

# V&V Reference Report

## L2 ASCDS Version : 10.6

Observation 20949 - L2 Version 1  
Chandra X-Ray Center

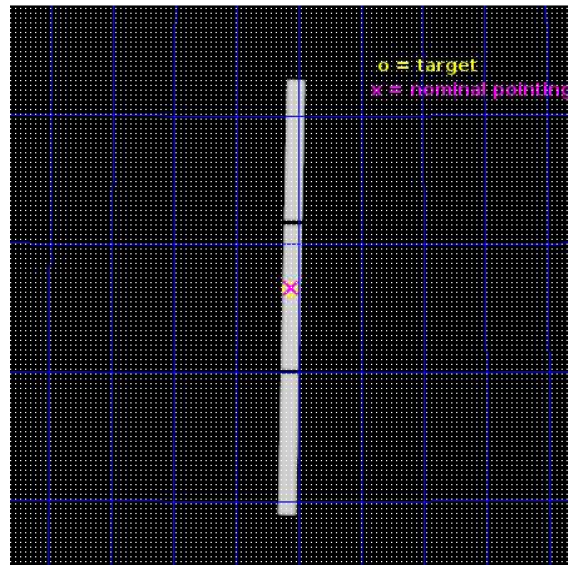
L2 Processing Date : Feb 3 2018

## 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	703315	Sequence number
obs_id	20949	Observation id
title	Chandra observations of a unique X-ray WHIM absorber towards PG 1116+215	Proposal title
observer	Massimiliano Bonamente	Principal investigator
object	PG 1116+215	Source name
ra_targ	169.78625	Observer's specified target RA [deg]
dec_targ	21.321667	Observer's specified target Dec [deg]
ra_nom	169.77919461361	Nominal RA [deg]
dec_nom	21.330450031625	Nominal Dec [deg]
roll_nom	91.069893962716	Nominal Roll [deg]
revision	1	Processing version of data
ontime	18813.619858384	[s]
livetime	18619.797869541	Ontime multiplied by DTCOR
l2events	1601719	Number of level 2 events

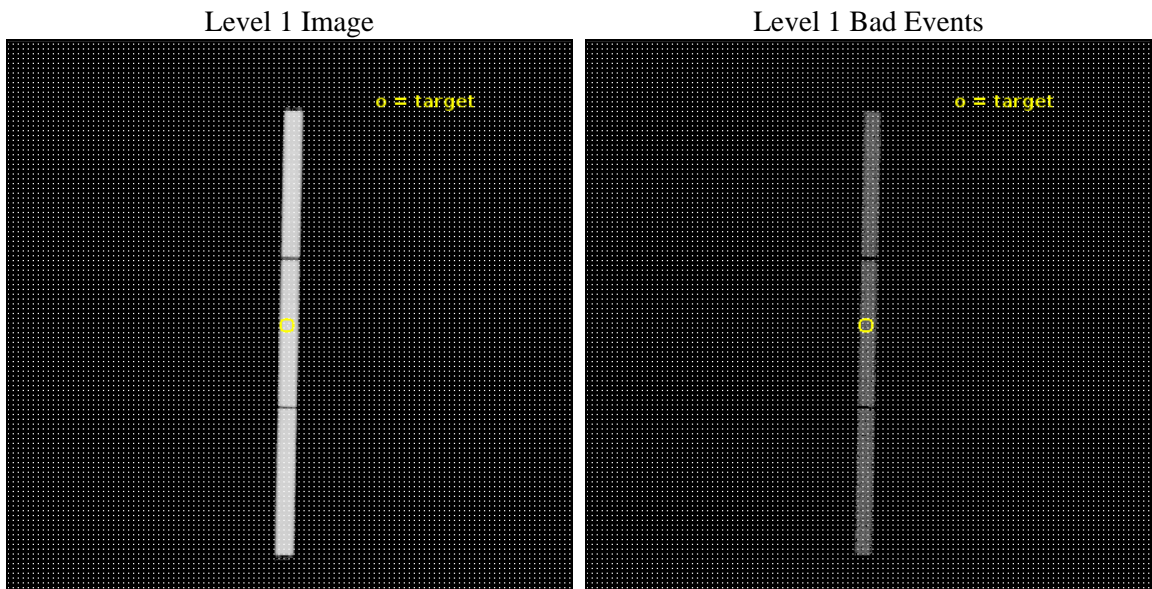




## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	19000.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	18813.619858384	[s]
caldsver	4.7.7	&#160	l1events	2134259	Number of level 1 events
date	2018-02-03T17:45:53	Date and time of file creation	tgmethod	TGDETECT	Method used to create src1a file
revision	1	Processing version of data	zo_pos	(32586.08, 32523.90)	src1a sky pixel position

### 2.1.3 Events

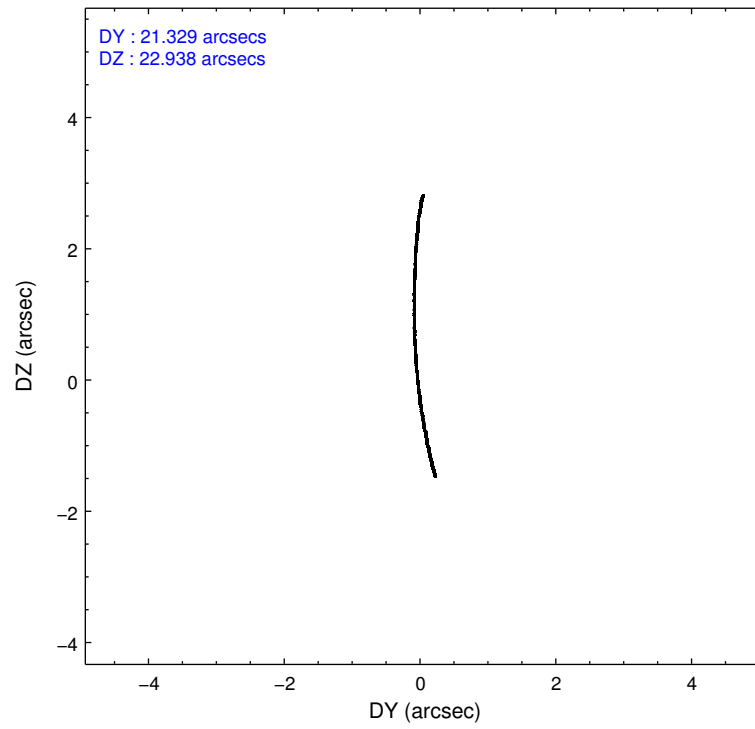
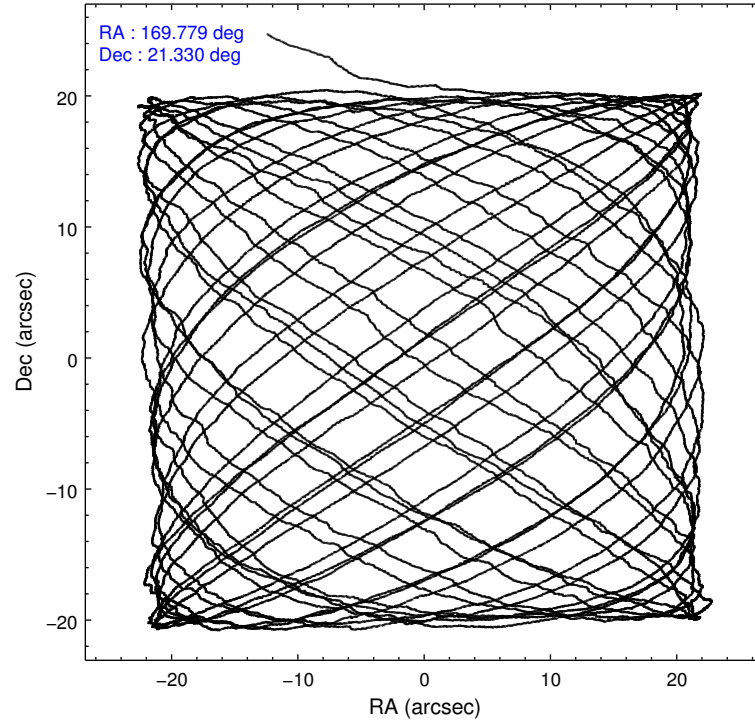
Level 1 Events

