

# V&V Reference Report

## L2 ASCDS Version : 10.4

Observation 17061 - L2 Version 1  
Chandra X-Ray Center

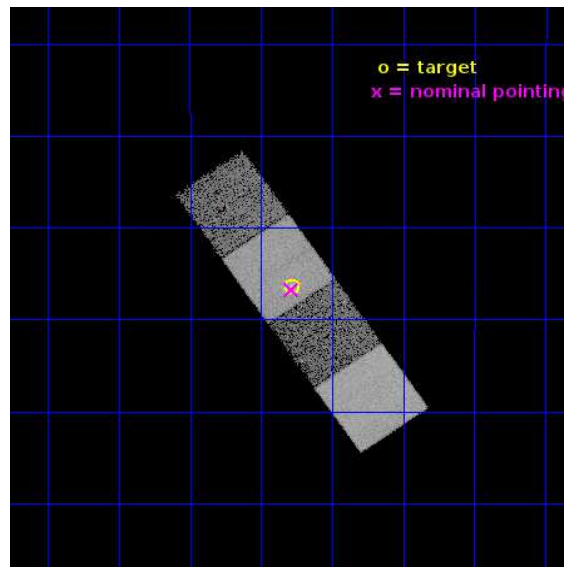
L2 Processing Date : Jun 13 2015

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# 1 Front

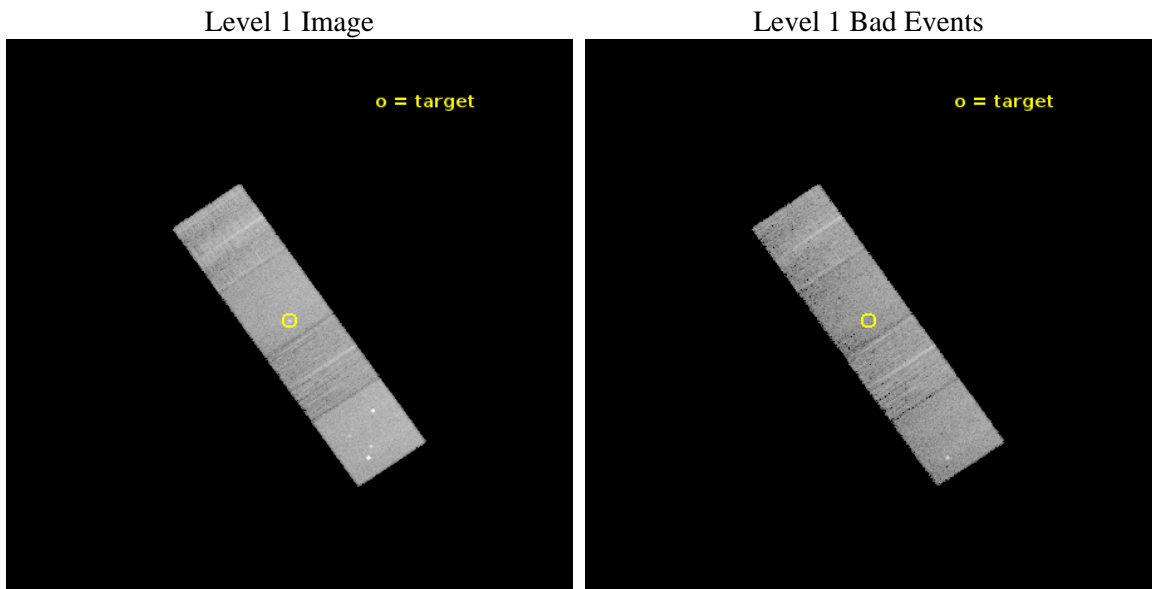
seq_num	703065	Sequence number
obs_id	17061	Observation id
title	ULTRAMASSIVE BLACK HOLES: FUNDAMENTAL PLANE AND CORONAE	Proposal t
observer	Dr. Kayhan Gultekin	Principal investigator
object	Mrk 1216	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	127.19625	Observer's specified target RA [deg]
dec_targ	-6.940167	Observer's specified target Dec [deg]
ra_nom	127.19667778137	Nominal RA [deg]
dec_nom	-6.9455899077017	Nominal Dec [deg]
roll_nom	235.314934877	Nominal Roll [deg]
revision	1	Processing version of data
ontime	13063.400100589	Sum of GTIs [s]
livetime	12892.717161139	Livetime [s]
ontime5	13063.400100589	Sum of GTIs [s]
ontime6	13063.400100589	Sum of GTIs [s]
ontime7	13063.400100589	Sum of GTIs [s]
ontime8	13063.400100589	Sum of GTIs [s]
l2events	107602	Number of level 2 events



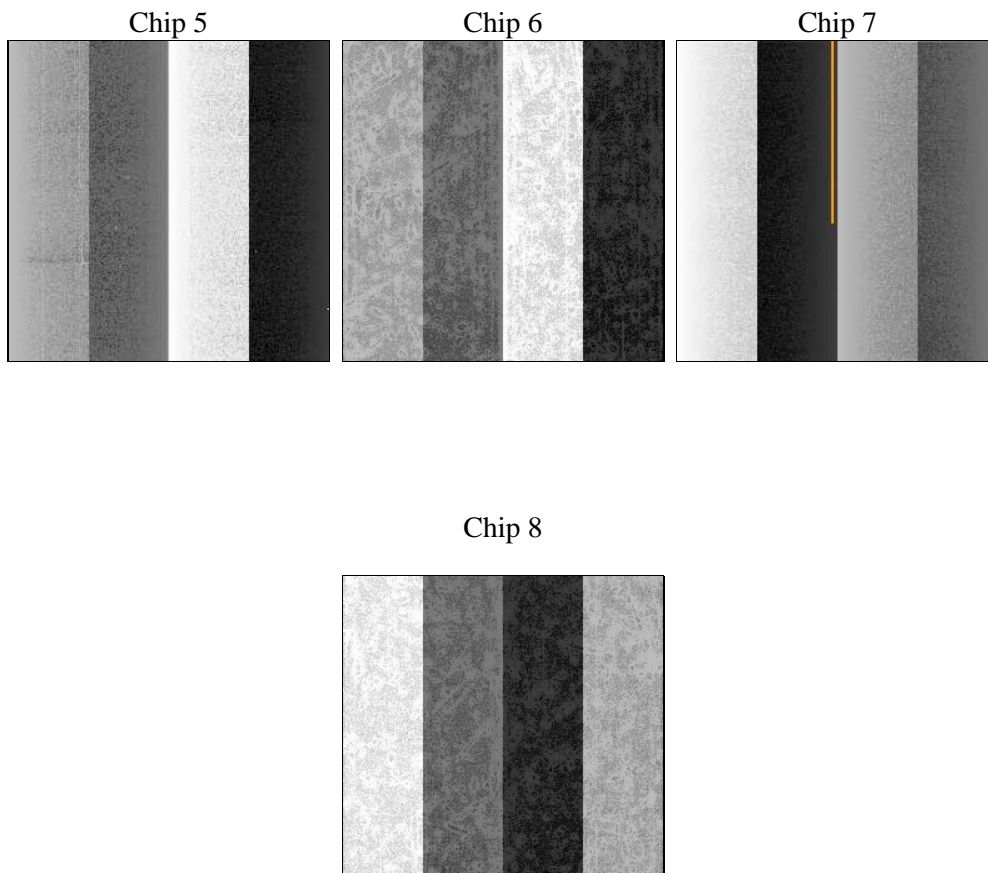
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	13000.000000	[s] Scheduled observation exposure time
ascdsver	10.4	Processing system revision	ontime	13063.400100589	Sum of GTIs [s]
caldbver	4.6.7	&#160	ontime5	13063.400100589	Sum of GTIs [s]
date	2015-06-13T10:40:27	Date and time of file creation	ontime6	13063.400100589	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	13063.400100589	Sum of GTIs [s]
			ontime8	13063.400100589	Sum of GTIs [s]
			l1events	372915	Number of level 1 events

