

# V&V Reference Report

## L2 ASCDS Version : 10.0.1

Observation 14938 - L2 Version 2  
Chandra X-Ray Center

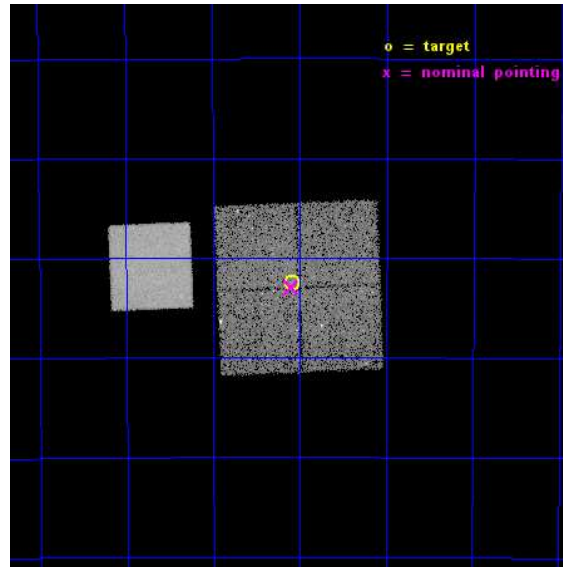
L2 Processing Date : Dec 6 2014

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# 1 Front

seq_num	601068	Sequence number
obs_id	14938	Observation id
title	Chandra survey of the oldest open clusters	Proposal title
observer	Dr Maureen van den Berg	Principal investigator
object	NGC 6253	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	254.770833	Observer's specified target RA [deg]
dec_targ	-52.708333	Observer's specified target Dec [deg]
ra_nom	254.7743093016	Nominal RA [deg]
dec_nom	-52.716124705553	Nominal Dec [deg]
roll_nom	267.67508620785	Nominal Roll [deg]
revision	2	Processing version of data
ontime	22072.000169754	Sum of GTIs [s]
livetime	21783.613238366	Livetime [s]
ontime0	22072.000169754	Sum of GTIs [s]
ontime1	22072.000169754	Sum of GTIs [s]
ontime2	22068.859199405	Sum of GTIs [s]
ontime3	22072.000169754	Sum of GTIs [s]
ontime7	22072.000169754	Sum of GTIs [s]
l2events	96714	Number of level 2 events

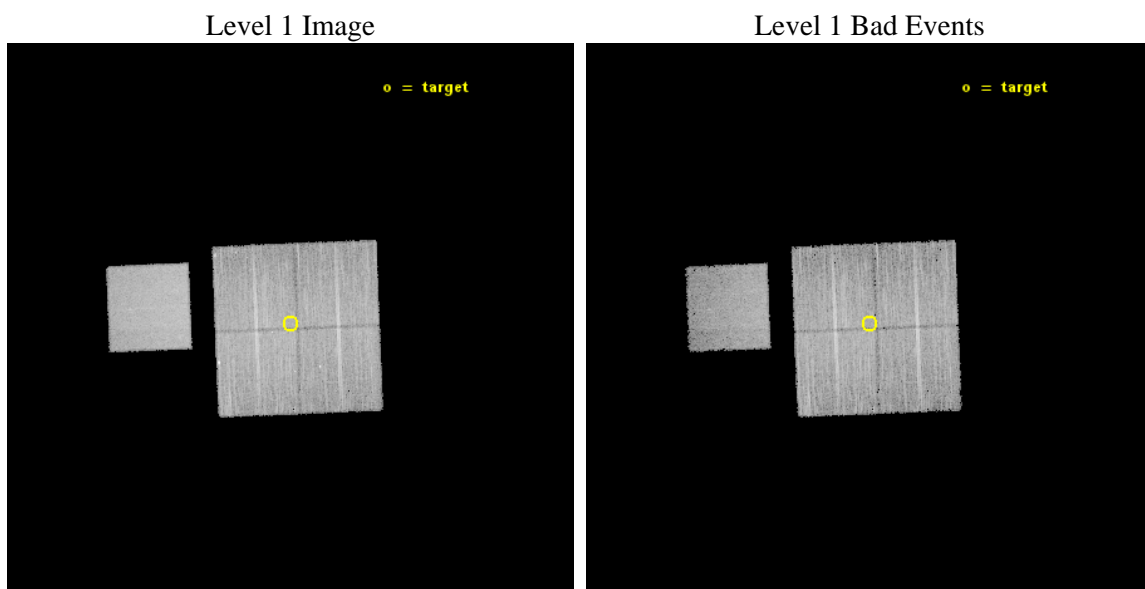




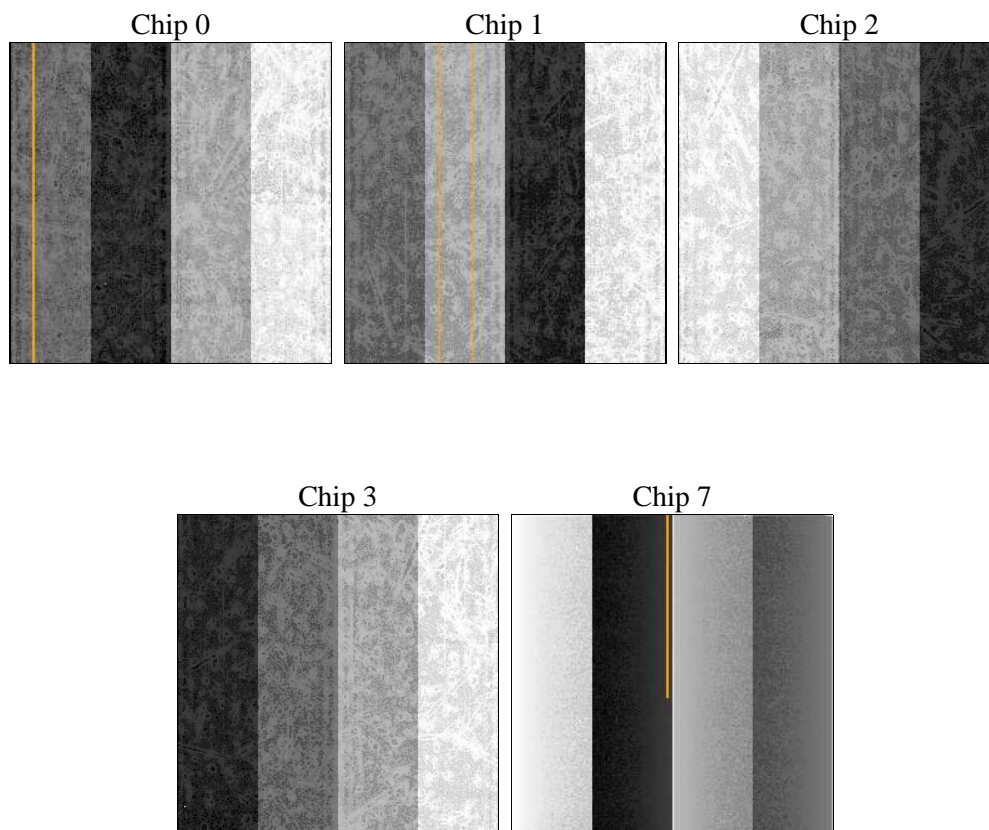
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	22000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	22072.000169754	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	22072.000169754	Sum of GTIs [s]
date	2014-12-06T10:06:46	Date and time of file creation	ontime1	22072.000169754	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	22068.859199405	Sum of GTIs [s]
			ontime3	22072.000169754	Sum of GTIs [s]
			ontime7	22072.000169754	Sum of GTIs [s]
			l1events	476872	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	84639	86378	99846	89688	116321
rejected events	71744	73895	86106	77291	60928
rejected %	84%	85%	86%	86%	52%

