

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13104 - L2 Version 4  
Chandra X-Ray Center

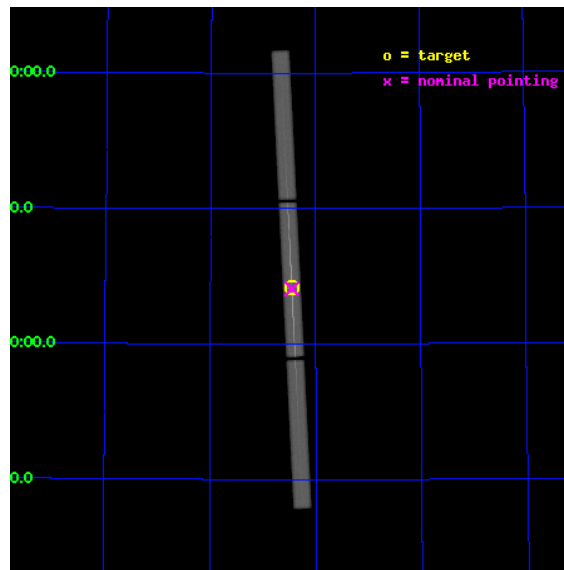
L2 Processing Date : Aug 9 2012

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# 1 Front

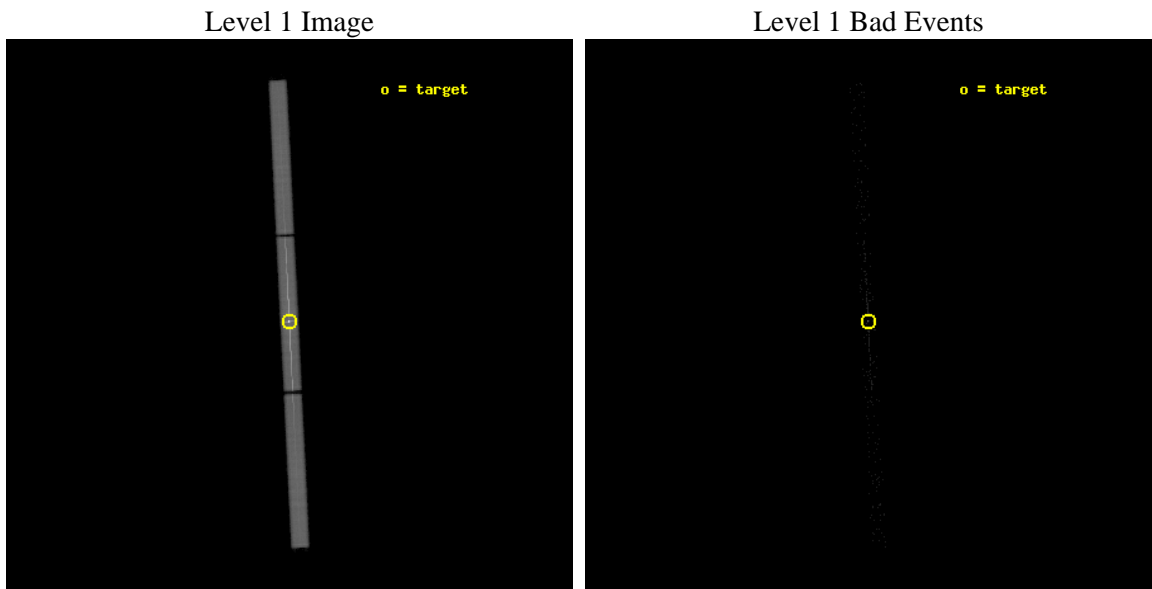
seq_num	790234	Sequence number
obs_id	13104	Observation id
title	AO-12 Calibration Observations of Mkn421	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	MKN421	Source name
ra_targ	166.113333	Observer's specified target RA [deg]
dec_targ	38.208806	Observer's specified target Dec [deg]
ra_nom	166.113042688	Nominal RA [deg]
dec_nom	38.20412817832	Nominal Dec [deg]
roll_nom	267.11361178484	Nominal Roll [deg]
revision	4	Processing version of data
ontime	10175.43178004	[s]
livetime	10081.891071332	Ontime multiplied by DTCOR
l2events	870071	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	10175.43178004	[s]
caldsver	4.5.1.1	&#160	l1events	1099408	Number of level 1 events
date	2012-08-10T01:01:52	Date and time of file creation			
revision	4	Processing version of data			

### 2.1.3 Events

Level 1 Events

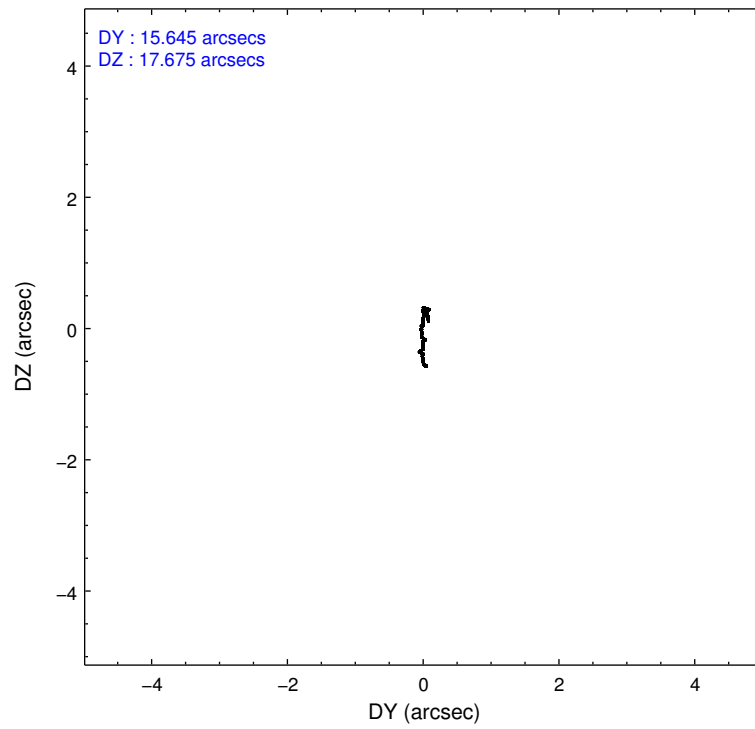
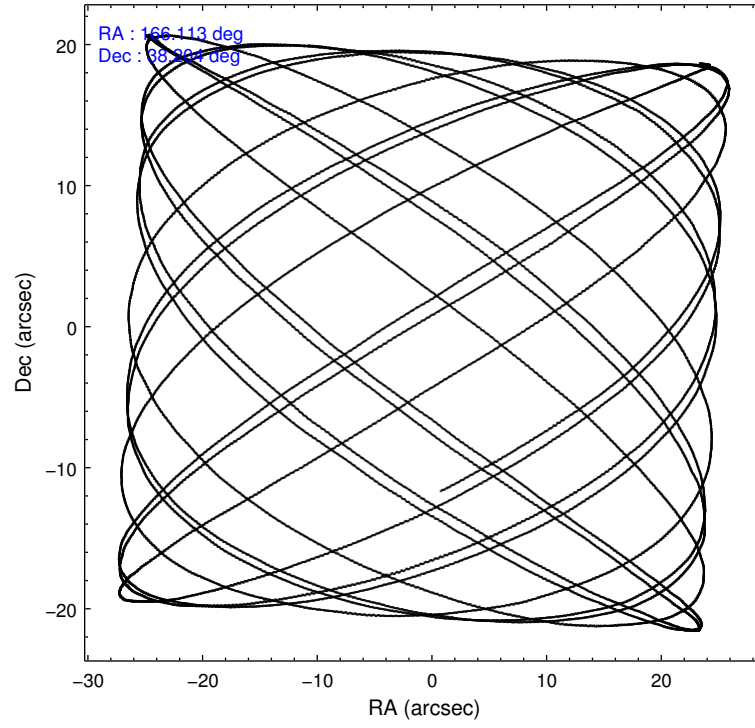
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	308489	475007	315912
rejected events	9227	12291	9587
rejected %	2%	2%	3%

