

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 14326 - L2 Version 3  
Chandra X-Ray Center

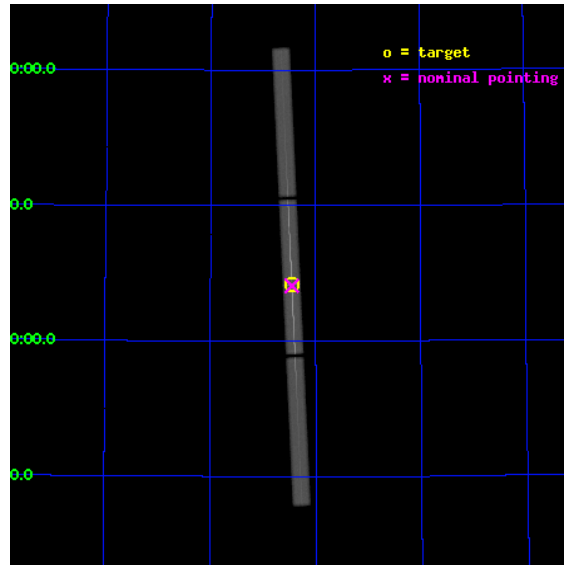
L2 Processing Date : Aug 10 2012

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# 1 Front

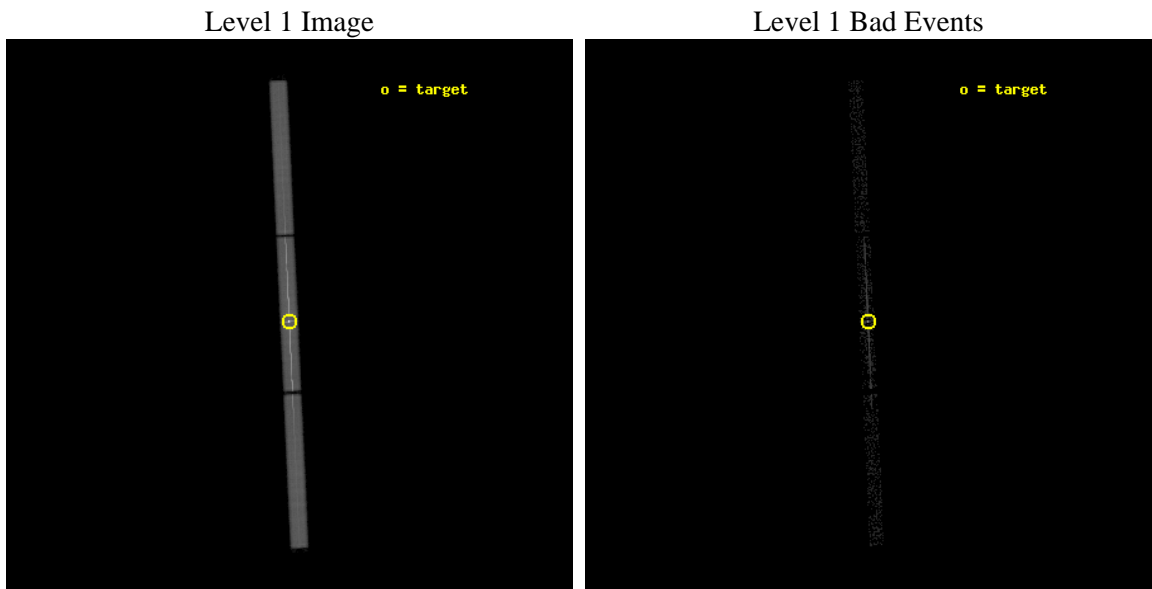
seq_num	790245	Sequence number
obs_id	14326	Observation id
title	AO-13 Calibration Observations of Mkn421 to Calibrate the New HRC-S HV Setting	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	MKN421[Voltage:current default]	Source name
ra_targ	166.113333	Observer's specified target RA [deg]
dec_targ	38.208806	Observer's specified target Dec [deg]
ra_nom	166.11305028785	Nominal RA [deg]
dec_nom	38.204067996781	Nominal Dec [deg]
roll_nom	267.28114807971	Nominal Roll [deg]
revision	3	Processing version of data
ontime	10189.781793773	[s]
livetime	10092.859329546	Ontime multiplied by DTCOR
l2events	869705	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	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	10189.781793773	[s]
caldbver	4.5.1.1	&#160	l1events	1149607	Number of level 1 events
date	2012-08-10T06:24:38	Date and time of file creation			
revision	3	Processing version of data			

### 2.1.3 Events

Level 1 Events

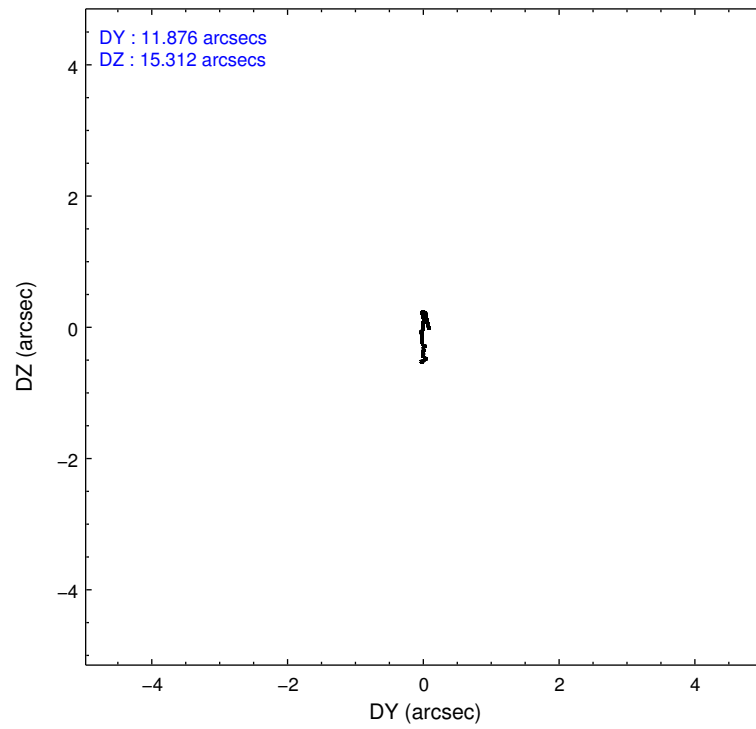
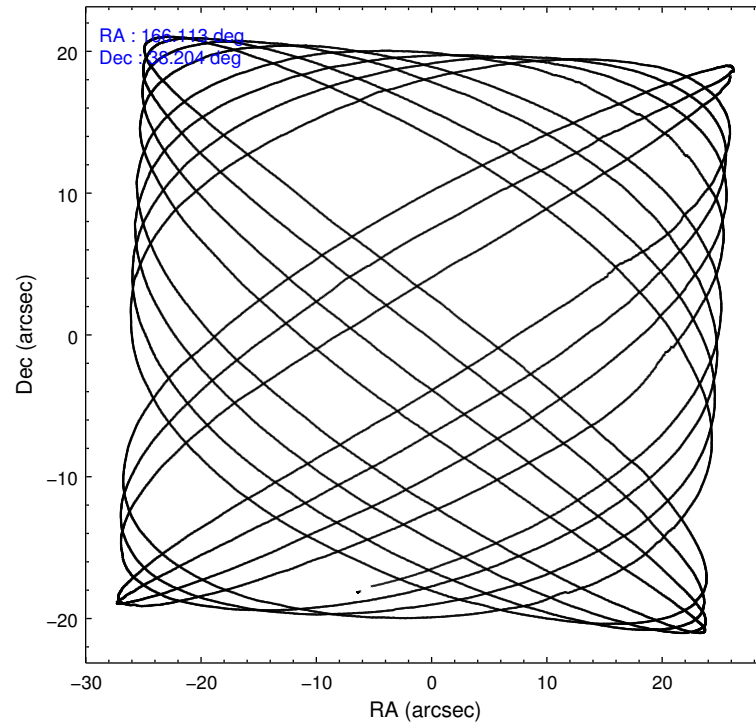
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	309037	524290	316280
rejected events	11742	17042	11911
rejected %	3%	3%	3%

