

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 5317 - L2 Version 3  
Chandra X-Ray Center

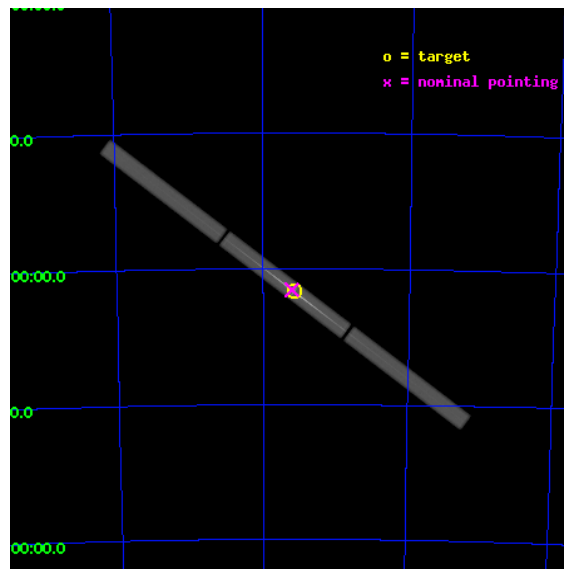
L2 Processing Date : Dec 1 2012

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Parameters . . . . .	4
2.1.3	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>3</b>	<b>Gratings</b>	<b>17</b>
3.1	LETG Arm . . . . .	17
<b>A</b>	<b>Summary</b>	<b>19</b>
A.1	Status . . . . .	19
A.2	Comments . . . . .	19

# 1 Front

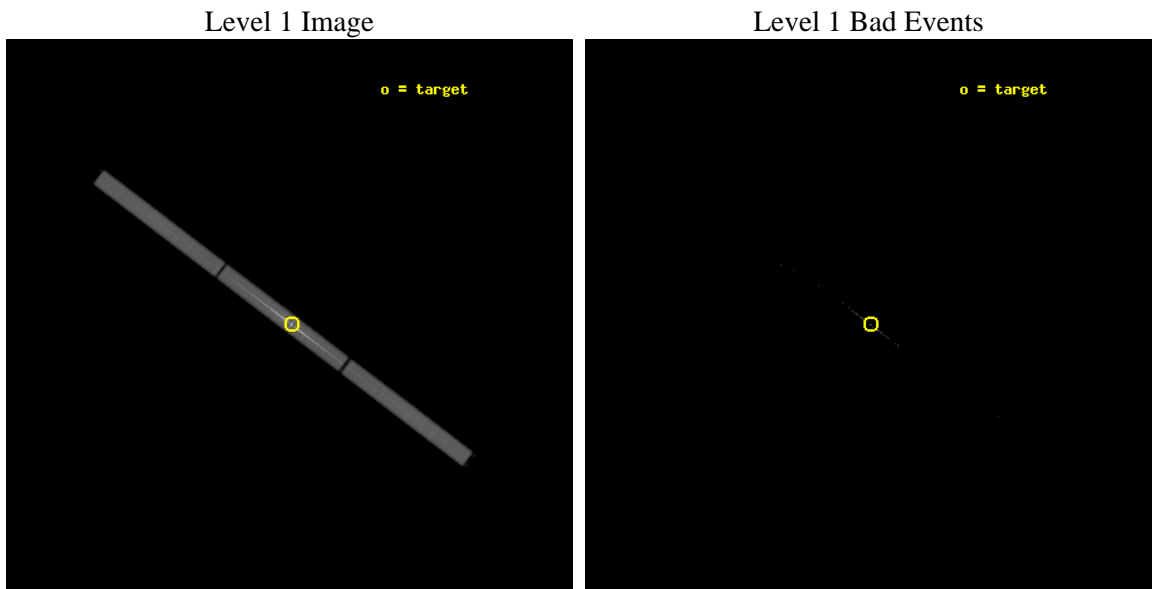
seq_num	400357	Sequence number
obs_id	5317	Observation id
title	High Resolution Spectroscopy of LMC X-3: Probing Local Hot X-ray Absorbing Gas	Proposal title
observer	Dr. Taotao Fang	Principal investigator
object	LMC X-3	Source name
ra_targ	84.734583	Observer's specified target RA [deg]
dec_targ	-64.084167	Observer's specified target Dec [deg]
ra_nom	84.753290600753	Nominal RA [deg]
dec_nom	-64.077887638512	Nominal Dec [deg]
roll_nom	217.02209552394	Nominal Roll [deg]
revision	3	Processing version of data
ontime	39831.758007109	[s]
livetime	39524.407475458	Overtime multiplied by DTCOR
l2events	2719665	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	40000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	39831.758007109	[s]
caldbver	4.5.2	&#160	l1events	3521970	Number of level 1 events
date	2012-12-01T02:02:49	Date and time of file creation			
revision	3	Processing version of data			

### 2.1.3 Events

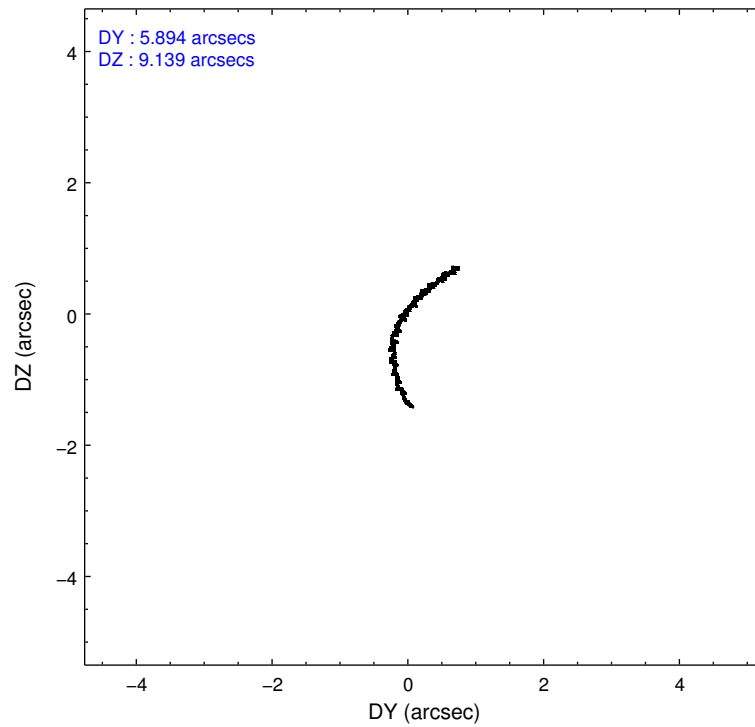
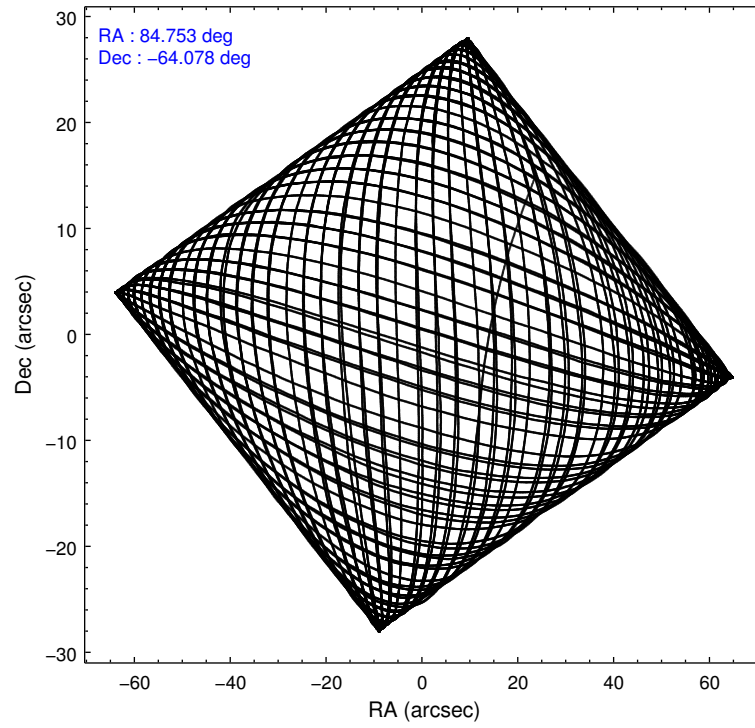
#### Level 1 Events

