

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13109 - L2 Version 2  
Chandra X-Ray Center

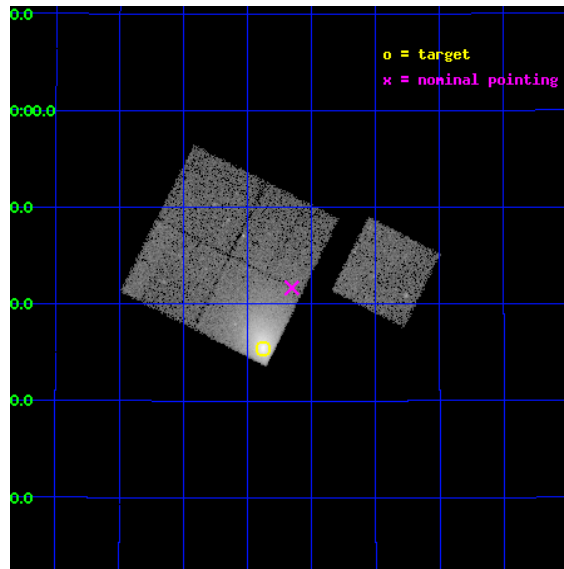
L2 Processing Date : Feb 6 2012

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# 1 Front

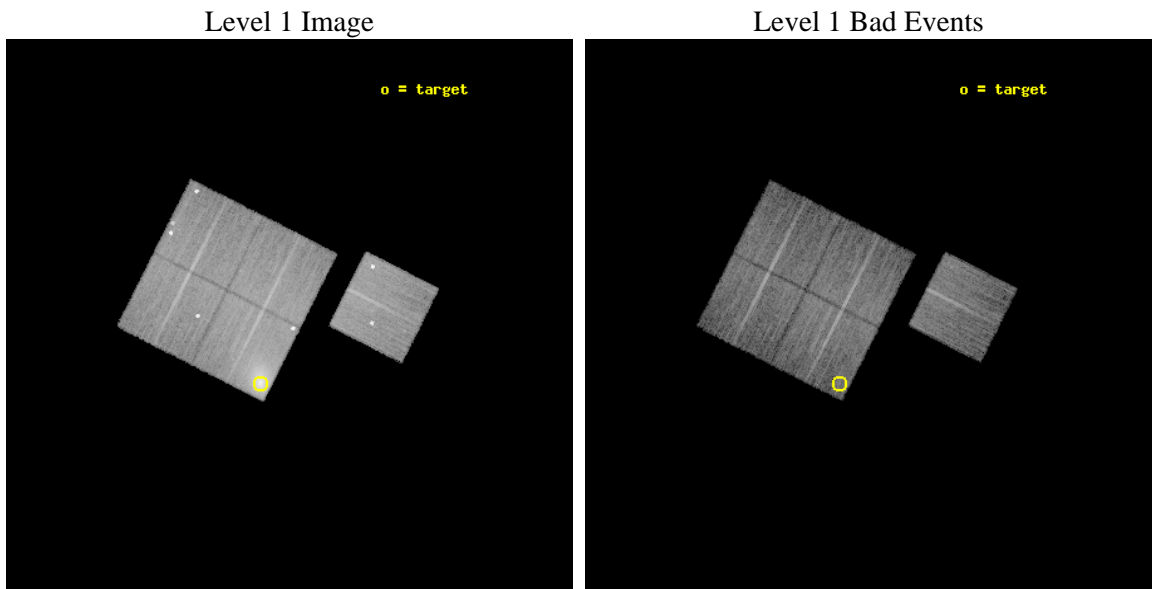
seq_num	890049	Sequence number
obs_id	13109	Observation id
title	AO-12 Calibration Observations of A1795	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	A1795	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	207.219583	Observer's specified target RA [deg]
dec_targ	26.590833	Observer's specified target Dec [deg]
ra_nom	207.16347703477	Nominal RA [deg]
dec_nom	26.694731328775	Nominal Dec [deg]
roll_nom	116.8575158363	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14770.546264112	Sum of GTIs [s]
livetime	14577.558203253	Livetime [s]
ontime0	14770.423153996	Sum of GTIs [s]
ontime1	14770.464184105	Sum of GTIs [s]
ontime2	14770.505224109	Sum of GTIs [s]
ontime3	14770.546264112	Sum of GTIs [s]
ontime6	14770.382104099	Sum of GTIs [s]
l2events	124166	Number of level 2 events



