

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 14370 - L2 Version 3  
Chandra X-Ray Center

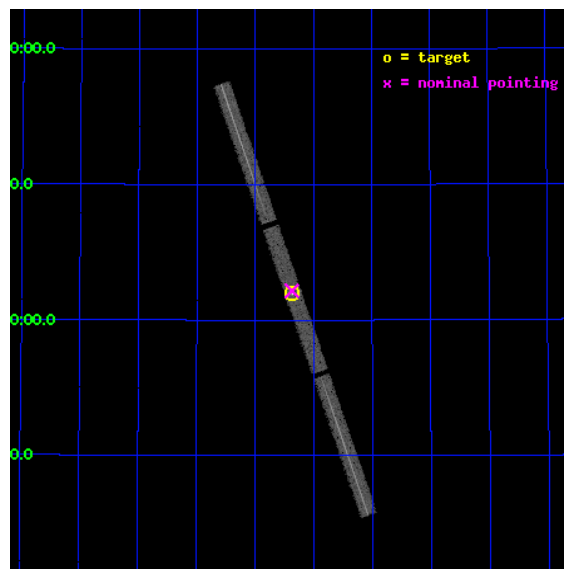
L2 Processing Date : Aug 10 2012

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# 1 Front

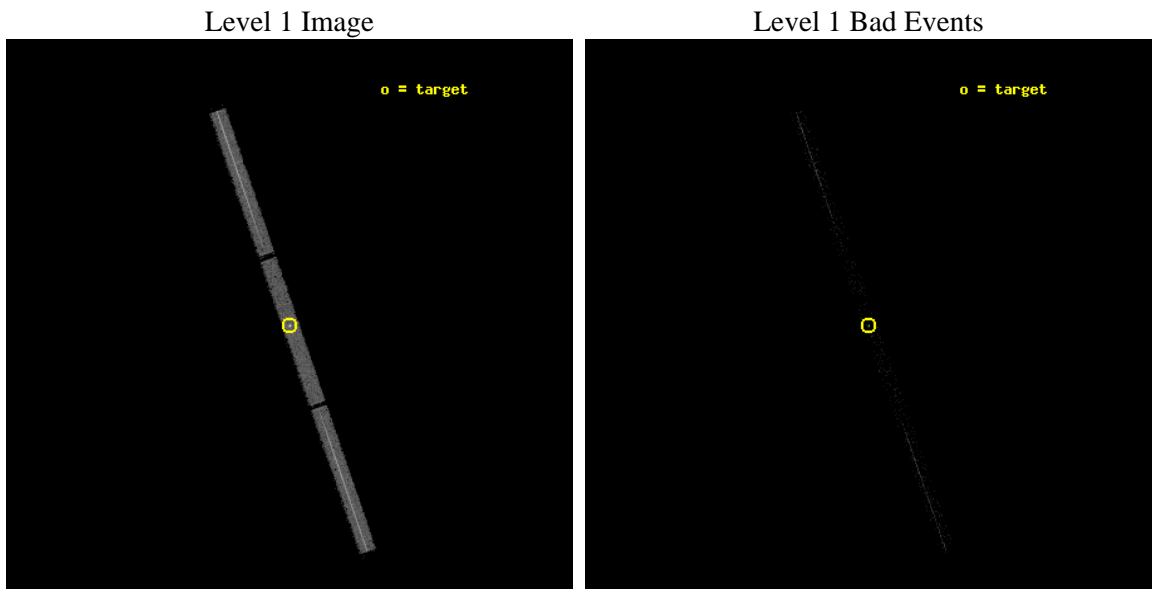
seq_num	291071	Sequence number
obs_id	14370	Observation id
title	Determination of HRC-S MCP HV step change	Proposal title
observer	CXC Calibration	Principal investigator
object	HZ43	Source name
ra_targ	199.092083	Observer's specified target RA [deg]
dec_targ	29.099	Observer's specified target Dec [deg]
ra_nom	199.09270356085	Nominal RA [deg]
dec_nom	29.108442094721	Nominal Dec [deg]
roll_nom	70.844690335813	Nominal Roll [deg]
revision	3	Processing version of data
ontime	313.65001654625	[s]
livetime	310.28462104547	Ontime multiplied by DTCOR
l2events	33046	Number of level 2 events



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	4800.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	313.65001654625	[s]
caldsver	4.5.1.1	&#160	l1events	134247	Number of level 1 events
date	2012-08-10T03:51:23	Date and time of file creation			
revision	3	Processing version of data			

### 2.1.3 Events

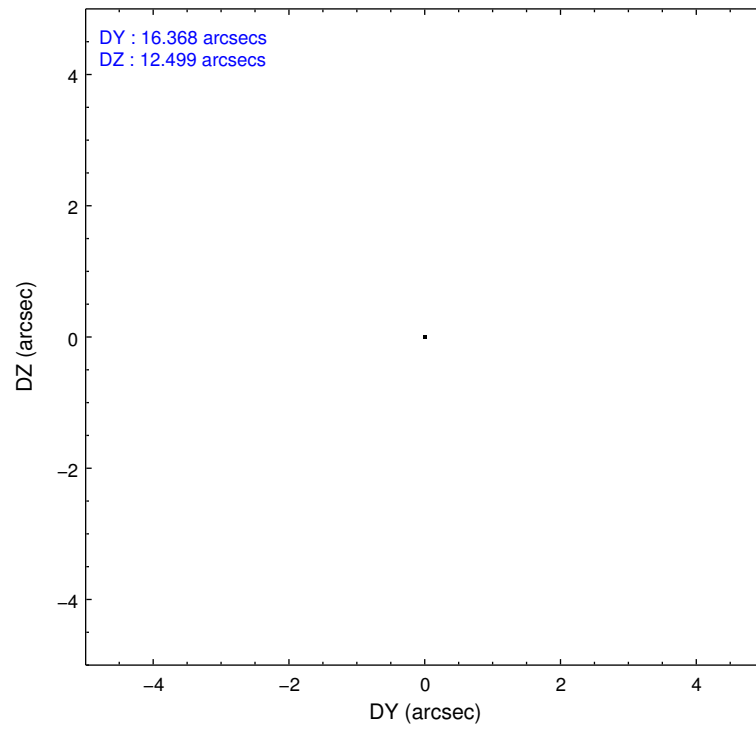
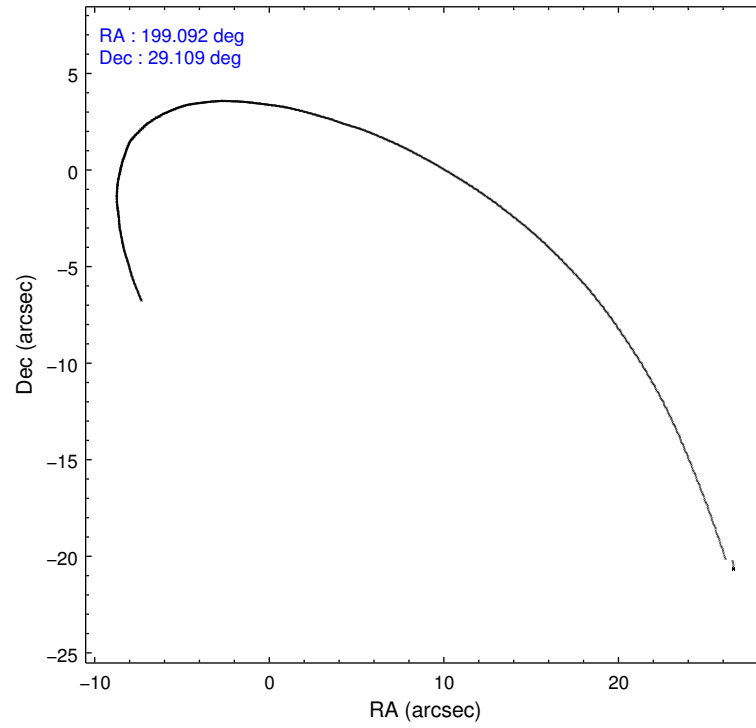
Level 1 Events