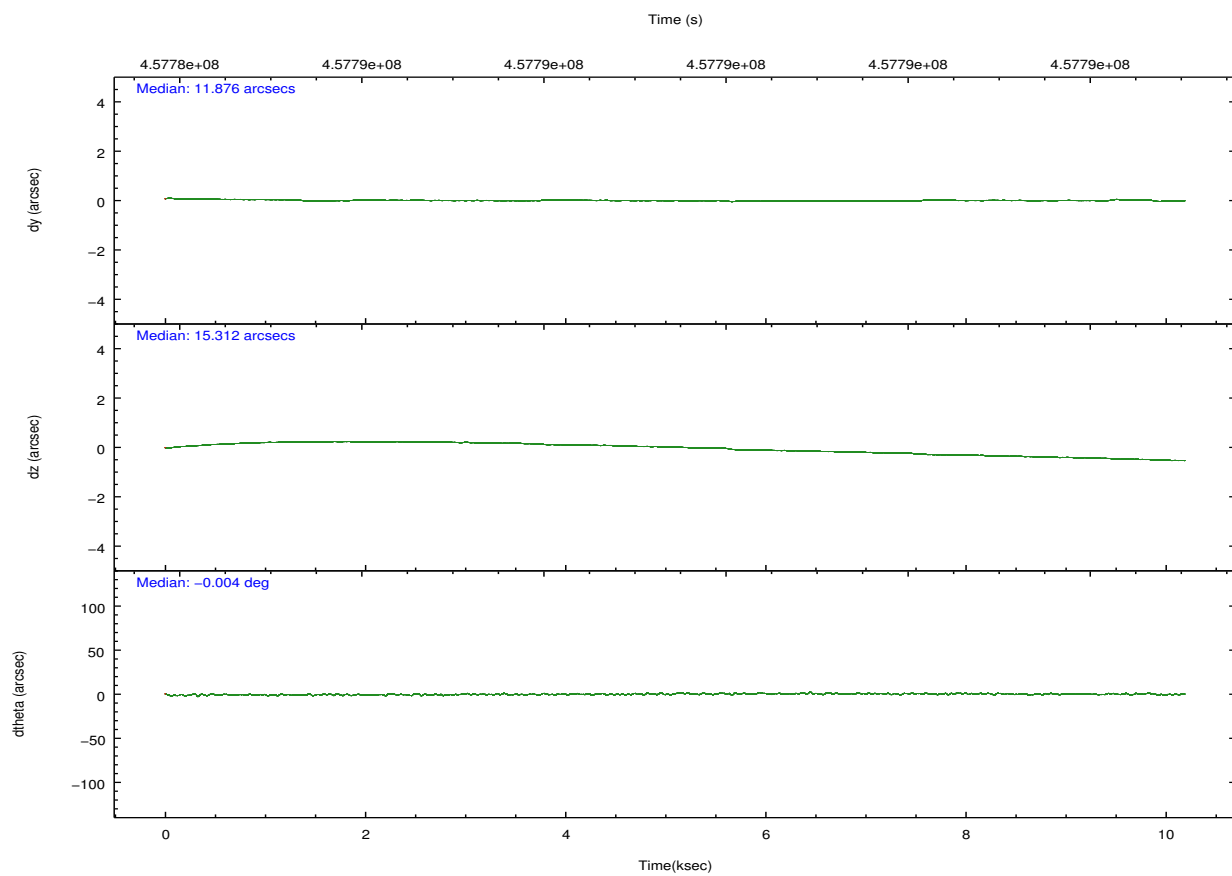
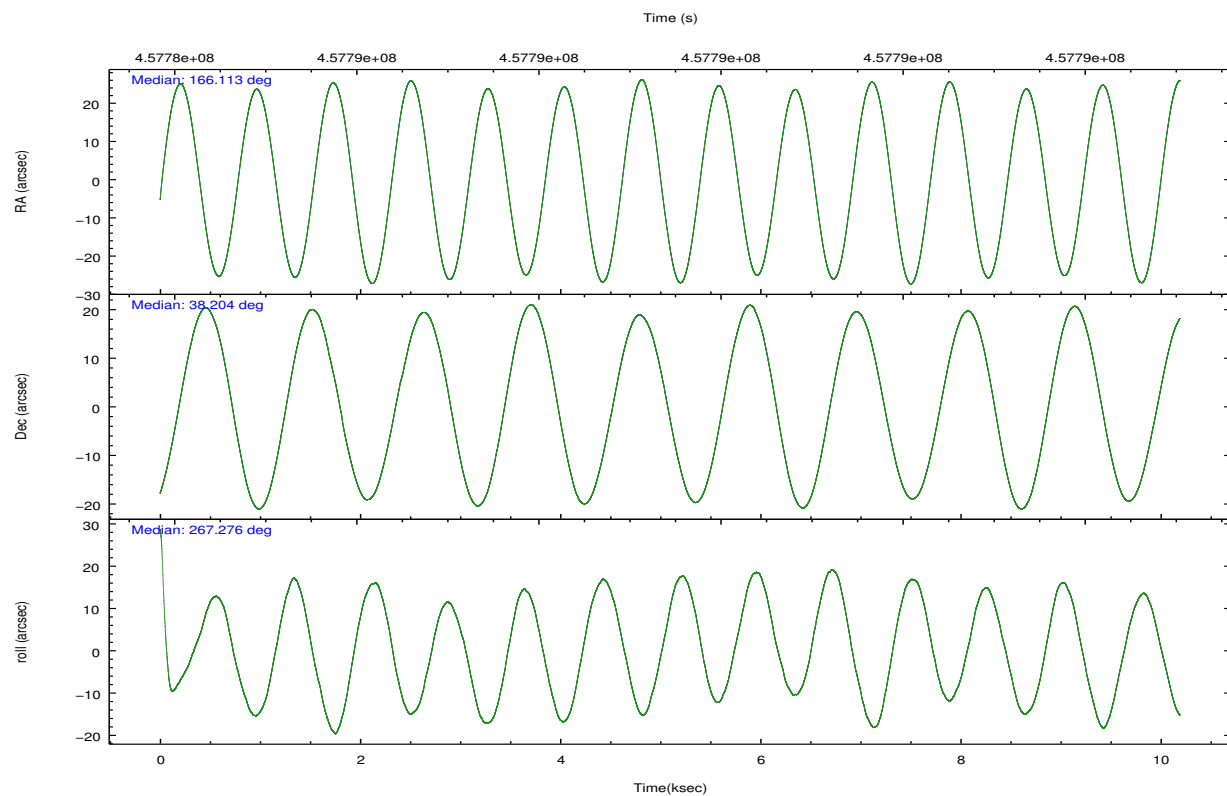


## 2.2 Compared Parameters

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	166.094619	166.1130502878533			
[deg] Pointing Dec	38.228877	38.2040679967813			
[deg] Pointing Roll	267.225189	267.2811480797117			
[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)	457784540.184000	457784073.11714			
Observation start date	2012-07-04T10:21:13	2012-07-04T10:14:33			
[s] Observation end time (MET)	457794540.184000	457794673.1552			
Observation end date	2012-07-04T13:07:53	2012-07-04T13:11:13			