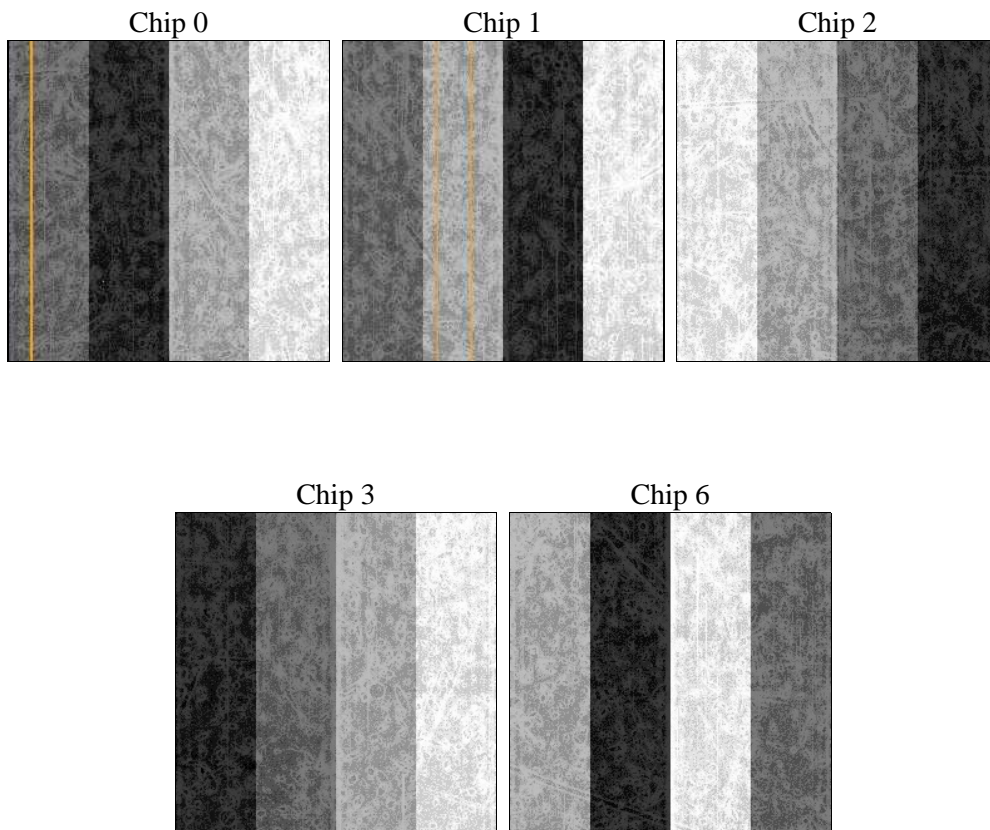
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	14770.546264112	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime0	14770.423153996	Sum of GTIs [s]
date	2012-02-06T06:51:26	Date and time of file creation	ontime1	14770.464184105	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	14770.505224109	Sum of GTIs [s]
			ontime3	14770.546264112	Sum of GTIs [s]
			ontime6	14770.382104099	Sum of GTIs [s]
			l1events	628424	Number of level 1 events

