

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 12133 - L2 Version 2  
Chandra X-Ray Center

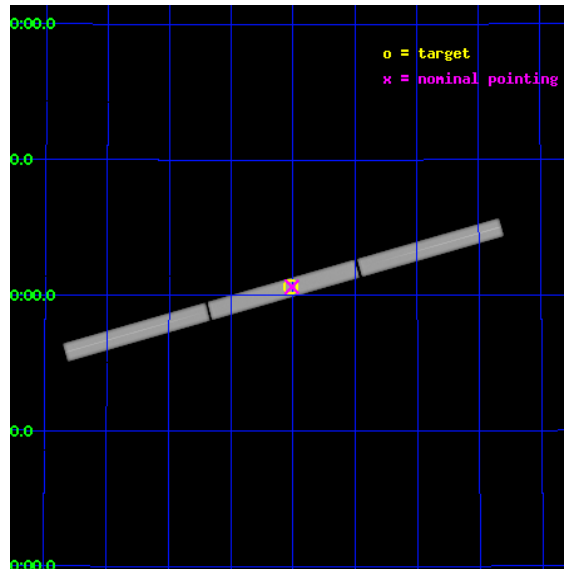
L2 Processing Date : Jun 28 2012

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# 1 Front

seq_num	200653	Sequence number
obs_id	12133	Observation id
title	The Chandra LETGS Soft X-ray Spectrum of the White Dwarf GD153	Pro
observer	Dr. Peter Predehl	Principal investigator
object	GD153	Source name
ra_targ	194.259583	Observer's specified target RA [deg]
dec_targ	22.03125	Observer's specified target Dec [deg]
ra_nom	194.25466776179	Nominal RA [deg]
dec_nom	22.032612026825	Nominal Dec [deg]
roll_nom	164.06918675767	Nominal Roll [deg]
revision	2	Processing version of data
ontime	49158.233747303	[s]
livetime	48645.77306337	Ontime multiplied by DTCOR
l2events	4448277	Number of level 2 events

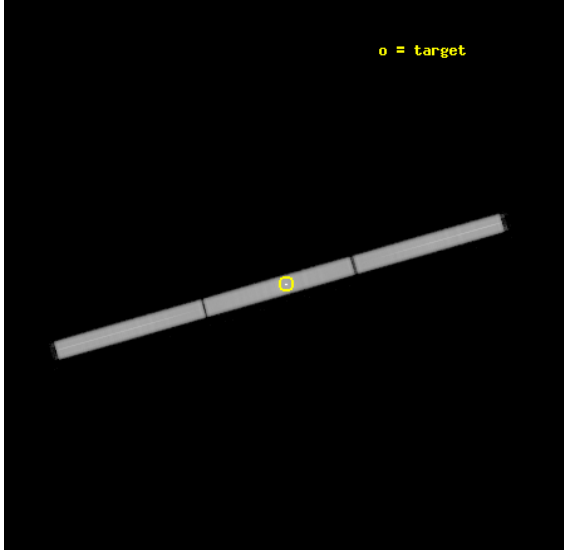


## 2 OBI

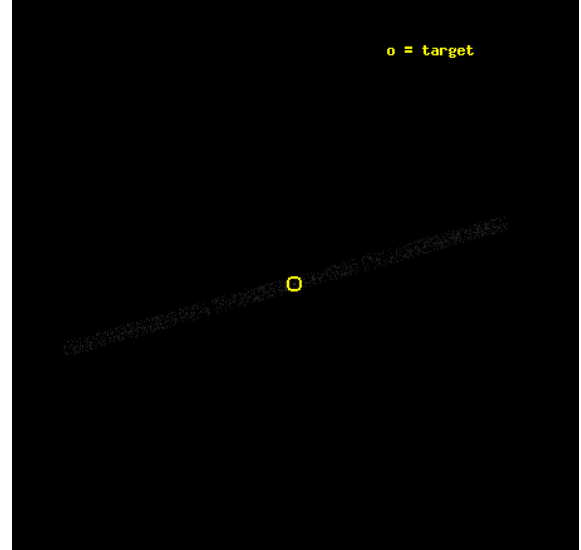
### 2.1 OBI

#### 2.1.1 Images

Level 1 Image



Level 1 Bad Events



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	49000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	49158.233747303	[s]
caldbver	4.5.0	&#160	l1events	5850621	Number of level 1 events
date	2012-06-27T18:48:31	Date and time of file creation			
revision	2	Processing version of data			

### 2.1.3 Events

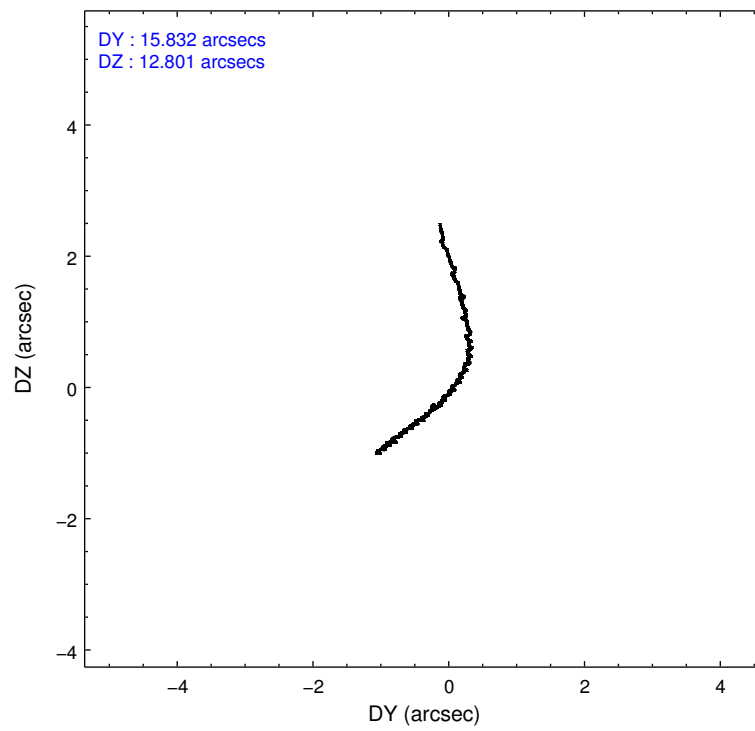
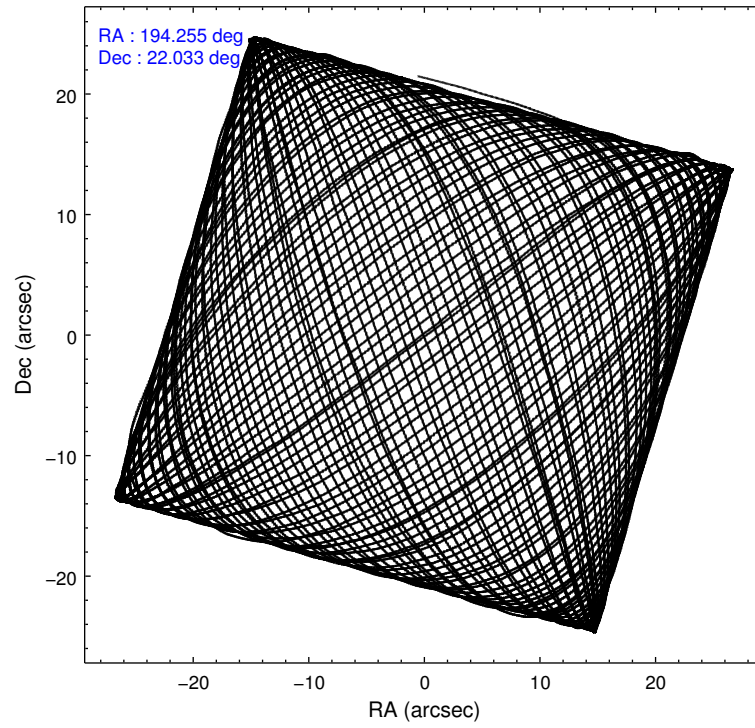
#### Level 1 Events