## 2.3 Aspect



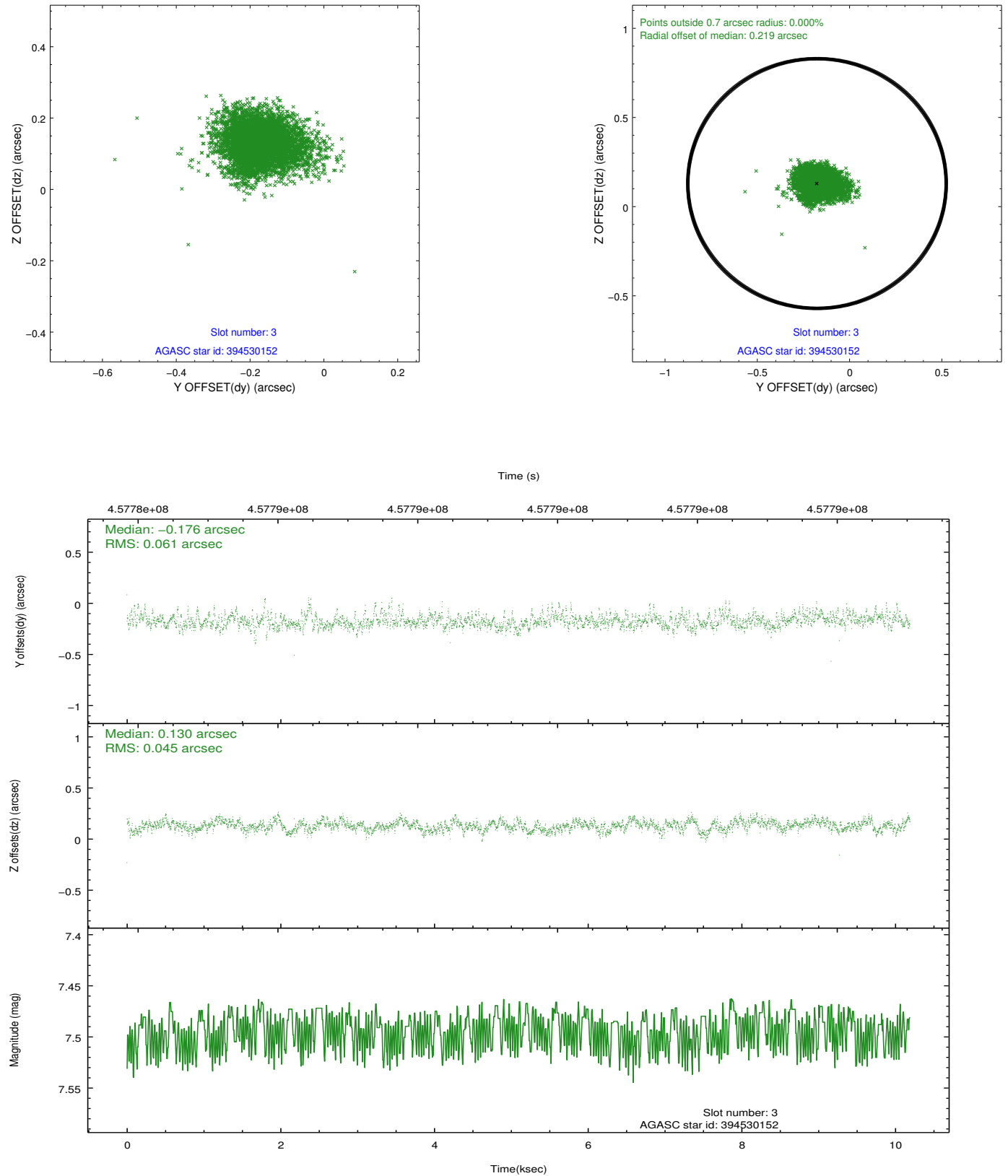


### Slot Statistics

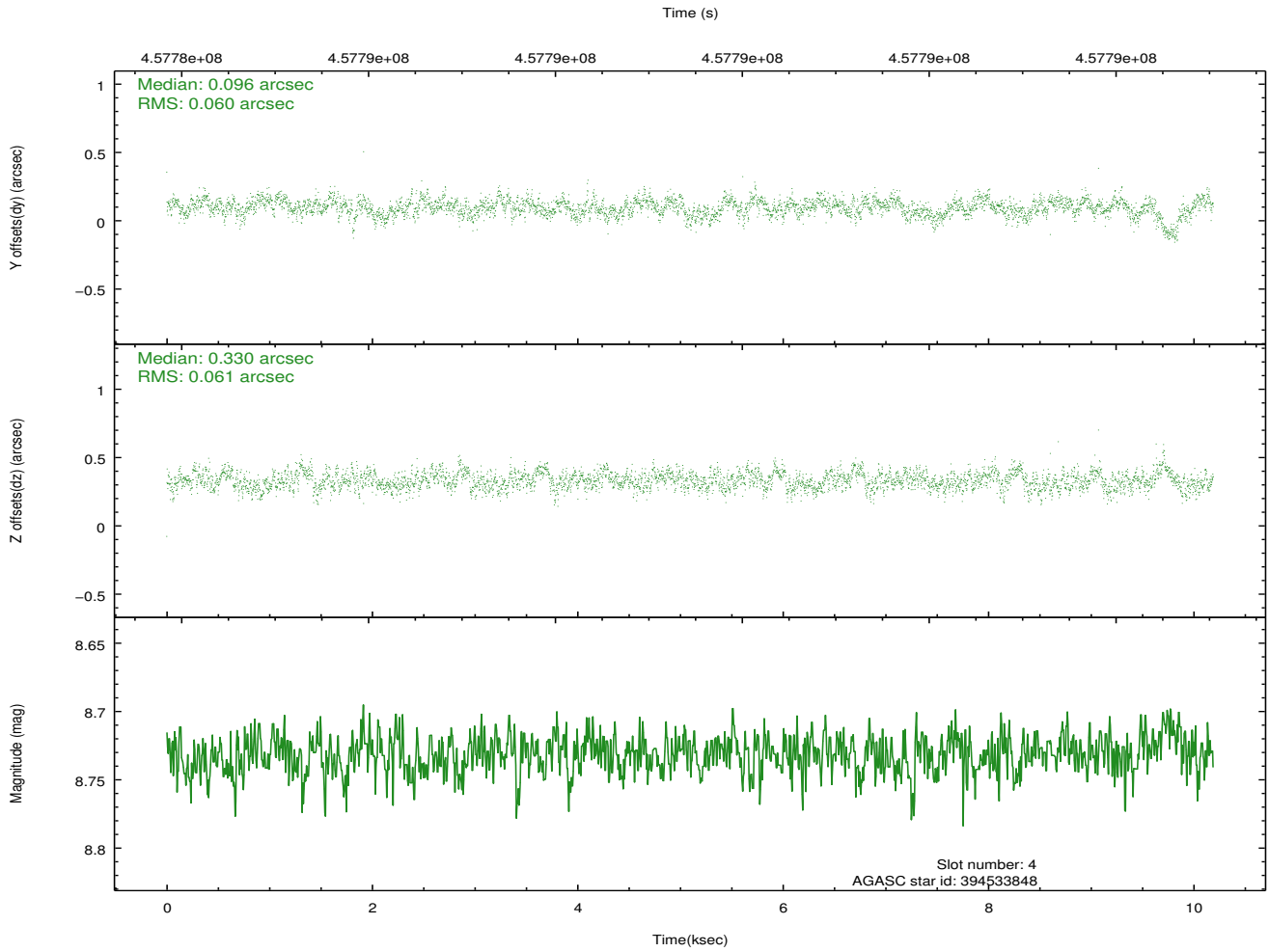
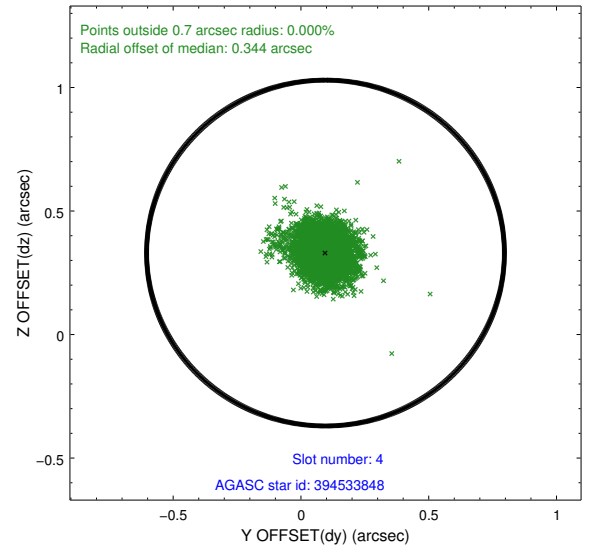
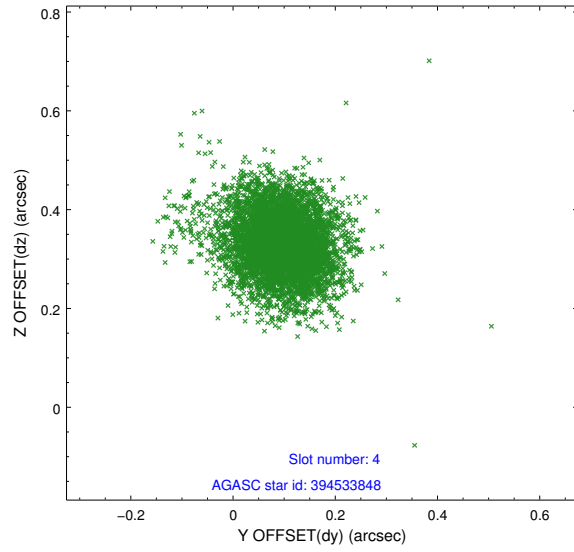
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-S-1	7.01	2486	0.050	-0.188	0.010	0.016	0.000000	0.000000	-1166.22	-464.13
1	FID	HRC-S-2	7.00	2486	0.290	-0.134	0.007	0.016	0.000000	0.000000	1233.23	-456.90
2	FID	HRC-S-3	7.01	2486	0.051	0.019	0.009	0.014	0.000000	0.000000	-1168.45	565.42
3	GUIDE	394530152	7.49	4972	-0.176	0.130	0.078	0.133	166.075805	38.868252	-2296.27	-164.21
4	GUIDE	394533848	8.73	4970	0.096	0.330	0.088	0.147	166.382906	38.276007	-210.78	801.52
5	GUIDE	394543960	9.80	4950	0.174	0.191	0.145	0.238	165.802757	37.787371	1627.03	-752.07
6	GUIDE	394546712	6.61	4972	-0.167	0.283	0.070	0.118	166.451462	38.394357	-644.99	975.83
7	GUIDE	394546720	6.42	4971	0.071	-0.939	0.106	0.173	166.130115	38.241361	-49.45	97.30