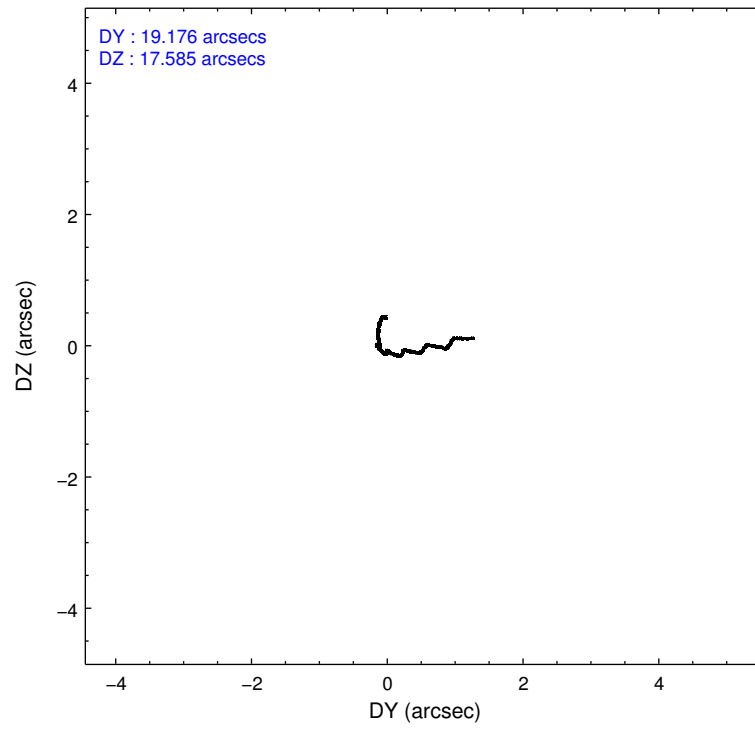
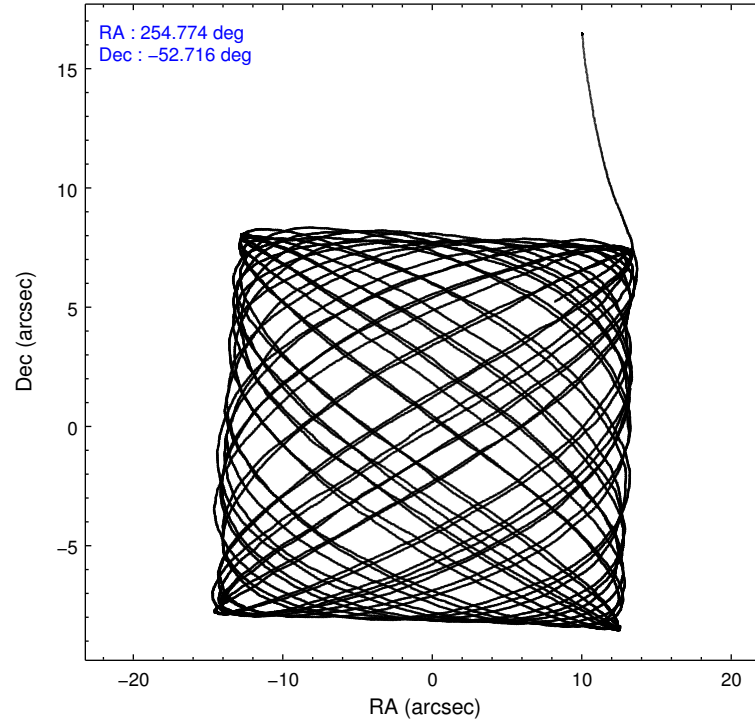
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	5507	4856	6394	5251	5794
	6%	5%	6%	5%	4%
grade 1 events	65	56	72	64	164
	0%	0%	0%	0%	0%
grade 2 events	2993	2771	3048	2565	11929
	3%	3%	3%	2%	10%
grade 3 events	1186	1217	1105	1171	4979
	1%	1%	1%	1%	4%
grade 4 events	1100	1185	1133	1216	4954
	1%	1%	1%	1%	4%
grade 5 events	3826	4282	3423	4486	12182
	4%	4%	3%	5%	10%
grade 6 events	2114	2456	2064	2197	27754
	2%	2%	2%	2%	23%
grade 7 events	67848	69555	82607	72738	48565
	80%	80%	82%	81%	41%