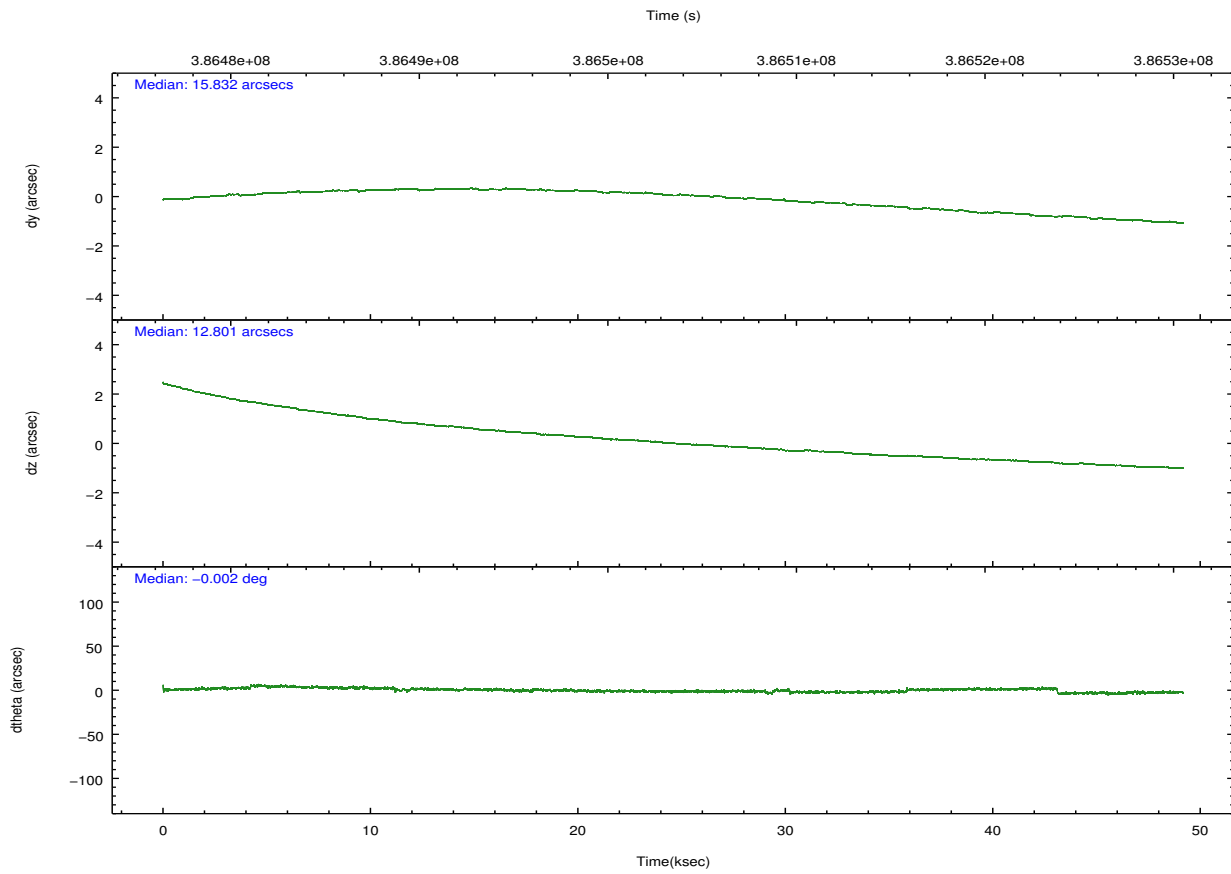
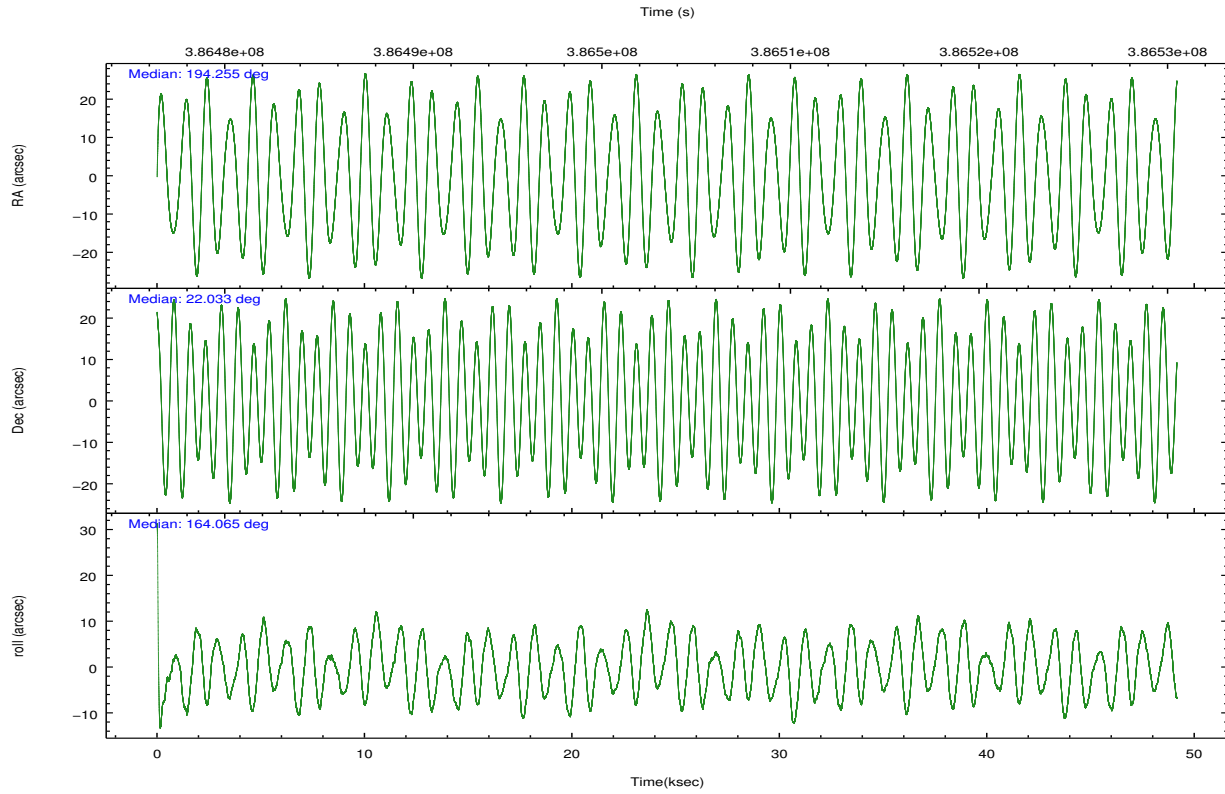
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	1956855	1920100	1973666
rejected events	59473	58287	59342
rejected %	3%	3%	3%

## 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	194.284287	194.254667761791			
[deg] Pointing Dec	22.040984	22.03261202682528			
[deg] Pointing Roll	163.990734	164.0691867576746			
[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)	386479048.184000	386477346.10632			
Observation start date	2010-04-01T03:16:22	2010-04-01T02:49:06			
[s] Observation end time (MET)	386528048.184000	386528736.53393			
Observation end date	2010-04-01T16:53:02	2010-04-01T17:05:36			