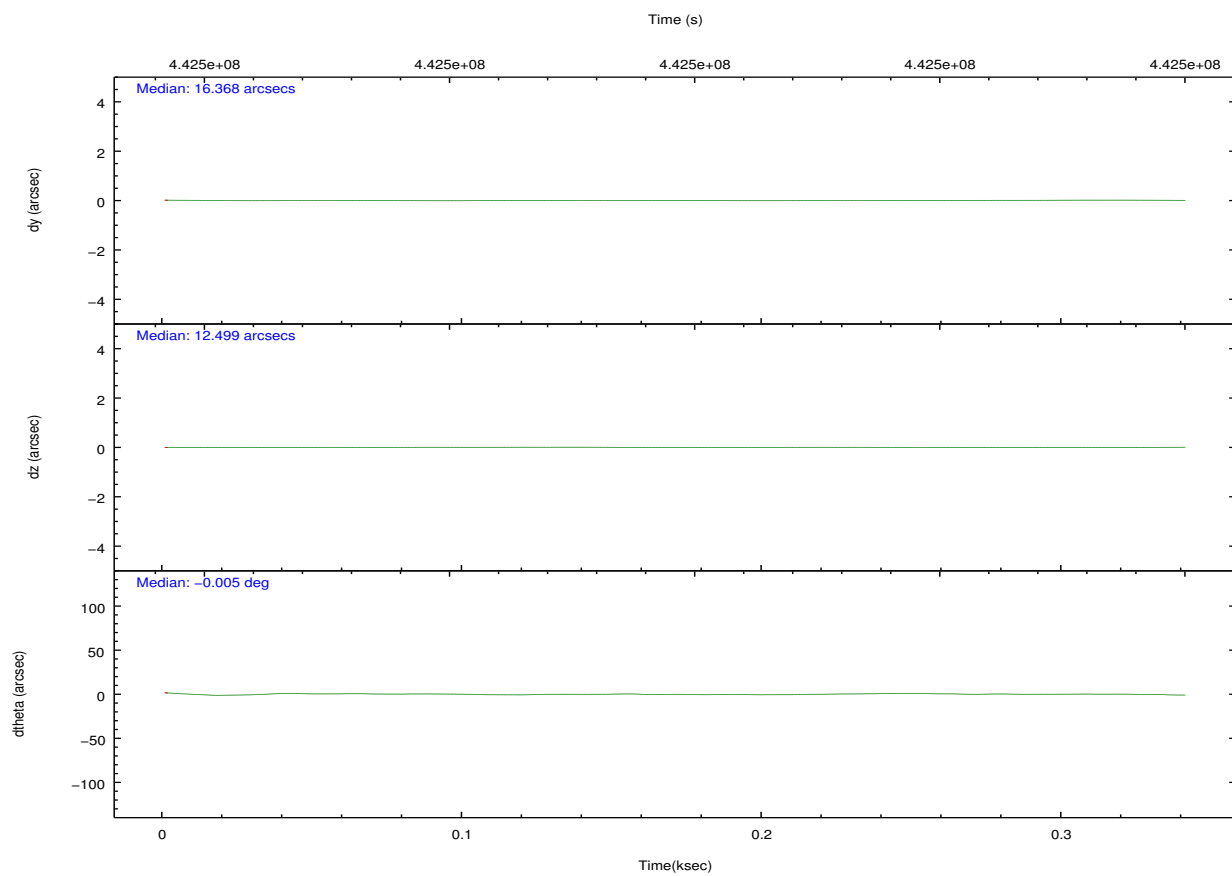
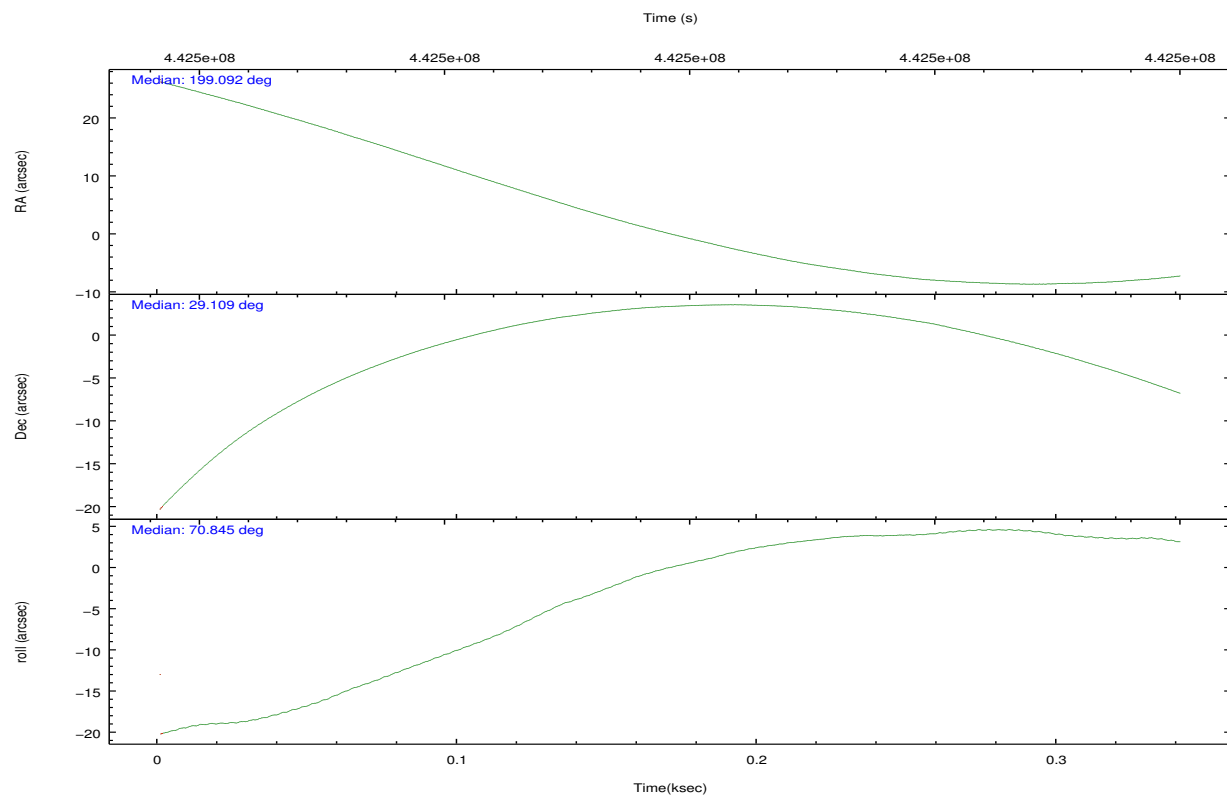
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	45168	42962	46117
rejected events	31645	30911	32115
rejected %	70%	71%	69%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	HRC	HRC	Obspar format version number	7	7
Detector	HRC-S	HRC-S	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	Obspar update status	NONE	UPDATED
Data mode	OBSERVING	OBSERVING			
Observation mode	POINTING	POINTING			
[deg] Pointing RA	199.101721	199.0927035608472			
[deg] Pointing Dec	29.075585	29.10844209472064			
[deg] Pointing Roll	70.773153	70.844690335813			
[mm] SIM focus pos	-1.429586	-1.428180813131781			
[mm] SIM defocus	0.1037507710433287	0.1051558262725154			
[mm] SIM translation stage pos	250.455976	250.466033080201			
[mm] SIM translation stage offset	0	-0.01005468664627074			
[s] Observation start time (MET)	442502165.184000	442501081.43481			
Observation start date	2012-01-09T13:14:59	2012-01-09T12:58:01			
[s] Observation end time (MET)	442506965.184000	442502358.58488			
Observation end date	2012-01-09T14:34:59	2012-01-09T13:19:18			

