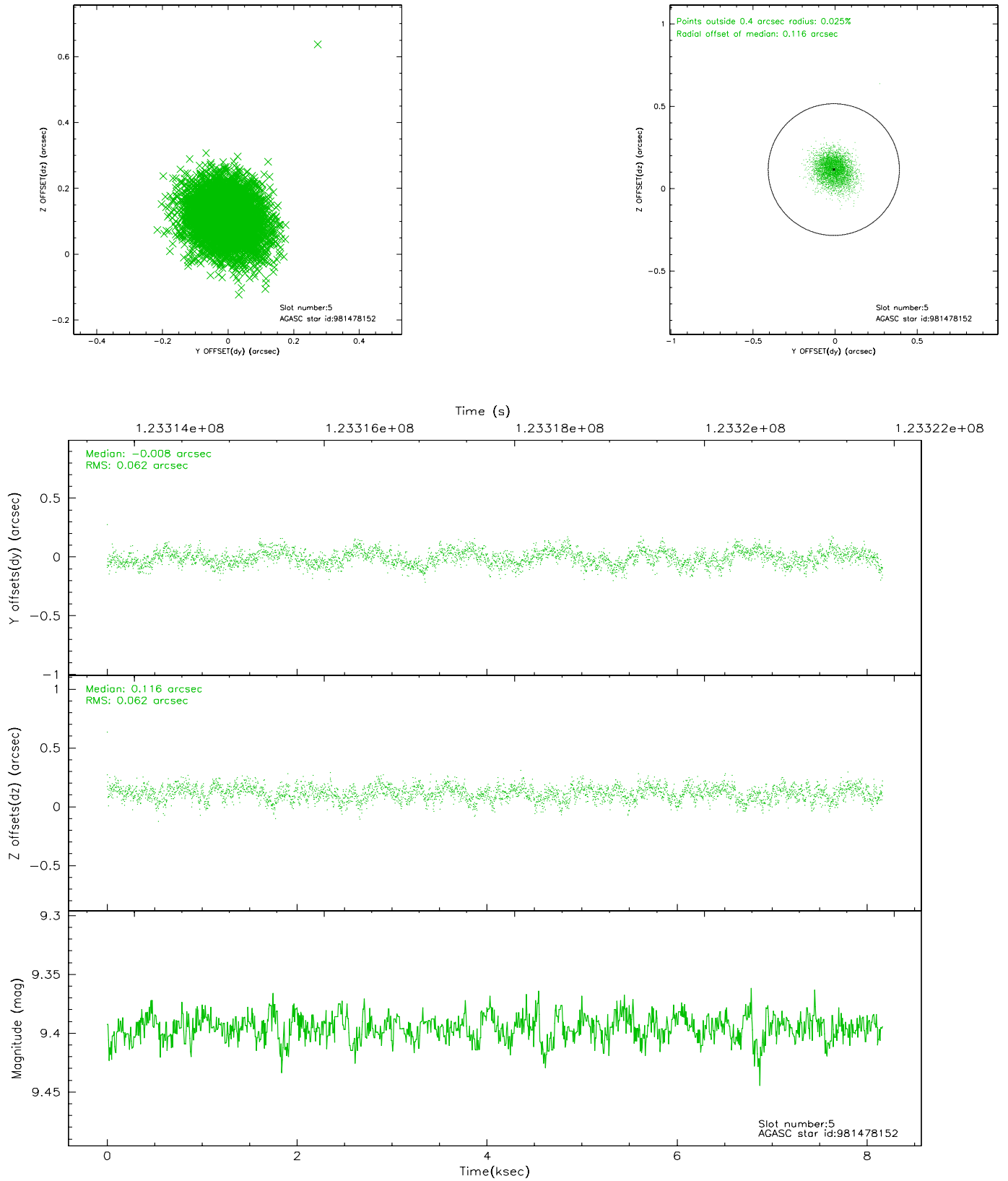
### 2.4.1 Slot 3



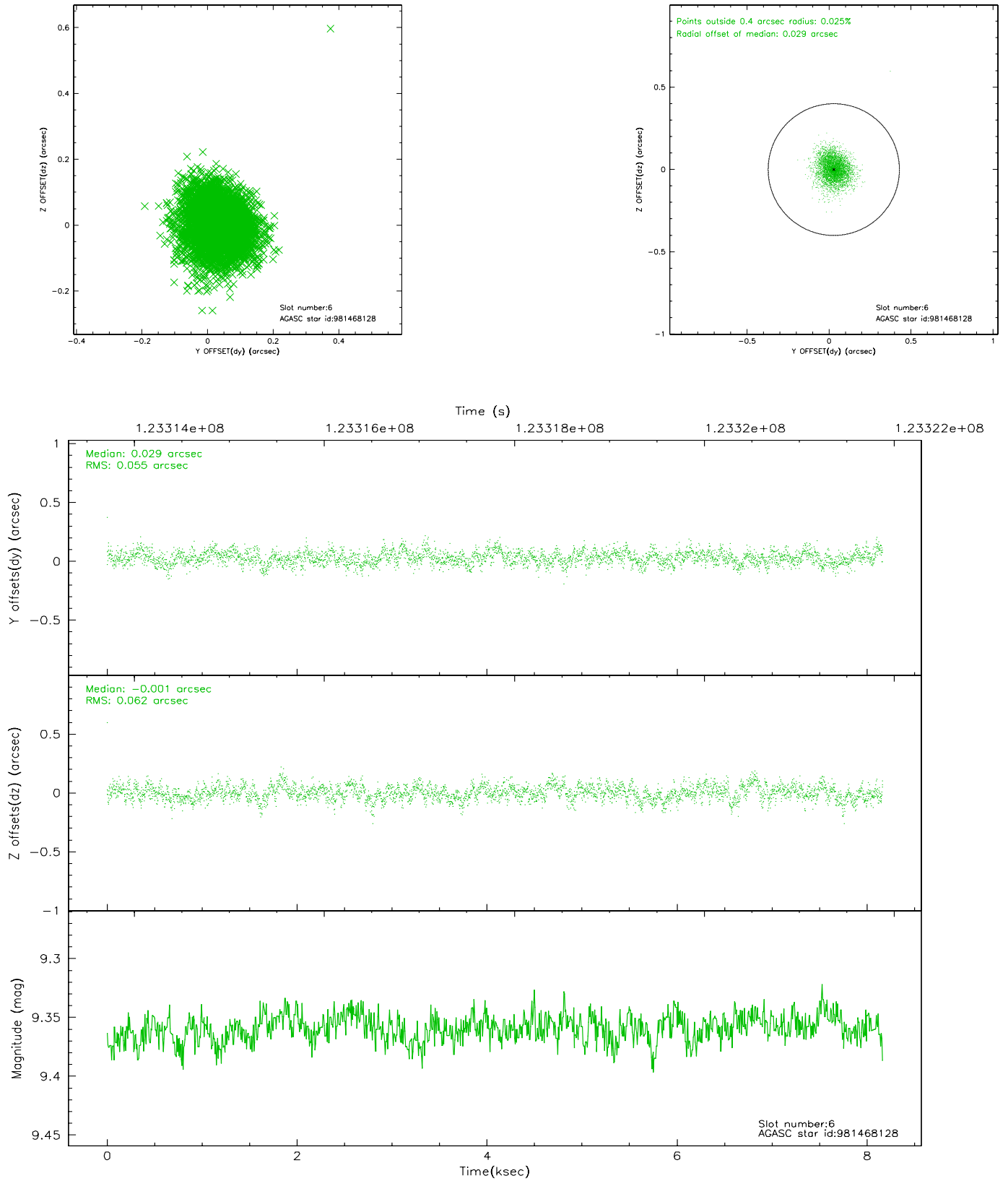
## 2.4.2 Slot 4



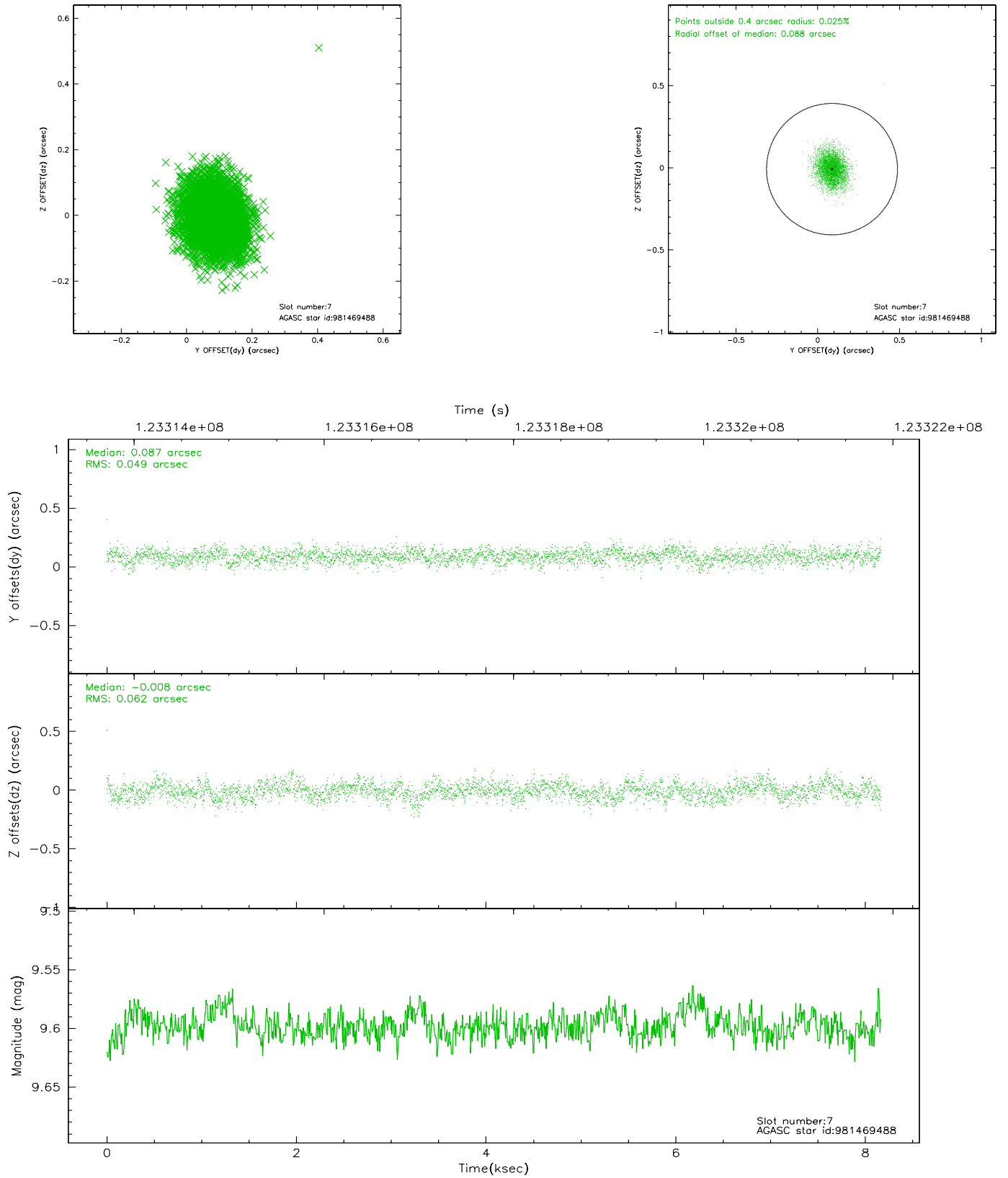
