

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 3414 - L2 Version 001  
Chandra X-Ray Center

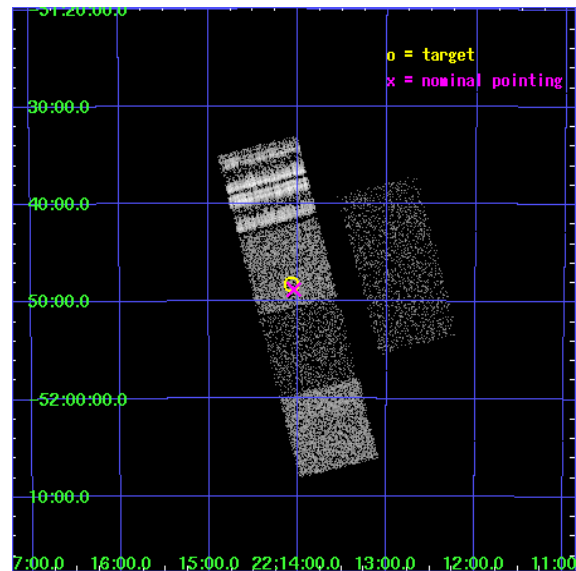
L2 Processing Date : Jan 16 2007

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# 1 Front

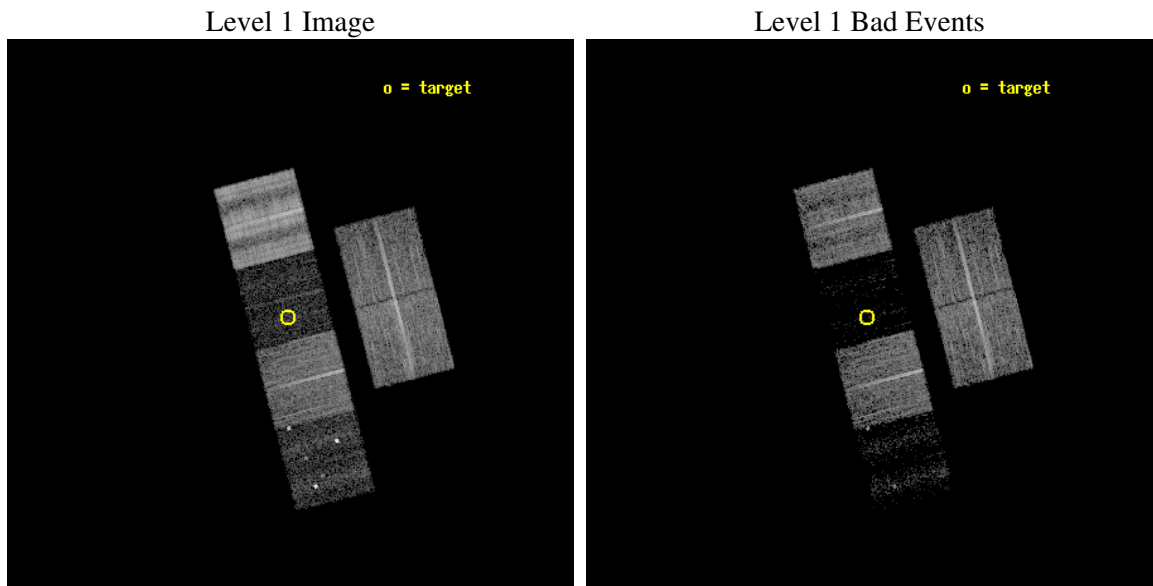
seq_num	100030
obs_id	3414
title	ACIS-S LOW ENERGY SPECTROSCOPY AND PHOTOMETRIC IMAGING OF CHARGE EXCHANGE X-RAY EMISSION FROM COMET C/LINEAR WM1 (2000)
observer	Dr. Carey Lisse
object	C/LINEAR WM1 (2000)
dtcycle	0
cycle	P
ra_targ	333.51743
dec_targ	-51.80457
ra_nom	333.51094705249
dec_nom	-51.813402248155
roll_nom	255.48366223896
revision	2
ontime	8505.6000079215
livetime	8397.8969791637
ontime2	8505.6000079215
ontime3	8505.6000079215
ontime5	8505.6000079215
ontime6	8505.6000079215
ontime7	8505.6000079215
ontime8	8499.1180375814
l2events	30323



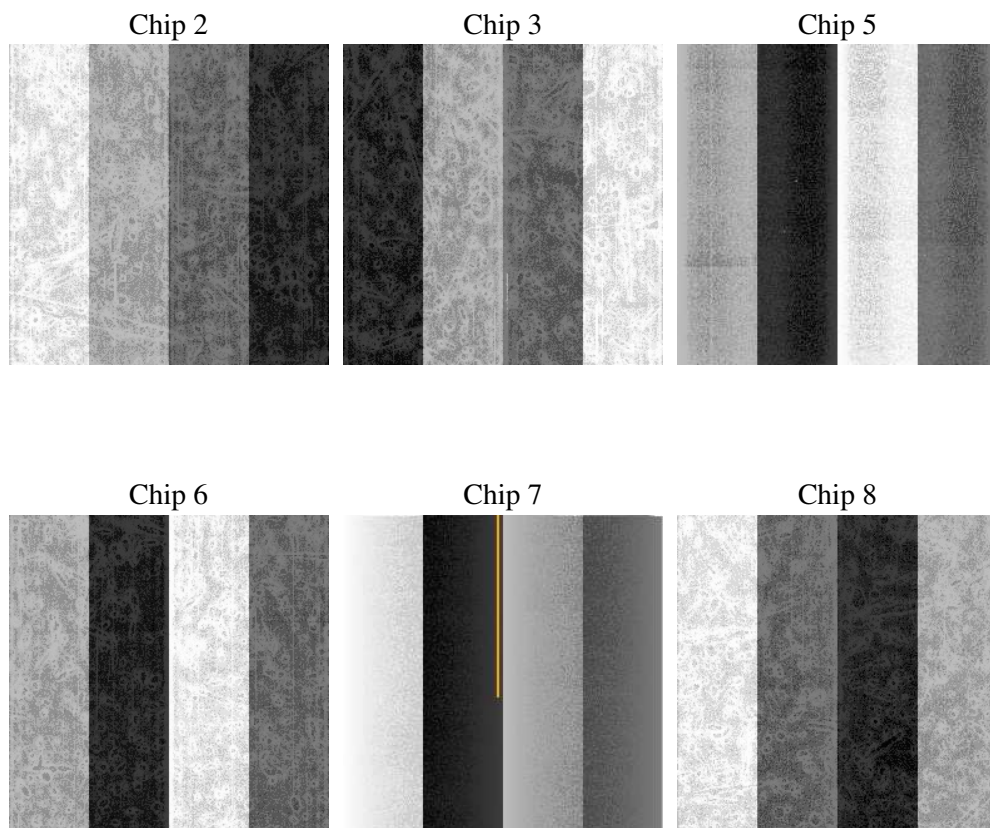
## 2 OBI

### 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	2007-01-17T02:35:24
revision	2

sched_exp_time	8750.000000
ontime	8505.6000079215
ontime2	8505.6000079215
ontime3	8505.6000079215
ontime5	8505.6000079215
ontime6	8505.6000079215
ontime7	8505.6000079215
ontime8	8499.1180375814
l1events	224088