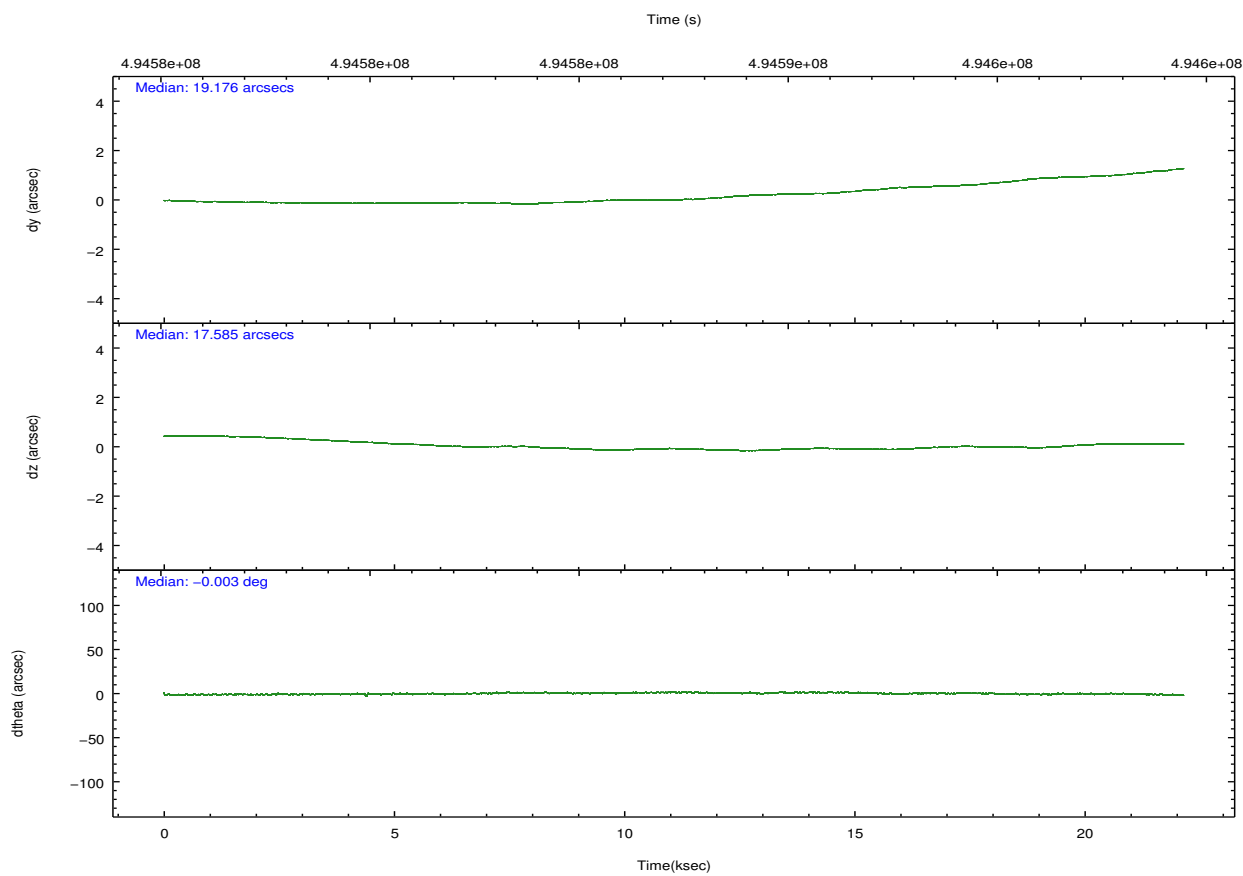
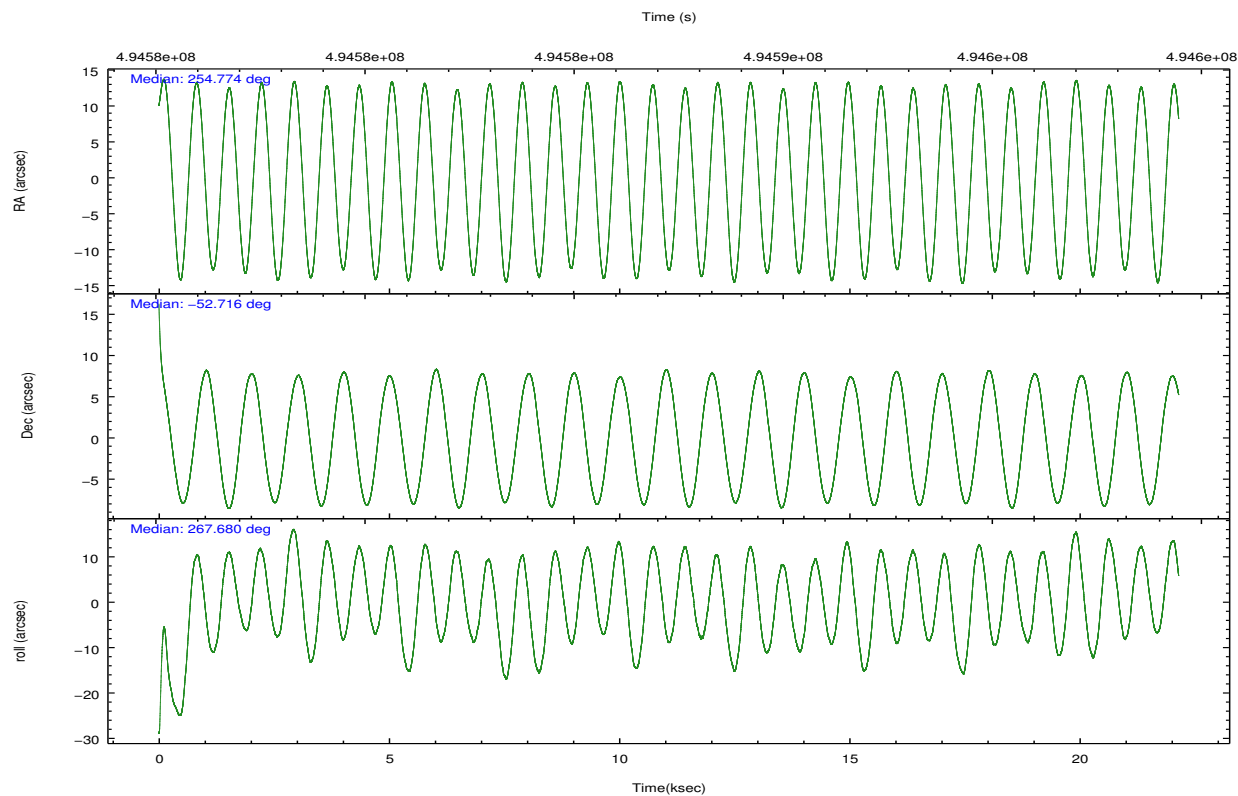
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-01237	ACIS-01237
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	254.753035	254.774309301599
[deg] Pointing Dec	-52.691838	-52.7161247055527
[deg] Pointing Roll	267.449486	267.6750862078492
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-233.592463	-233.5874344608287
[mm] SIM translation stage offset	0	-0.005018542100998502
[s] Observation start time (MET)	494576332.184000	494575152.4525
Observation start date	2013-09-03T06:17:45	2013-09-03T05:59:12
[s] Observation end time (MET)	494598332.184000	494598923.7413
Observation end date	2013-09-03T12:24:25	2013-09-03T12:35:23
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	Y	Y
CCD I1 on	Y	Y
CCD I2 on	Y	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	N	N
CCD S3 on	O1	Y
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



