

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 62692 - L2 Version 4  
Chandra X-Ray Center

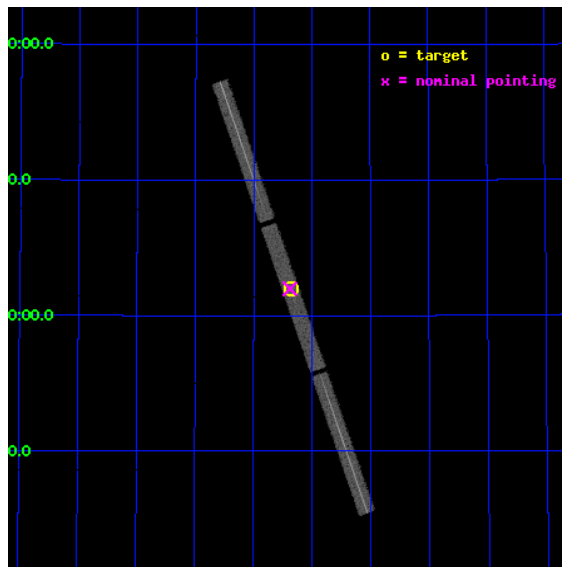
L2 Processing Date : Aug 10 2012

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# 1 Front

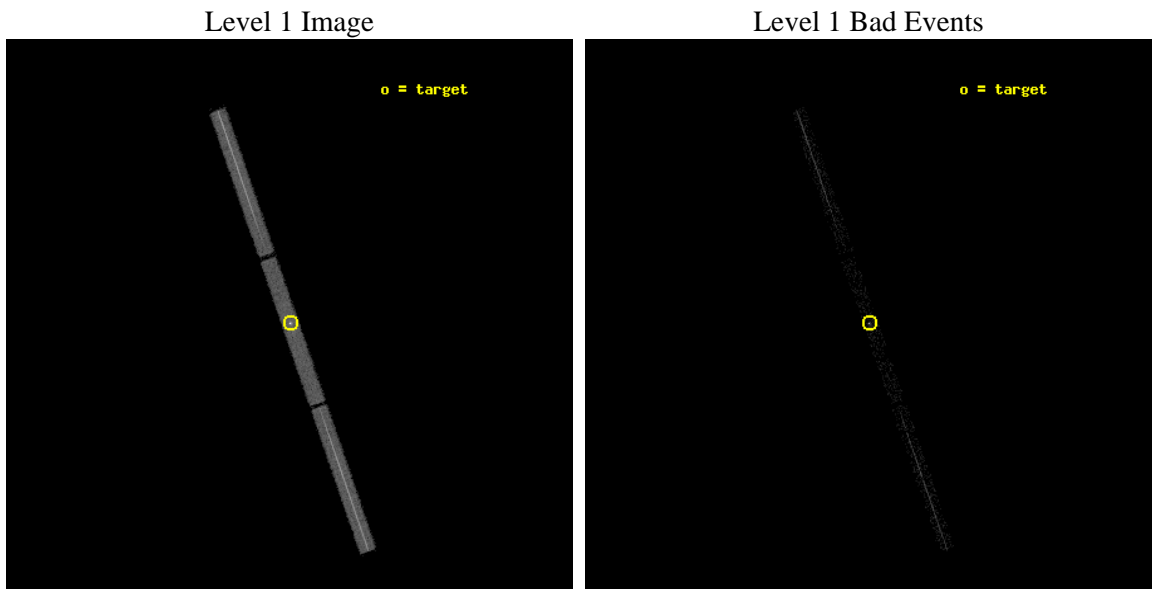
seq_num	0	Sequence number
obs_id	62692	Observation id
title	Determination of HRC-S MCP HV step change	Proposal title
observer	CXC Calibration	Principal investigator
object	HZ43	Source name
ra_targ	199.092083	Observer's specified target RA [deg]
dec_targ	29.099	Observer's specified target Dec [deg]
ra_nom	199.09487562971	Nominal RA [deg]
dec_nom	29.099712449303	Nominal Dec [deg]
roll_nom	70.84384219273	Nominal Roll [deg]
revision	4	Processing version of data
ontime	459.20002424717	[s]
livetime	454.19581905049	Ontime multiplied by DTCOR
l2events	48848	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	459.20002424717	[s]
caldbver	4.5.1.1	&#160	l1events	65495	Number of level 1 events
date	2012-08-10T03:49:58	Date and time of file creation			
revision	4	Processing version of data			

### 2.1.3 Events

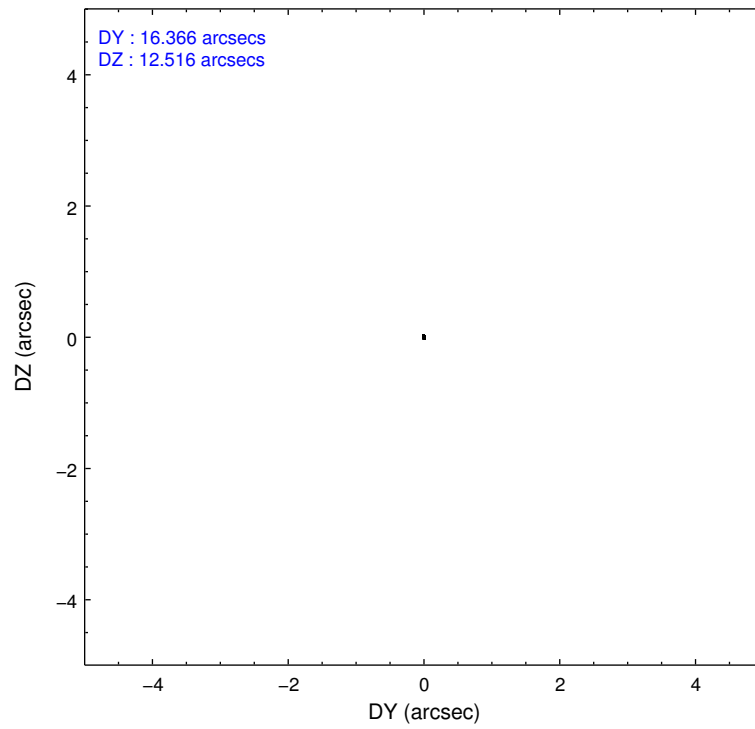
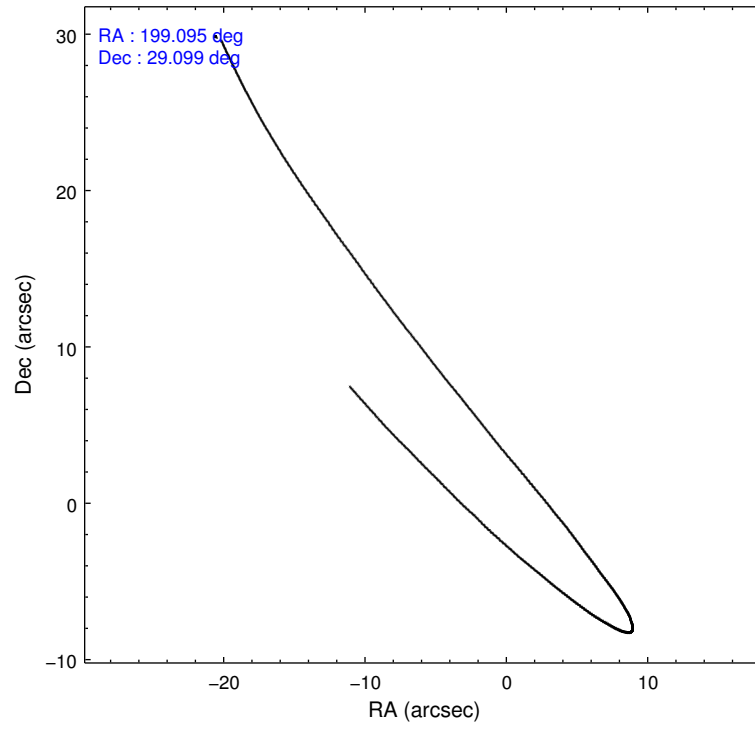
Level 1 Events