### 2.4.3 Slot 5



## 2.4.4 Slot 6

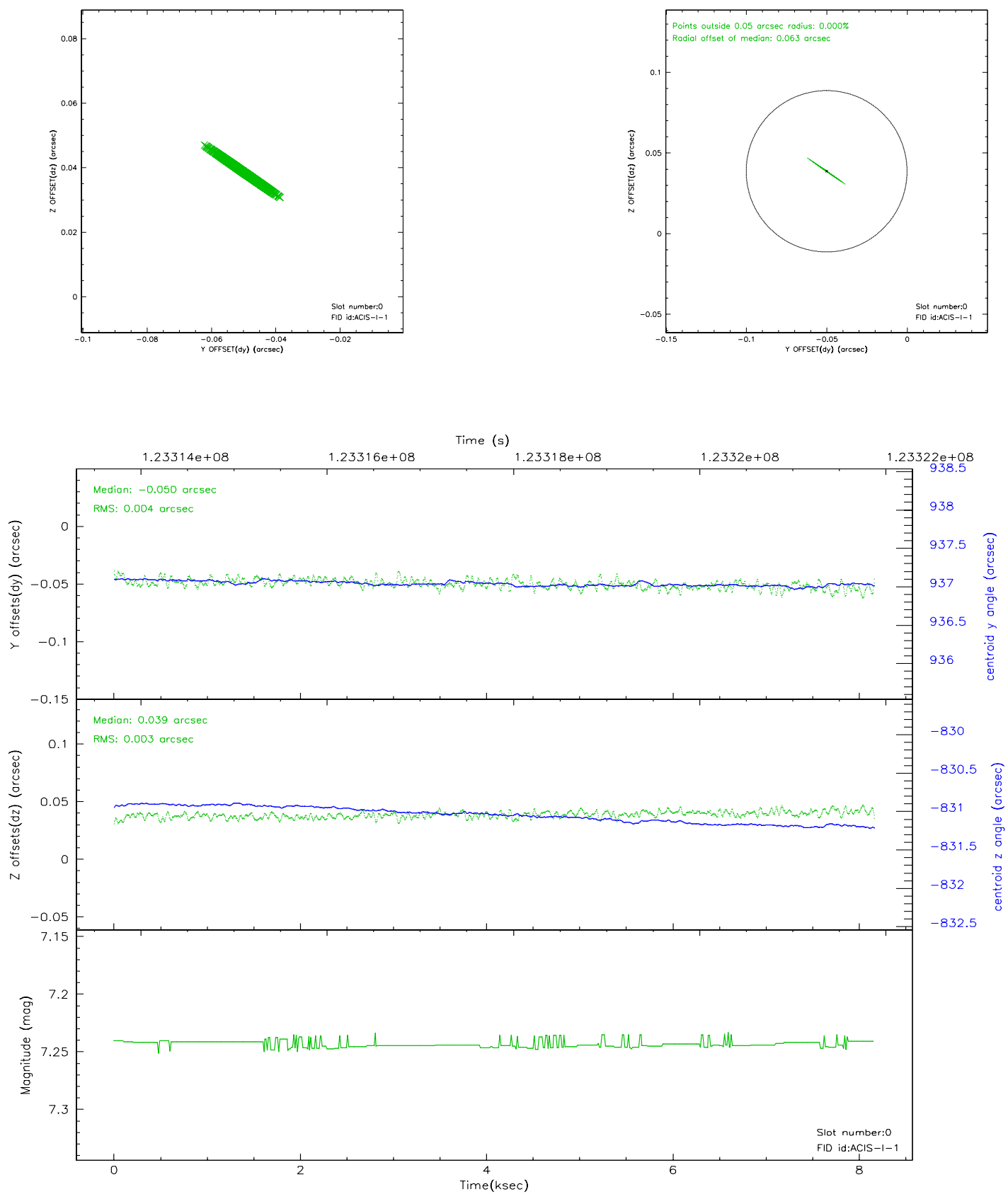


## 2.4.5 Slot 7

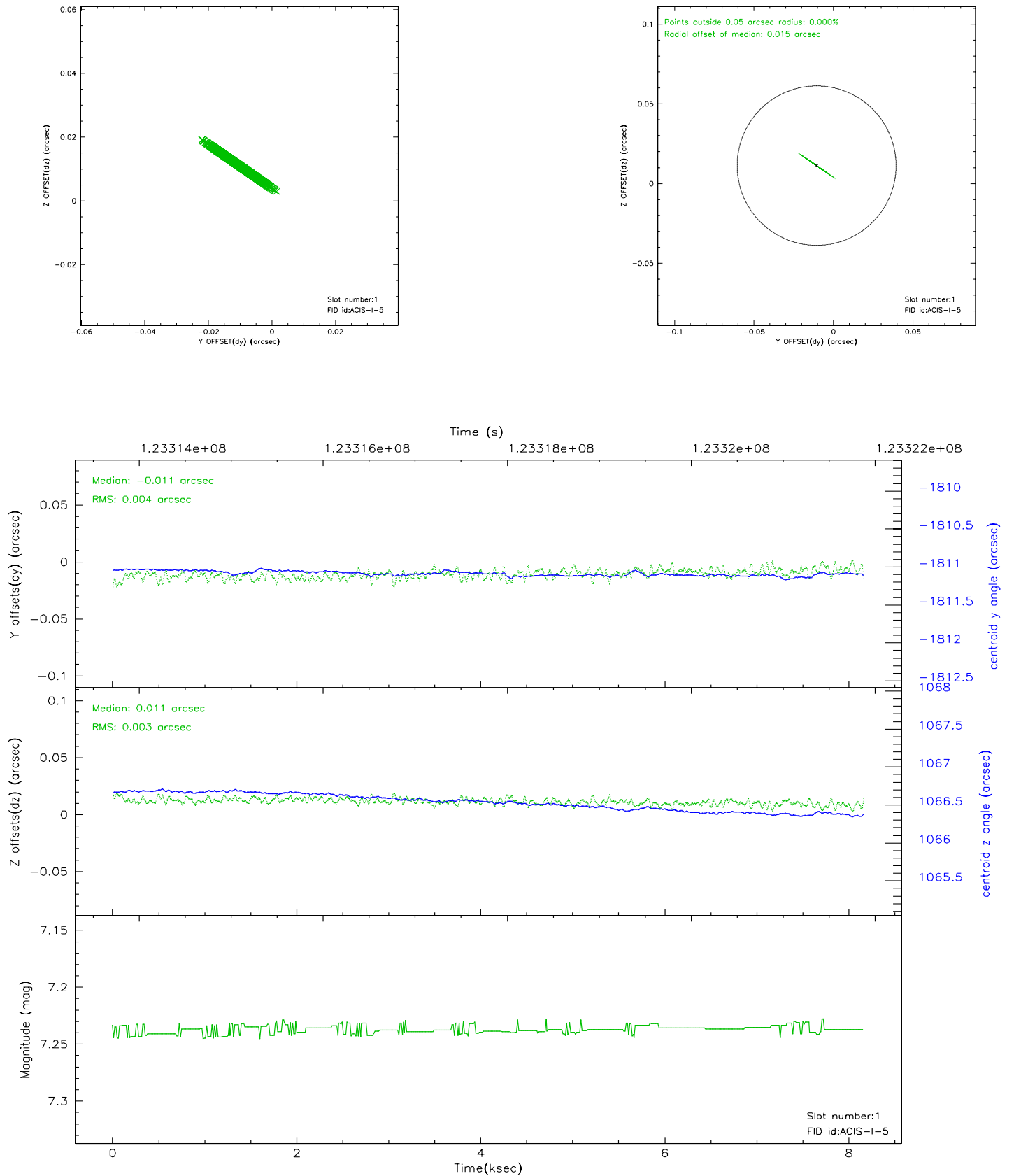


## 2.5 FID Slots

### 