### 2.1.4 Events

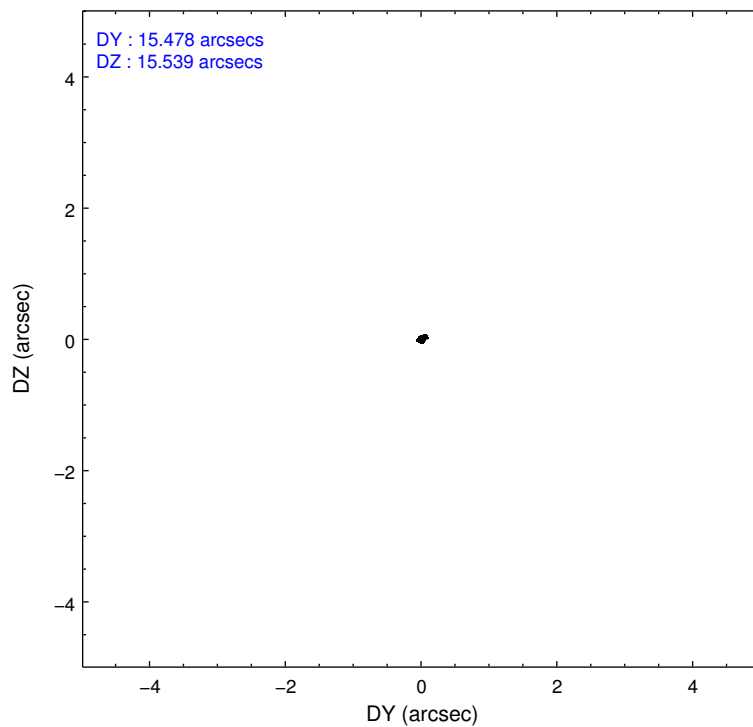
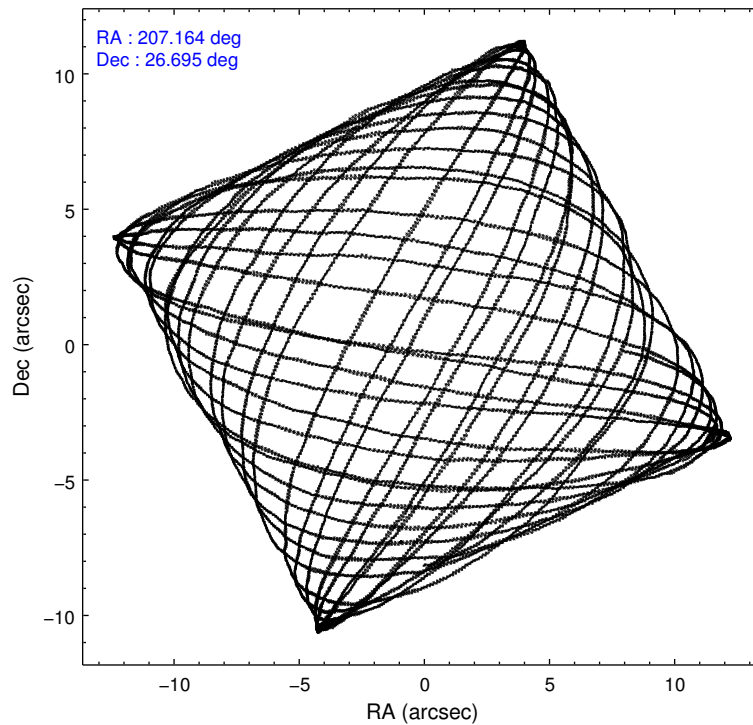
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	106707	104623	113566	185817	117711
rejected events	84769	86543	99115	98361	96717
rejected %	79%	82%	87%	52%	82%