## 2.3 Aspect





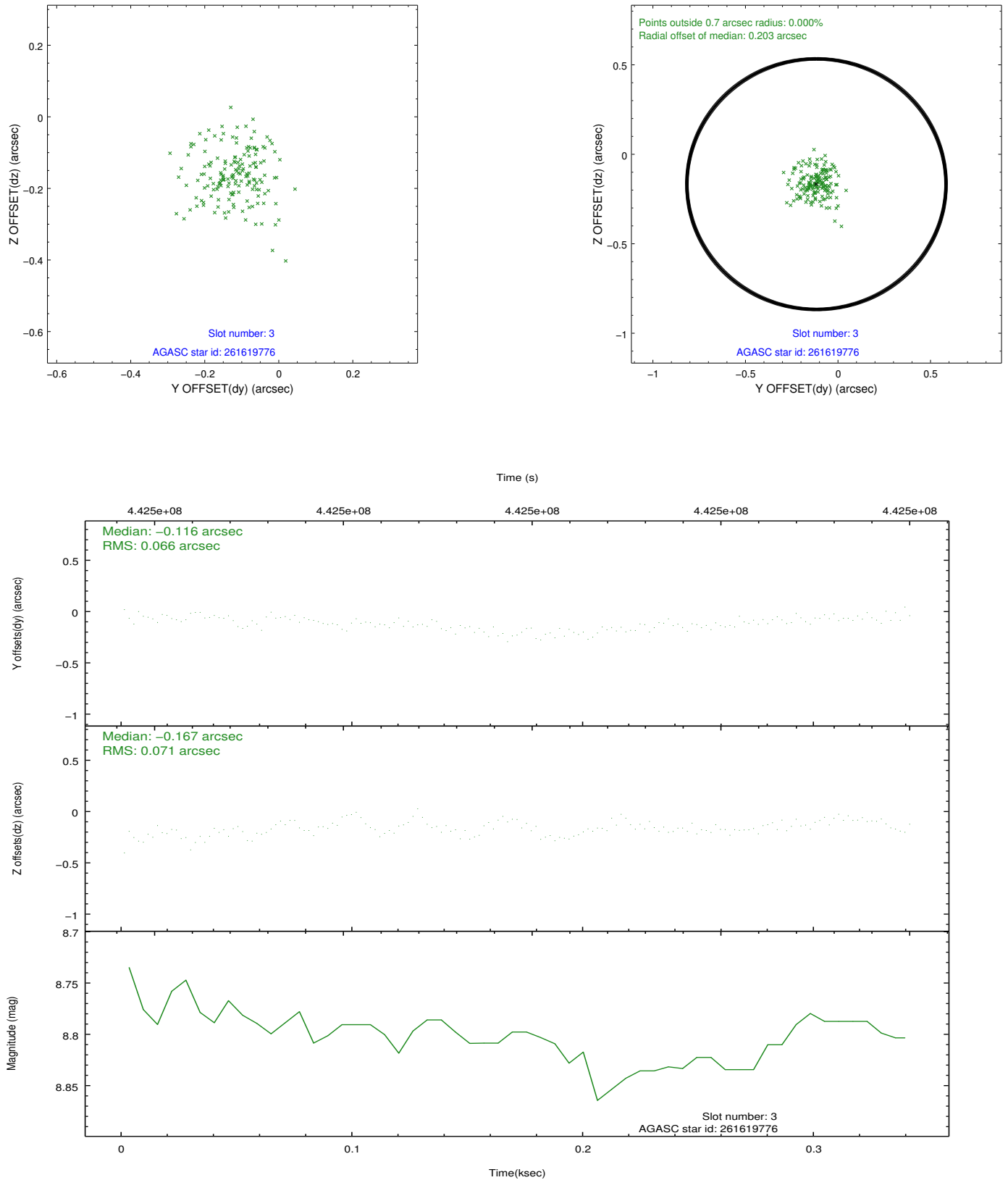
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-S-1	6.98	84	0.017	-0.110	0.007	0.010	0.000000	0.000000	-1170.87	-461.27
1	FID	HRC-S-2	6.95	84	0.307	-0.127	0.004	0.006	0.000000	0.000000	1215.16	-459.36
2	FID	HRC-S-3	6.99	84	0.066	-0.064	0.007	0.009	0.000000	0.000000	-1159.10	562.84
3	GUIDE	261619776	8.80	167	-0.116	-0.167	0.105	0.167	198.654383	29.401174	631.20	1701.35
4	GUIDE	261619992	9.27	167	0.171	-0.414	0.182	0.283	198.395553	28.647634	-2194.87	1601.88
5	GUIDE	261621400	6.98	167	0.078	-0.183	0.107	0.173	198.901600	28.741982	-1370.28	201.57
6	GUIDE	261623040	9.10	167	-0.364	-0.245	0.112	0.216	198.792686	29.757643	1977.37	1712.64
7	GUIDE	261623624	9.11	166	0.228	0.961	0.122	0.213	199.611555	28.454113	-1581.43	-2257.43

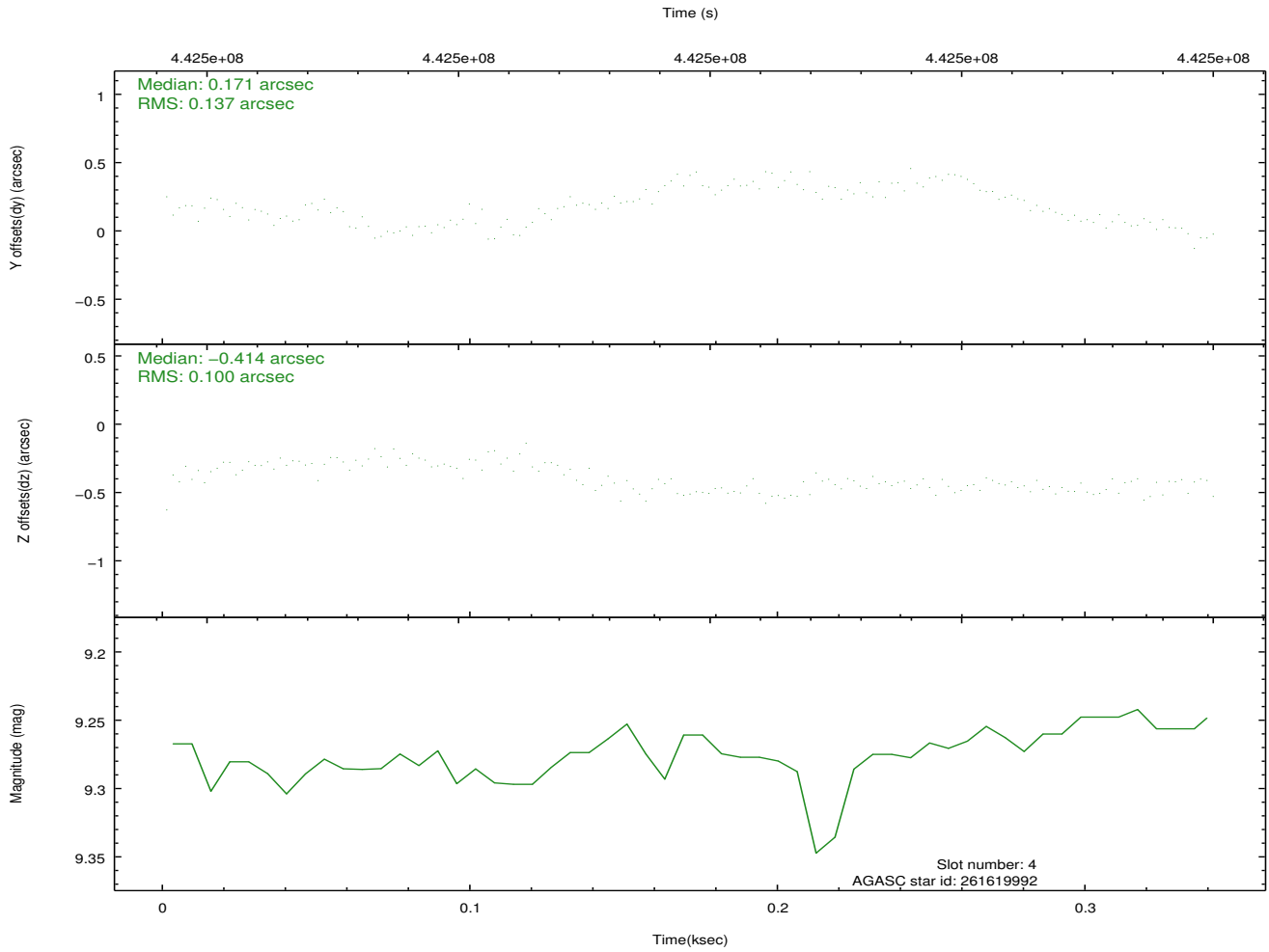
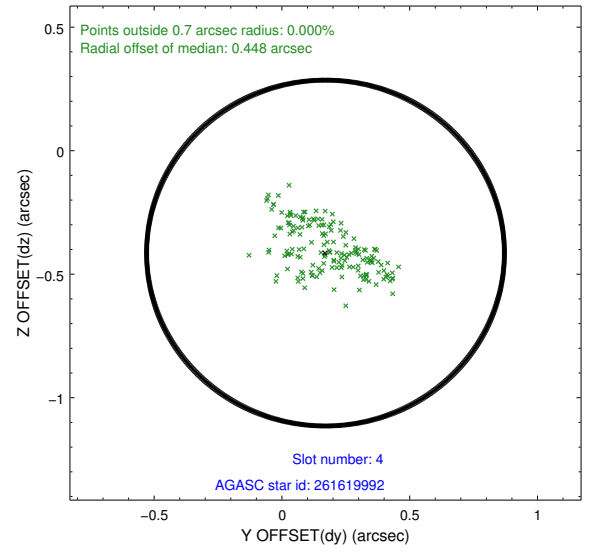
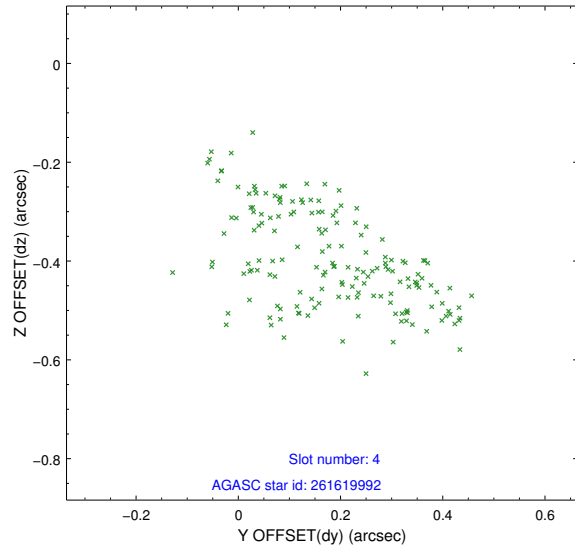