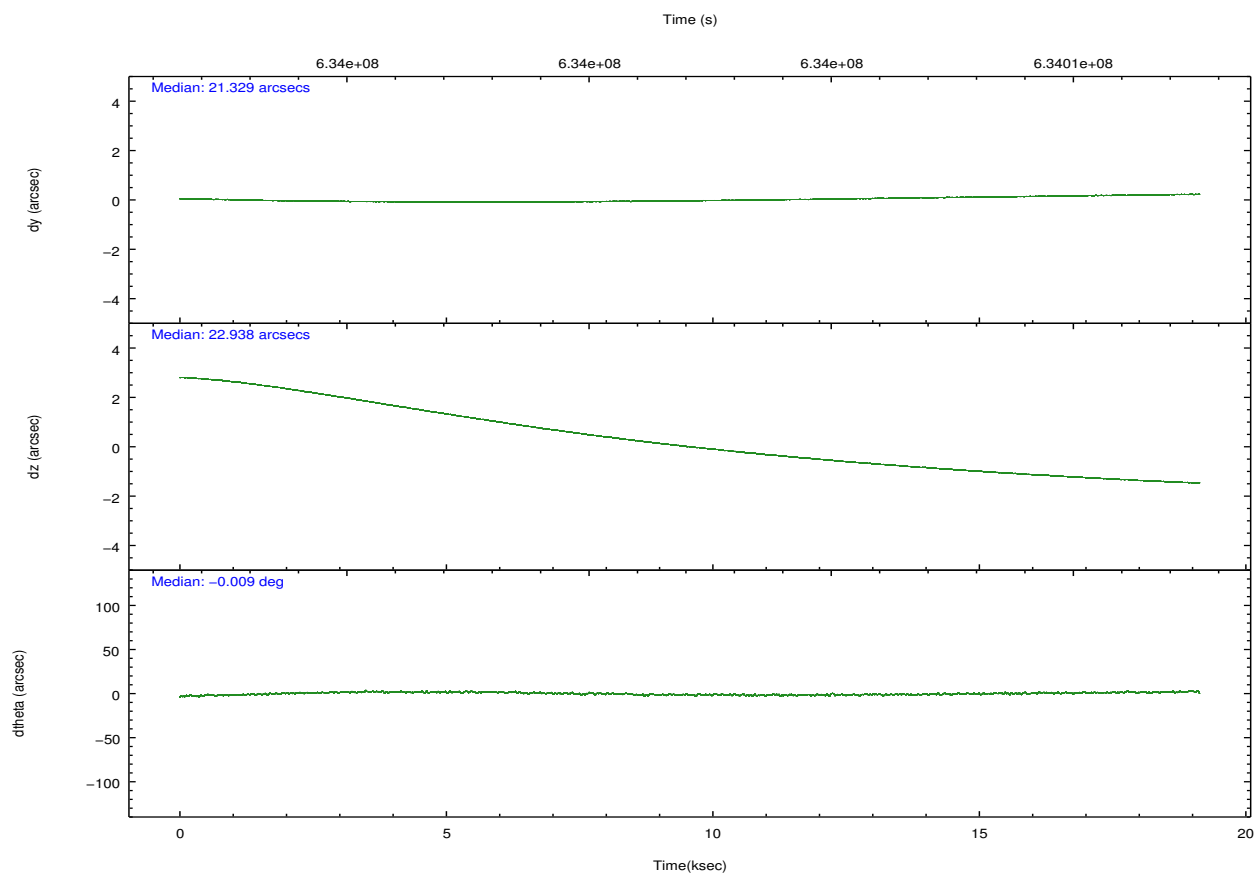
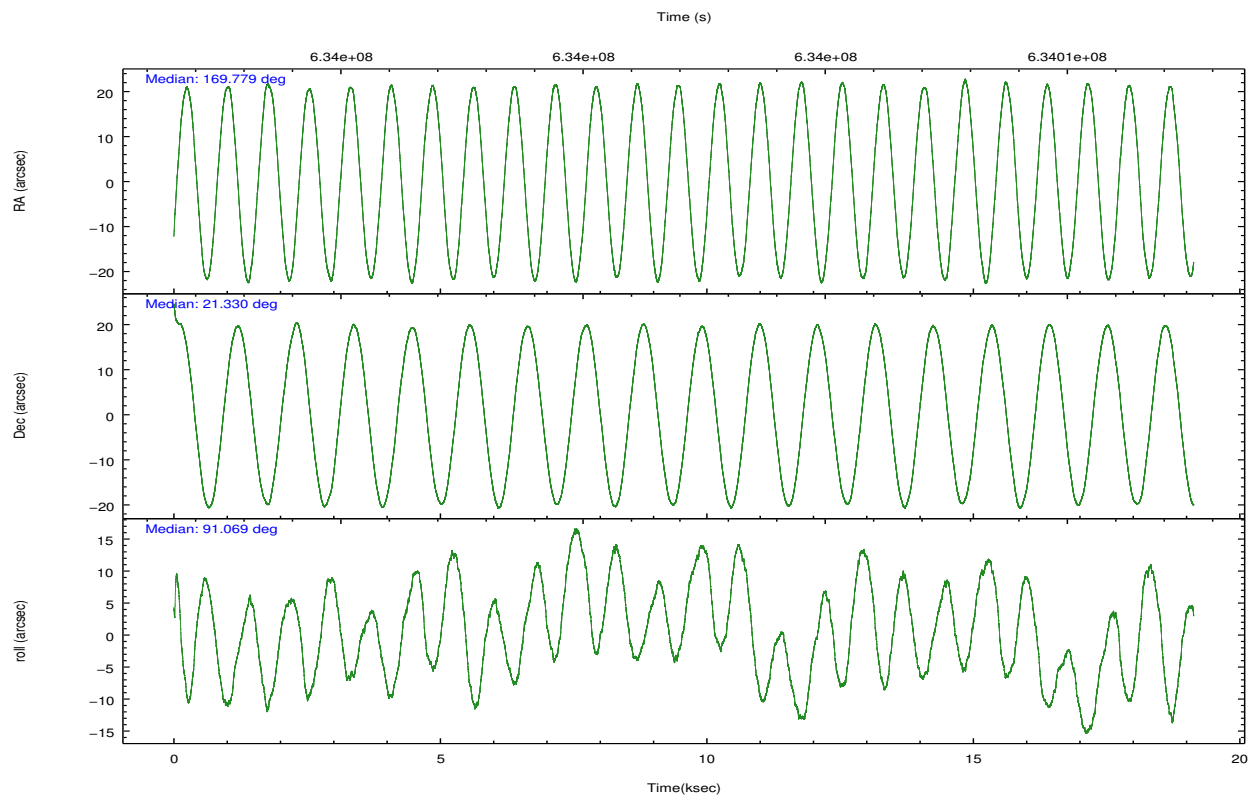
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	711244	714274	708741
rejected events	51505	51355	51028
rejected %	7%	7%	7%

## 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	169.796444	169.7791946136079			
[deg] Pointing Dec	21.306429	21.33045003162469			
[deg] Pointing Roll	90.996298	91.06989396271615			
[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)	633992664.184000	633991427.83164			
Observation start date	2018-02-02T21:03:15	2018-02-02T20:43:47			
[s] Observation end time (MET)	634011664.184000	634012441.35788			
Observation end date	2018-02-03T02:19:55	2018-02-03T02:34:01			

