

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 14418 - L2 Version 2  
Chandra X-Ray Center

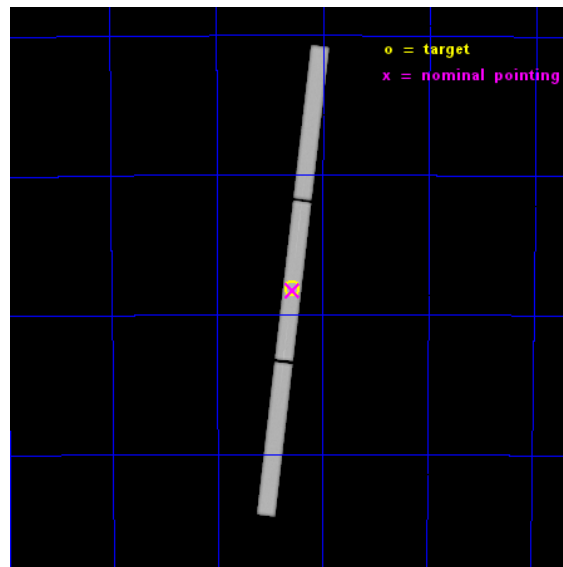
L2 Processing Date : Dec 6 2014

## 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

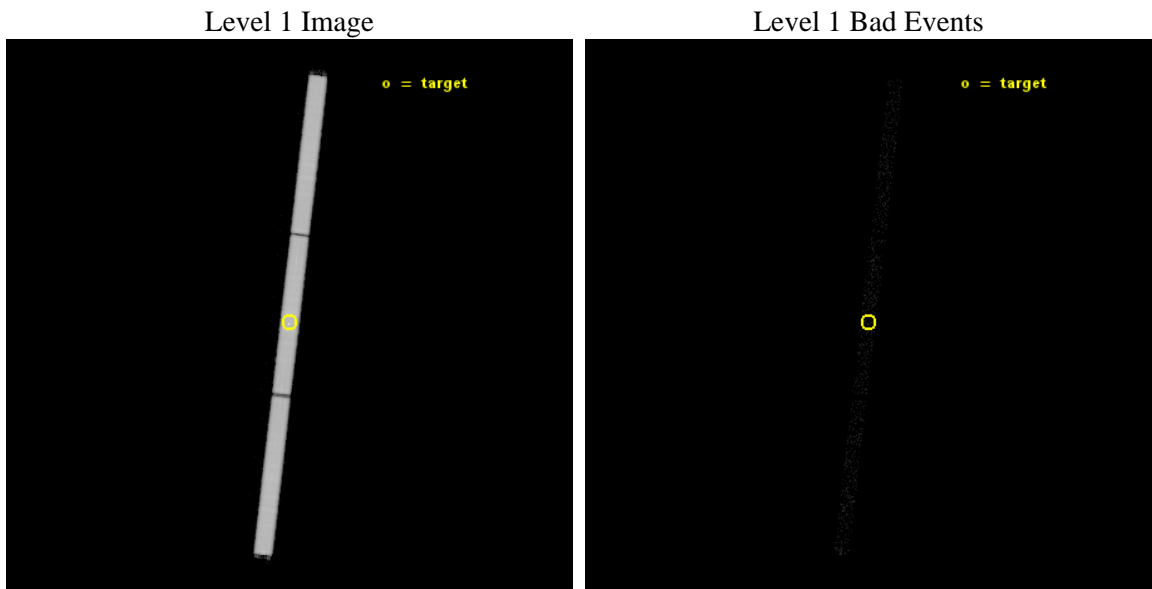
seq_num	590518	Sequence number
obs_id	14418	Observation id
title	HRC-S Calibration Observations of RXJ1856.5-3754	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	RXJ1856.5-3754	Source name
ra_targ	284.147083	Observer's specified target RA [deg]
dec_targ	-37.909611	Observer's specified target Dec [deg]
ra_nom	284.14775345538	Nominal RA [deg]
dec_nom	-37.914325709389	Nominal Dec [deg]
roll_nom	276.78788043315	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30181.382900178	[s]
livetime	29962.683307589	Ontime multiplied by DTCOR
l2events	1804865	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	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	30181.382900178	[s]
caldsver	4.6.4	&#160	l1events	2427869	Number of level 1 events
date	2014-12-07T00:45:21	Date and time of file creation	tgmethod	TGDETECT	Method used to create src1a file
revision	2	Processing version of data	zo_pos	(32724.35, 32878.14)	src1a sky pixel position

## 2.1.3 Events

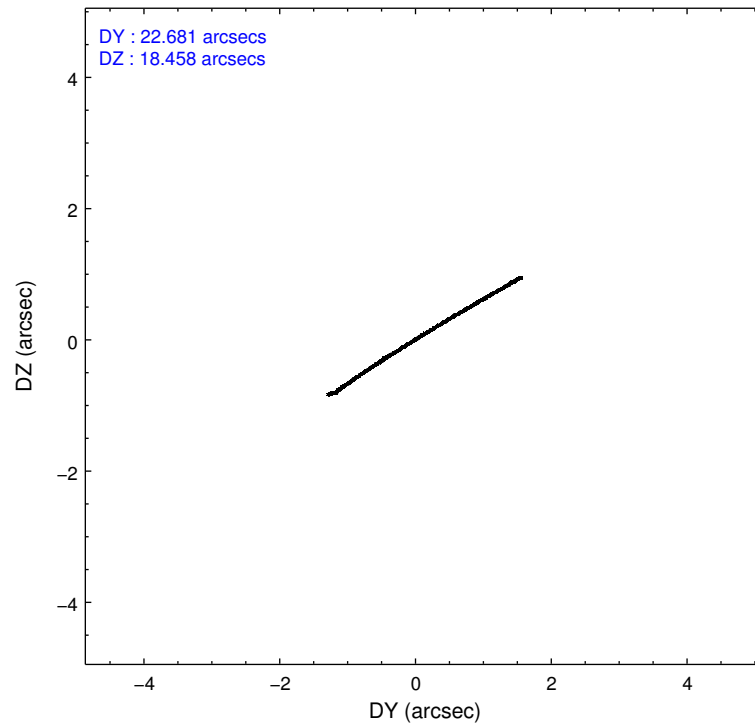
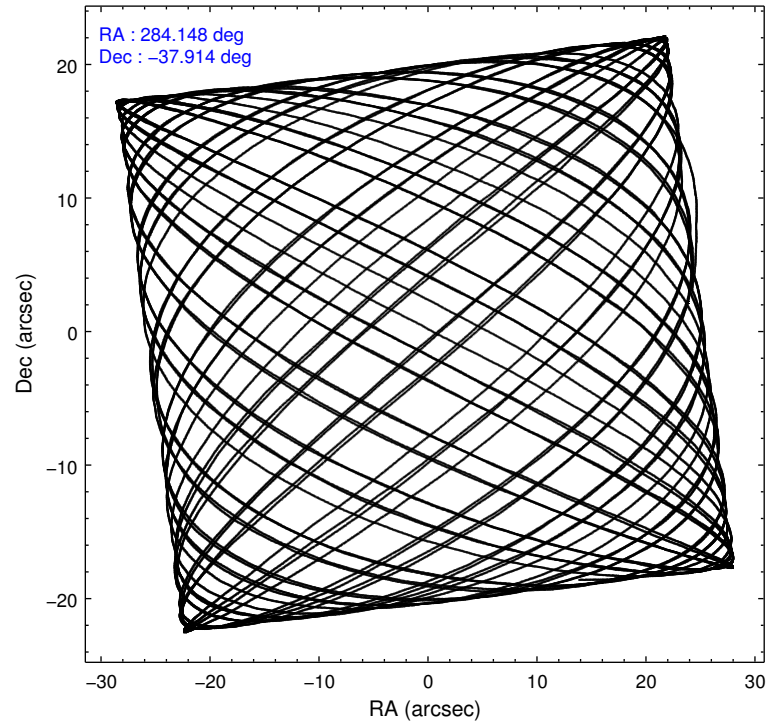
Level 1 Events

