

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 13294 - L2 Version 2  
Chandra X-Ray Center

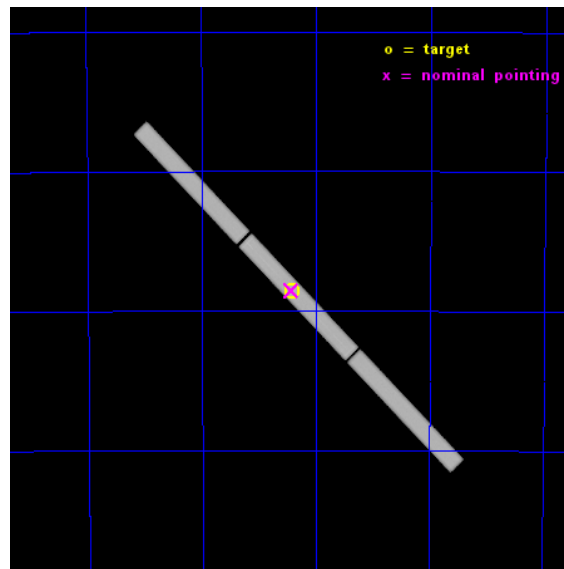
L2 Processing Date : Nov 29 2014

## 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

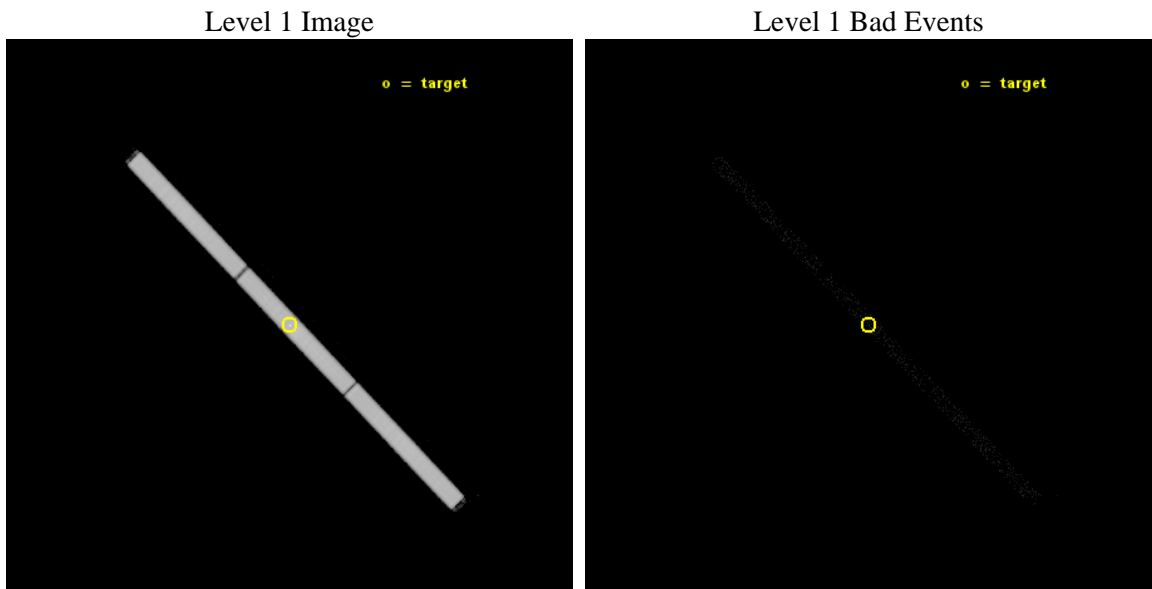
seq_num	501562	Sequence number
obs_id	13294	Observation id
title	RXJ0720.4-3125: a precessing isolated neutron star?	Proposal title
observer	Dr. Peter Predehl	Principal investigator
object	RXJ0720.4-3125	Source name
ra_targ	110.104167	Observer's specified target RA [deg]
dec_targ	-31.430611	Observer's specified target Dec [deg]
ra_nom	110.10812331178	Nominal RA [deg]
dec_nom	-31.427286595596	Nominal Dec [deg]
roll_nom	45.537107054625	Nominal Roll [deg]
revision	2	Processing version of data
ontime	32186.282980859	[s]
livetime	31967.308175341	Overtime multiplied by DTCOR
l2events	1736433	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	32000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	32186.282980859	[s]
caldbver	4.6.4	&#160	l1events	2449747	Number of level 1 events
date	2014-11-30T00:40:38	Date and time of file creation	tgmethod	TGDETECT	Method used to create src1a file
revision	2	Processing version of data	zo_pos	(32870.38, 32681.62)	src1a sky pixel position

### 2.1.3 Events

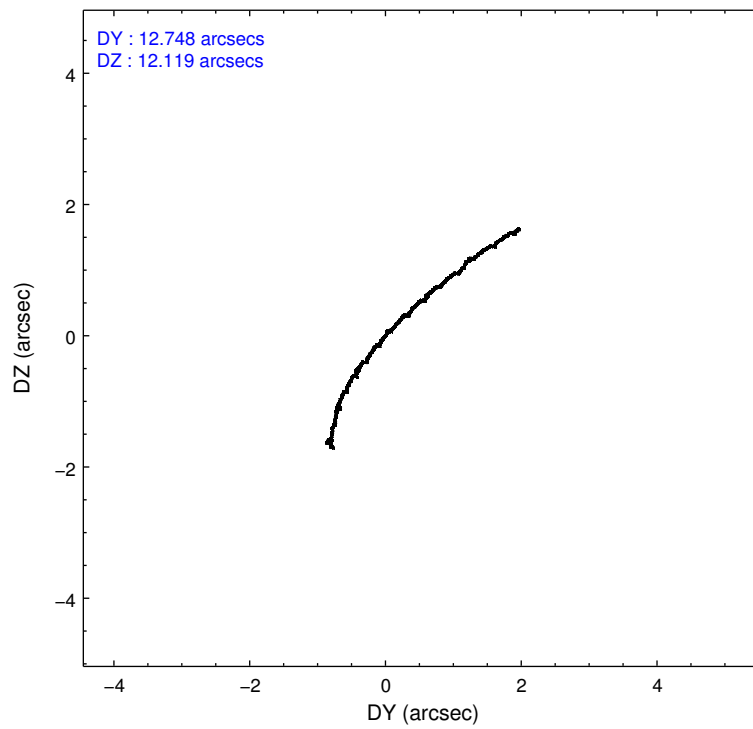
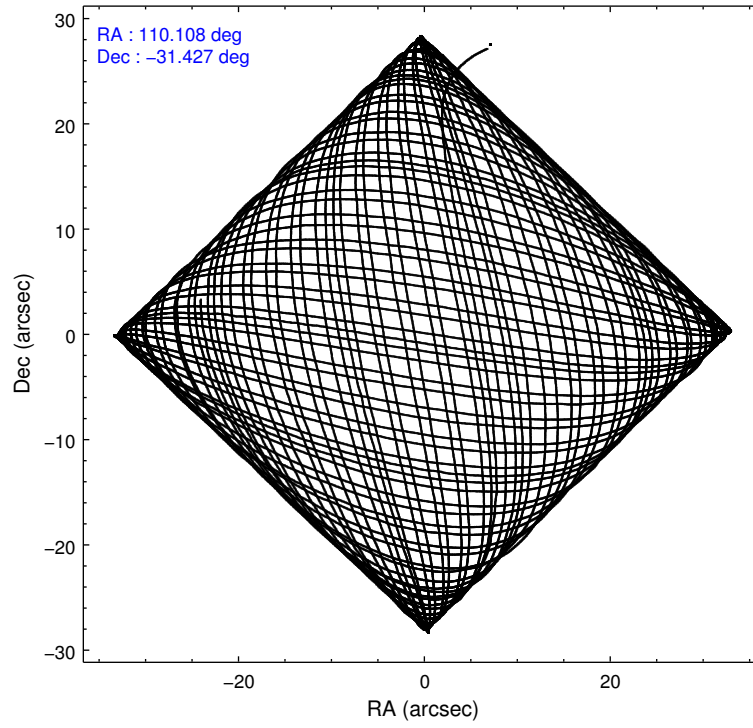
Level 1 Events