2.5.1 Slot 0

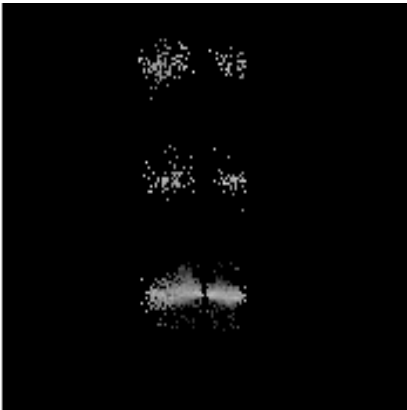


## 2.5.2 Slot 1

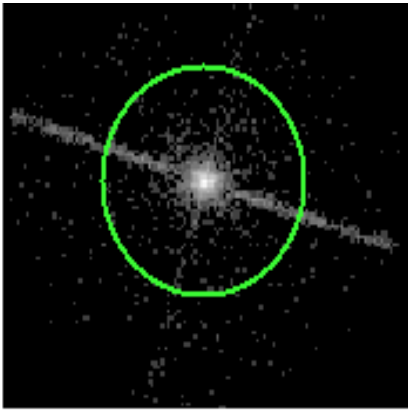


# 3 Gratings

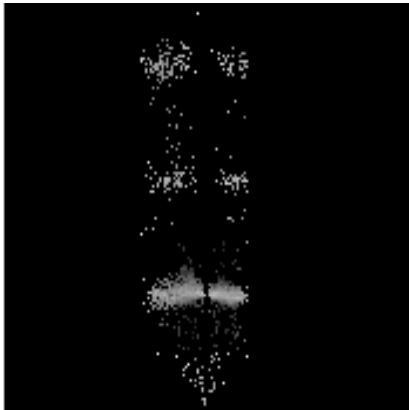