## 2.3 Aspect



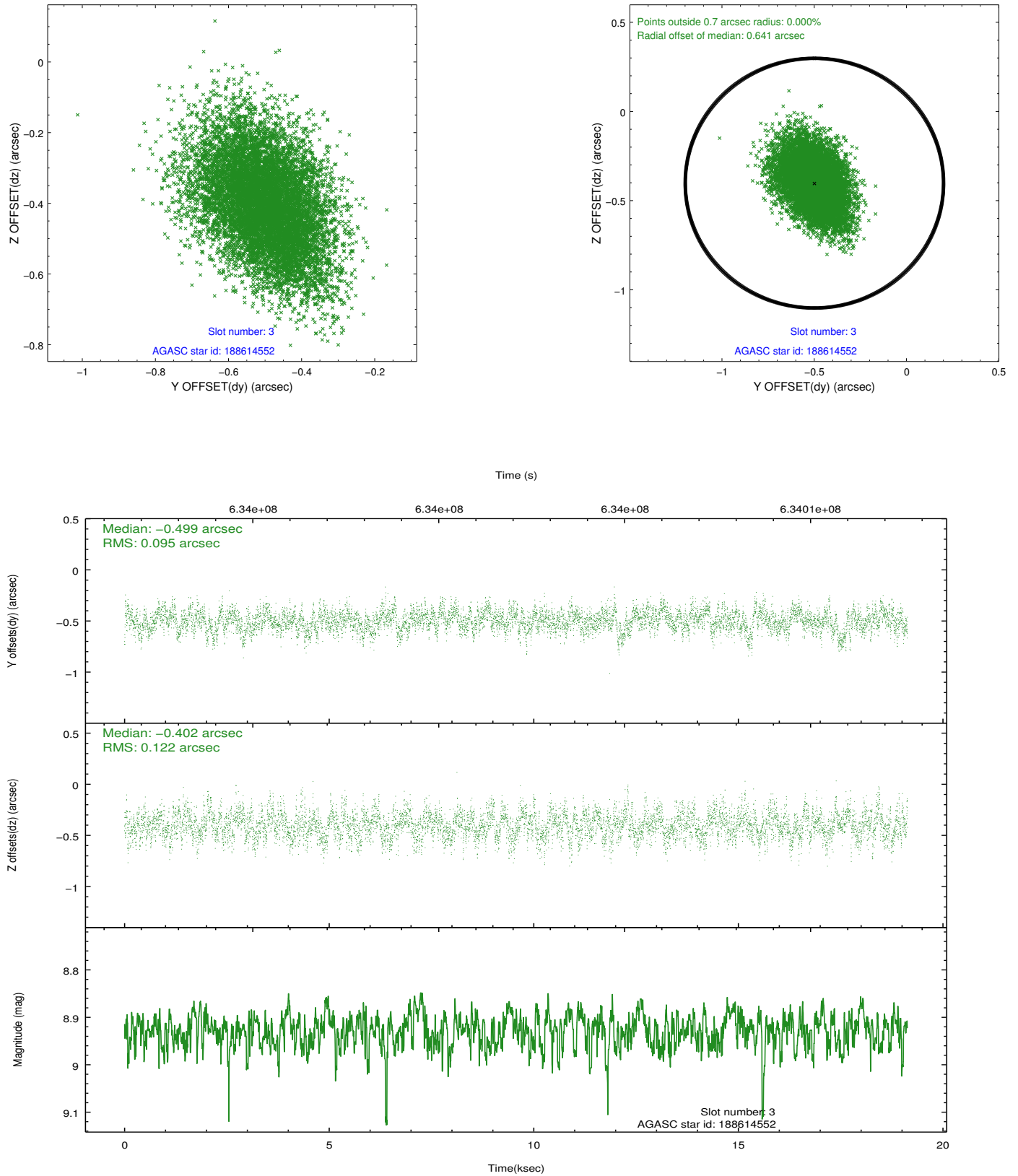


### Slot Statistics

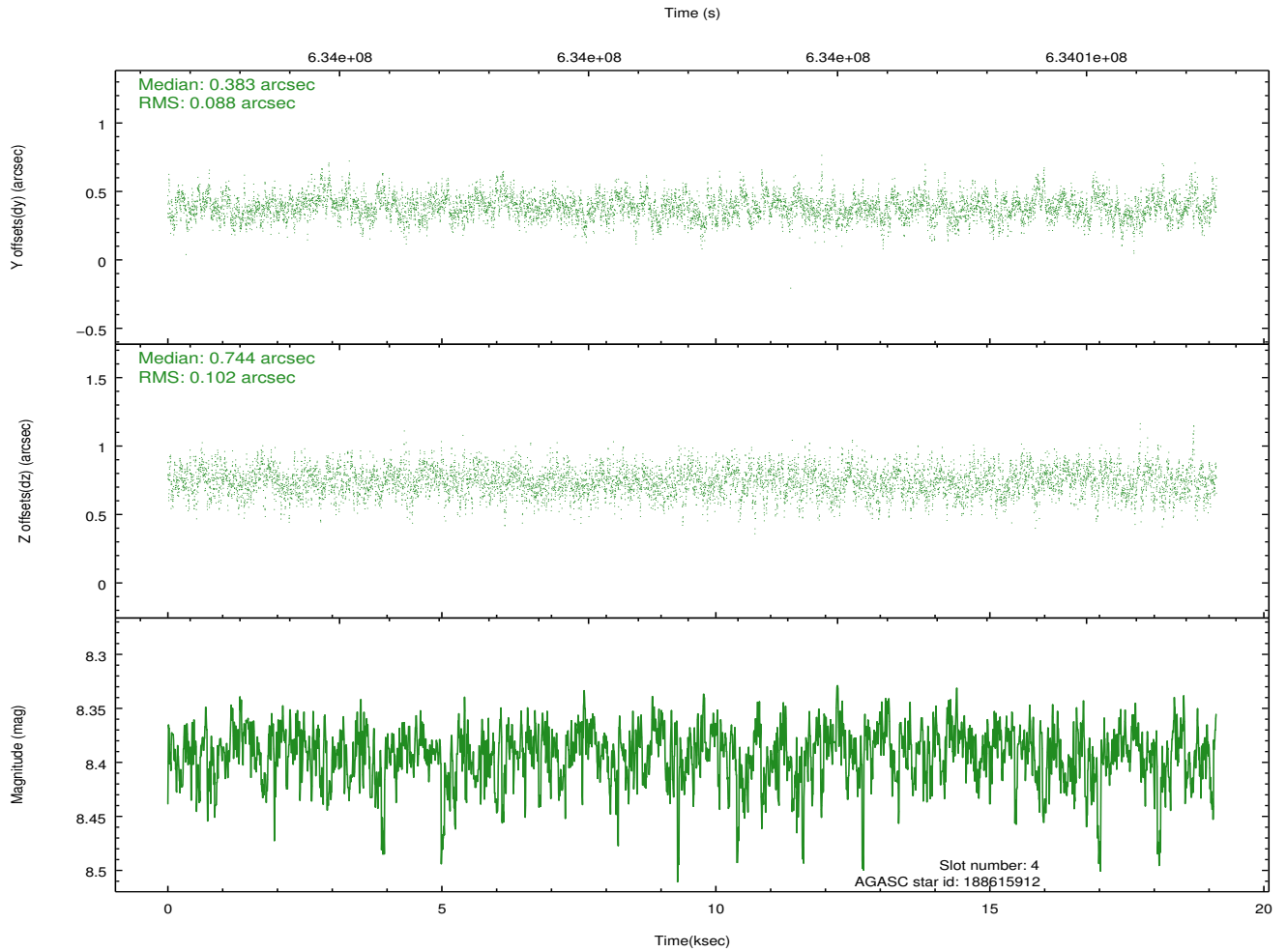
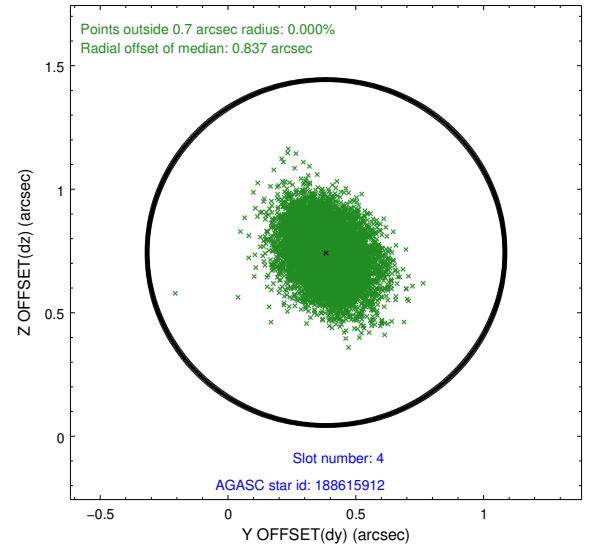
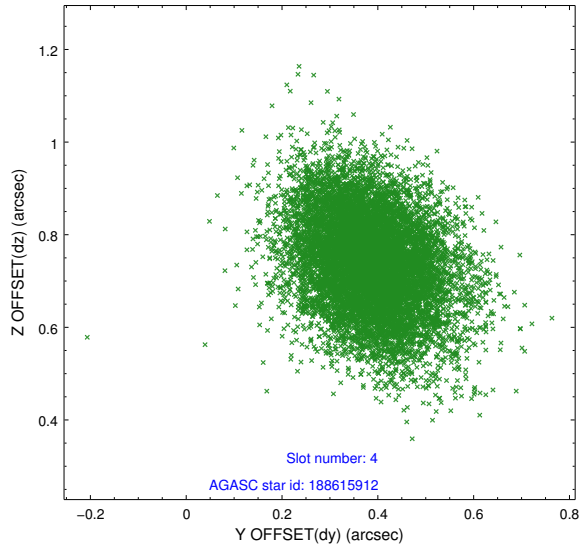
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		HRC-S-1	7.09	4667	-0.079	-0.169	0.018	0.041	0.000000	0.000000	-1176.01	-472.47
1	FID		HRC-S-2	7.06	4667	0.433	-0.140	0.006	0.012	0.000000	0.000000	1223.93	-464.95
2	FID		HRC-S-3	7.08	4667	0.036	0.006	0.019	0.043	0.000000	0.000000	-1178.46	557.15
3	GUIDE	used	188614552	8.93	9328	-0.499	-0.402	0.164	0.273	169.490657	21.468678	602.78	1014.56
4	GUIDE	used	188615912	8.39	9334	0.383	0.744	0.142	0.233	170.246329	20.858006	-1637.54	-1484.04
5	GUIDE	used	188616136	8.95	9319	-0.127	-0.435	0.166	0.293	169.590378	21.286471	-60.24	691.50
6	GUIDE	used	188623472	7.06	9257	0.096	0.065	0.124	0.218	169.895324	20.725289	-2096.78	-295.57
7	GUIDE	used	188614832	9.11	9311	0.145	0.029	0.188	0.343	170.375801	21.987686	2421.83	-1975.74