### 2.1.4 Events

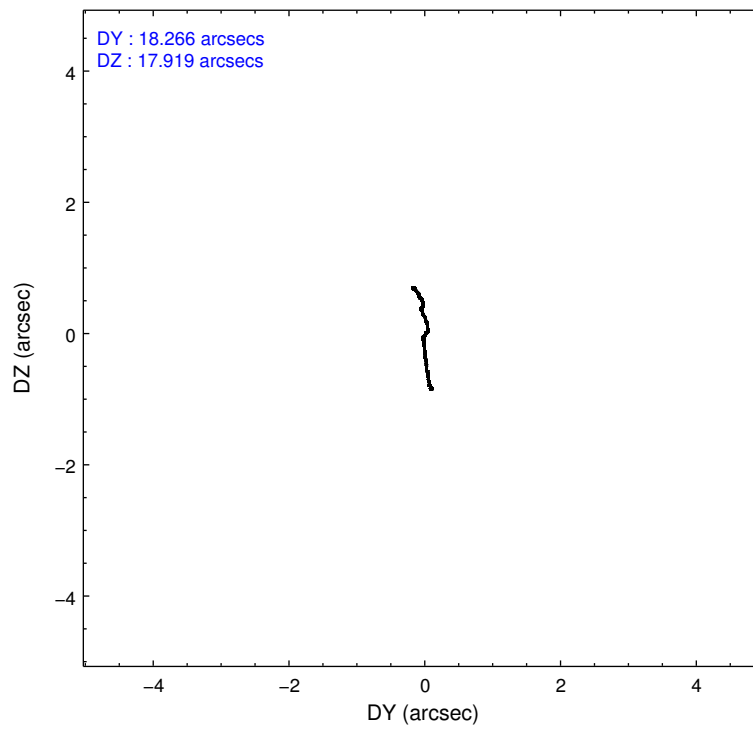
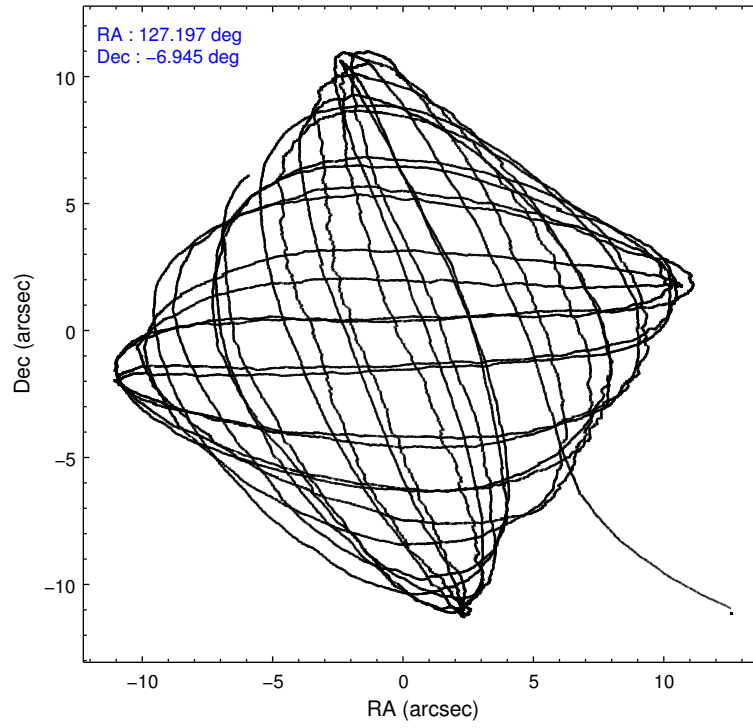
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	116163	69929	93978	92845
rejected events	58626	61529	52268	66013
rejected %	50%	87%	55%	71%

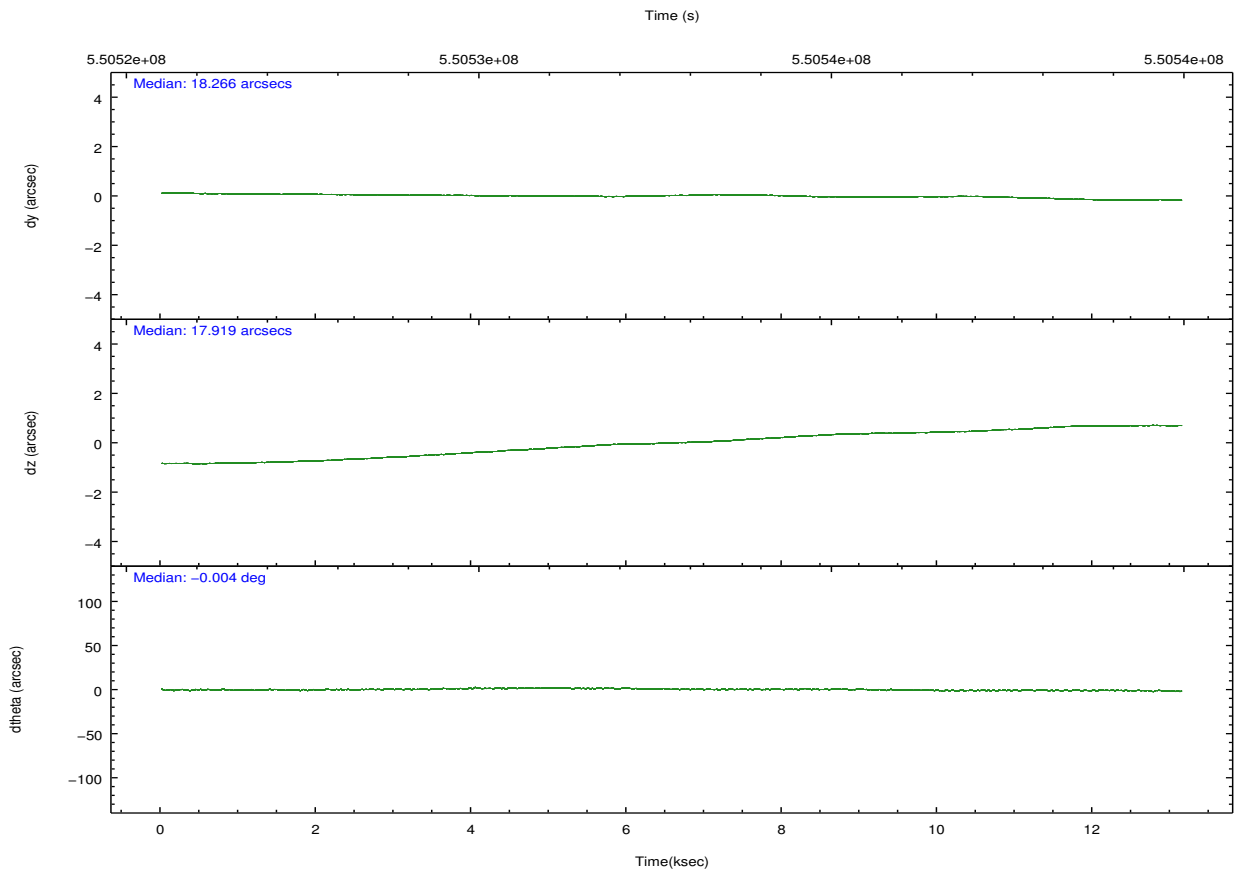
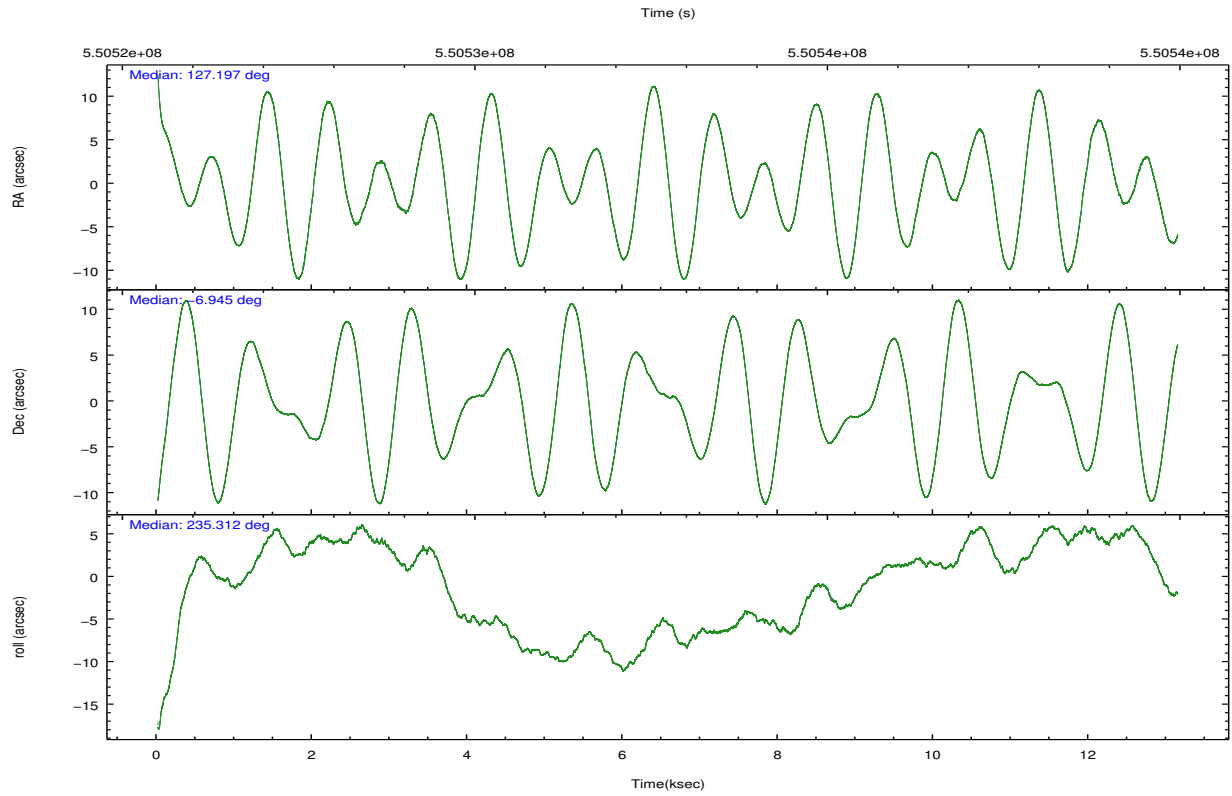
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	7538	2939	4036	7954
	6%	4%	4%	8%
grade 1 events	730	39	99	61
	0%	0%	0%	0%
grade 2 events	17137	1970	8846	5941
	14%	2%	9%	6%
grade 3 events	1875	827	3514	3174
	1%	1%	3%	3%
grade 4 events	1809	809	3516	2977
	1%	1%	3%	3%
grade 5 events	8160	3583	9447	5164
	7%	5%	10%	5%
grade 6 events	29204	1857	21816	6805
	25%	2%	23%	7%
grade 7 events	49710	57905	42704	60769
	42%	82%	45%	65%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	127.198559	127.1966777813689	Subarray requested	NONE	NONE
[deg] Pointing Dec	-6.918204	-6.945589907701691	Alternating exposures requested	N	N
[deg] Pointing Roll	235.158534	235.314934876999	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	550526303.184000	550525028.0893101			
Observation start date	2015-06-12T19:57:16	2015-06-12T19:37:08			
[s] Observation end time (MET)	550539303.184000	550539845.49014			
Observation end date	2015-06-12T23:33:56	2015-06-12T23:44:05			
Read mode	TIMED	TIMED			