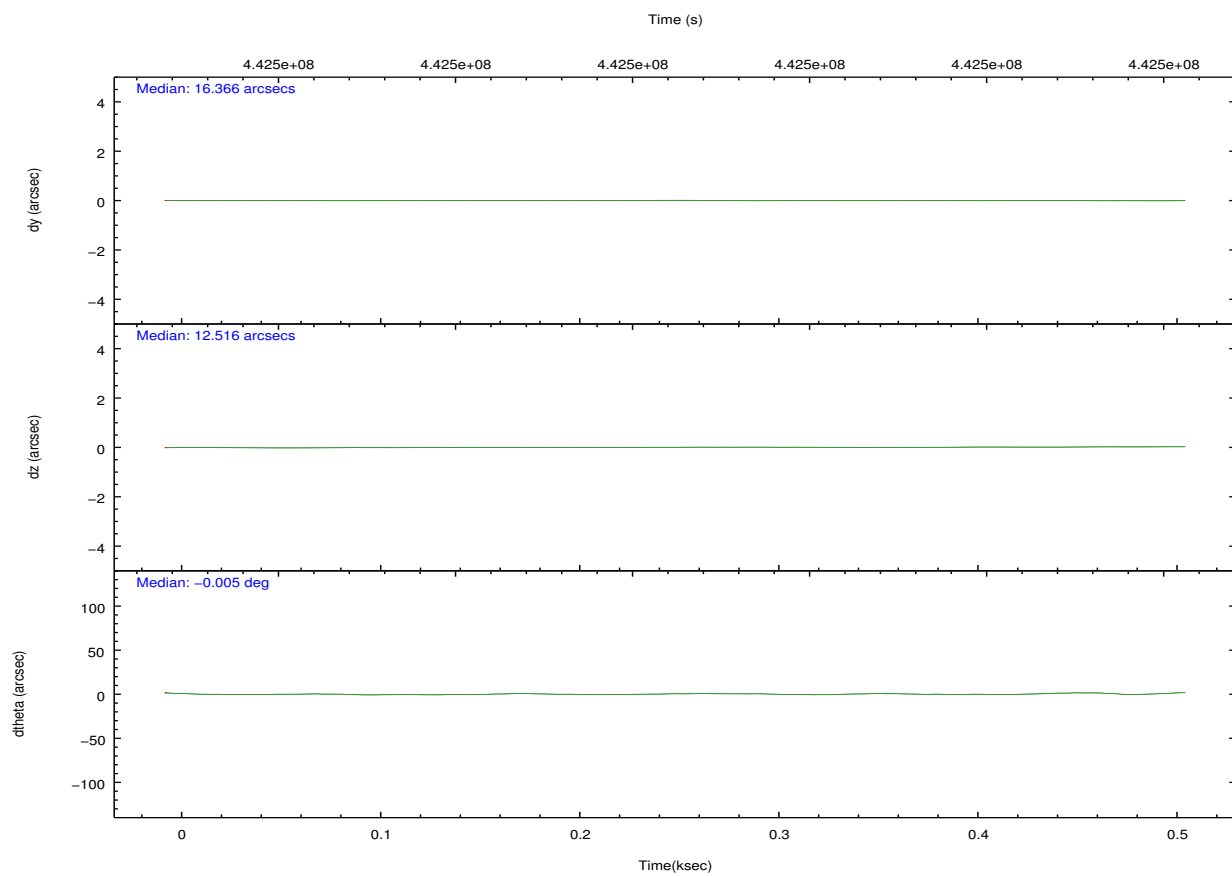
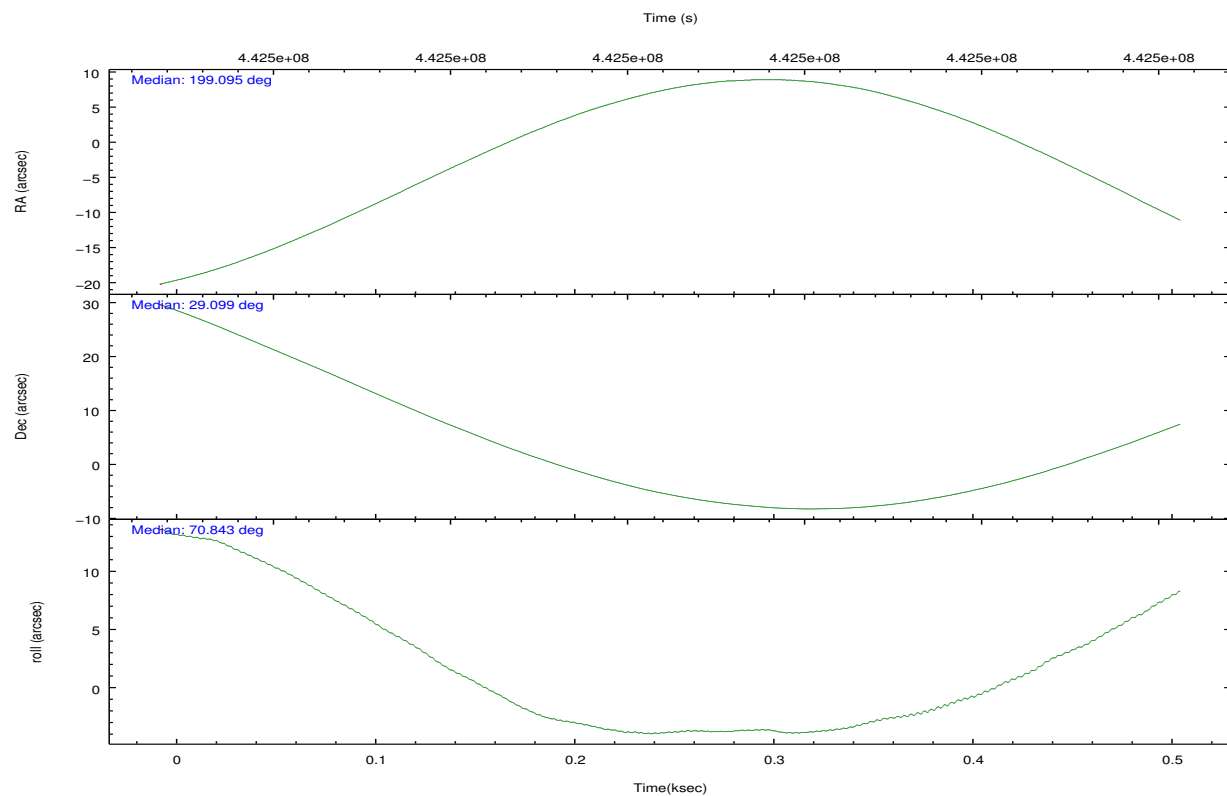
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	22696	19978	22821
rejected events	2348	2039	2356
rejected %	10%	10%	10%

## 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	199.094875629709			
[deg] Pointing Dec	29.075585	29.09971244930271			
[deg] Pointing Roll	70.773153	70.84384219273016			
[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)	442502359.609879	442502358.58488			
Observation start date	2012-01-09T13:14:59	2012-01-09T13:19:18			
[s] Observation end time (MET)	442502874.159906	442502873.13491			
Observation end date	2012-01-09T14:34:59	2012-01-09T13:27:53			