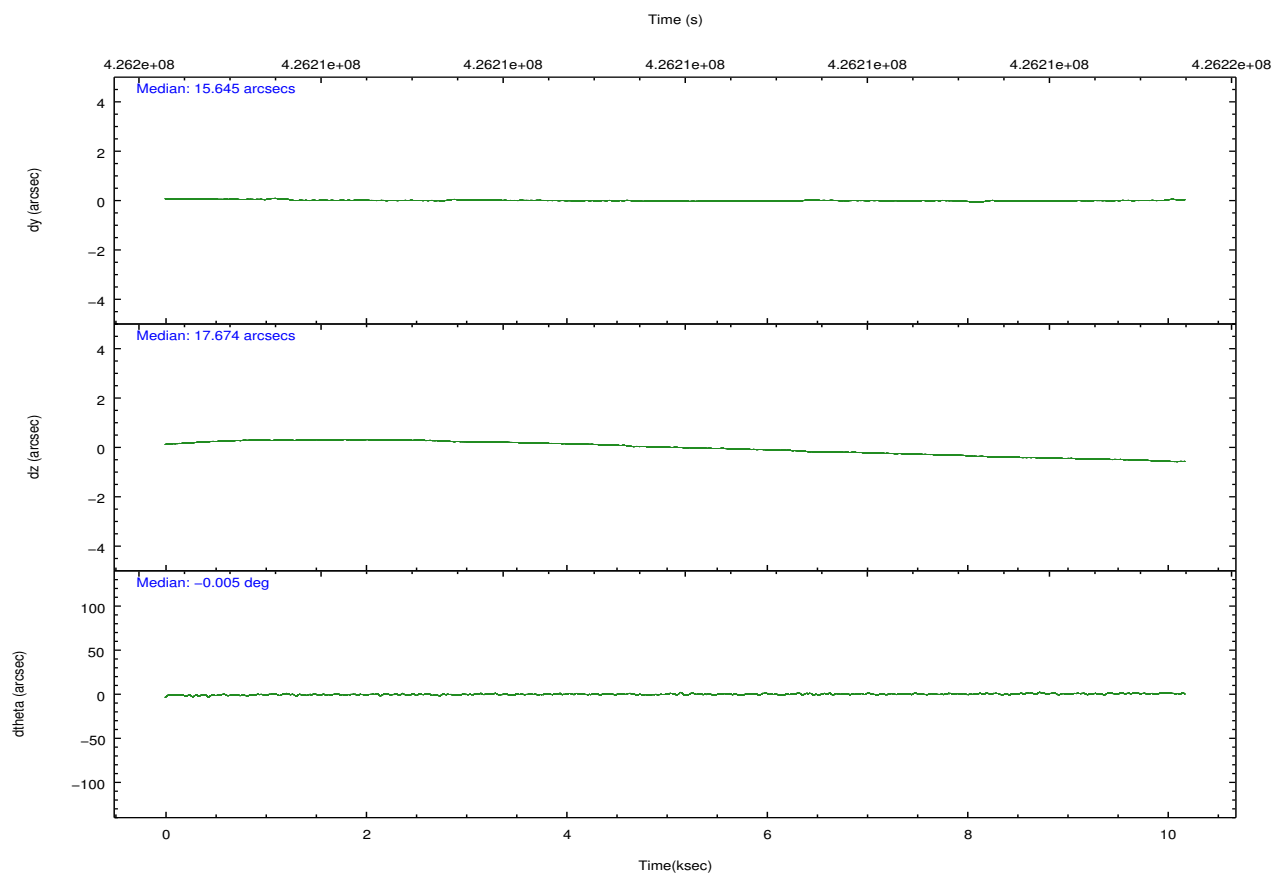
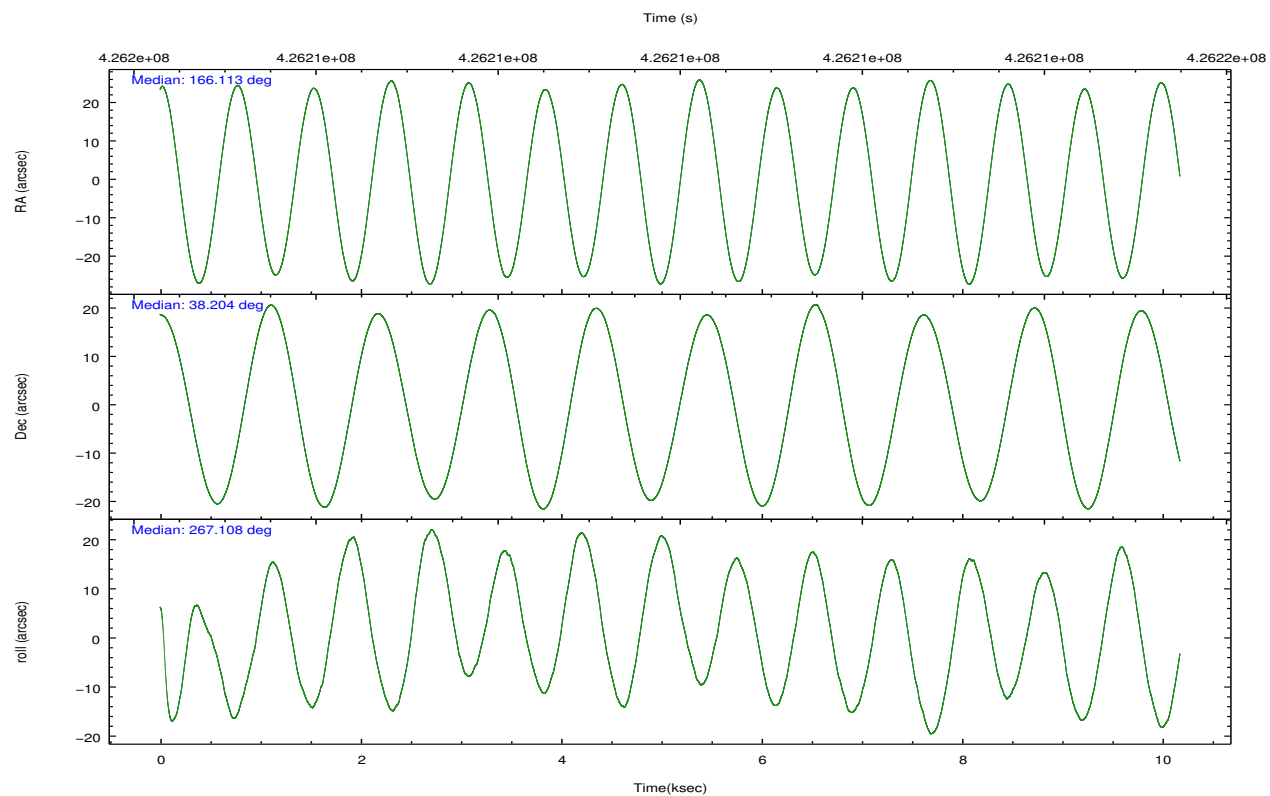


## 2.2 Compared Parameters

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	166.094681	166.1130426879954			
[deg] Pointing Dec	38.228915	38.20412817831976			
[deg] Pointing Roll	267.057637	267.113611784844			
[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)	426204968.184000	426204504.17612			
Observation start date	2011-07-04T22:15:02	2011-07-04T22:08:24			
[s] Observation end time (MET)	426214968.184000	426215231.82668			
Observation end date	2011-07-05T01:01:42	2011-07-05T01:07:11			