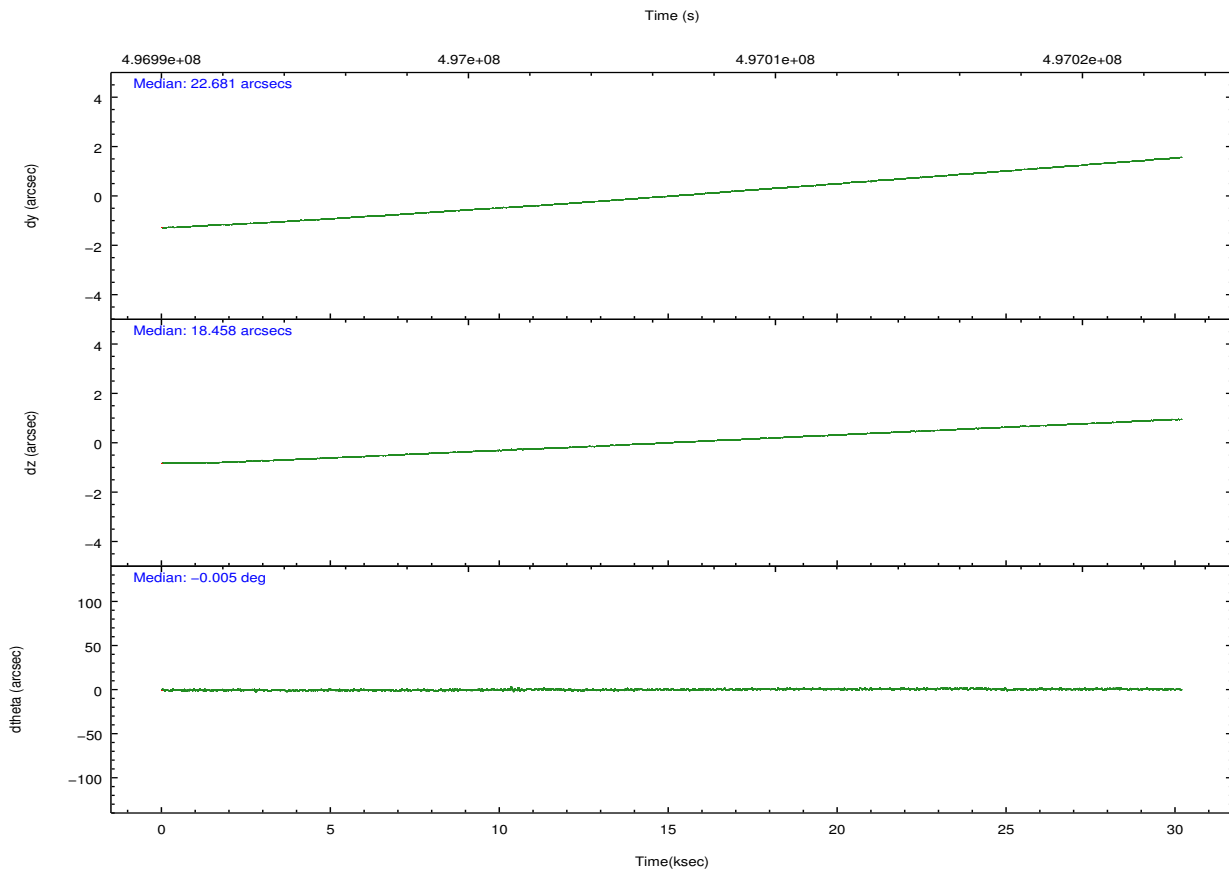
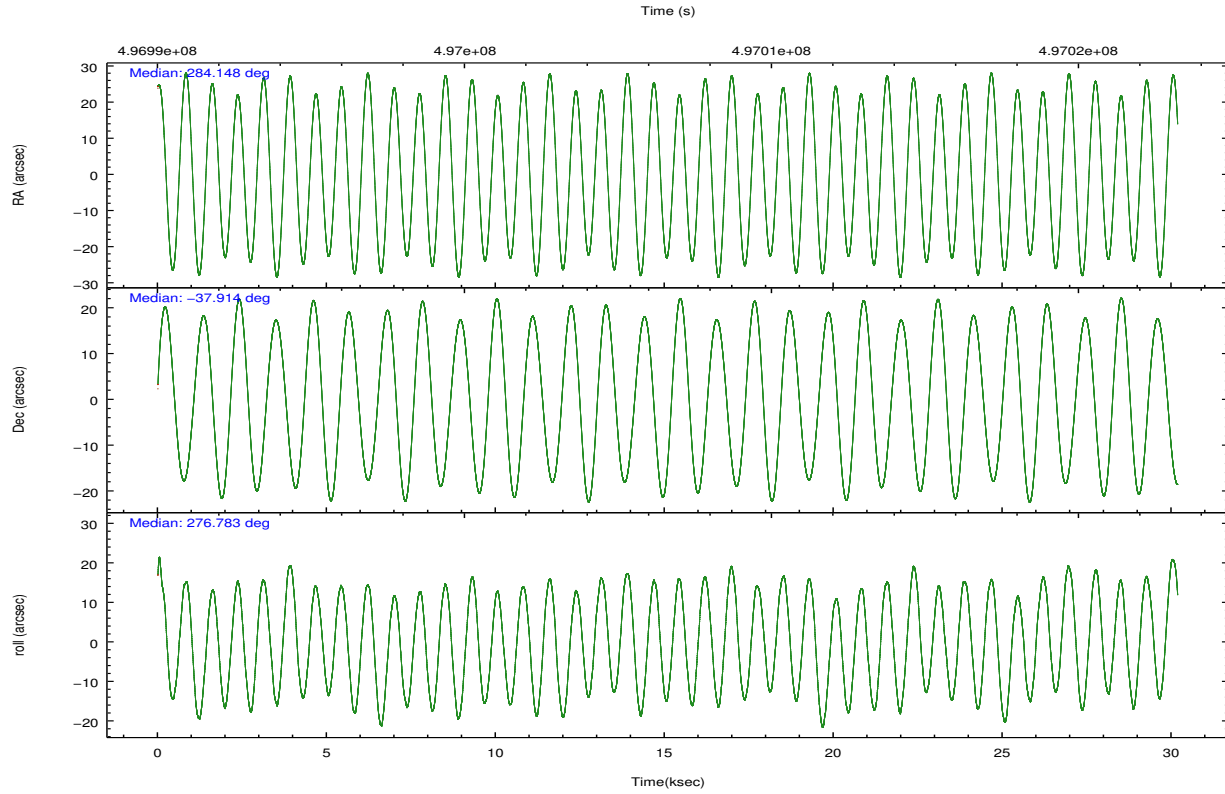
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	803612	819121	805136
rejected events	6707	6945	6857
rejected %	0%	0%	0%

## 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	284.124510	284.1477534553827			
[deg] Pointing Dec	-37.892242	-37.91432570938886			
[deg] Pointing Roll	276.706262	276.7878804331518			
[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)	496991719.184000	496991014.03445			
Observation start date	2013-10-01T05:14:12	2013-10-01T05:03:34			
[s] Observation end time (MET)	497021719.184000	497022531.24868			
Observation end date	2013-10-01T13:34:12	2013-10-01T13:48:51			