## 2.4 Star Slots

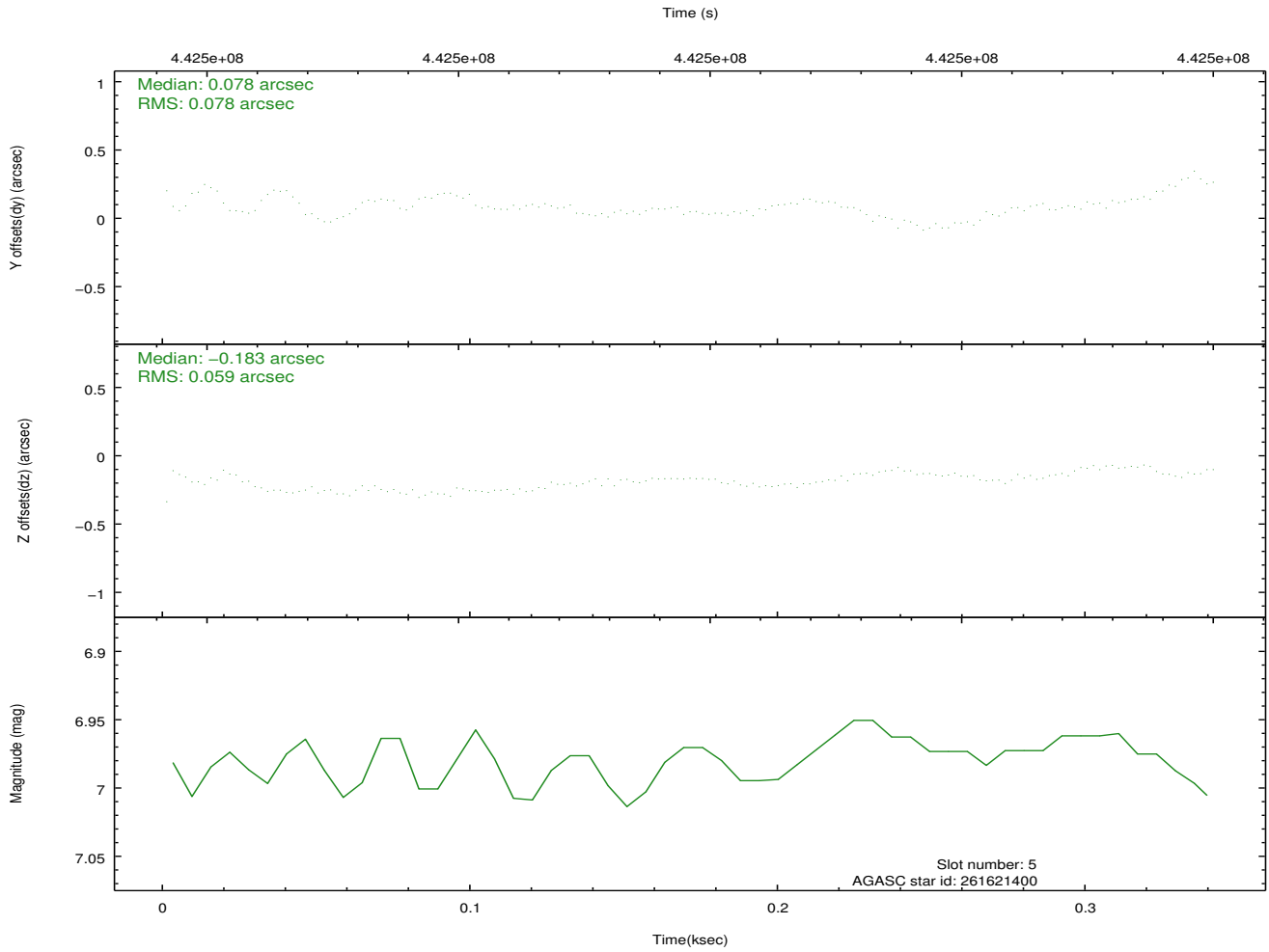
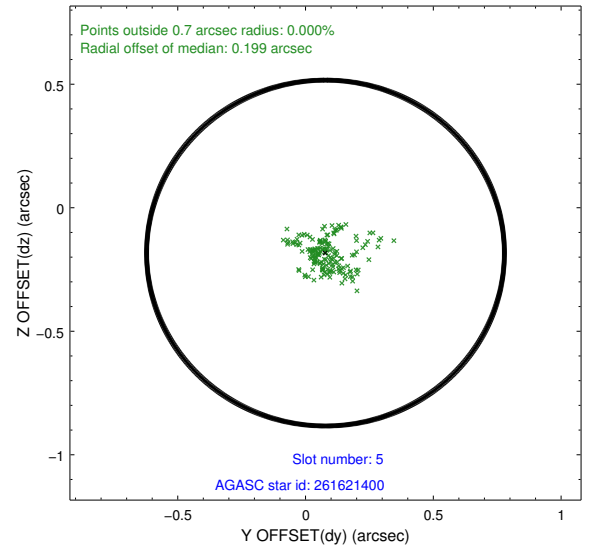
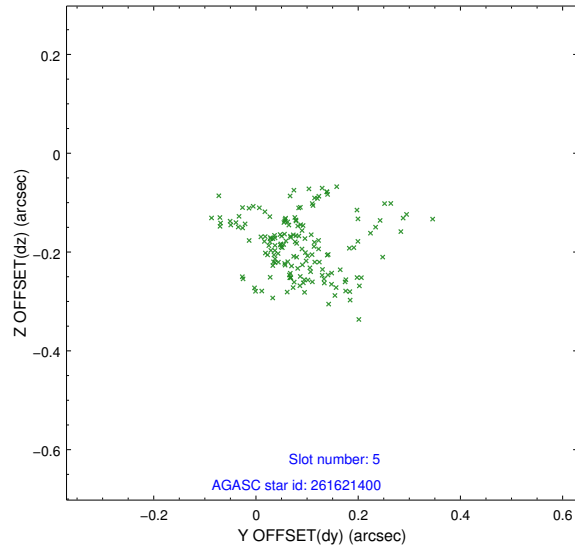
### 2.4.1 Slot 3