## 2.3 Aspect



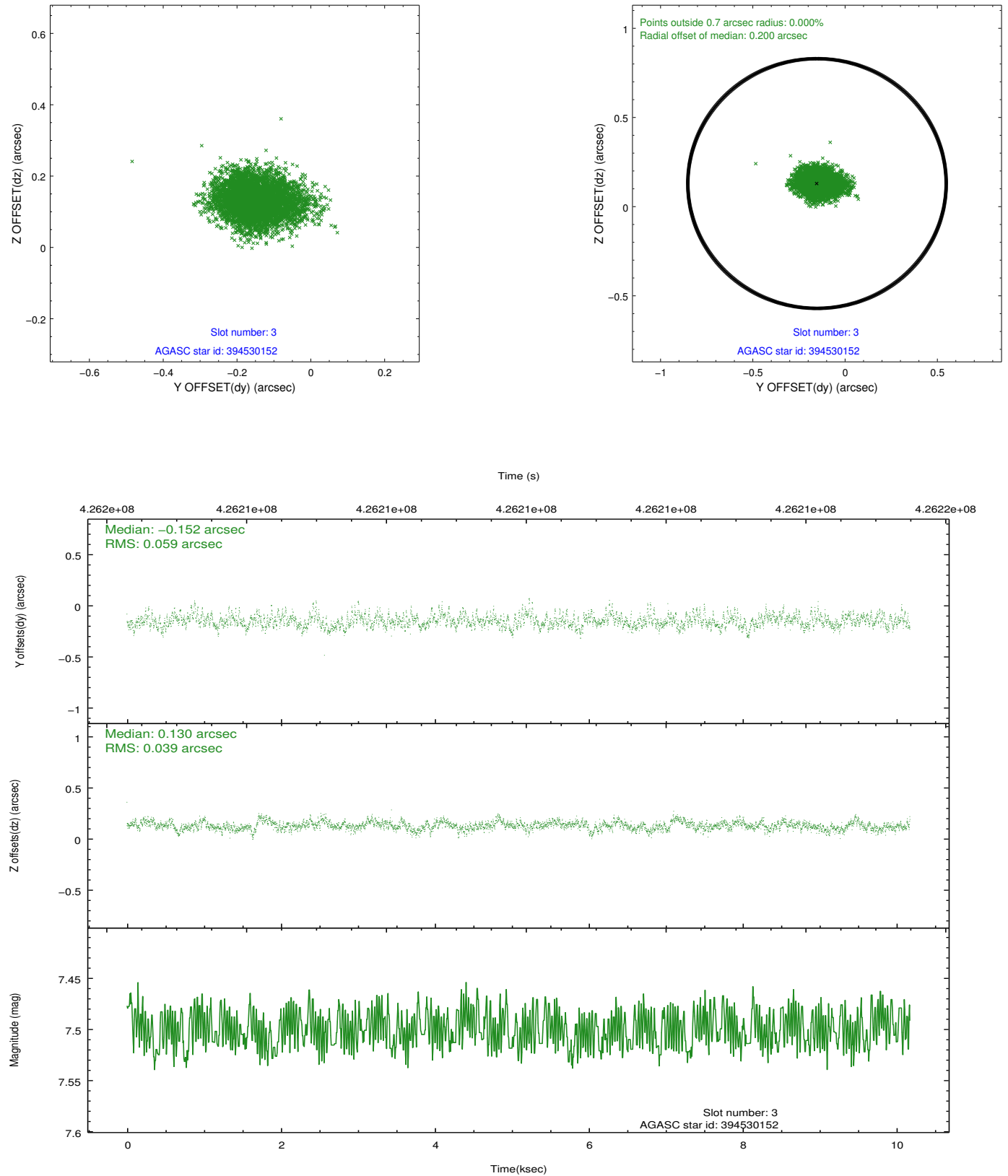


### Slot Statistics

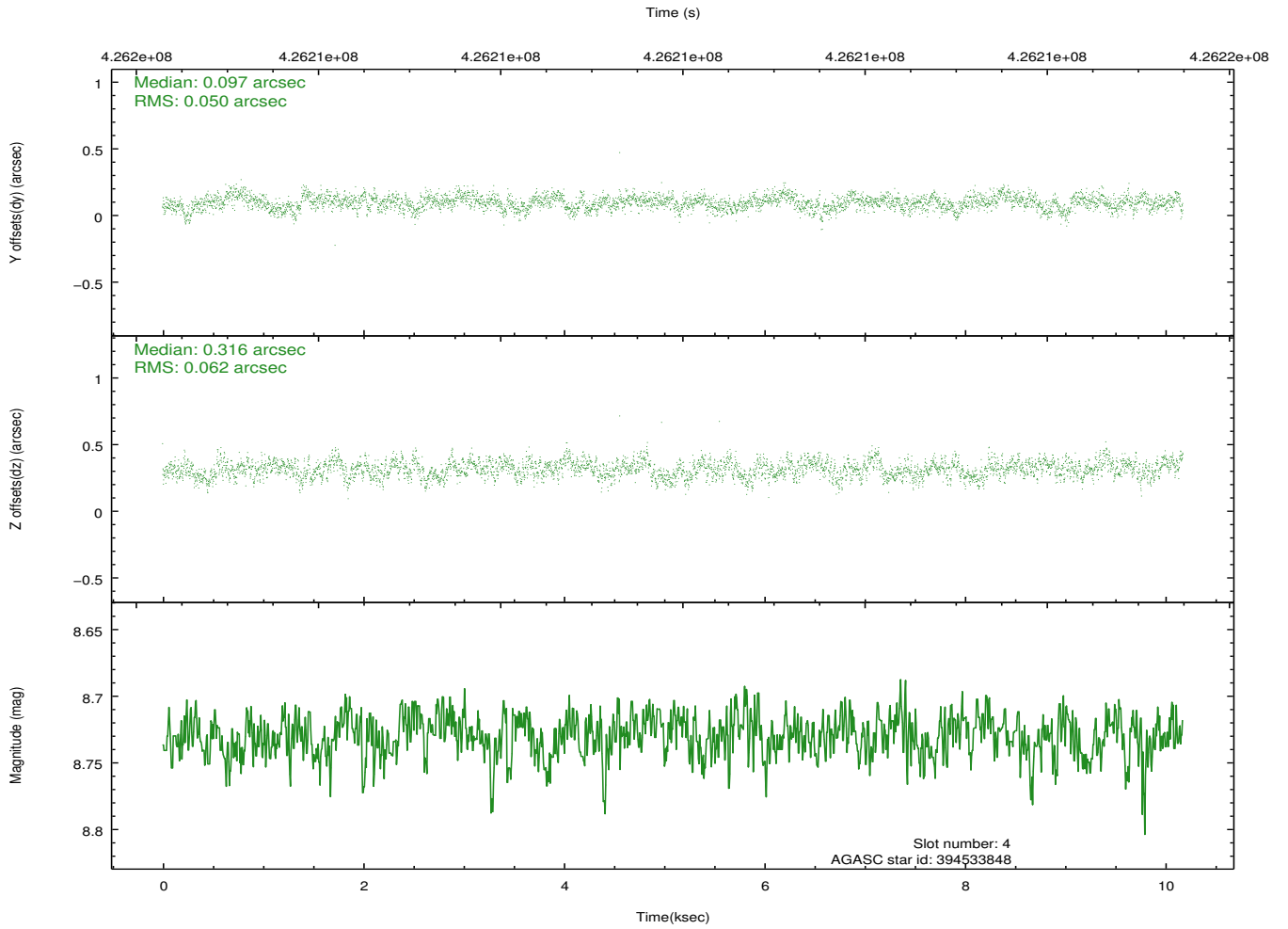
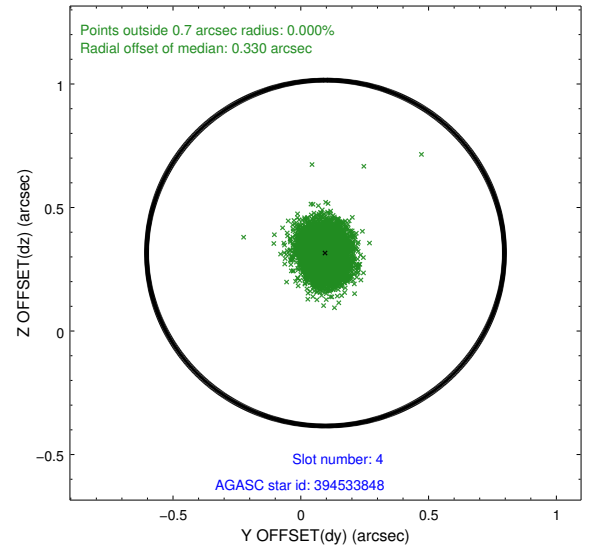
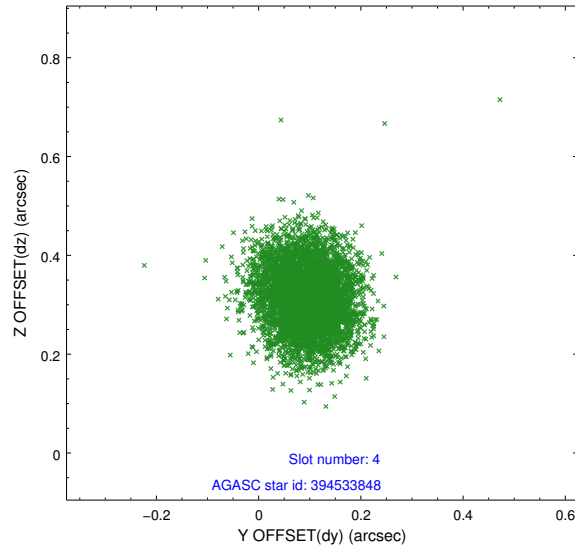
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-S-1	7.02	2482	0.048	-0.157	0.012	0.018	0.000000	0.000000	-1170.08	-466.60
1	FID	HRC-S-2	7.00	2482	0.233	-0.109	0.006	0.011	0.000000	0.000000	1229.31	-459.32
2	FID	HRC-S-3	7.02	2482	0.109	-0.036	0.011	0.017	0.000000	0.000000	-1172.27	562.87
3	GUIDE	394530152	7.50	4964	-0.152	0.130	0.074	0.126	166.075805	38.868252	-2295.39	-171.13
4	GUIDE	394533848	8.73	4963	0.097	0.316	0.085	0.135	166.382906	38.276007	-212.72	801.03
5	GUIDE	394543960	9.78	4922	0.158	0.202	0.144	0.244	165.802757	37.787371	1629.53	-747.43
6	GUIDE	394546712	6.60	4965	-0.166	0.252	0.078	0.126	166.451462	38.394357	-647.49	973.79
7	GUIDE	394546720	6.41	4964	0.062	-0.896	0.104	0.169	166.130115	38.241361	-49.37	97.00