## 2.4 Star Slots

### 2.4.1 Slot 3

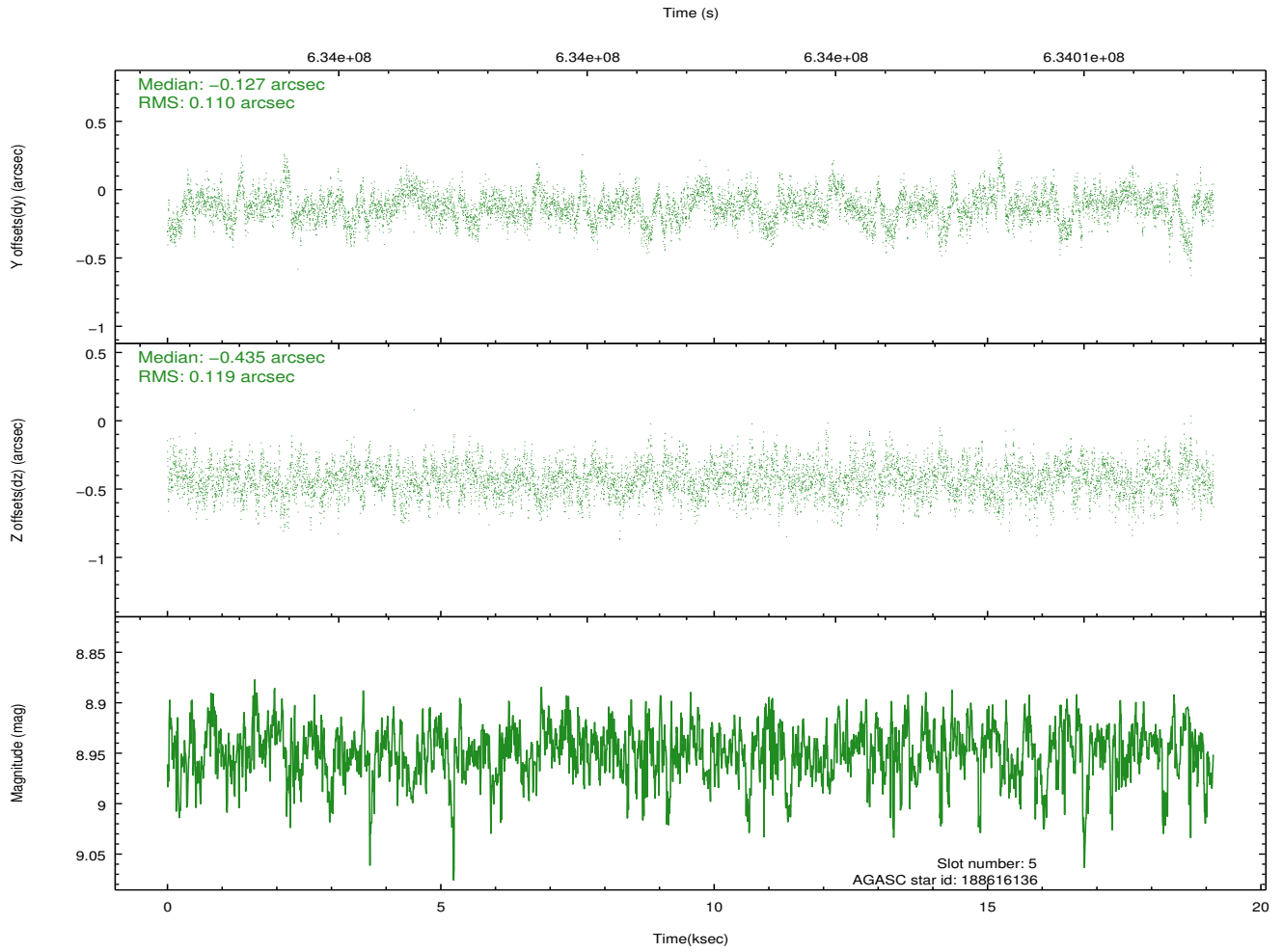
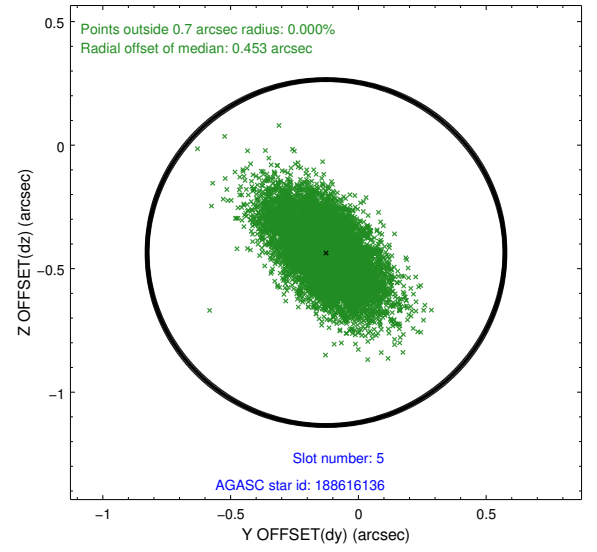
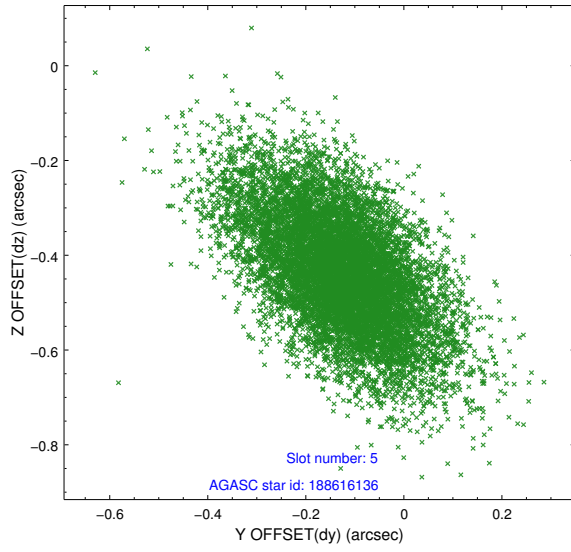