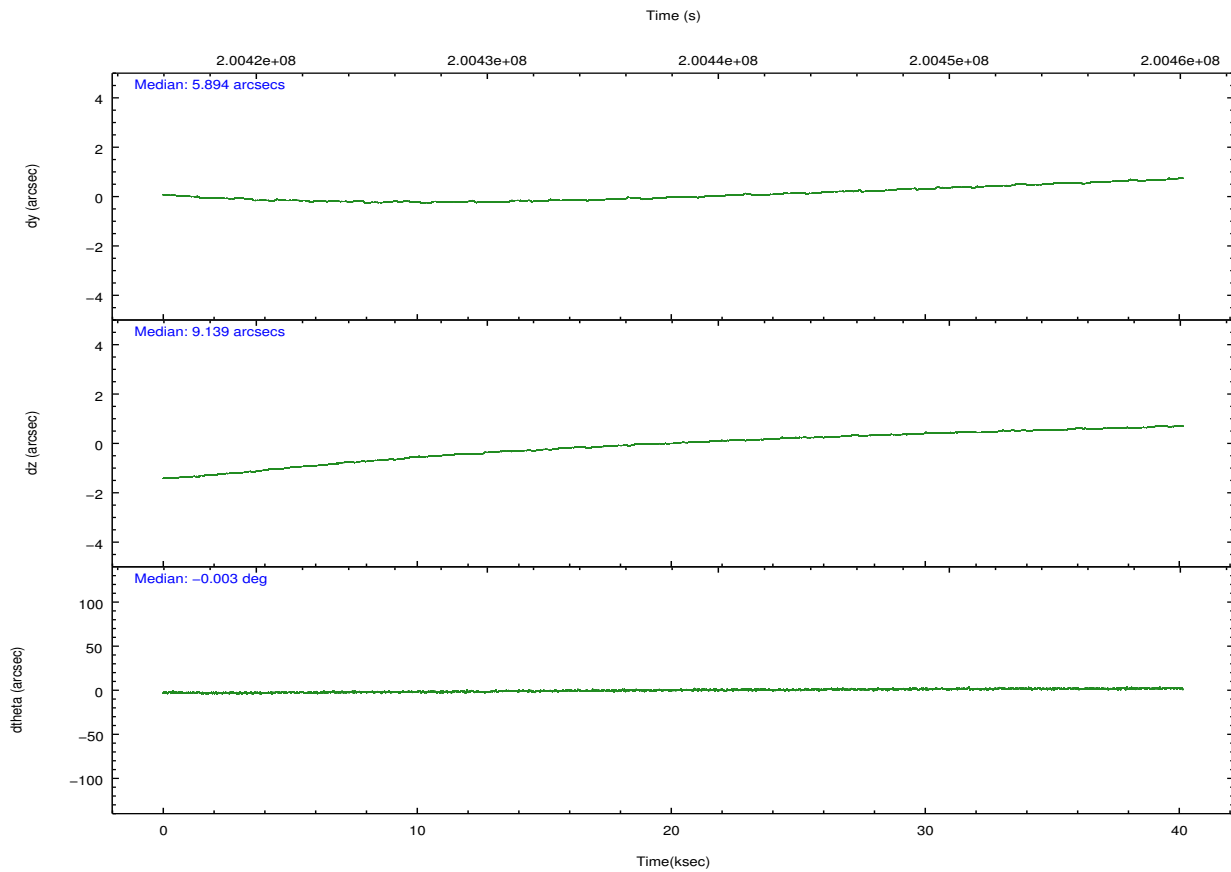
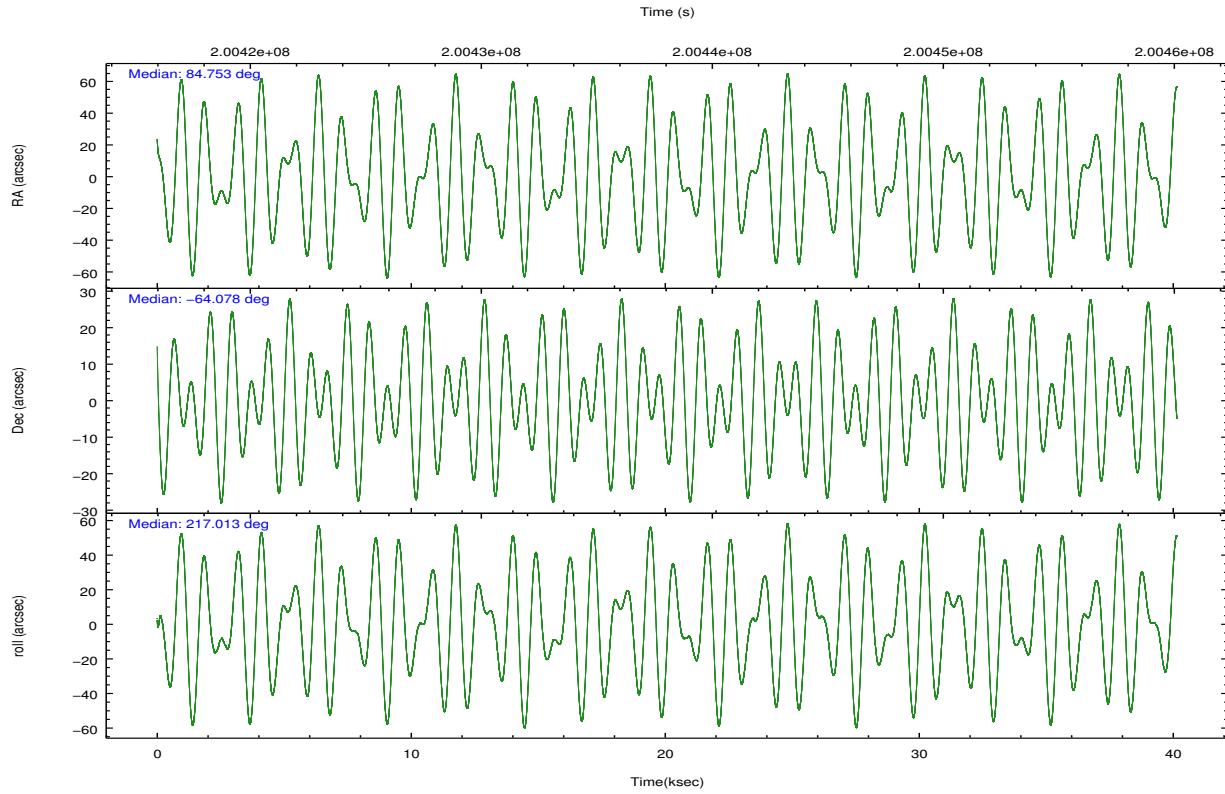
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	972398	1568790	980782
rejected events	3096	3984	3142
rejected %	0%	0%	0%

## 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	84.775779	84.75329060075285			
[deg] Pointing Dec	-64.051015	-64.07788763851156			
[deg] Pointing Roll	216.974980	217.0220955239362			
[mm] SIM focus pos	-1.429586	-1.428180813131781			
[mm] SIM defocus	0.1037507710433287	0.1051558262725154			
[mm] SIM translation stage pos	250.943976	250.9487816181005			
[mm] SIM translation stage offset	-0.488	-0.4928032245458098			
[s] Observation start time (MET)	200418113.184000	200416936.41011			
Observation start date	2004-05-08T15:40:49	2004-05-08T15:22:16			
[s] Observation end time (MET)	200458113.184000	200459492.36198			
Observation end date	2004-05-09T02:47:29	2004-05-09T03:11:32			