### 2.1.4 Events

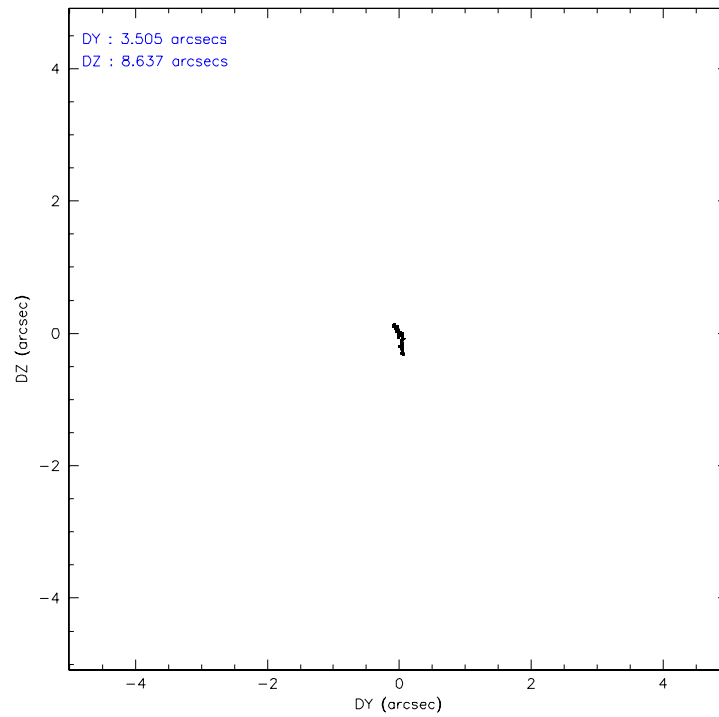
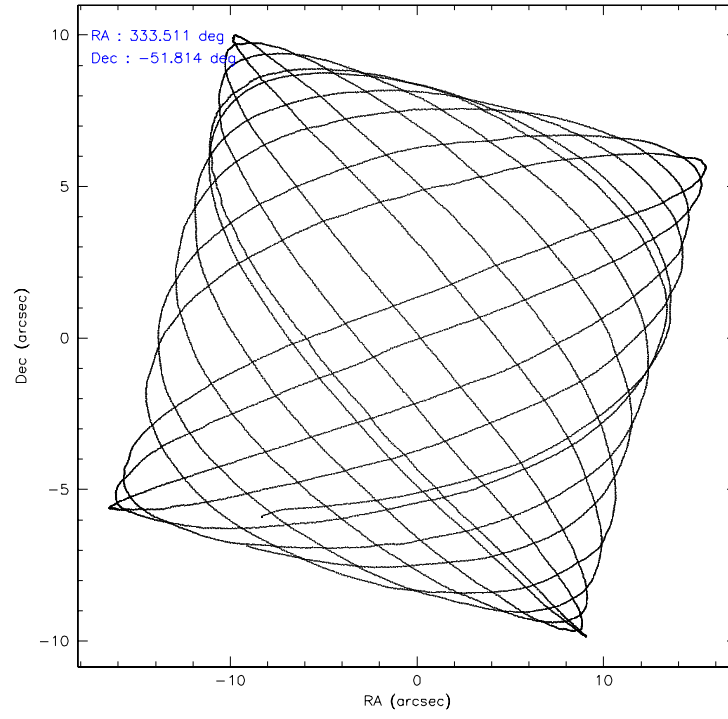
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	45600	36204	13946	38914	6885	82539
rejected events	42732	34876	3824	36311	1356	40784
rejected %	93%	96%	27%	93%	19%	49%

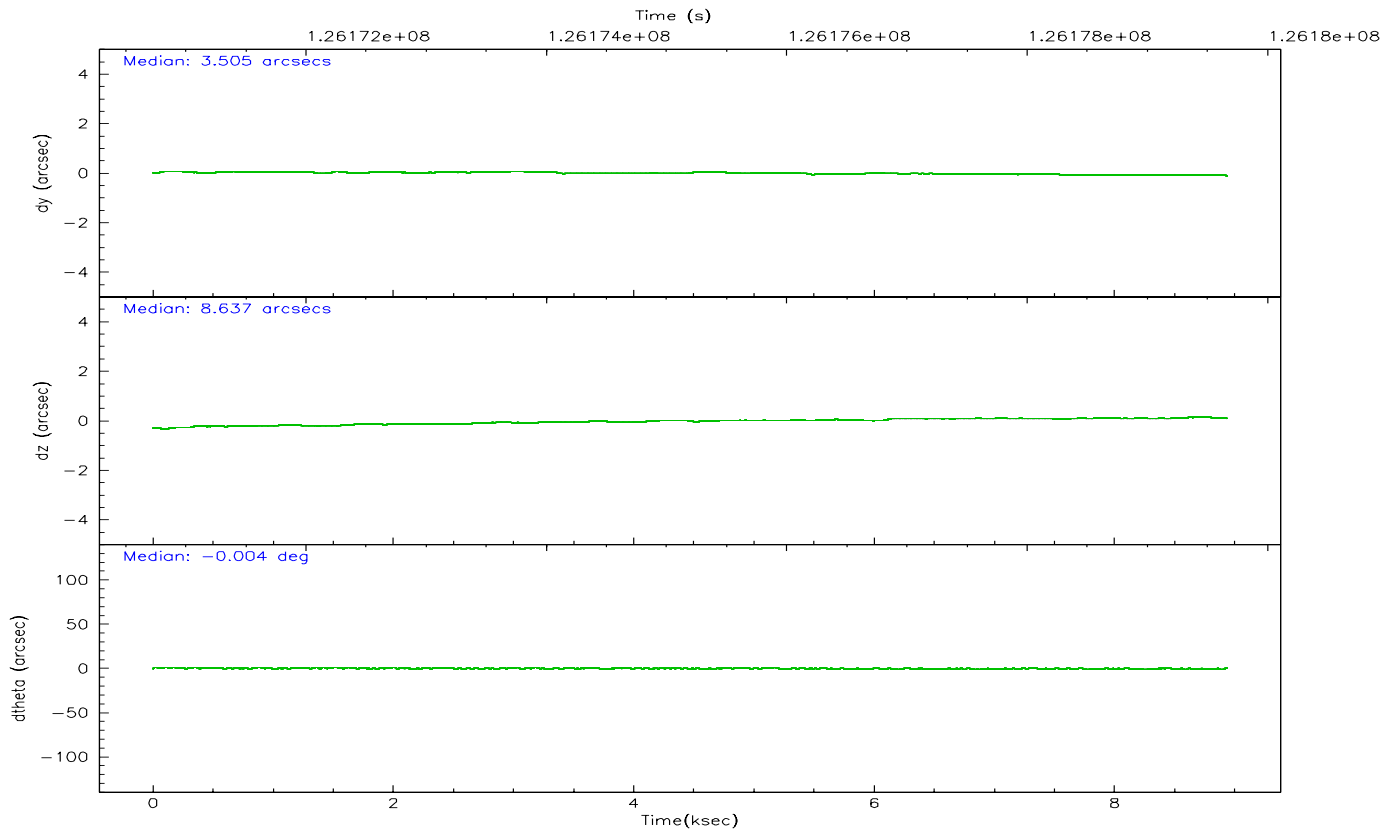
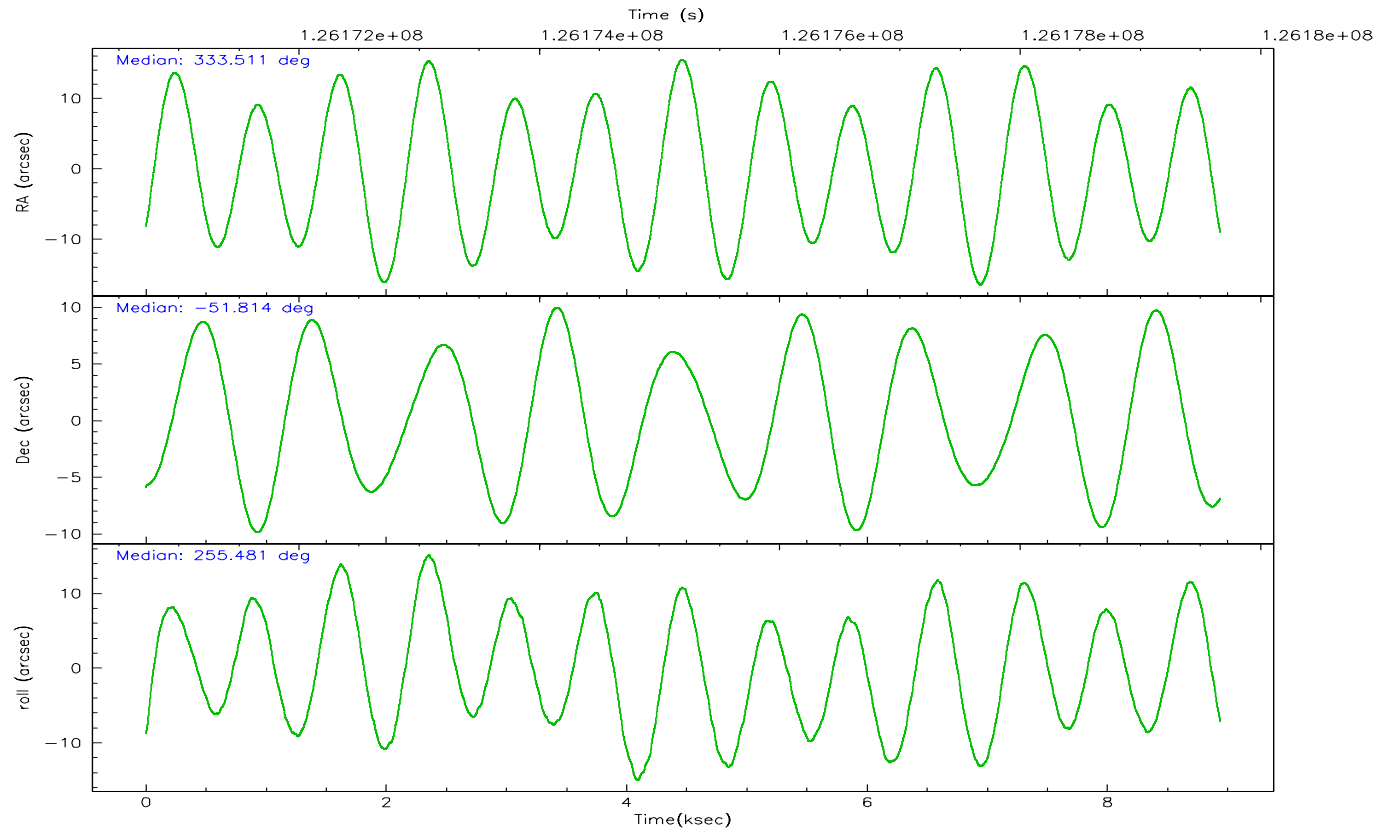
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	1271	621	4654	1462	1435	13087
	2%	1%	33%	3%	20%	15%
grade 1 events	18	7	242	24	20	119
	0%	0%	1%	0%	0%	0%
grade 2 events	825	218	2947	621	1886	5403
	1%	0%	21%	1%	27%	6%
grade 3 events	226	204	849	204	790	7879
	0%	0%	6%	0%	11%	9%
grade 4 events	313	193	883	213	775	7026
	0%	0%	6%	0%	11%	8%
grade 5 events	87	21	583	33	223	632
	0%	0%	4%	0%	3%	0%
grade 6 events	234	92	793	103	649	8361
	0%	0%	5%	0%	9%	10%
grade 7 events	42626	34848	2995	36254	1107	40032
	93%	96%	21%	93%	16%	48%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	333.498594	333.5109470524942	Subarray requested	NONE	NONE
Pointing Dec	-51.787210	-51.8134022481545	Alternating exposures requested	N	N
Pointing Roll	255.317328	255.483662238961	Primary exposure time	0.000000	3.2
Window start time	126144064.184000	126144064.184000			
Window stop time	126230404.184000	126230404.184000			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Observation start time	126170917.184000	126170540.65943			
Observation start date	2001-12-31T07:27:33	2001-12-31T07:22:20			
Observation end time	126179667.184000	126179800.50981			
Observation end date	2001-12-31T09:53:23	2001-12-31T09:56:40			
Read mode	TIMED	TIMED			

