

# V&V Reference Report

## L2 ASCDS Version : 10.4.3

Observation 18670 - L2 Version 1  
Chandra X-Ray Center

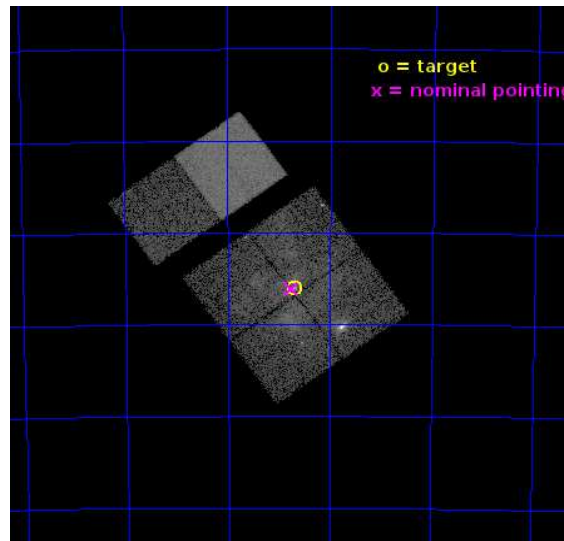
L2 Processing Date : Jan 22 2016

## 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	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	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>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

seq_num	901116	Sequence number
obs_id	18670	Observation id
title	The Tarantula -- Revealed by X-rays (T-ReX): A Definitive Chandra Investigation of 30 Doradus	Proposal title
observer	Dr. Leisa Townsley	Principal investigator
object	30 Doradus	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	84.676667	Observer's specified target RA [deg]
dec_targ	-69.100806	Observer's specified target Dec [deg]
ra_nom	84.689301572409	Nominal RA [deg]
dec_nom	-69.102104407979	Nominal Dec [deg]
roll_nom	324.22048650573	Nominal Roll [deg]
revision	1	Processing version of data
ontime	14752.000219822	Sum of GTIs [s]
livetime	14565.20151045	Livetime [s]
ontime0	14748.759219646	Sum of GTIs [s]
ontime1	14752.000219822	Sum of GTIs [s]
ontime2	14752.000219822	Sum of GTIs [s]
ontime3	14752.000219822	Sum of GTIs [s]
ontime6	14748.759199739	Sum of GTIs [s]
ontime7	14752.000219822	Sum of GTIs [s]
l2events	99071	Number of level 2 events

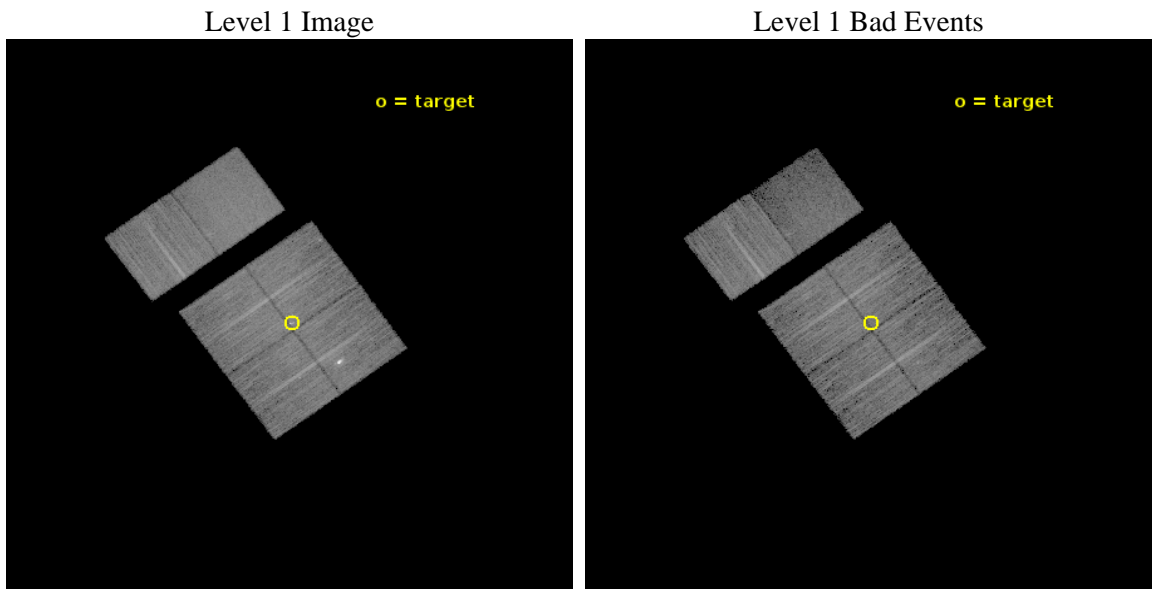




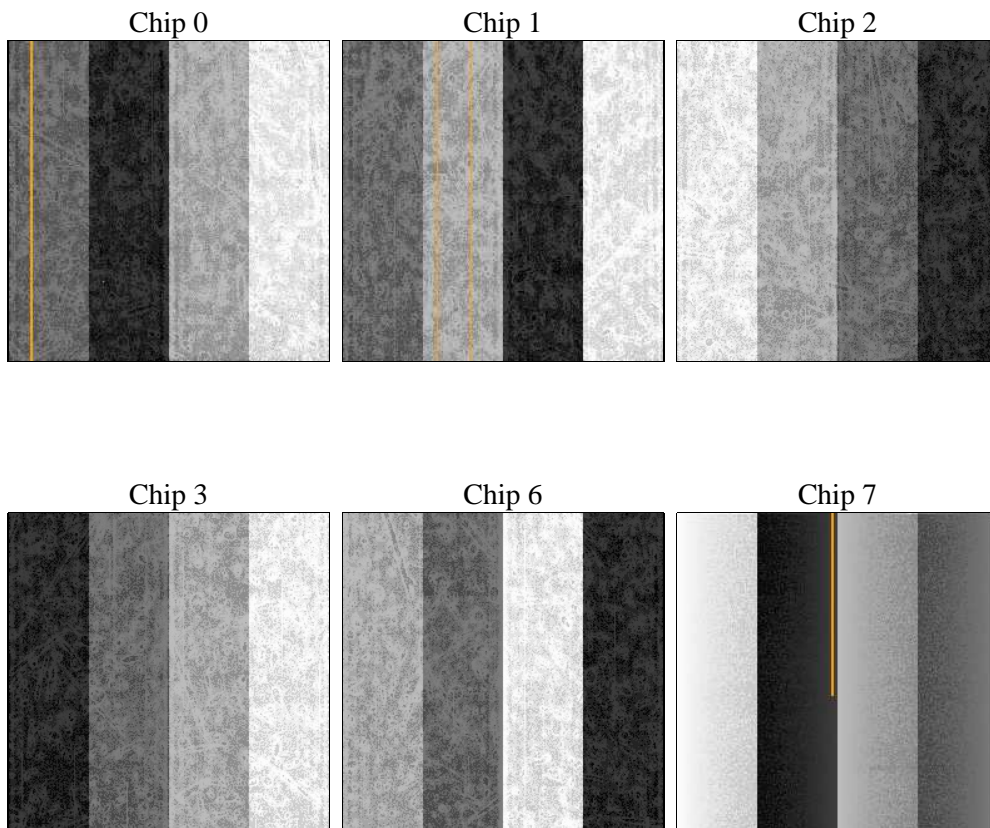
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	14808.860000	[s] Scheduled observation exposure time
ascdsver	10.4.3	Processing system revision	ontime	14752.000219822	Sum of GTIs [s]
caldsver	4.7.0	&#160	ontime0	14748.759219646	Sum of GTIs [s]
date	2016-01-22T06:43:16	Date and time of file creation	ontime1	14752.000219822	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	14752.000219822	Sum of GTIs [s]
			ontime3	14752.000219822	Sum of GTIs [s]
			ontime6	14748.759199739	Sum of GTIs [s]
			ontime7	14752.000219822	Sum of GTIs [s]
			l1events	503209	Number of level 1 events