## 2.4 Star Slots

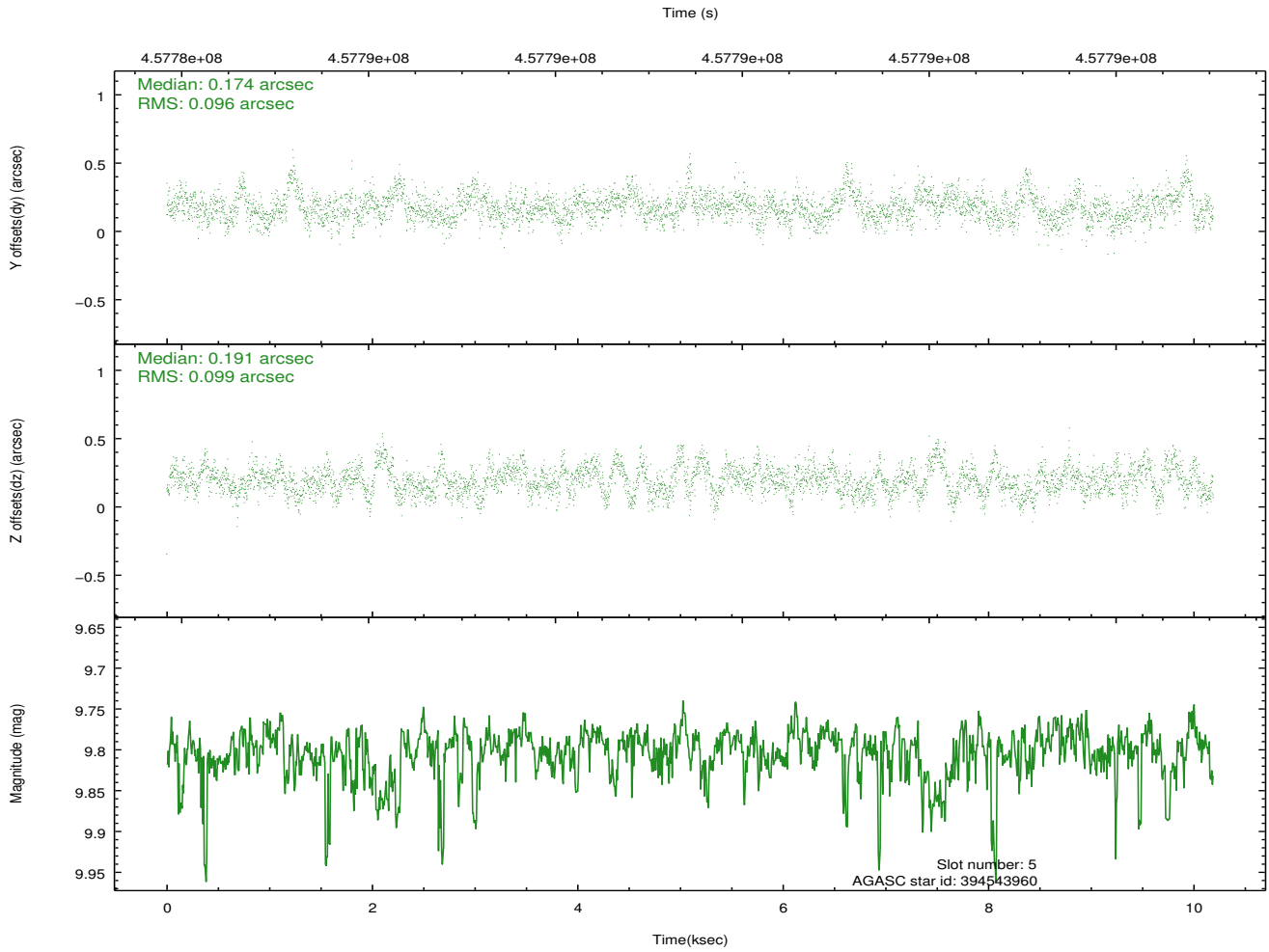
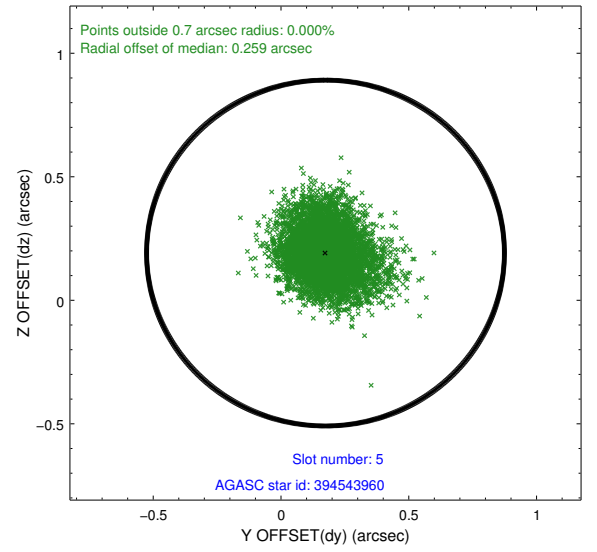
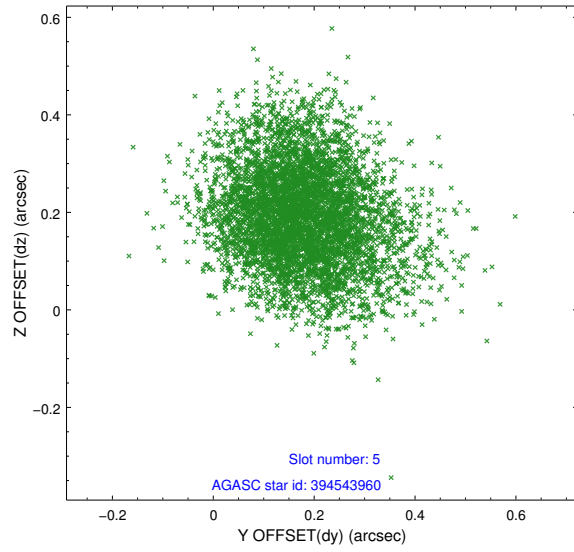
### 2.4.1 Slot 3