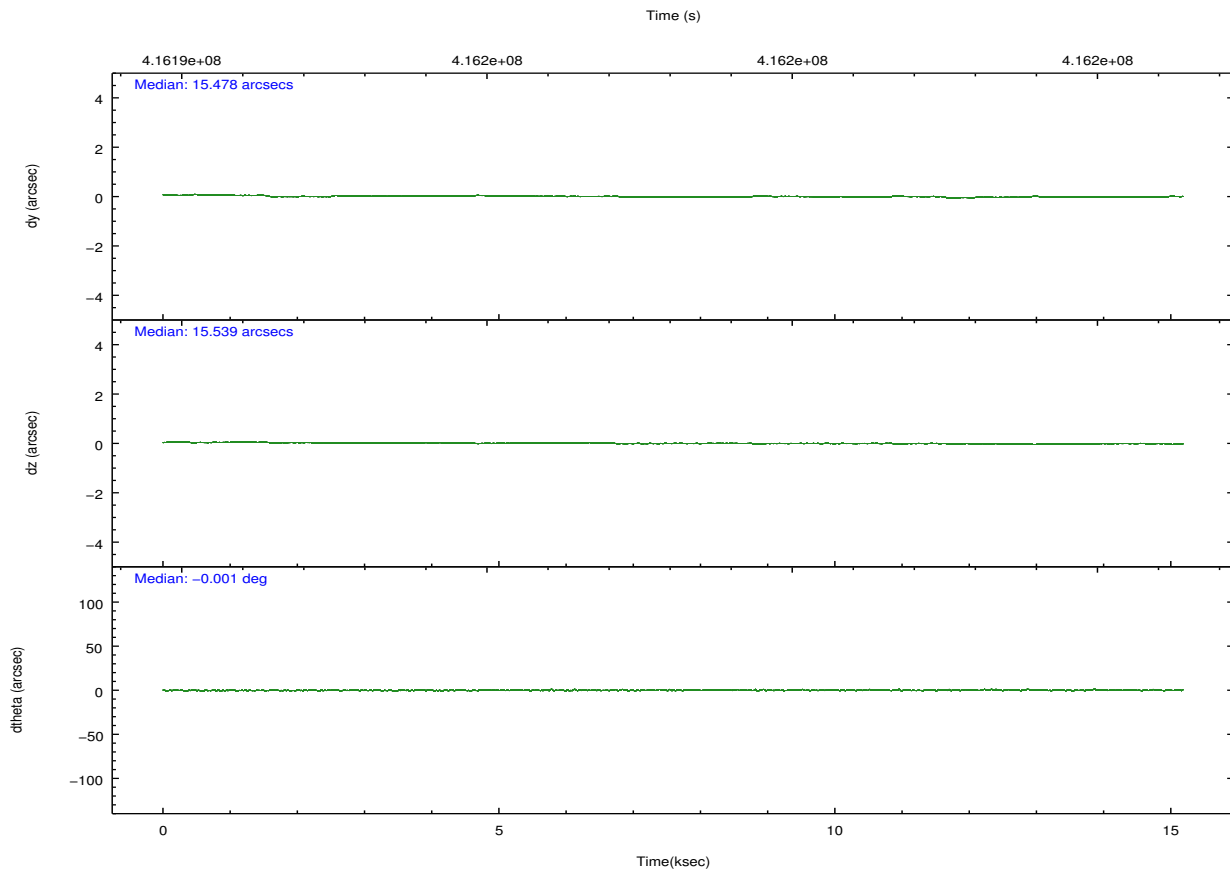
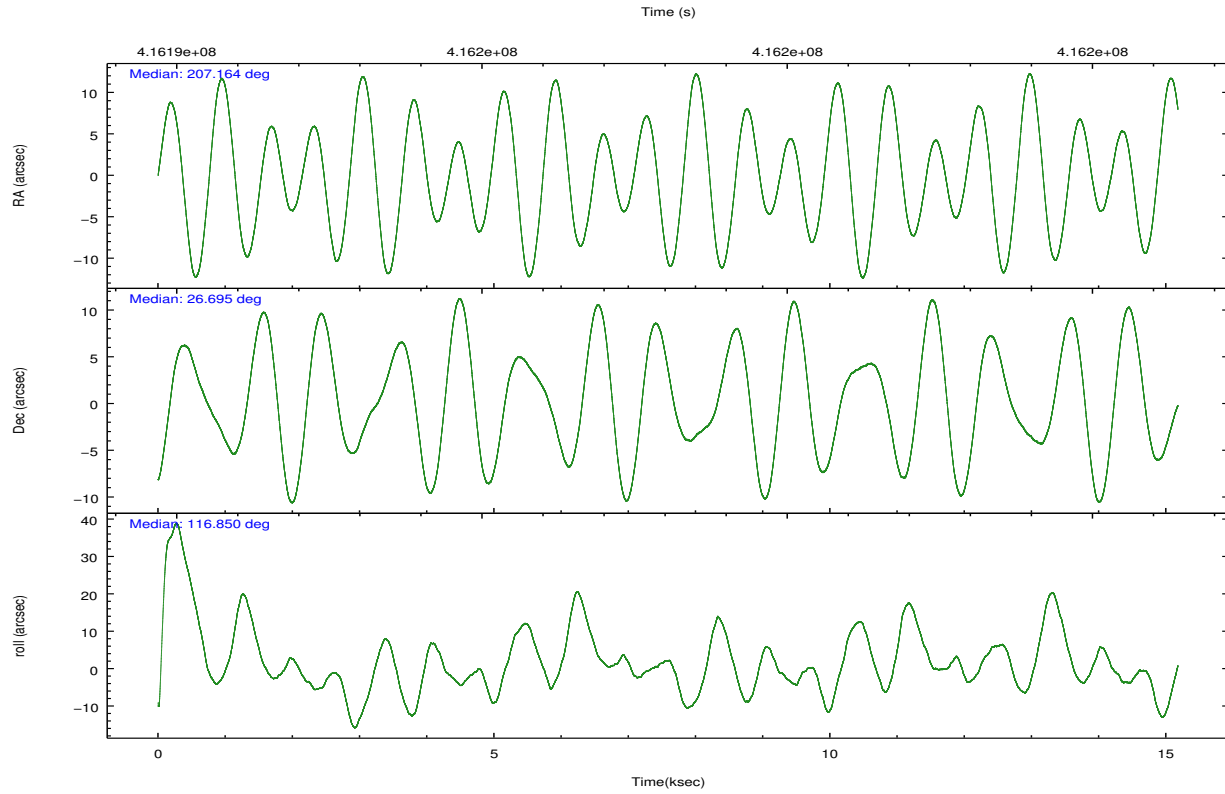
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	14074	9482	6278	66267	12979
	13%	9%	5%	35%	11%
grade 1 events	133	87	79	398	105
	0%	0%	0%	0%	0%
grade 2 events	3221	3372	3394	9894	3045
	3%	3%	2%	5%	2%
grade 3 events	1199	1334	1149	3559	1257
	1%	1%	1%	1%	1%
grade 4 events	1191	1314	1318	3542	1230
	1%	1%	1%	1%	1%
grade 5 events	4458	4552	4154	5084	4739
	4%	4%	3%	2%	4%
grade 6 events	2270	2586	2322	4228	2493
	2%	2%	2%	2%	2%
grade 7 events	80161	81896	94872	92845	91863
	75%	78%	83%	49%	78%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	207.189283	207.1634770347682	Subarray requested	NONE	NONE
[deg] Pointing Dec	26.679791	26.69473132877522	Alternating exposures requested	N	N
[deg] Pointing Roll	116.637248	116.8575158363039	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-214.092463	-214.0989765584371			
[mm] SIM translation stage offset	-19.5	-19.49347644449256			
[s] Observation start time (MET)	416190644.184000	416190269.03107			
Observation start date	2011-03-11T00:29:38	2011-03-11T00:24:29			
[s] Observation end time (MET)	416205644.184000	416205778.30688			
Observation end date	2011-03-11T04:39:38	2011-03-11T04:42:58			
Read mode	TIMED	TIMED			