## 2.3 Aspect





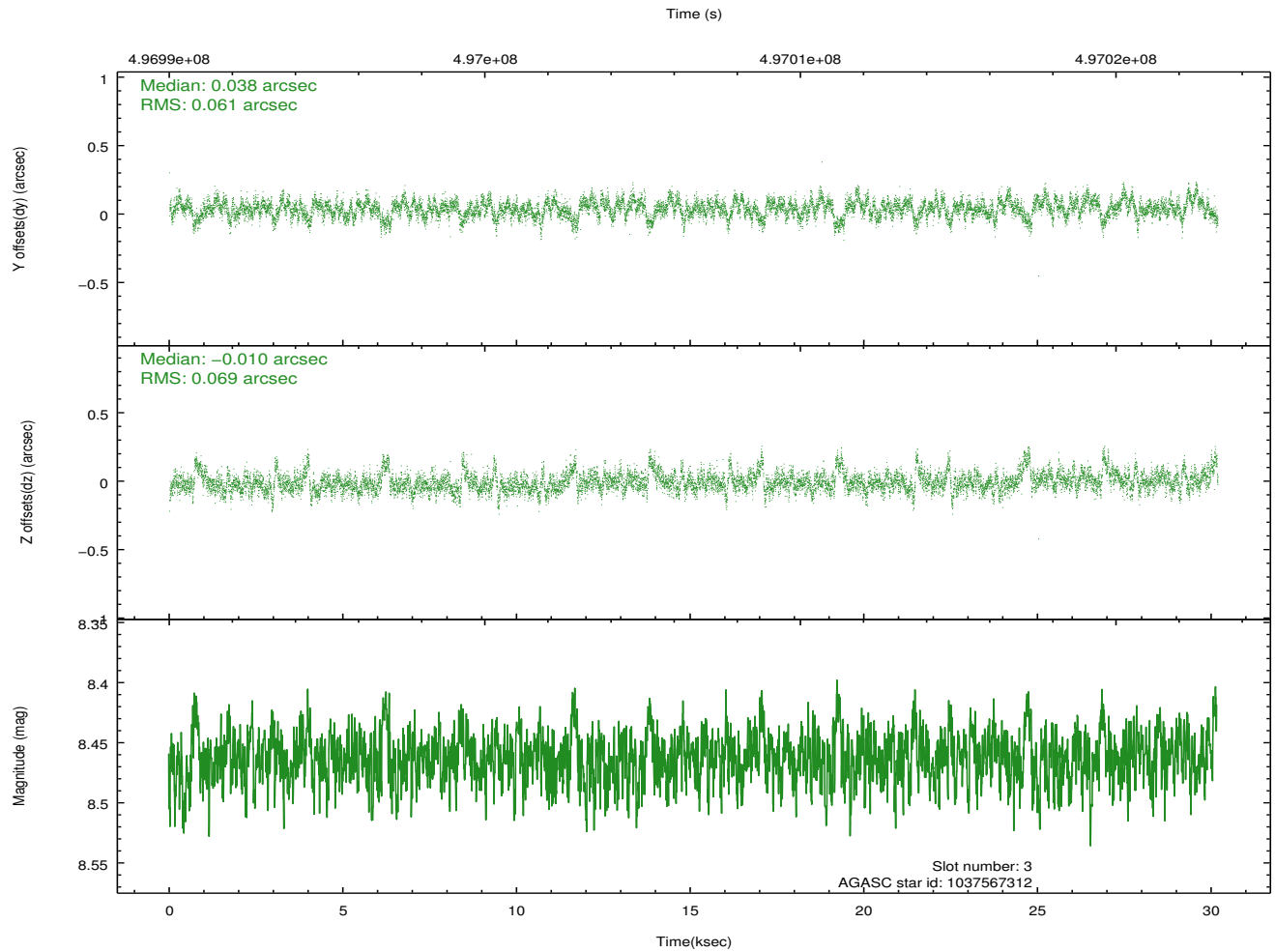
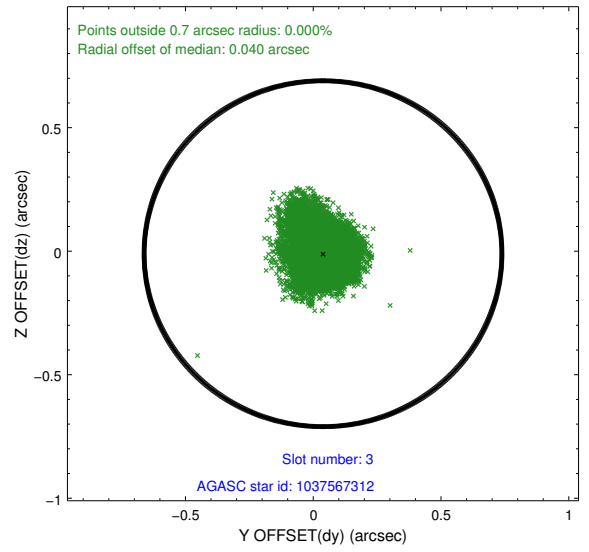
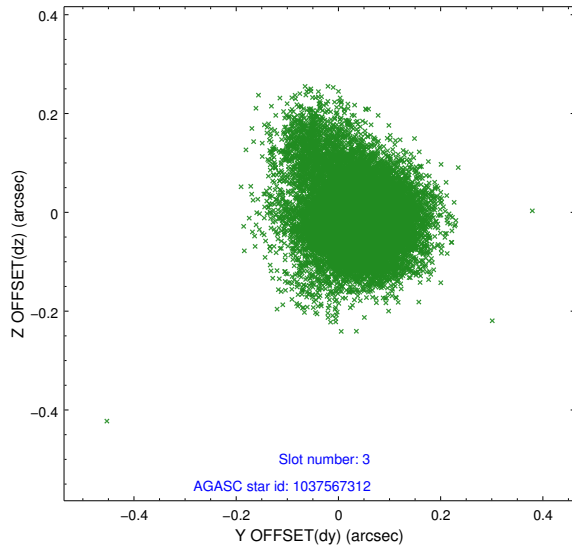
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		HRC-S-1	6.99	7361	0.021	-0.158	0.034	0.047	0.000000	0.000000	-1177.38	-467.49
1	FID		HRC-S-2	6.97	7362	0.280	-0.118	0.022	0.030	0.000000	0.000000	1222.41	-460.08
2	FID		HRC-S-3	7.00	7361	0.088	-0.025	0.030	0.041	0.000000	0.000000	-1179.89	562.11
3	GUIDE	used	1037567312	8.46	14718	0.038	-0.010	0.093	0.171	283.456056	-37.976515	87.25	-1920.12
4	GUIDE	used	1037567328	8.84	14699	0.131	0.135	0.101	0.161	284.052016	-37.647288	-899.23	-102.31
5	GUIDE	used	1037568192	8.69	14708	-0.115	-0.054	0.091	0.149	284.446060	-38.037443	627.41	844.27
6	GUIDE	used	1037578168	8.09	14718	-0.026	-0.046	0.088	0.143	284.493659	-38.169059	1116.86	920.47
7	GUIDE	used	1037578896	9.47	14595	-0.026	-0.018	0.173	0.278	284.843589	-38.309928	1738.78	1841.06

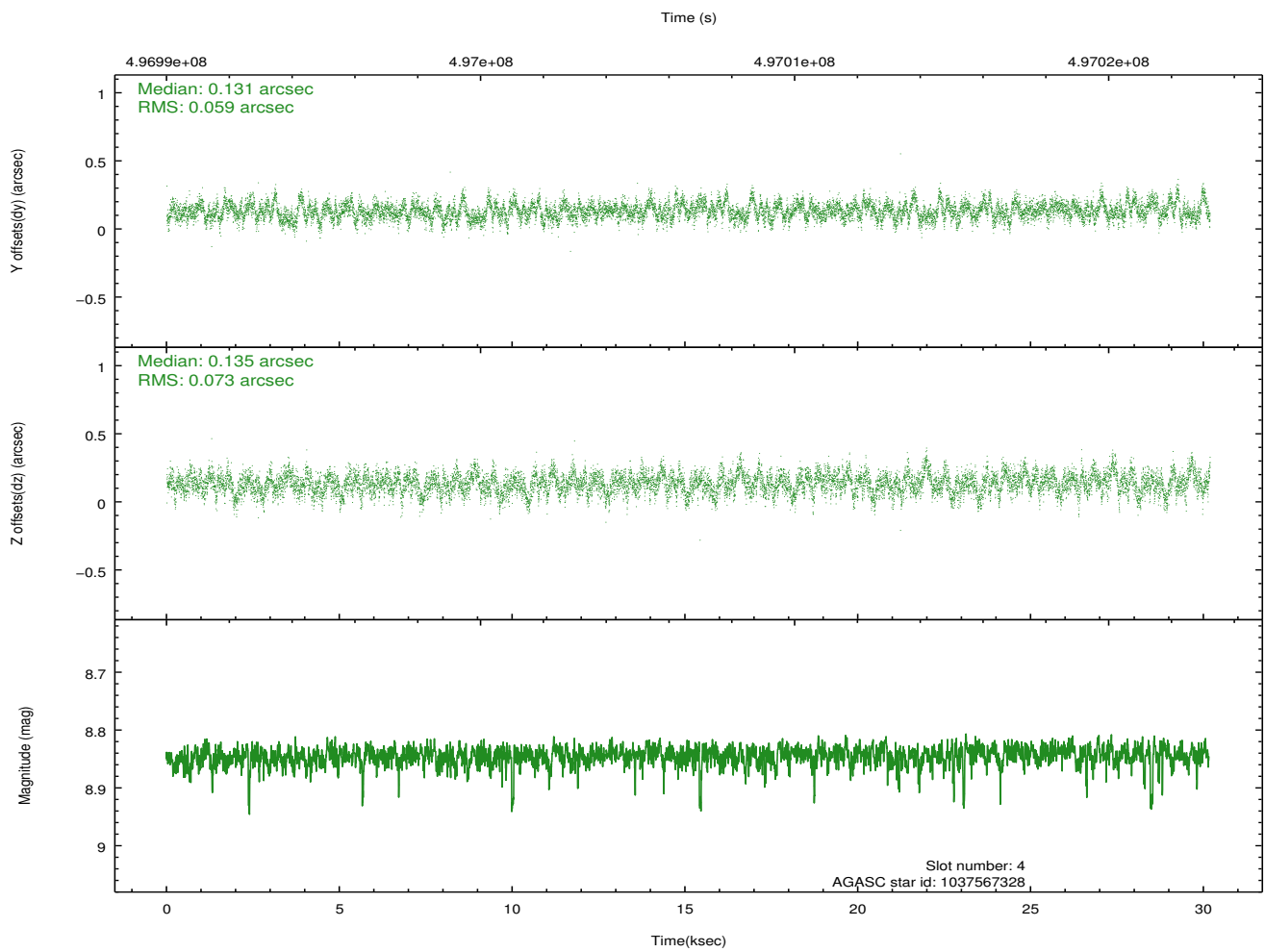
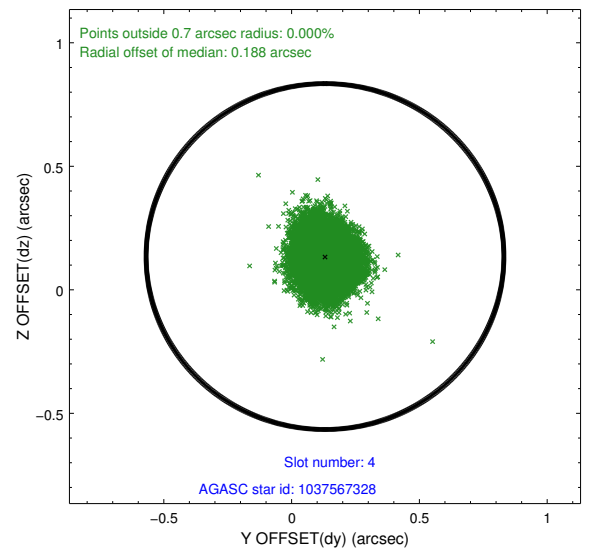
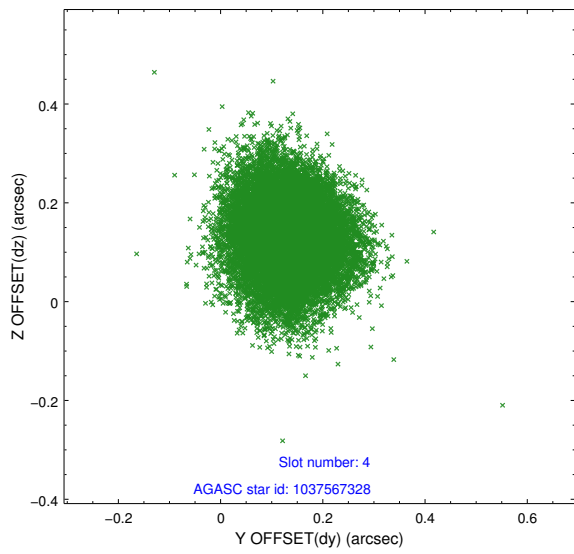
∞