## 2.3 Aspect



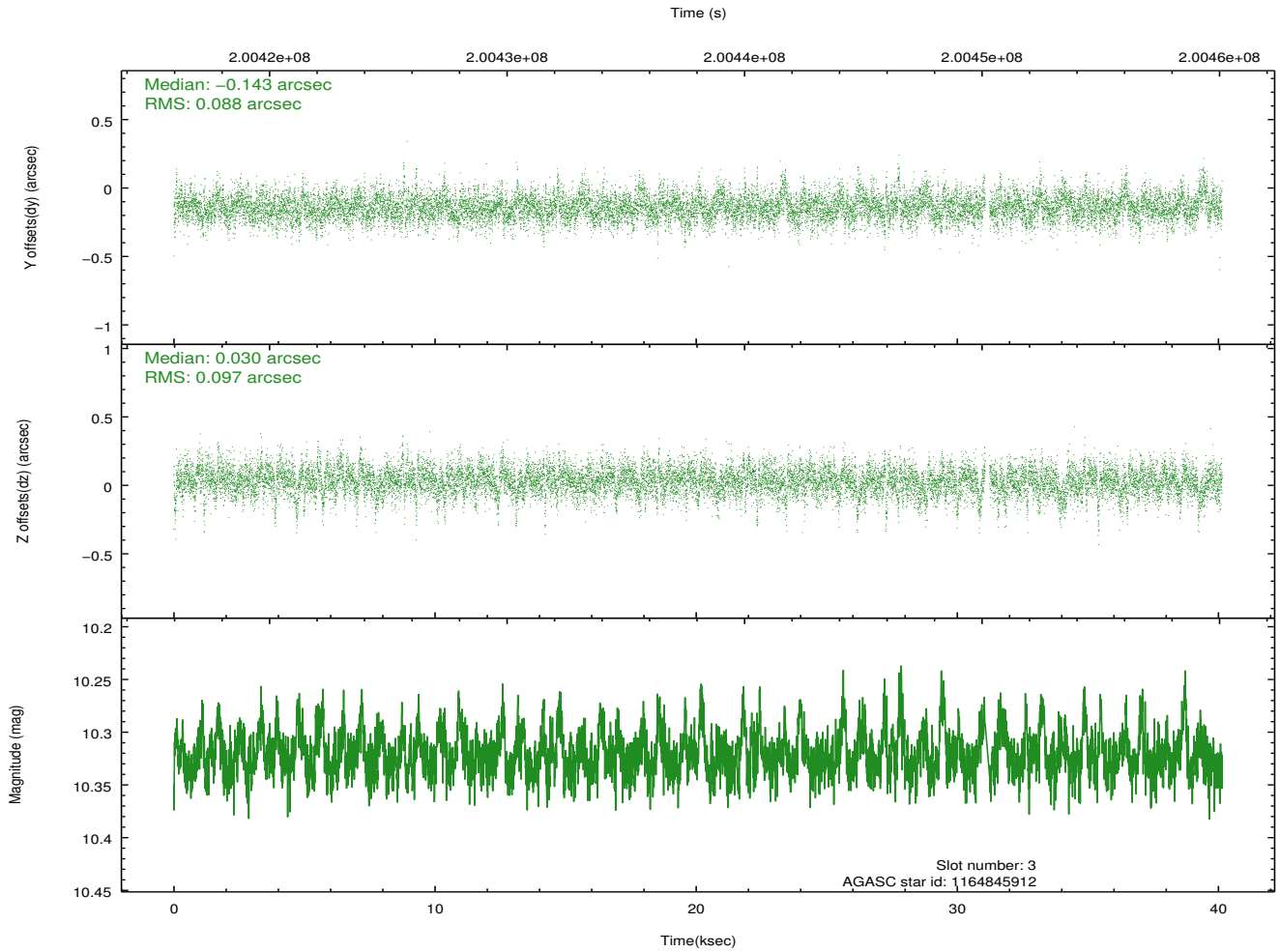
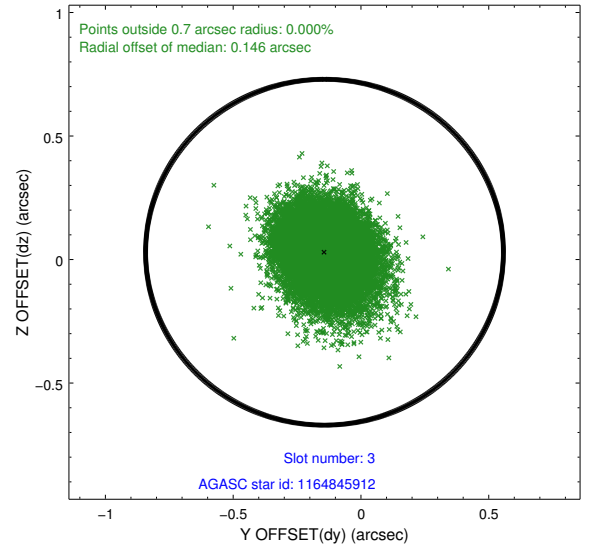
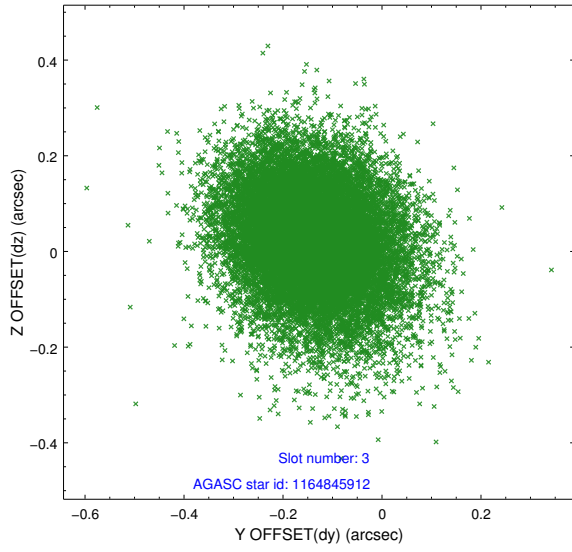


### Slot Statistics

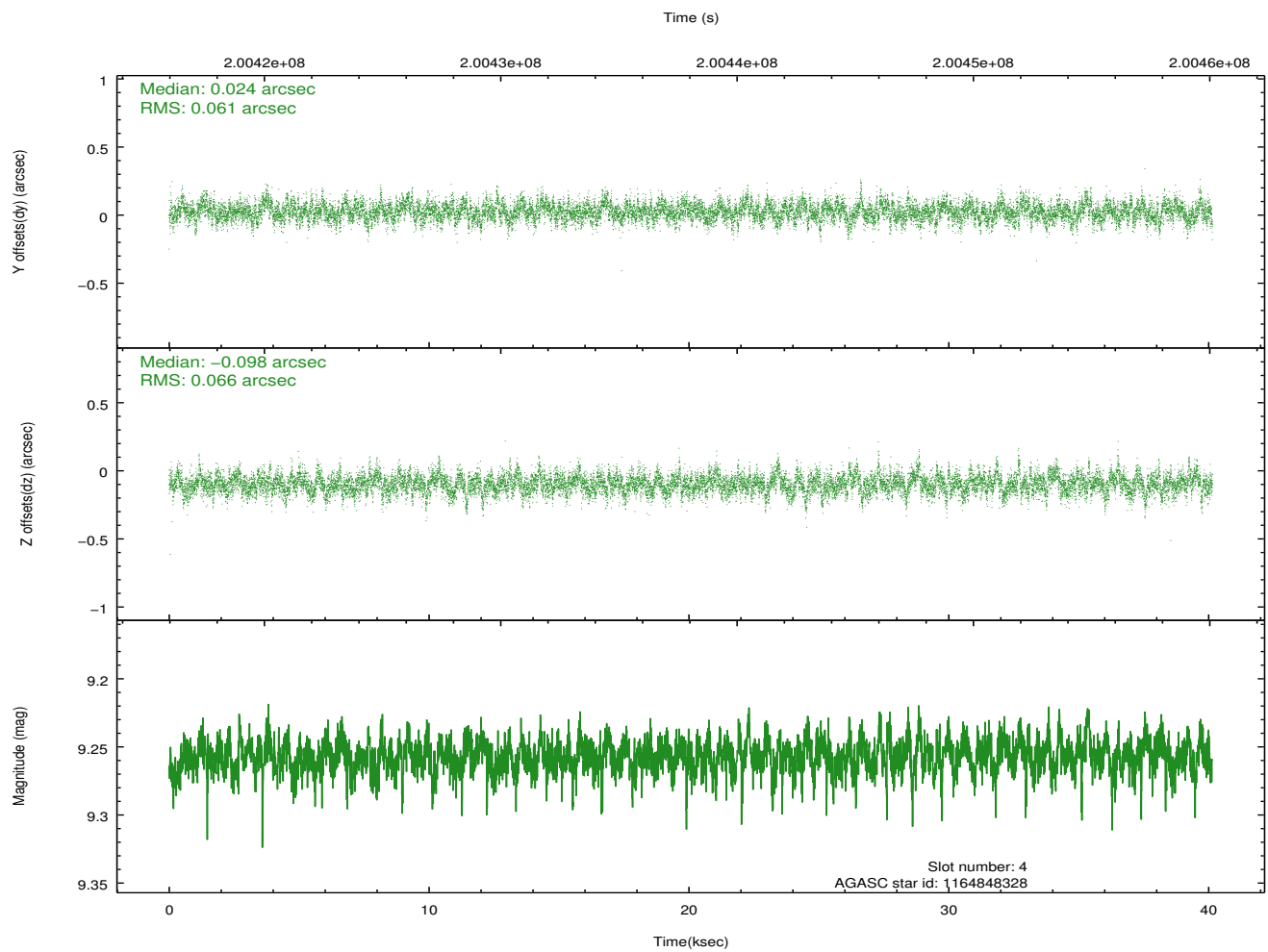
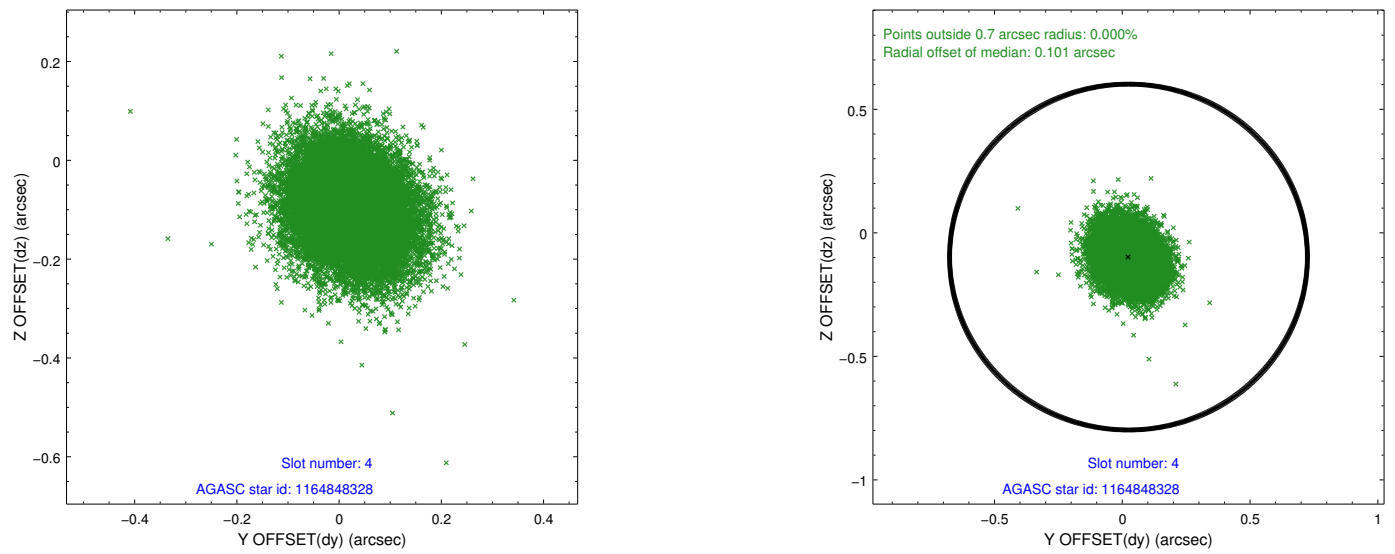
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-S-1	7.01	9793	0.106	-0.170	0.017	0.047	0.000000	0.000000	-1160.10	-467.60
1	FID	HRC-S-2	6.99	9792	0.149	-0.098	0.010	0.017	0.000000	0.000000	1239.50	-460.24
2	FID	HRC-S-3	7.02	9793	0.135	-0.033	0.021	0.049	0.000000	0.000000	-1162.66	562.01
3	GUIDE	1164845912	10.32	19481	-0.143	0.030	0.136	0.231	85.697231	-64.294189	-616.87	1573.22
4	GUIDE	1164848328	9.26	19571	0.024	-0.098	0.094	0.157	84.701267	-64.093054	184.91	50.68
5	GUIDE	1166544016	9.68	19558	0.051	-0.065	0.135	0.223	86.089673	-64.349585	-976.56	2107.01
6	GUIDE	1166548256	8.76	19581	0.033	0.149	0.085	0.137	85.738698	-64.074093	-1153.85	987.34
7	GUIDE	1164840584	9.11	19571	0.030	-0.010	0.119	0.197	82.750564	-63.883359	2231.86	-2370.99