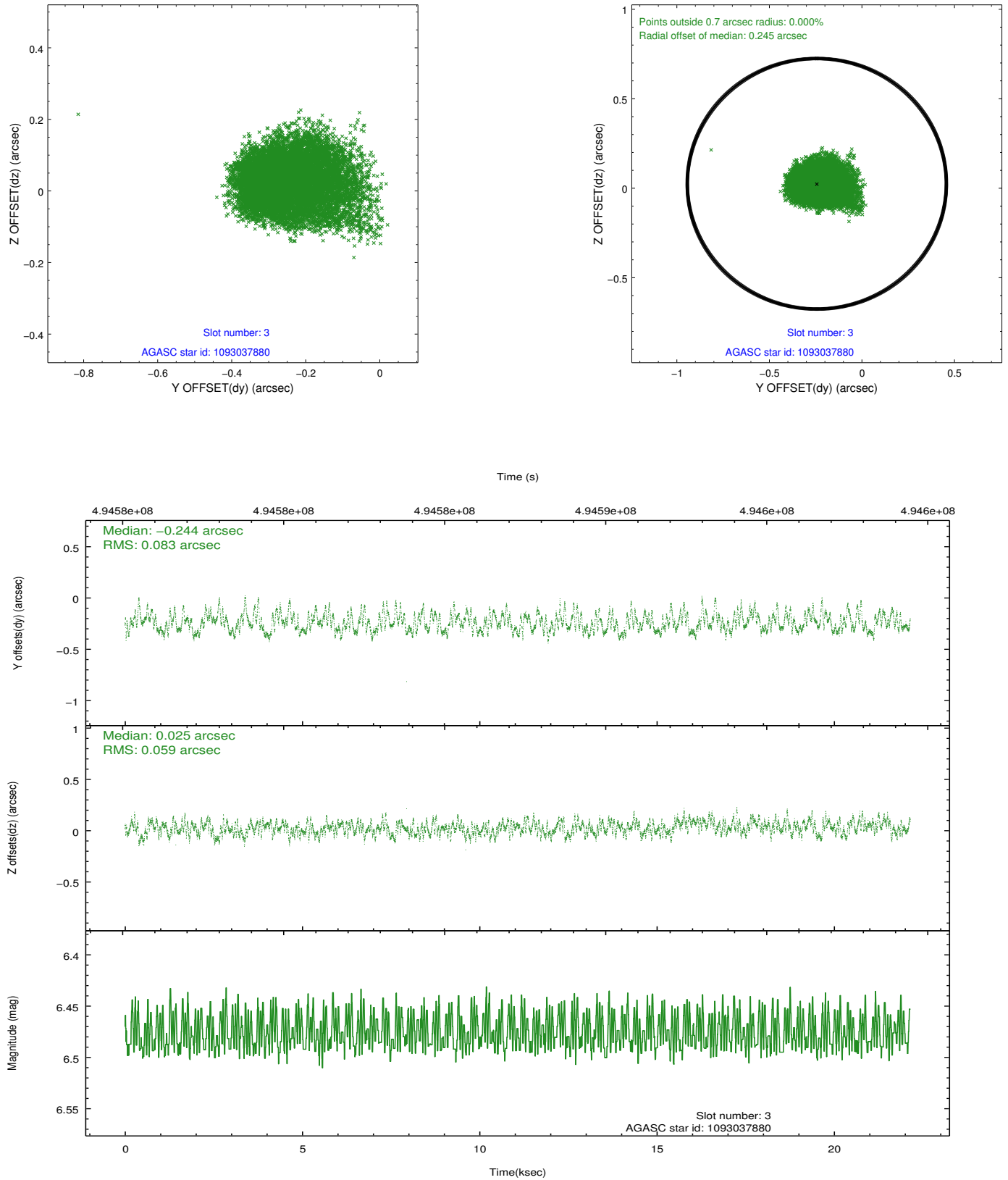


### Slot Statistics

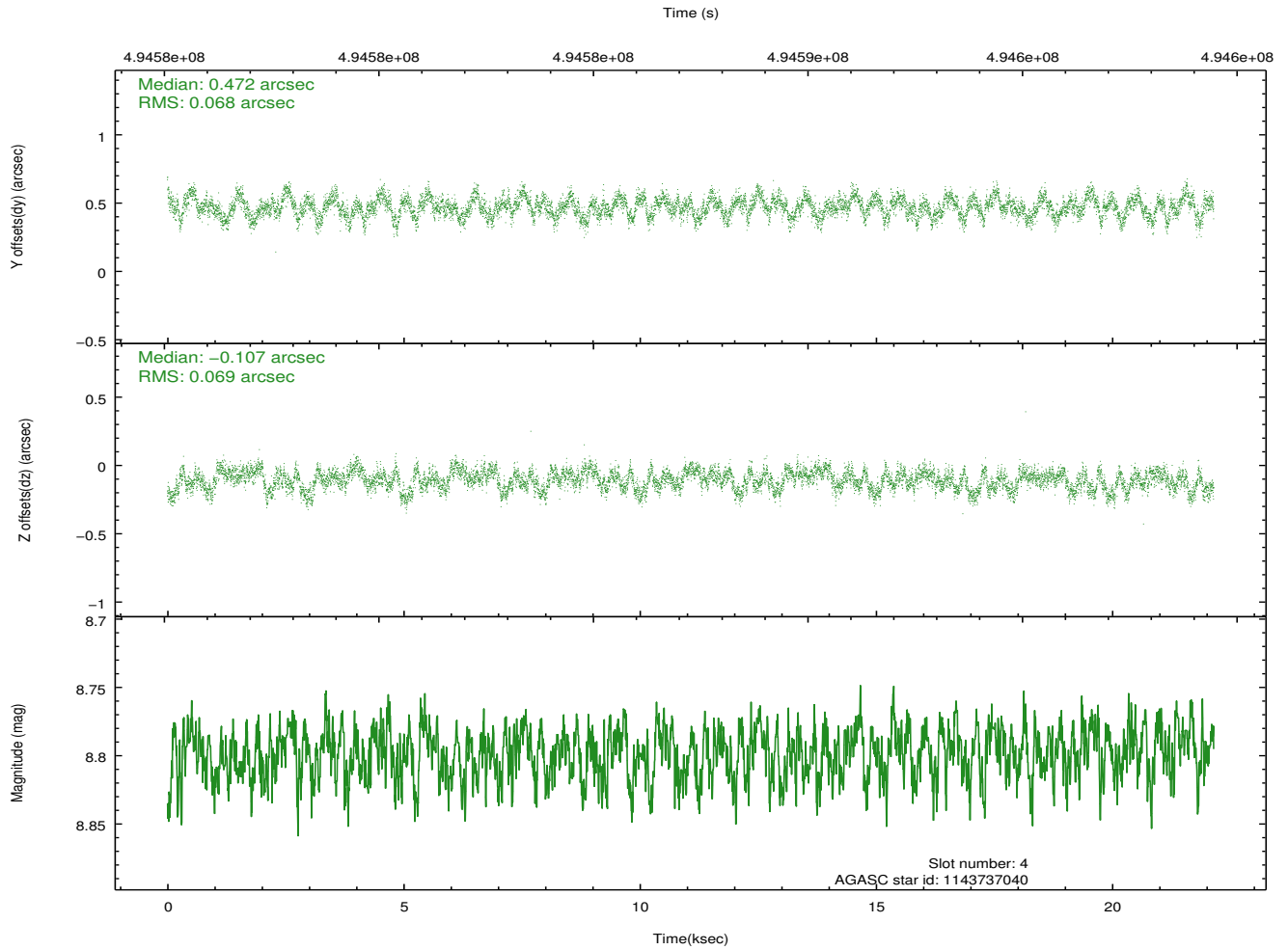
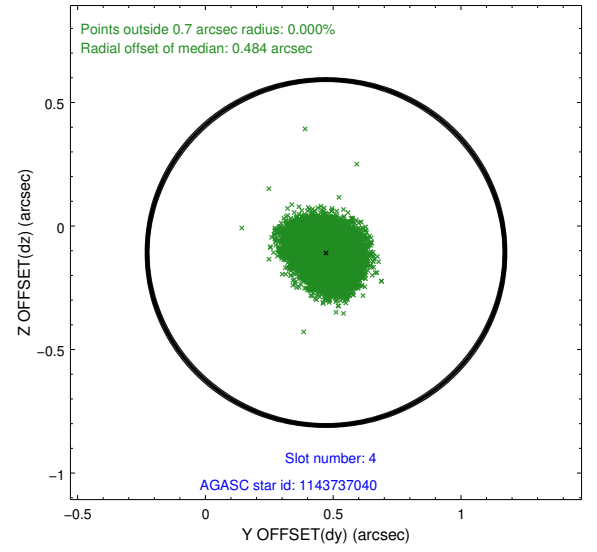
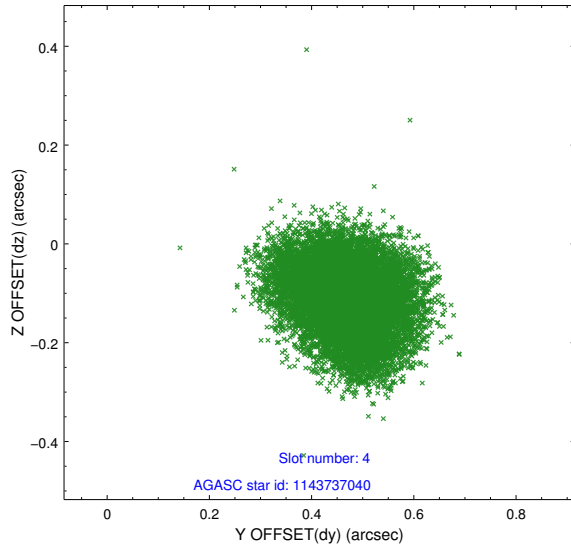
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	6.99	5402	0.064	0.007	0.014	0.021	0.000000	0.000000	920.00	-841.28
1	FID		ACIS-I-5	6.96	5402	-0.265	0.060	0.010	0.019	0.000000	0.000000	-1828.37	1056.15
2	FID		ACIS-I-6	6.98	5402	0.108	0.004	0.011	0.016	0.000000	0.000000	385.39	1700.80
3	GUIDE	used	1093037880	6.48	10805	-0.244	0.025	0.109	0.173	254.119869	-52.283758	-1398.74	-1458.29
4	GUIDE	used	1143737040	8.80	10799	0.472	-0.107	0.106	0.161	255.120058	-53.123265	1519.21	861.13
5	GUIDE	used	1143747024	8.20	10803	0.083	0.145	0.106	0.164	254.407207	-53.281737	2157.28	-649.00
6	GUIDE	used	1093022896	9.79	10769	-0.280	-0.071	0.189	0.292	255.381972	-52.078160	-2262.04	1292.16
7	GUIDE	used	1143744584	9.92	10574	-0.017	-0.004	0.268	0.462	255.121270	-53.355892	2355.31	897.01