## 3.1 LETG Arm



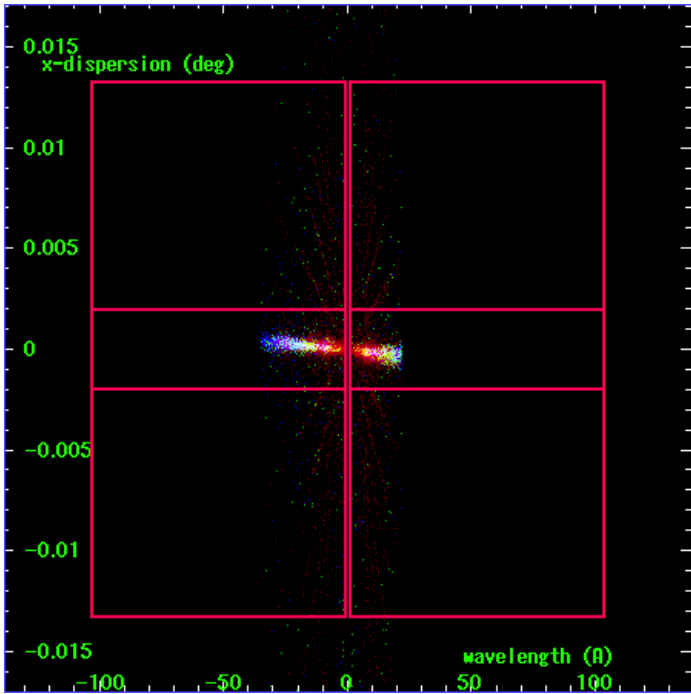
LETG Order Sort 123



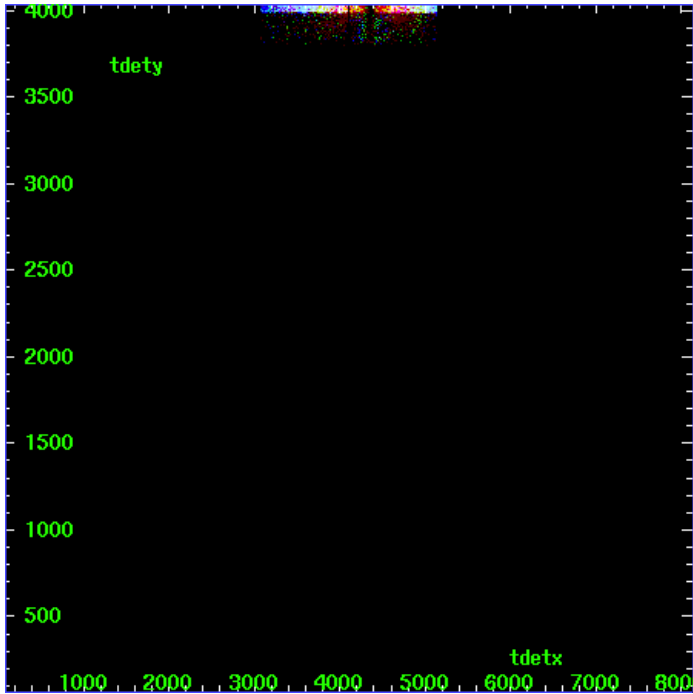
LETG Zero Order



LETG Order Sort ALL