## 2.4 Star Slots

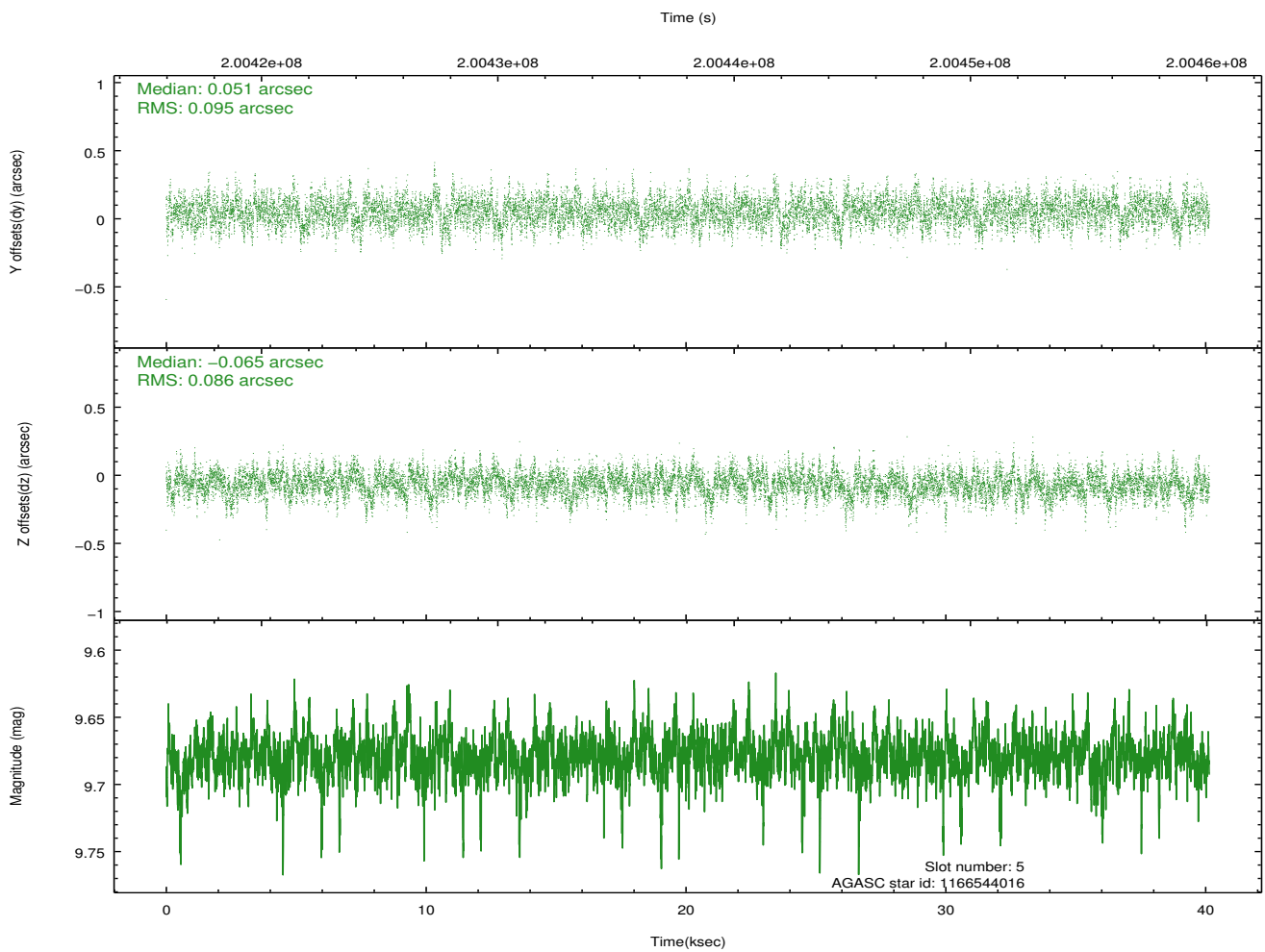
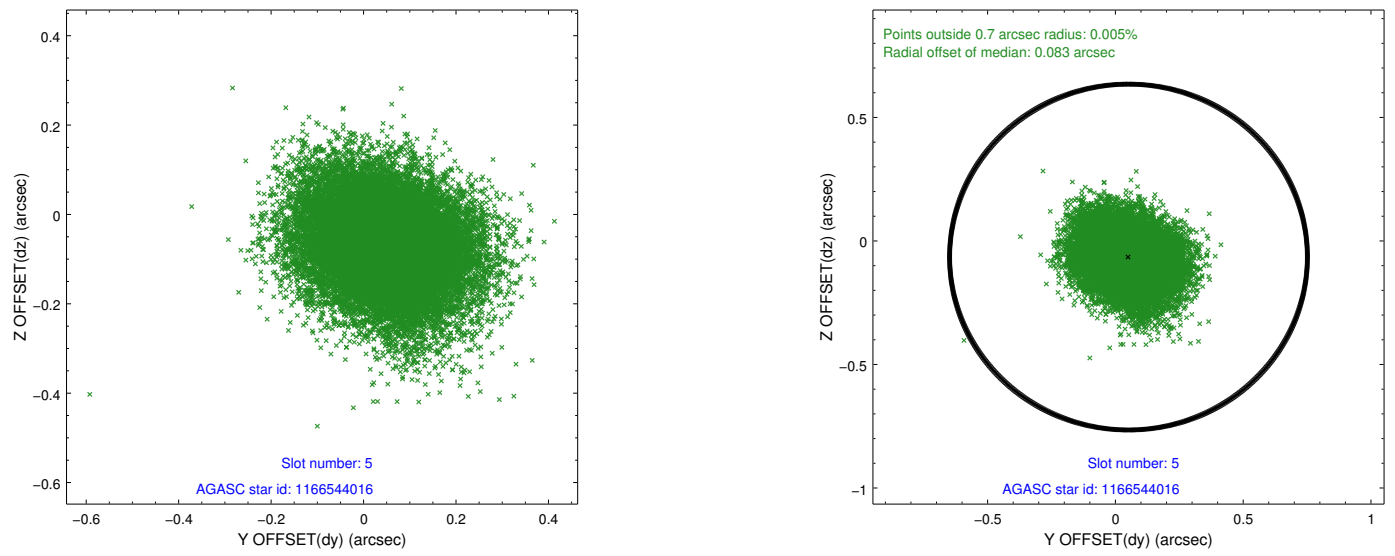
### 2.4.1 Slot 3