## 2.3 Aspect





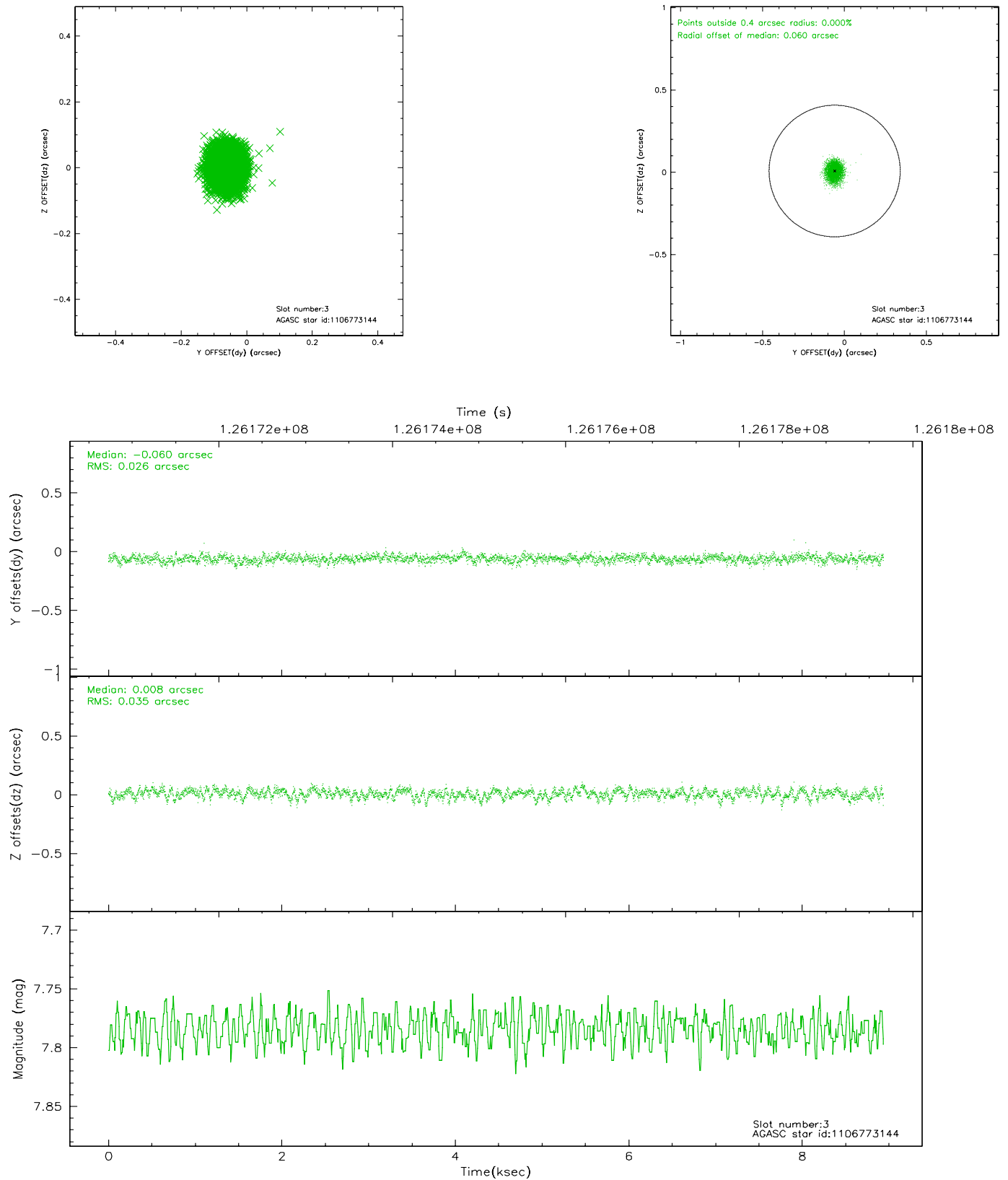
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	2178	-0.001	0.012	0.007	0.013	0.000000	0.000000	-756.15	-1729.81
1	FID	ACIS-S-4	7.20	2178	-0.056	-0.003	0.005	0.009	0.000000	0.000000	2156.79	178.03
2	FID	ACIS-S-5	7.24	2180	0.026	-0.000	0.007	0.012	0.000000	0.000000	-1808.19	172.40
3	GUIDE	1106773144	7.78	4360	-0.060	0.008	0.046	0.075	333.747596	-52.196523	1286.54	904.00
4	GUIDE	1106774680	7.78	4360	-0.013	0.015	0.059	0.091	332.589342	-51.960089	1125.53	-1790.78
5	GUIDE	1106774016	8.48	4359	0.060	-0.022	0.056	0.089	333.431255	-52.253176	1660.31	280.06
6	GUIDE	1106907400	9.06	4354	-0.020	-0.023	0.078	0.123	334.001770	-51.303937	-1966.32	654.21
7	GUIDE	1106904104	10.30	4353	0.033	0.026	0.127	0.208	334.211836	-51.784252	-406.24	1534.81