## 2.3 Aspect



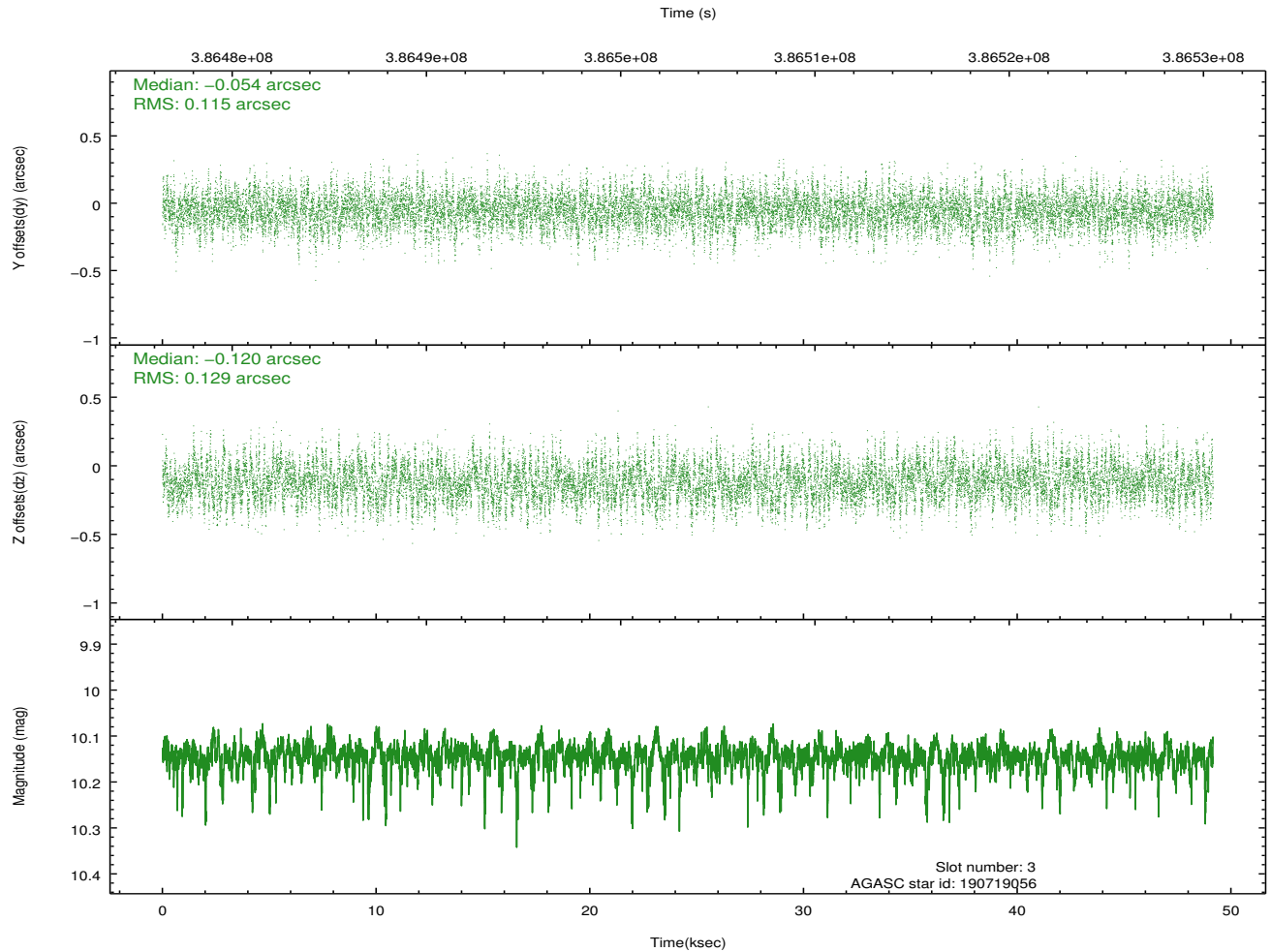
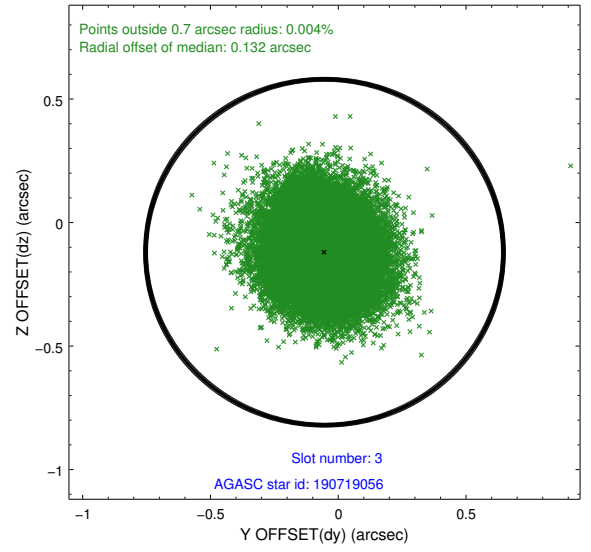
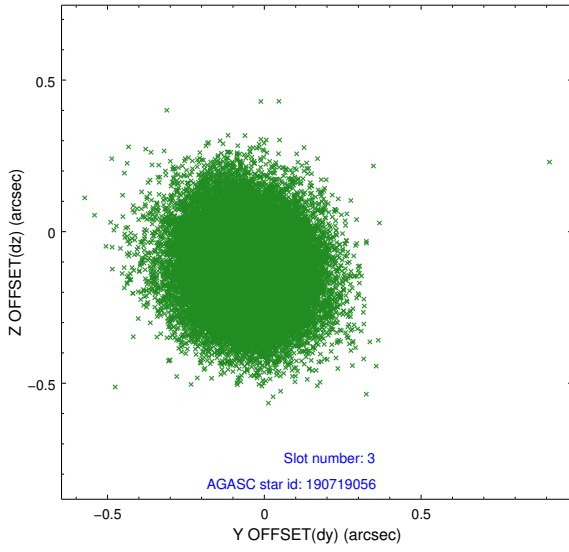


### Slot Statistics

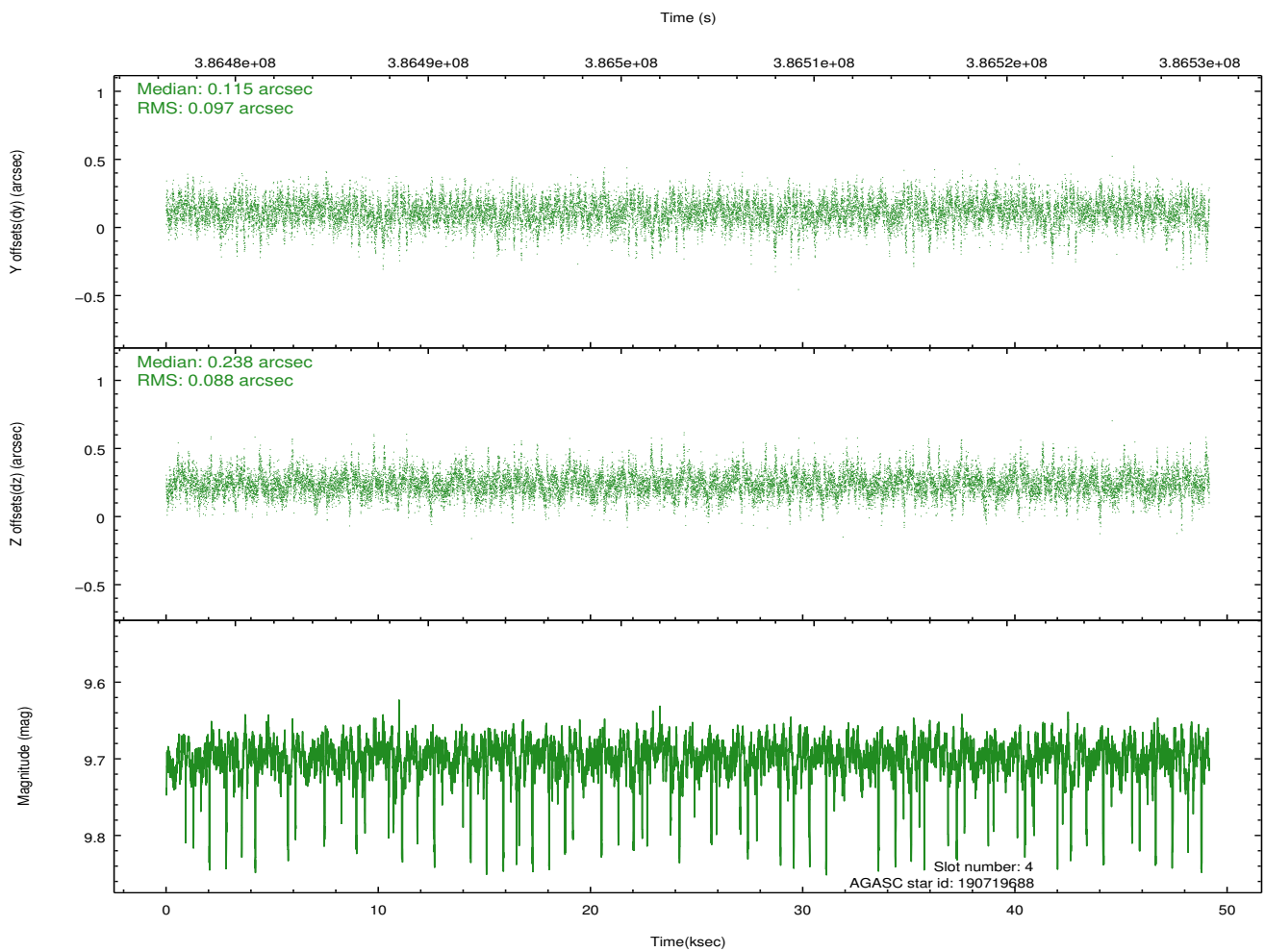
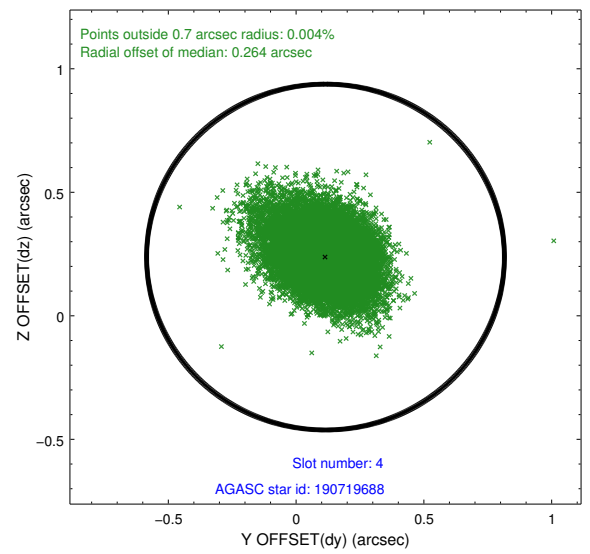
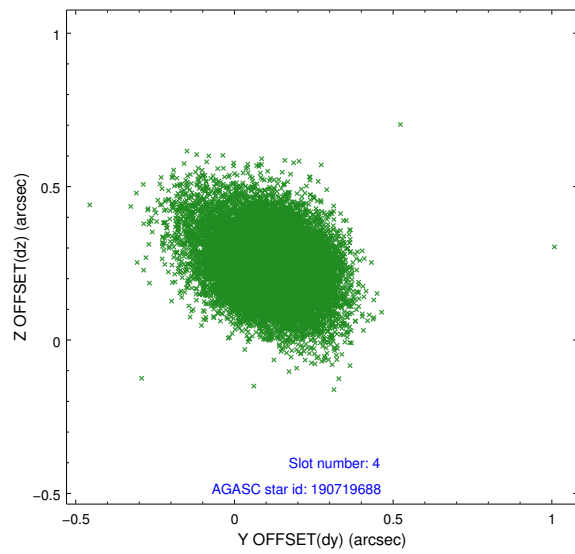
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	HRC-S-2	7.01	11990	0.210	-0.060	0.035	0.097	0.000000	0.000000	1229.69	-454.38
1	FID	HRC-S-3	7.04	11989	-0.020	-0.066	0.014	0.040	0.000000	0.000000	-1172.81	567.81
2	FID	HRC-S-4	6.98	11990	0.213	-0.169	0.032	0.100	0.000000	0.000000	1228.19	570.31
3	GUIDE	190719056	10.14	23868	-0.054	-0.120	0.185	0.298	194.588717	21.325530	-1691.36	2193.34
4	GUIDE	190719688	9.70	23821	0.115	0.238	0.132	0.238	193.909737	22.180853	1339.79	-140.37
5	GUIDE	190720152	7.13	23979	-0.114	-0.294	0.086	0.139	193.666732	22.107929	2047.06	332.74
6	GUIDE	190843704	7.36	23973	-0.095	0.102	0.085	0.134	194.670543	22.042885	-1237.68	-361.04
7	GUIDE	190845144	8.87	23960	0.150	0.071	0.106	0.182	194.692633	22.213679	-1135.51	-973.92