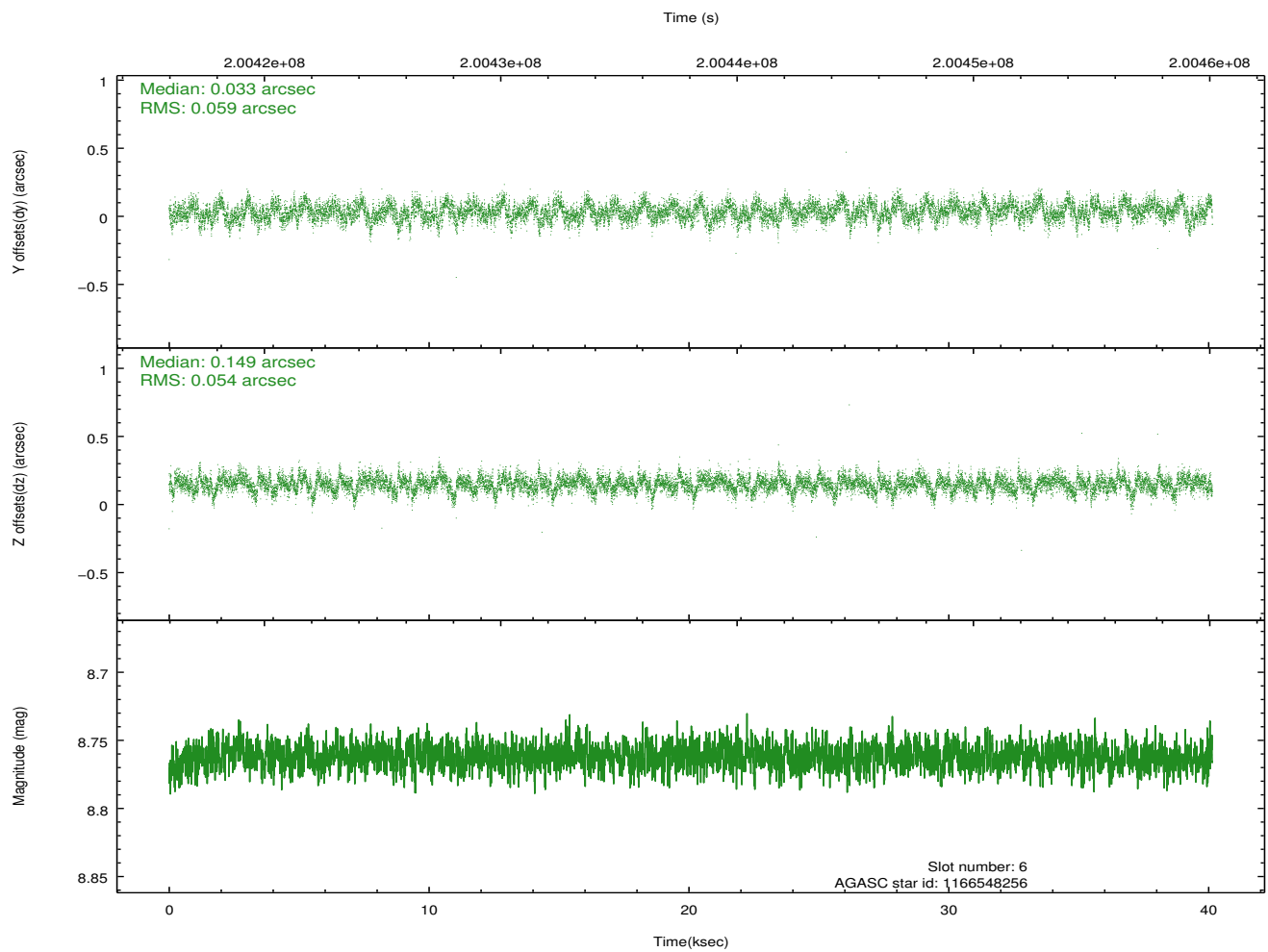
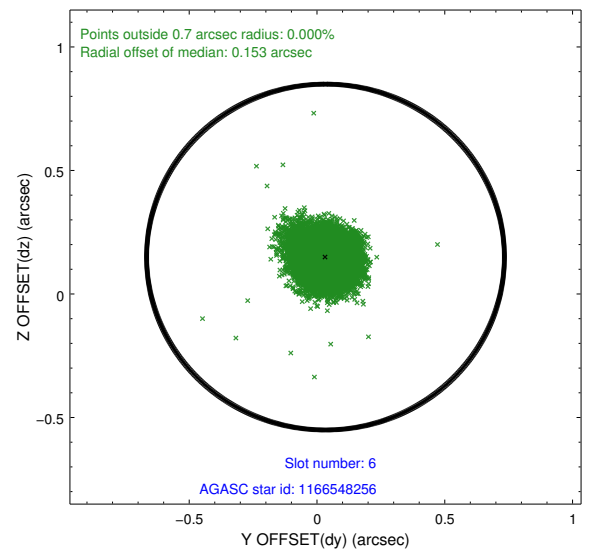
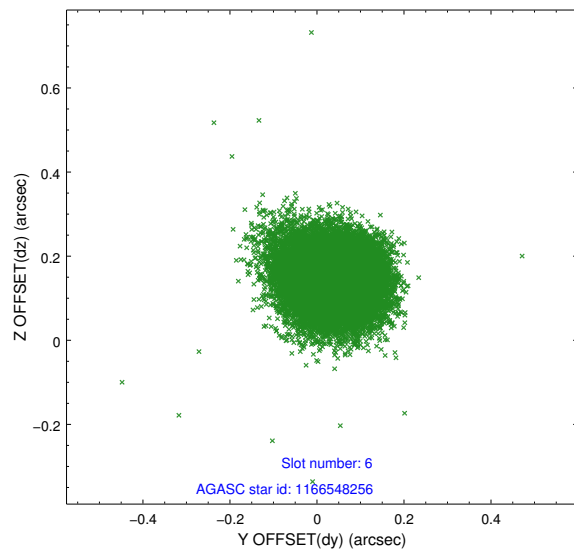
## 2.4.2 Slot 4



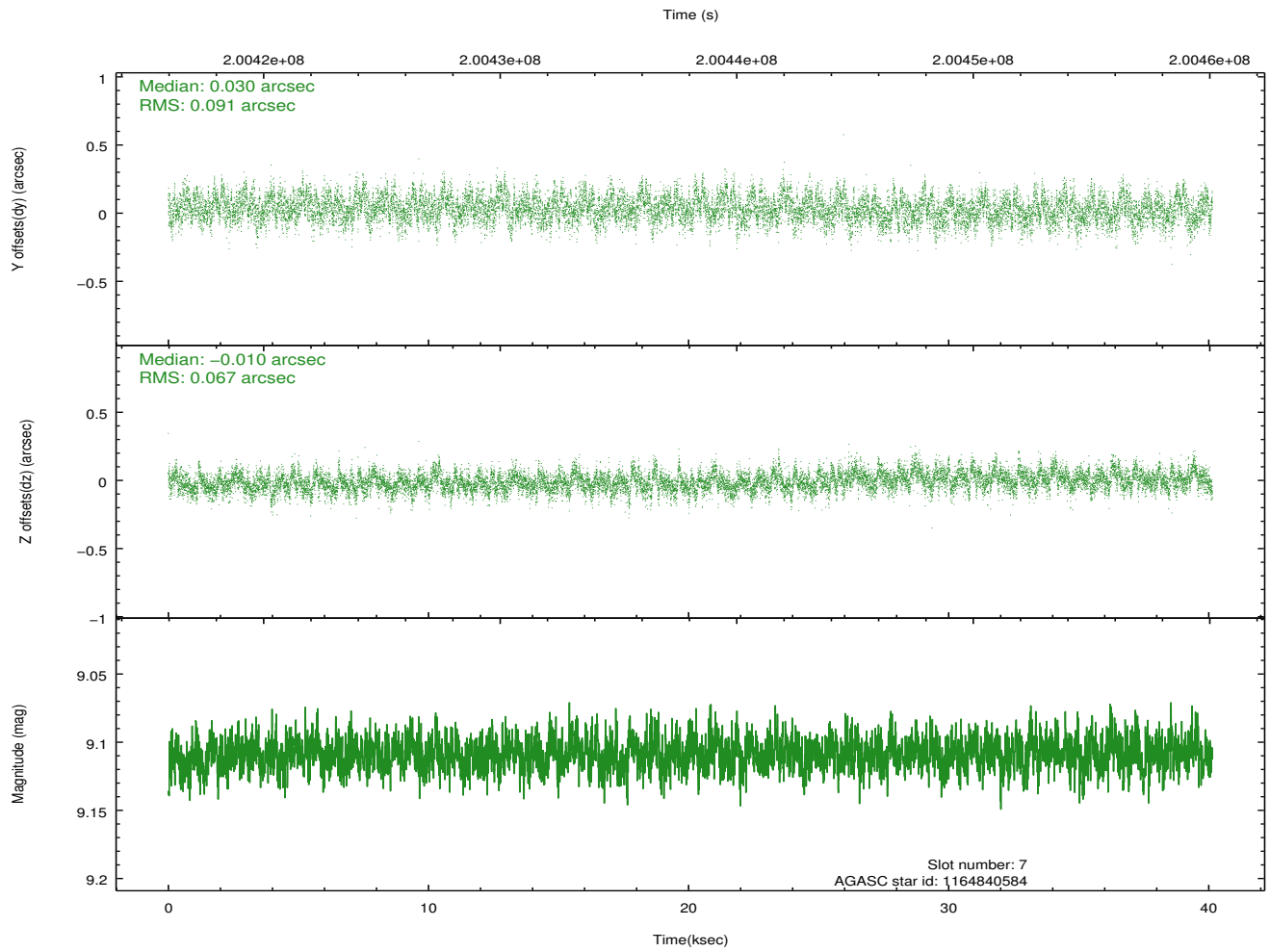
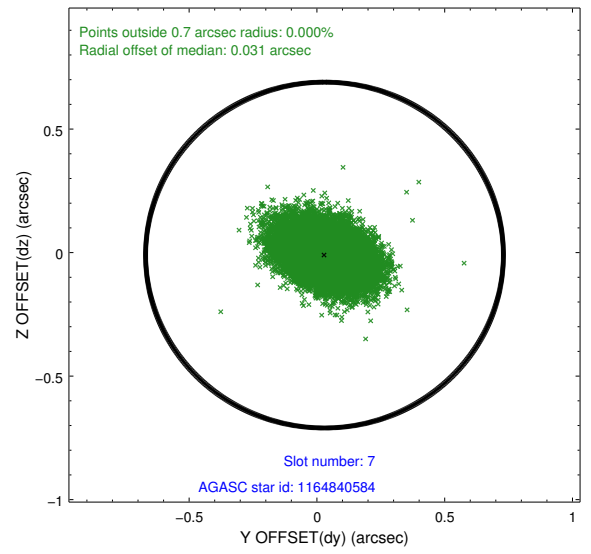
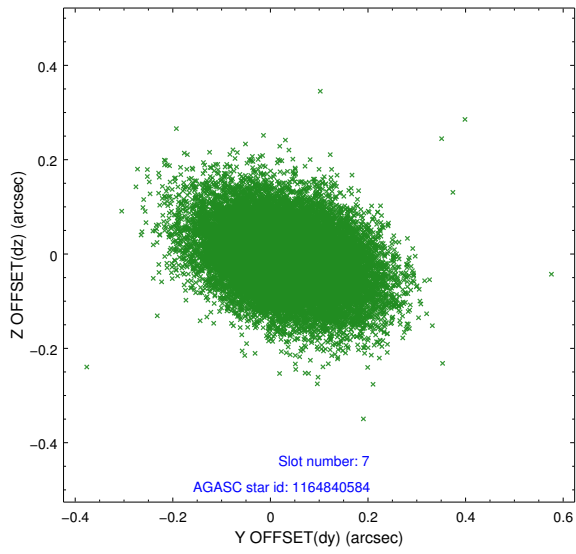
### 2.4.3 Slot 5