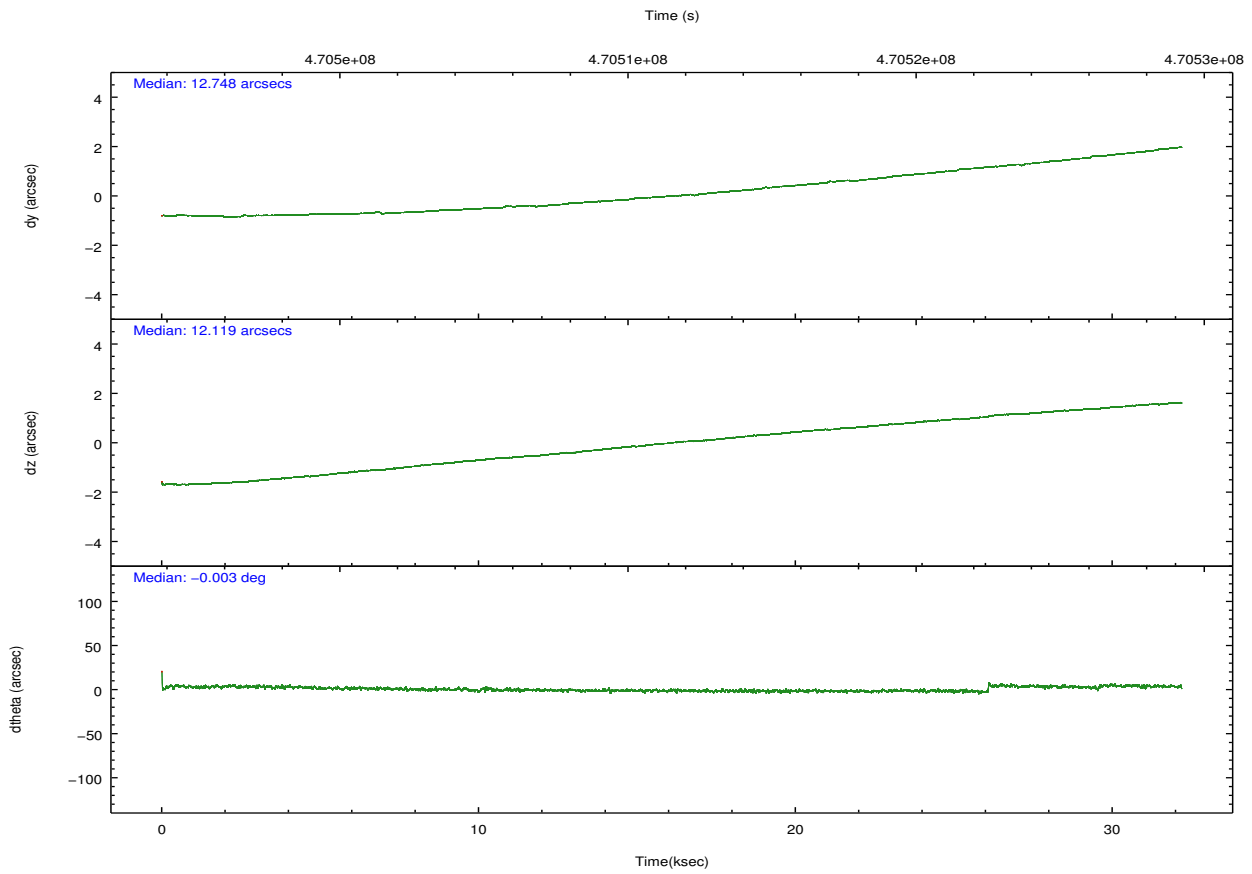
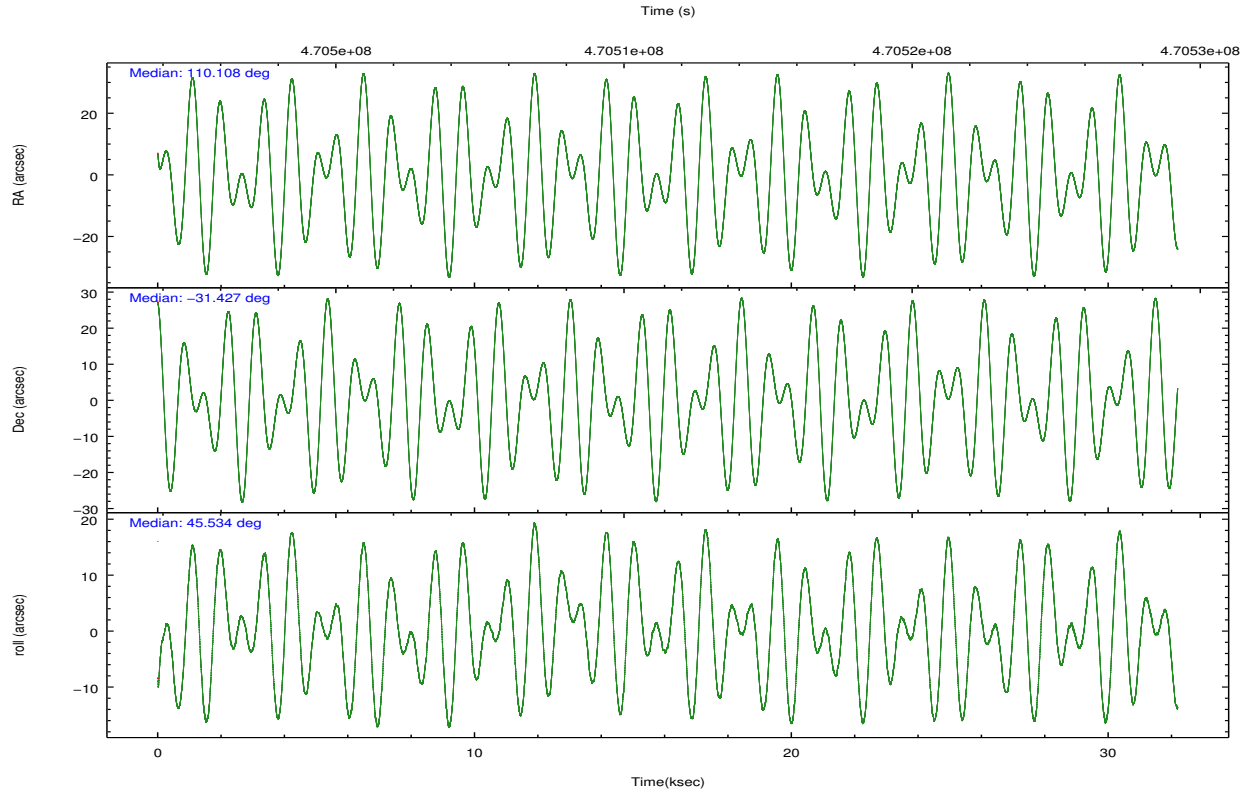
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	814771	814972	820004
rejected events	18324	17950	18053
rejected %	2%	2%	2%

## 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	110.101365	110.108123311784			
[deg] Pointing Dec	-31.455372	-31.42728659559576			
[deg] Pointing Roll	45.466249	45.53710705462451			
[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)	470495619.184000	470494723.13562			
Observation start date	2012-11-28T13:12:32	2012-11-28T12:58:43			
[s] Observation end time (MET)	470527619.184000	470528361.07493			
Observation end date	2012-11-28T22:05:52	2012-11-28T22:19:21			