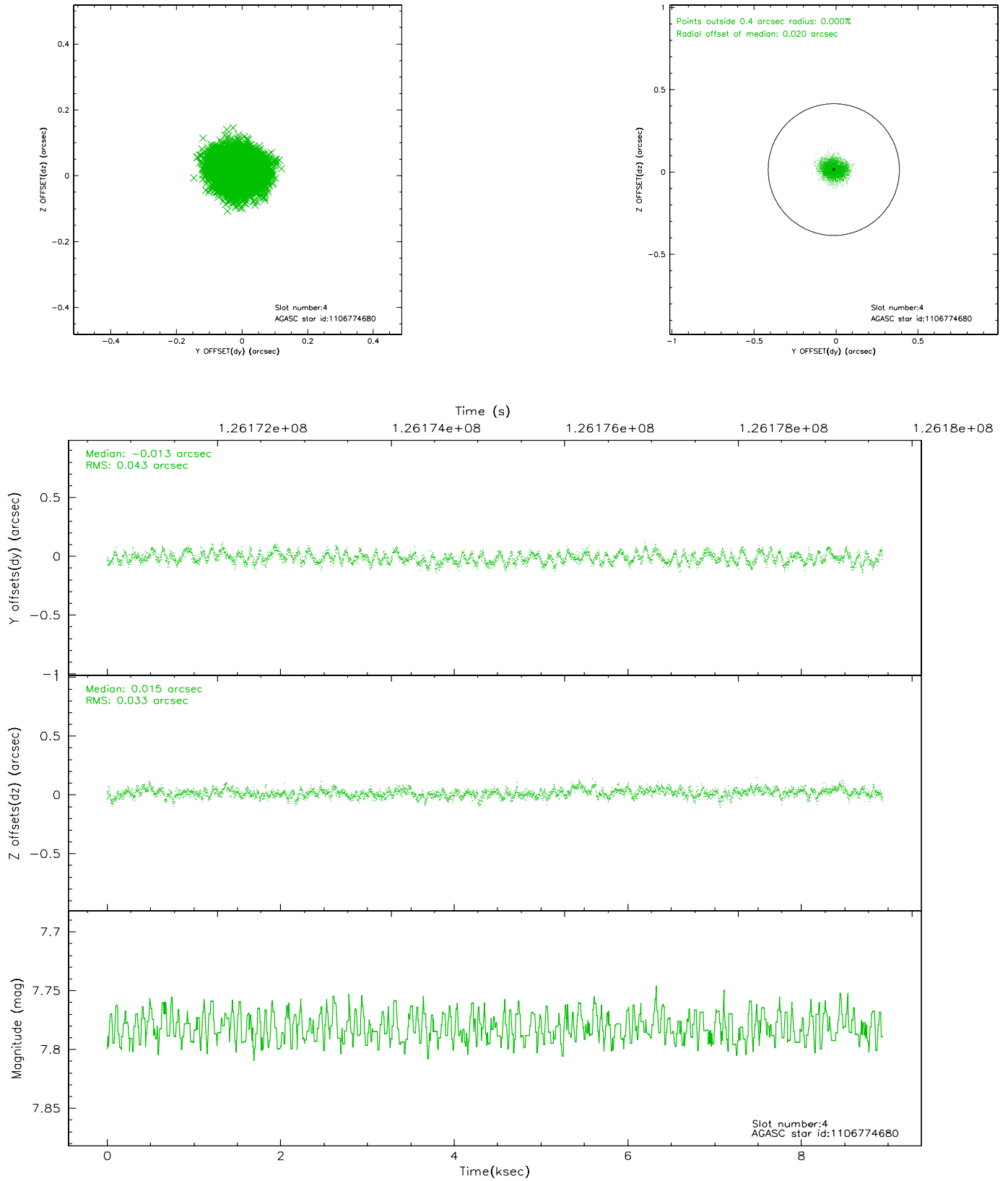


## 2.4 Star Slots

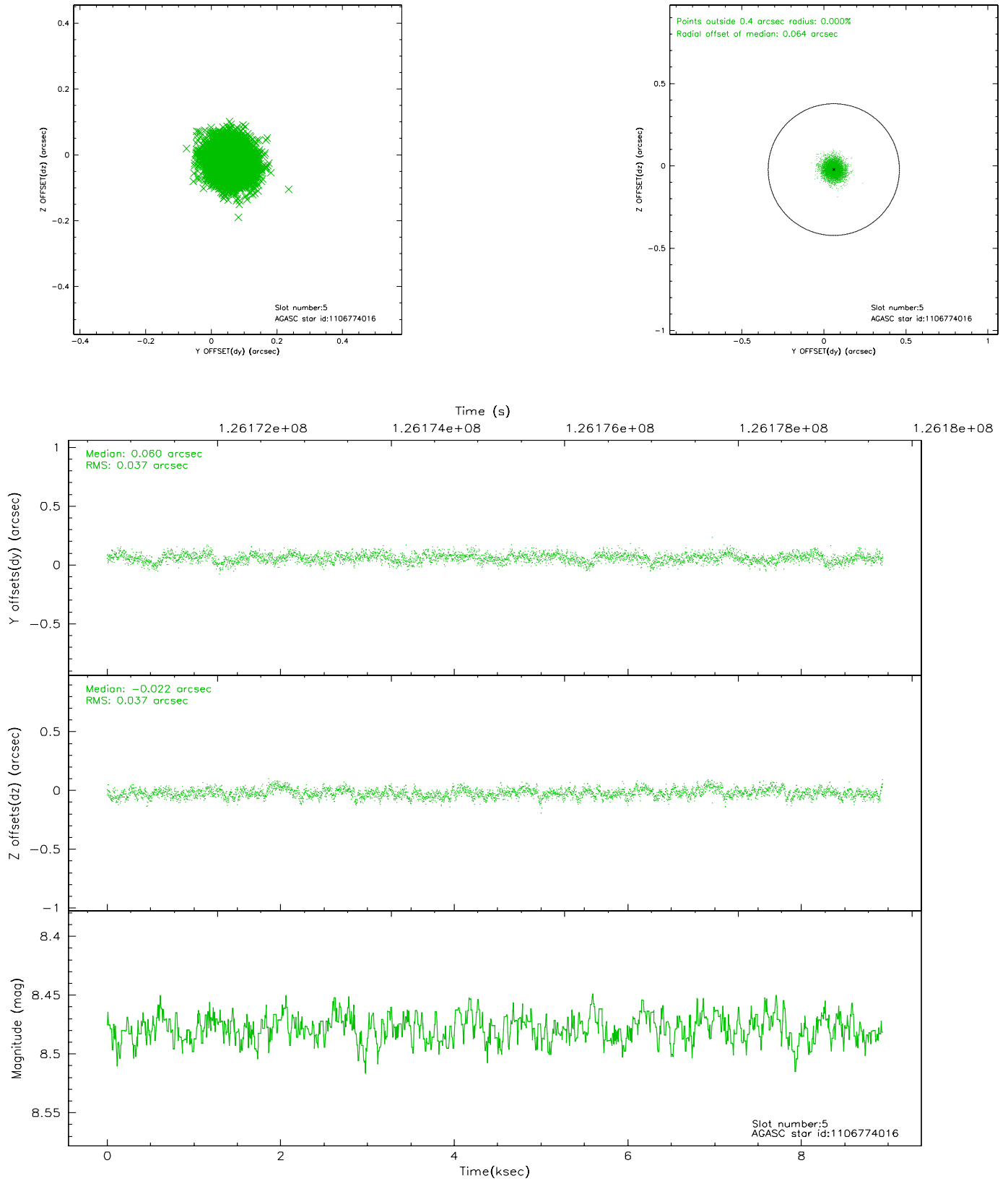
### 2.4.1 Slot 3