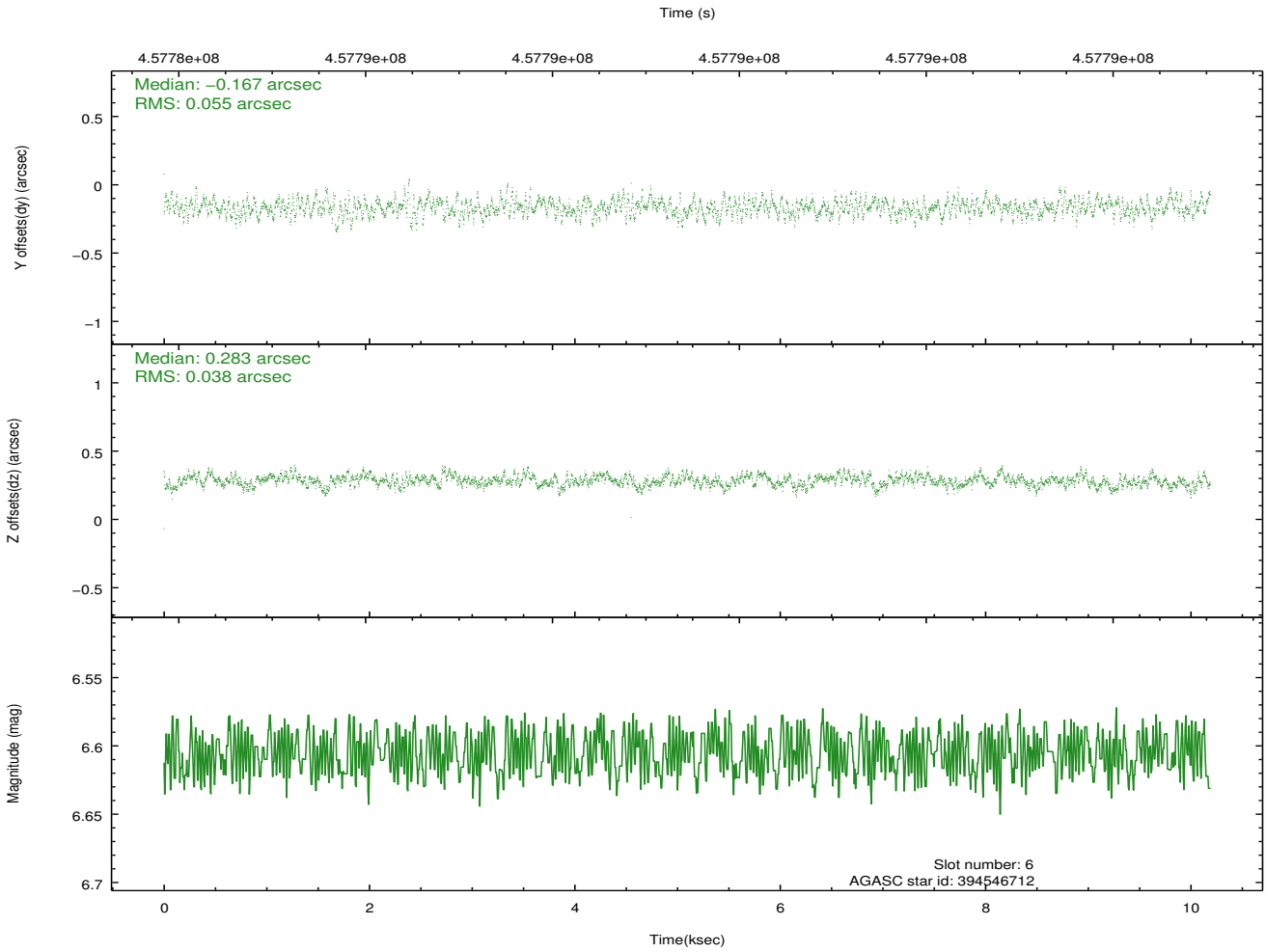
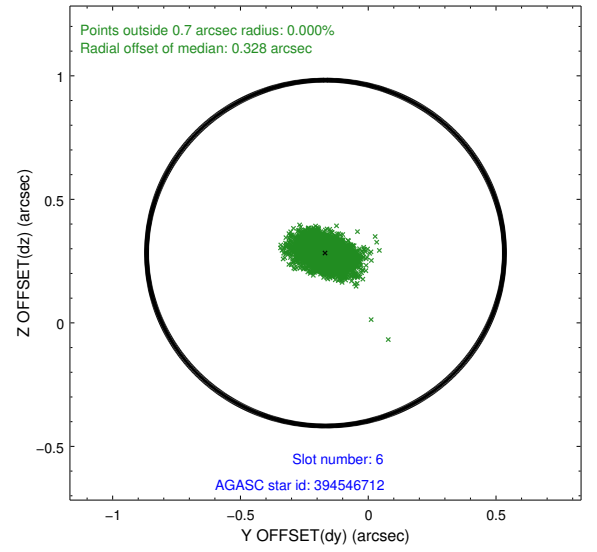
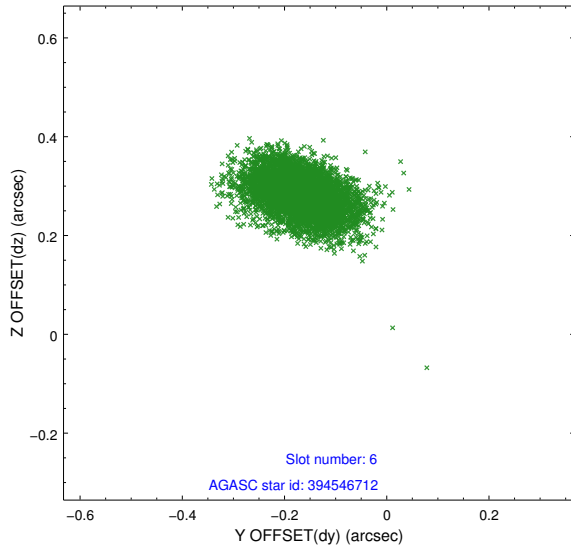
## 2.4.2 Slot 4