## 2.3 Aspect





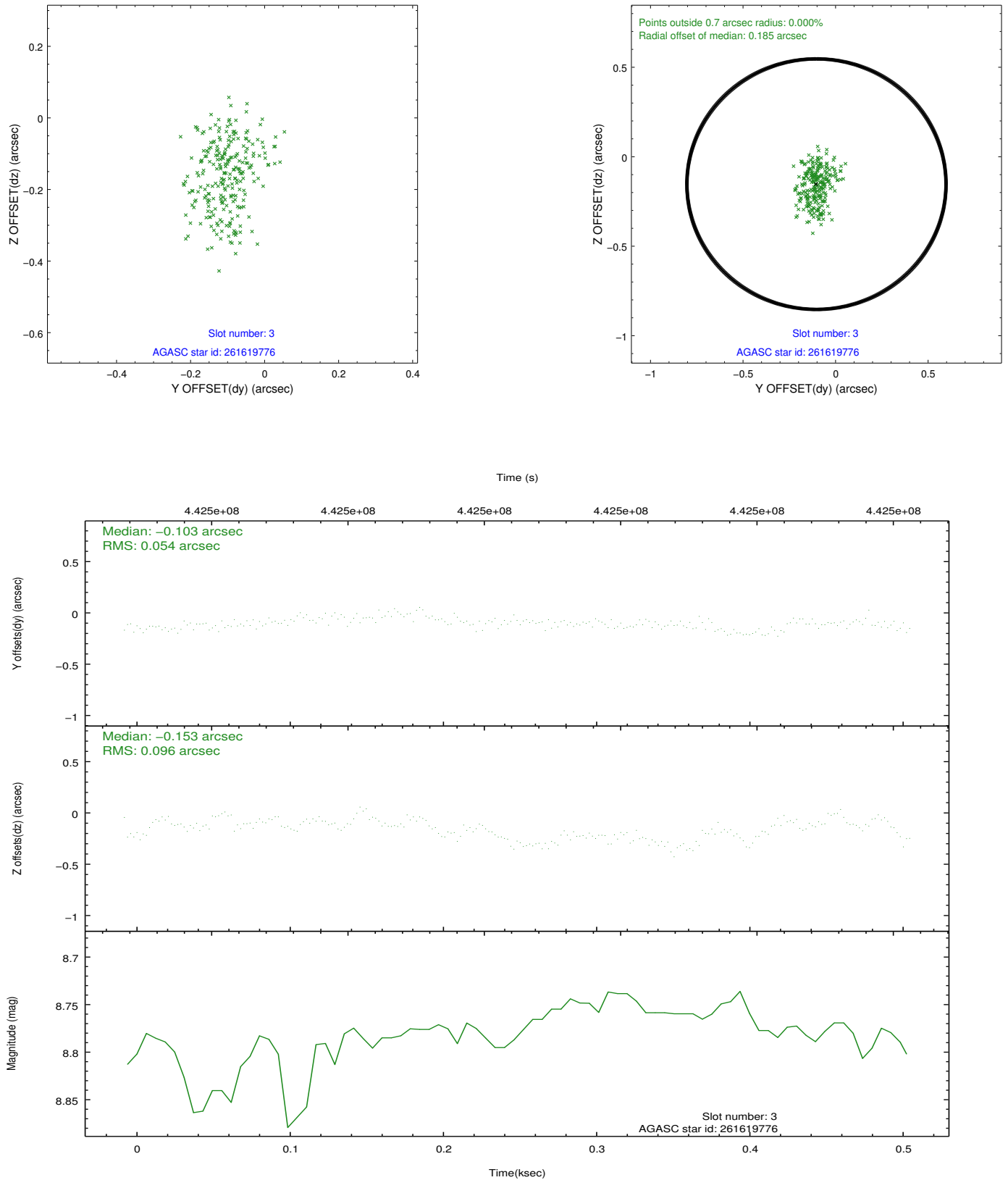
### Slot Statistics

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	125	0.019	-0.111	0.007	0.011	0.000000	0.000000	-1170.87	-461.29
1	FID	HRC-S-2	6.96	125	0.305	-0.128	0.005	0.011	0.000000	0.000000	1219.73	-457.58
2	FID	HRC-S-3	6.99	125	0.065	-0.064	0.007	0.012	0.000000	0.000000	-1163.81	564.63
3	GUIDE	261619776	8.78	251	-0.103	-0.153	0.118	0.194	198.654383	29.401174	658.69	1718.26
4	GUIDE	261619992	9.29	251	0.129	-0.319	0.105	0.196	198.395553	28.647634	-2168.59	1615.53
5	GUIDE	261621400	6.98	251	0.095	-0.202	0.101	0.152	198.901600	28.741982	-1338.29	215.32
6	GUIDE	261623040	9.09	248	-0.349	-0.246	0.104	0.170	198.792686	29.757643	2007.59	1729.08
7	GUIDE	261623624	9.11	250	0.242	0.957	0.178	0.298	199.611555	28.454113	-1557.78	-2243.94

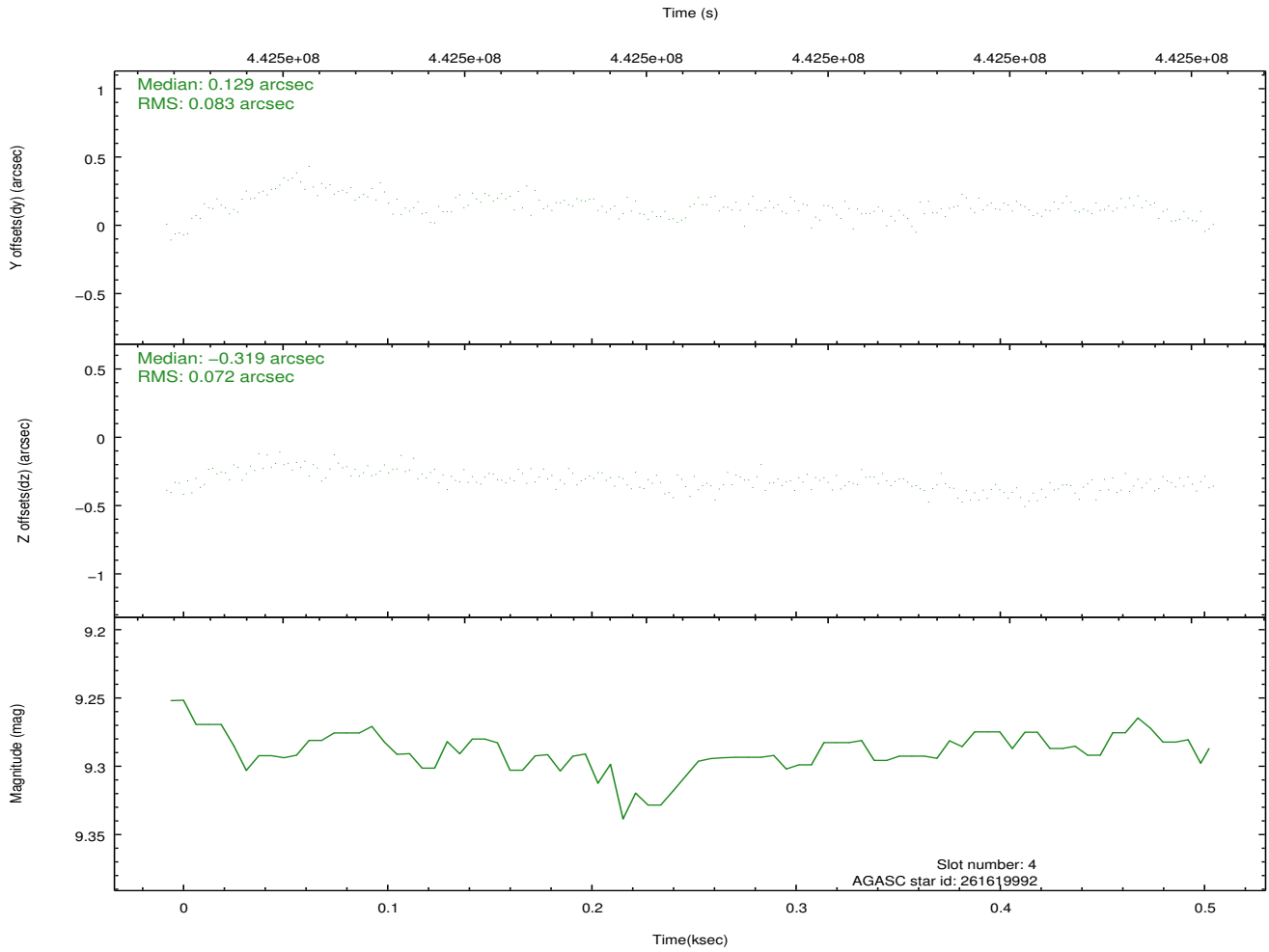
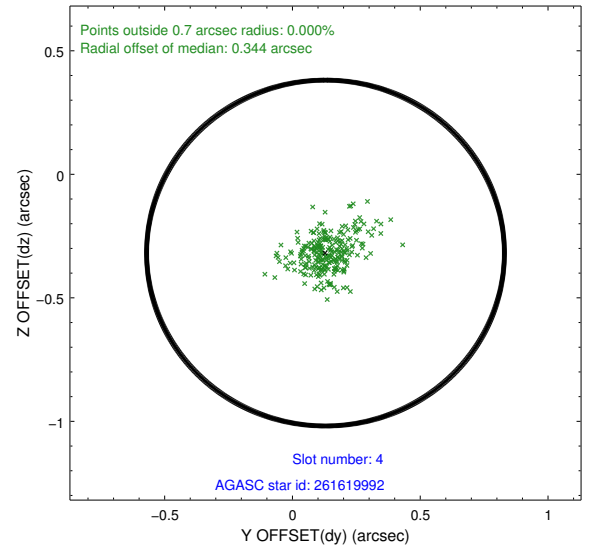
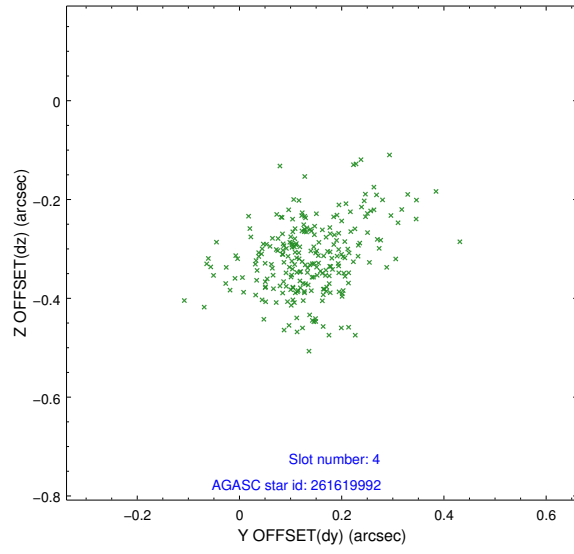