## 2.3 Aspect





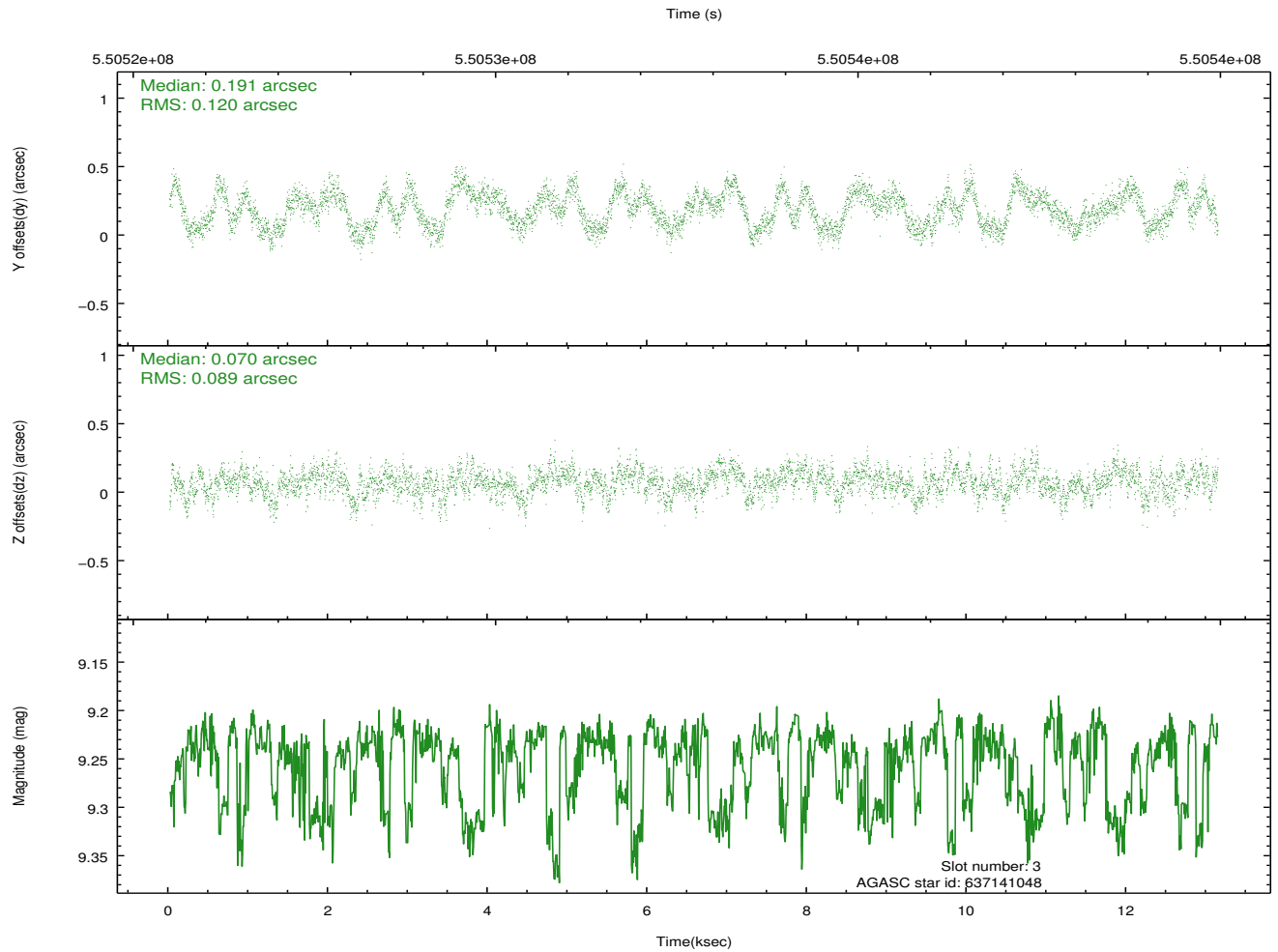
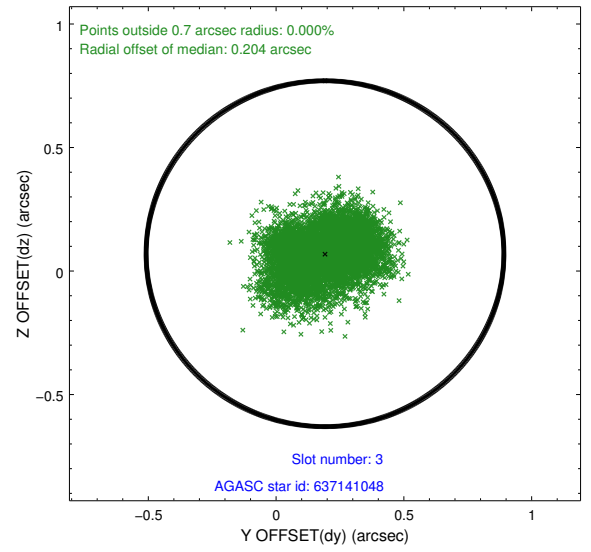
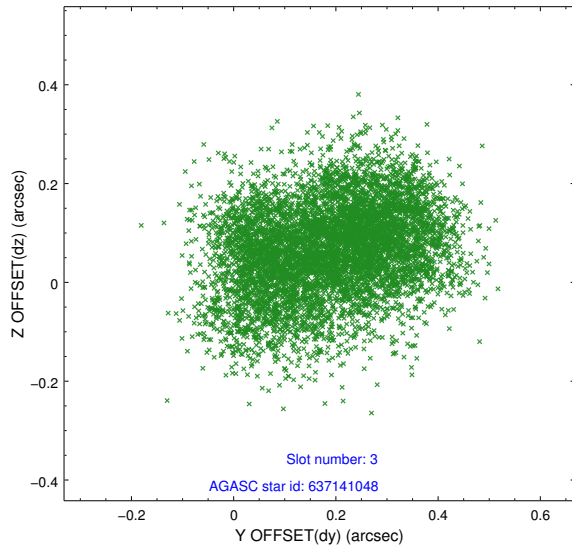
### Slot Statistics

lot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.02	3204	-0.109	-0.083	0.014	0.036	0.000000	0.000000	-771.44	-1739.47
1	FID		ACIS-S-4	7.10	3204	0.328	0.073	0.007	0.011	0.000000	0.000000	2142.12	168.87
2	FID		ACIS-S-5	7.12	3204	-0.250	0.017	0.012	0.029	0.000000	0.000000	-1823.94	162.88
3	GUIDE	used	637141048	9.25	6403	0.191	0.070	0.165	0.248	127.462654	-7.078875	-63.63	1105.20
4	GUIDE	used	637143216	7.02	6405	-0.045	0.002	0.075	0.130	126.941738	-7.220354	1417.26	-130.80
5	BAD	used	637144600	5.12	4001	-0.231	-0.146	0.063	0.106	127.421480	-6.318783	-2225.63	-576.98
6	GUIDE	used	637158032	6.78	6408	0.019	0.122	0.104	0.168	126.821957	-6.409718	-731.38	-2151.37
7	GUIDE	used	638852152	9.26	6402	-0.017	-0.096	0.120	0.197	127.610741	-6.727049	-1406.03	816.35