## 2.4 Star Slots

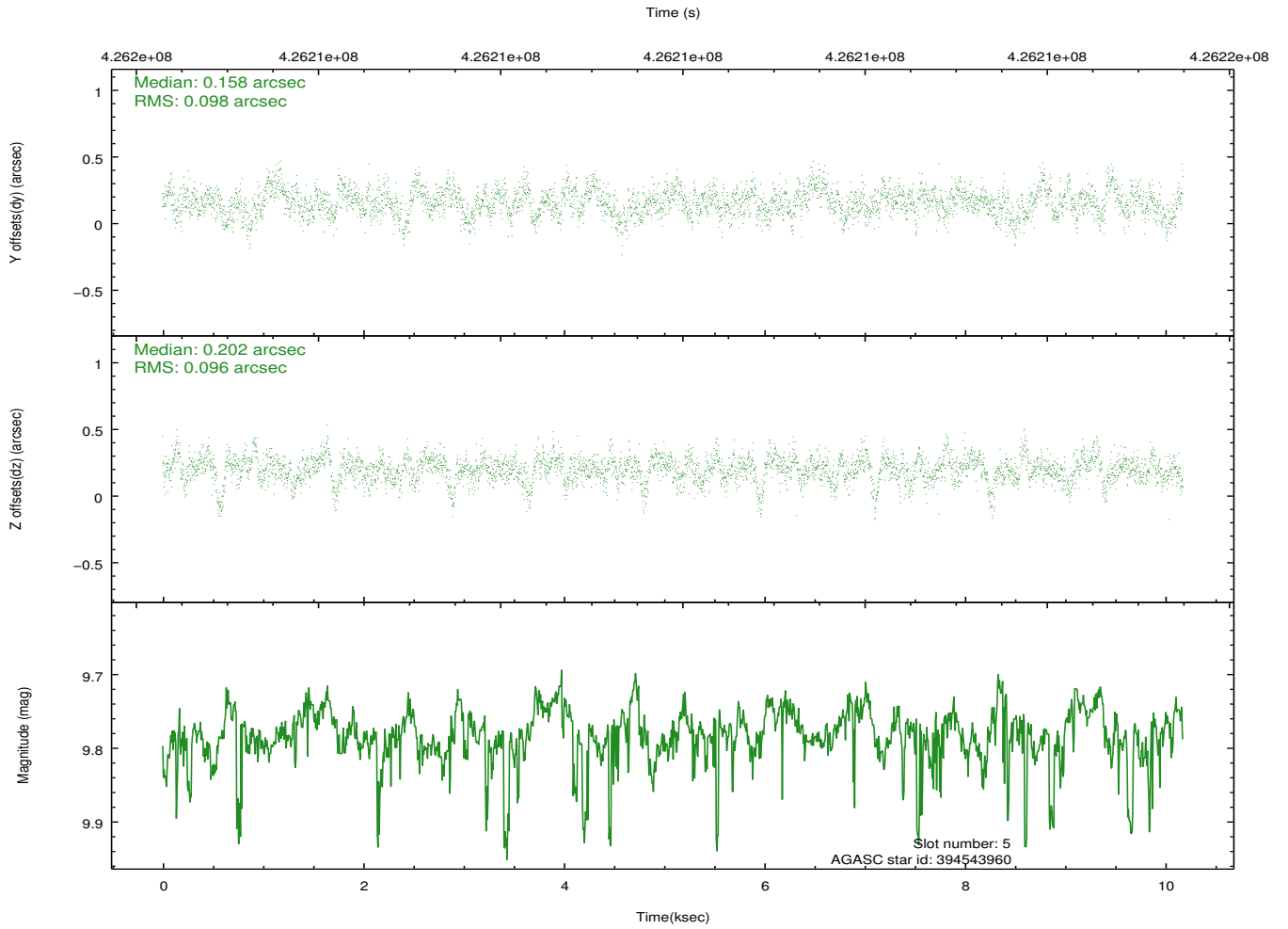
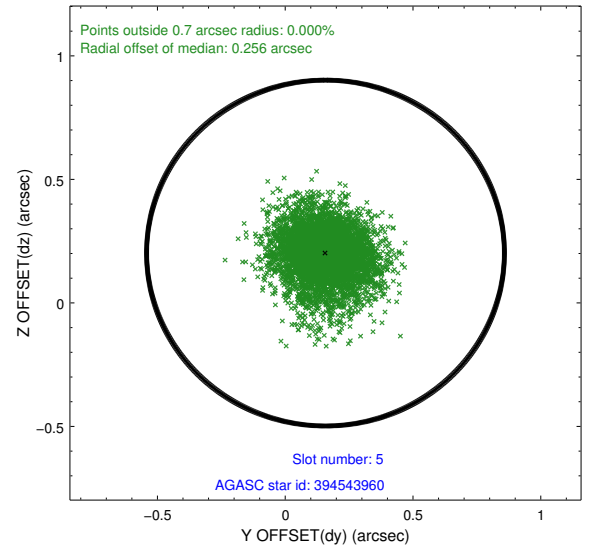
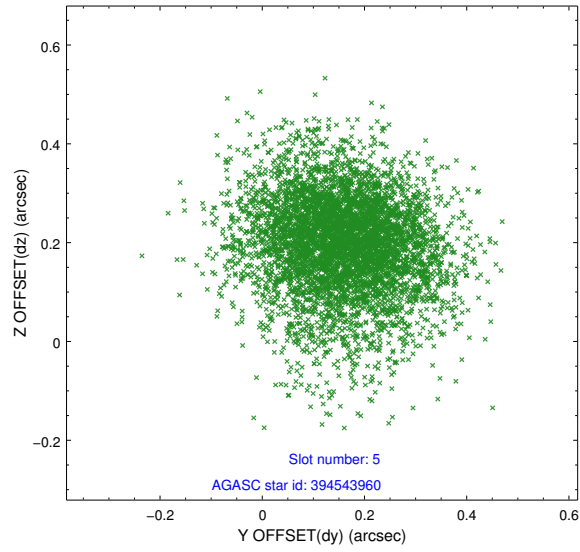
### 2.4.1 Slot 3