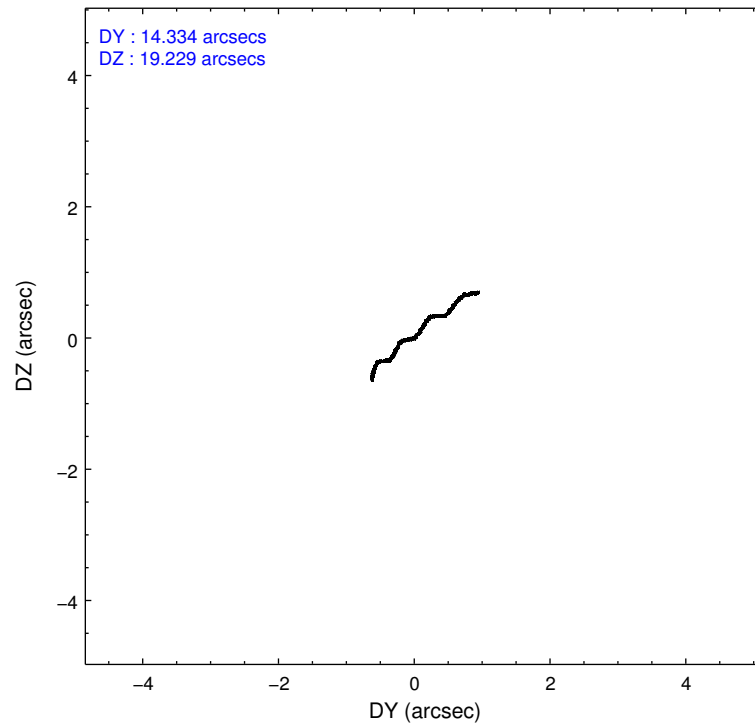
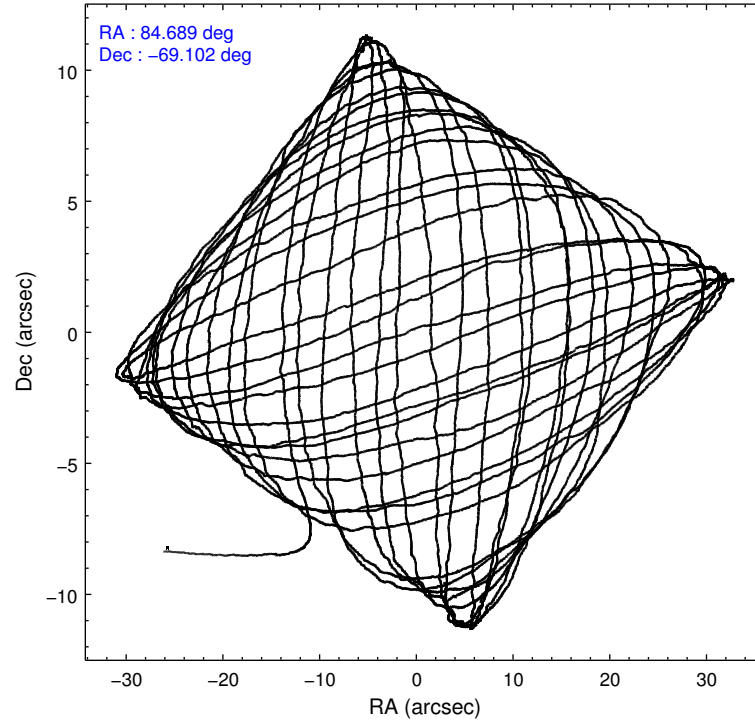
### 2.1.4 Events

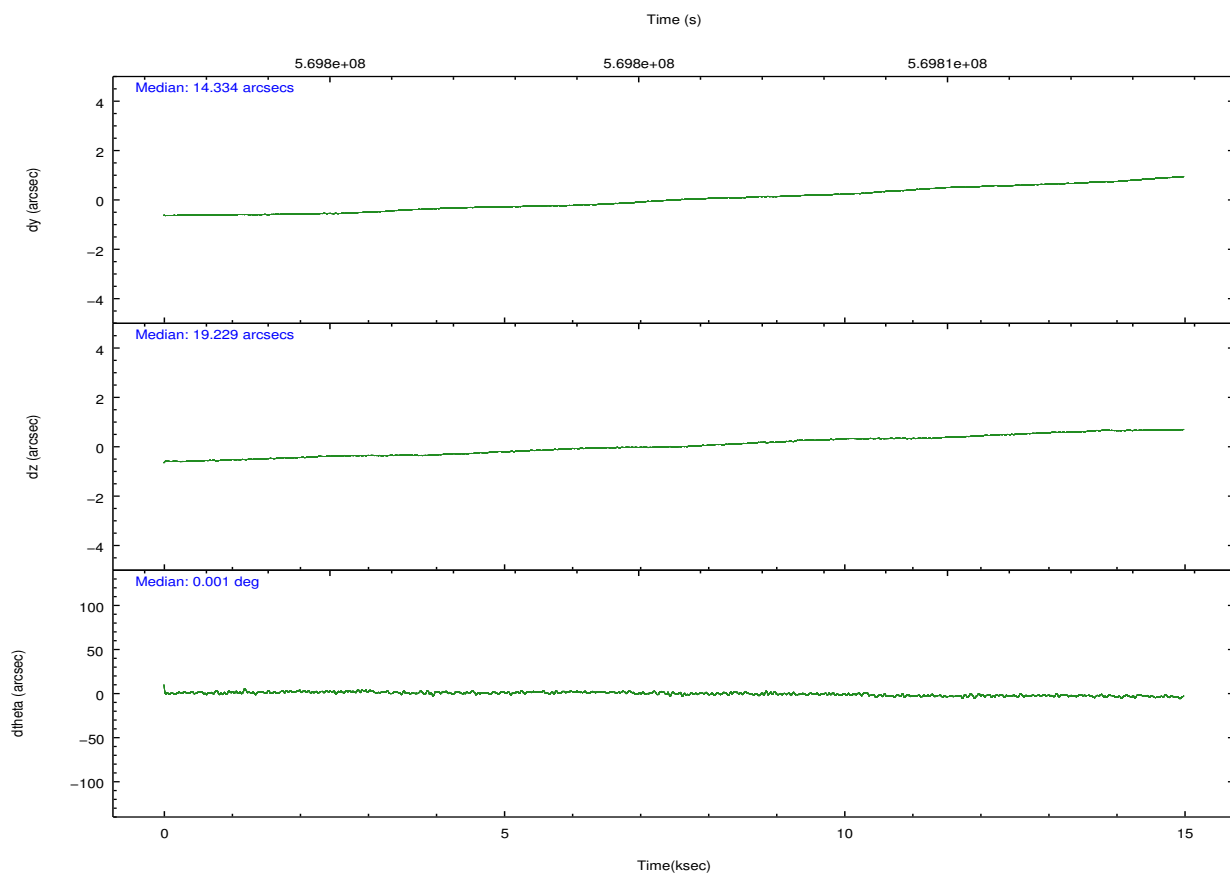
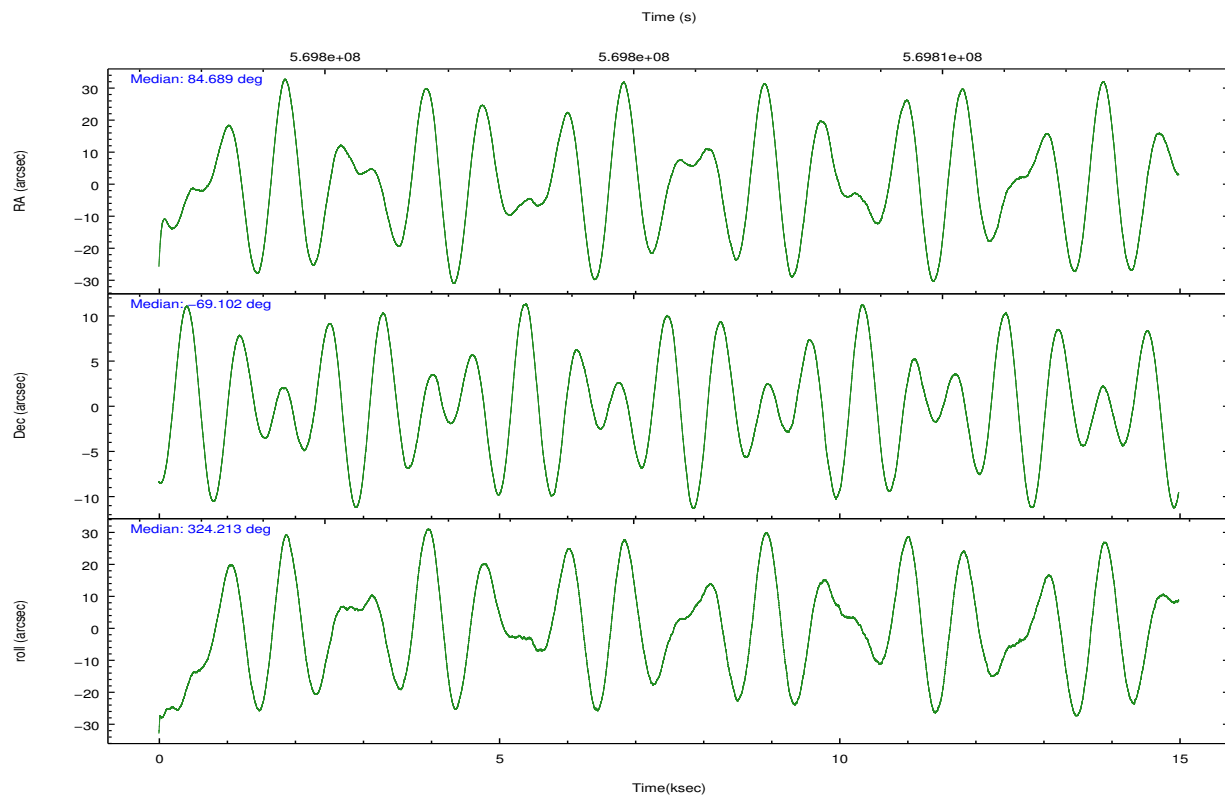
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	76564	84025	84971	82657	86284	88708	grade 0 events	6270	11935	5872	7103	3942	4057
rejected events	64104	64132	73359	69615	76413	46873		8%	14%	6%	8%	4%	4%
rejected %	83%	76%	86%	84%	88%	52%	grade 1 events	52	81	50	78	45	156
								0%	0%	0%	0%	0%	0%
							grade 2 events	2500	3321	2258	2252	2156	9177
								3%	3%	2%	2%	2%	10%
							grade 3 events	983	1212	912	987	896	3481
								1%	1%	1%	1%	1%	3%
							grade 4 events	933	1268	942	962	903	3533
								1%	1%	1%	1%	1%	3%
							grade 5 events	2852	3294	2646	3440	3361	9058
								3%	3%	3%	4%	3%	10%
							grade 6 events	1777	2160	1632	1739	1975	21599
								2%	2%	1%	2%	2%	24%
							grade 7 events	61197	60754	70659	66096	73006	37647
								79%	72%	83%	79%	84%	42%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	84.612343	84.68930157240939	CCD I2 on	Y	Y
[deg] Pointing Dec	-69.099388	-69.10210440797884	CCD I3 on	Y	Y
[deg] Pointing Roll	323.939911	324.2204865057284	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	569798252.184000	569797177.85475	CCD S5 on	N	N
Observation start date	2016-01-21T21:16:24	2016-01-21T20:59:37	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	569813061.184000	569813298.03067	On-chip summing requested	N	N
Observation end date	2016-01-22T01:23:13	2016-01-22T01:28:18	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