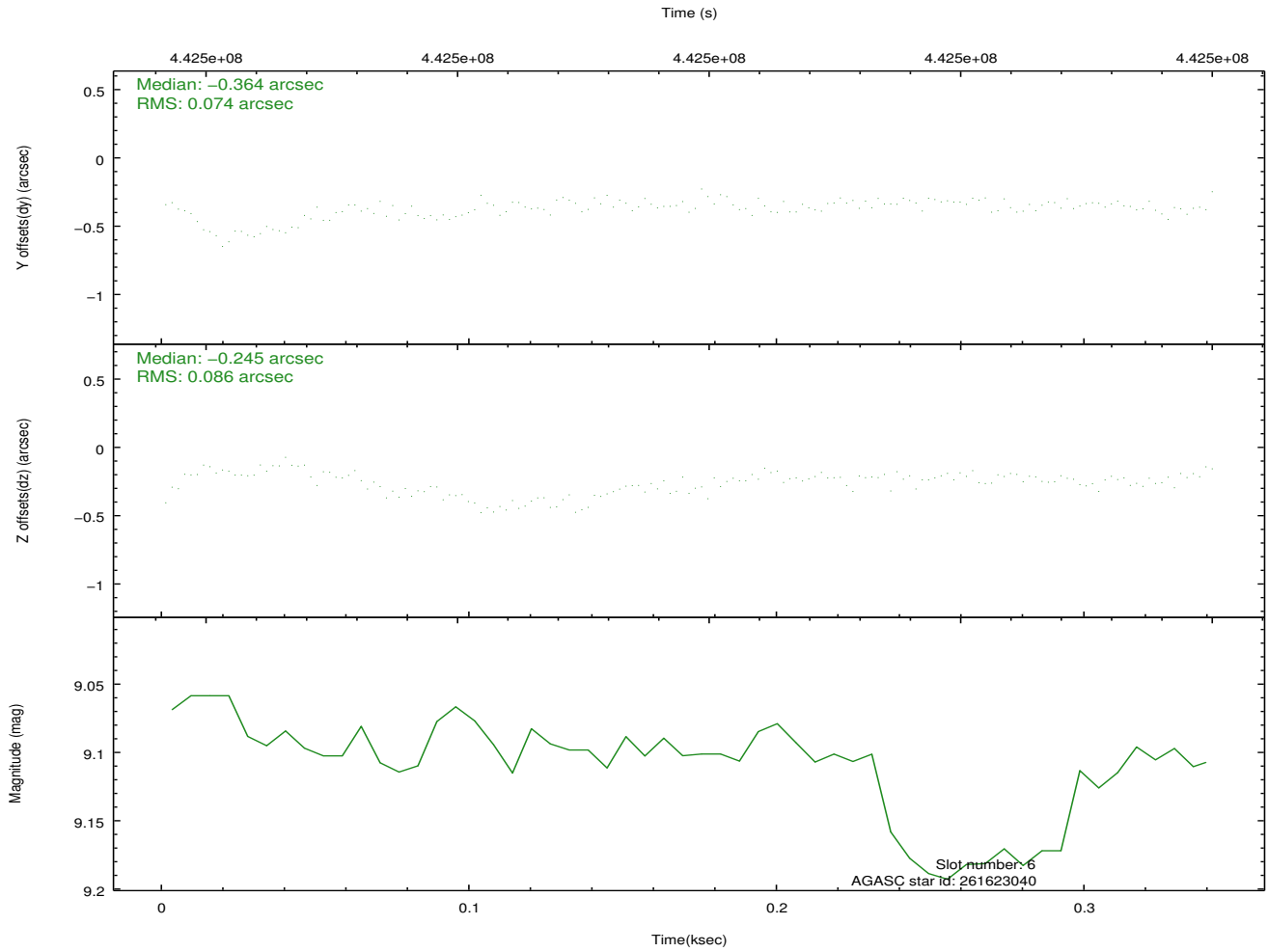
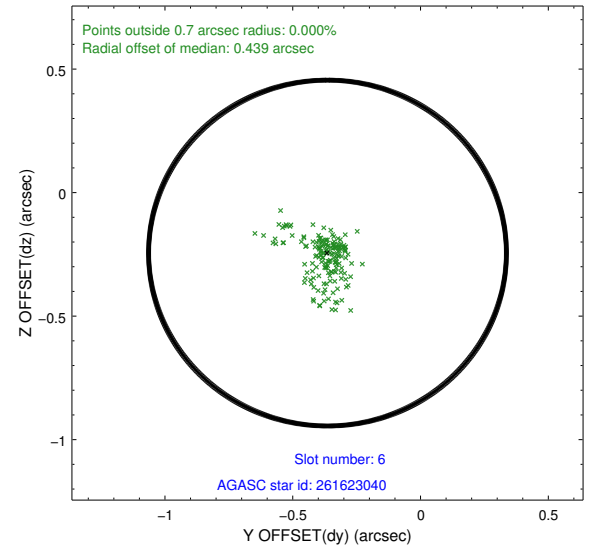
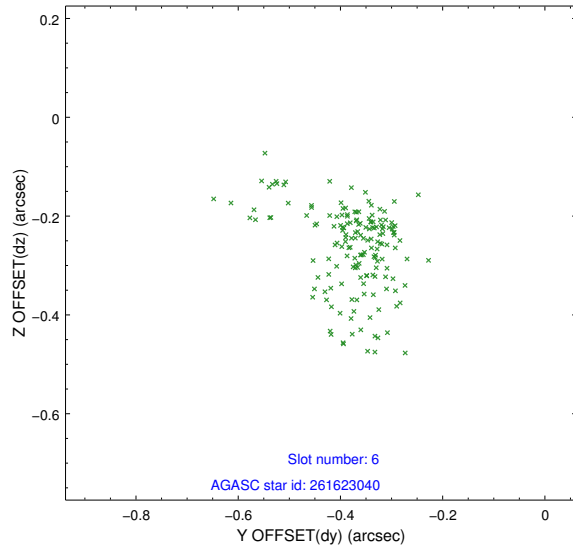
## 2.4.2 Slot 4



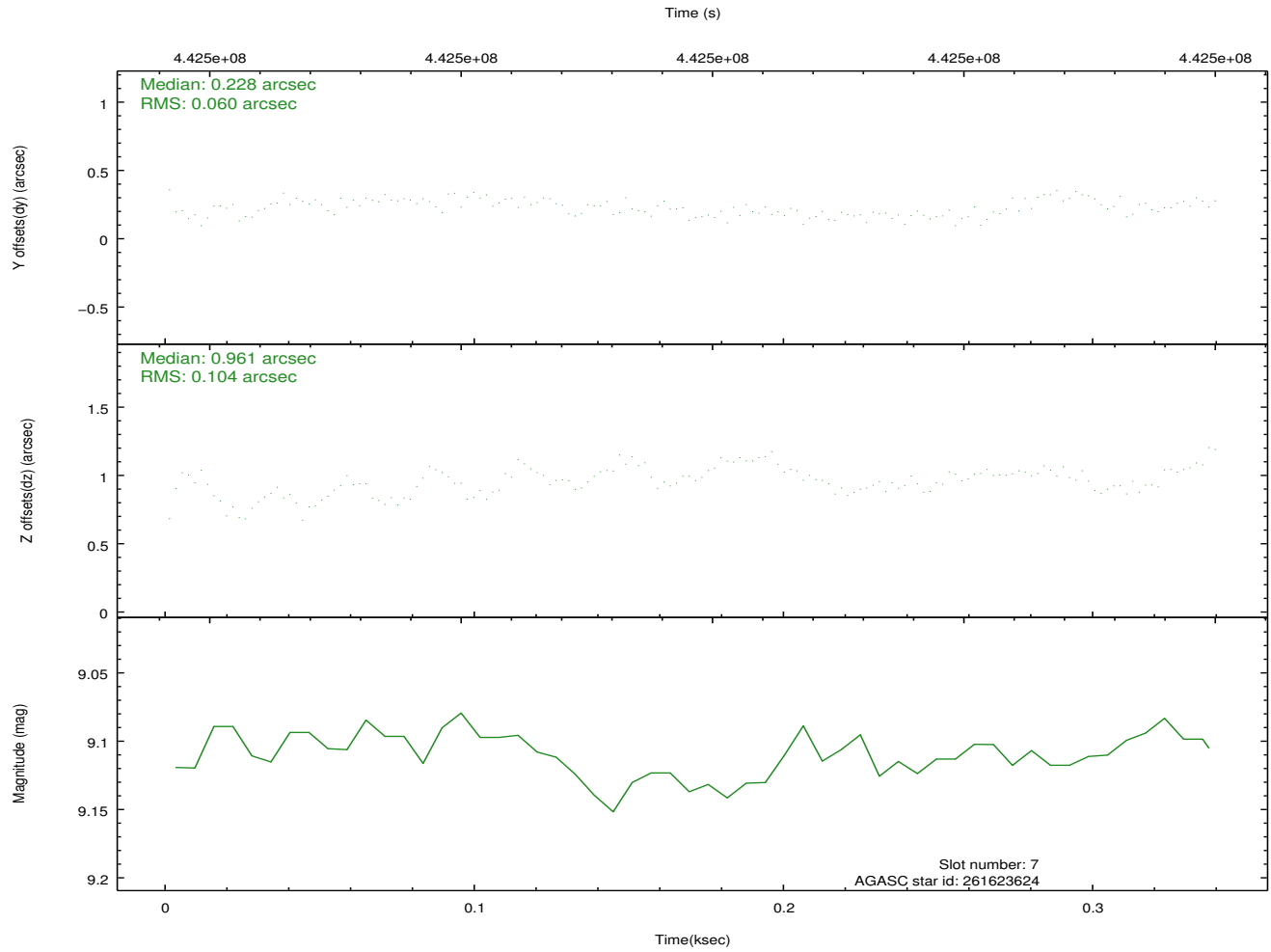
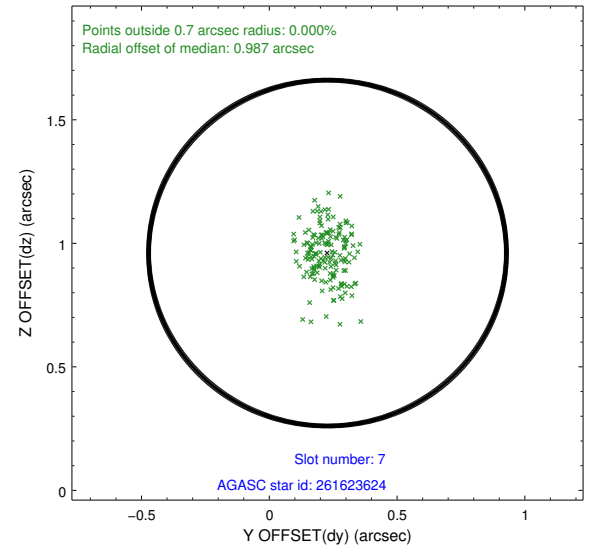
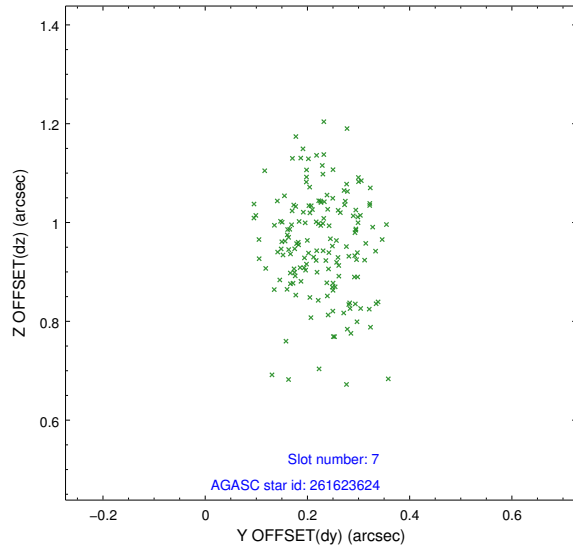
### 2.4.3 Slot 5