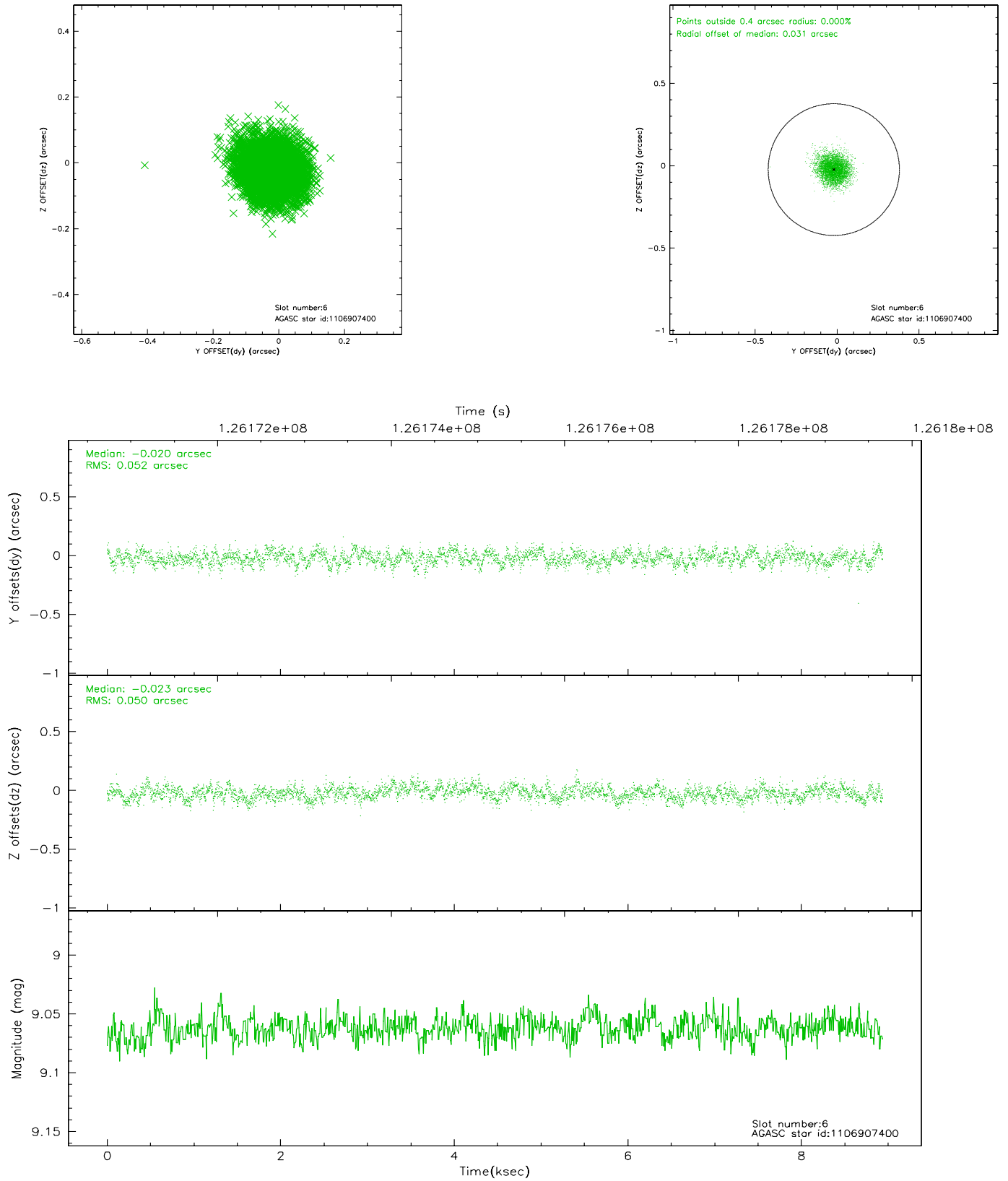
## 2.4.2 Slot 4



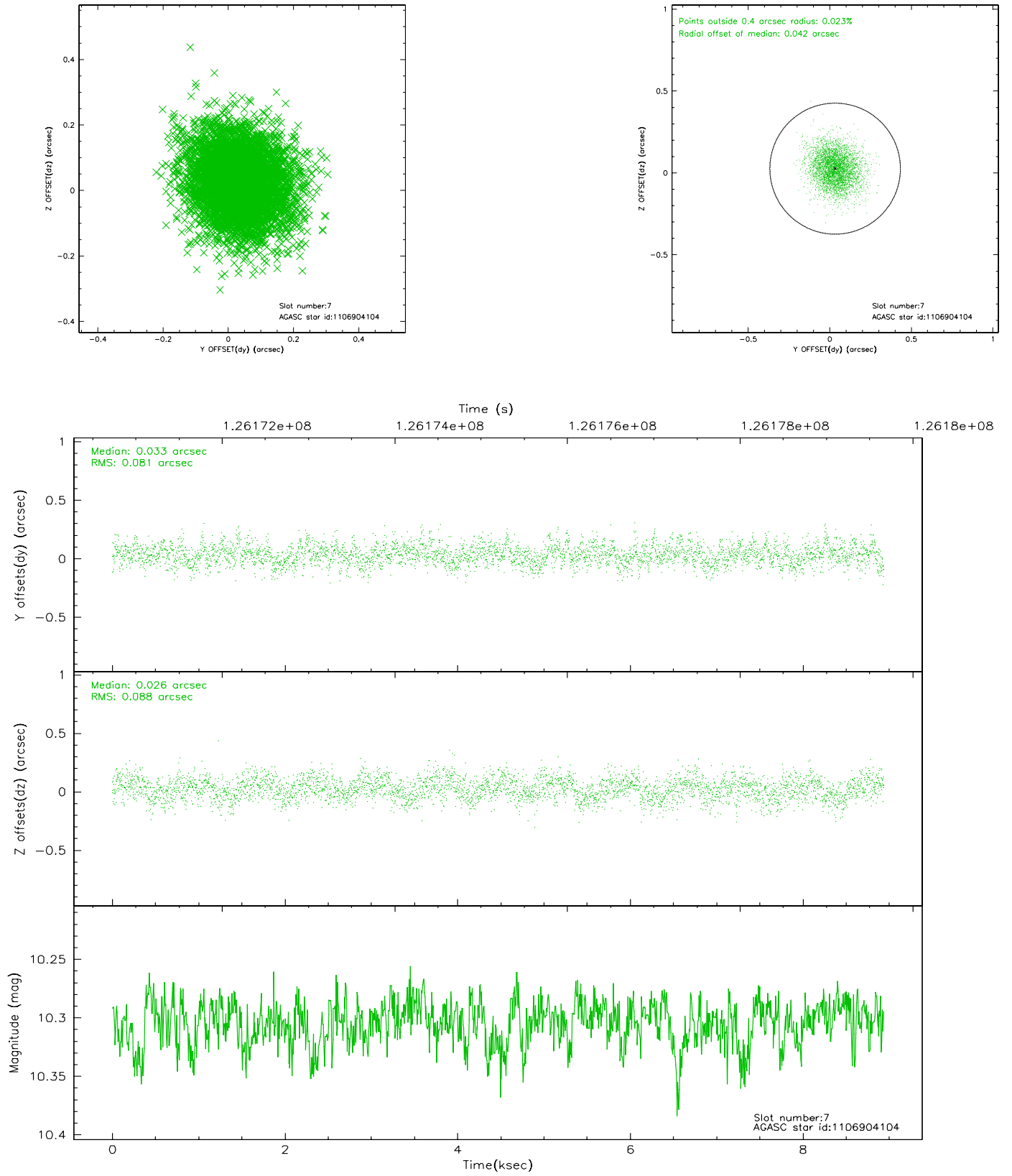
### 2.4.3 Slot 5



## 2.4.4 Slot 