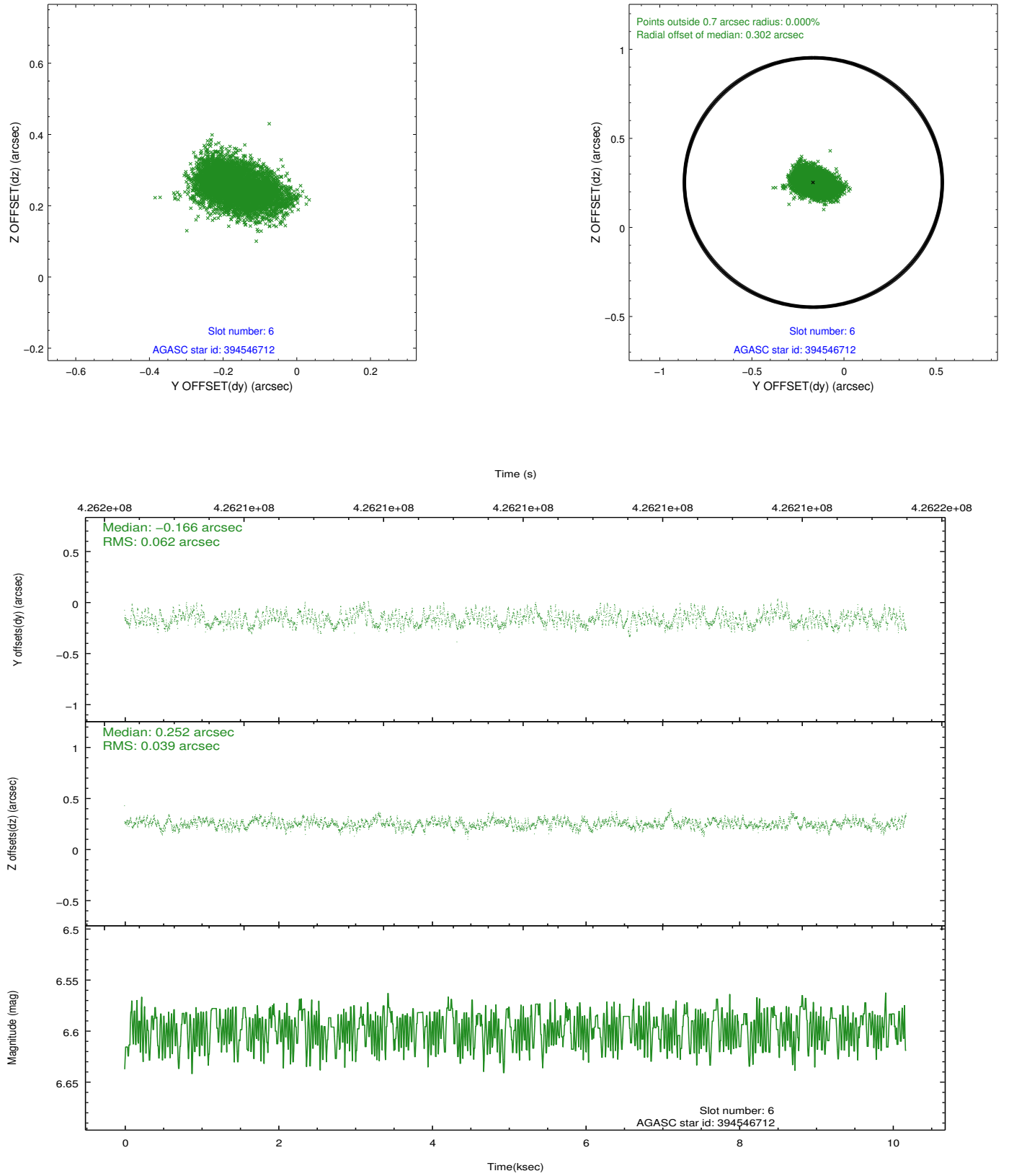
## 2.4.2 Slot 4



### 2.4.3 Slot 5

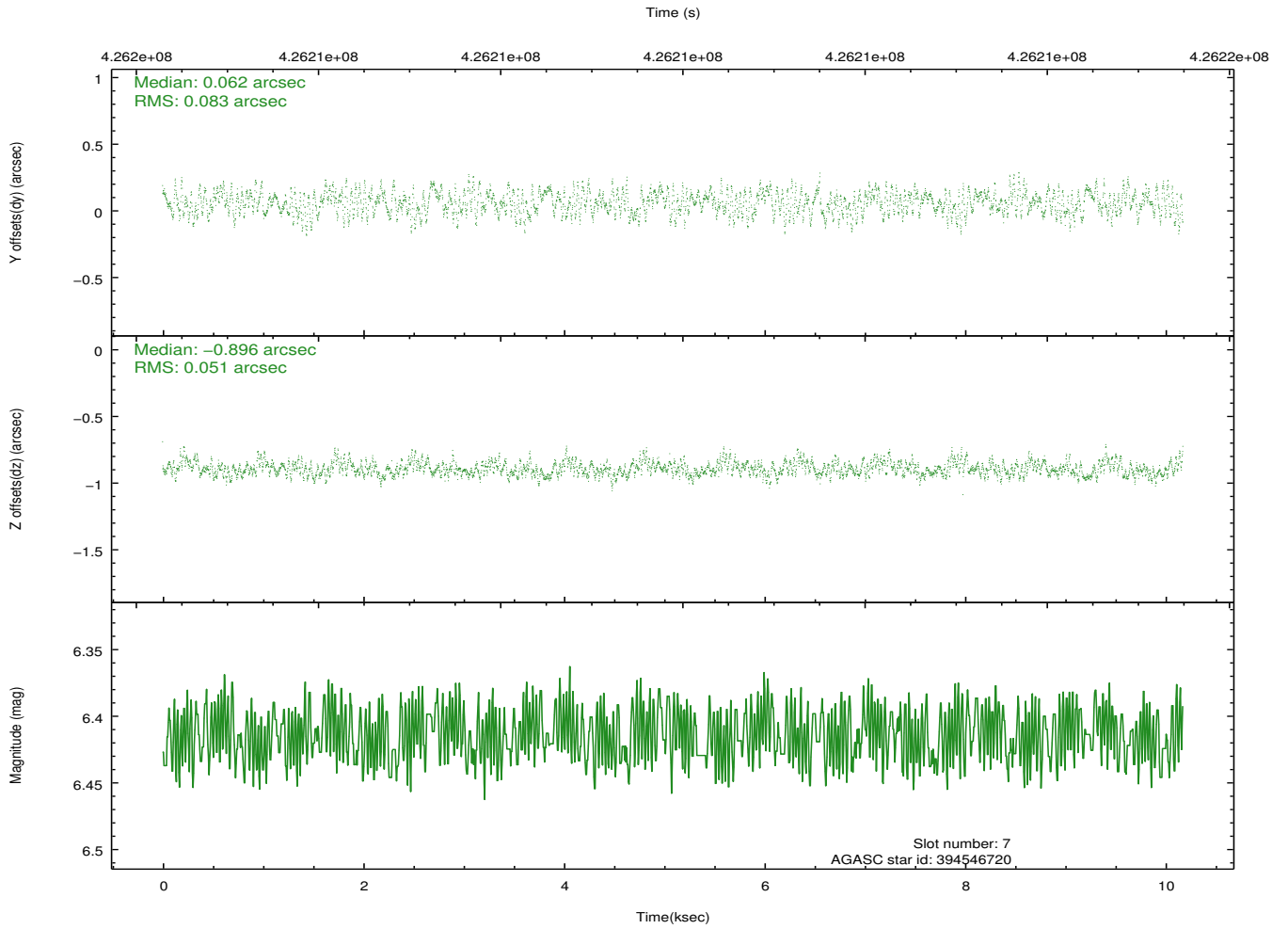
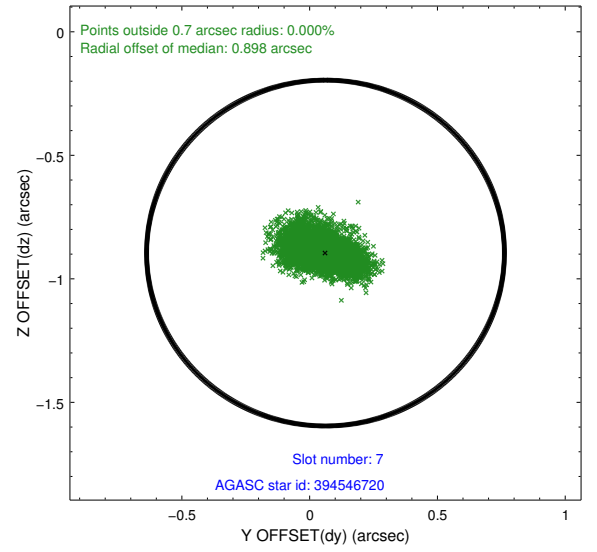
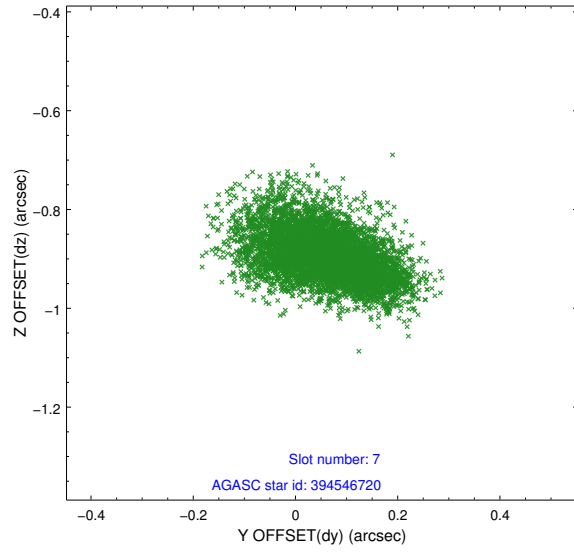