## 2.4 Star Slots

### 2.4.1 Slot 3

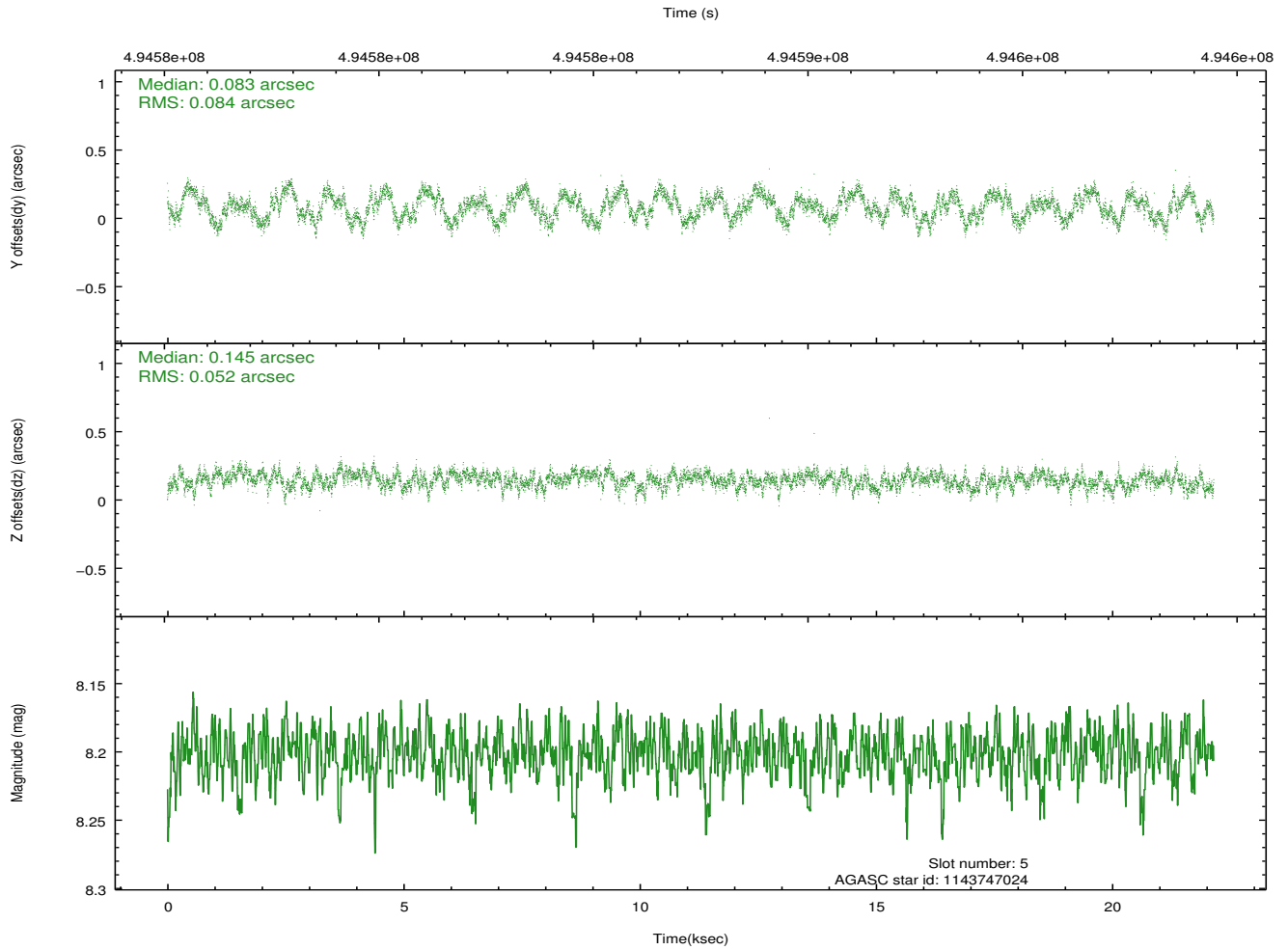
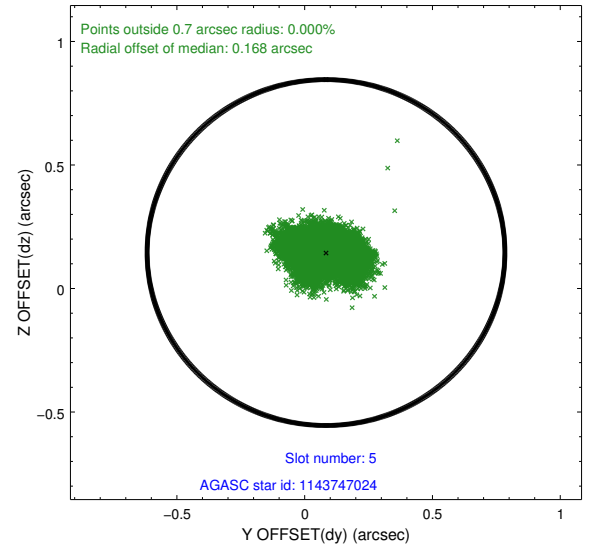
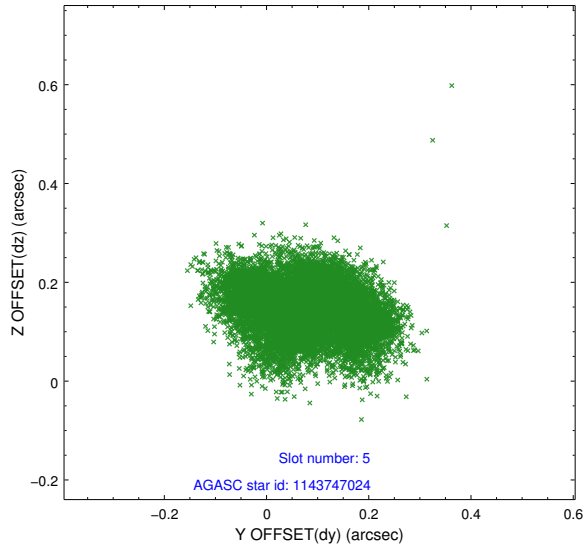