### 2.4.3 Slot 5

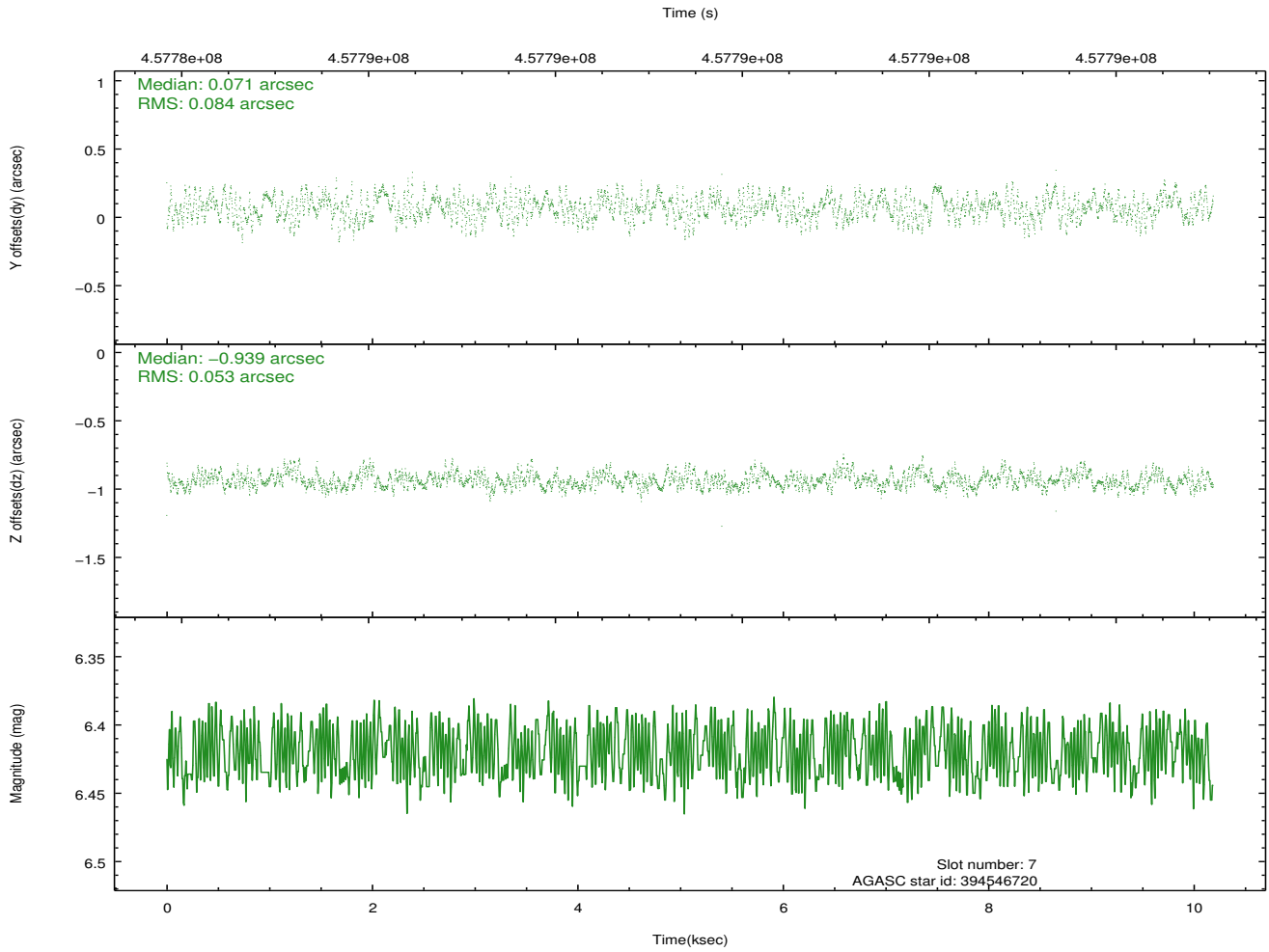
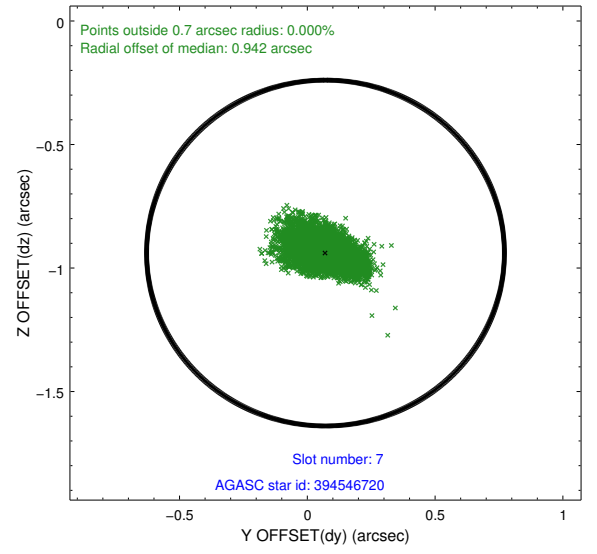
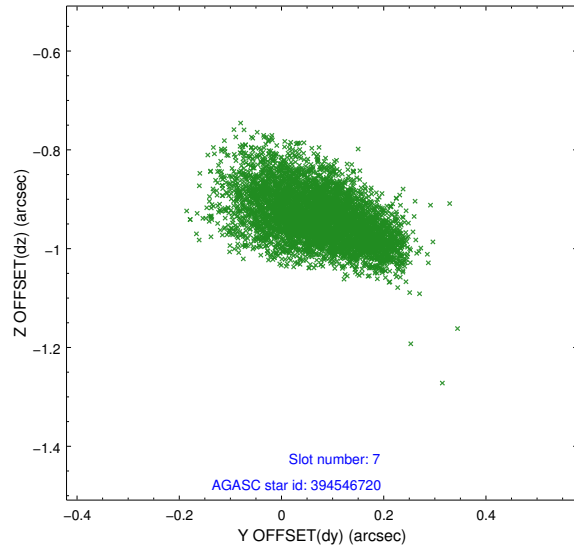