## 2.3 Aspect



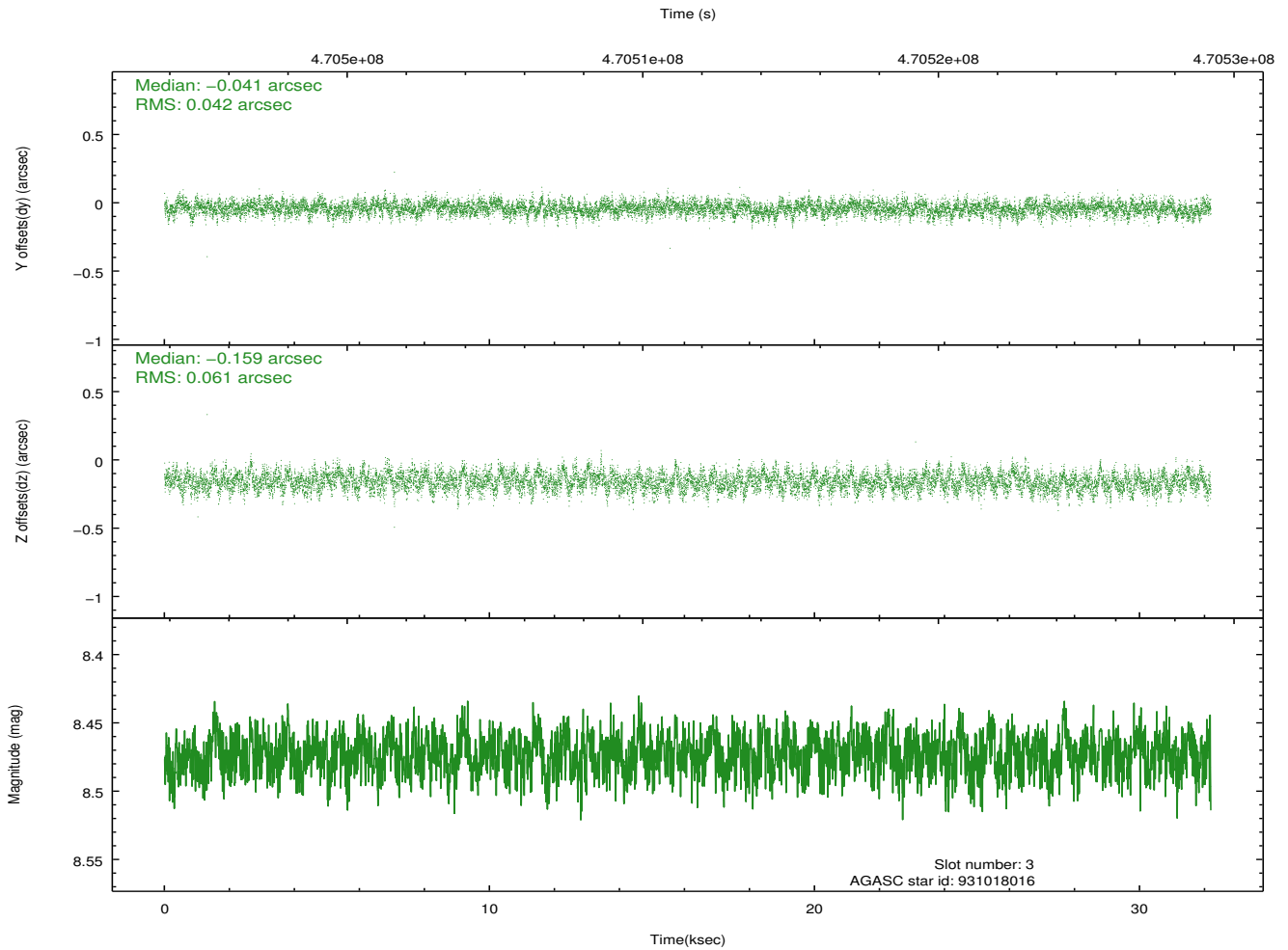
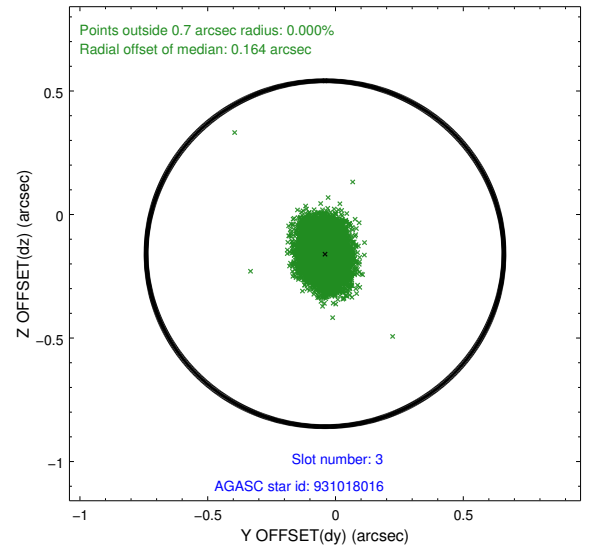
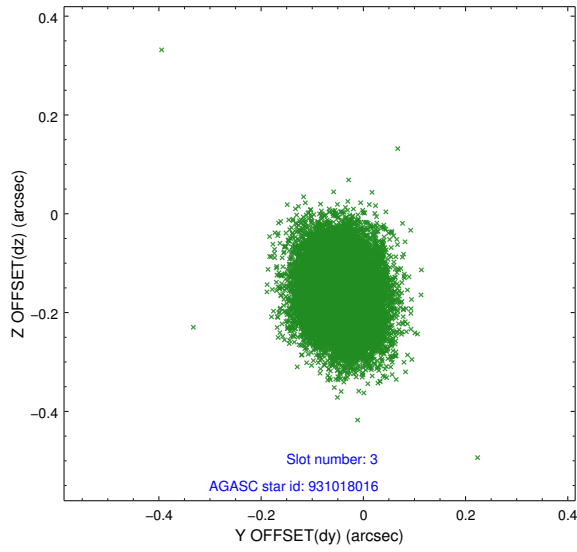


### Slot Statistics

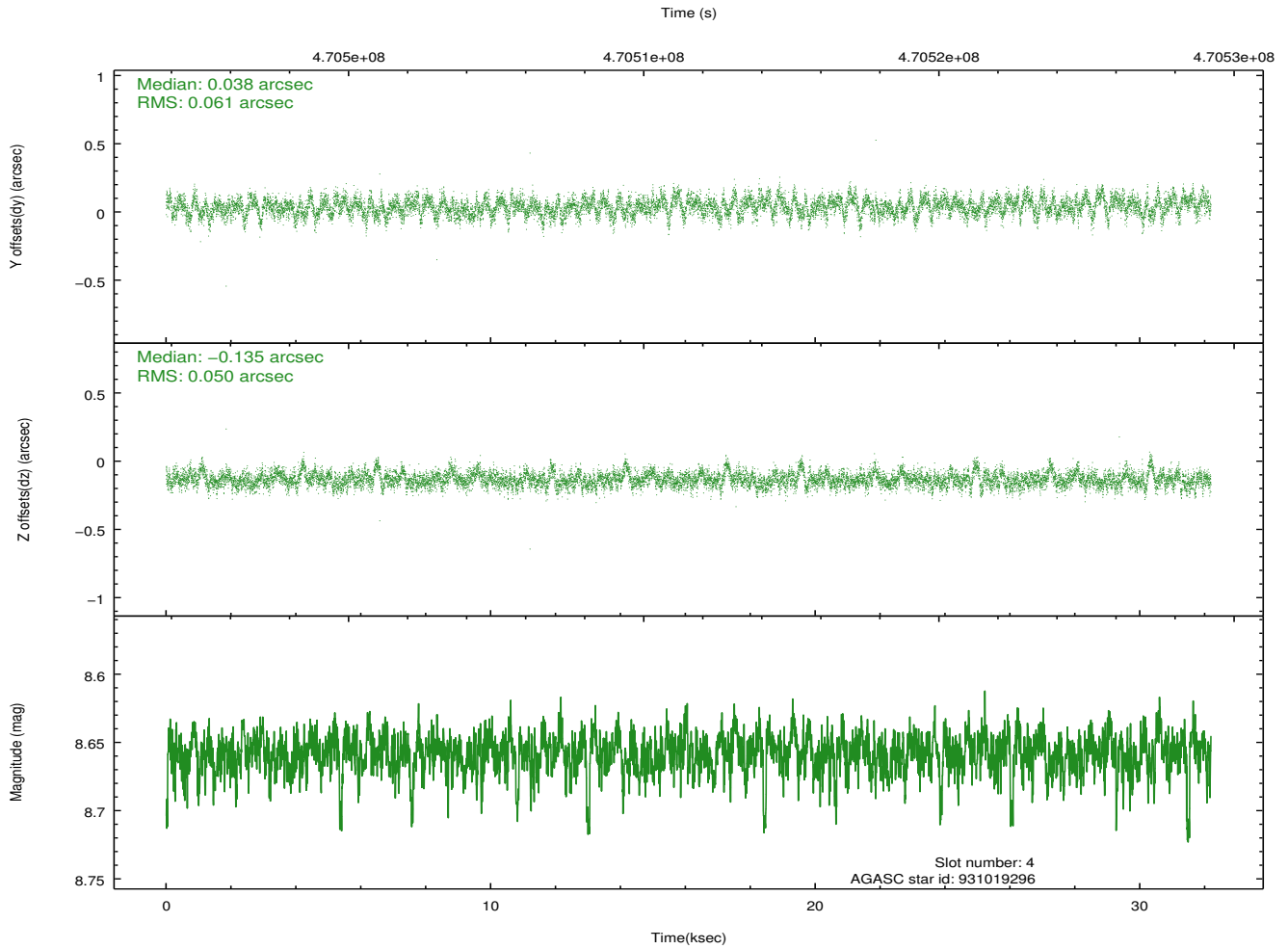
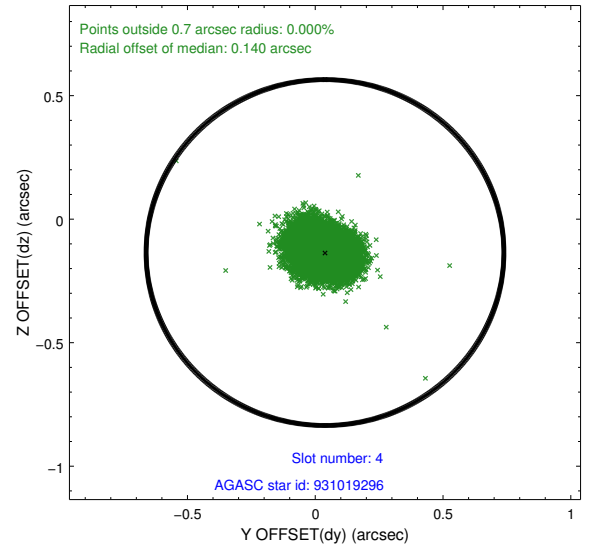
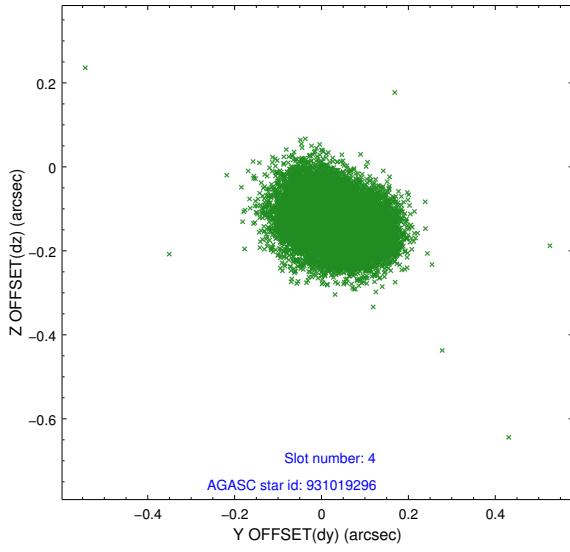
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		HRC-S-1	7.01	7851	0.043	-0.172	0.026	0.040	0.000000	0.000000	-1167.33	-460.85
1	FID		HRC-S-3	7.01	7851	0.037	-0.063	0.032	0.047	0.000000	0.000000	-1170.20	568.73
2	FID		HRC-S-4	6.95	7851	0.307	-0.063	0.014	0.045	0.000000	0.000000	1231.04	571.42
3	GUIDE	used	931018016	8.47	15696	-0.041	-0.159	0.078	0.128	109.684535	-31.226562	-314.34	1490.70
4	GUIDE	used	931019296	8.66	15695	0.038	-0.135	0.083	0.137	109.471771	-31.694370	-1970.23	767.24
5	GUIDE	used	931022960	8.94	15681	0.214	0.335	0.088	0.142	109.733092	-31.864448	-1840.29	-231.00
6	GUIDE	used	931160352	8.61	15698	-0.224	-0.139	0.075	0.122	110.268138	-30.864891	1876.55	1123.70
7	GUIDE	used	931163512	8.48	15694	0.018	0.098	0.095	0.153	110.894384	-31.299941	2104.03	-1352.17