## 2.4 Star Slots

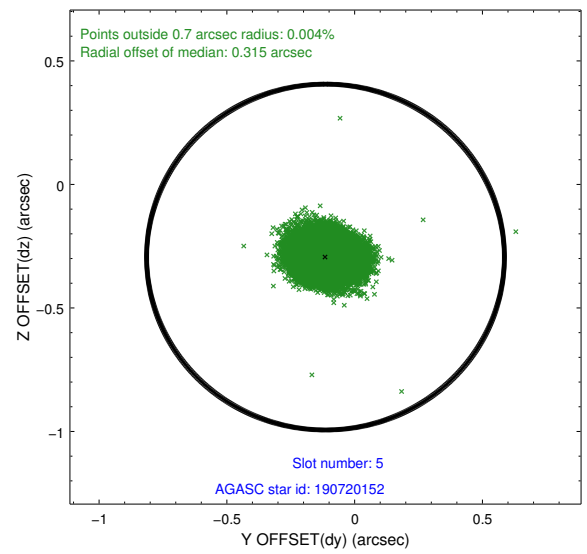
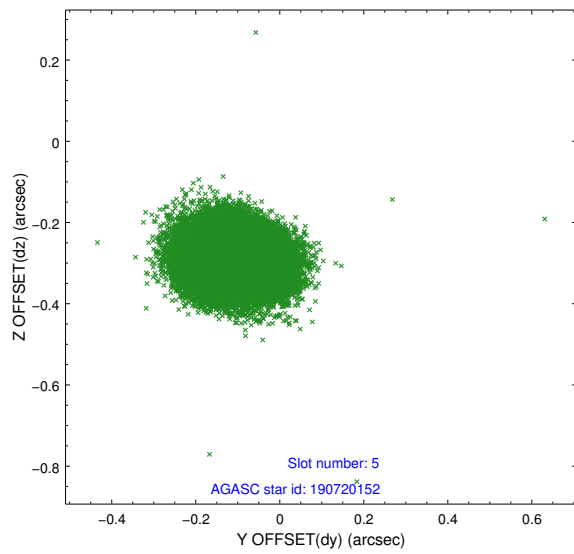
### 2.4.1 Slot 3