## 2.4.4 Slot 6



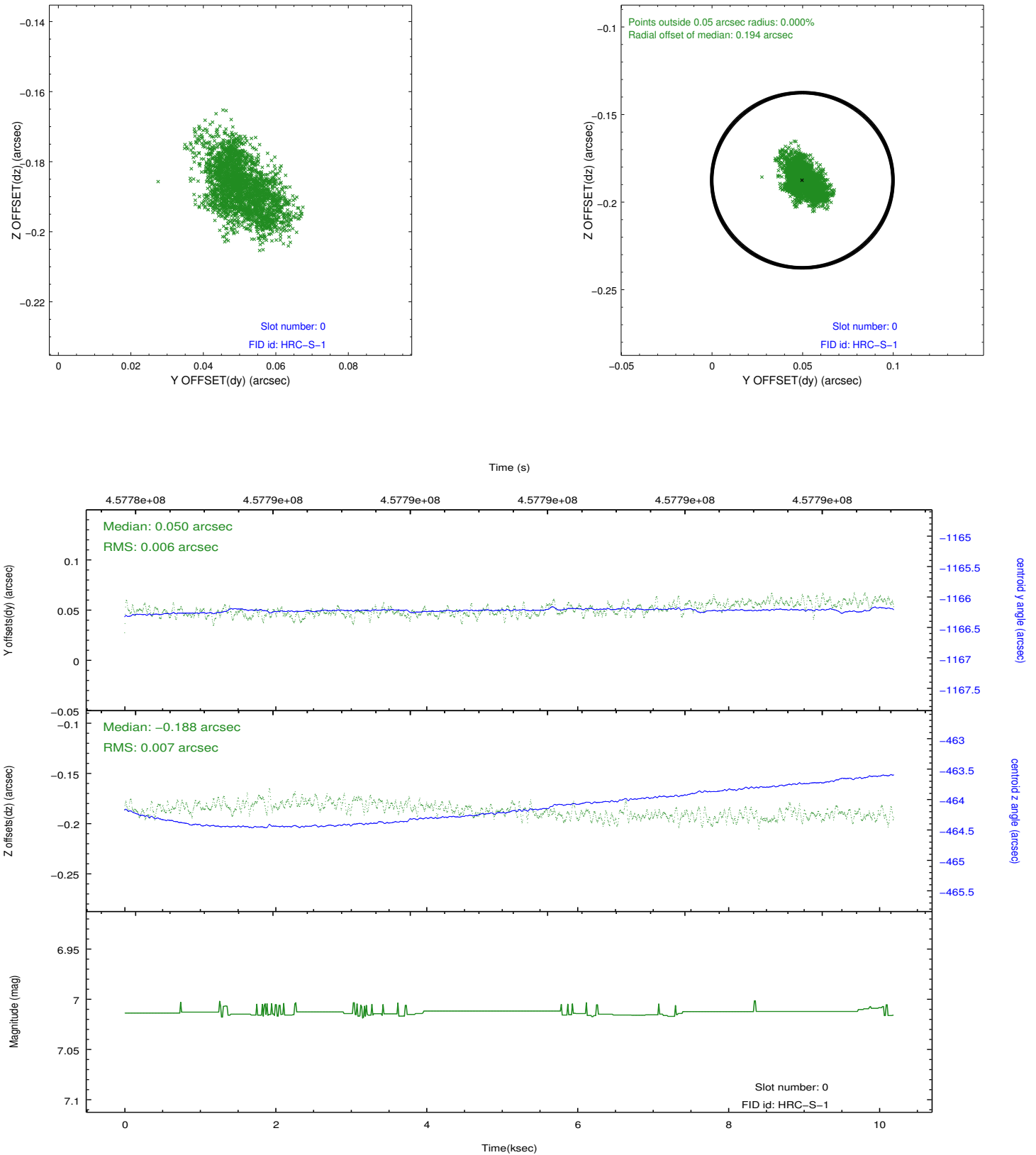


## 2.4.5 Slot 7

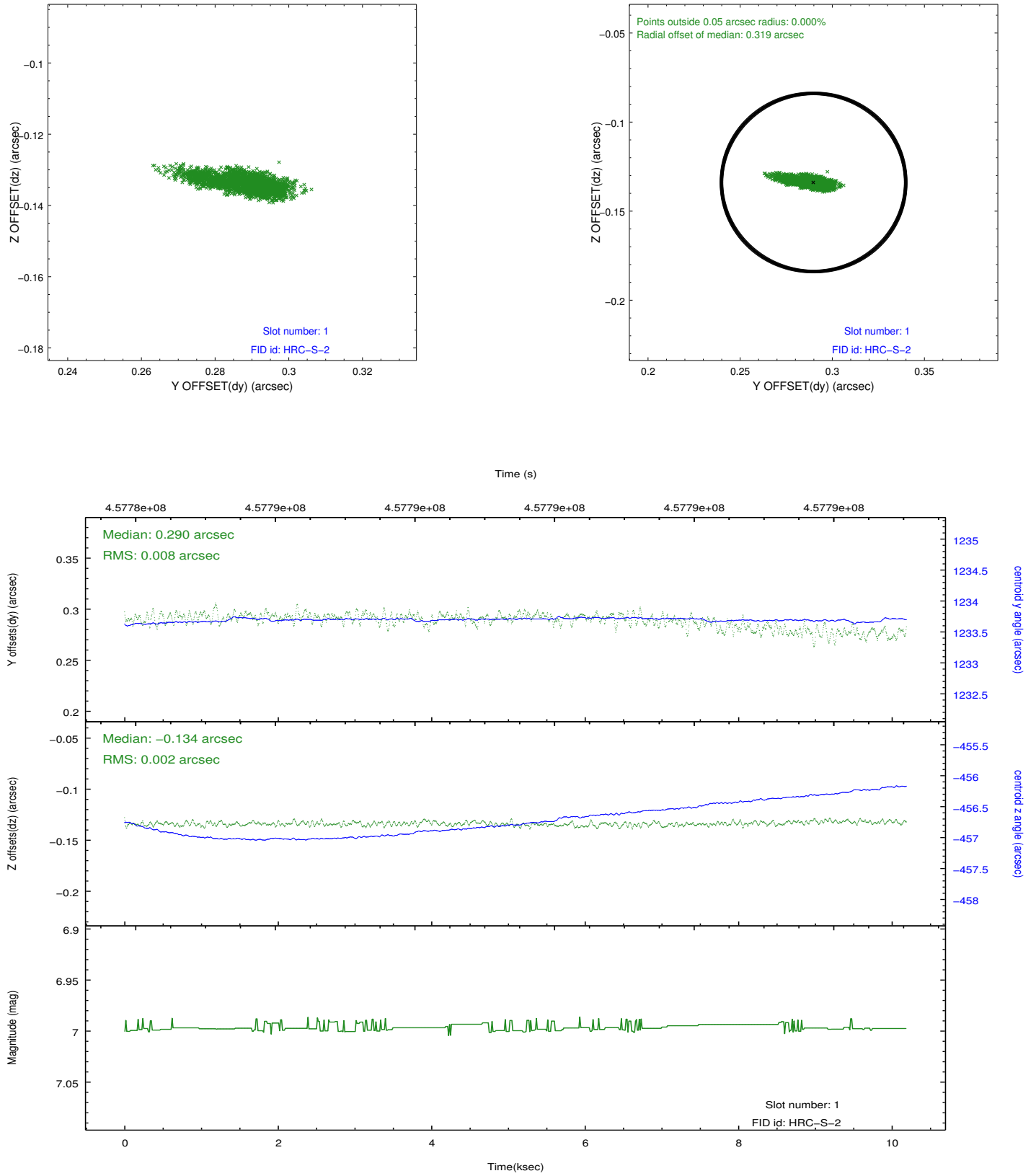


## 2.5 FID Slots

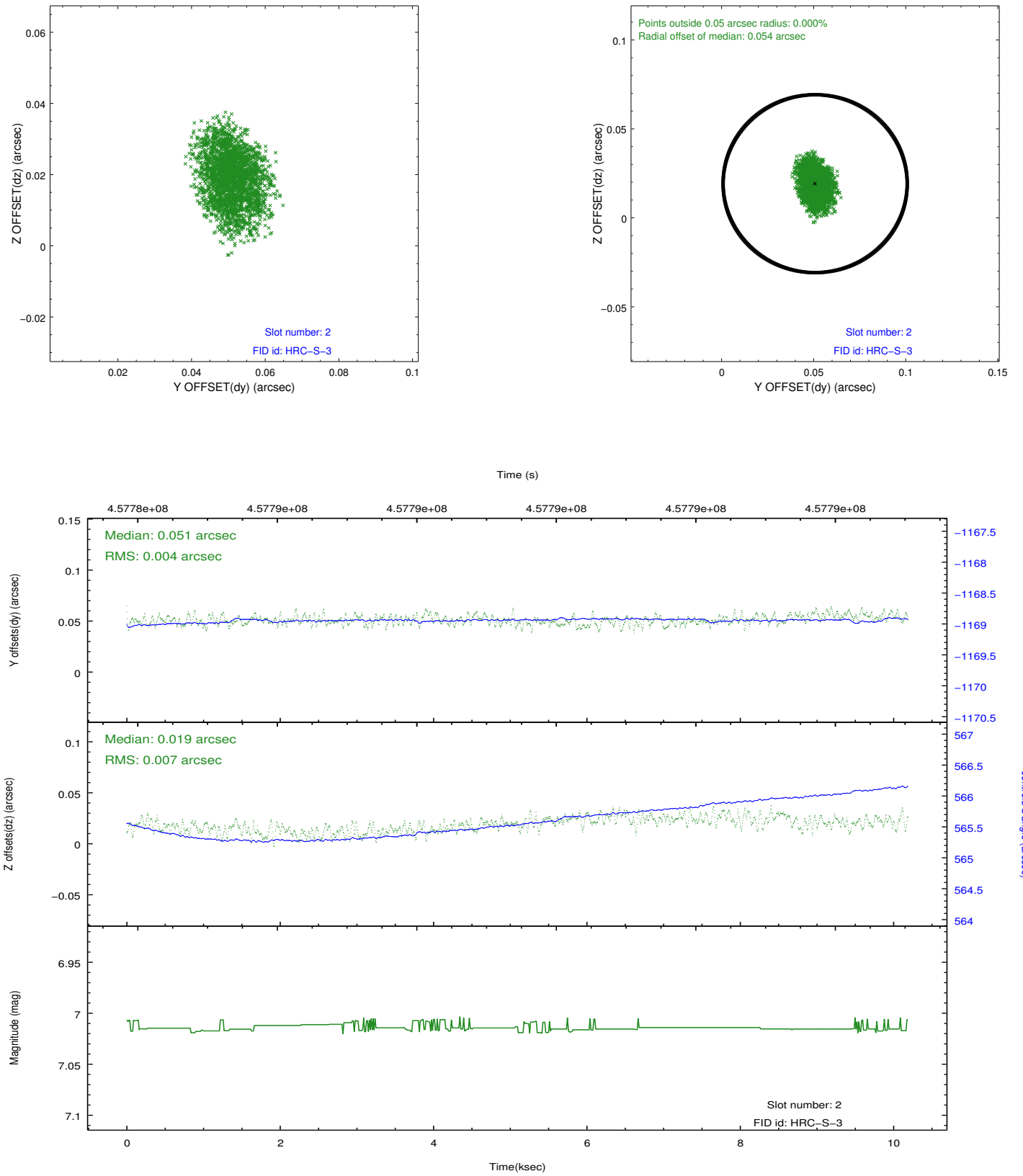
### 2.5.1 Slot 0



## 2.5.2 Slot 1

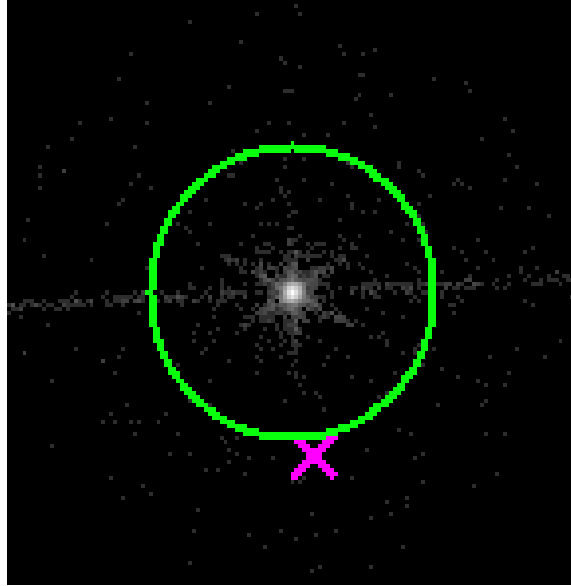