6

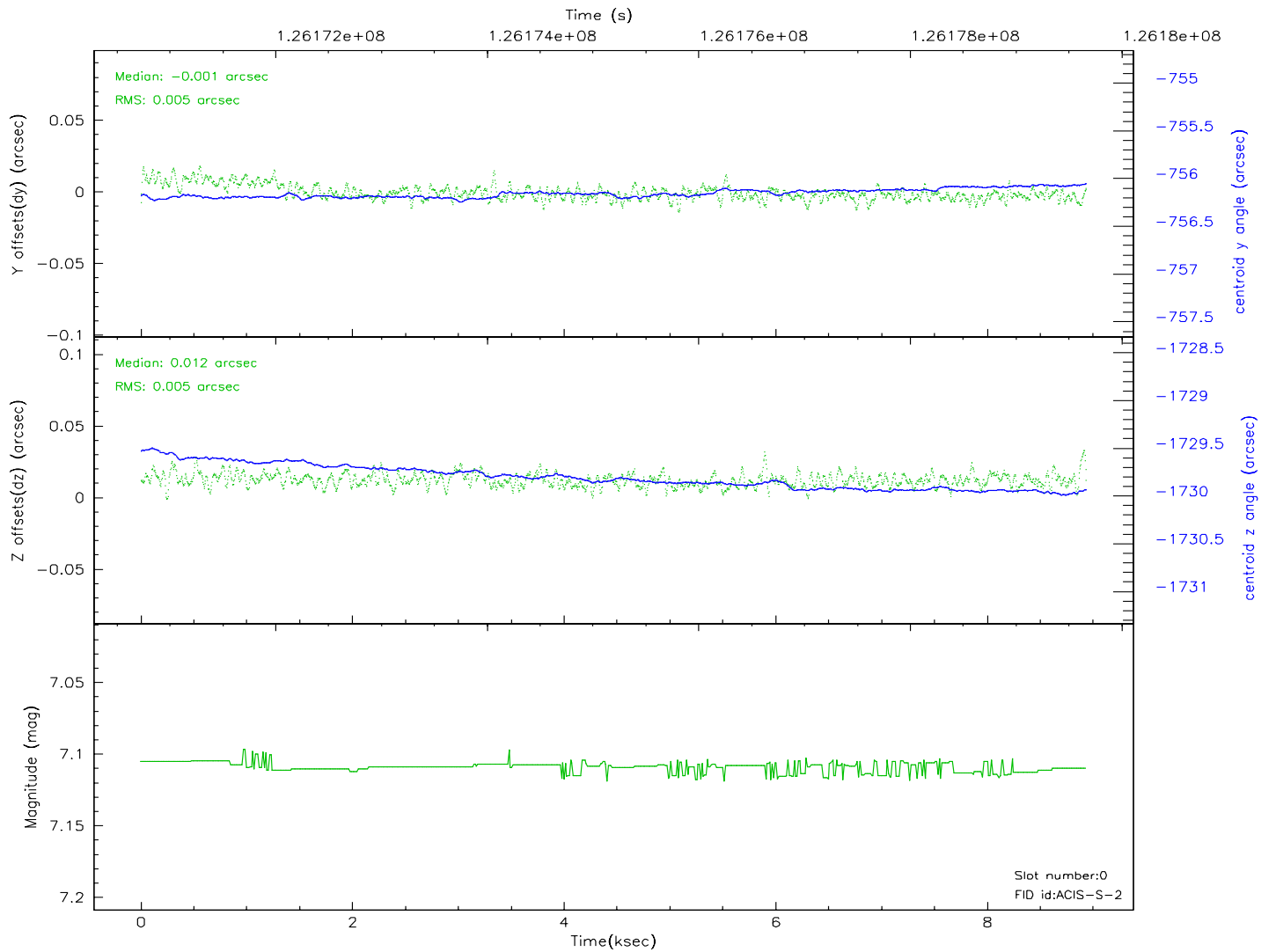
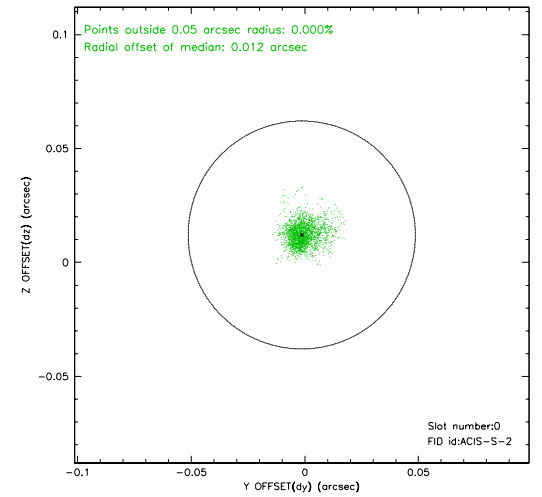
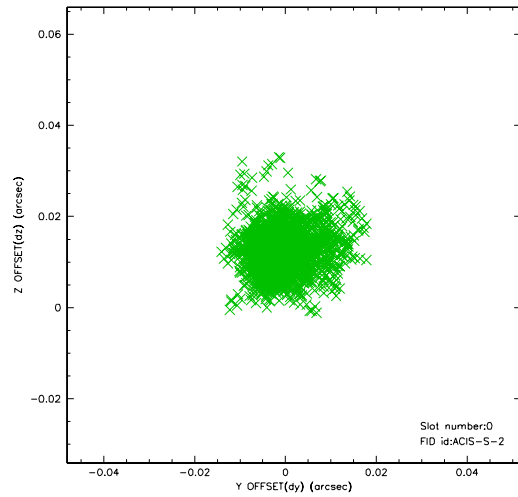