## 2.4.4 Slot 6

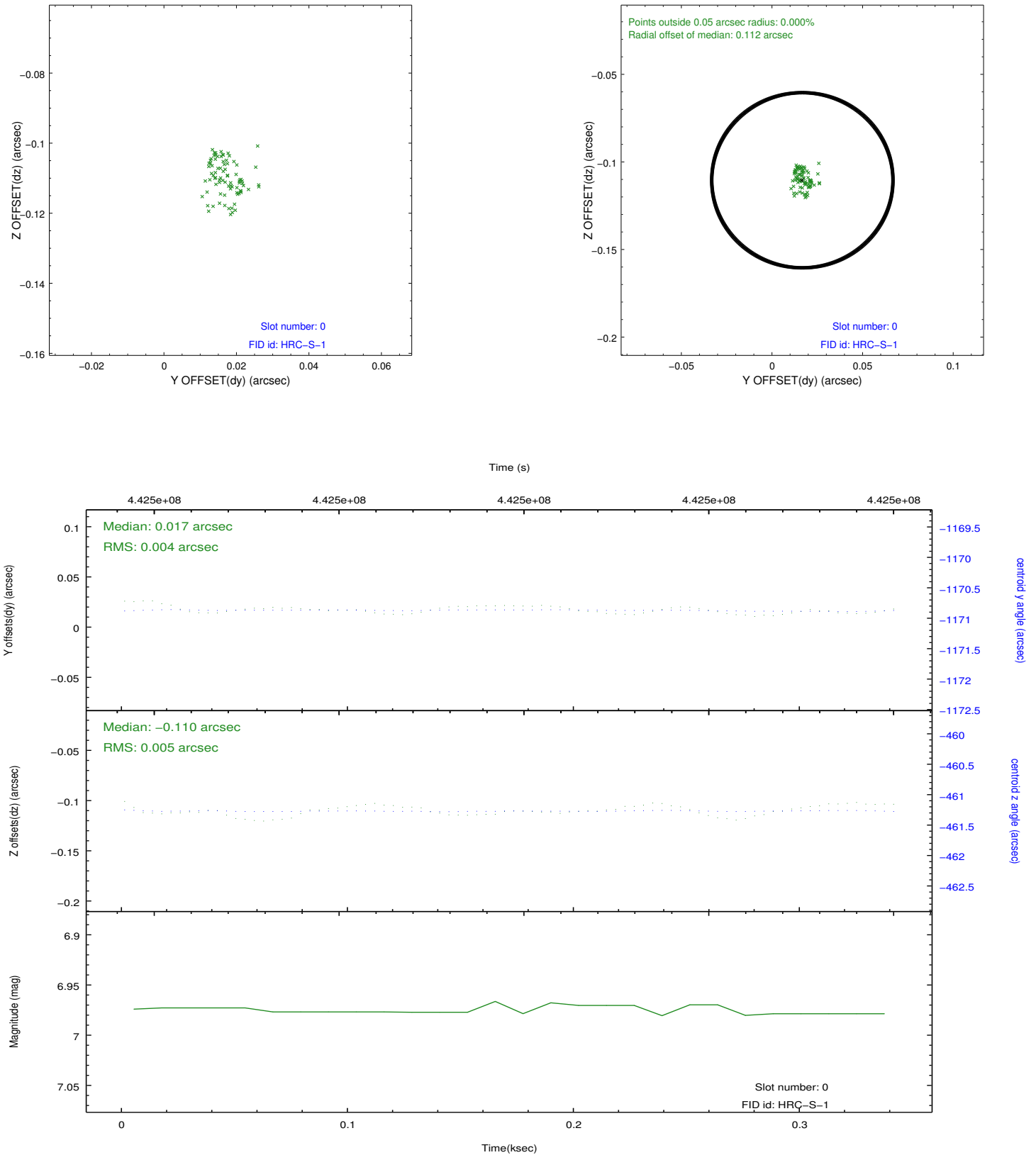


## 2.4.5 Slot 7

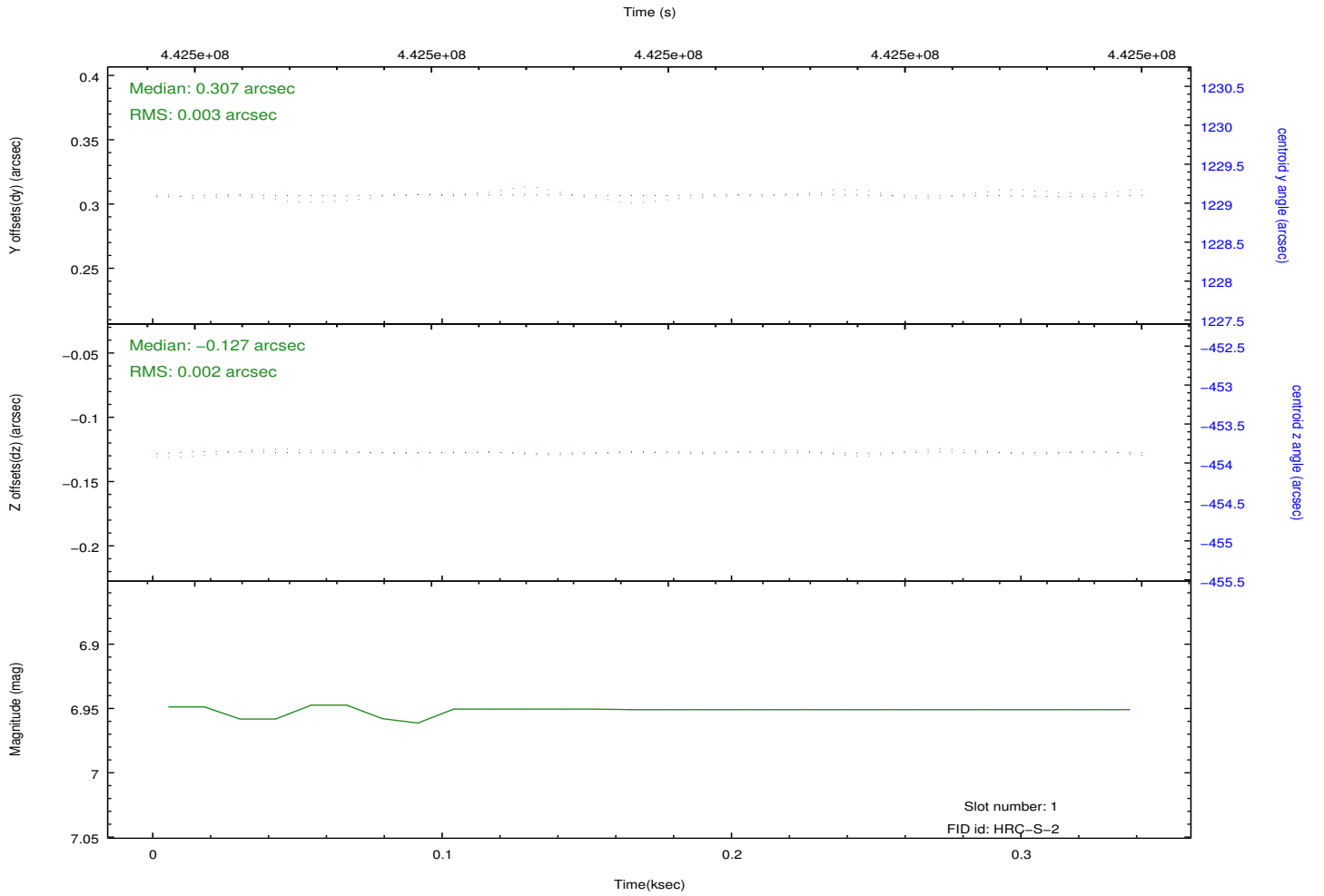
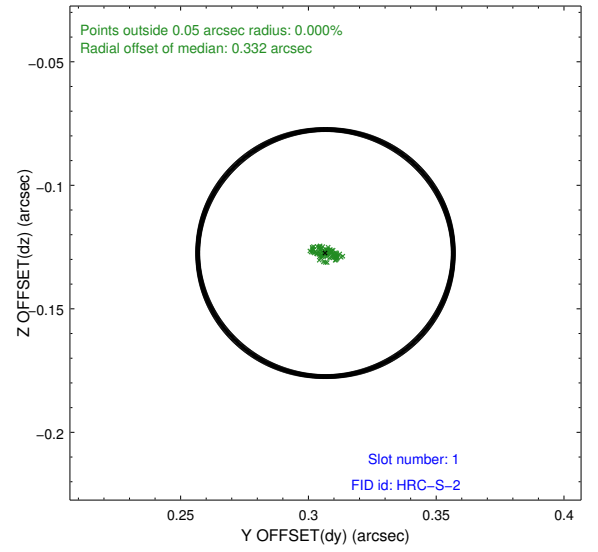
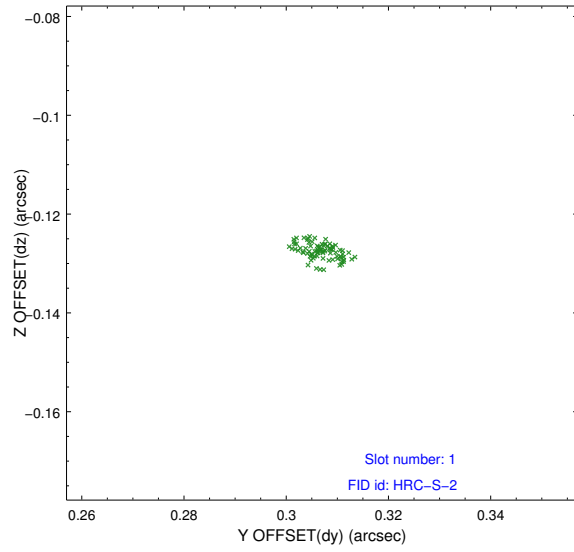