## 2.4 Star Slots

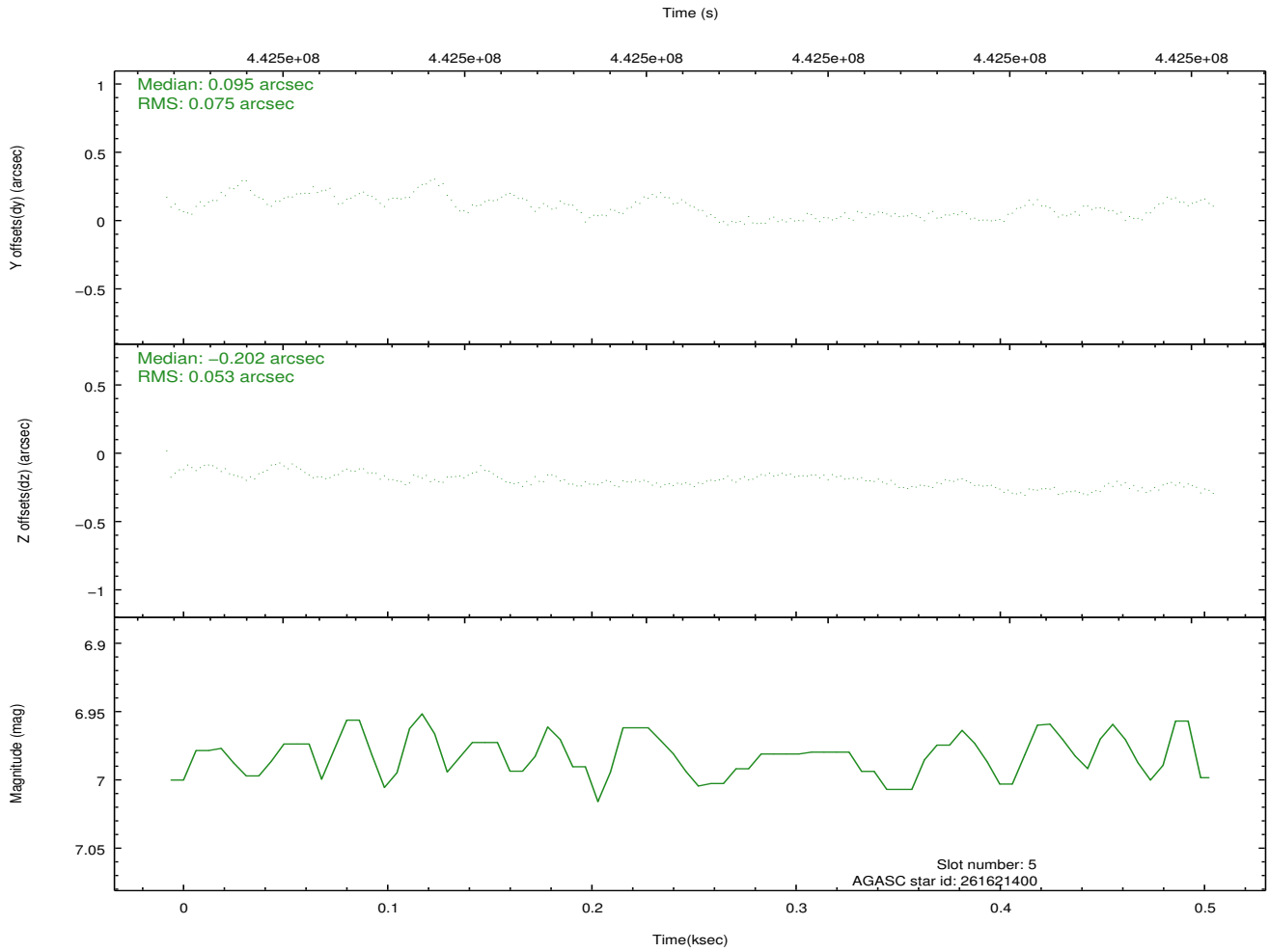
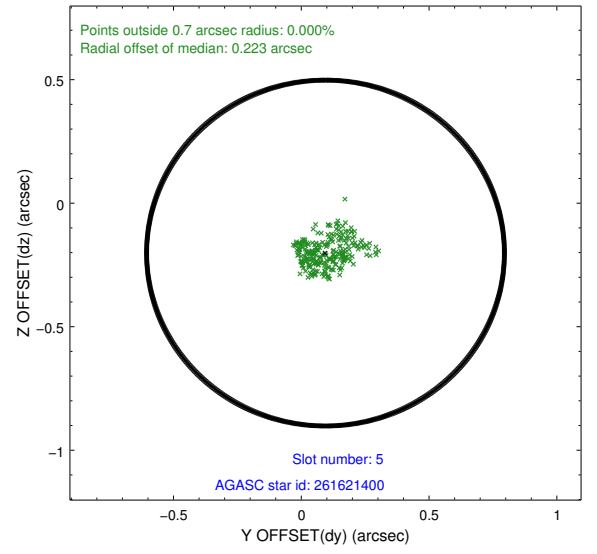
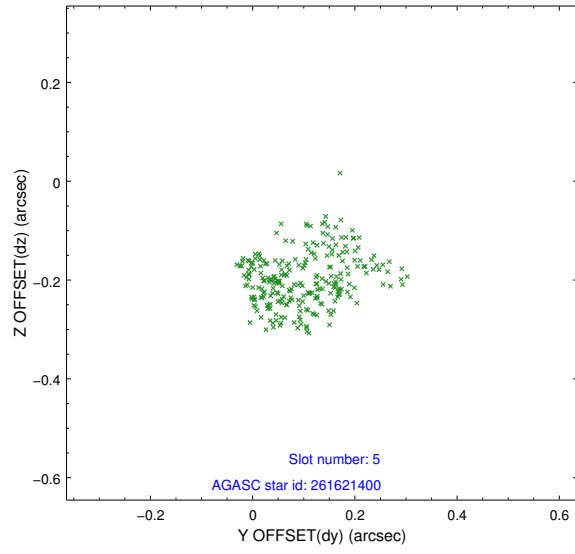
### 2.4.1 Slot 3