## 2.4 Star Slots

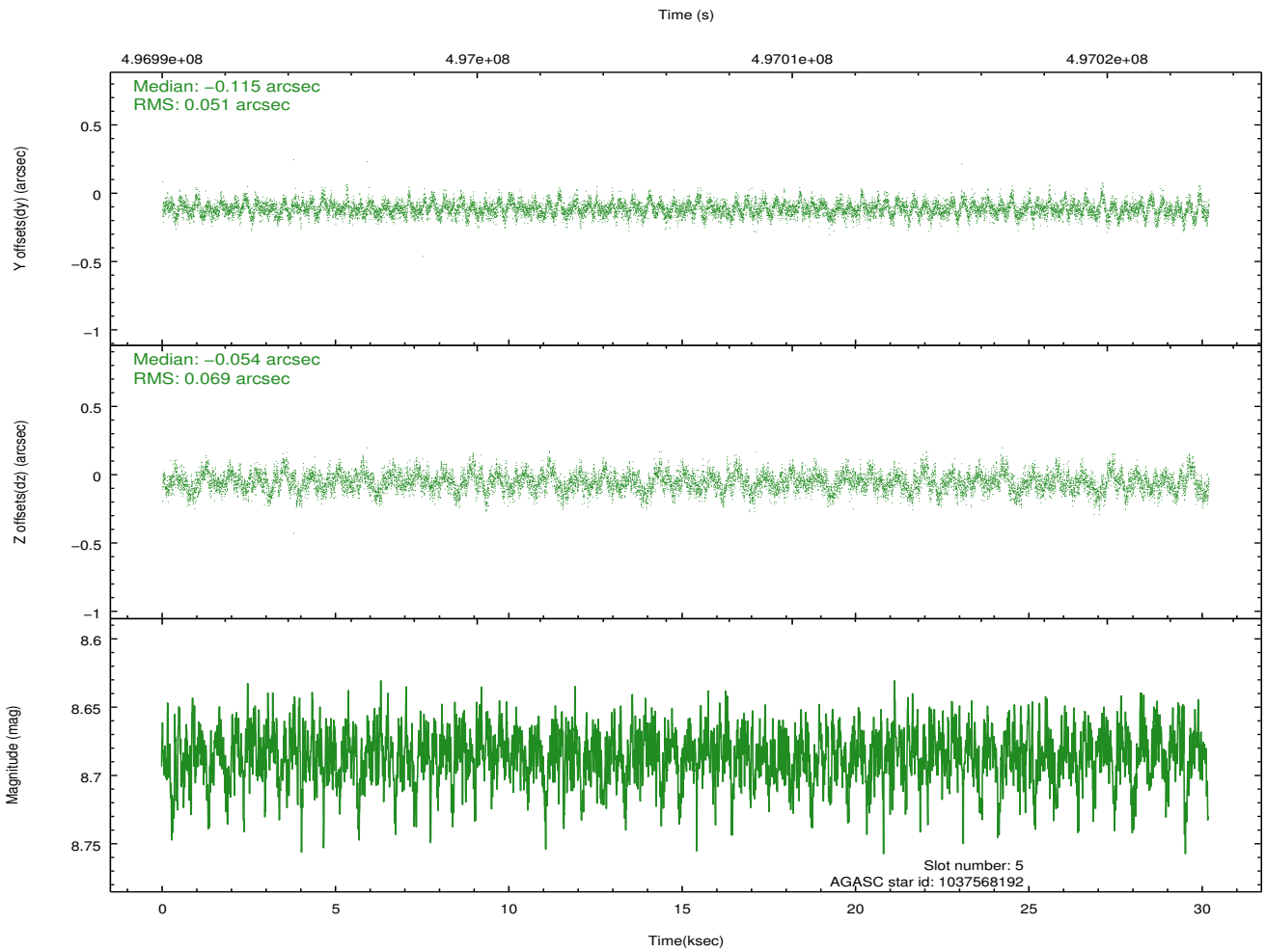
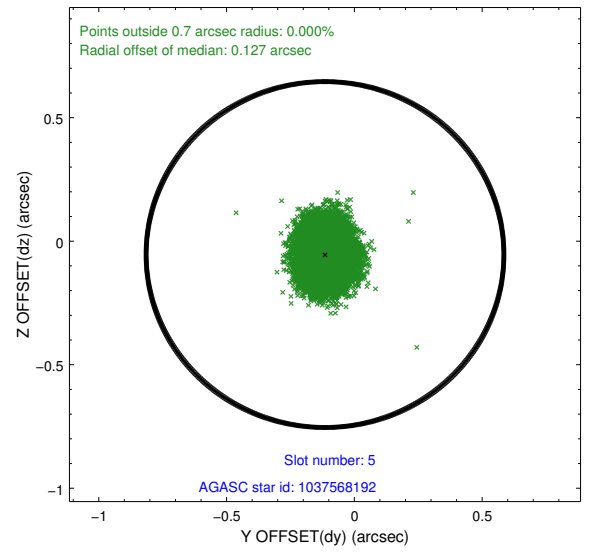
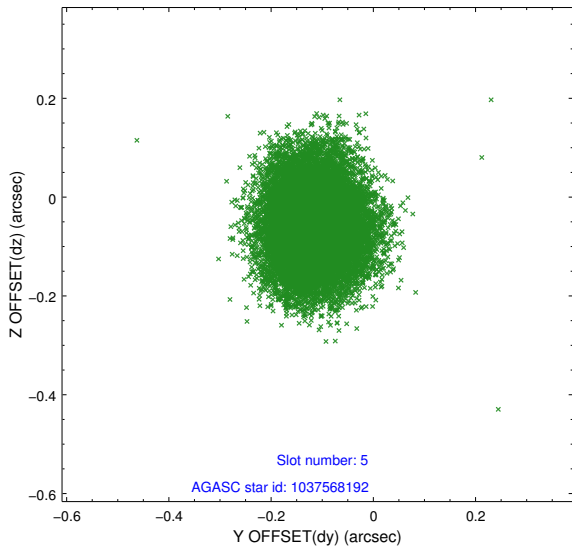
### 2.4.1 Slot 3