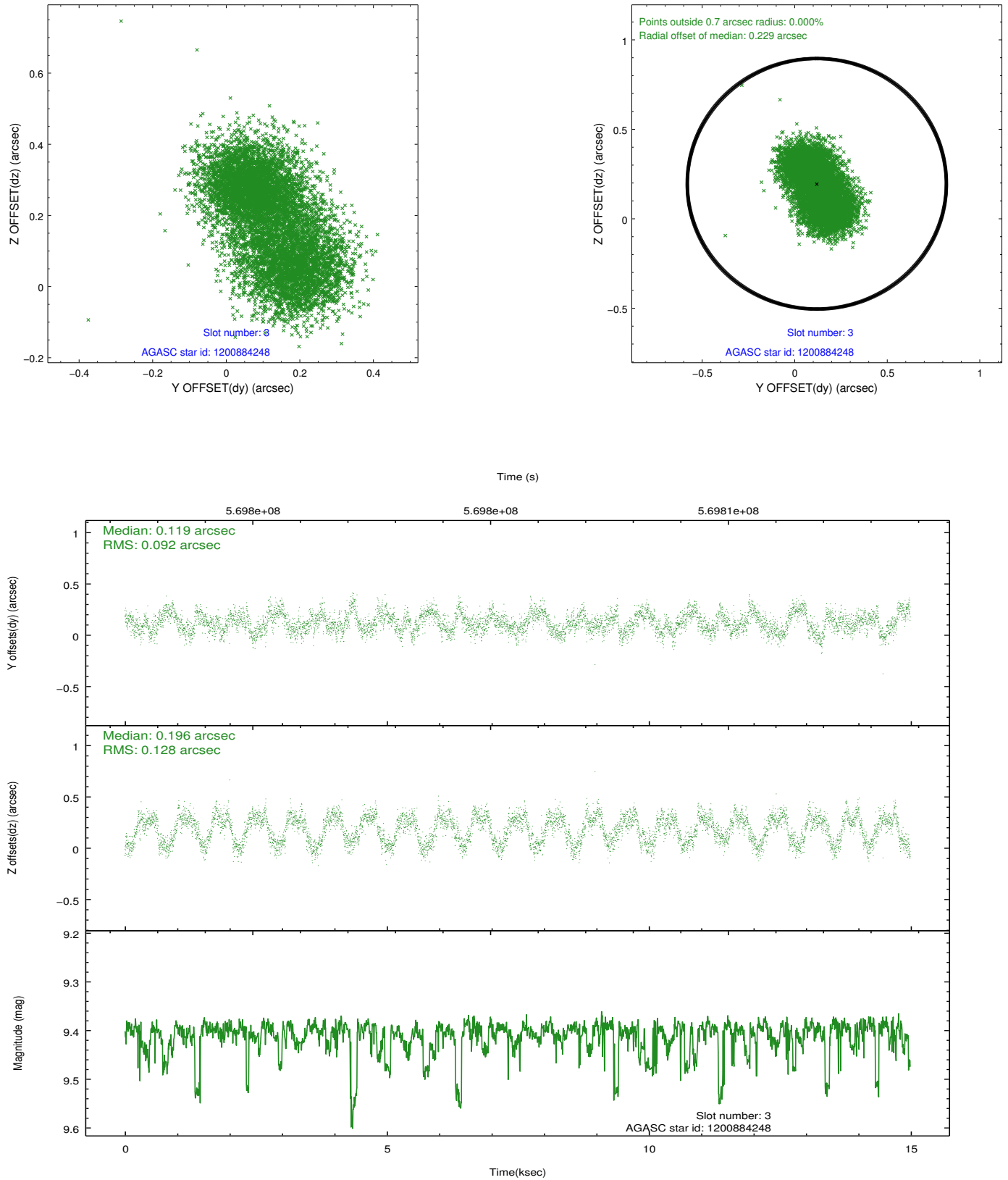


### Slot Statistics

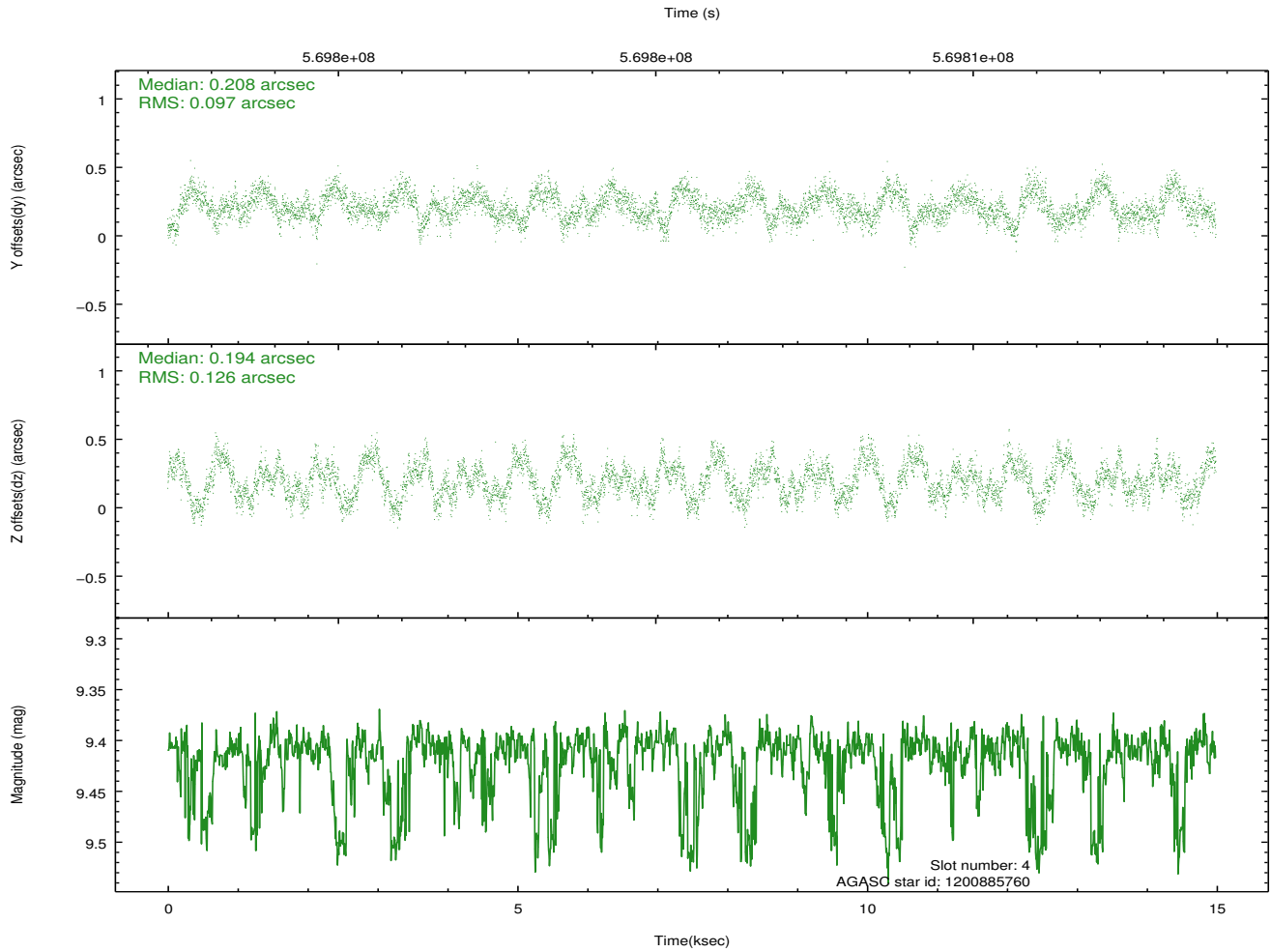
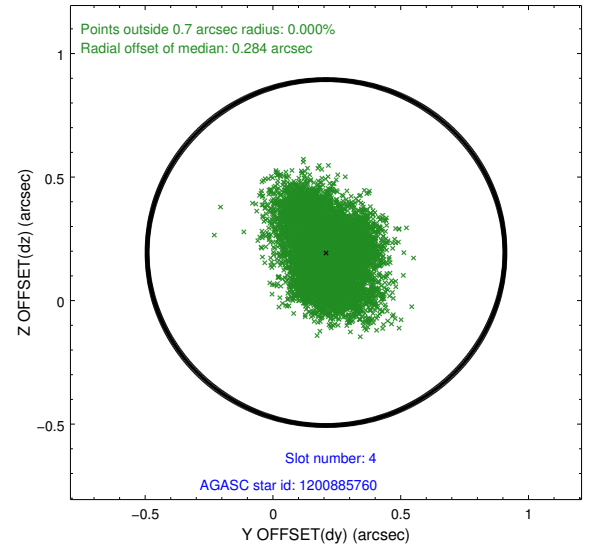
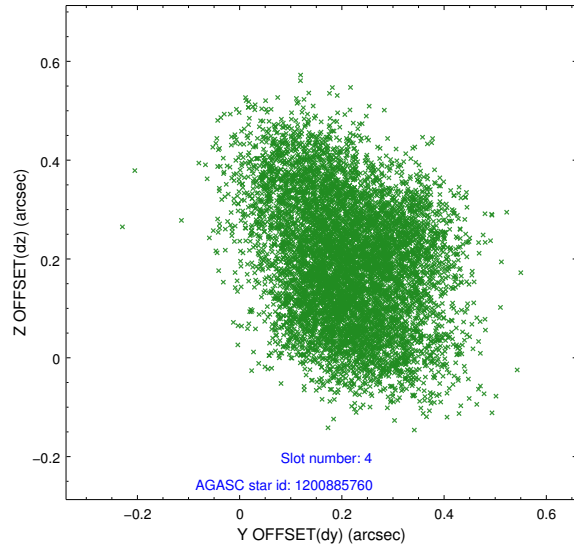
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.25	3656	-0.009	-0.004	0.021	0.039	0.000000	0.000000	925.07	-843.04
1	FID		ACIS-I-2	7.15	3656	-0.299	-0.127	0.017	0.028	0.000000	0.000000	-769.15	-849.67
2	FID		ACIS-I-4	7.19	3655	0.209	0.201	0.013	0.020	0.000000	0.000000	2145.13	1056.76
3	GUIDE	used	1200884248	9.41	7305	0.119	0.196	0.173	0.261	83.880915	-68.565170	-1906.08	984.42
4	GUIDE	used	1200885760	9.41	7298	0.208	0.194	0.173	0.267	83.723637	-68.777667	-1612.52	248.12
5	GUIDE	used	1201020040	8.59	7308	-0.167	-0.146	0.109	0.174	85.379163	-68.879396	341.38	1220.90
6	GUIDE	used	1201540776	9.57	7302	0.012	0.160	0.171	0.286	85.107945	-69.858480	2107.37	-1848.74
7	GUIDE	used	1201018384	9.07	7305	-0.168	-0.395	0.162	0.265	85.801362	-68.593260	199.95	2380.48