## 2.4 Star Slots

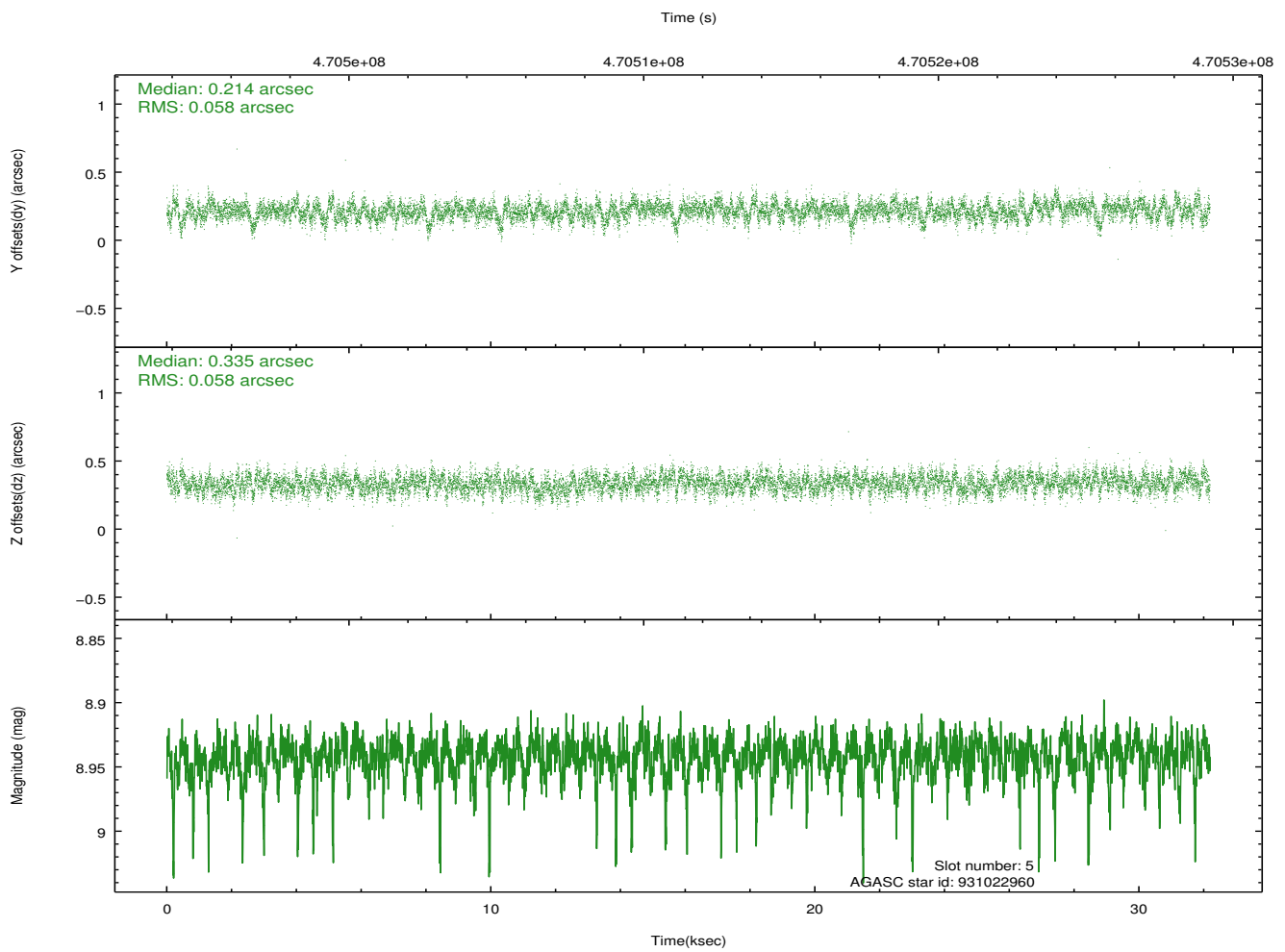
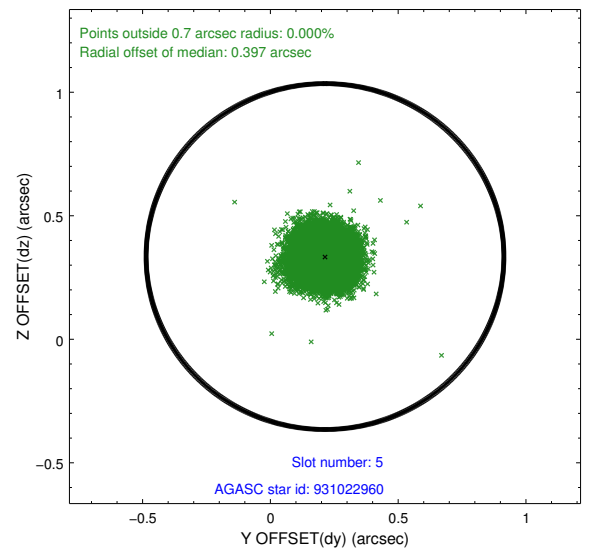
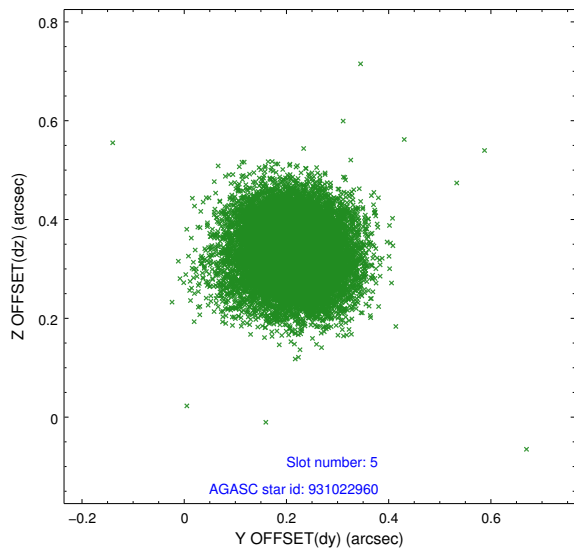
### 2.4.1 Slot 3