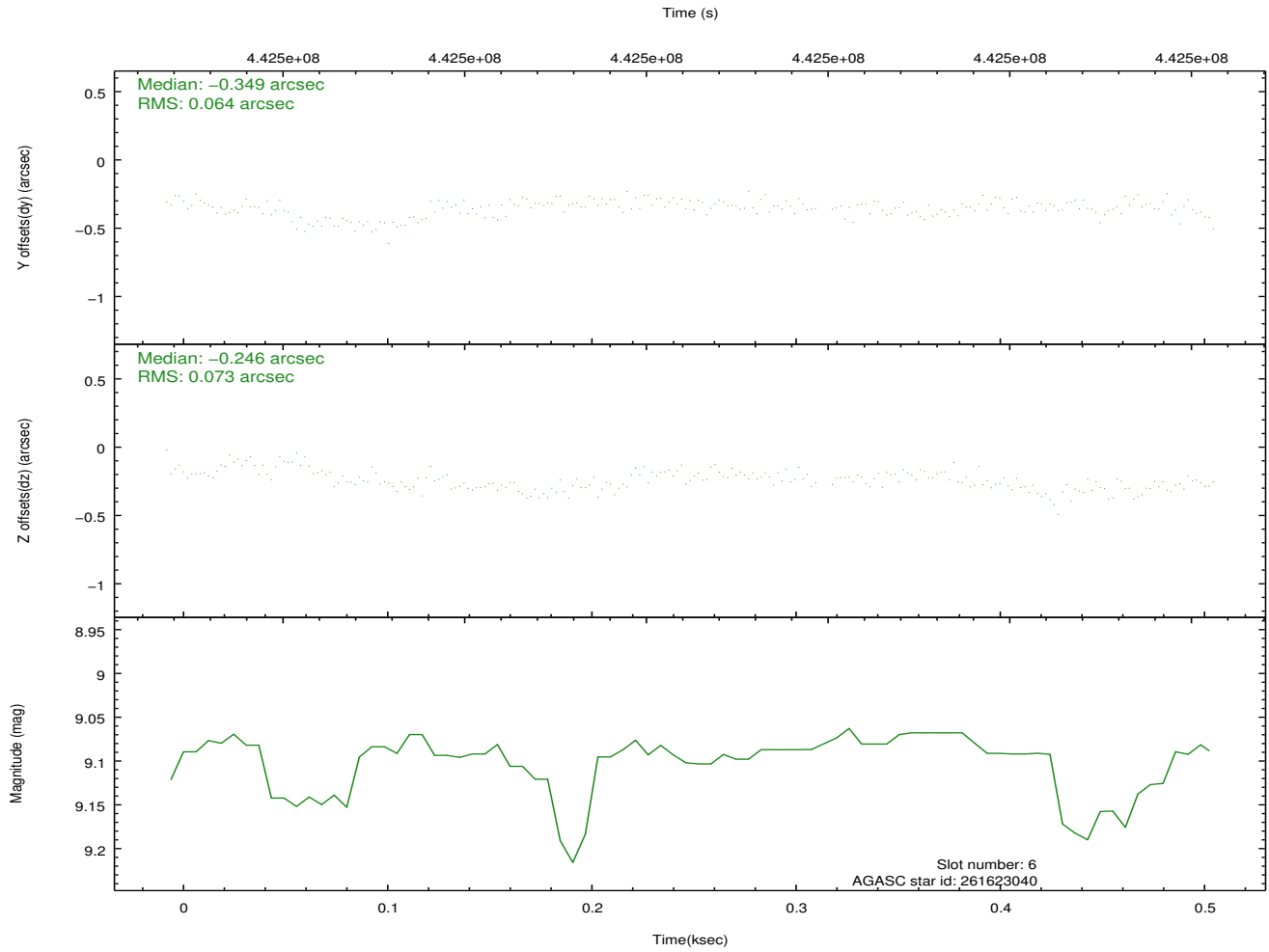
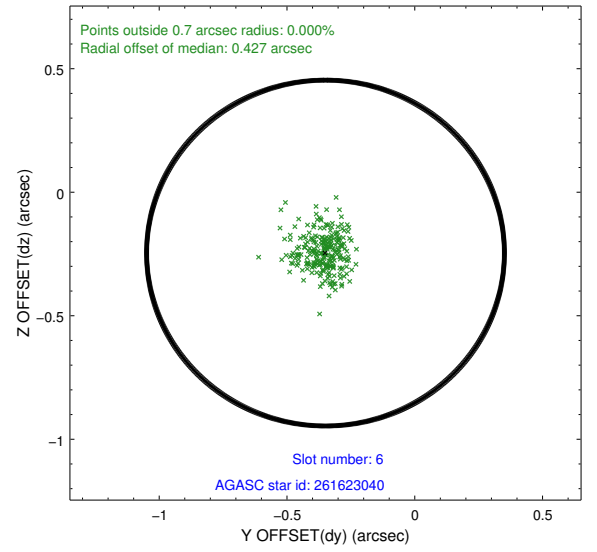
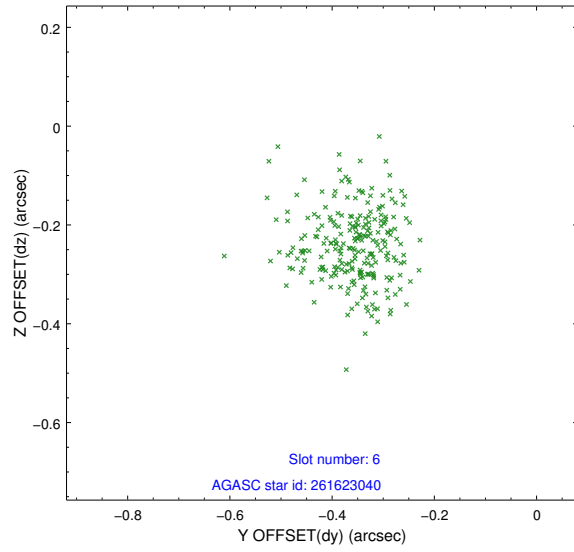
## 2.4.2 Slot 4