## 2.4 Star Slots

### 2.4.1 Slot 3

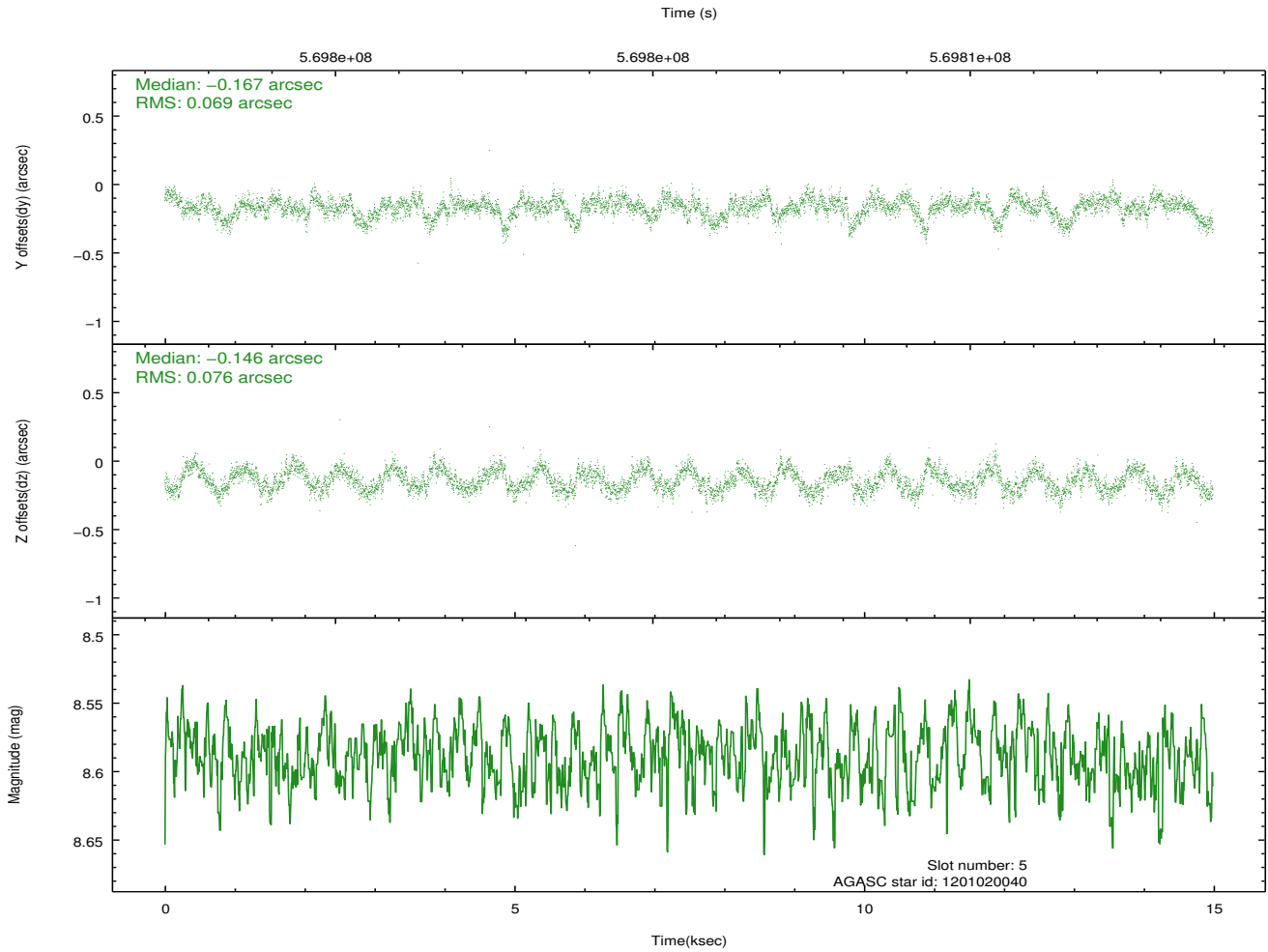
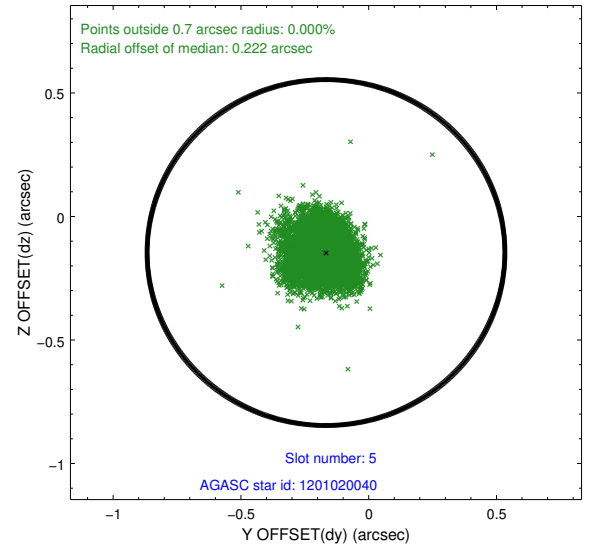
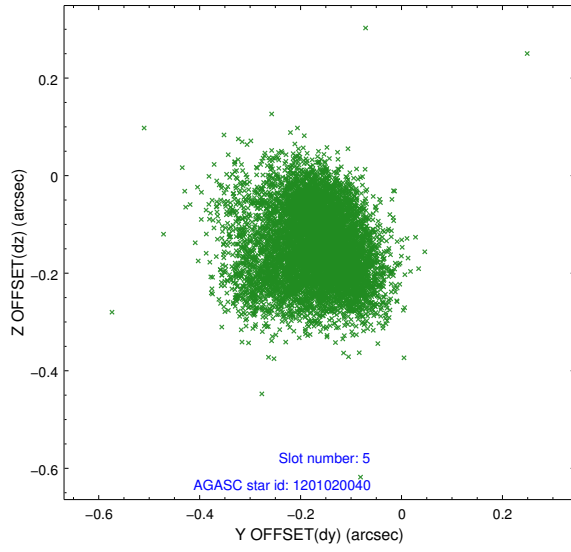