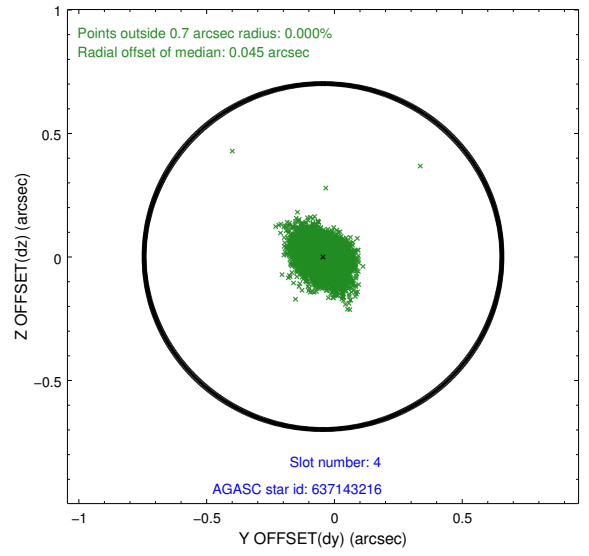
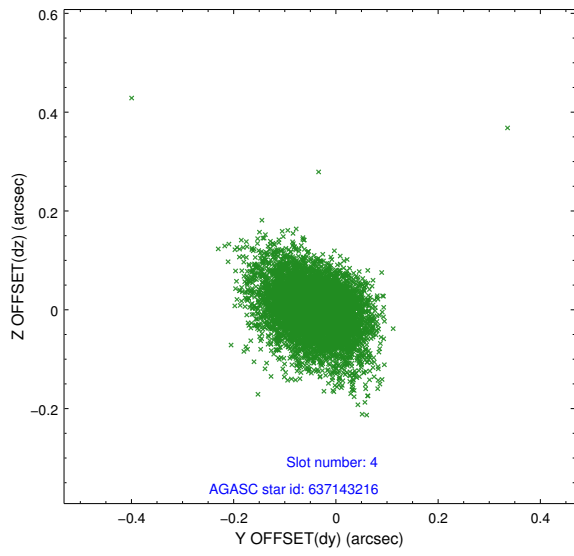
∞