## 2.4.4 Slot 6

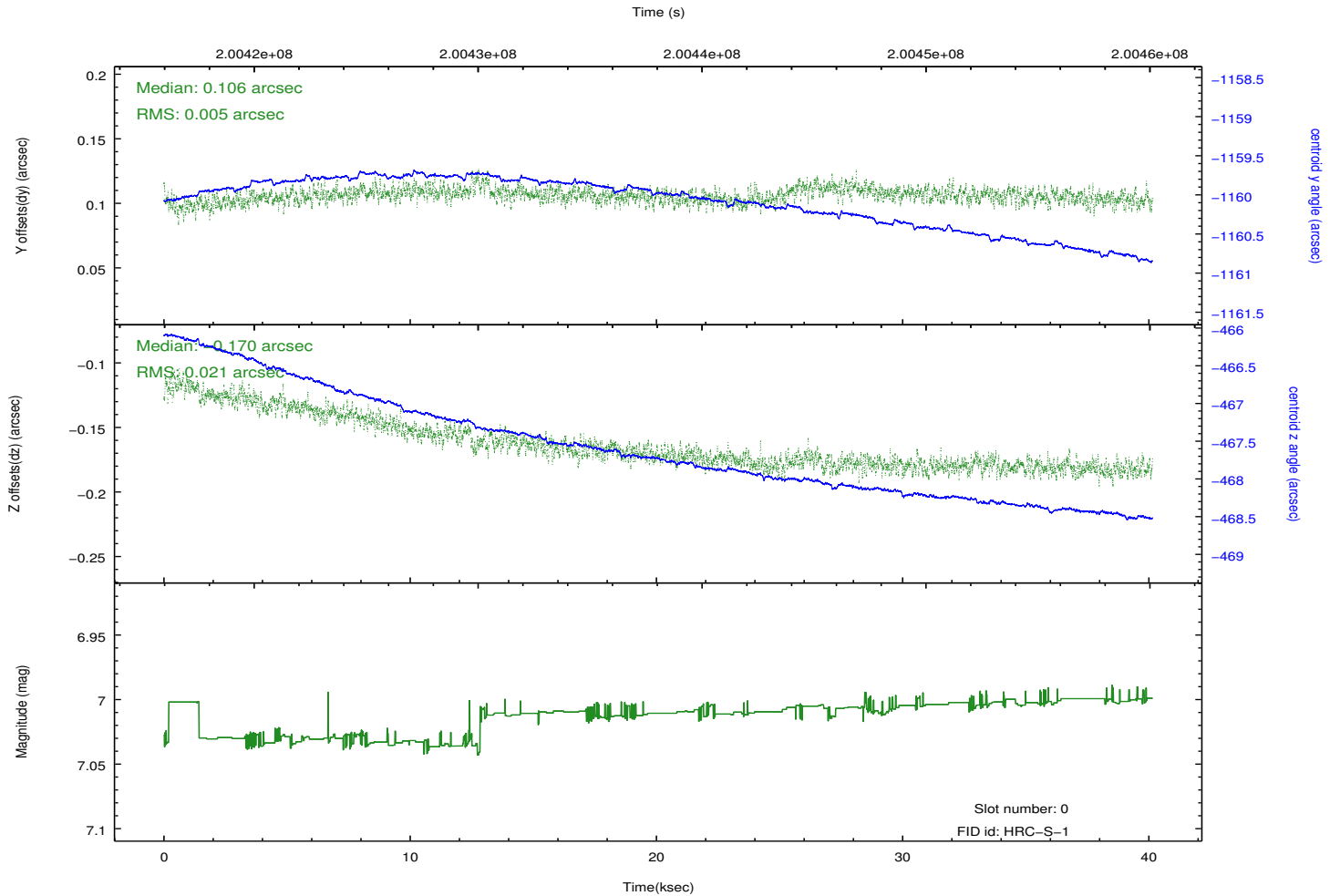
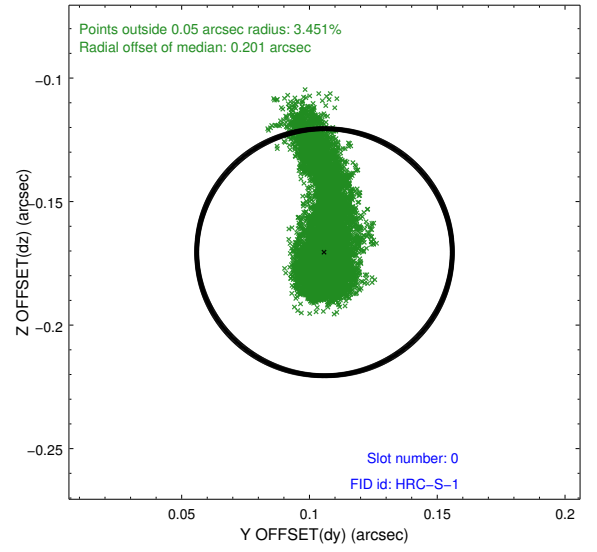
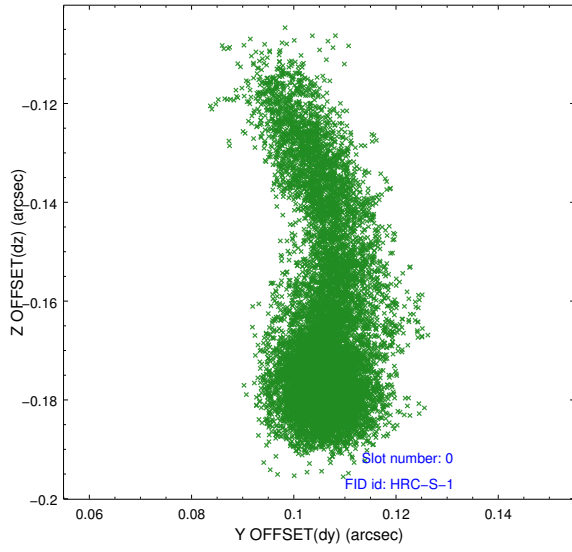