## 2.4.4 Slot 6



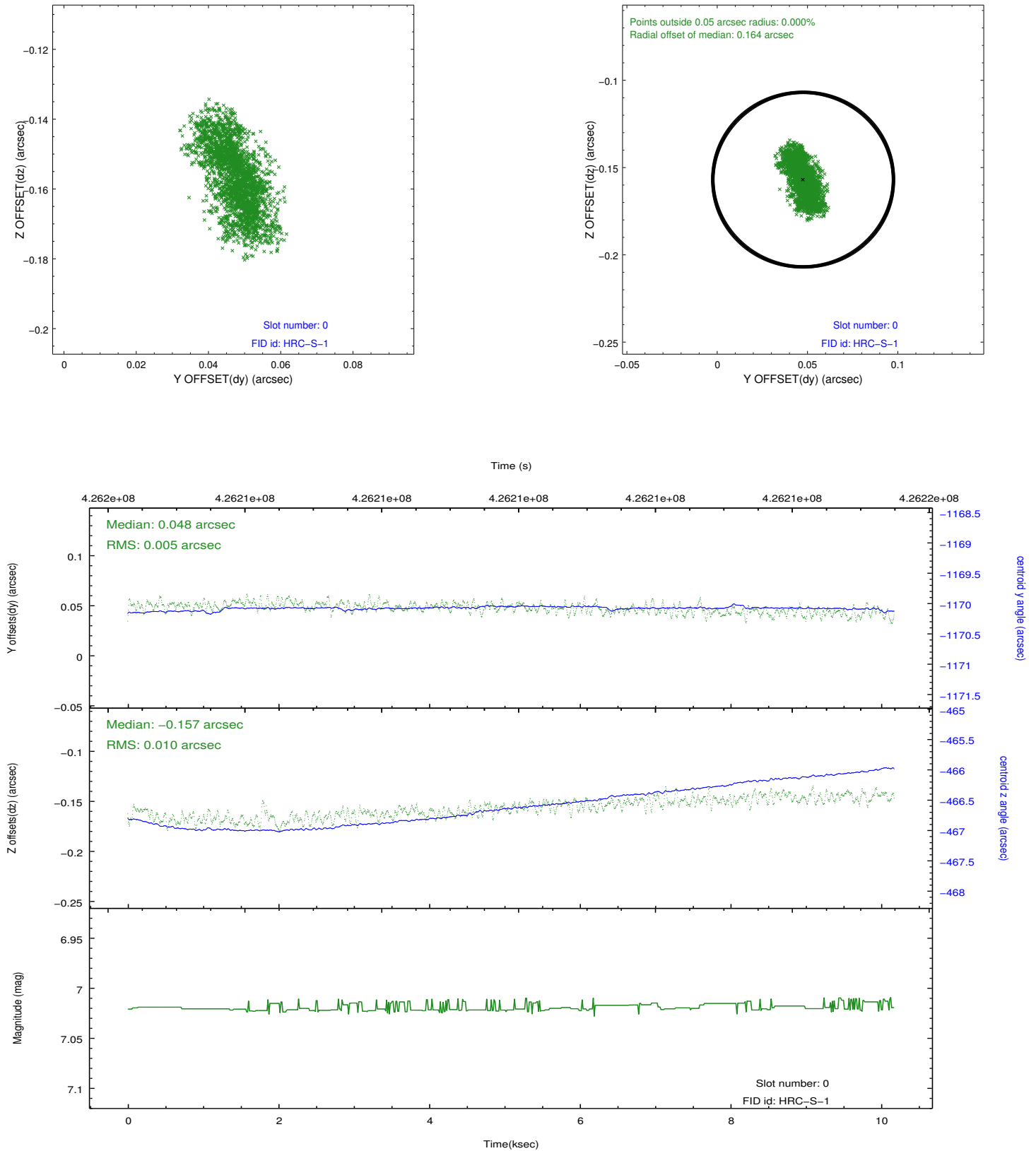


## 2.4.5 Slot 7

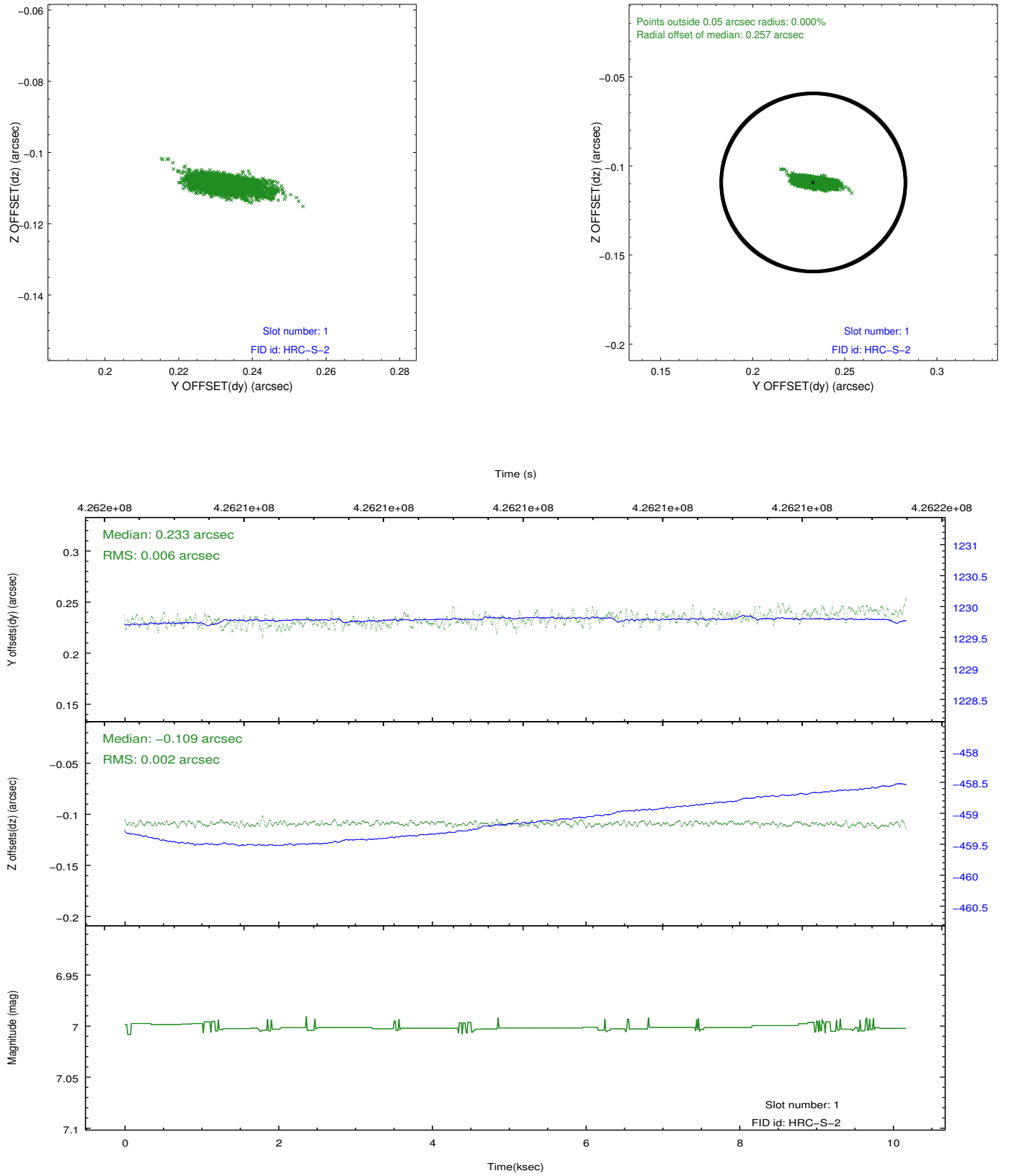


## 2.5 FID Slots