## 2.4.2 Slot 4

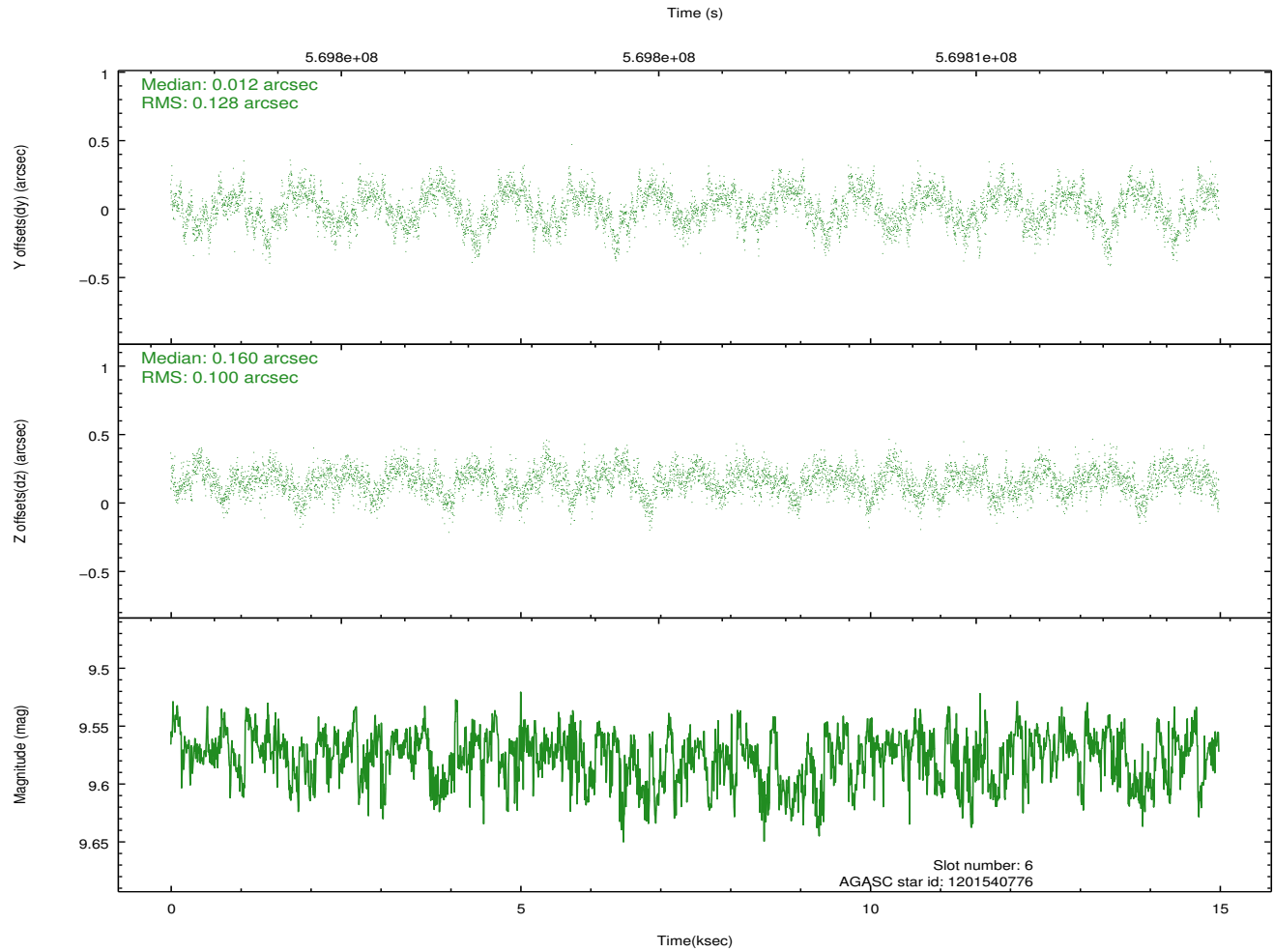
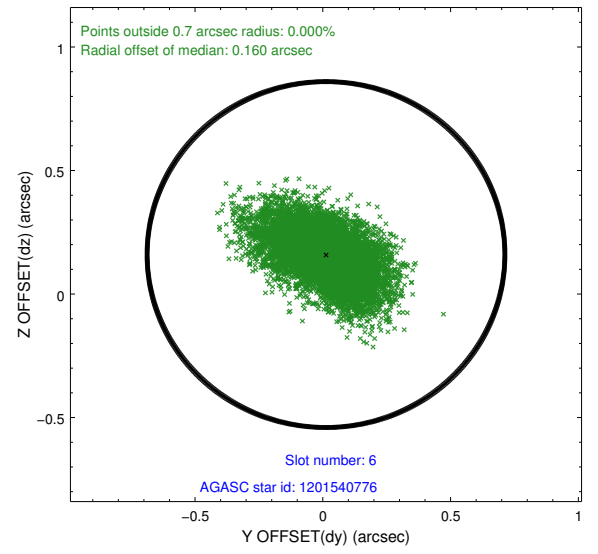
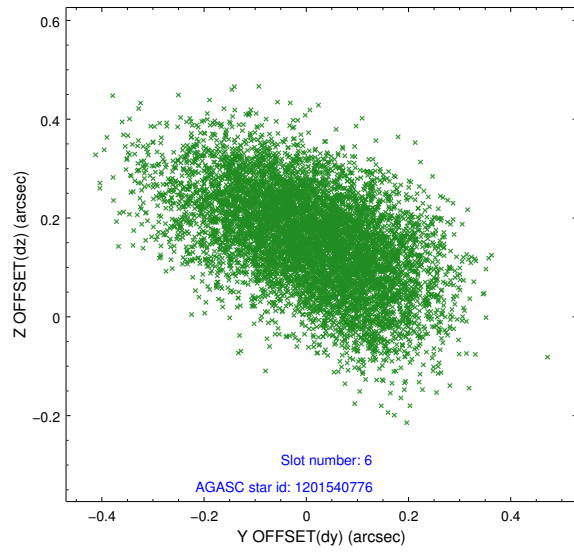