### 2.4.5 Slot 7

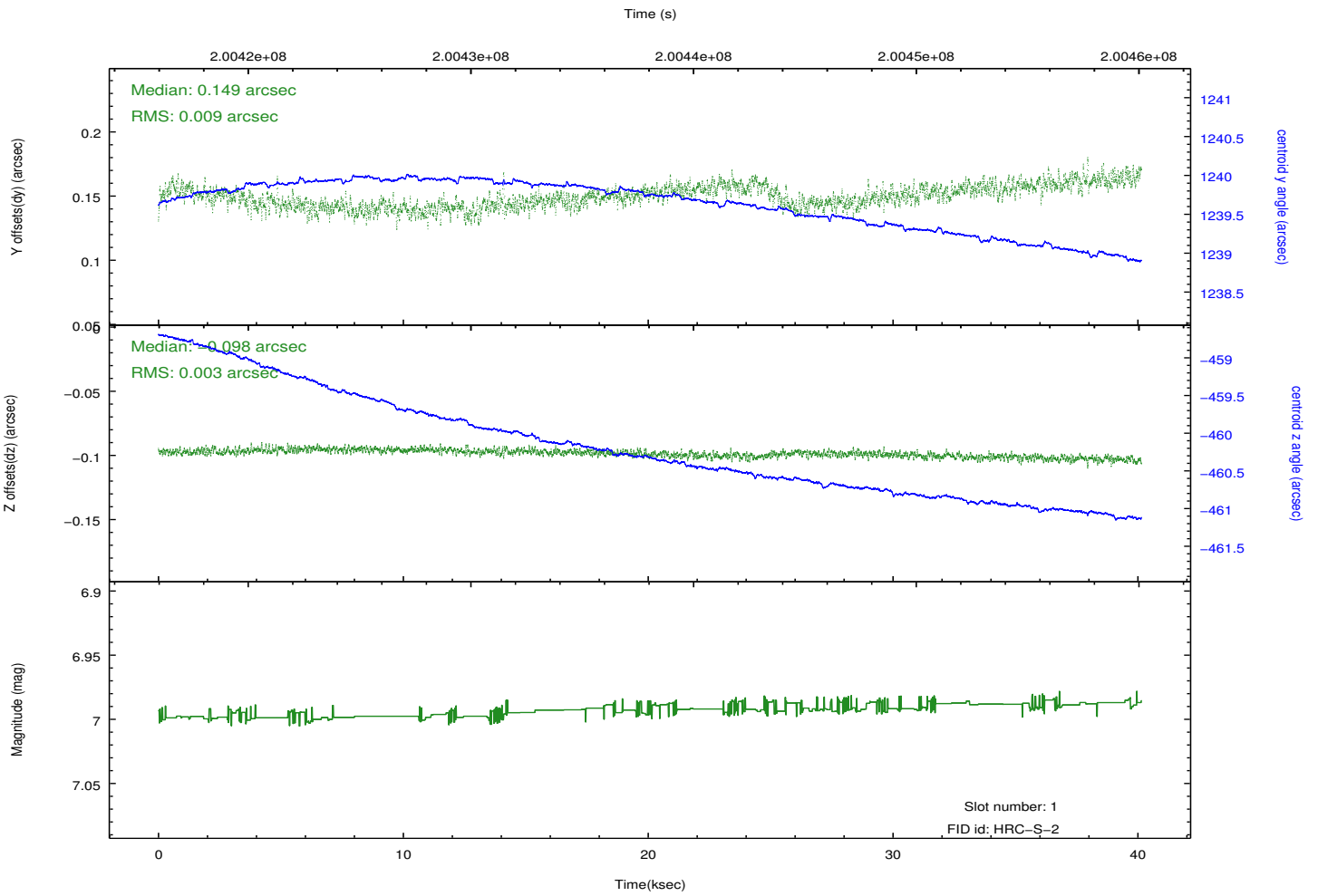
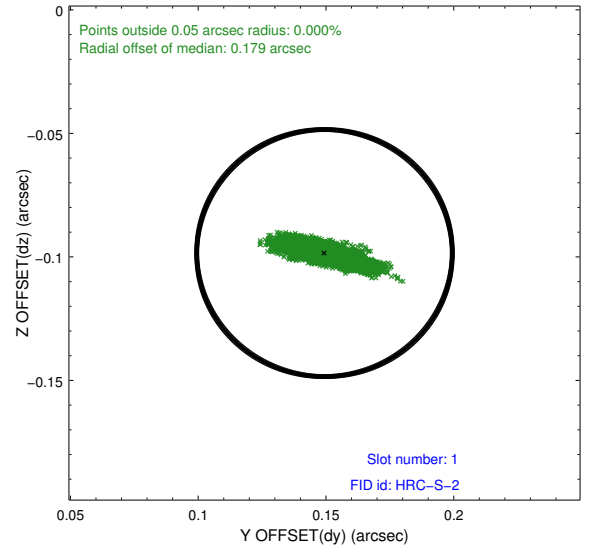
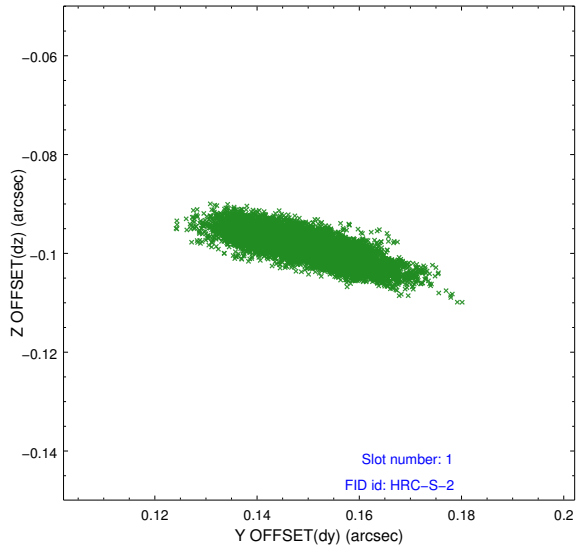


## 2.5 FID Slots

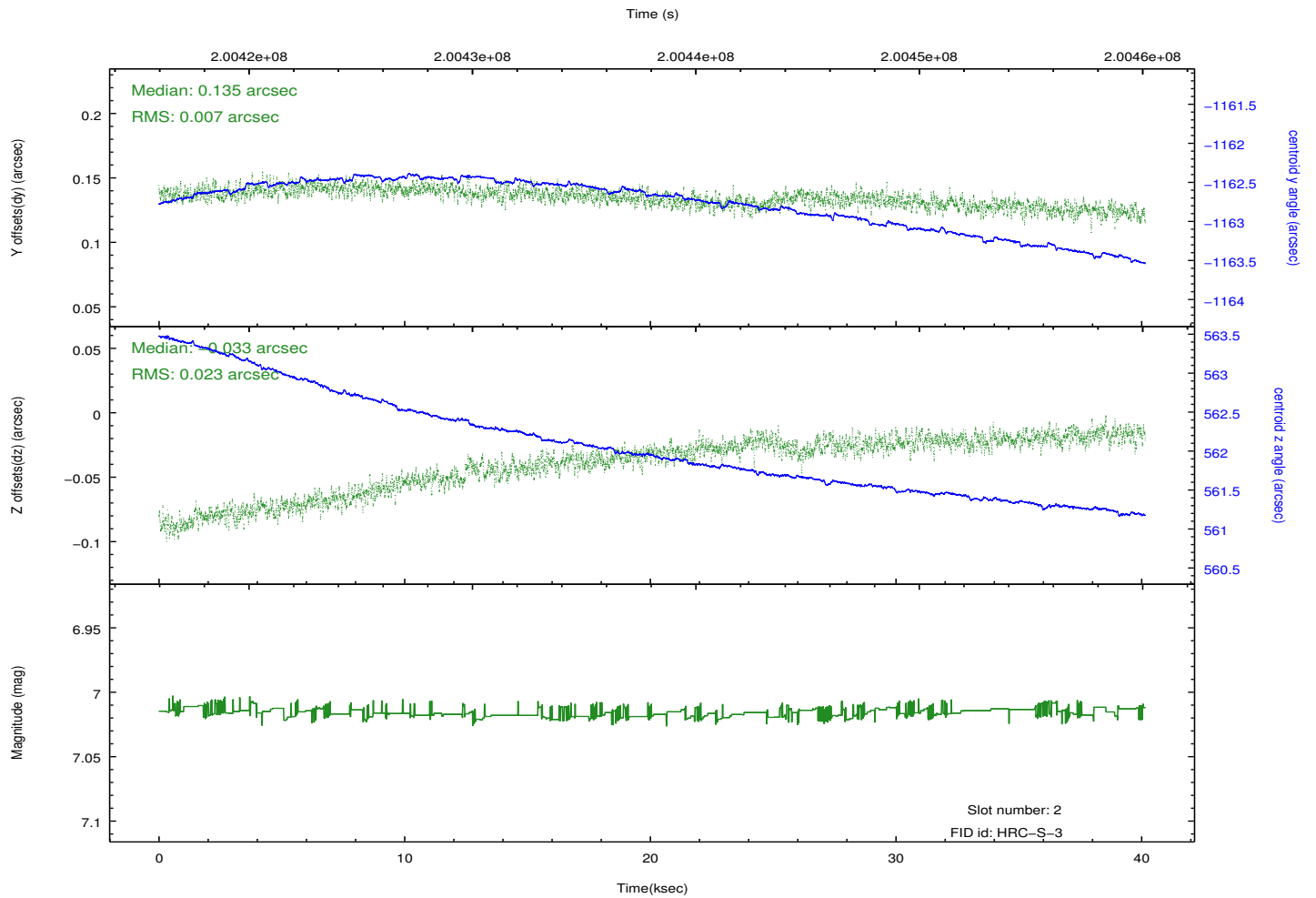
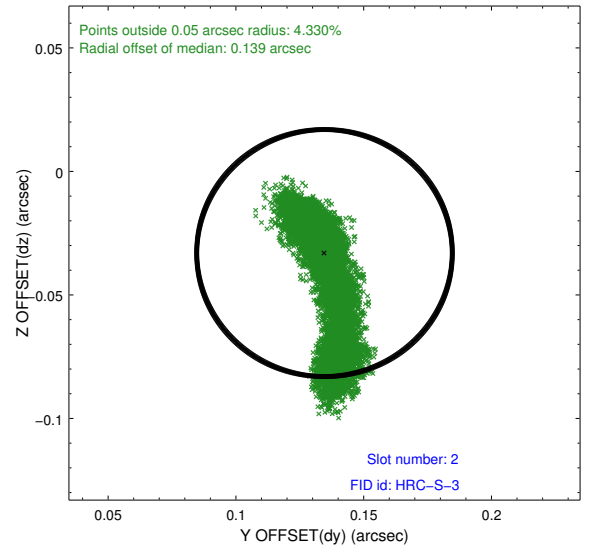
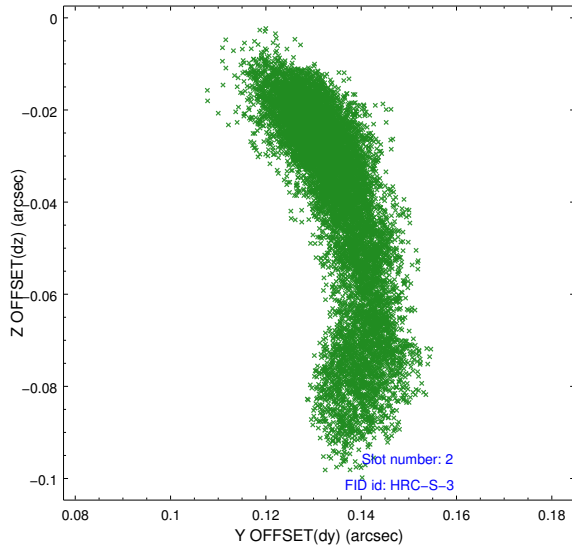
### 2.5.1 Slot 0