## 2.4.2 Slot 4

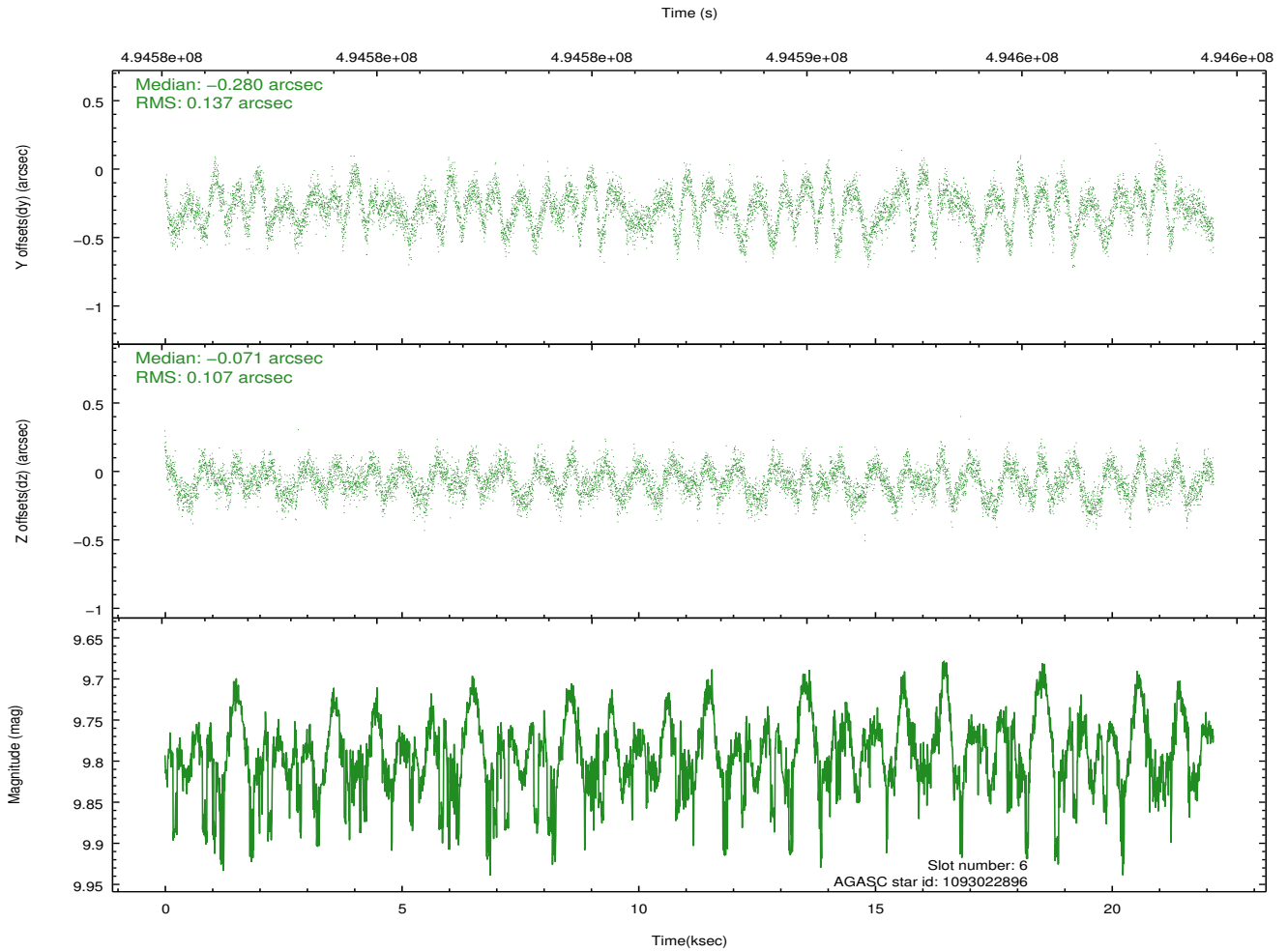
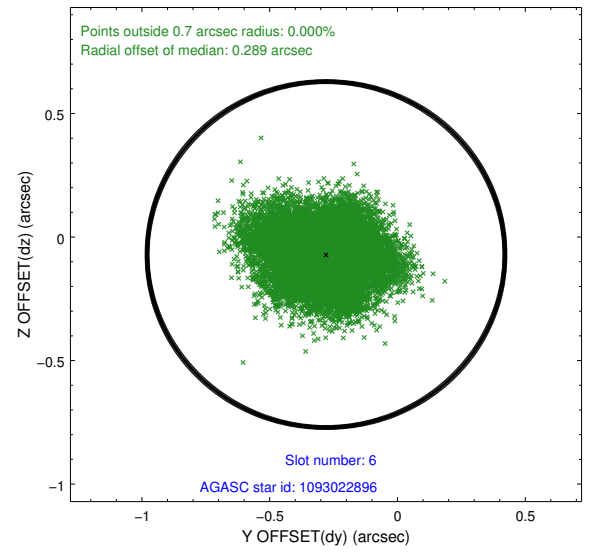
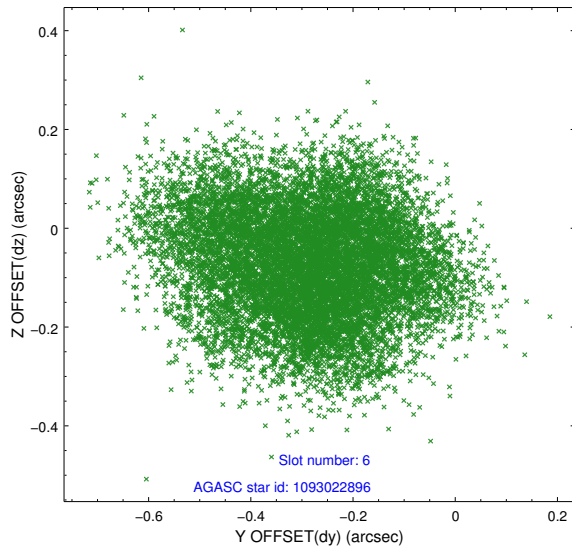