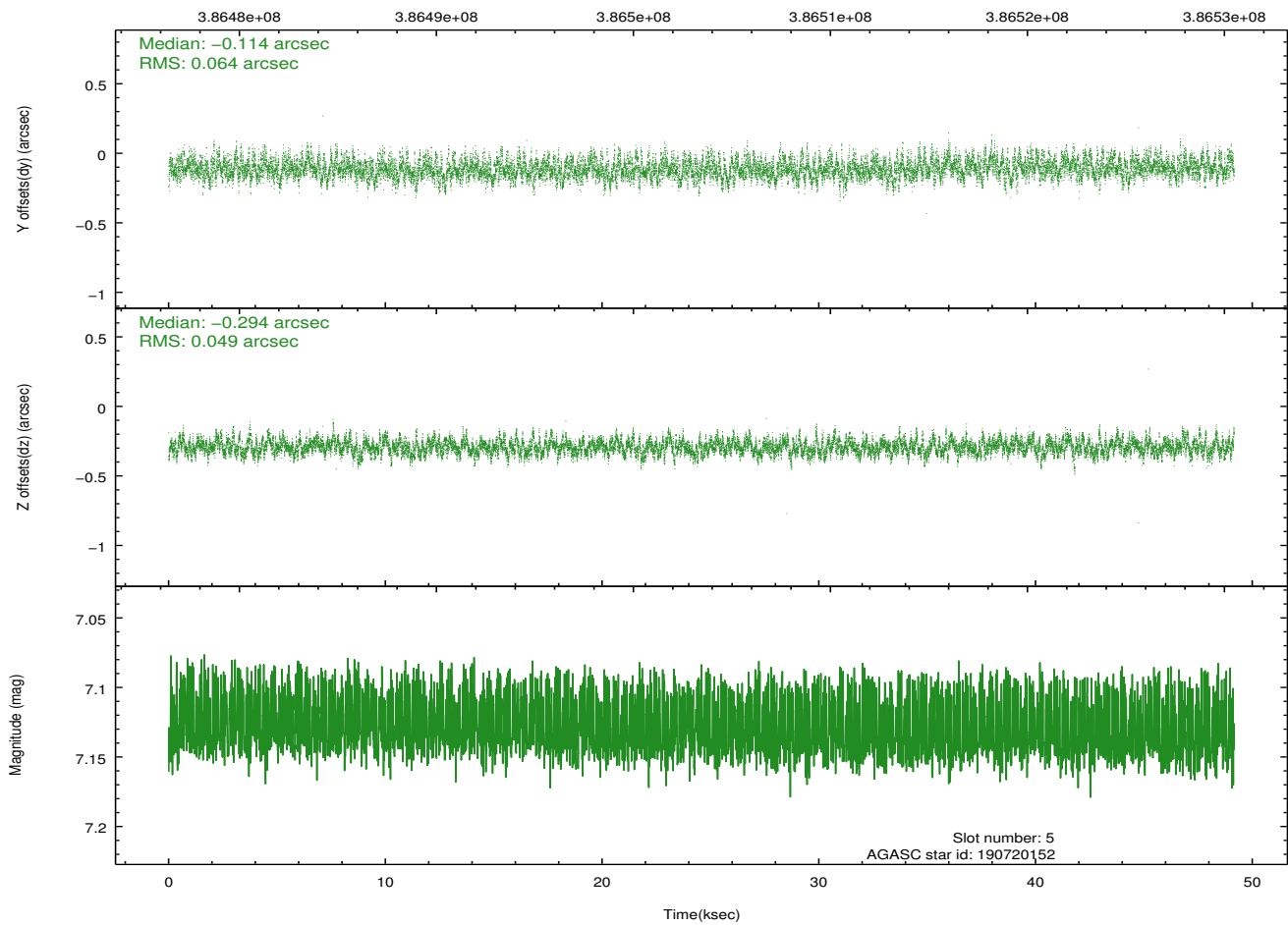
## 2.4.2 Slot 4



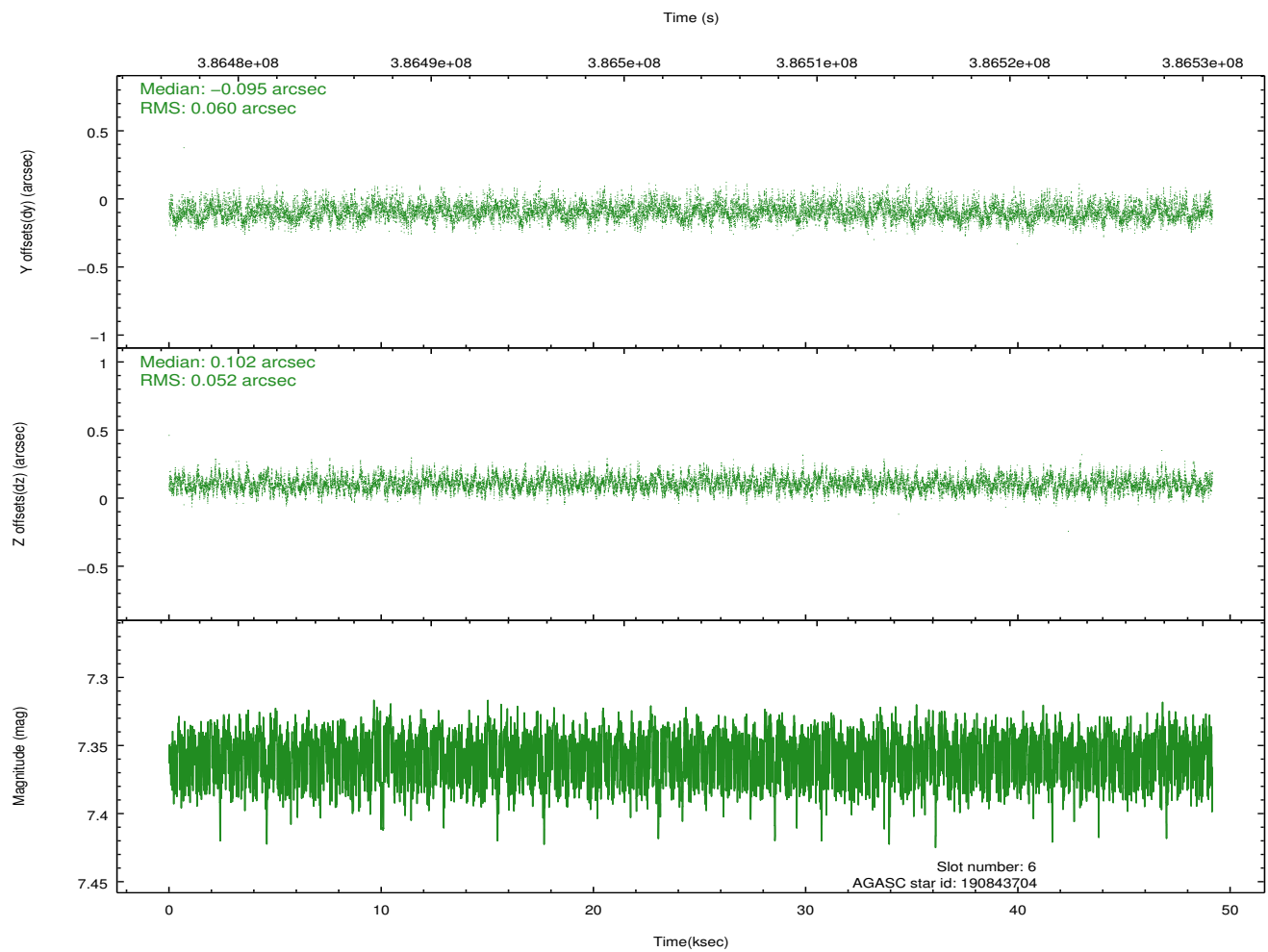
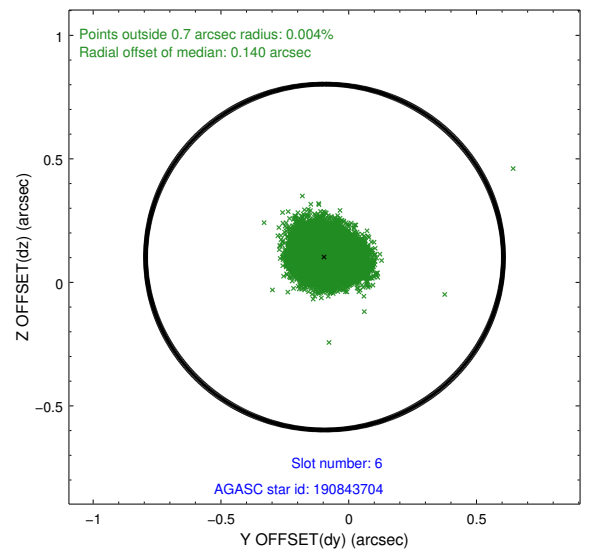
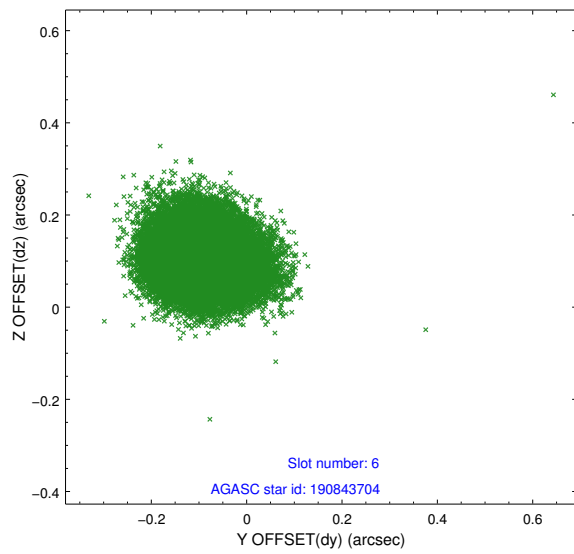
### 2.4.3 Slot 5