## 2.4.5 Slot 7

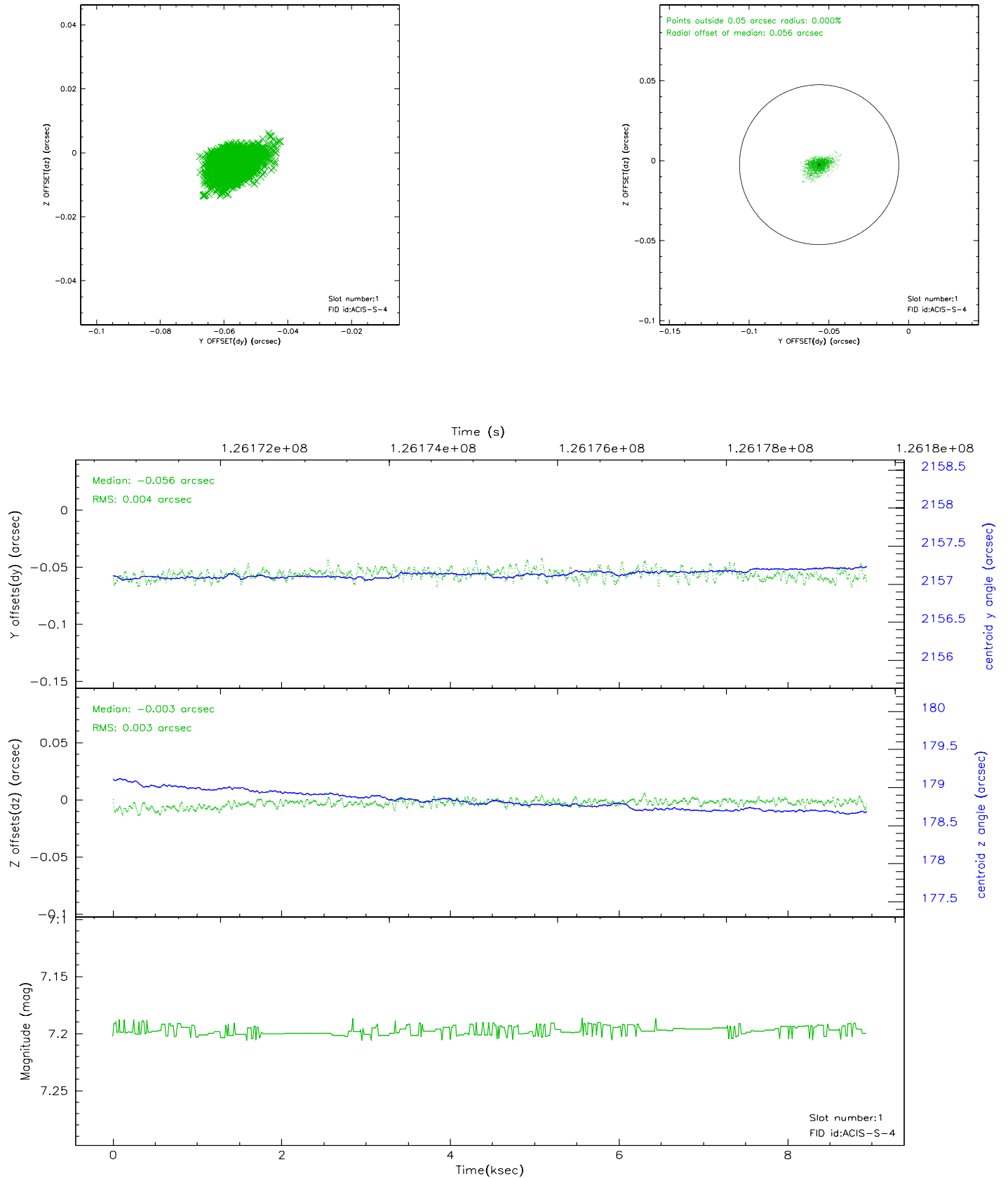


## 2.5 FID Slots

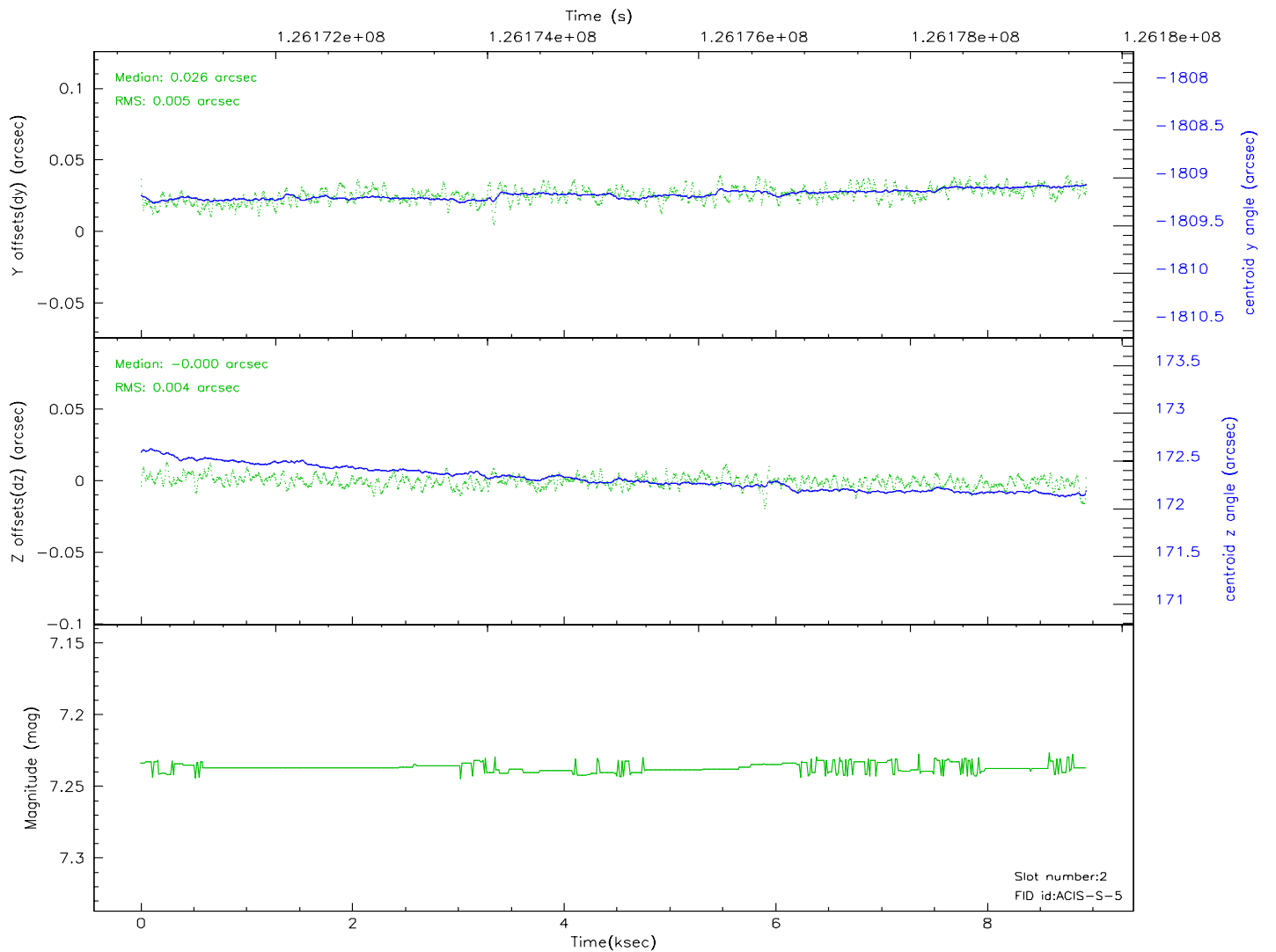
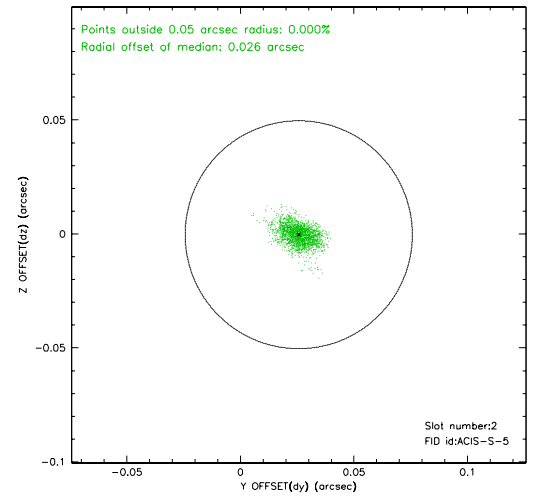
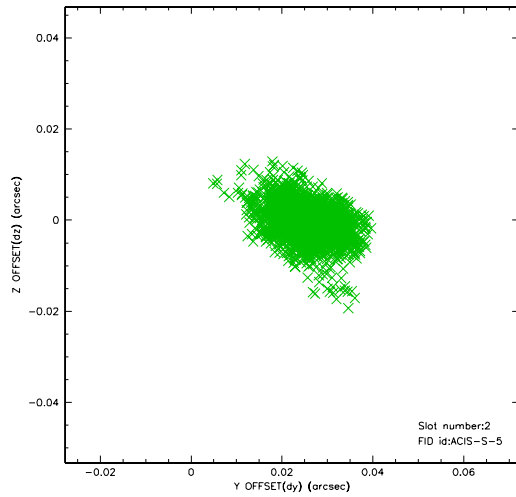
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