## 2.4.2 Slot 4

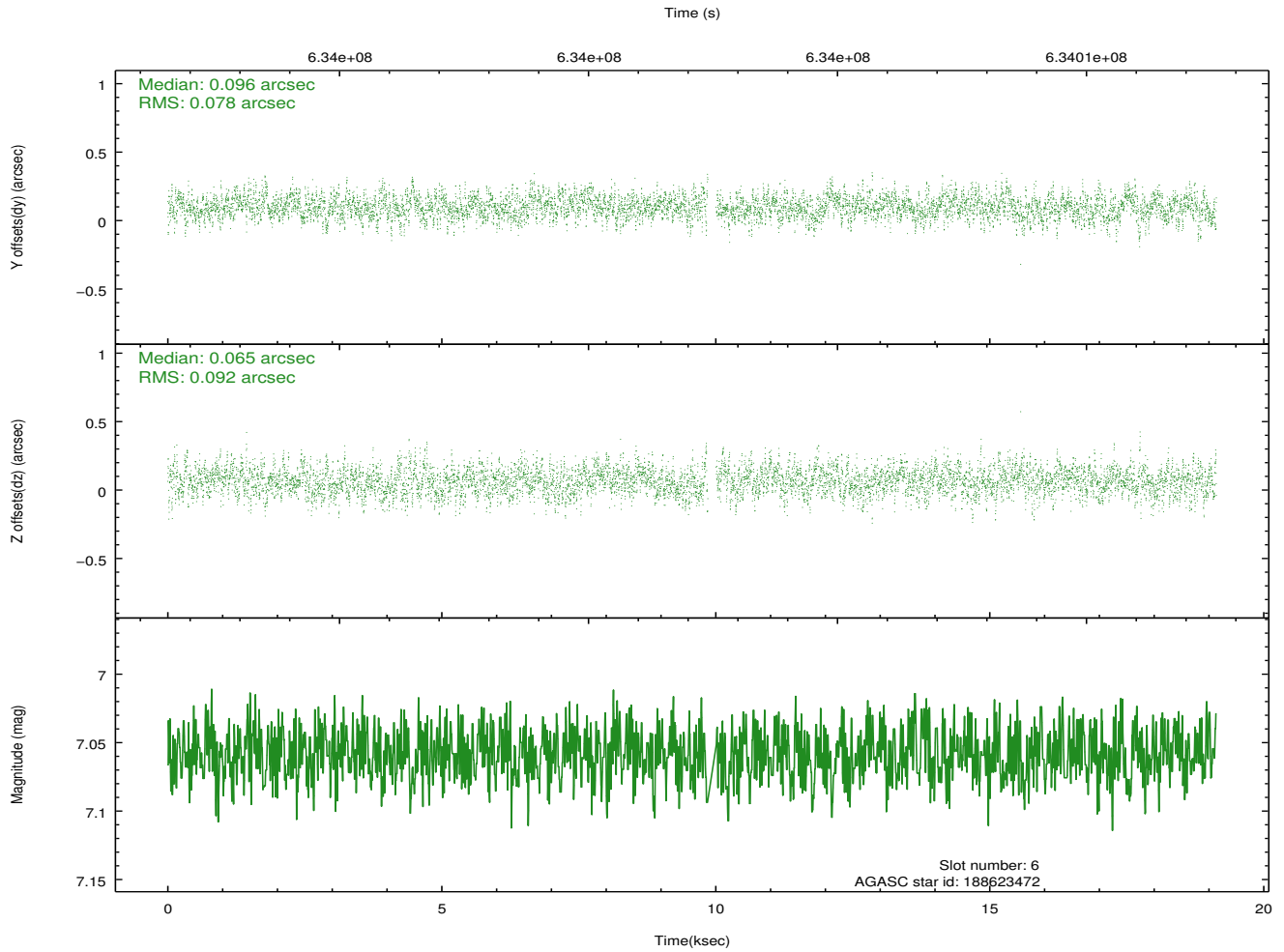
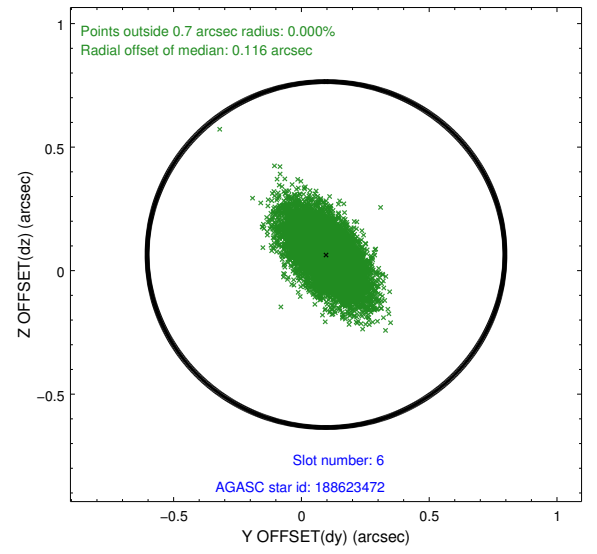
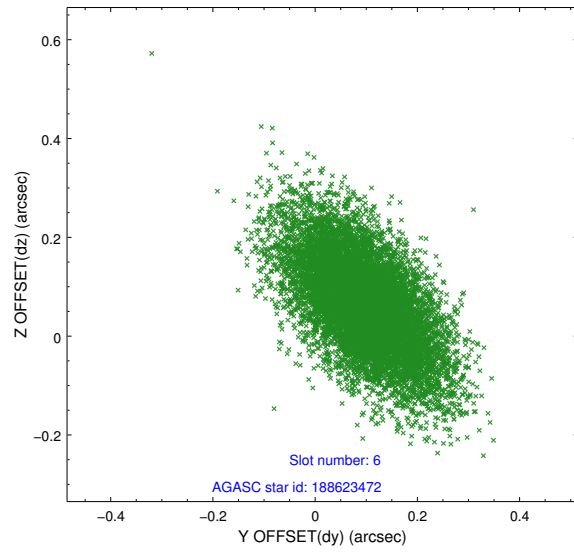