## 2.4 Star Slots

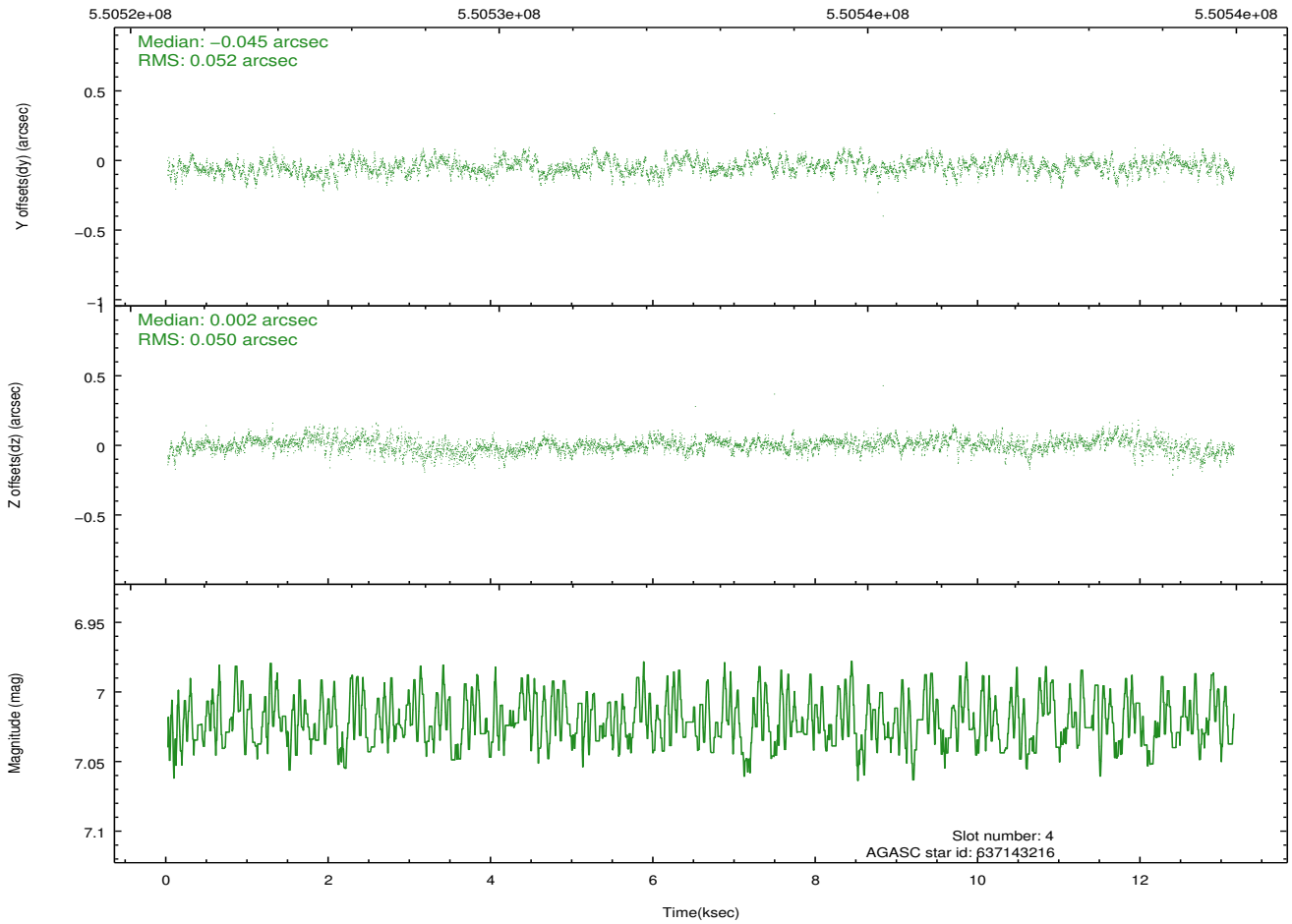
### 2.4.1 Slot 3



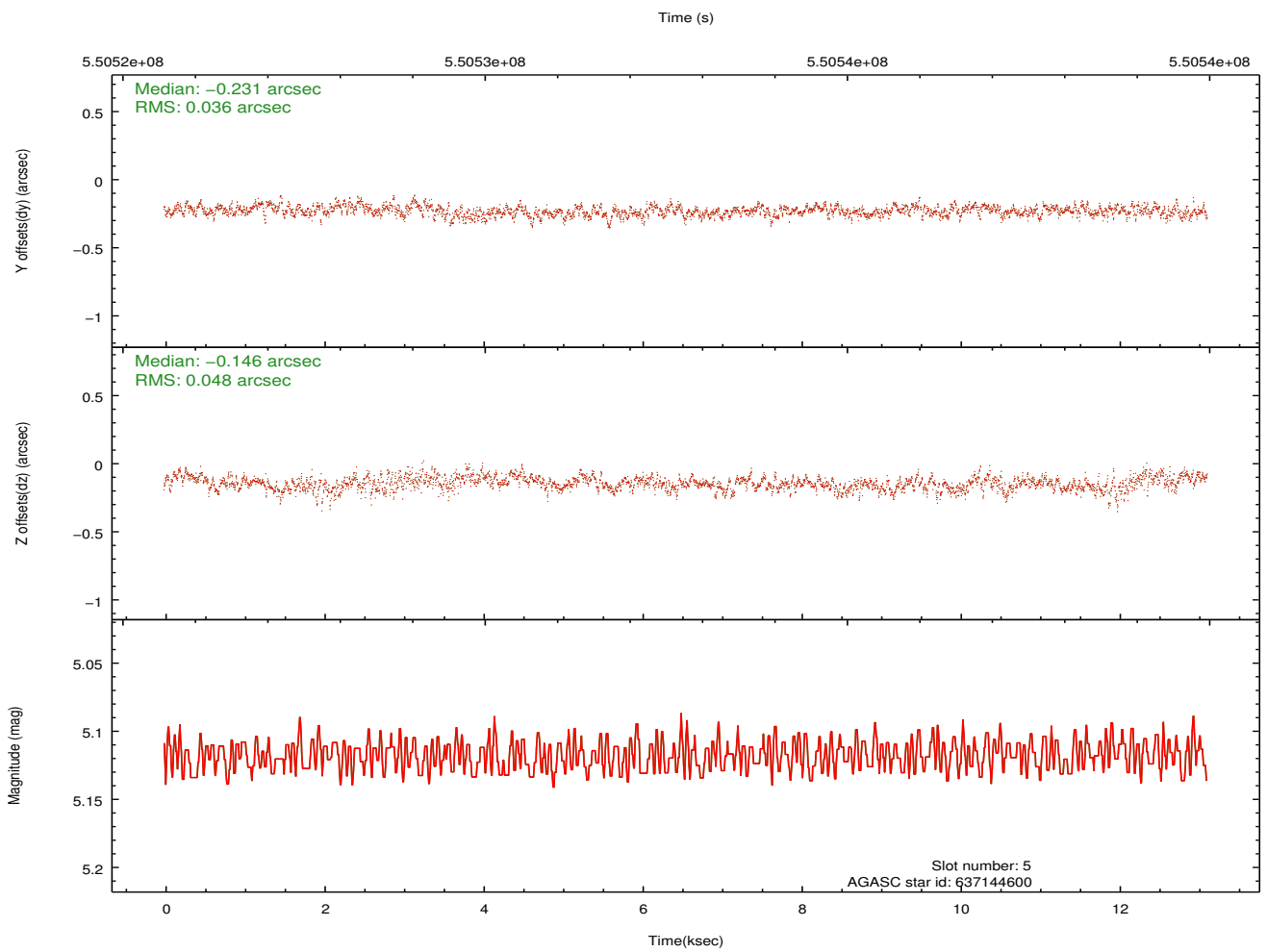
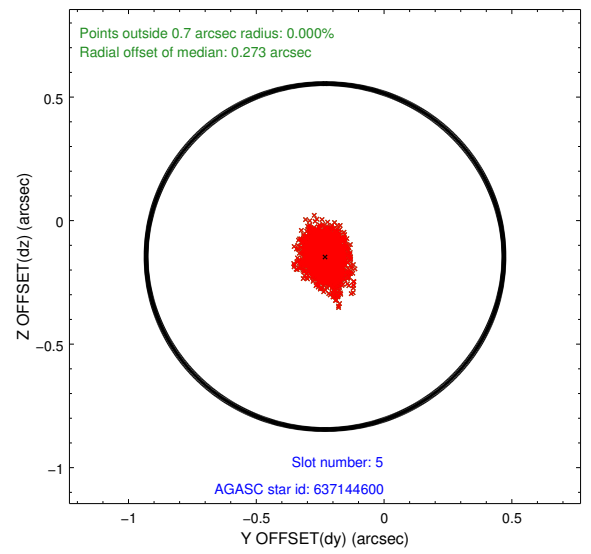
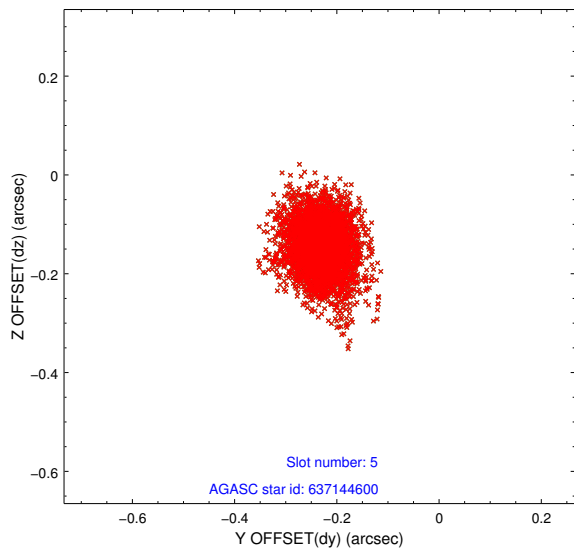
## 2.4.2 Slot 4



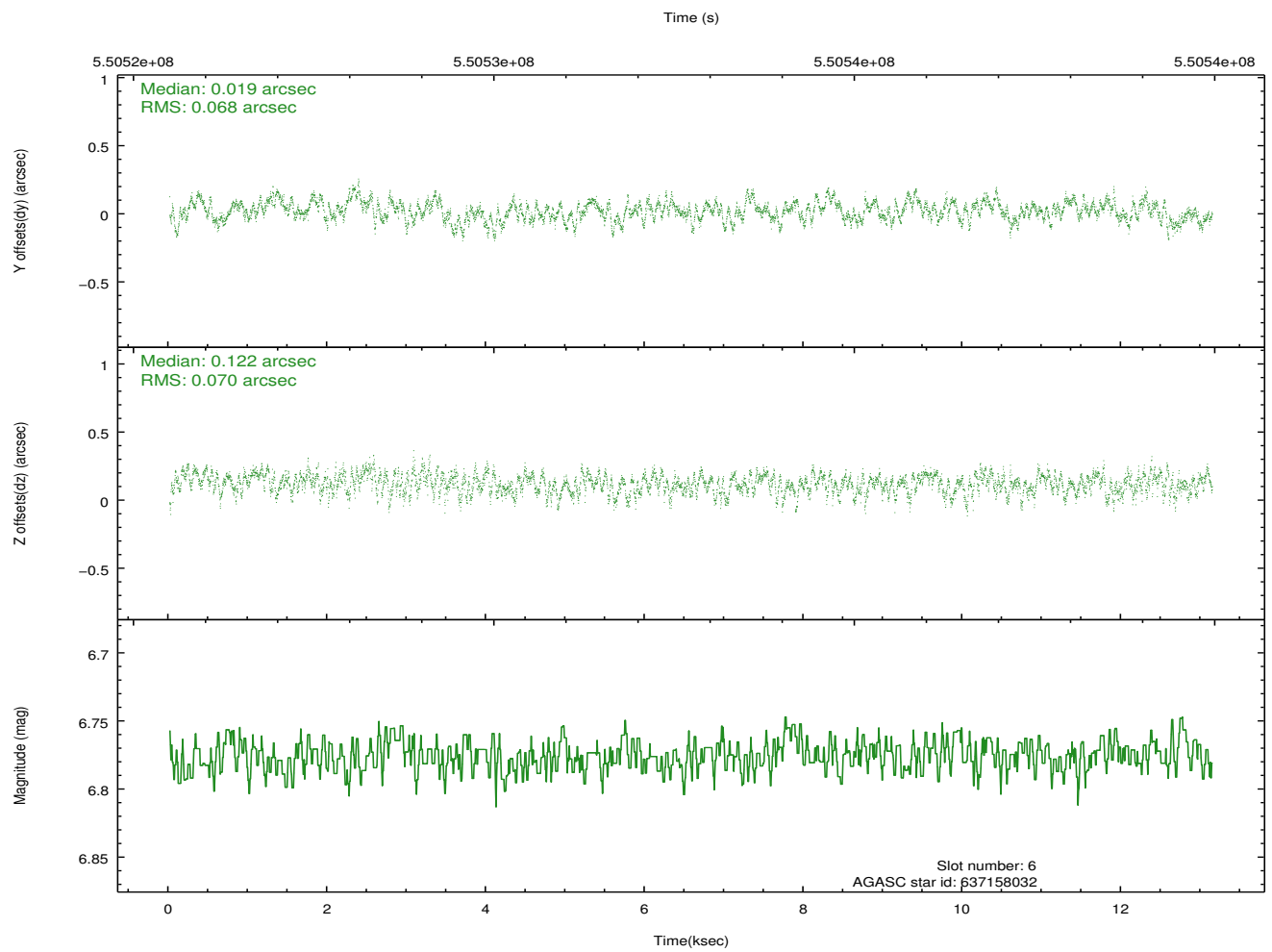
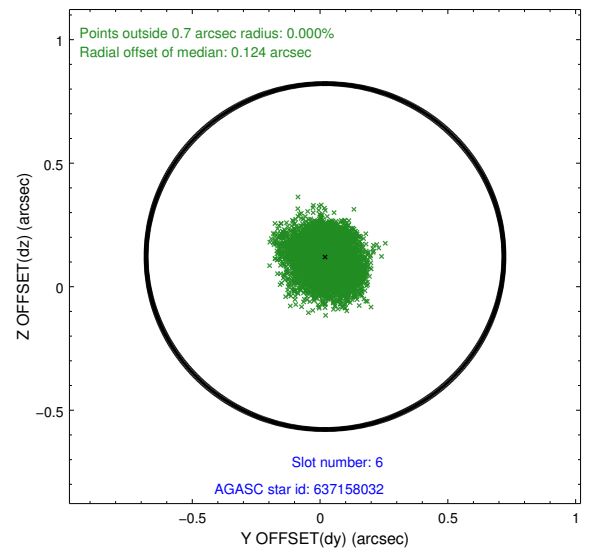
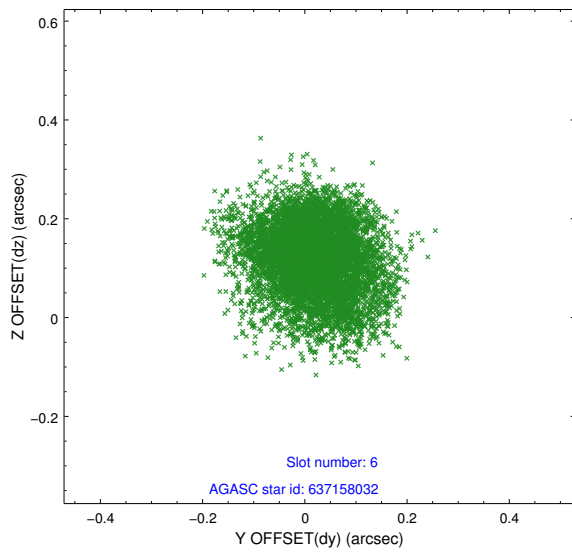
Time (s)