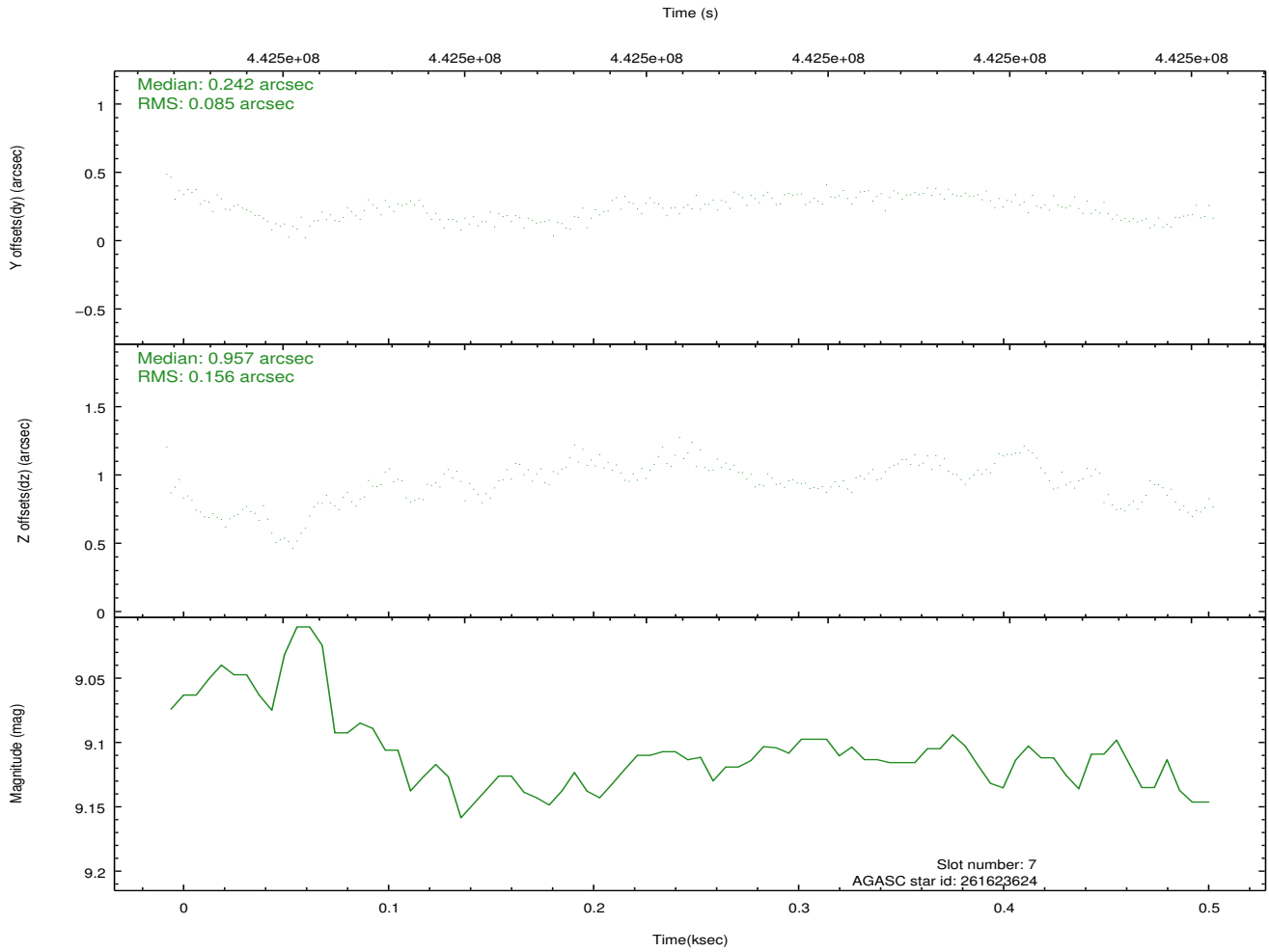
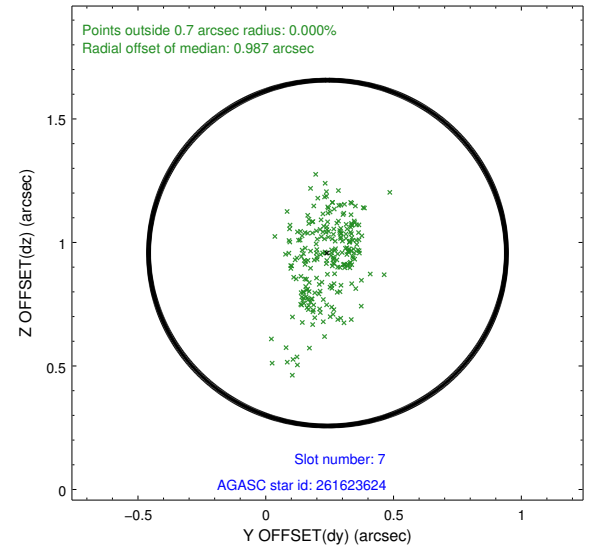
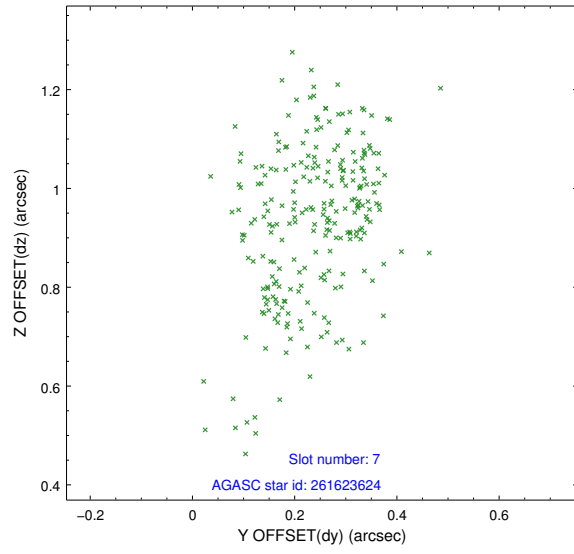
### 2.4.3 Slot 5