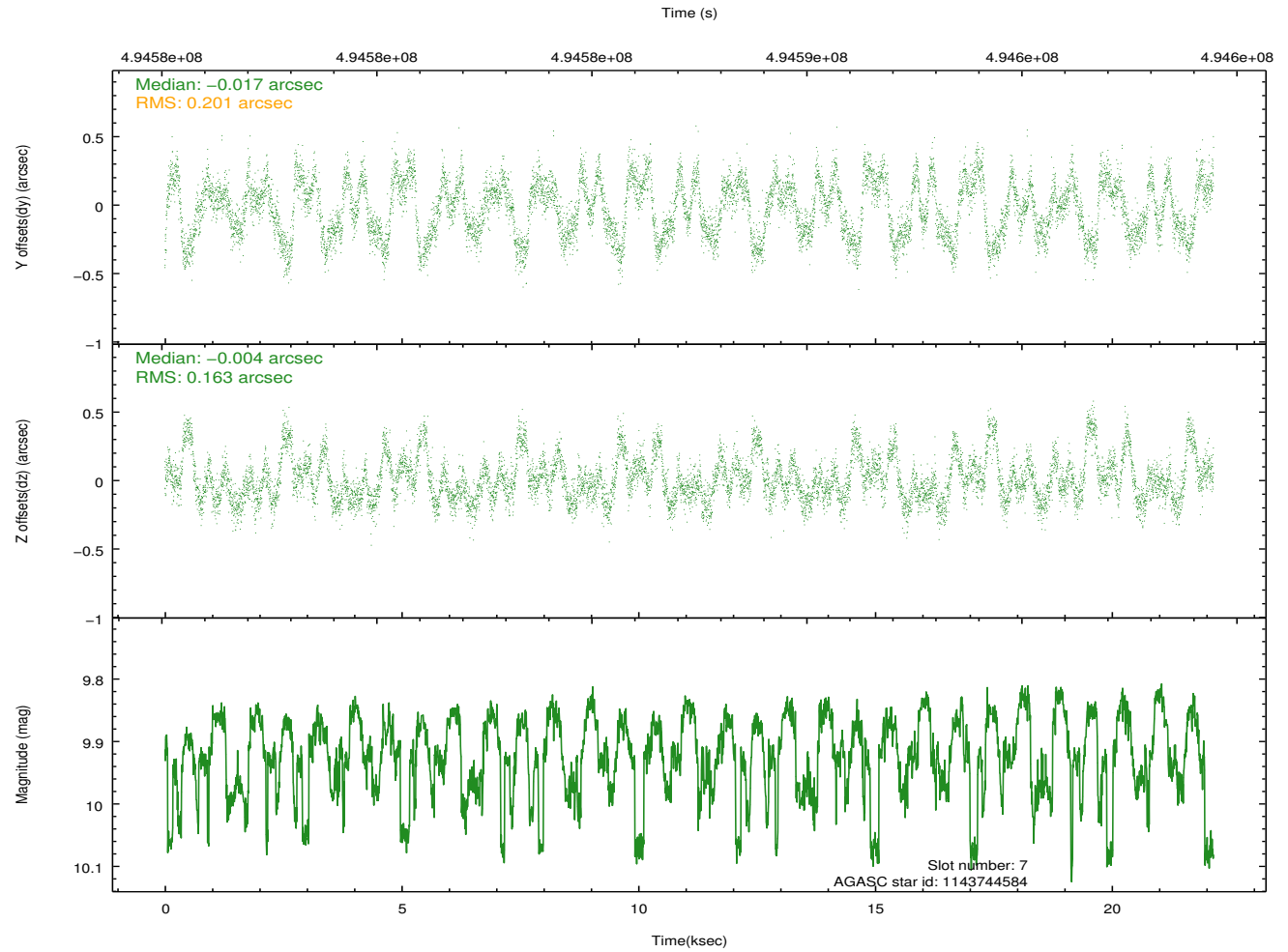
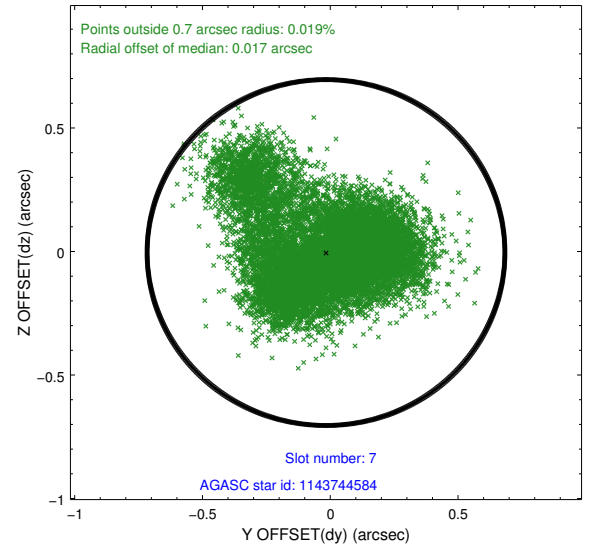
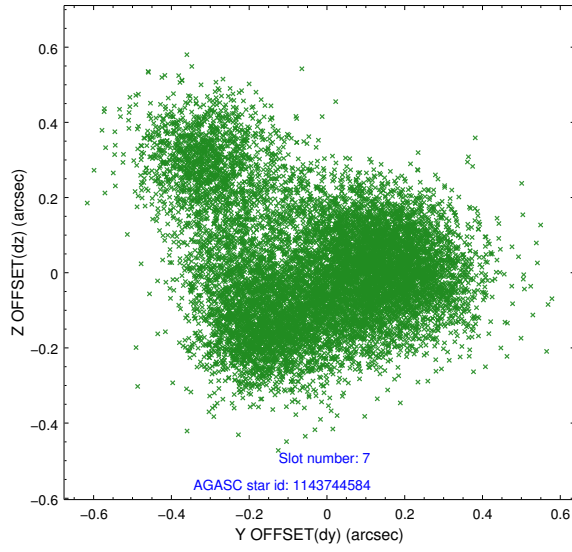
### 2.4.3 Slot 5