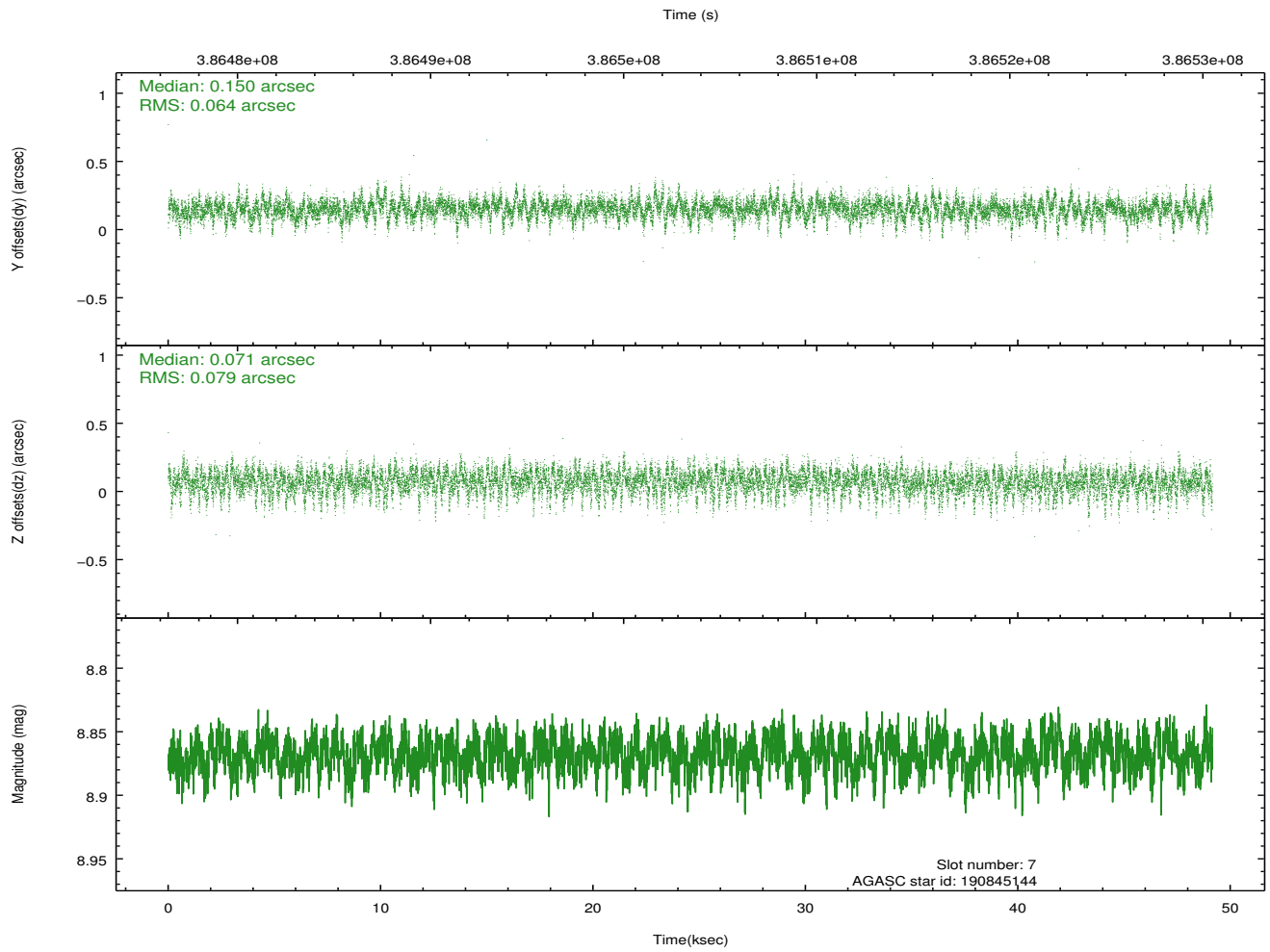
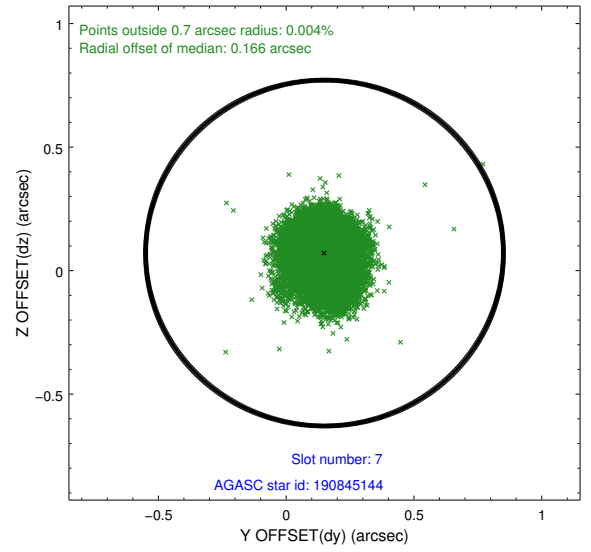
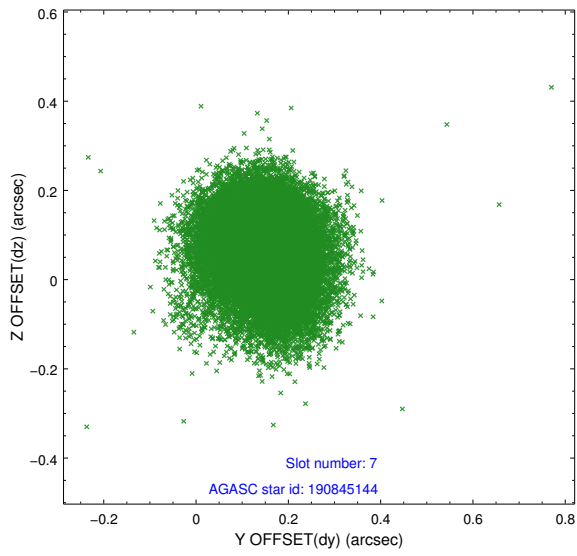
Time (s)



## 2.4.4 Slot 6

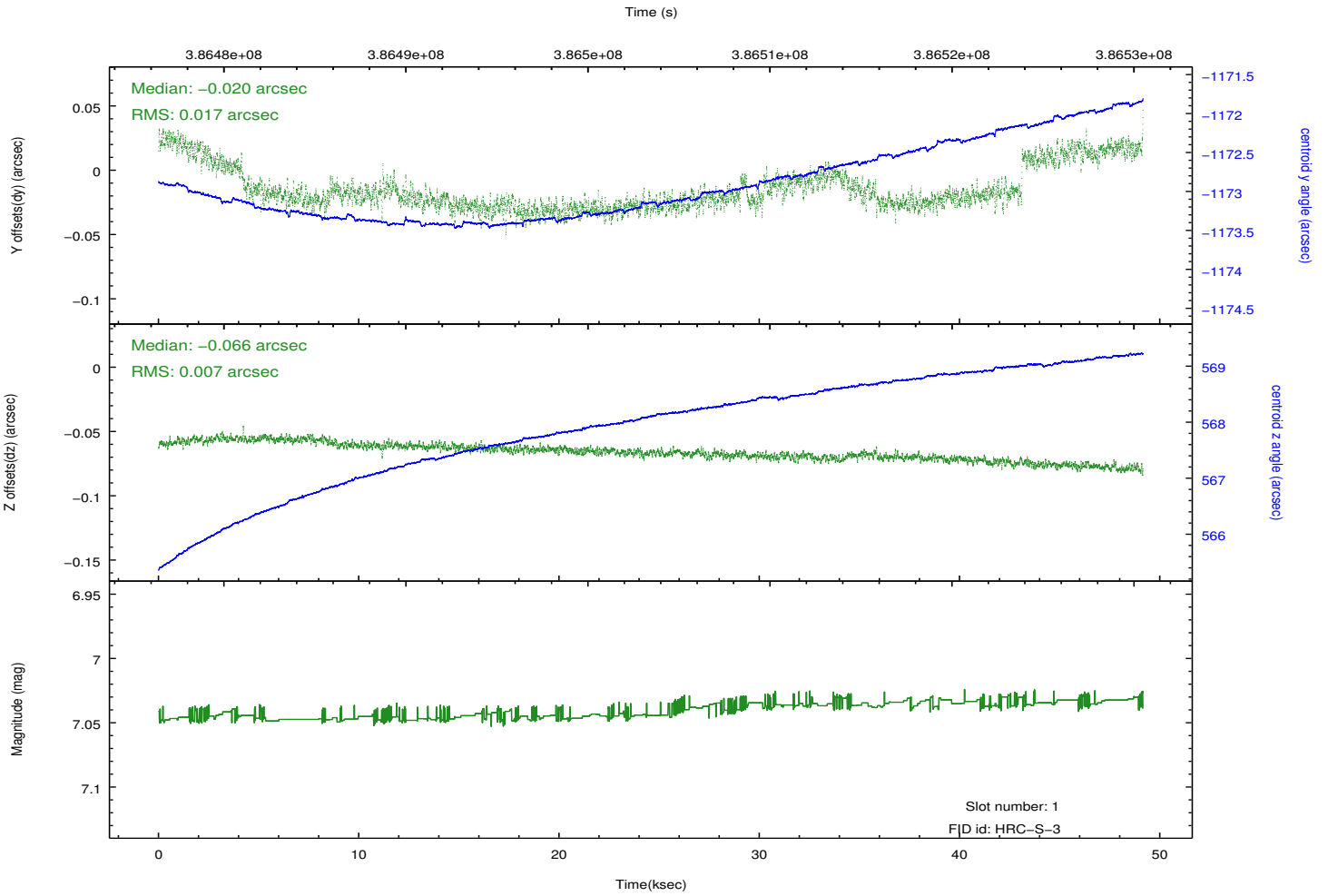
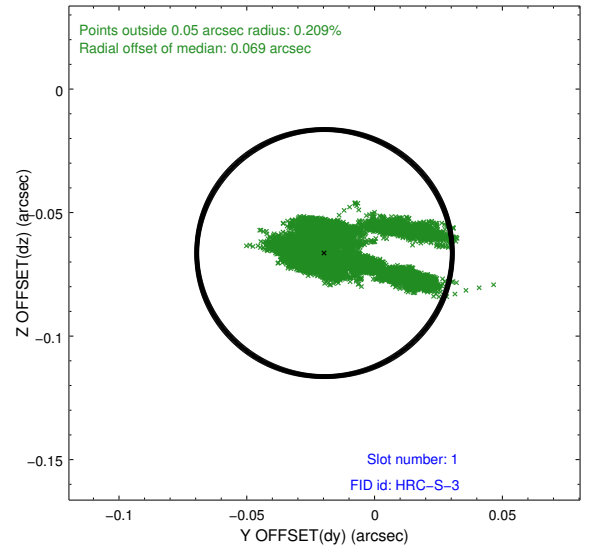
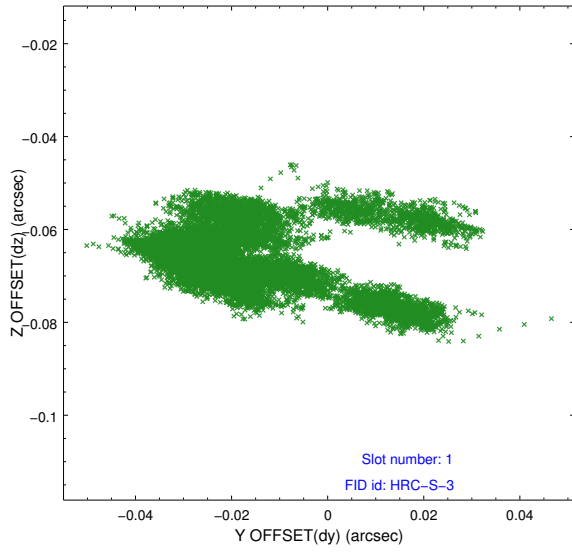