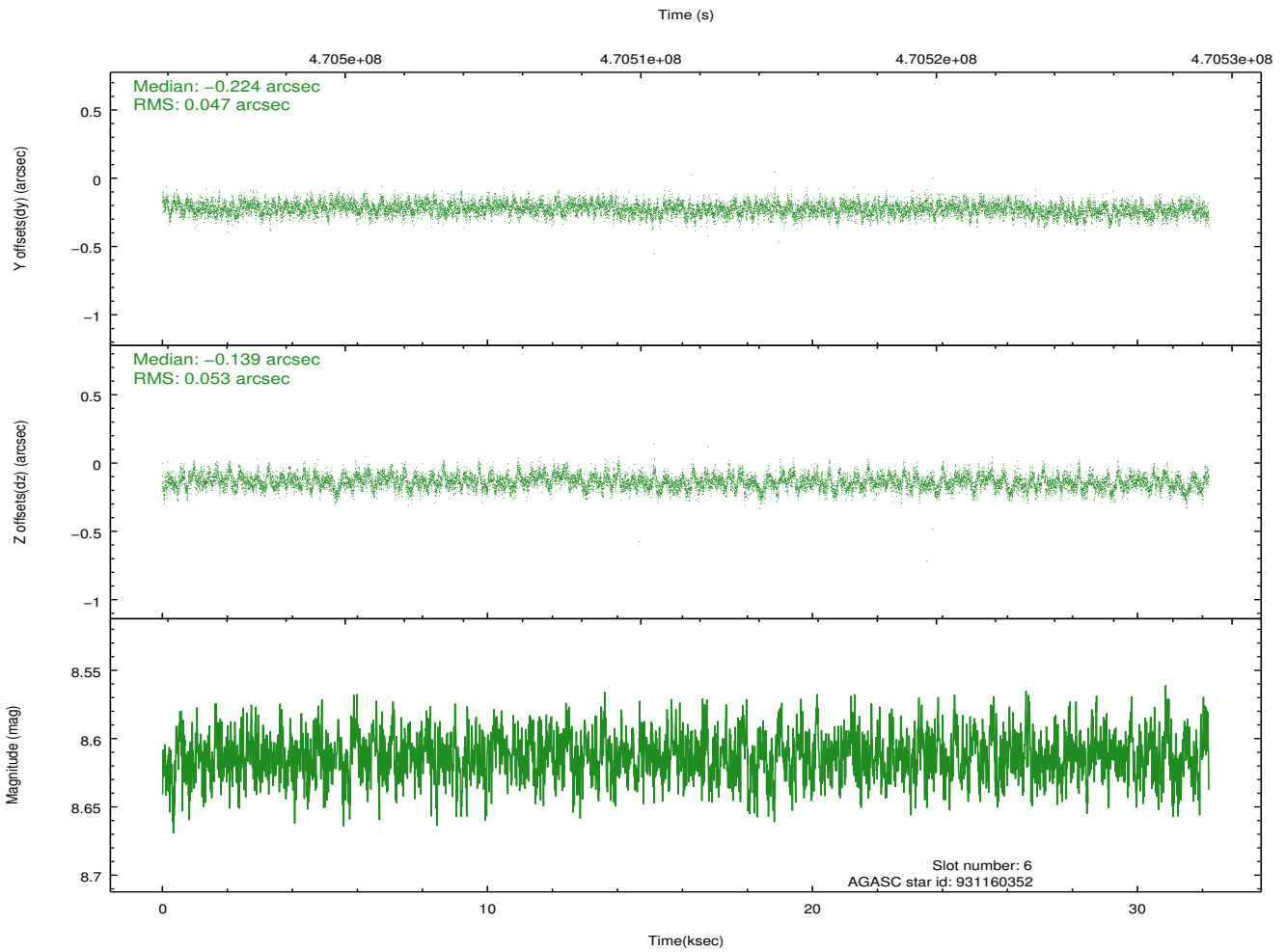
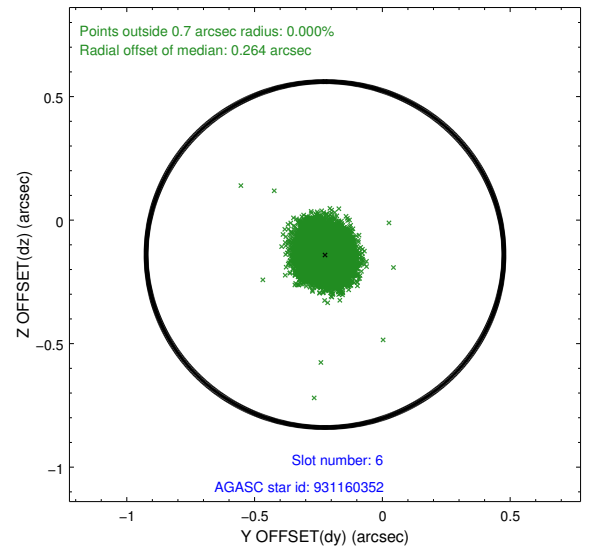
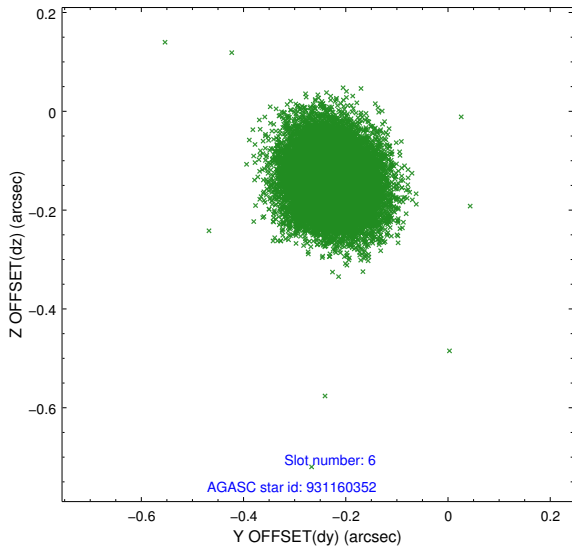
## 2.4.2 Slot 4



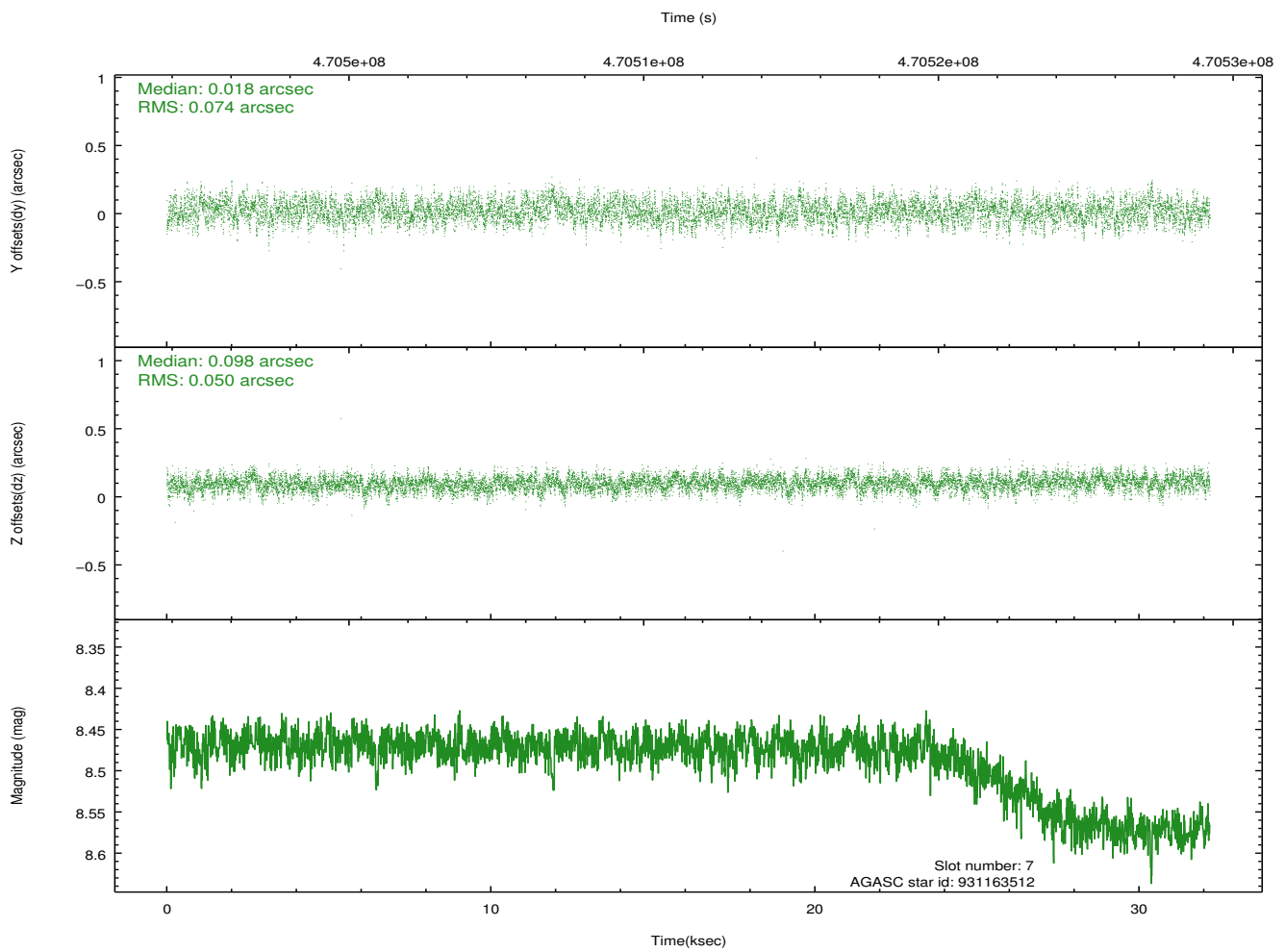
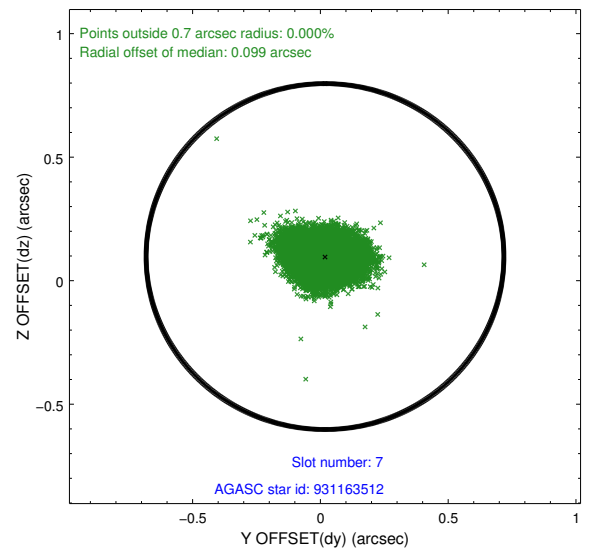
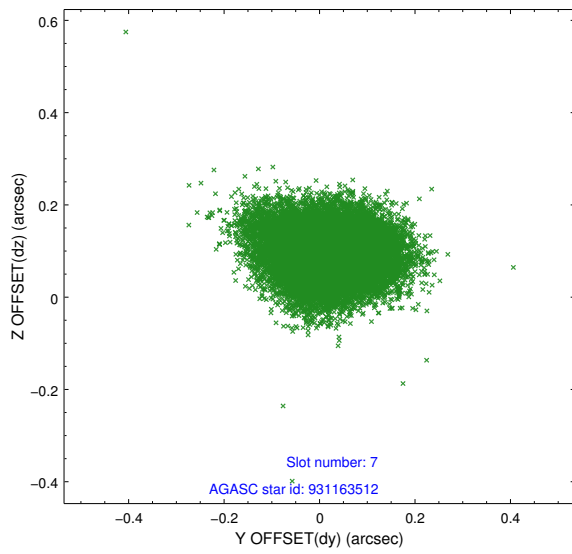
### 2.4.3 Slot 5