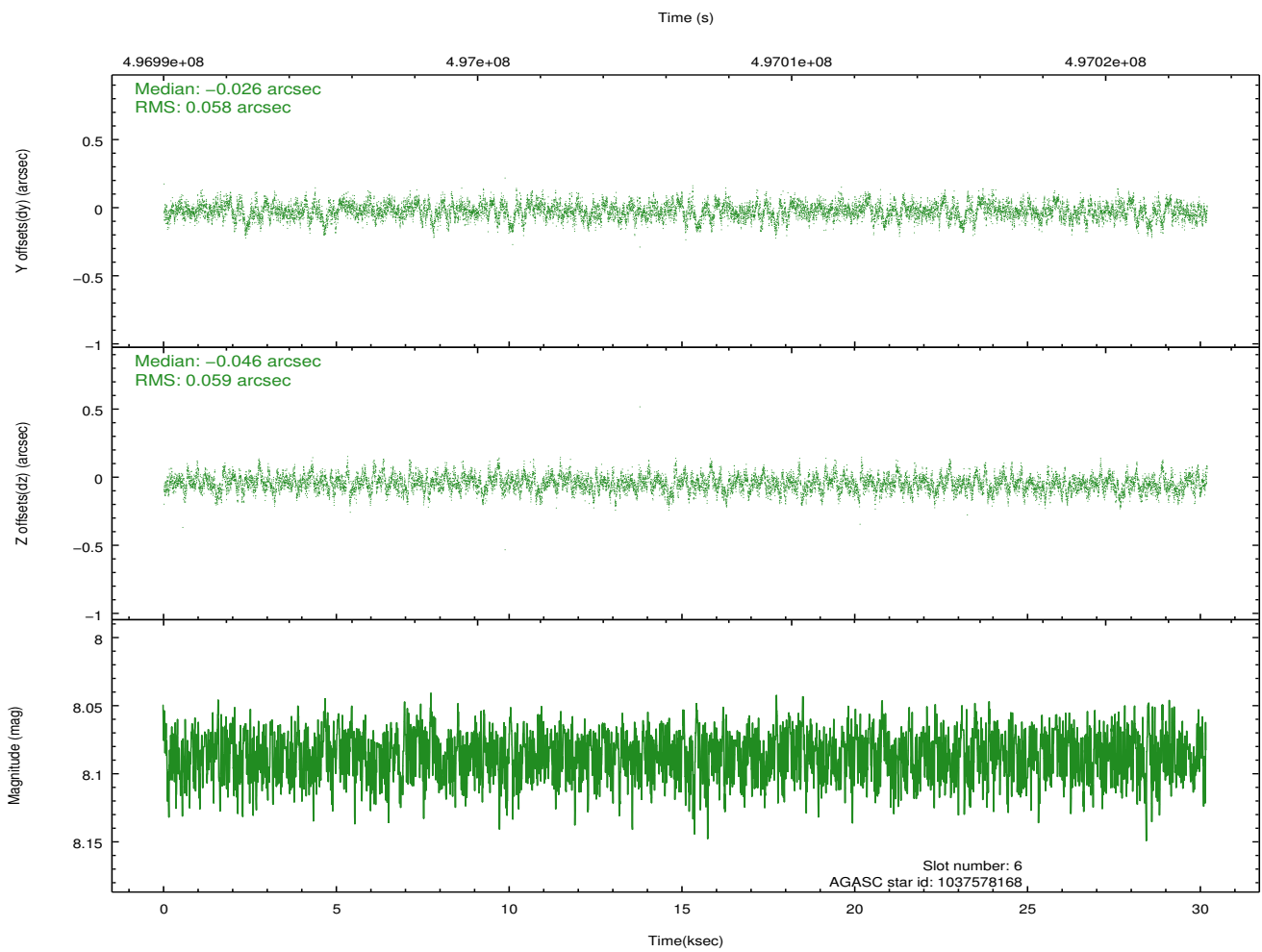
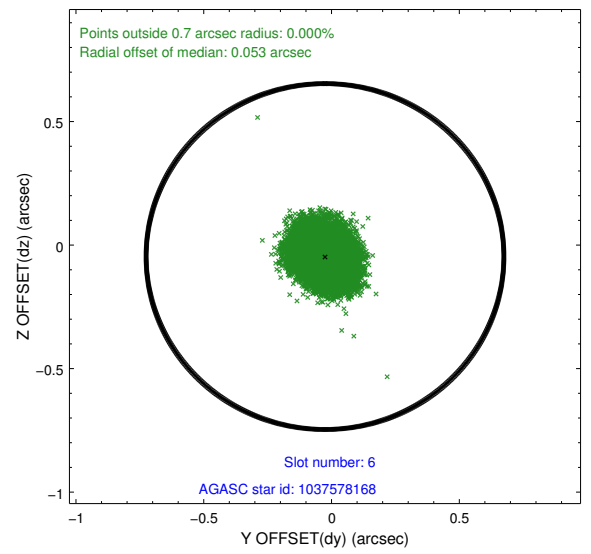
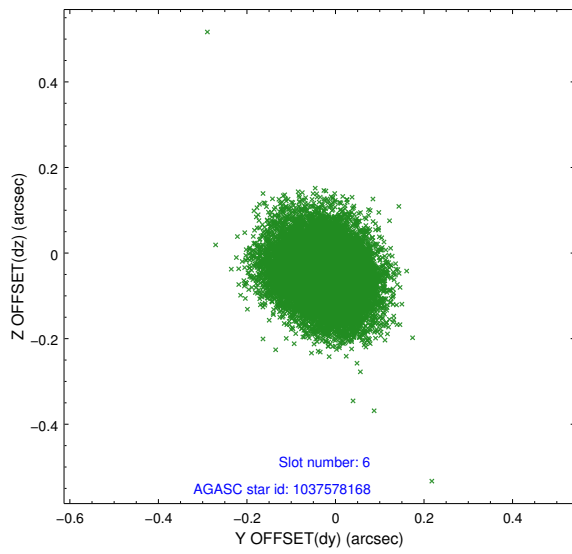
## 2.4.2 Slot 4



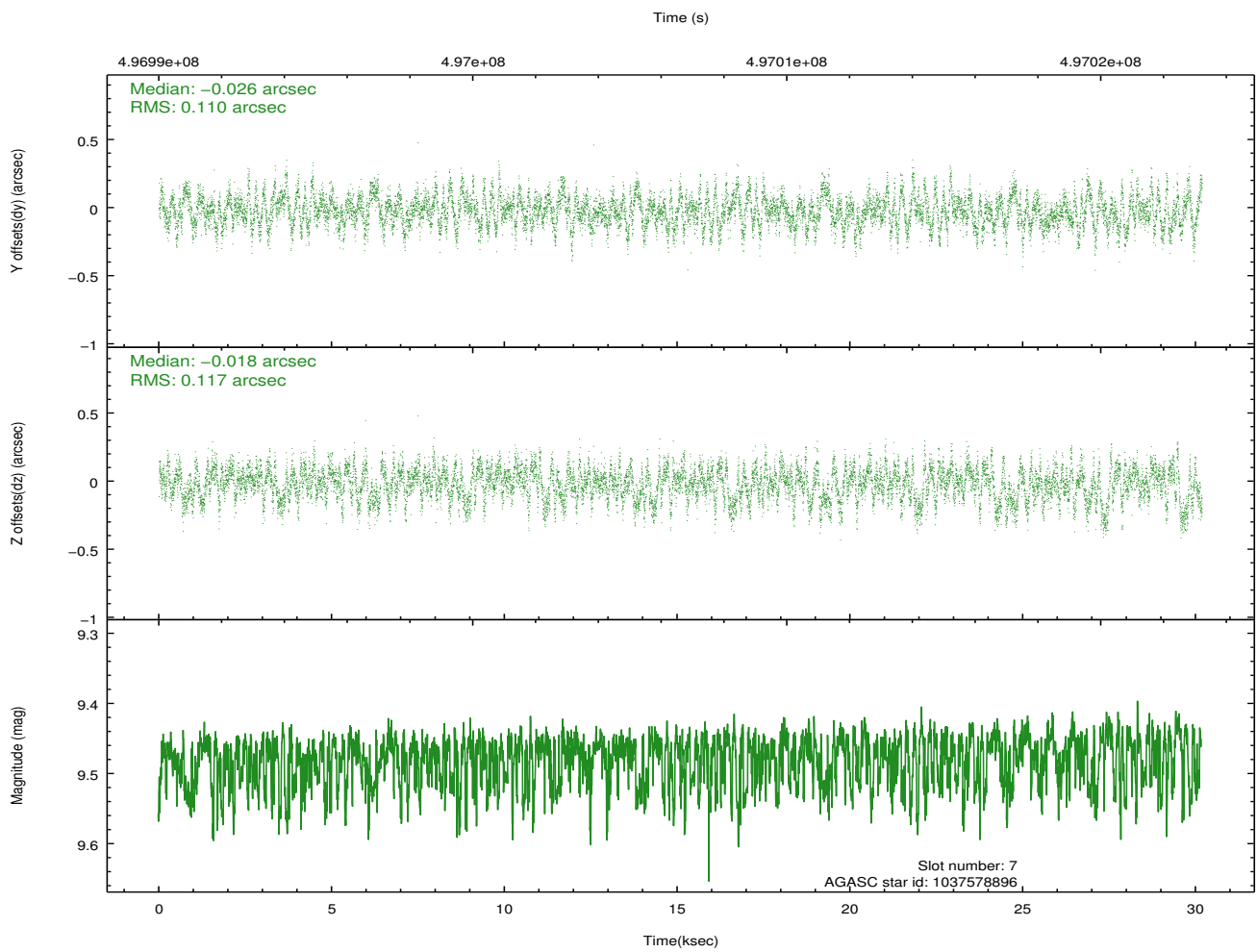
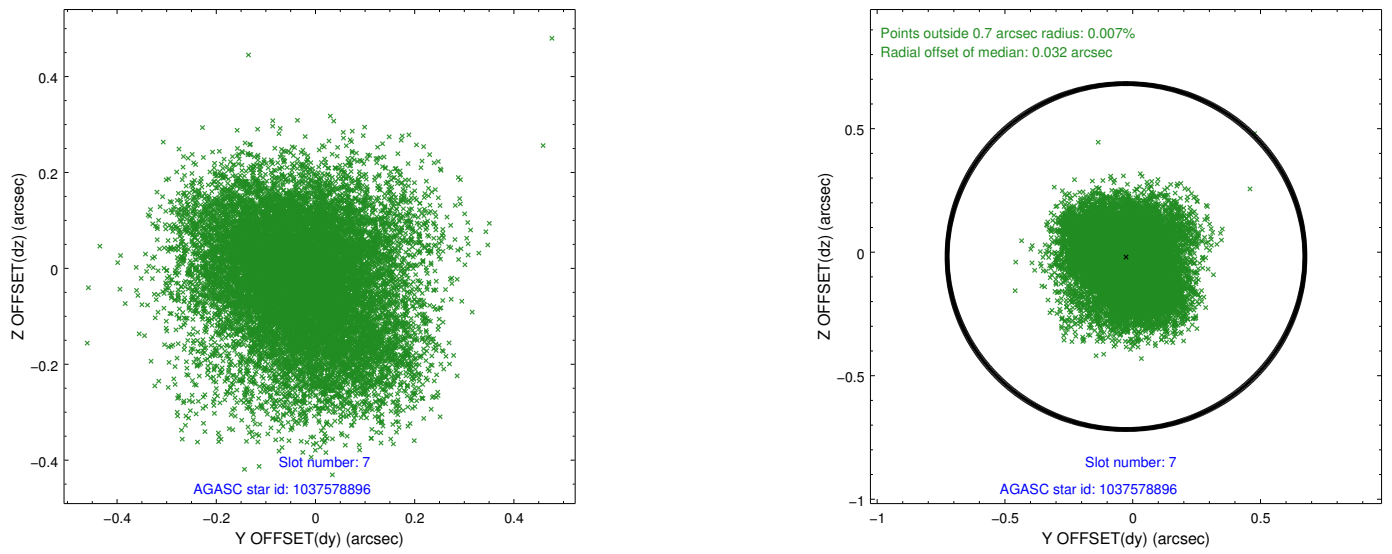
### 2.4.3 Slot 5