## 2.4.4 Slot 6

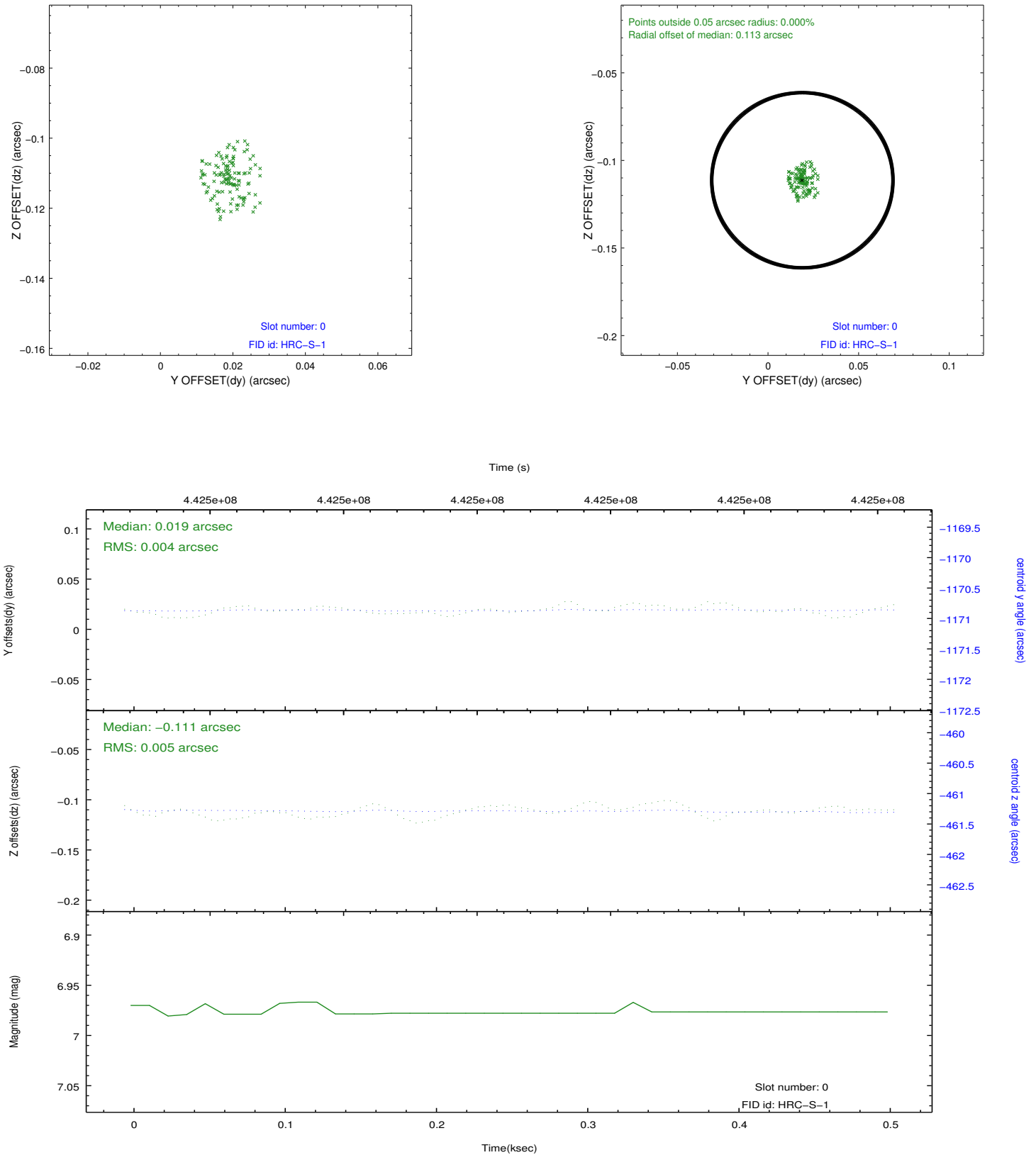


## 2.4.5 Slot 7

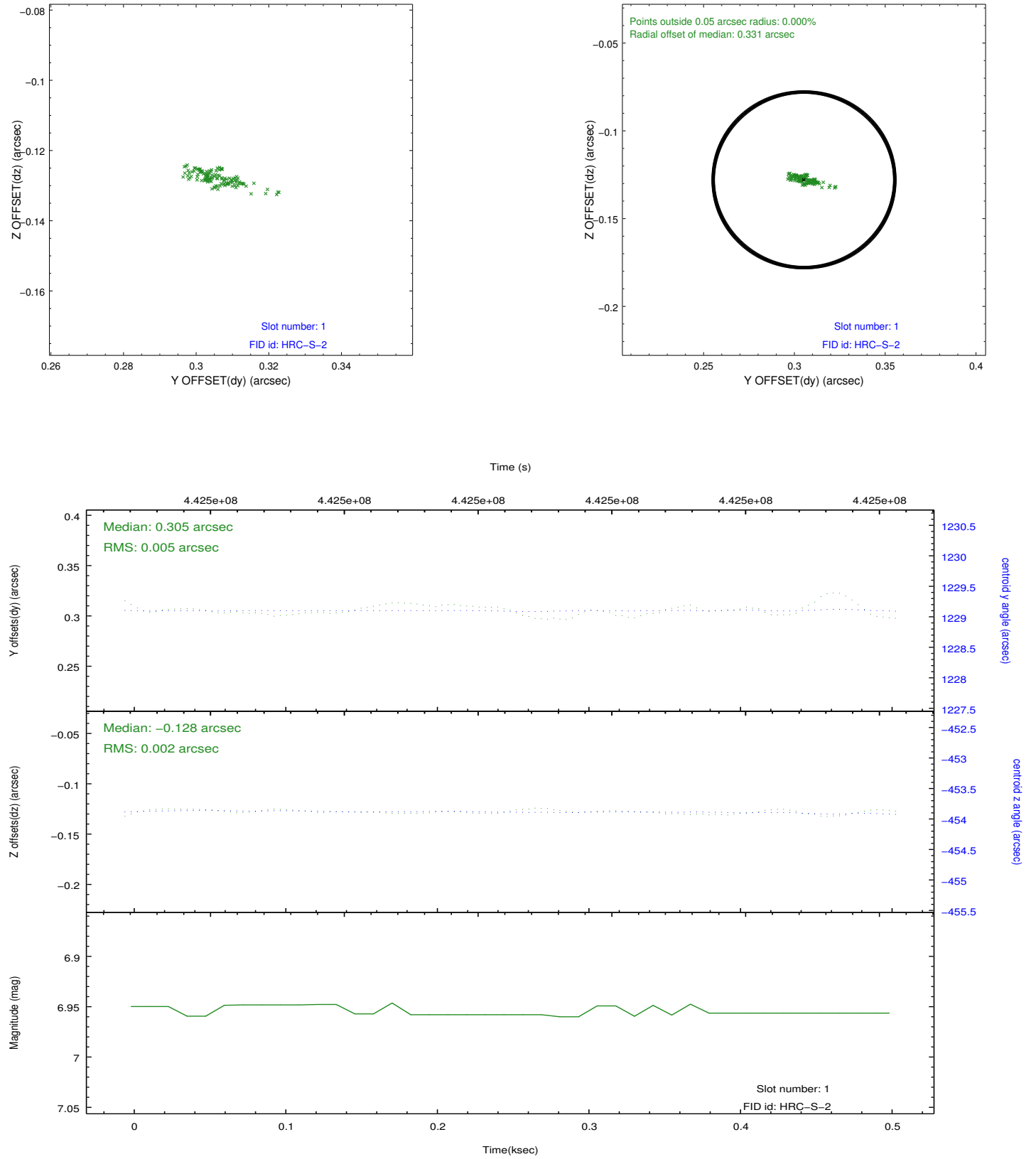


## 2.5 FID Slots

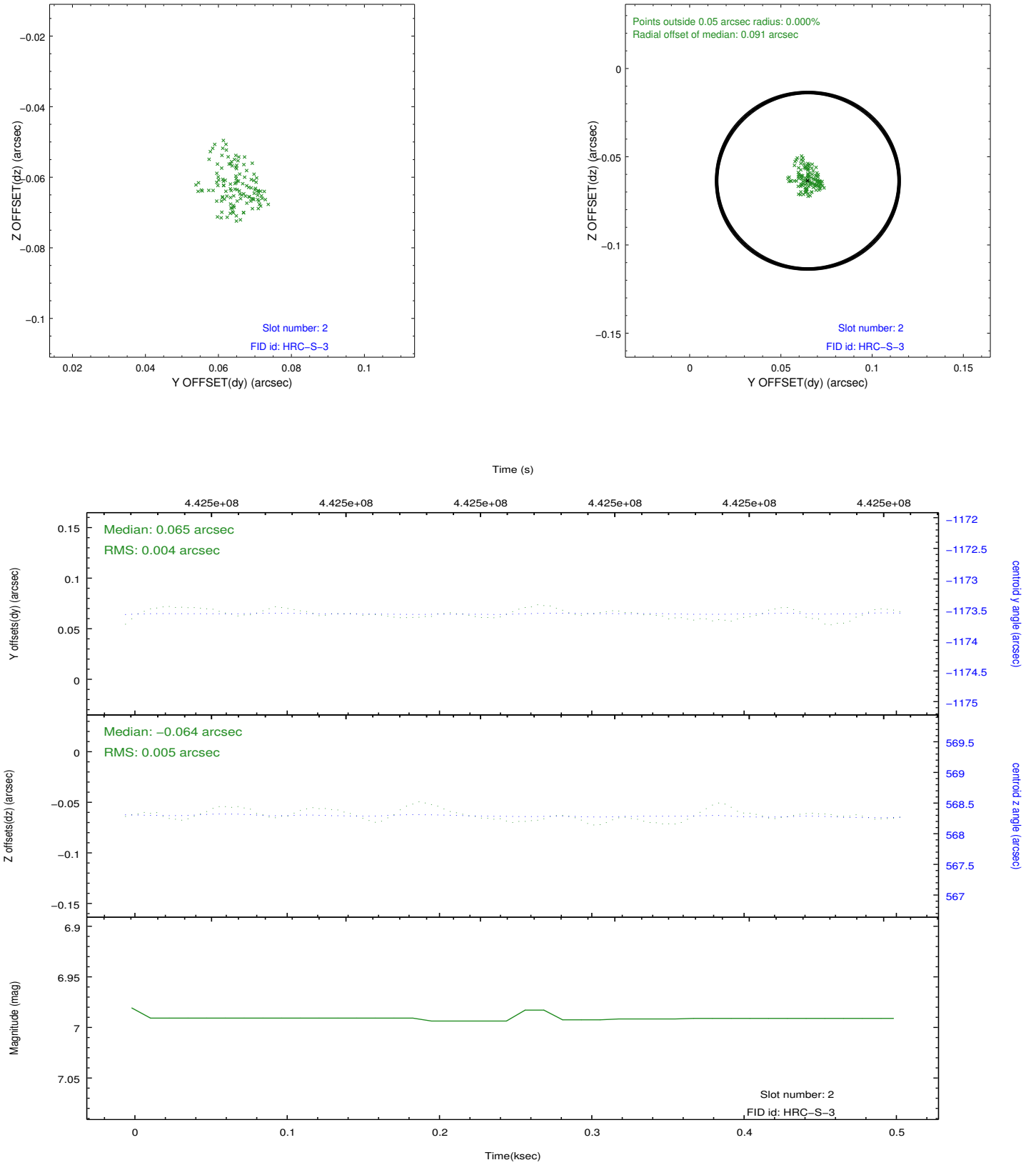
### 2.5.1 Slot 0



## 2.5.2 Slot 1



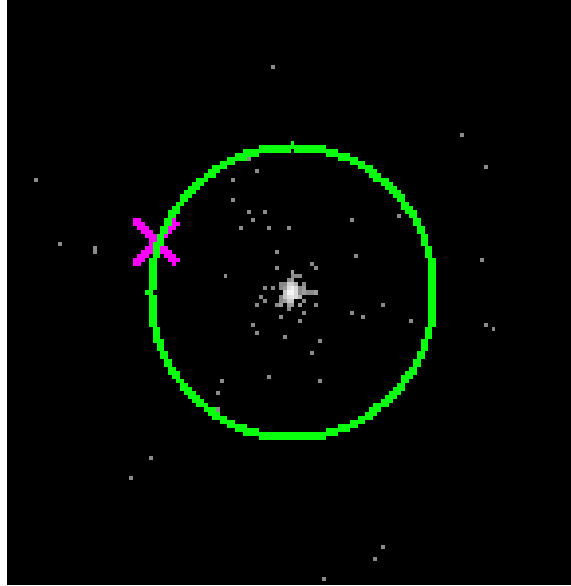
### 2.5.3 Slot 2



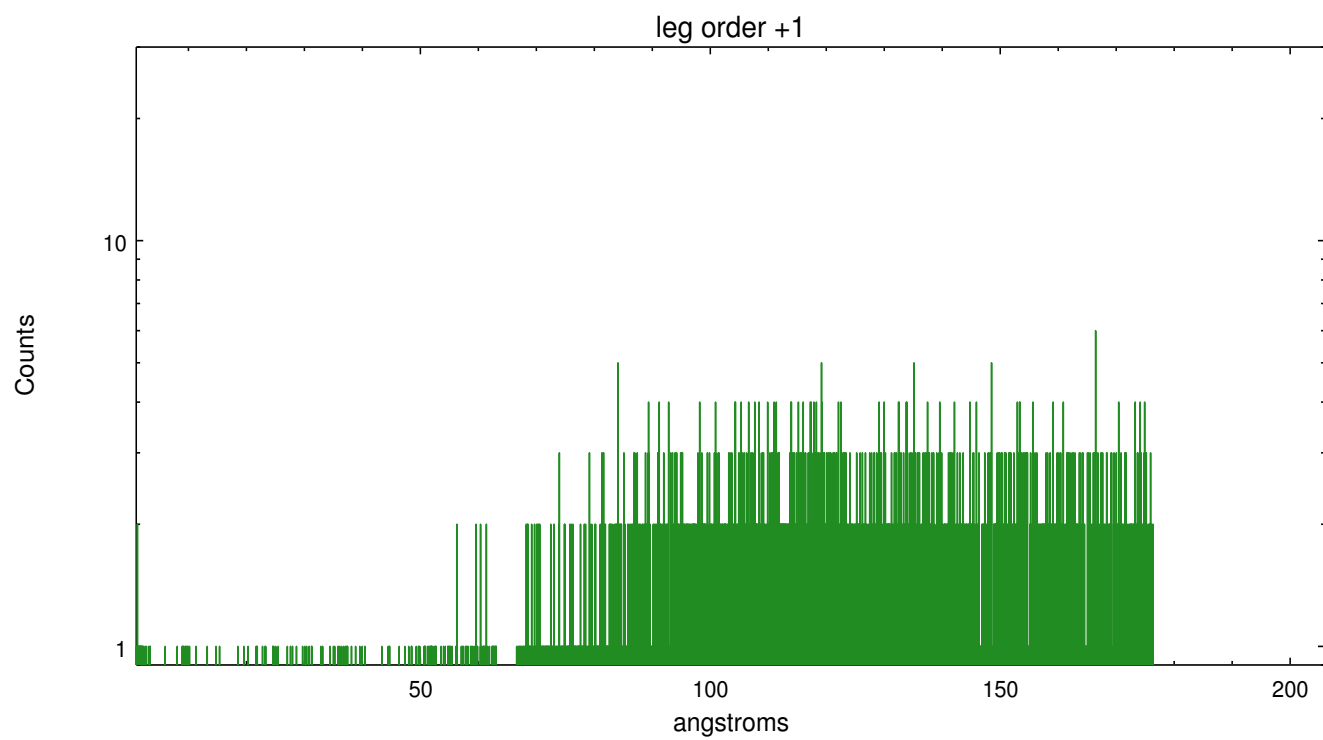
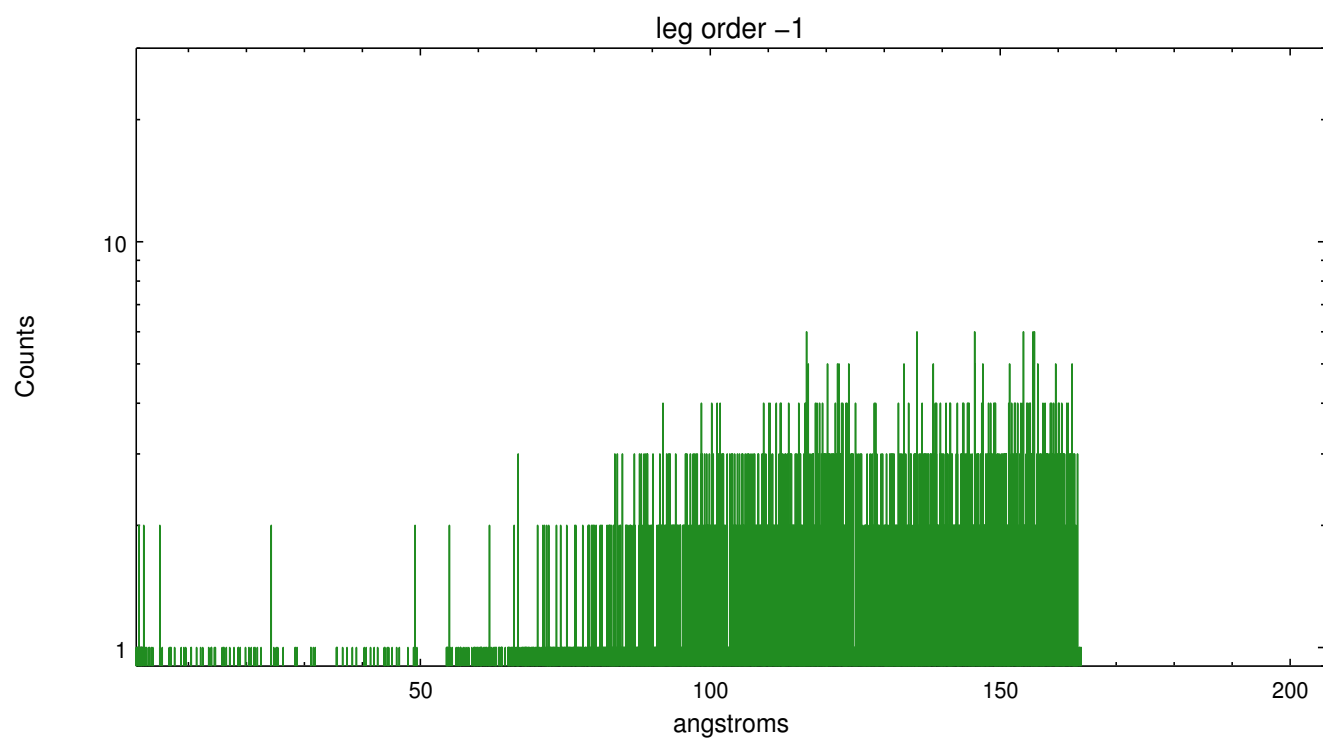


## 3 Gratings

### 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	0.45920002424717

## A.2 Comments

HRC MCP HV test began with obsid 14370->62684. Note original commanded obsids had been previously used so raw telemetry was modified using edit\_telem.pl to make these obsid number changes: 62800 -> 62692 62799 -> 62691 62798 -> 62690 62797 -> 62689 62796 -> 62688 62795 -> 62687 62794 -> 62686 62793 -> 62685 62792 -> 62684 ===== During the HRC-S/LETG observation of HZ43 both the bottom and top MCP HV were adjusted up gradually in steps. For each setting we updated the ObsID prior to changing the HV step. 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)