## 2.4.4 Slot 6

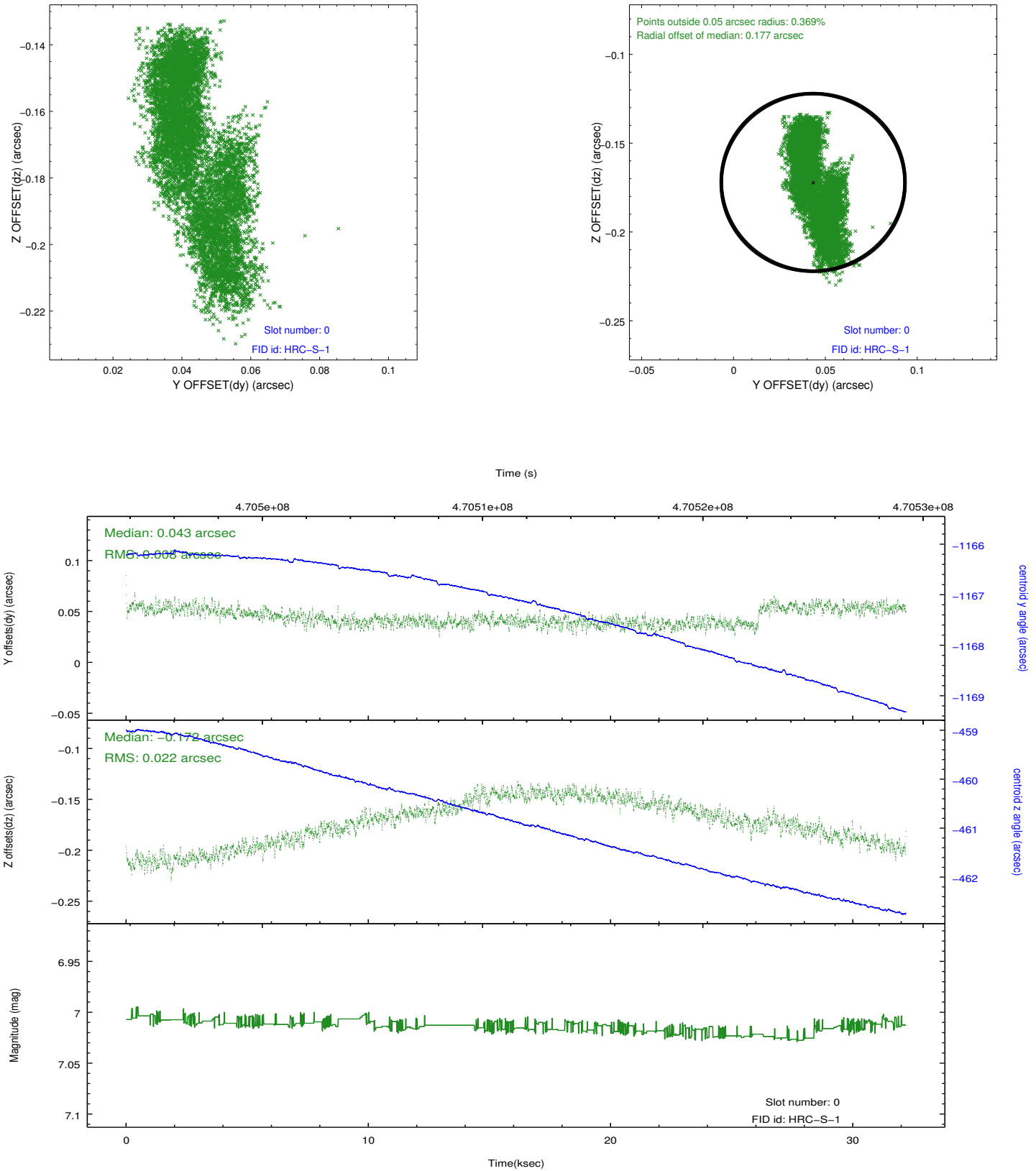


## 2.4.5 Slot 7

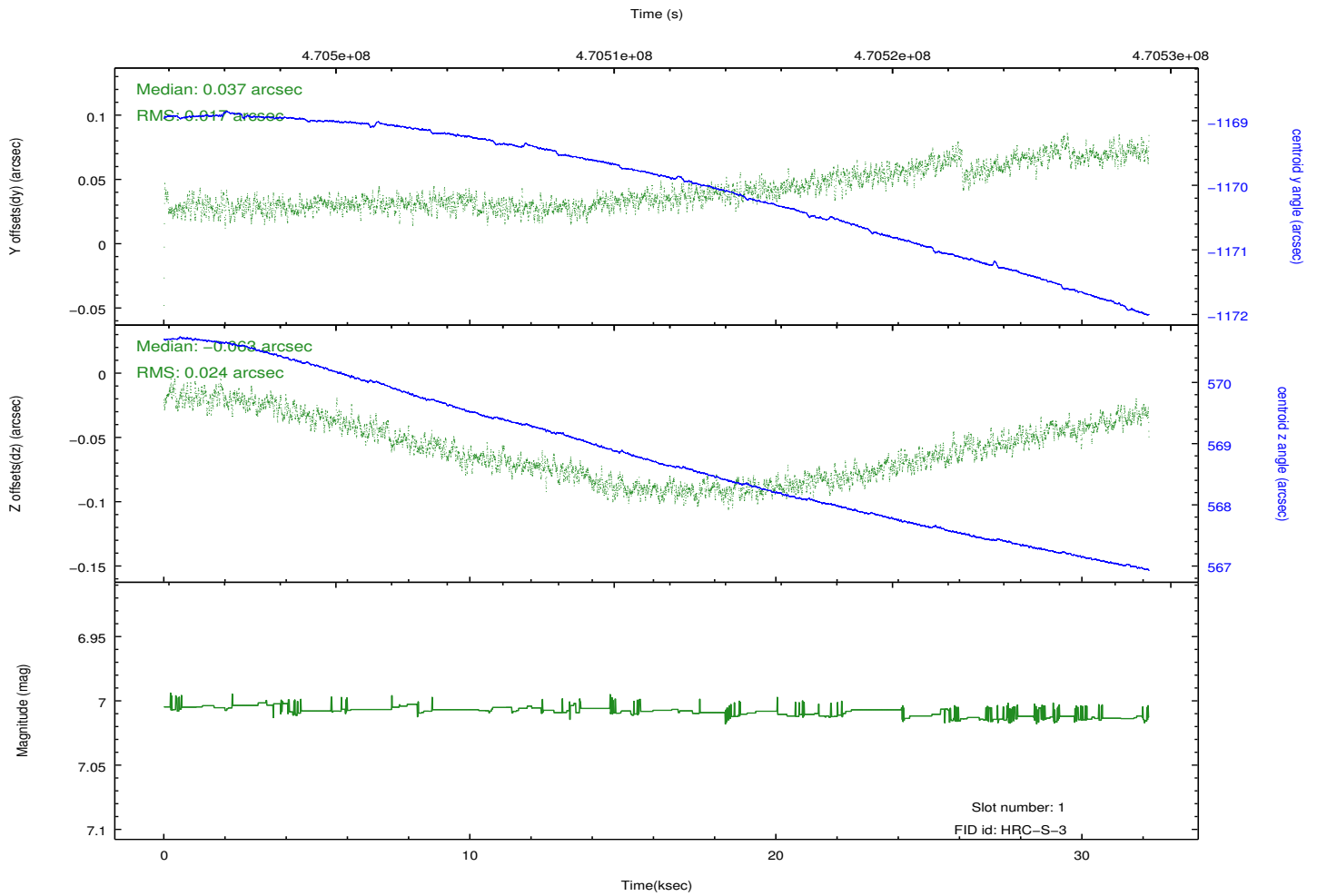
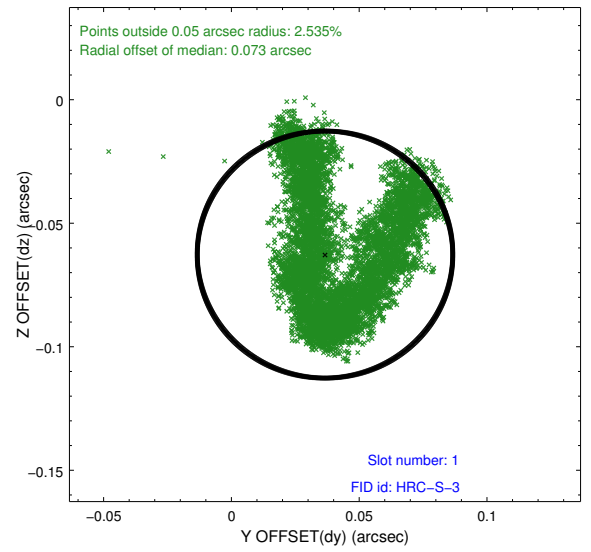
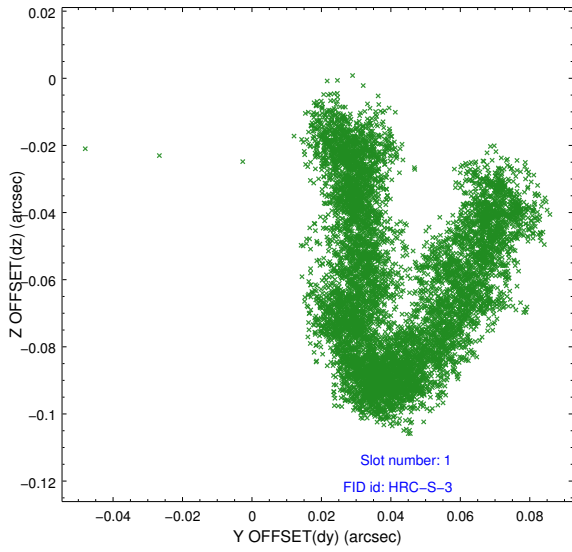