## 2.4.4 Slot 6

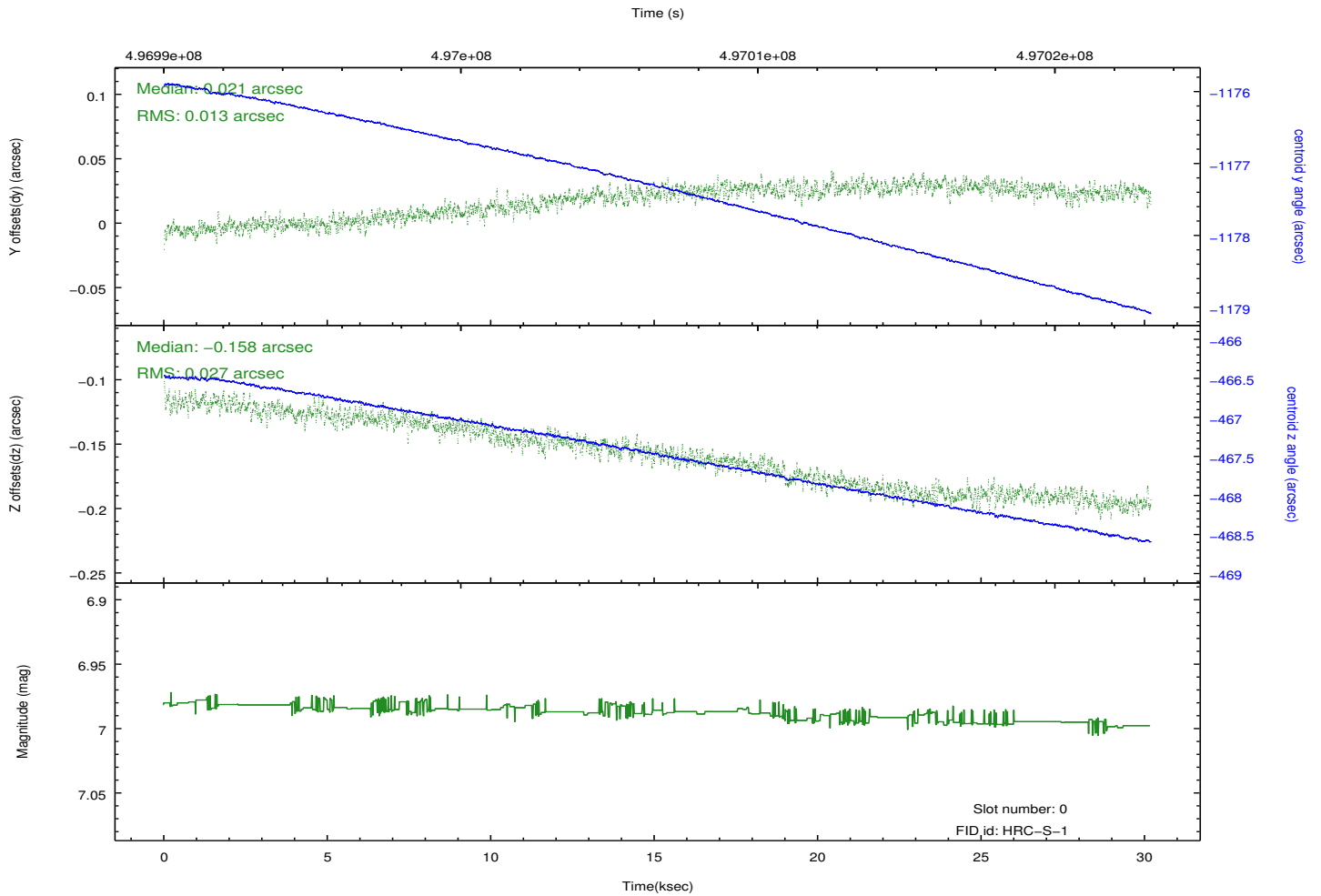
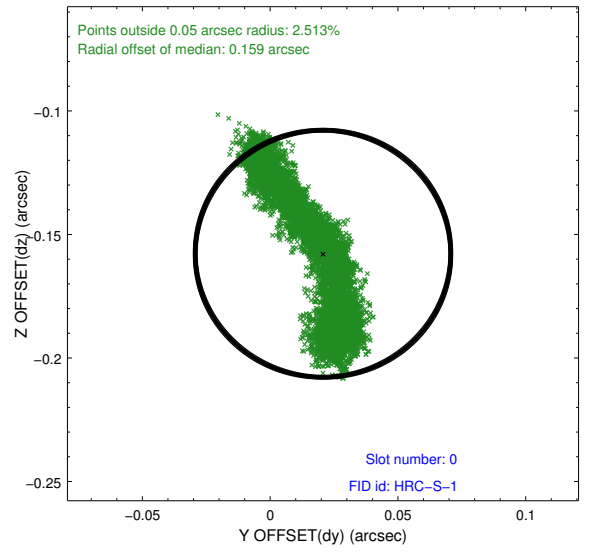
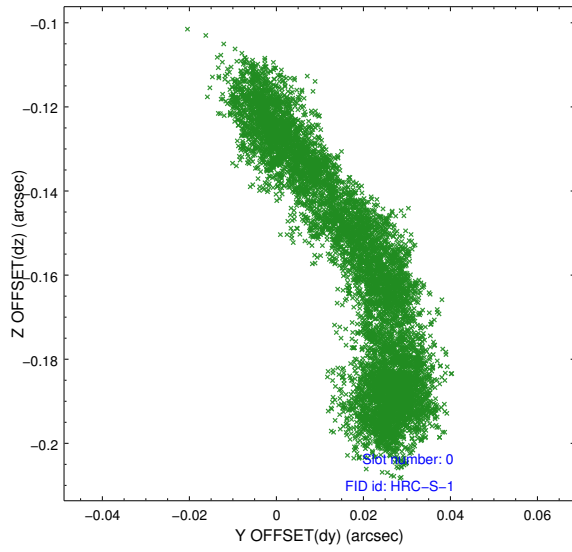