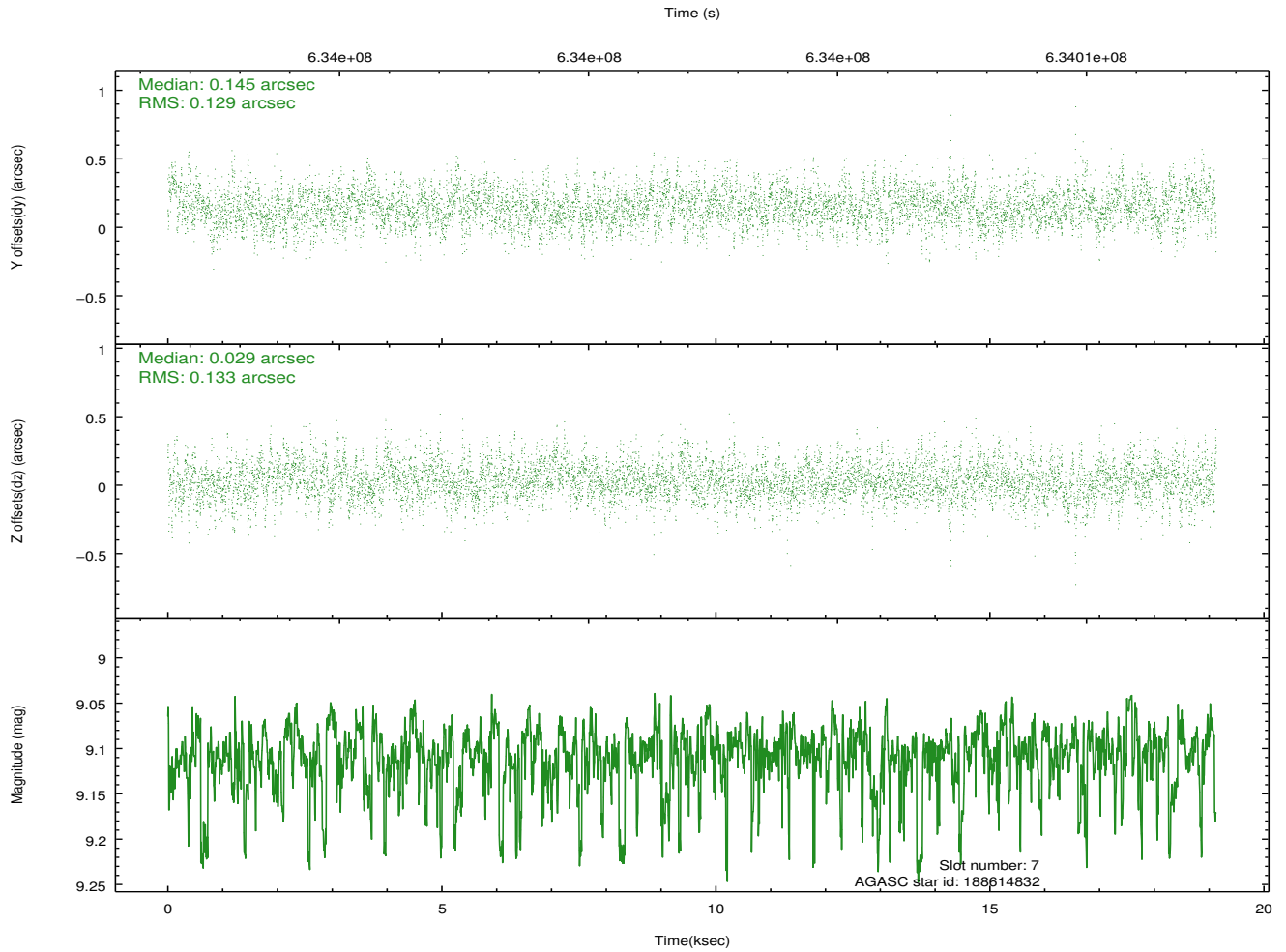
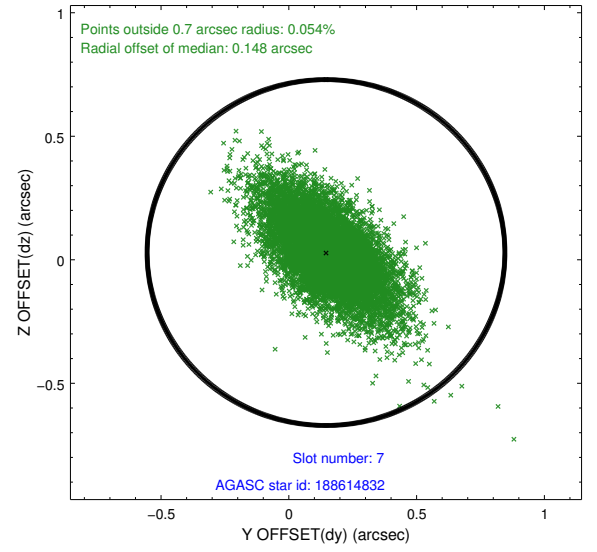
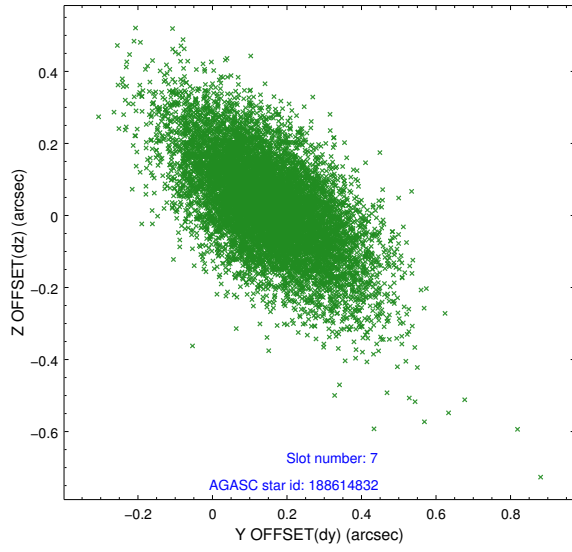
### 2.4.3 Slot 5