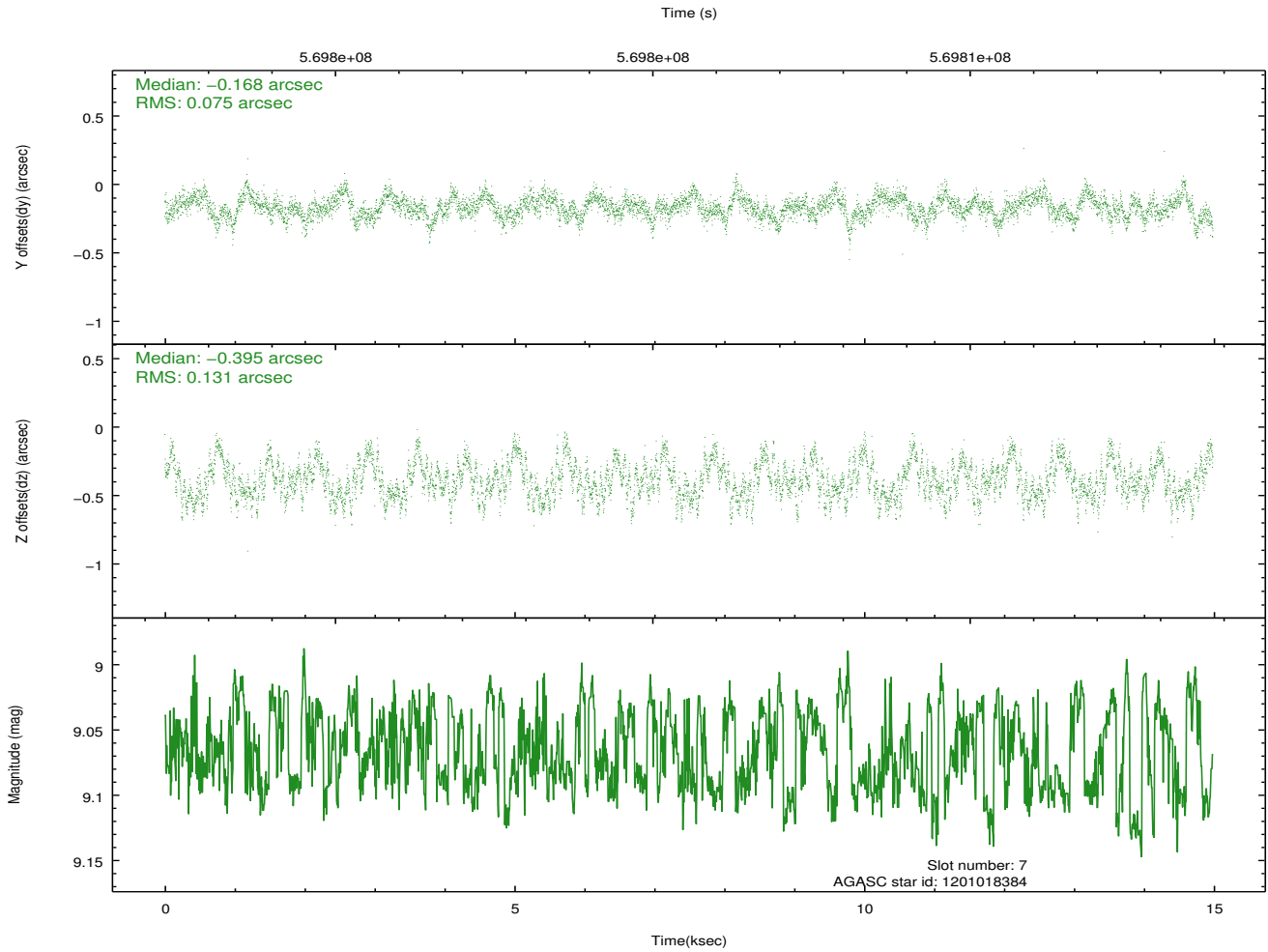
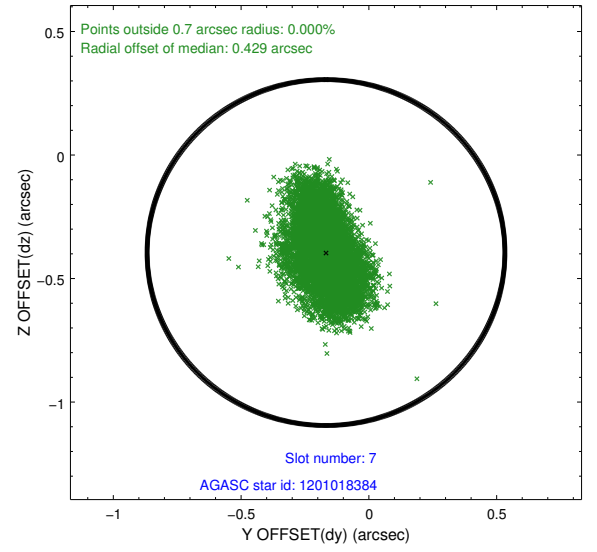
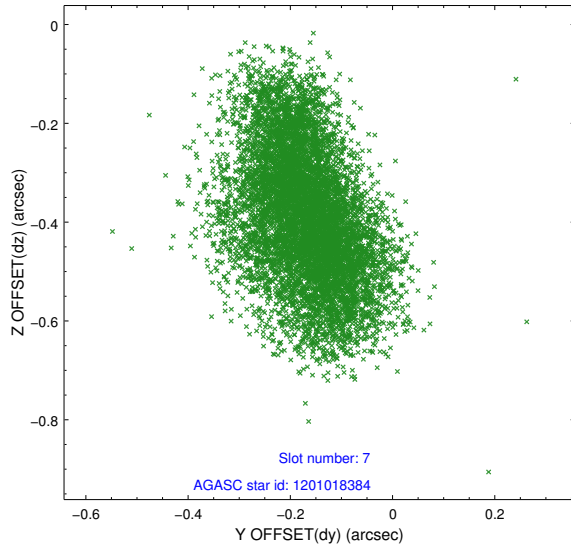
### 2.4.3 Slot 5