### 2.5.3 Slot 2

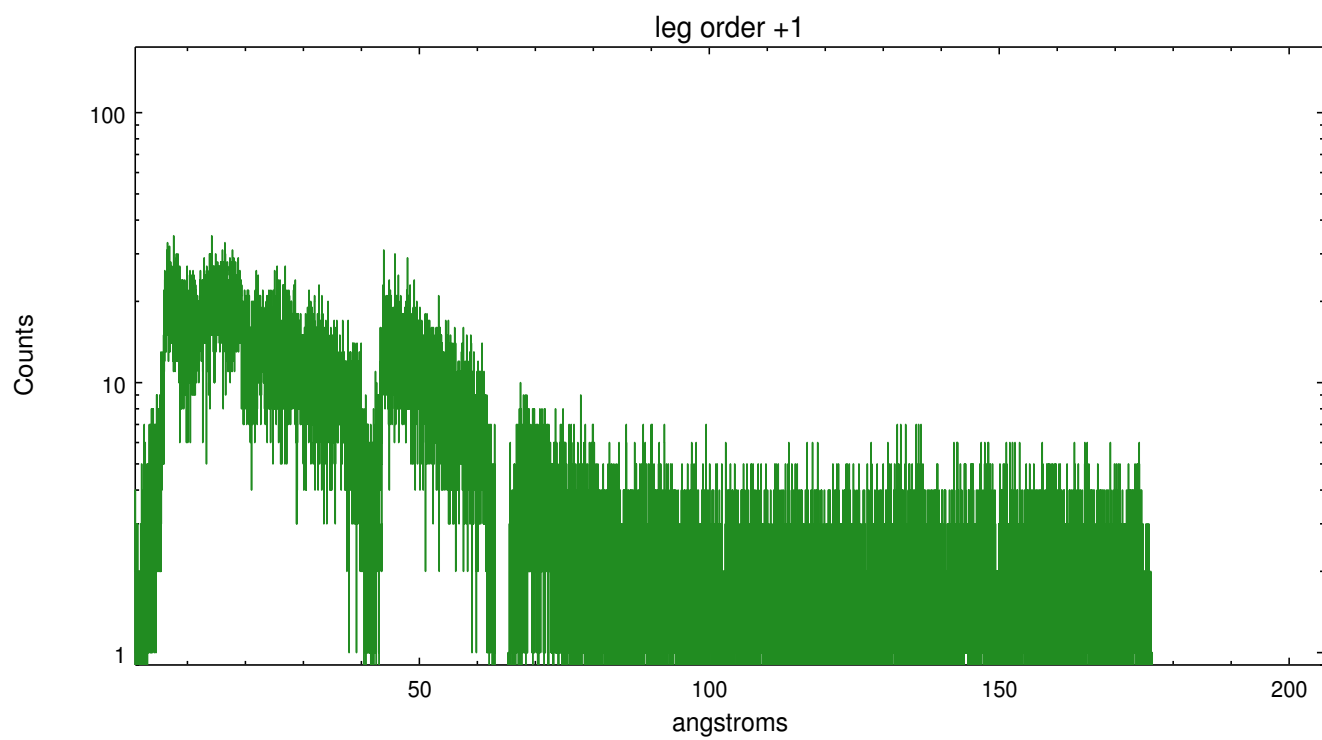
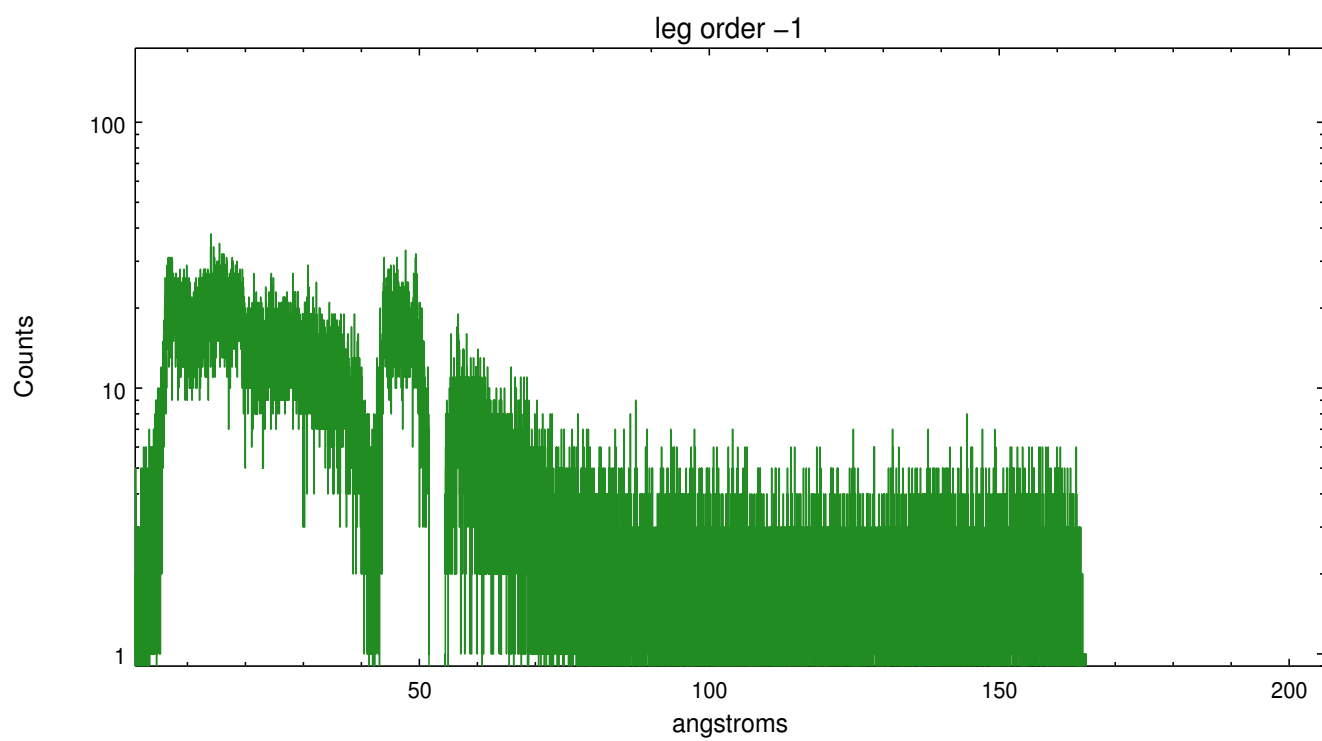


## 3 Gratings

### 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	10.189781793773

### **A.2 Comments**