## 2.5.2 Slot 1

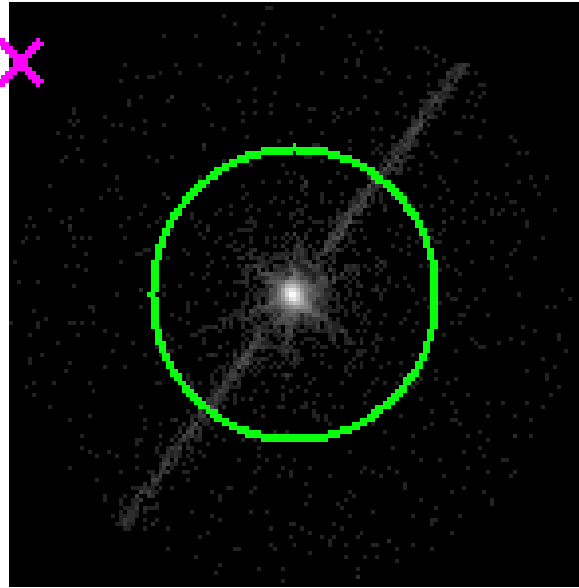


### 2.5.3 Slot 2

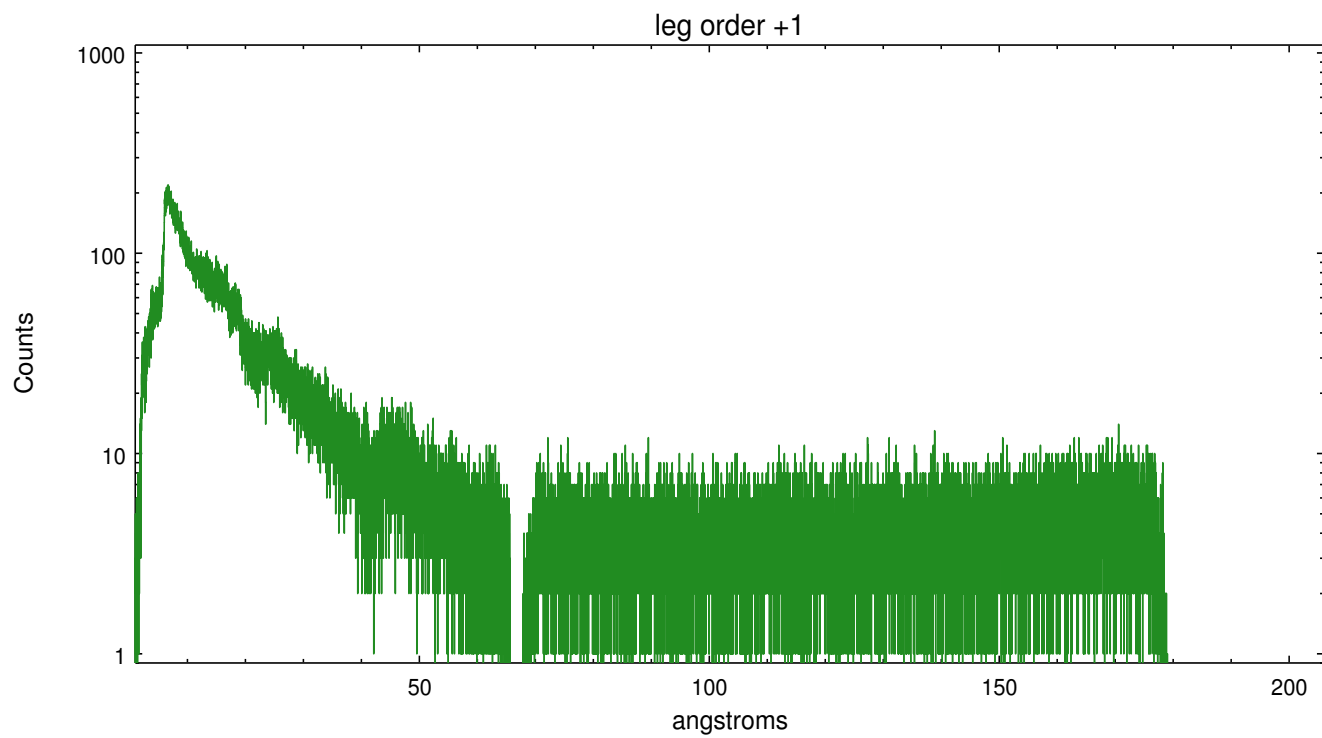
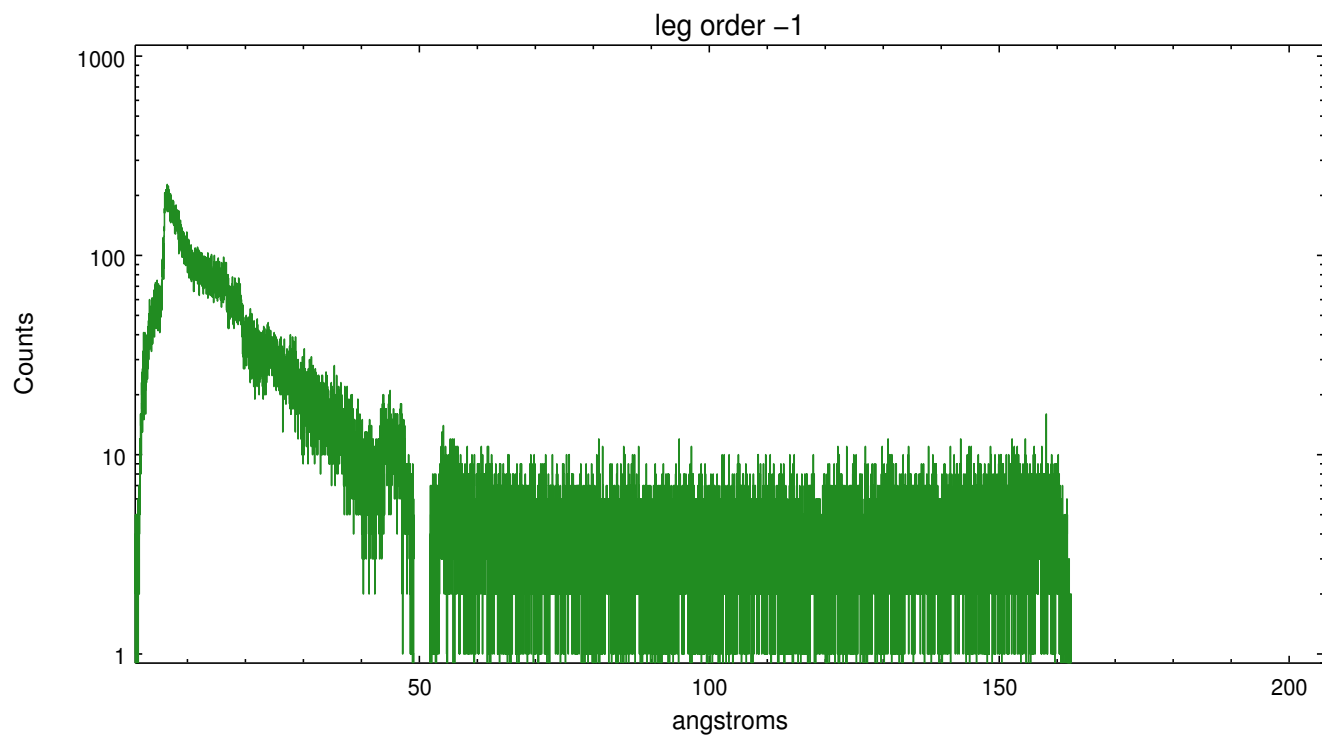


### 3 Gratings

#### 3.1 LETG Arm



LETG Zero Order



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.01.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	39.831

## A.2 Comments

Zerth order PSF is asymmetrical. Due to the expected source brightness the zerth order was given a Y-offset and a SIM-Z-offset in order to avoid a large added dose to the nominal target point. The asymmetric PSF with an extension along the dispersion direction can be attributed to an HRC instrumental effect, primarily the decap calibration at this position. This is a followup observation to obsid 4575. There are more details in the V&V report for obsid 4575.