## 2.4.4 Slot 6

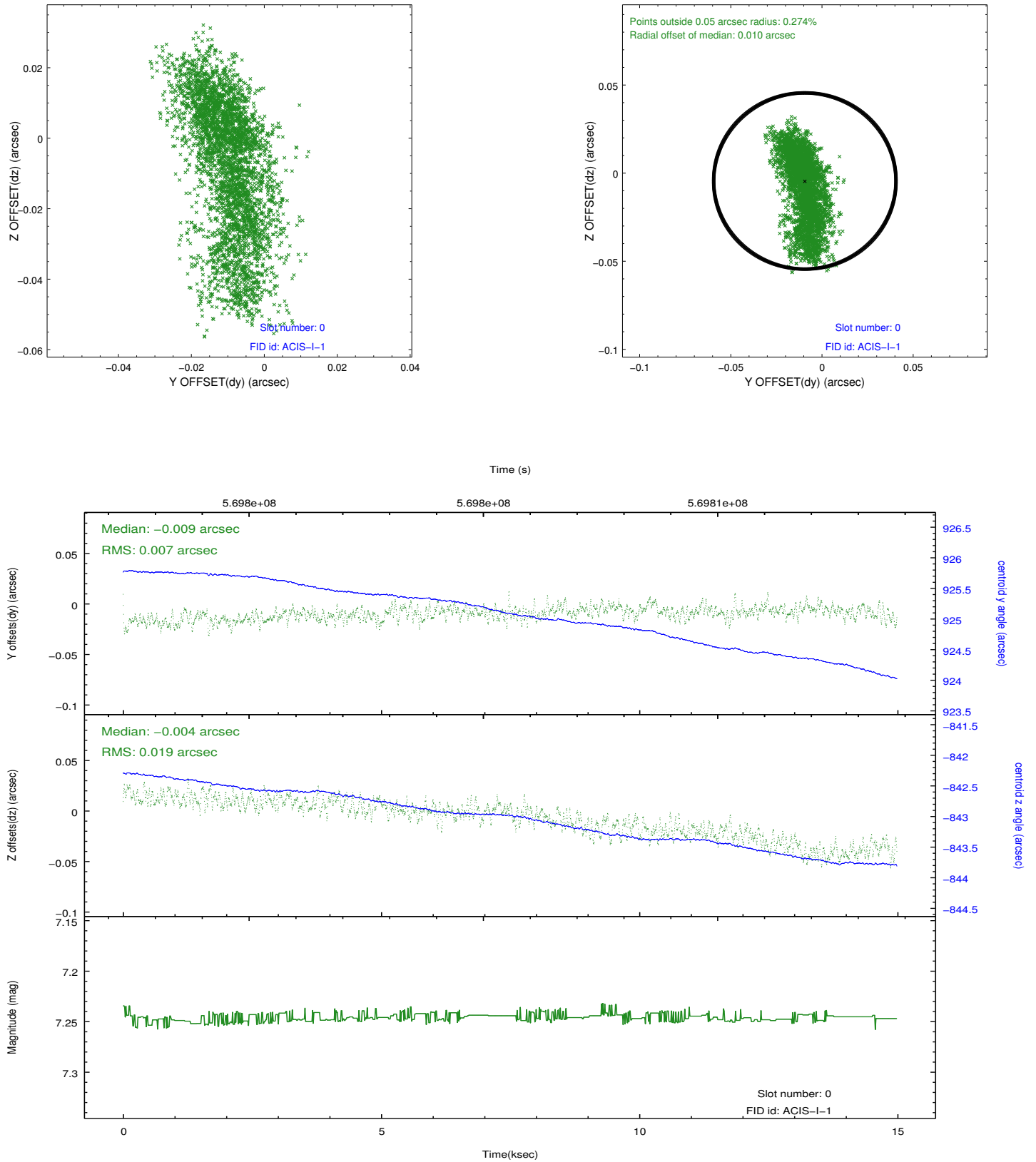


## 2.4.5 Slot 7

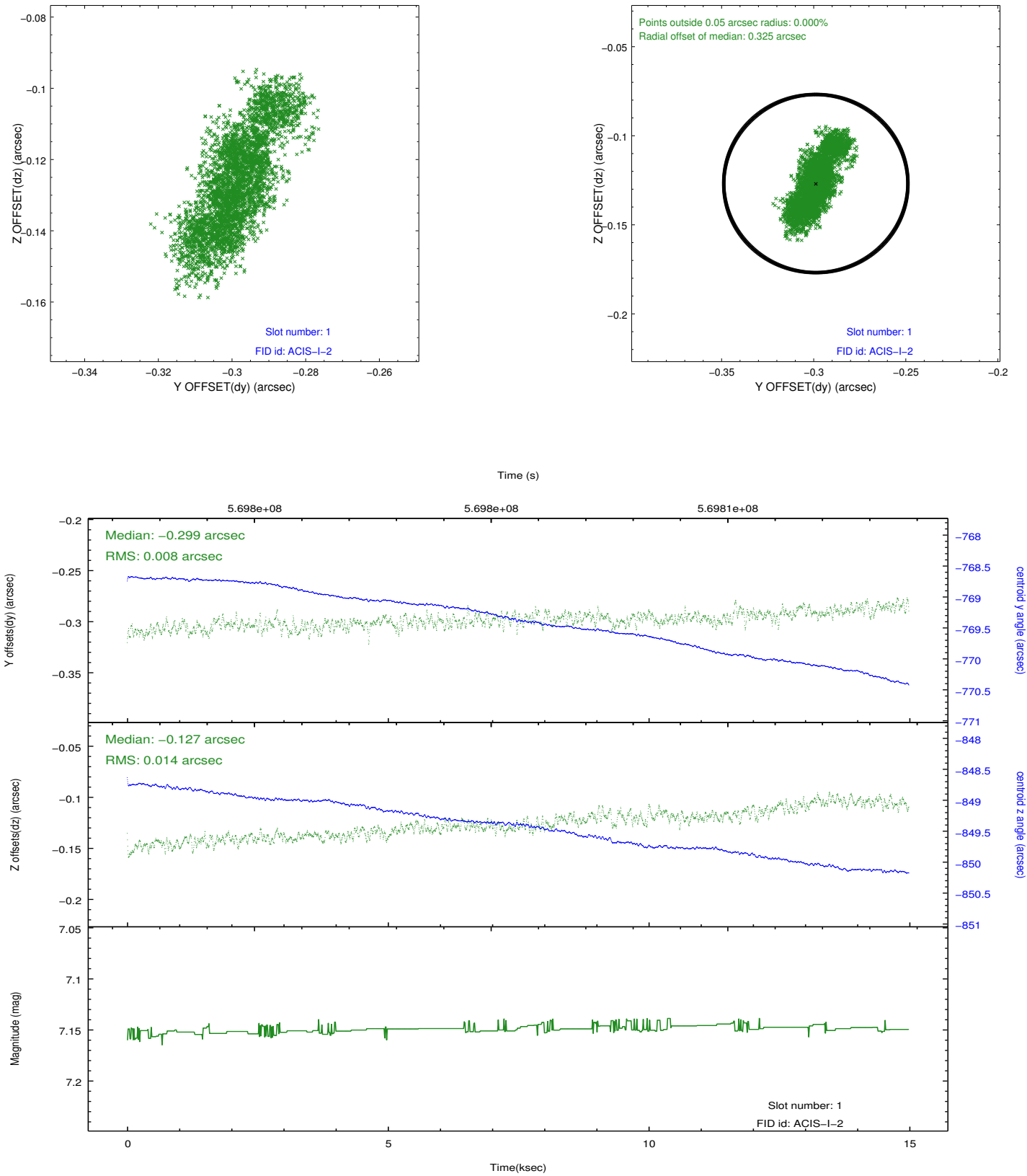


## 2.5 FID Slots

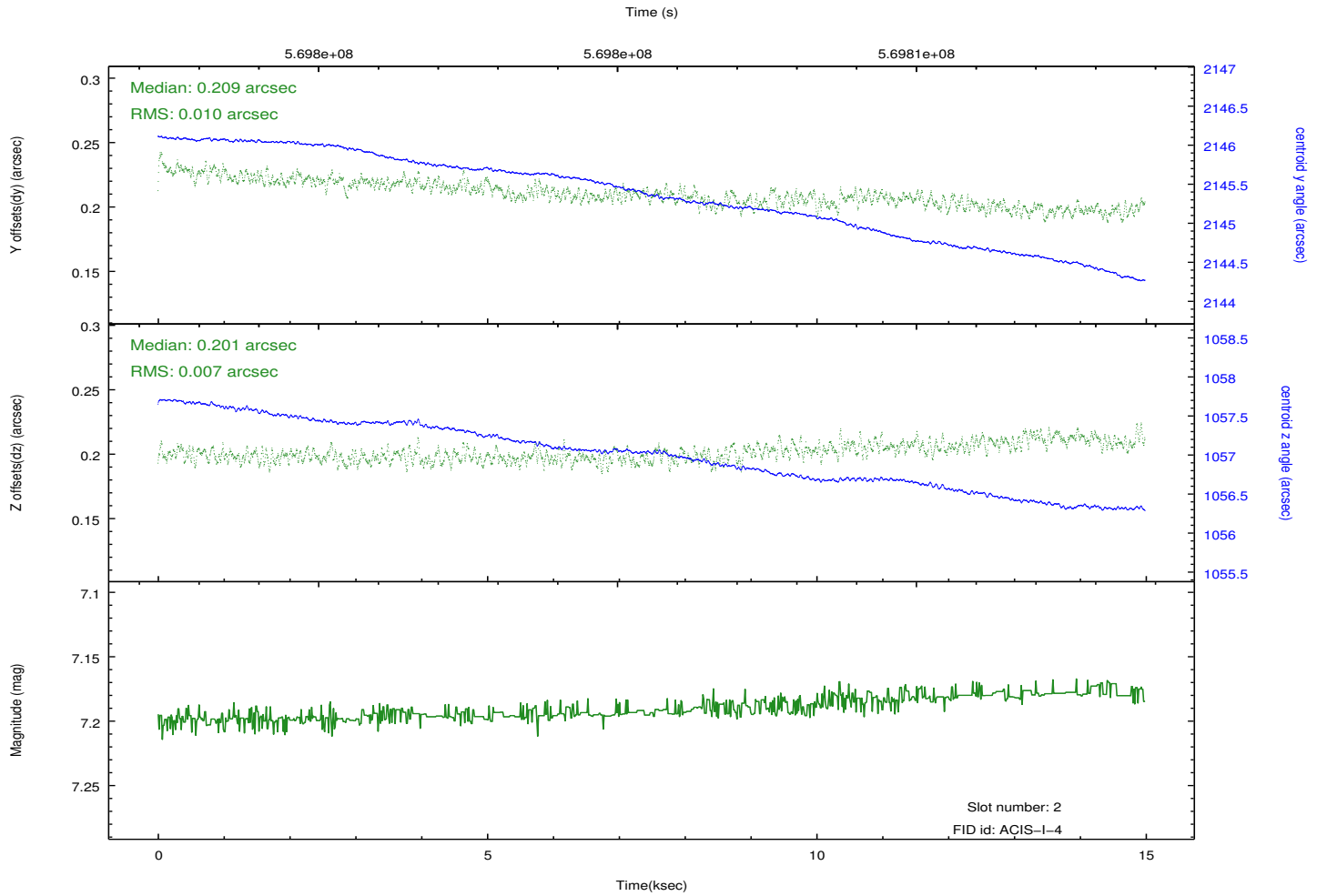
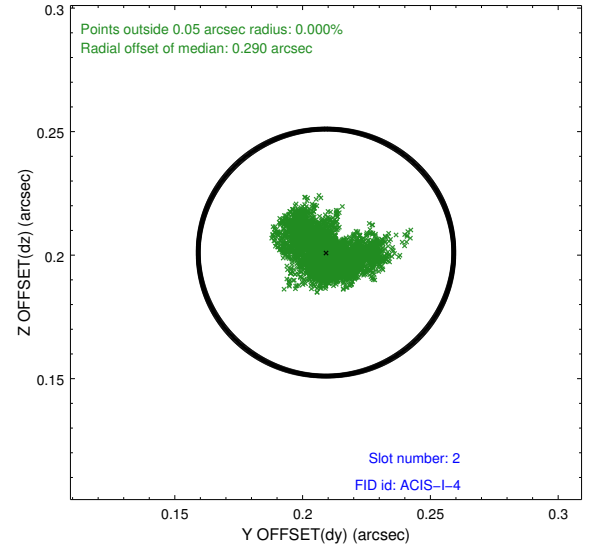
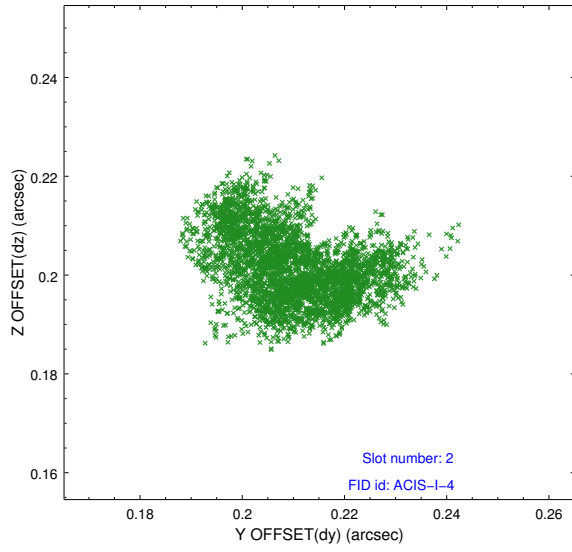
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2016.01.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.752000219822

### A.2 Comments