## 2.4.5 Slot 7

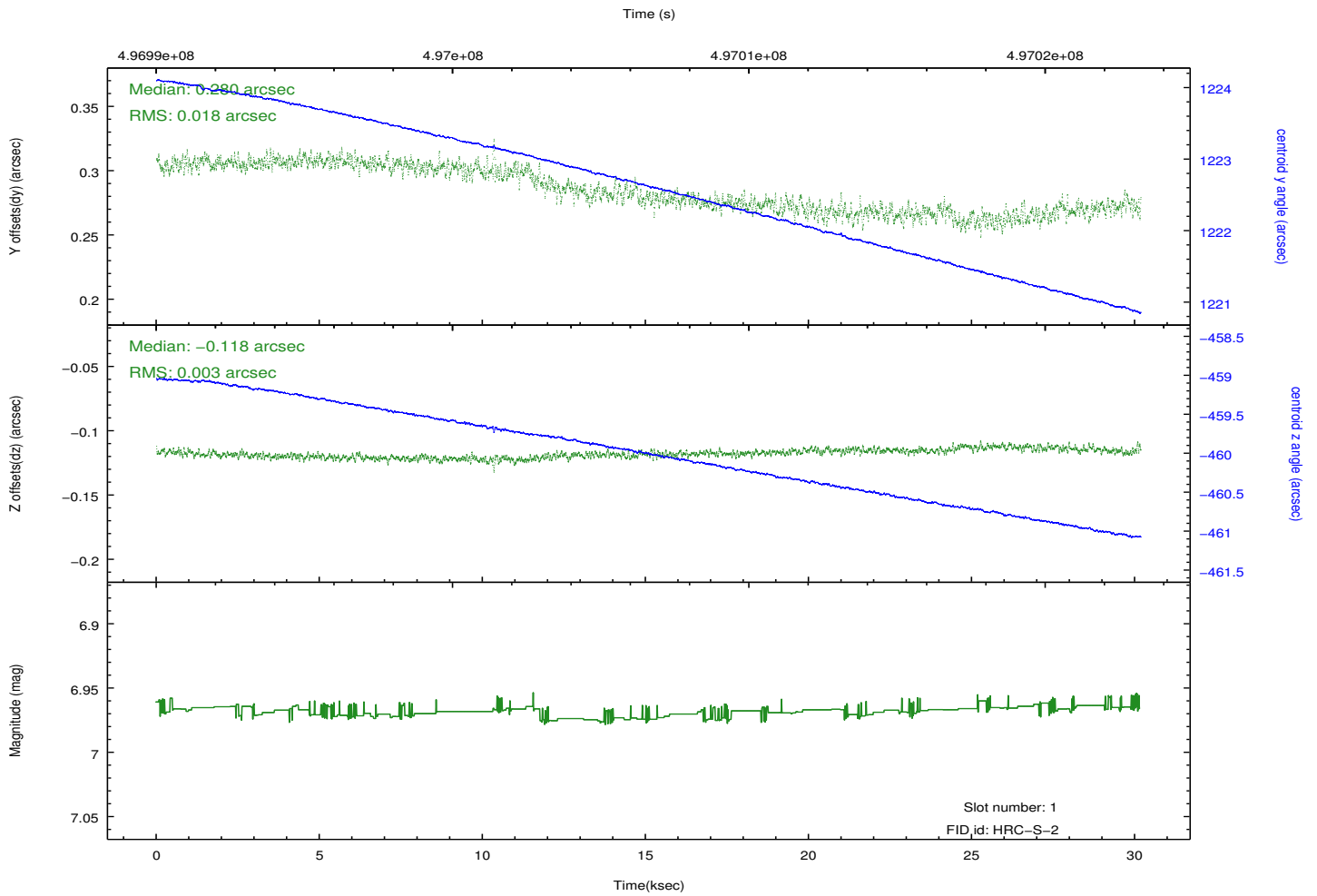
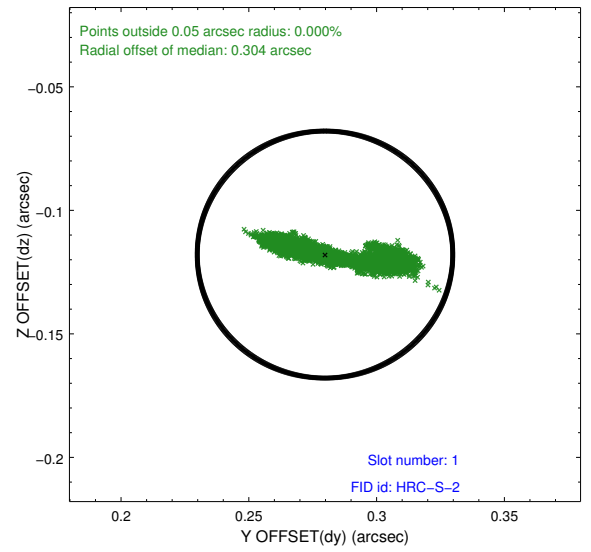
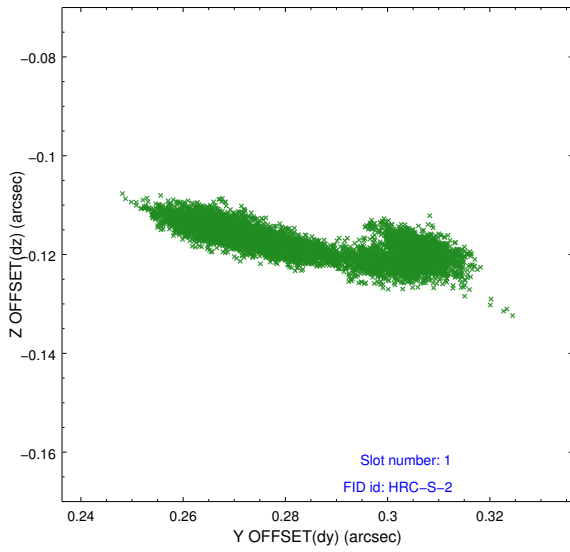


## 2.5 FID Slots

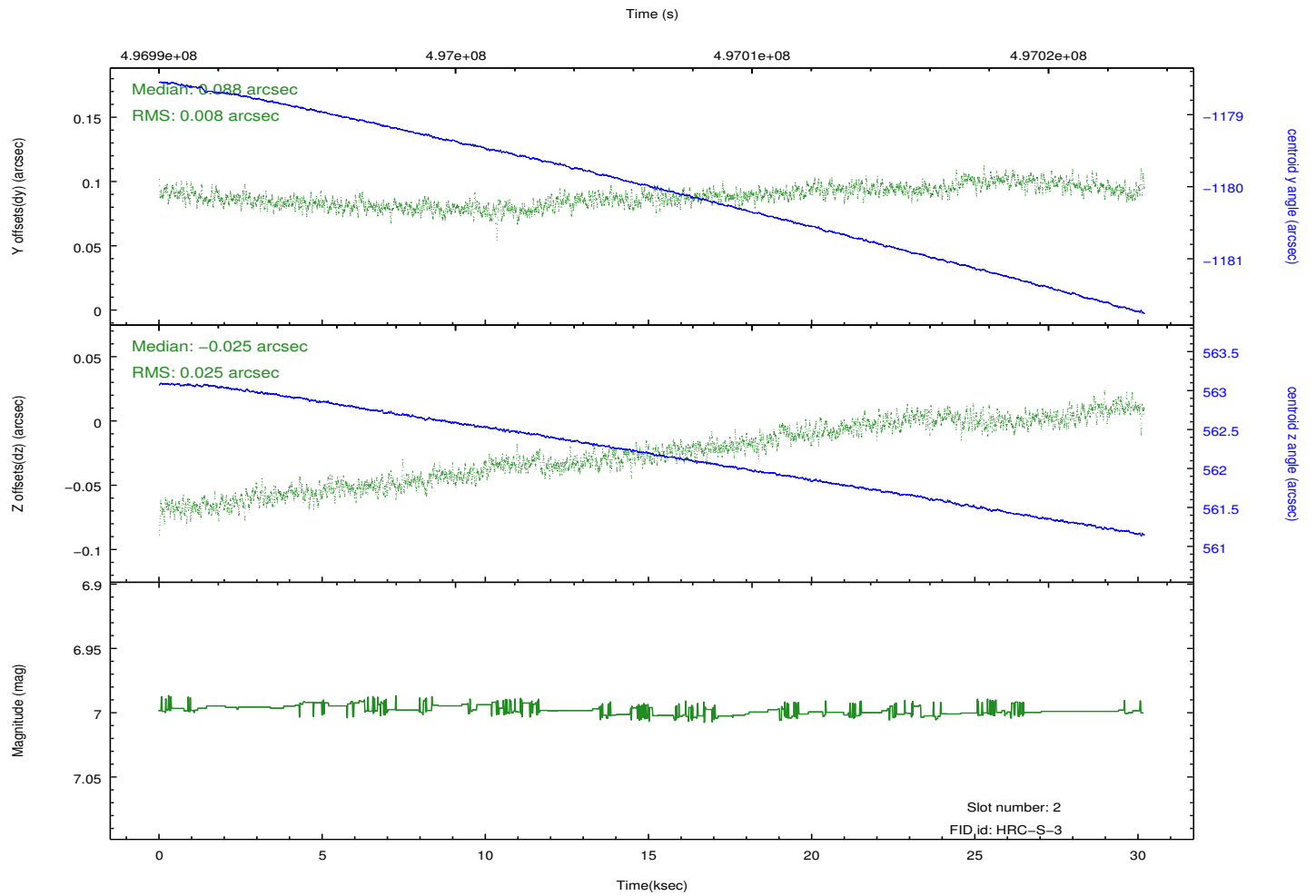
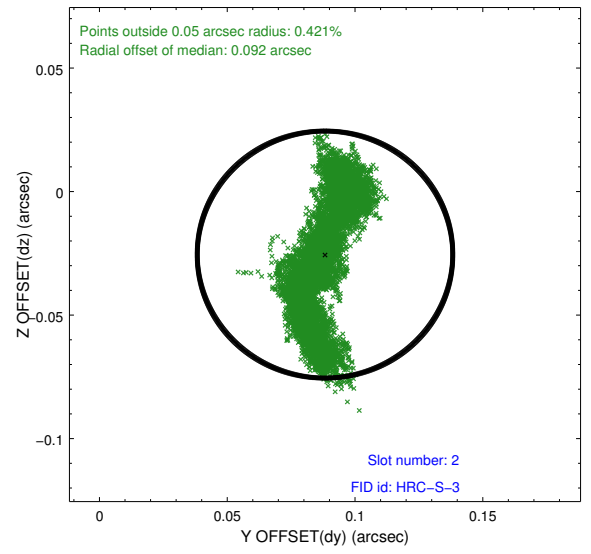
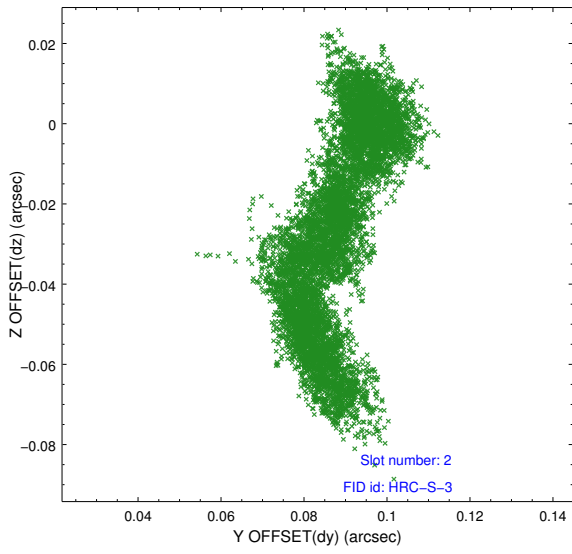
### 2.5.1 Slot 0