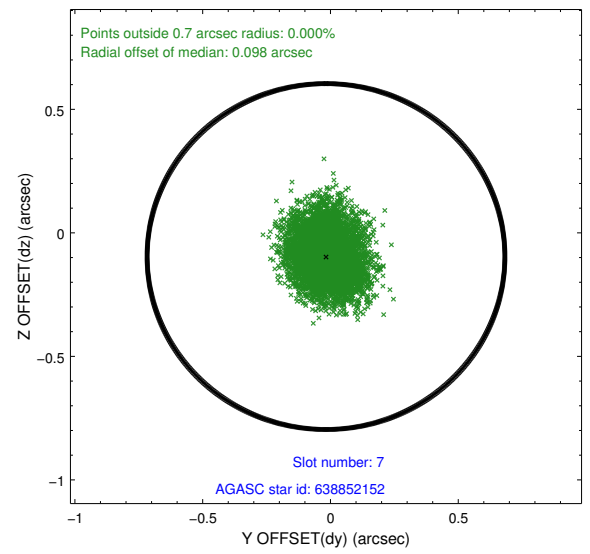
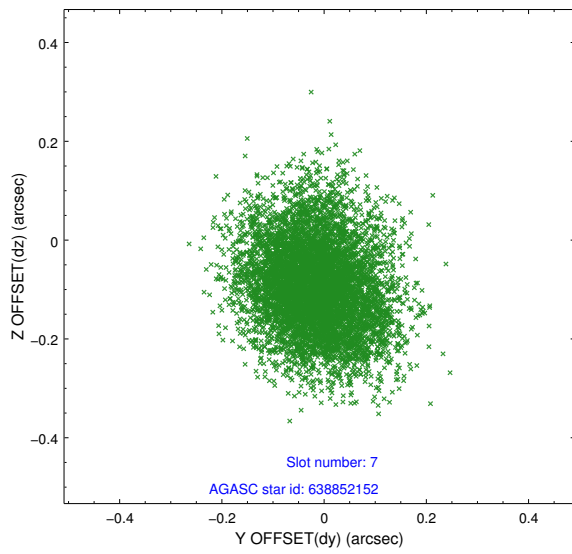
### 2.4.3 Slot 5