## 2.5 FID Slots

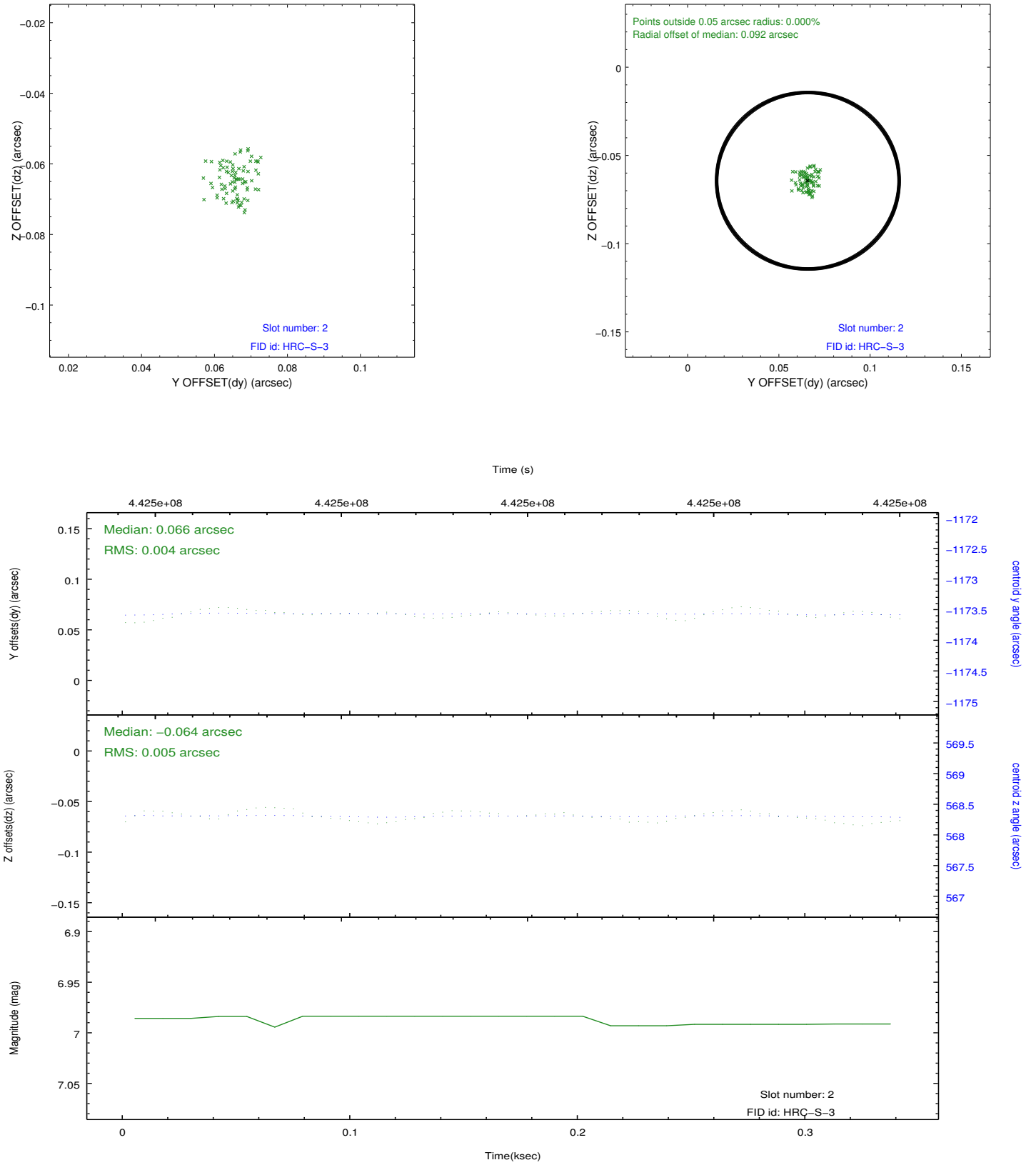
### 2.5.1 Slot 0



## 2.5.2 Slot 1



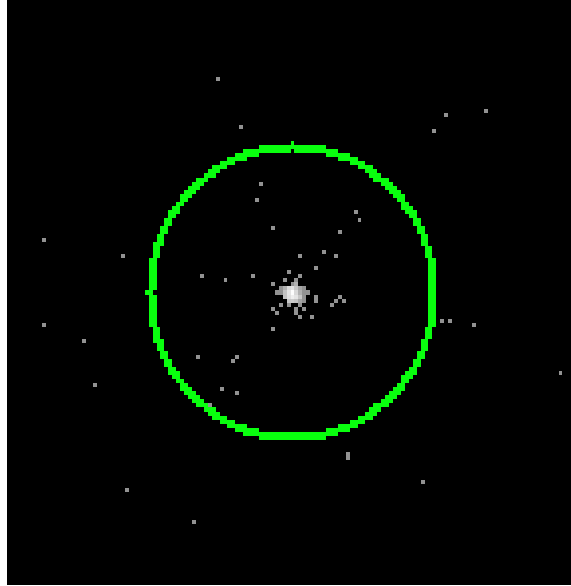
### 2.5.3 Slot 2



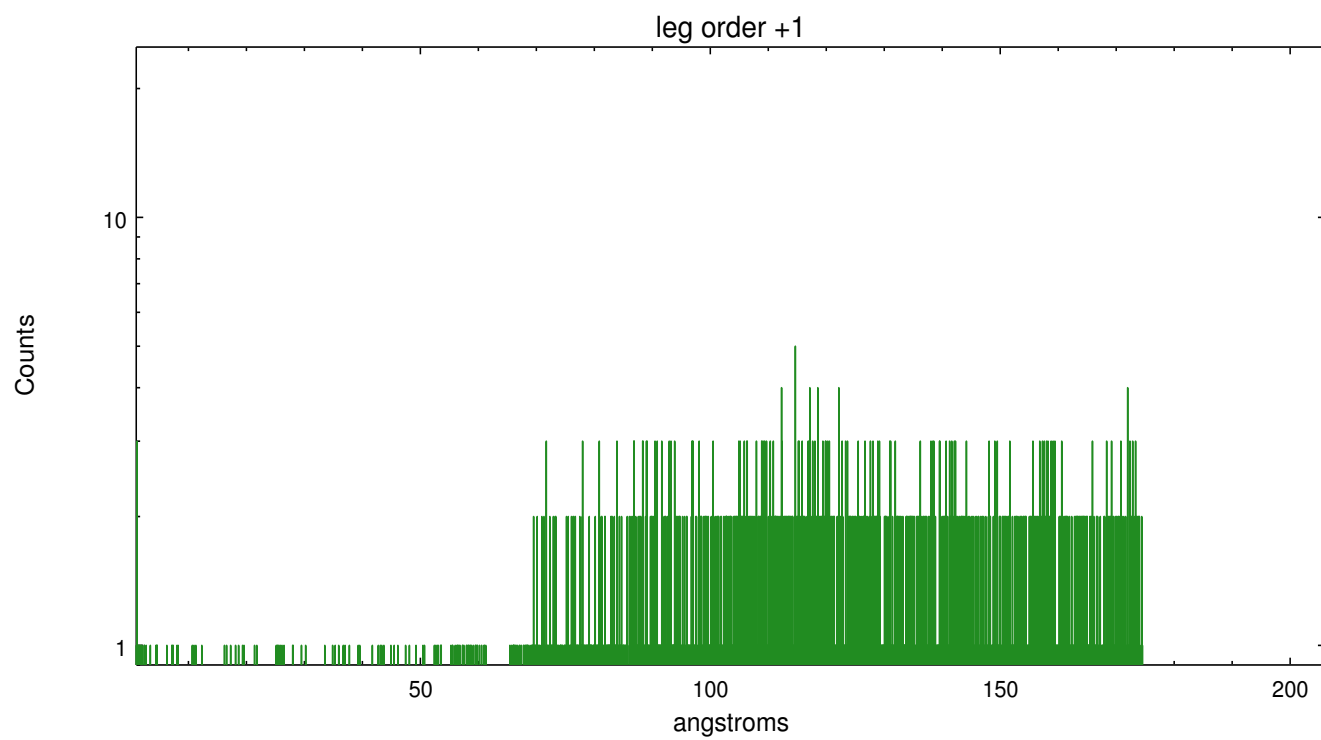
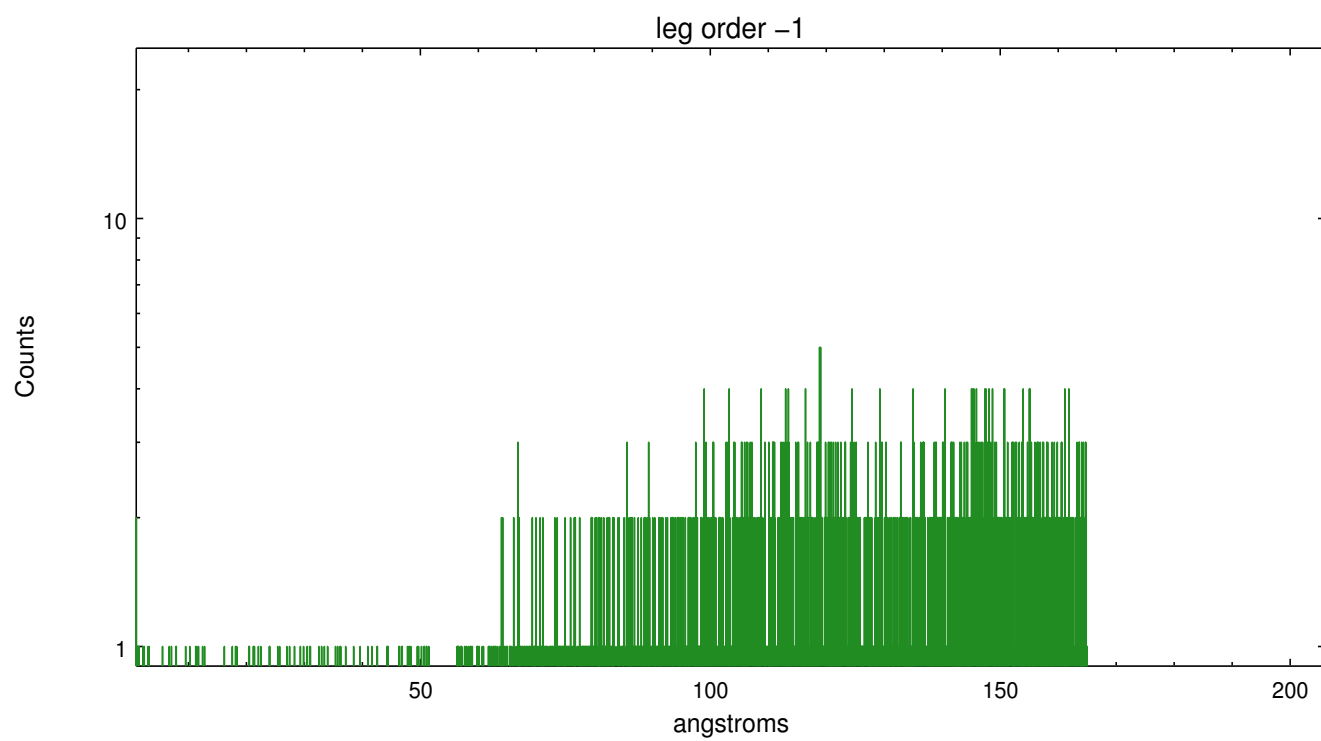


## 3 Gratings

### 3.1 LETG Arm



LETG Zero Order



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.08.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	0.31365

## A.2 Comments

This observation is part of a series of HRC calibration observations to investigate the effect of changes in the high voltage on the data. This observation was taken at the nominal HV setting. The charge time is shorter than originally planned for this observation because of the execution of the test. Below is a table of the ObsID/HV-step configurations. ObsID Bottom Top Start (approx.) -----

```
----- 14370 102 90 2012:009:13:10:30 (nominal steps) 62692 103
90 2012:009:13:20:00 62691 103 91 2012:009:13:27:45 62690 104 91
2012:009:13:36:00 62689 104 92 2012:009:13:44:20 62688 105 92
2012:009:13:52:45 62687 105 93 2012:009:14:01:30 62686 106 93
2012:009:14:10:45 62685 106 94 2012:009:14:18:15 62684 102 90
2012:009:14:30:00 (nominal steps)
```