### 2.4.5 Slot 7

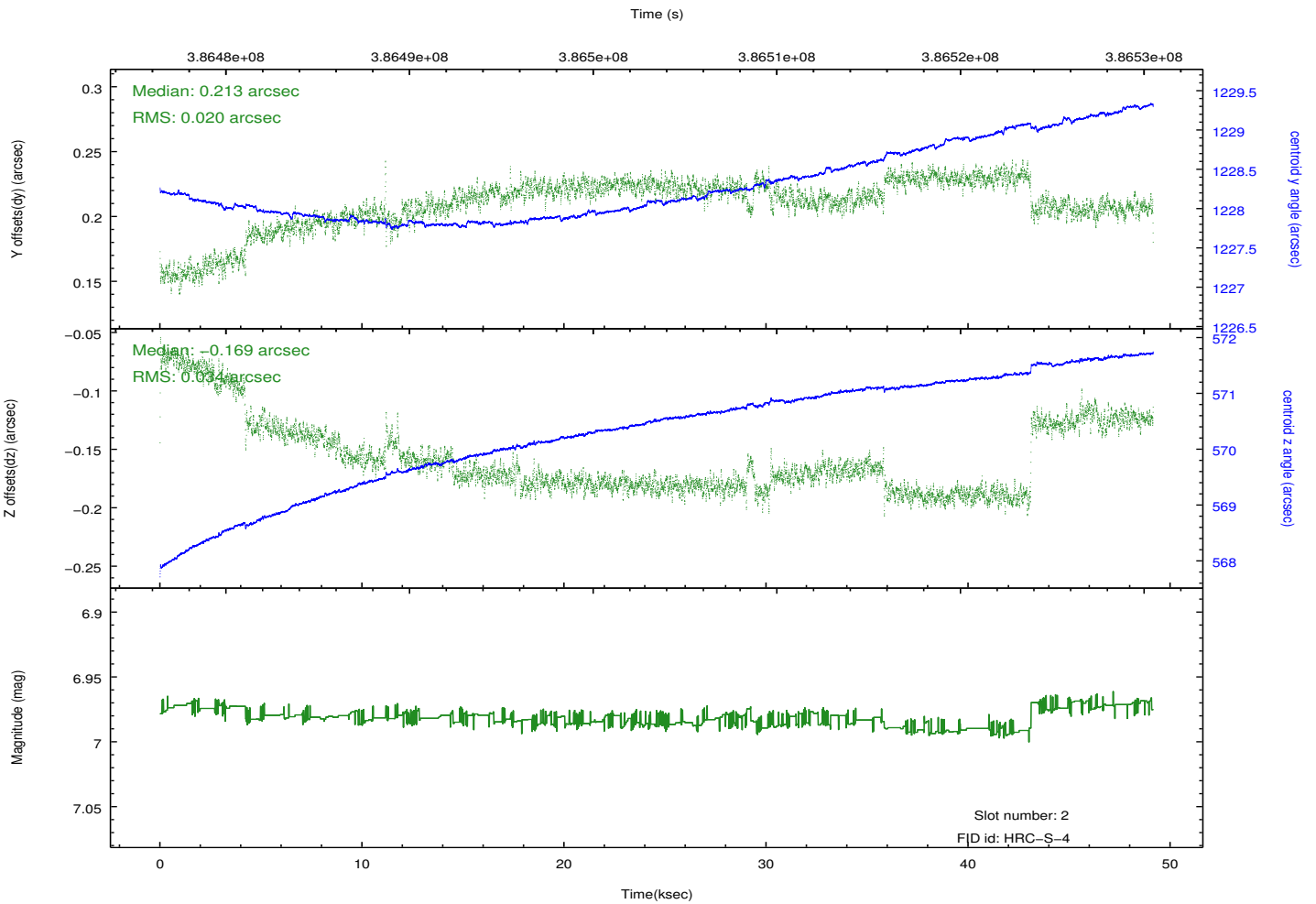
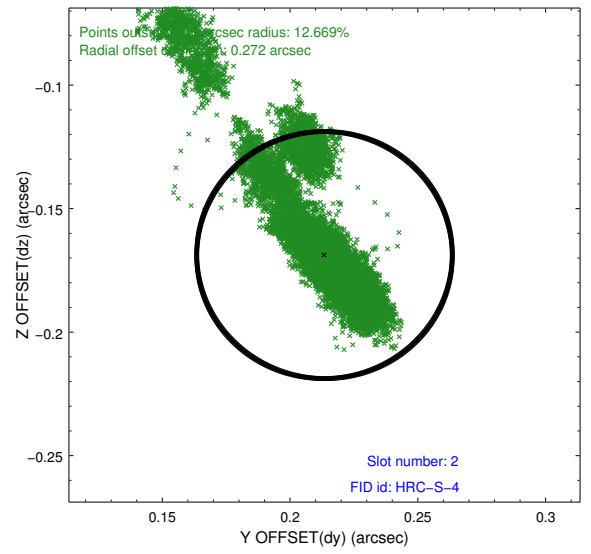
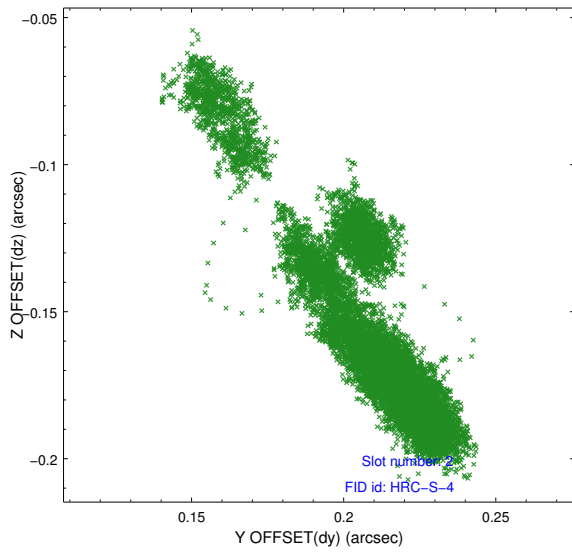