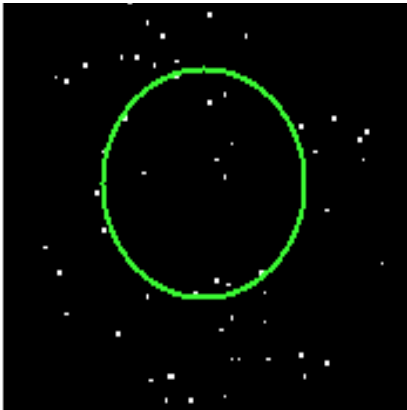


# 3 Gratings

## 3.1 LETG Arm



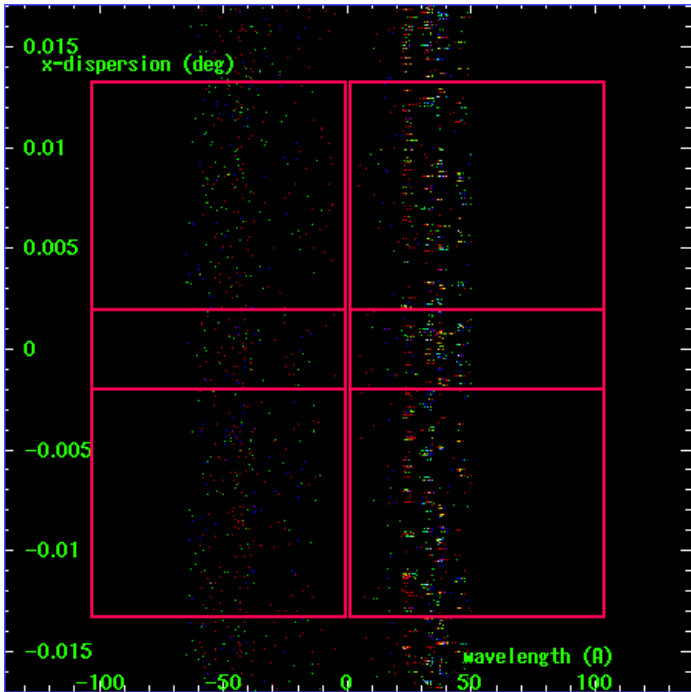
LETG Order Sort 123



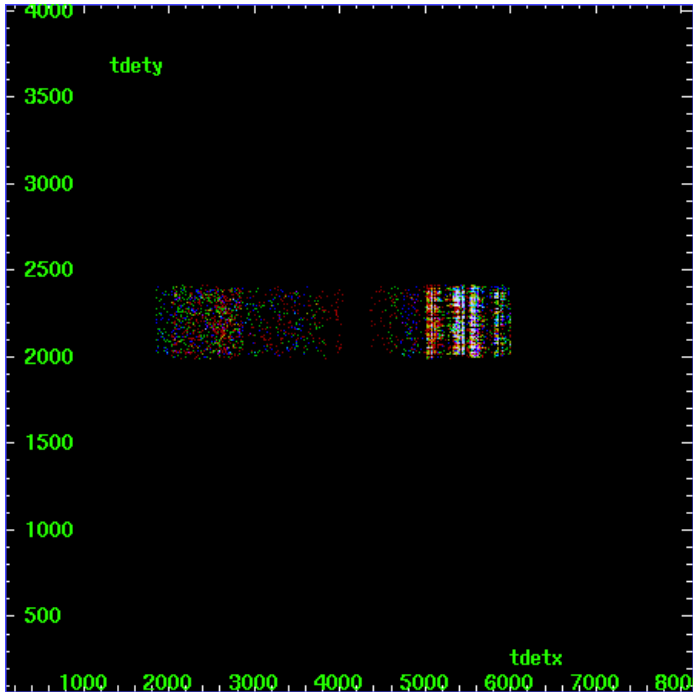
LETG Zero Order



LETG Order Sort ALL

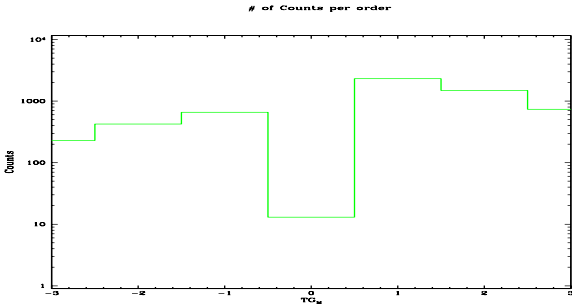


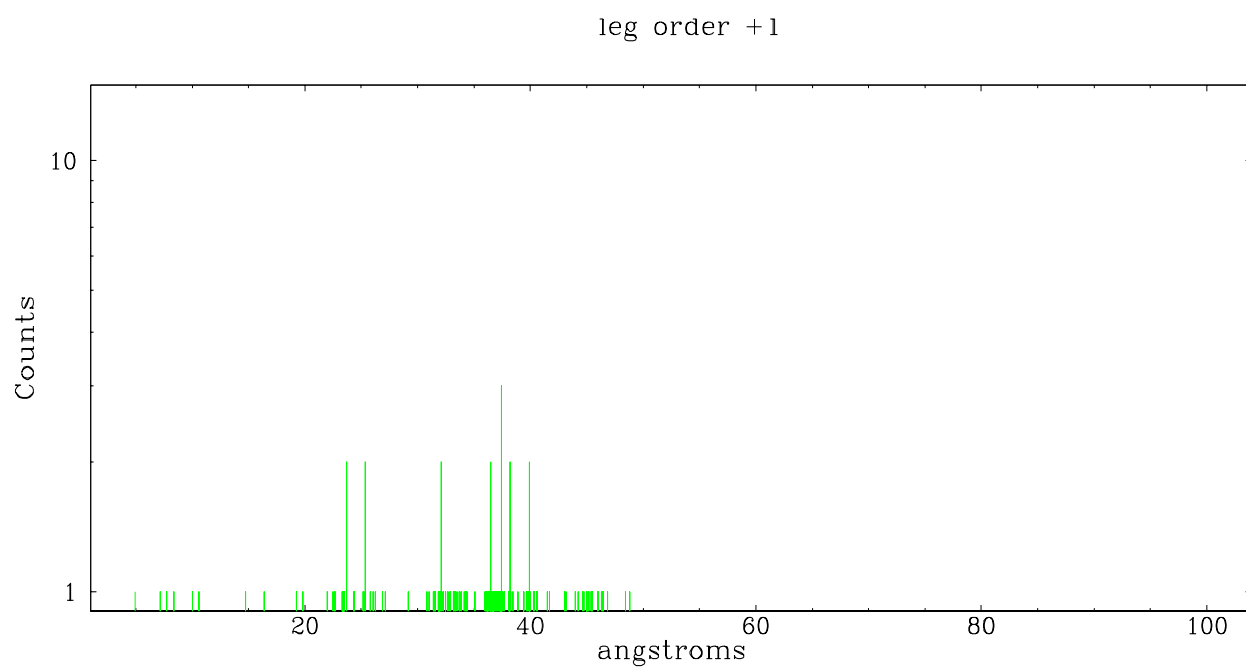
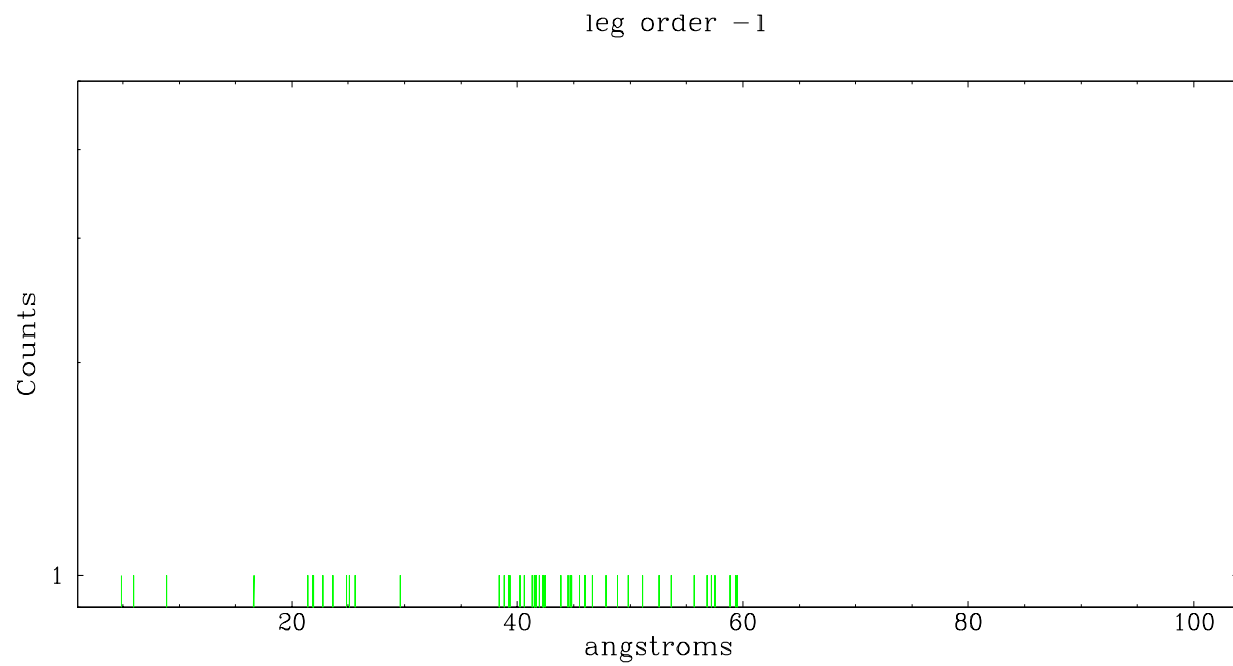
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	230	425	657	13	2312	1494	737





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.01.31
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.508

## A.2 Comments

Moving target. Energy filter allowed only events with energies 0.1 to 2.0 keV to be recorded. LETG grating used. Spectral extraction provided with this processing was done without benefit of SAO\_freeze software, so the spectrum is meaningless. Streak on chip 8 is not fully removed with pipeline processing. Additional analysis procedures by the user may improve the uniformity of chip 8.