## 2.5 FID Slots

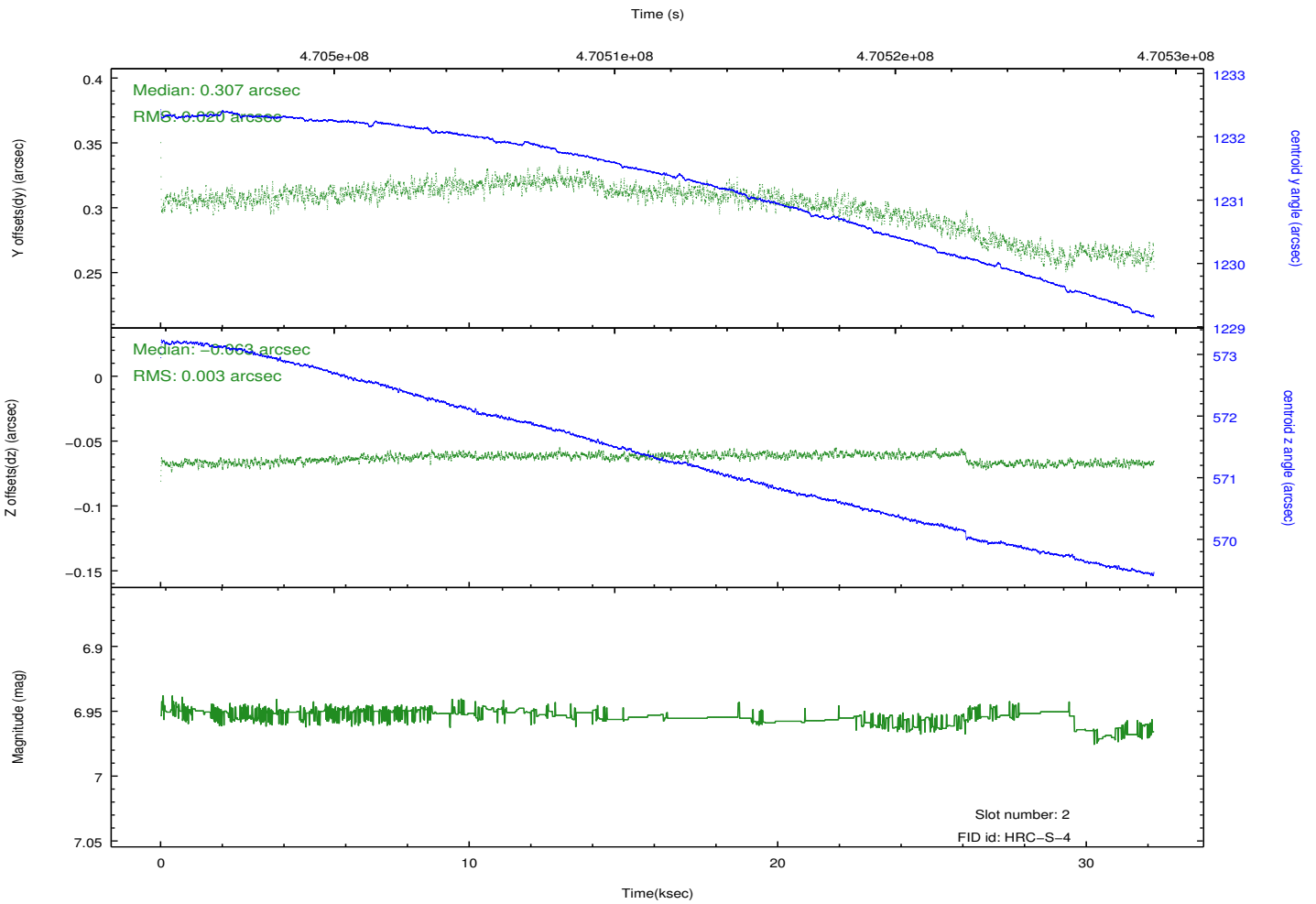
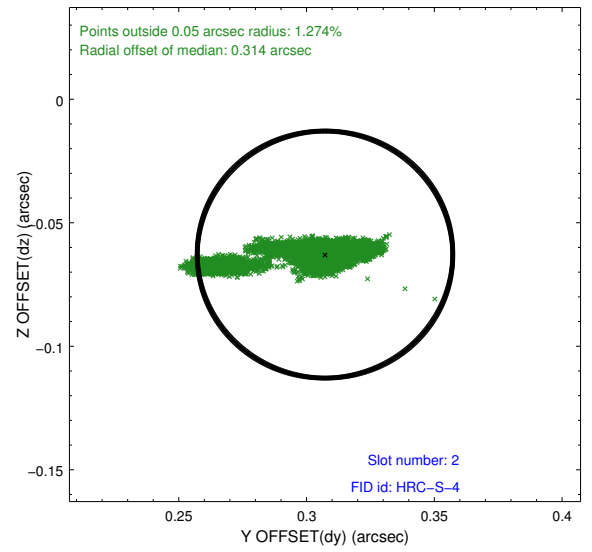
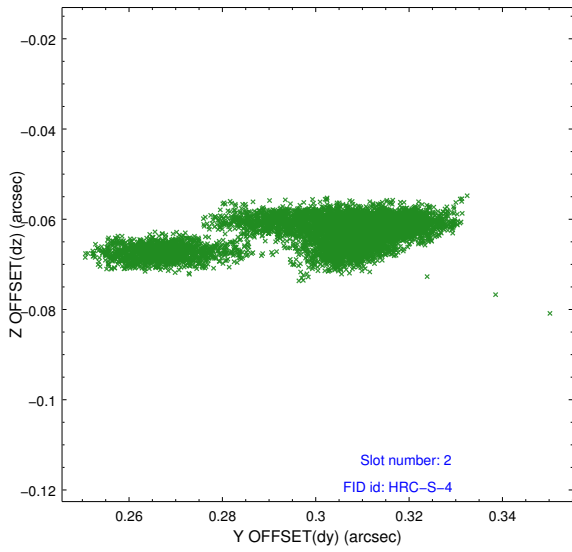
### 2.5.1 Slot 0