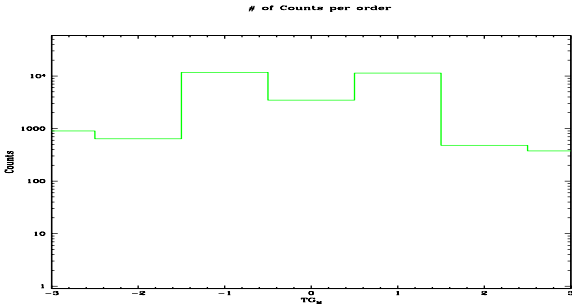


Spot Image LETG

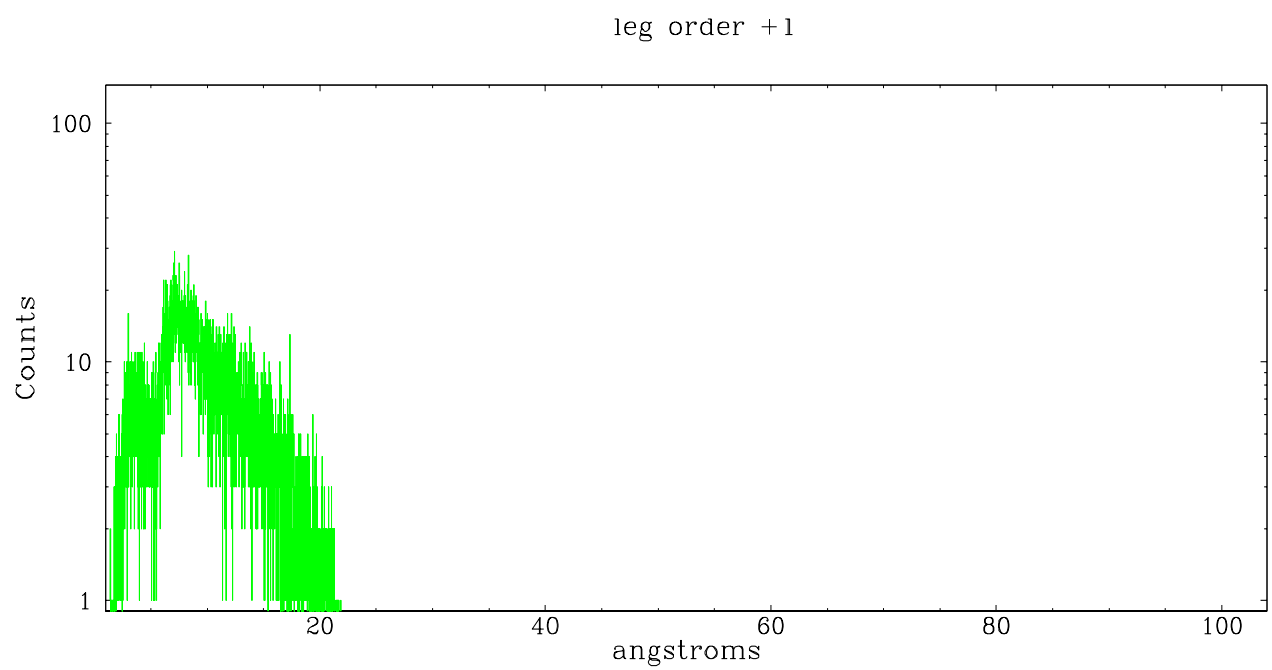
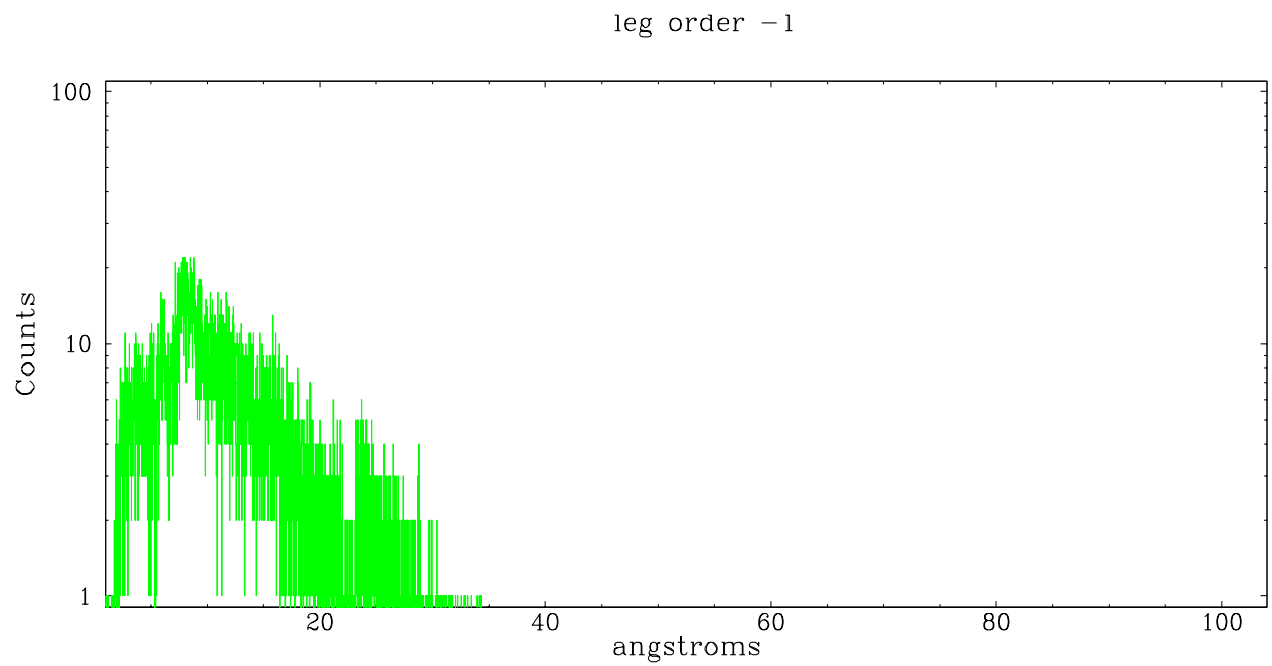


Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	903	637	11711	3475	11335	481	374







# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2010.10.01
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	8.156

## A.2 Comments

Non-standard grating/detector combination requires custom parameters.  
To resolve order, tg\_resolve\_events used osip=NONE and a constant  
order-sorting boundary.

=====

The fid light in slot 2 was manually excluded from the processing due to  
poor data quality.