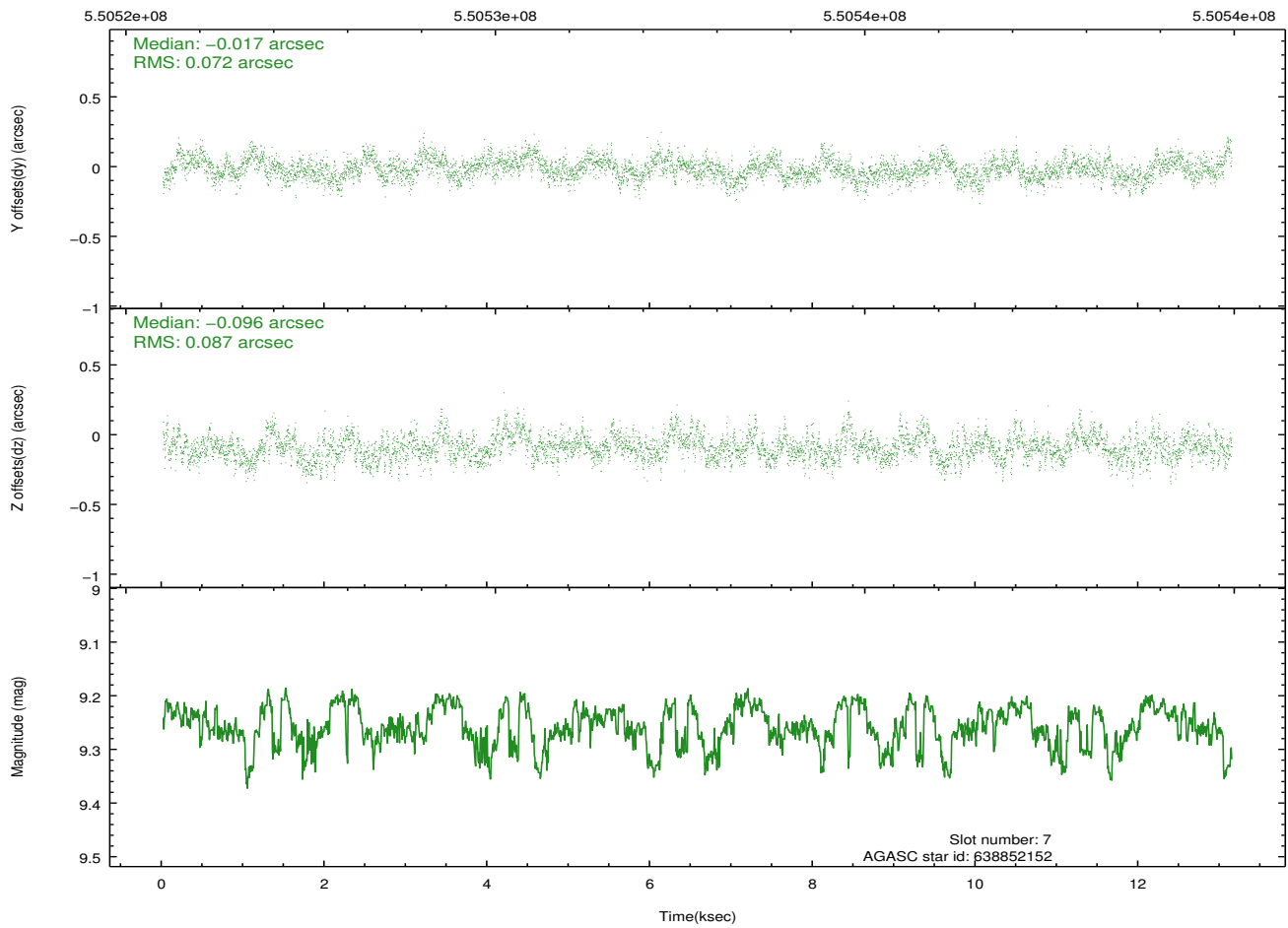
## 2.4.4 Slot 6



## 2.4.5 Slot 7

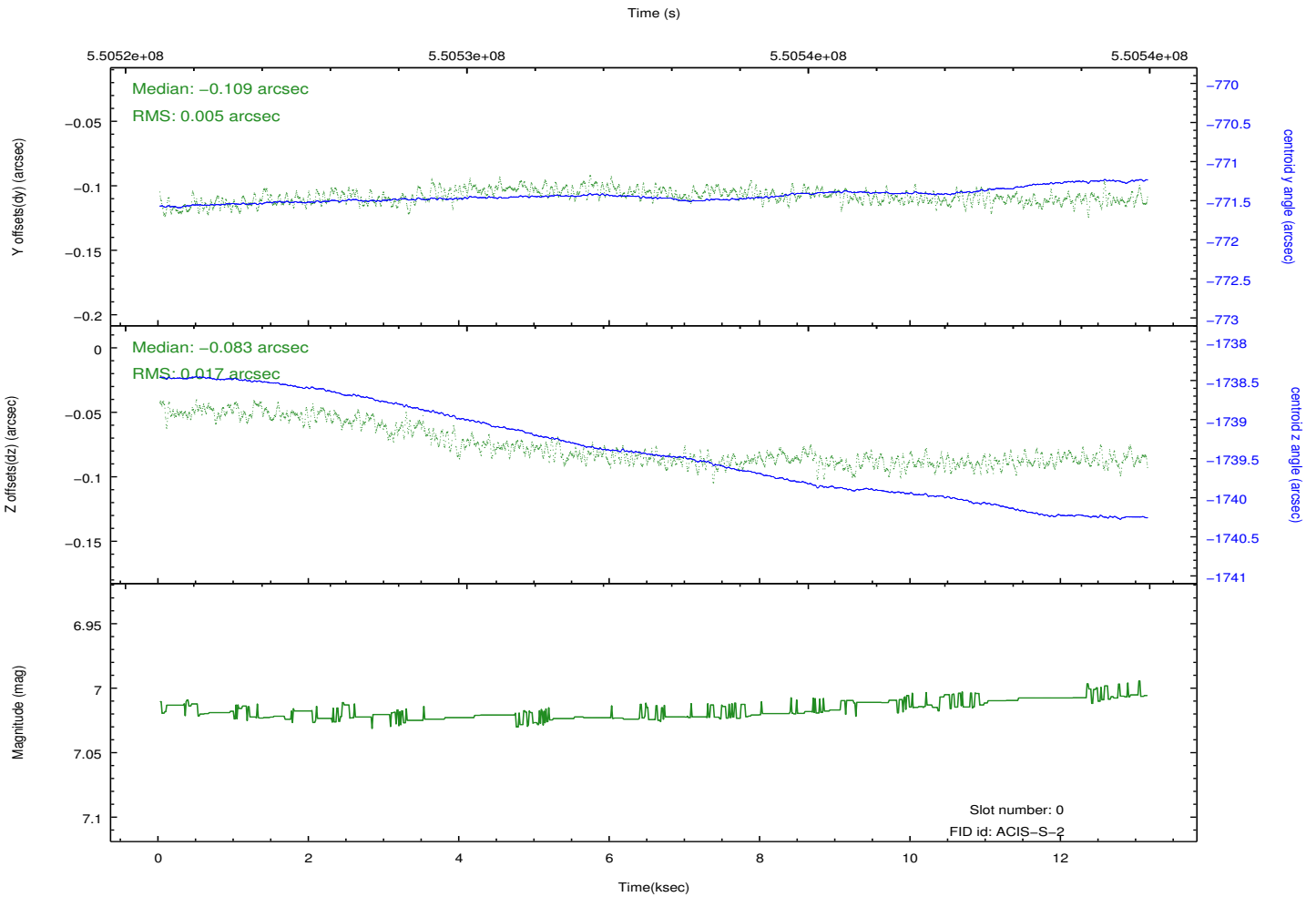
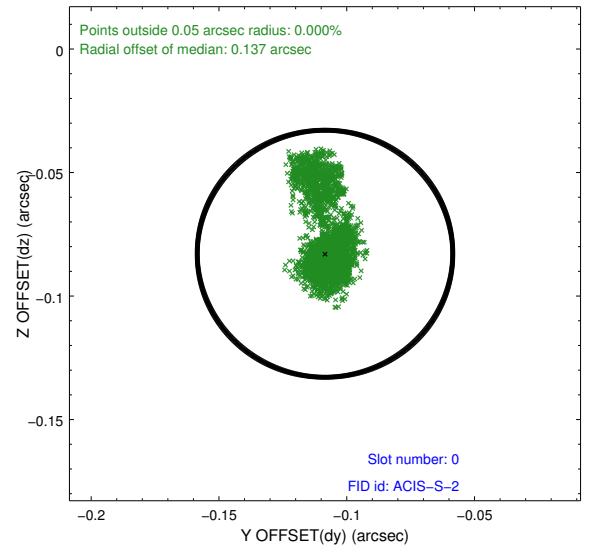
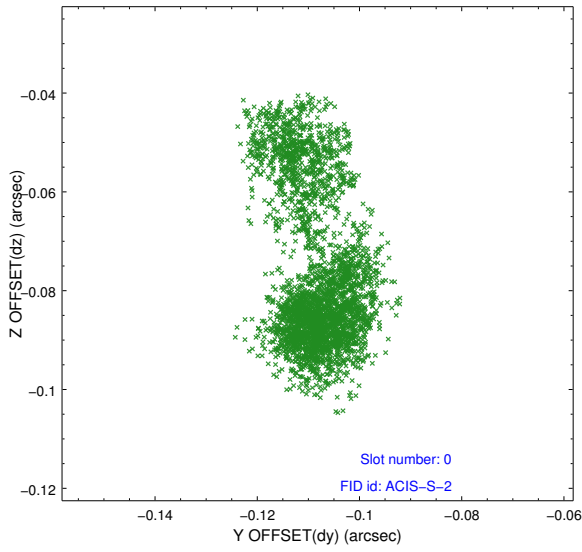


Time (s)

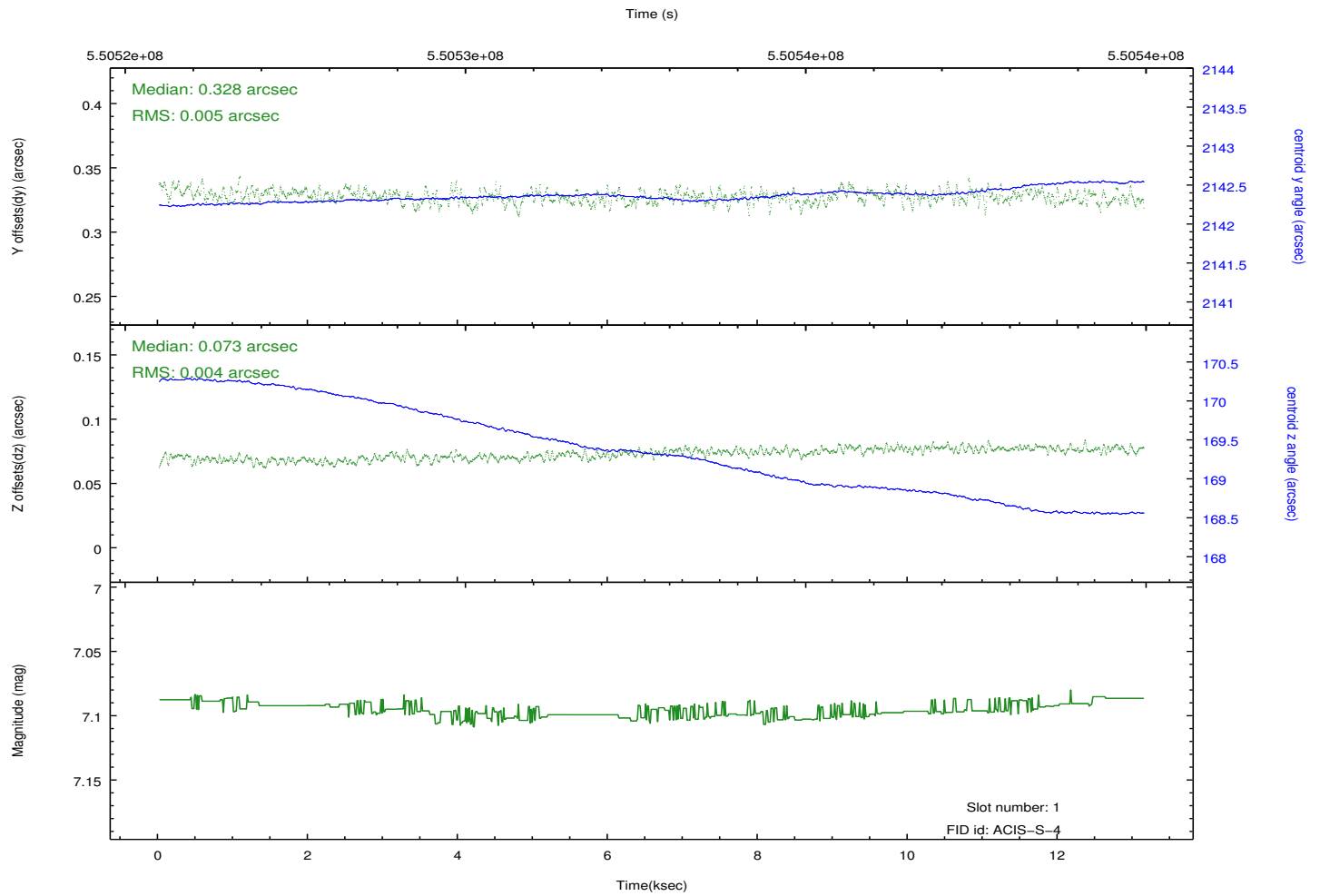
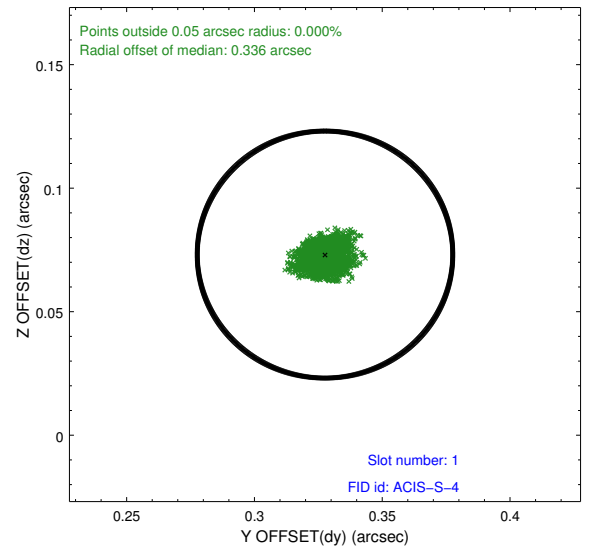
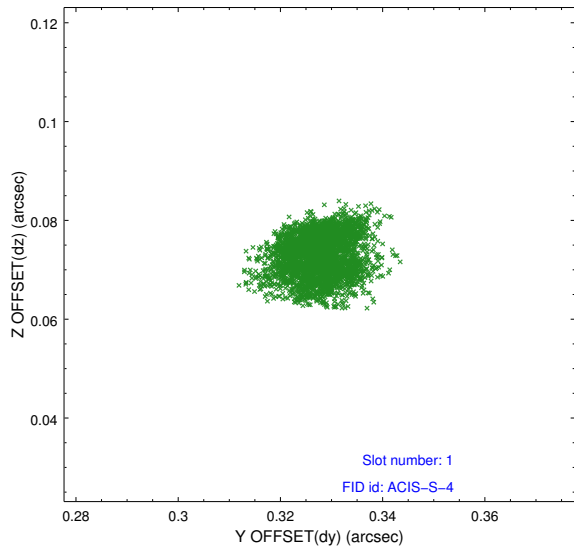