## 2.4.4 Slot 6

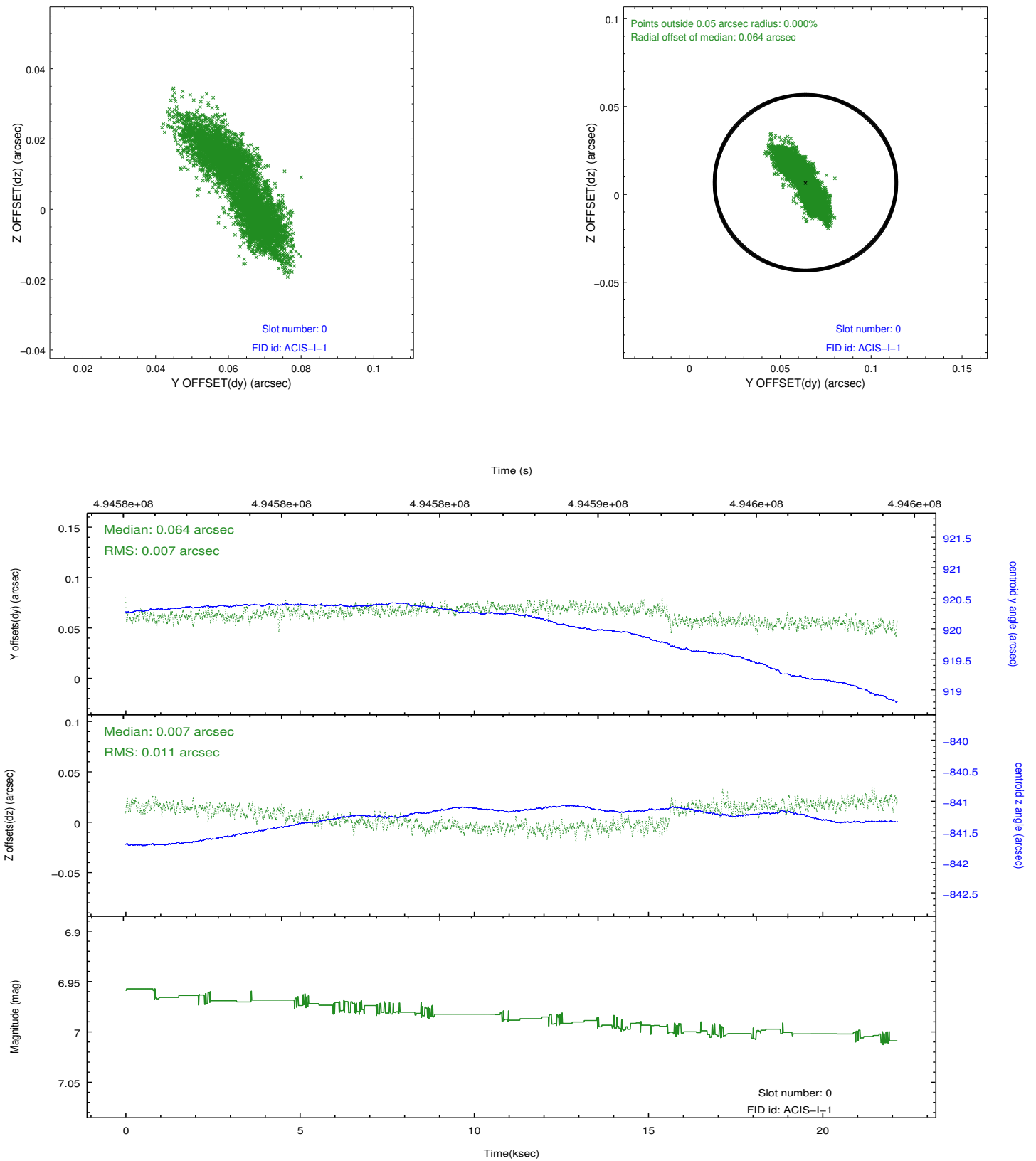


## 2.4.5 Slot 7

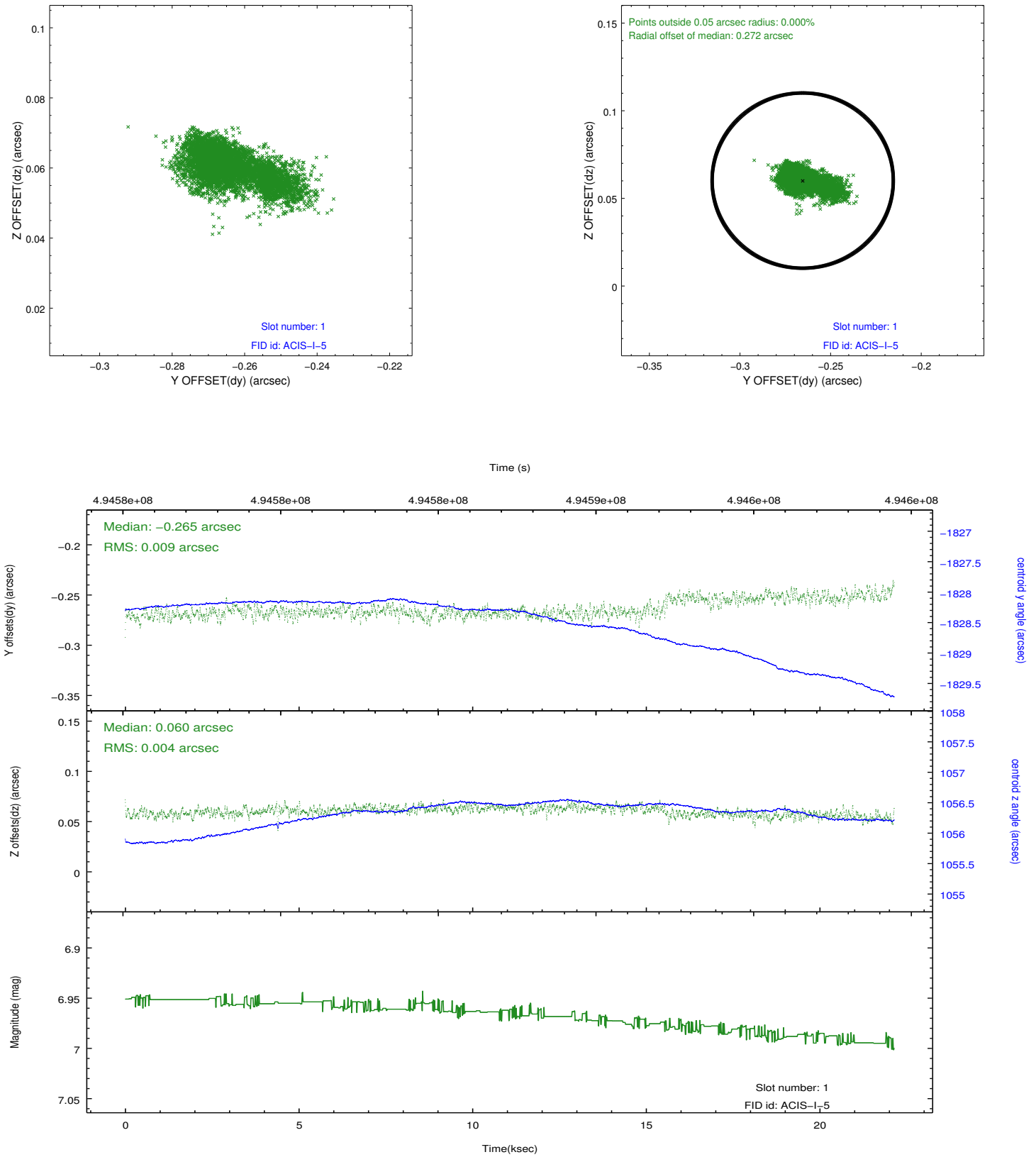


## 2.5 FID Slots

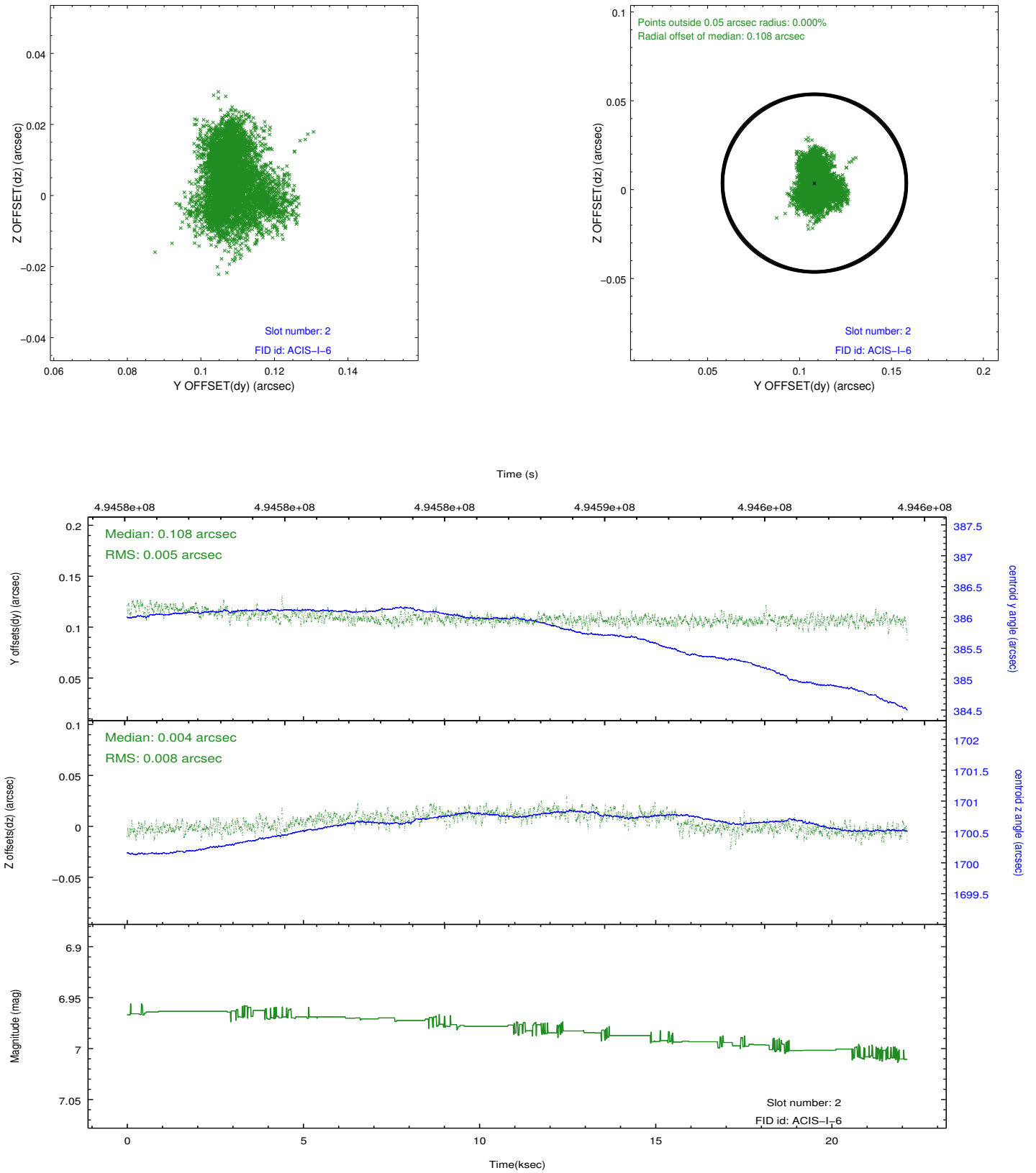
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	22.072000169754

## 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.