## 2.4.4 Slot 6

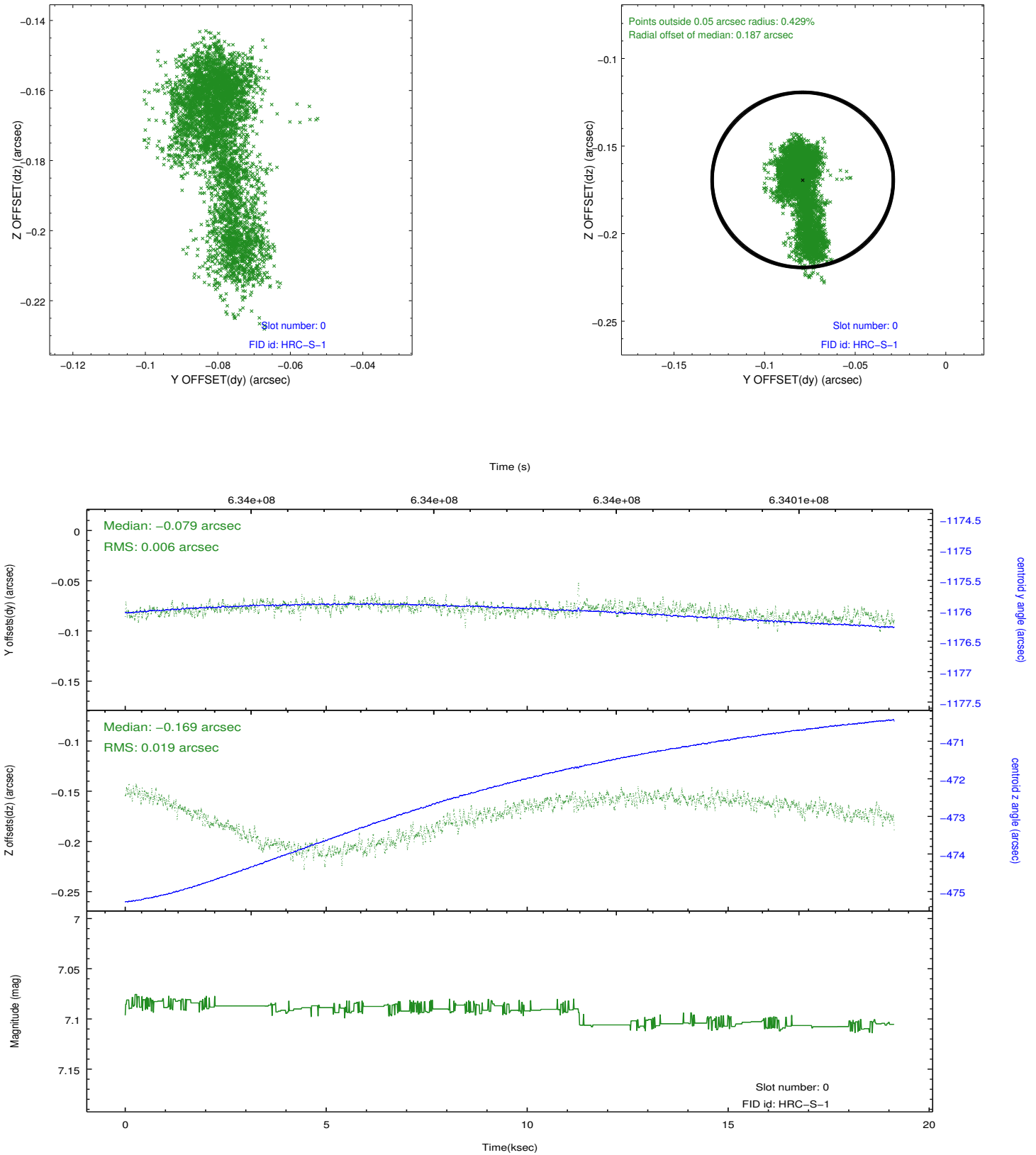


## 2.4.5 Slot 7

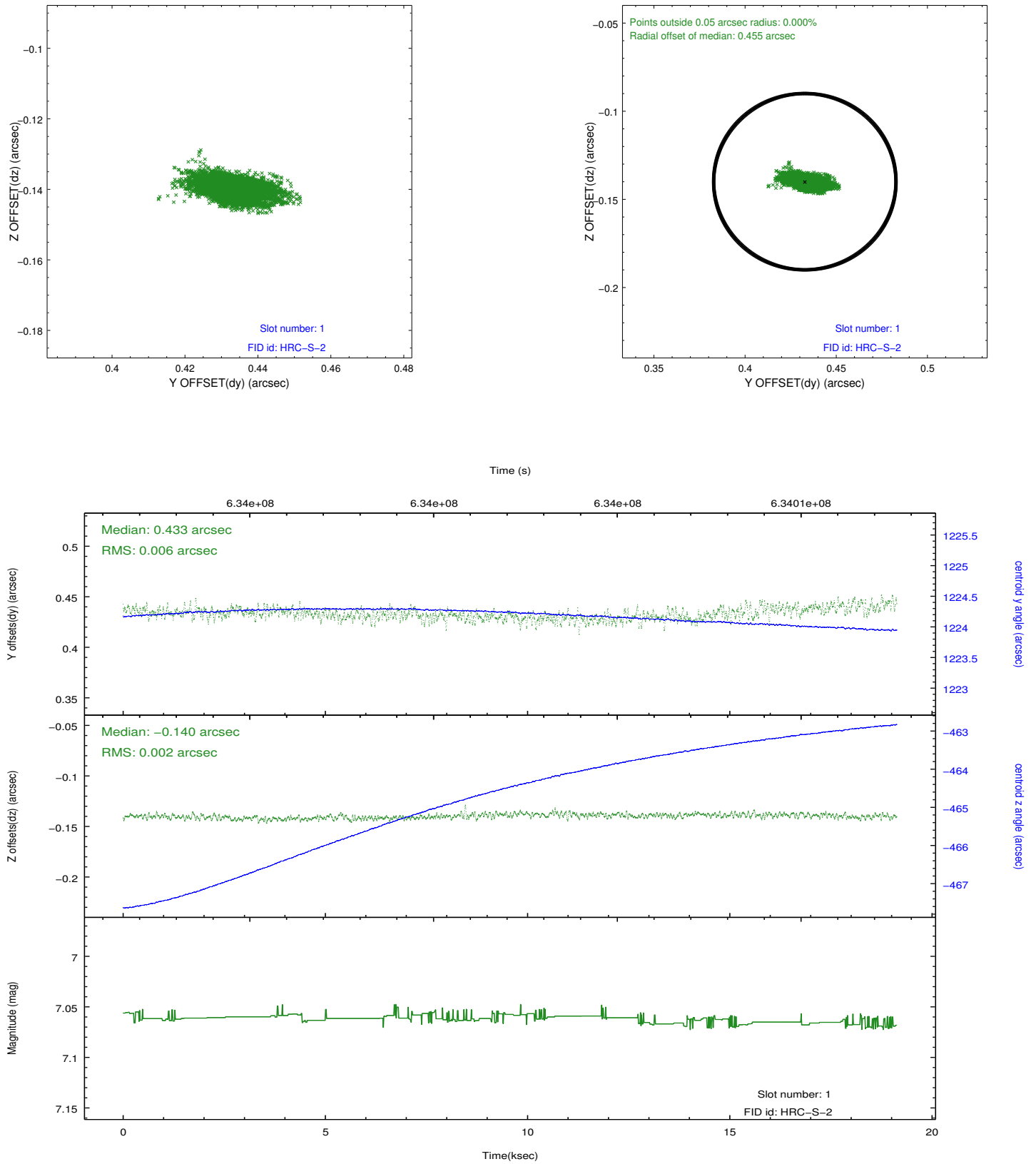


## 2.5 FID Slots

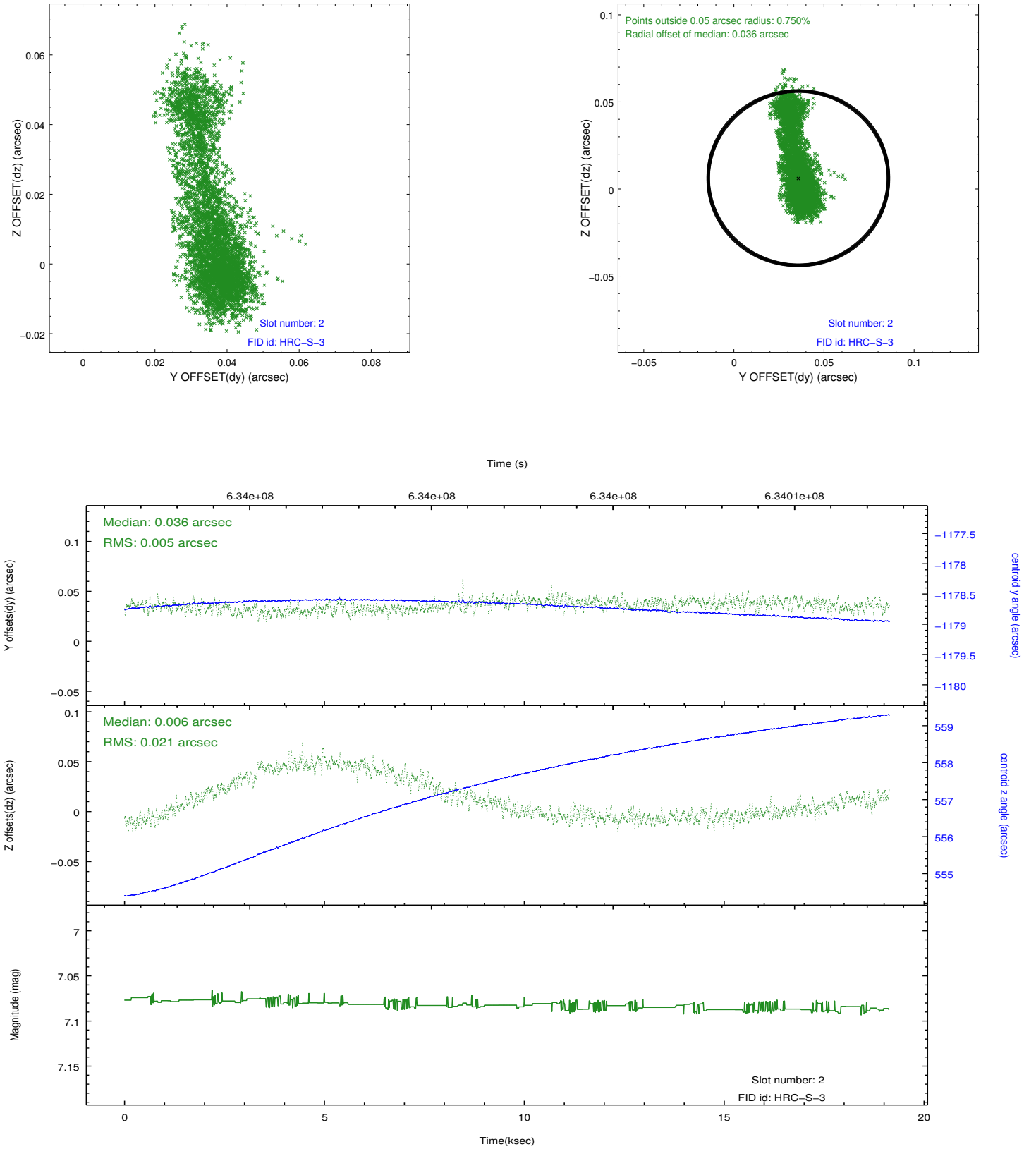
### 2.5.1 Slot 0



## 2.5.2 Slot 1

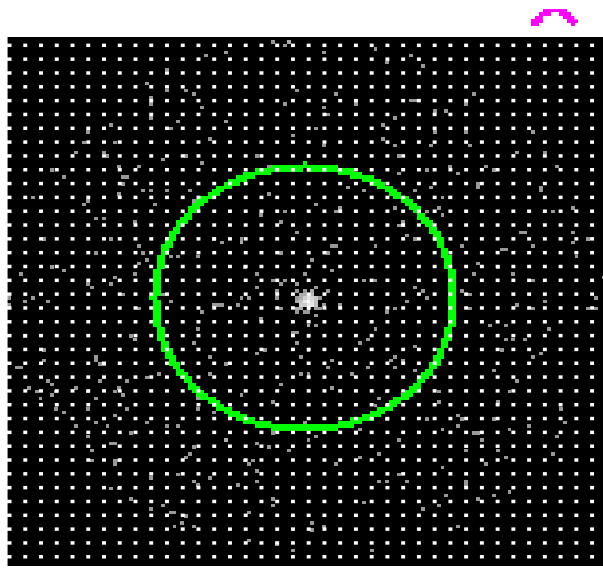


### 2.5.3 Slot 2

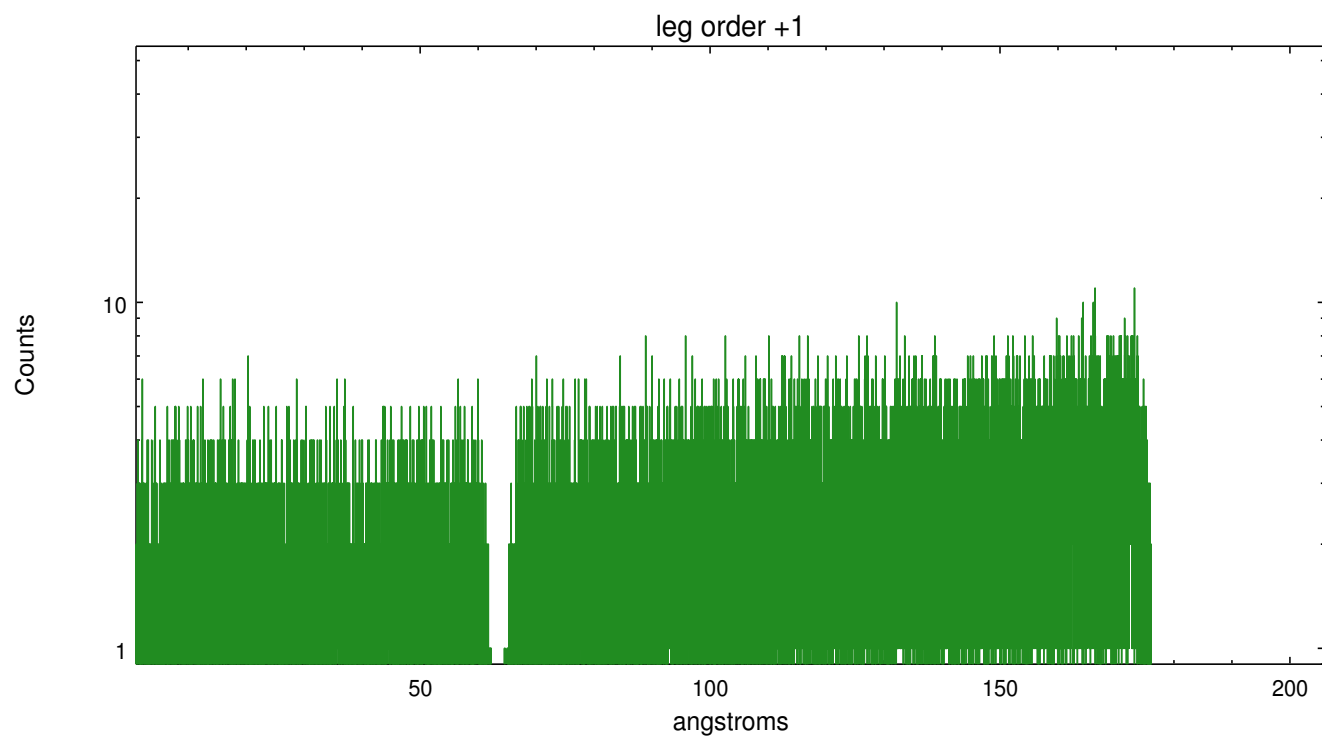
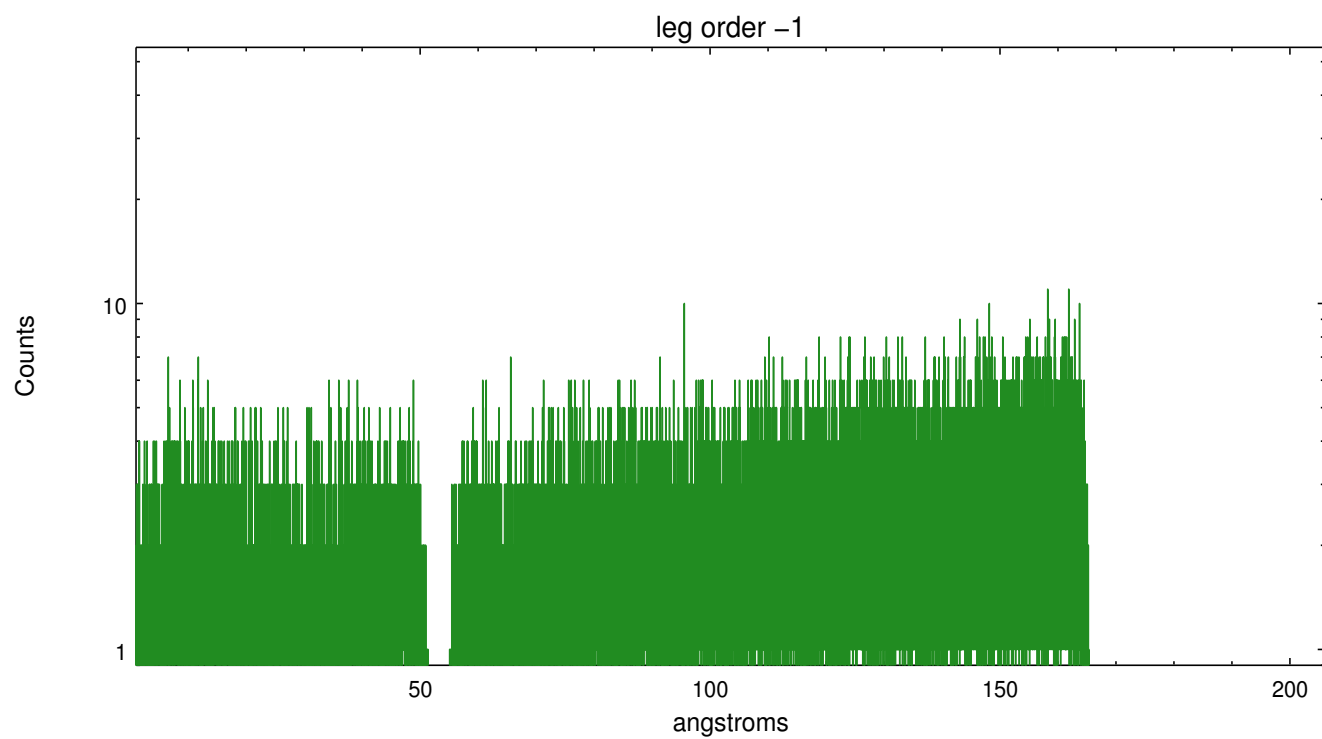


## 3 Gratings

### 3.1 LETG Arm



LETG Zero Order





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2018.02.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.813619858384

## A.2 Comments

Due to corruption of the secondary science data during this observation, some instrument parameters have bogus values. PLEASE NOTE: All the event data in this observation are good. The short gaps in the GTI intervals can be eliminated (i.e., use the first START and last STOP). THE DTF values during this observation can be estimated by dropping all the low values and averaging the remaining values near 1.0.