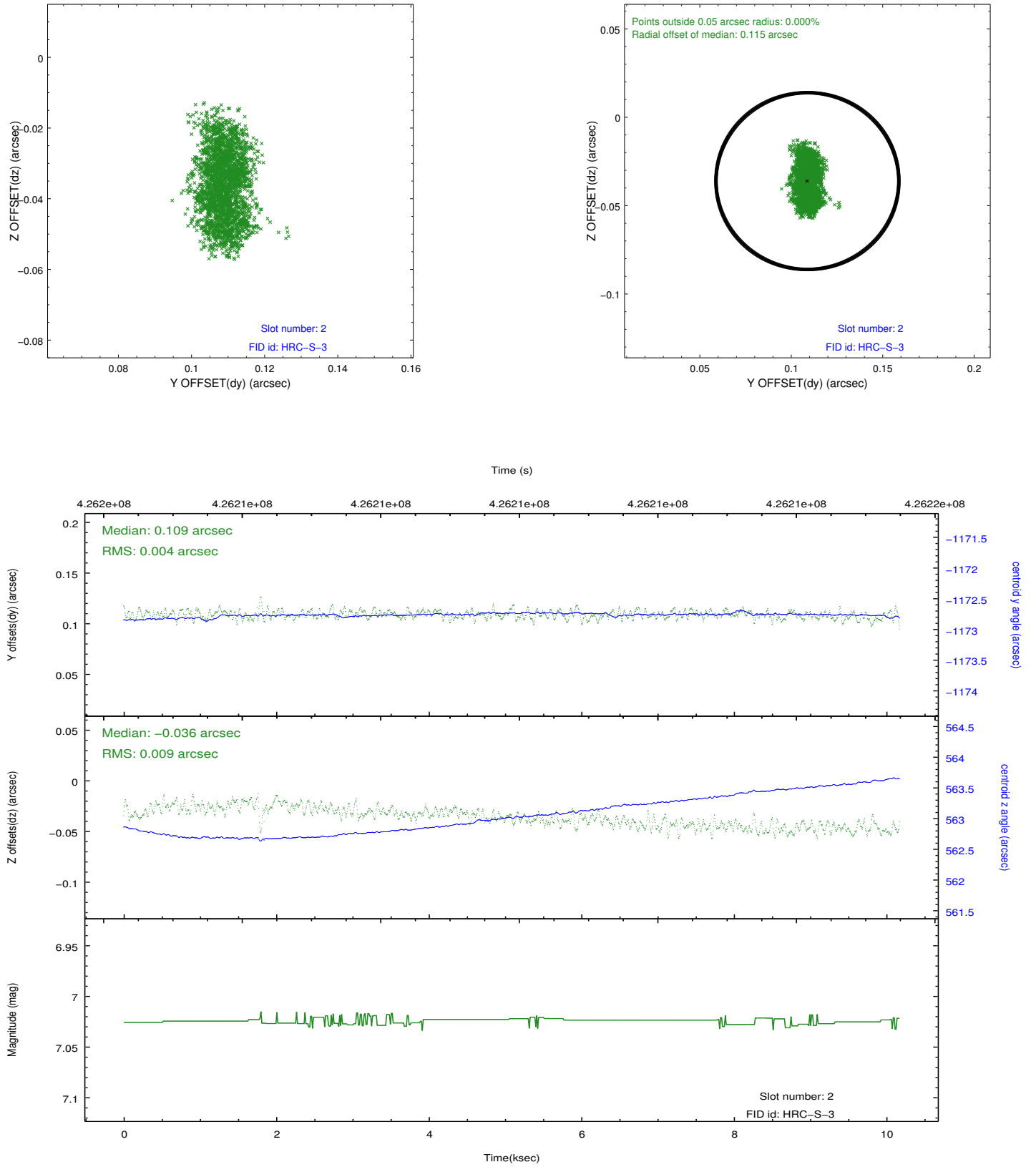
### 2.5.1 Slot 0



## 2.5.2 Slot 1

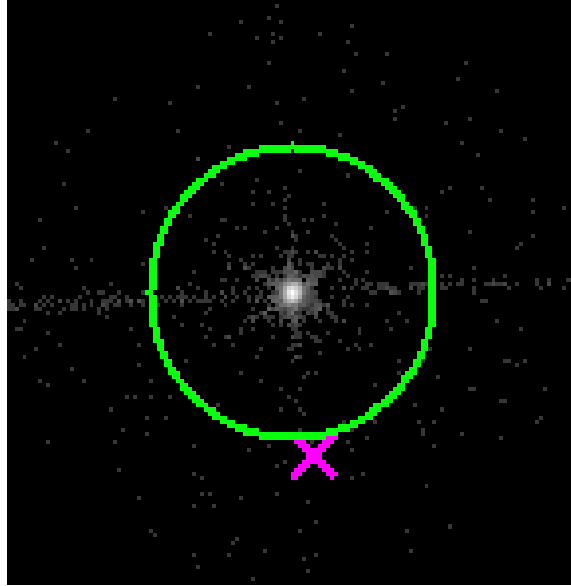


### 2.5.3 Slot 2

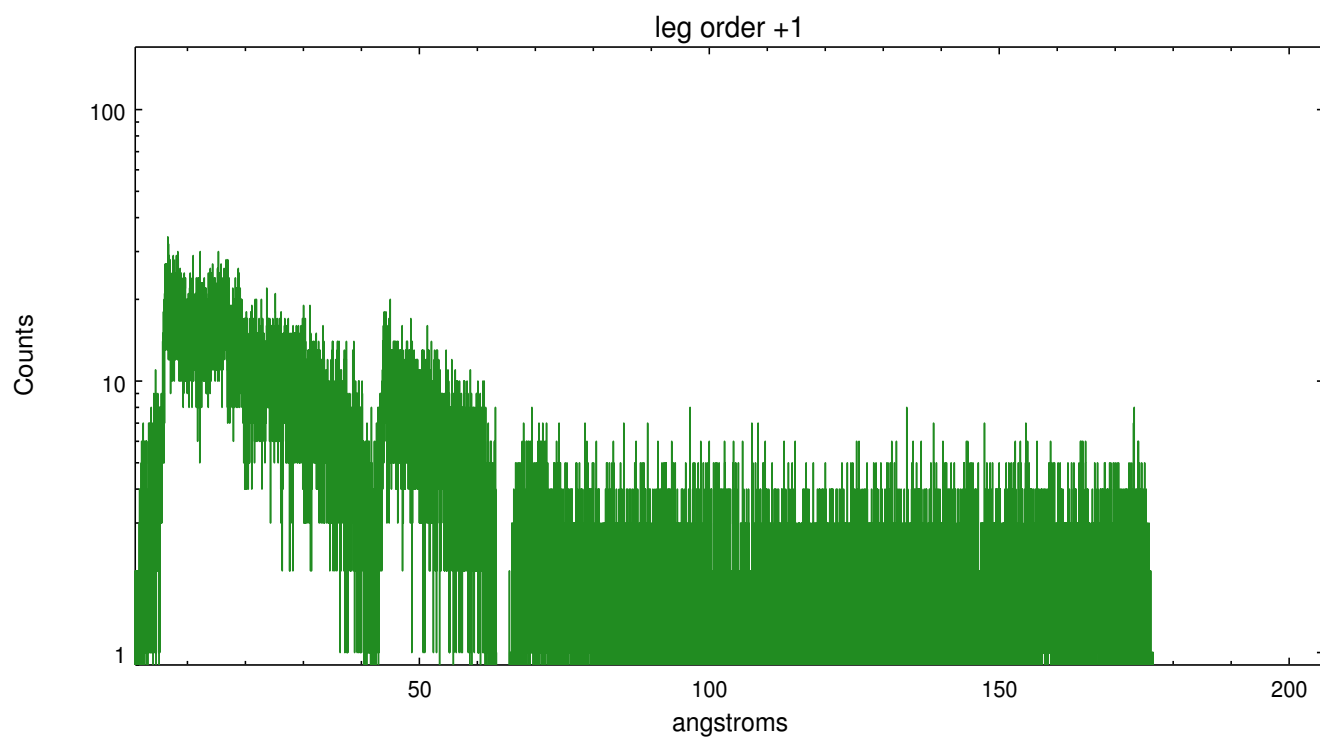