## 2.5 FID Slots

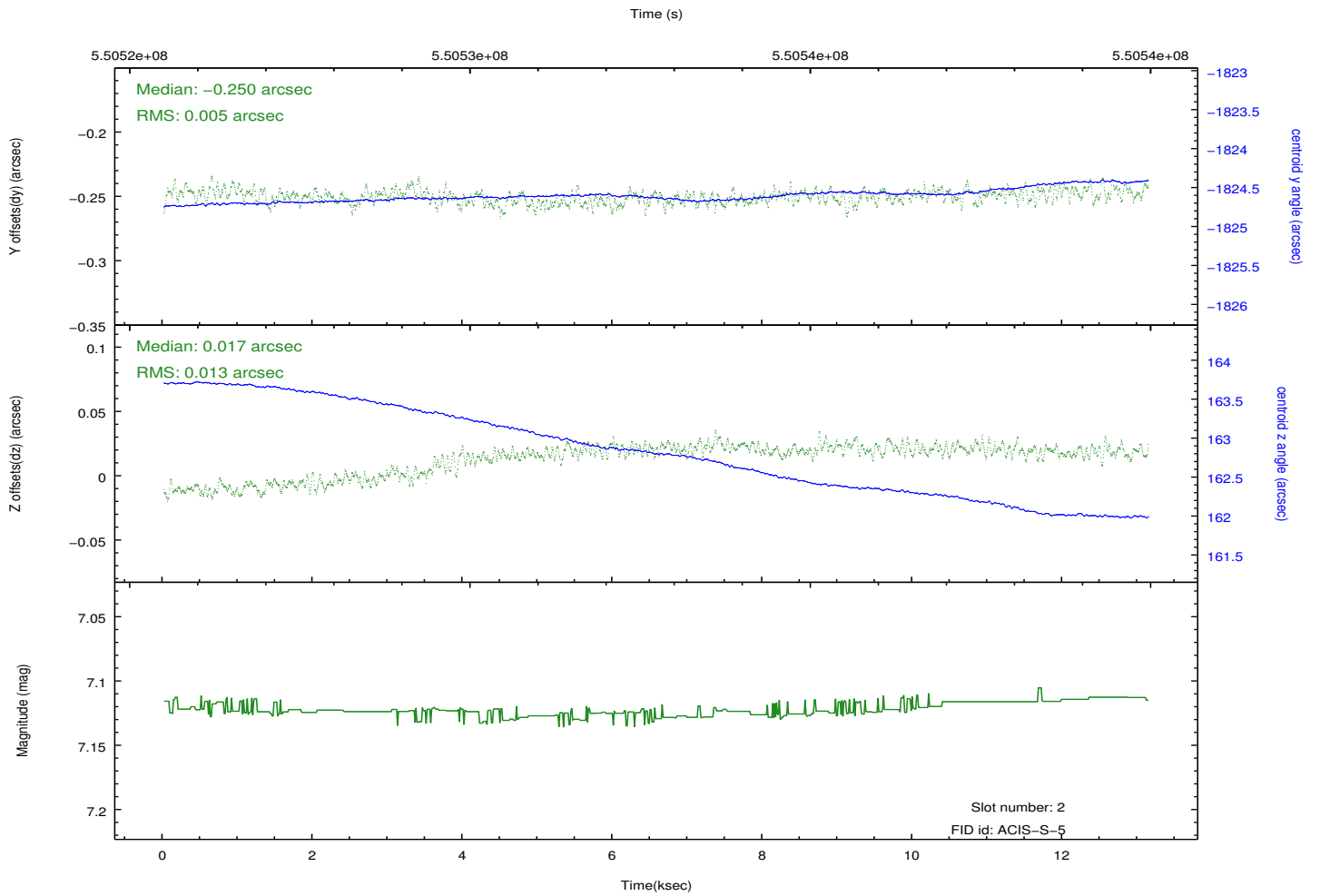
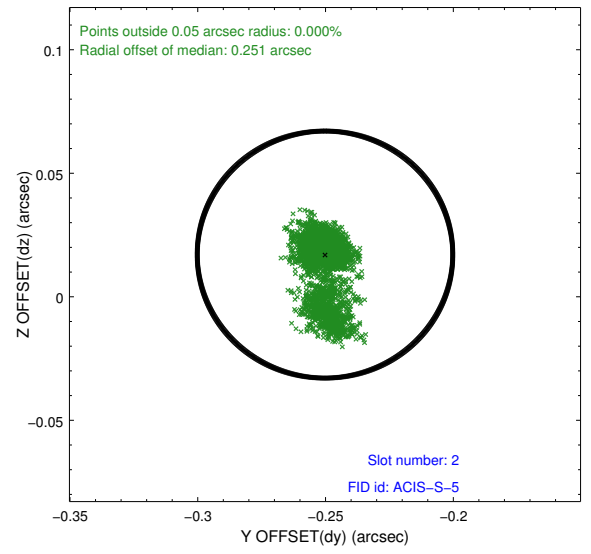
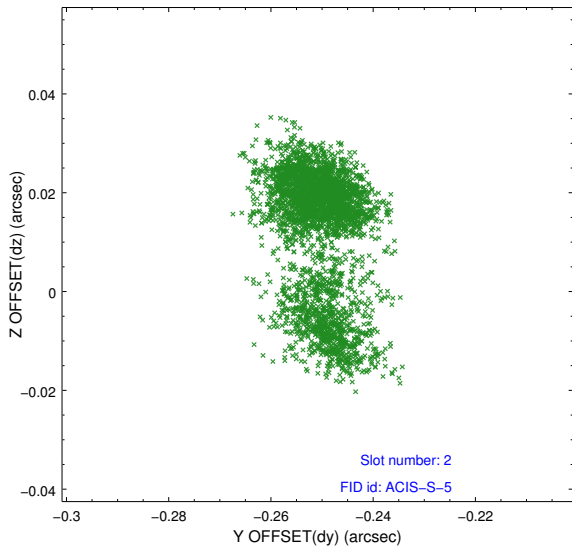
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2015.06.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	13.063400100589

## A.2 Comments

Joint proposal with NRAO.