## 2.5.2 Slot 1

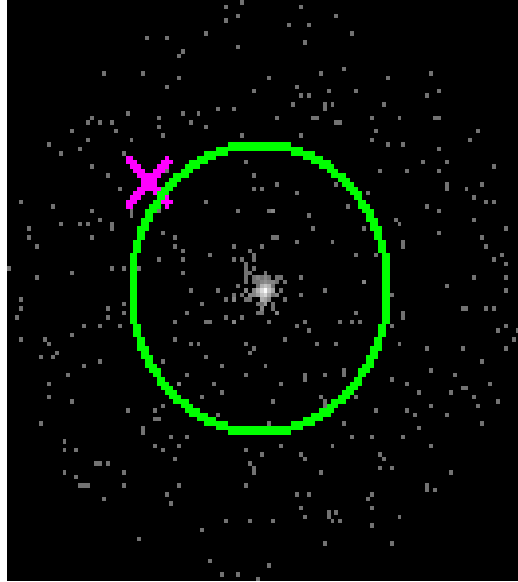


### 2.5.3 Slot 2



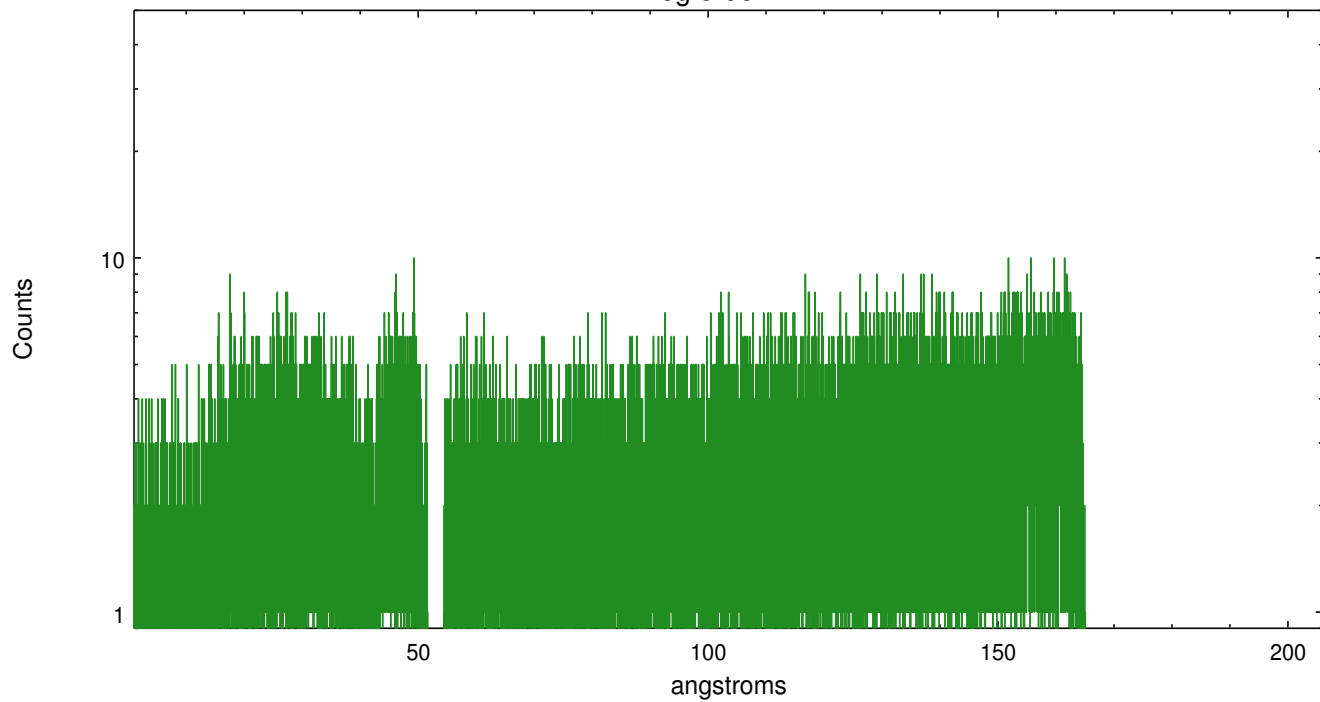
### 3 Gratings

#### 3.1 LETG Arm

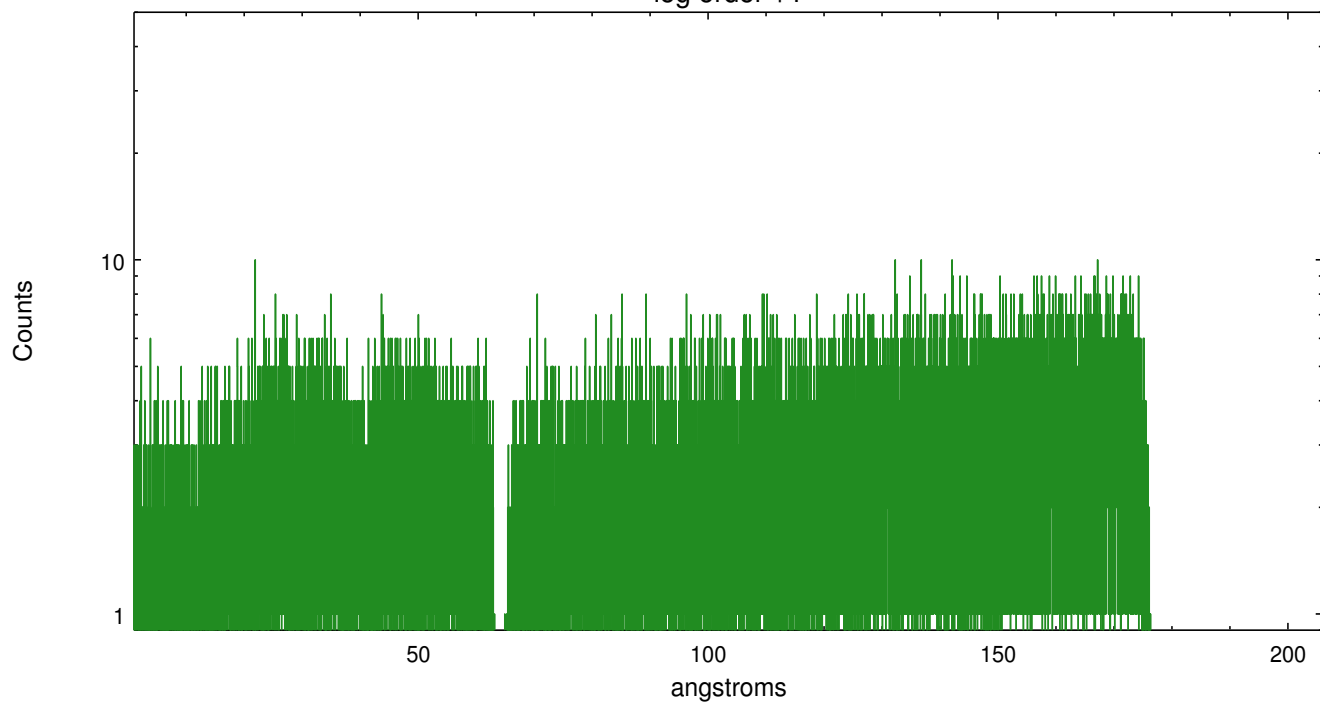


LETG Zero Order

leg order -1



leg order +1



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2014.12.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	32.186282980859

## 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.