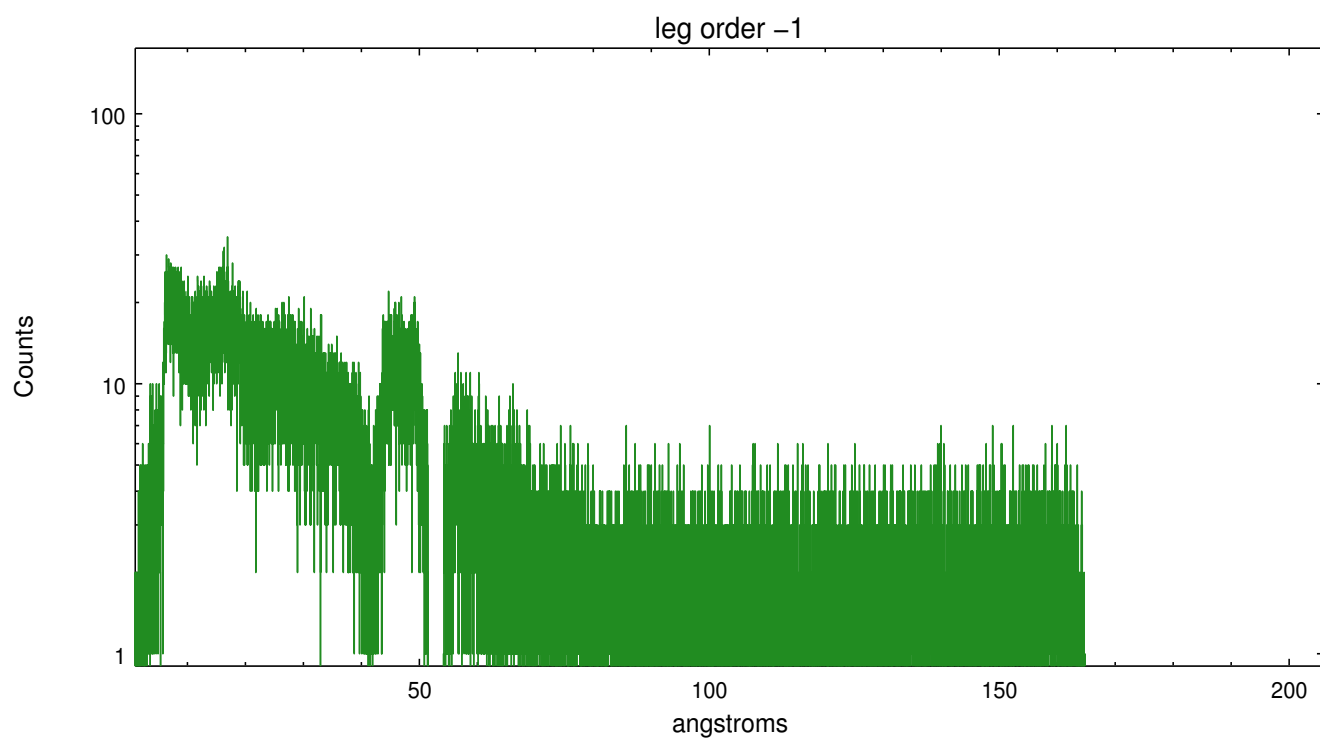


## 3 Gratings

### 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	10.175175530732

### A.2 Comments