## 2.5.2 Slot 1

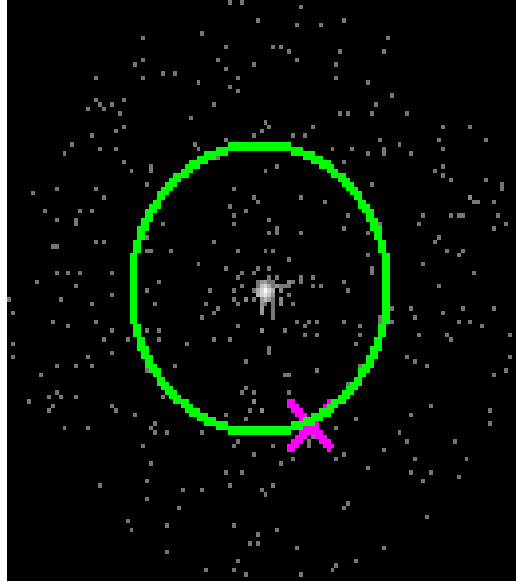


### 2.5.3 Slot 2

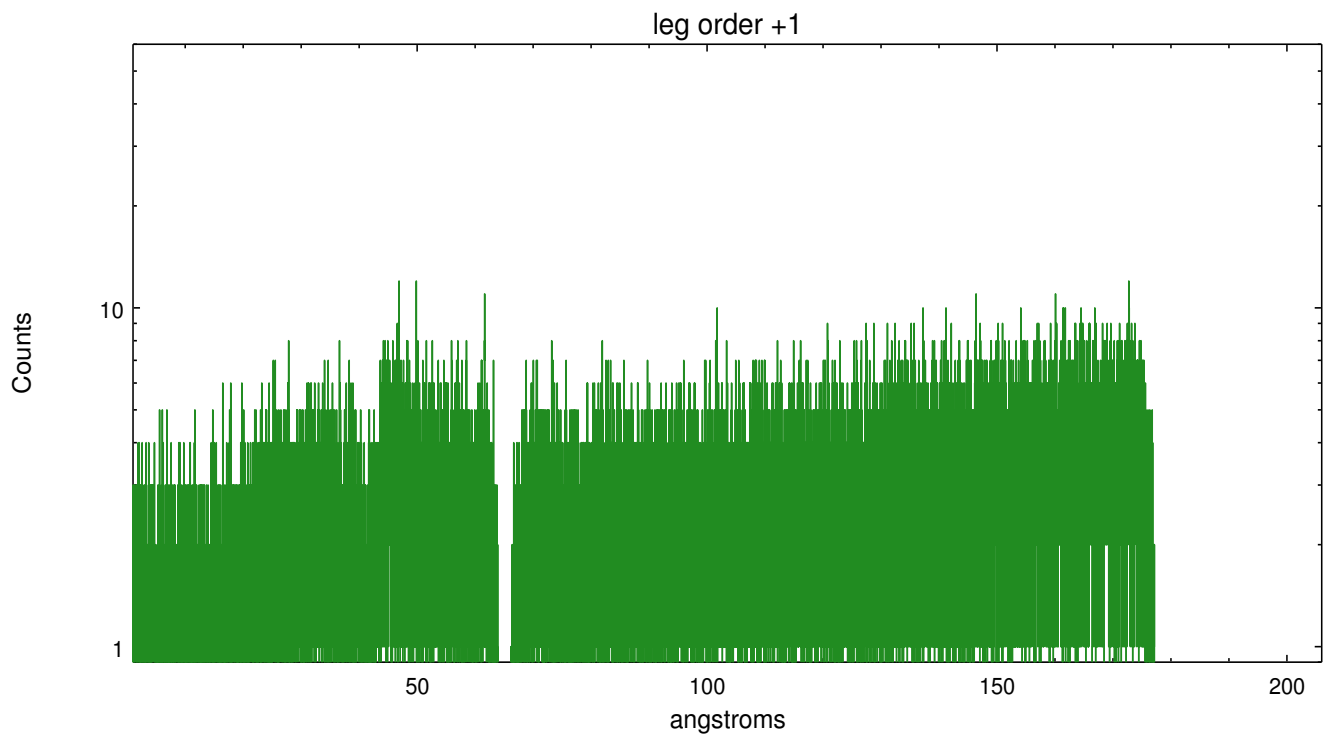
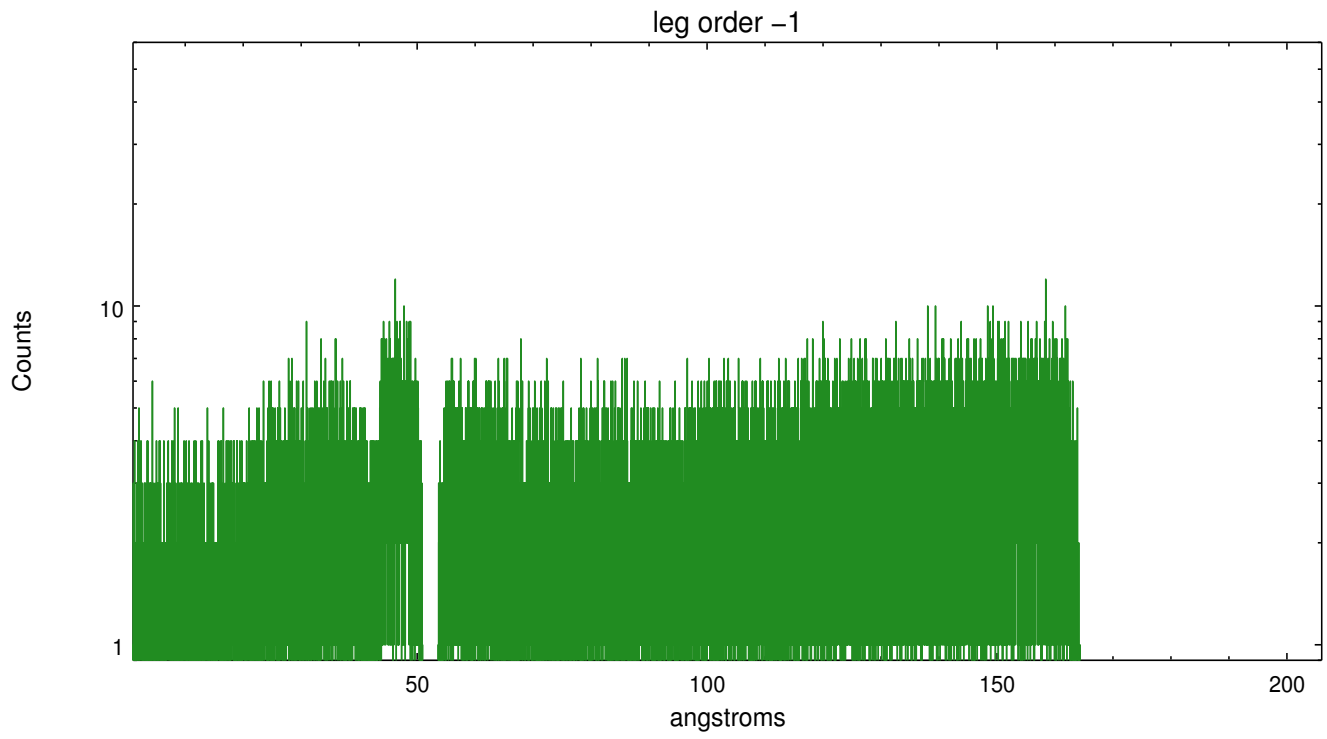


### 3 Gratings

#### 3.1 LETG Arm



LETG Zero Order



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.11.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.181382900178

## A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.