## 2.5.2 Slot 1

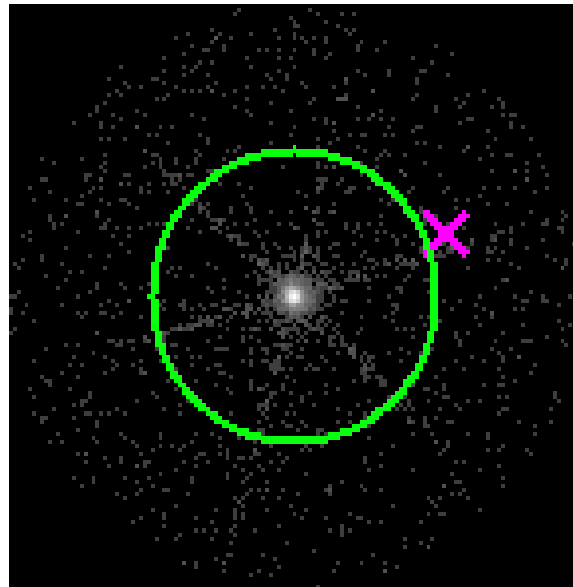


### 2.5.3 Slot 2

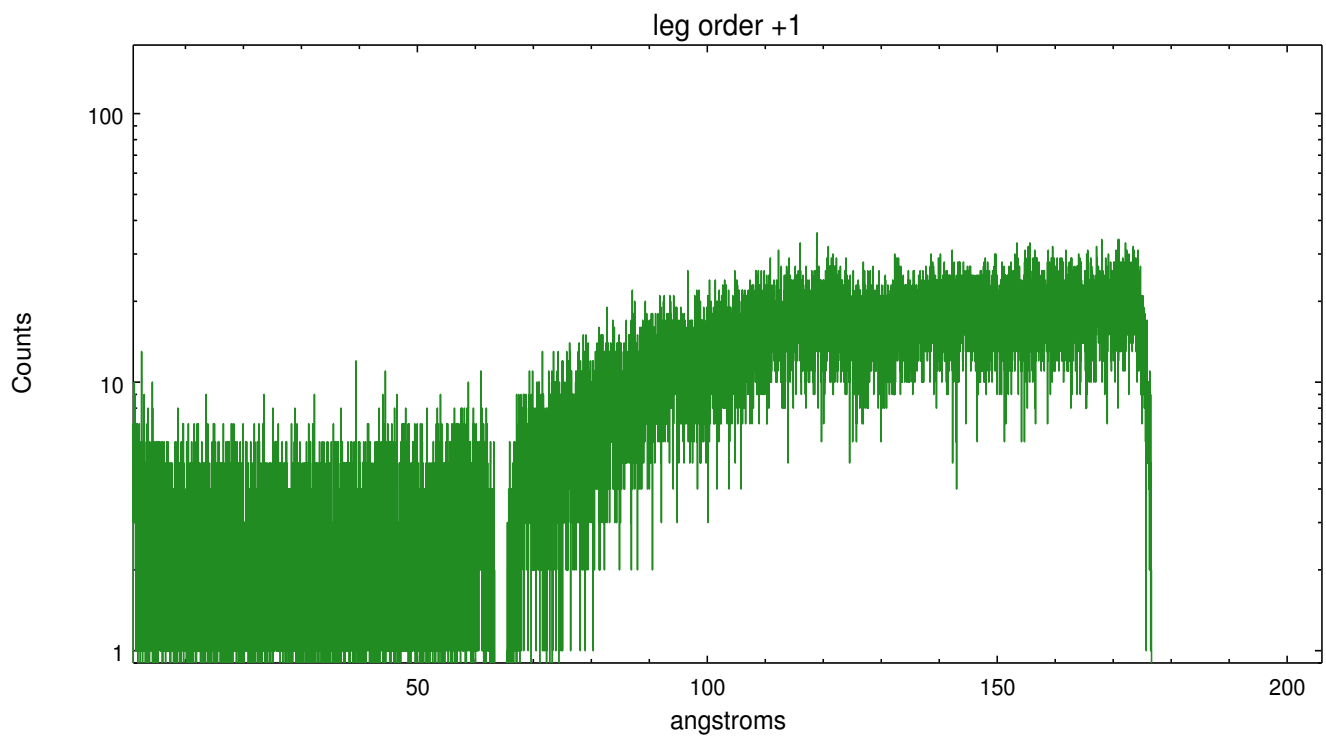
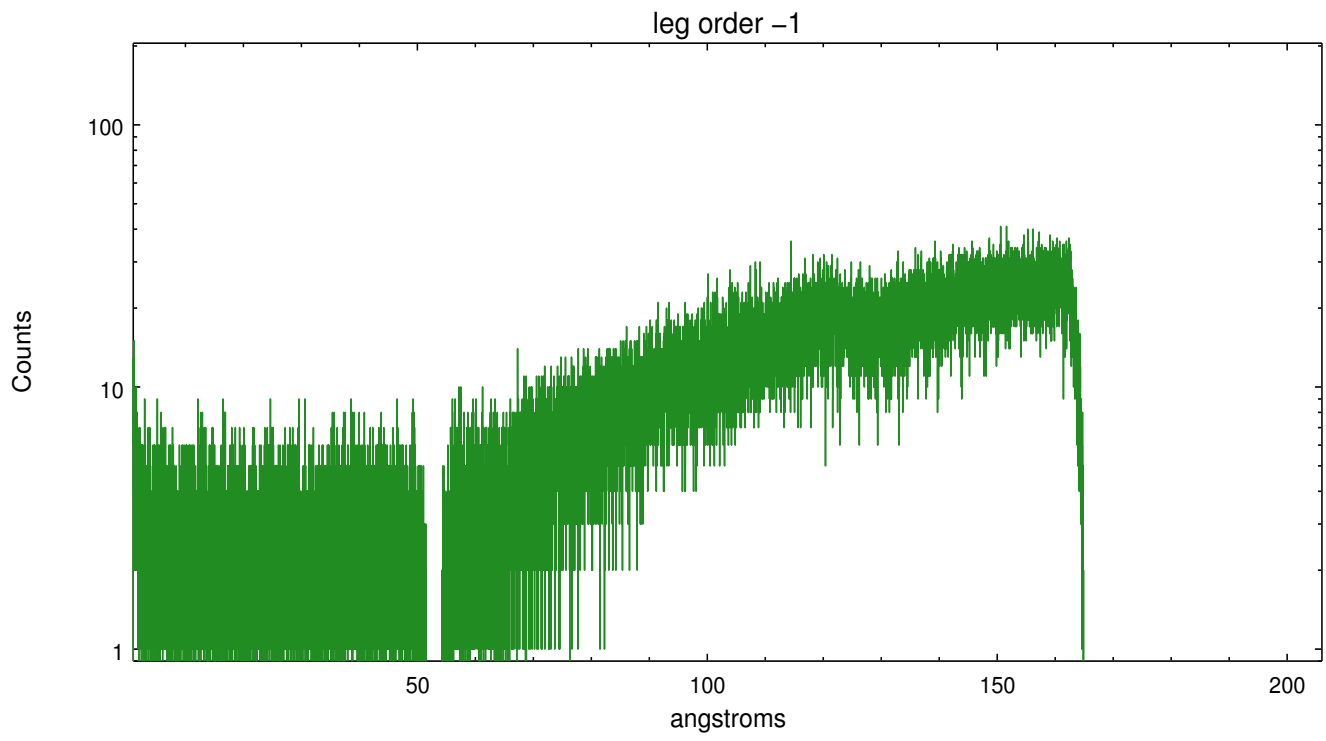


### 3 Gratings

#### 3.1 LETG Arm



LETG Zero Order



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.07.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	49.158233748615

## A.2 Comments