## 2.3 Aspect



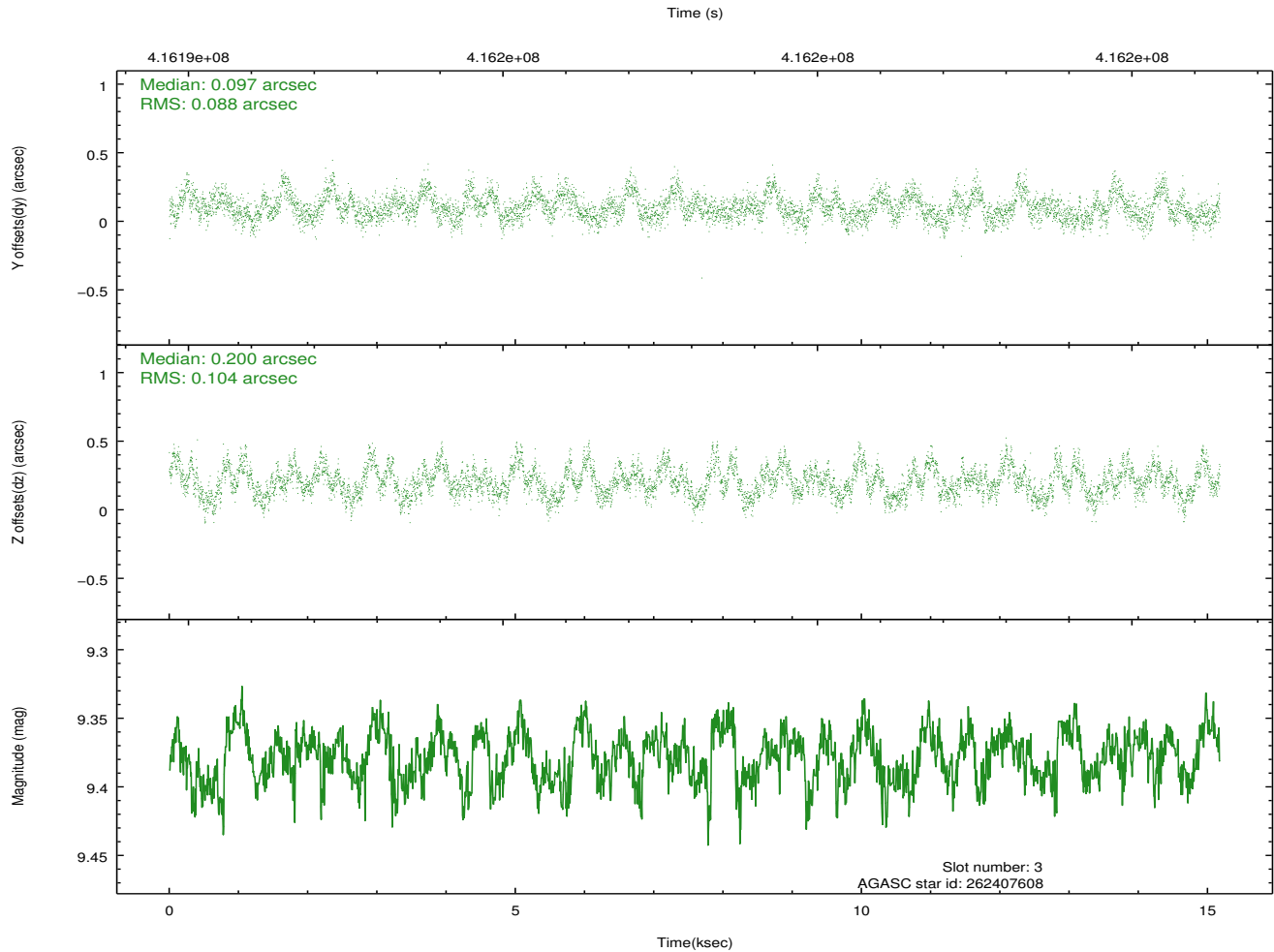
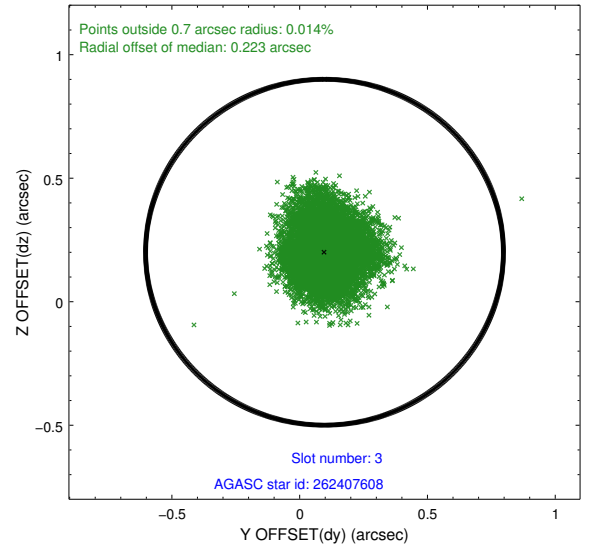
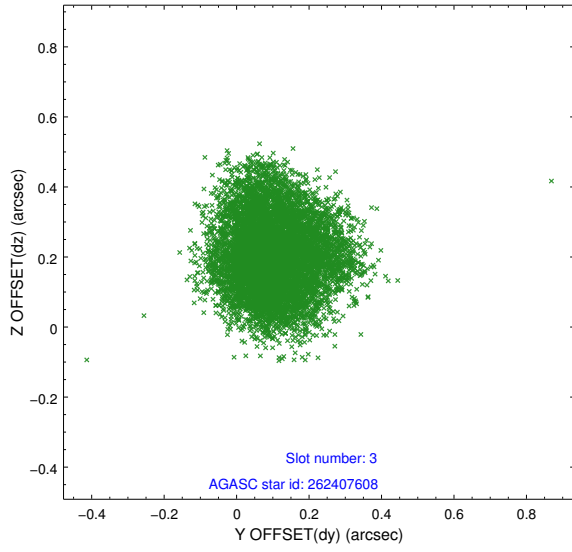


### Slot Statistics

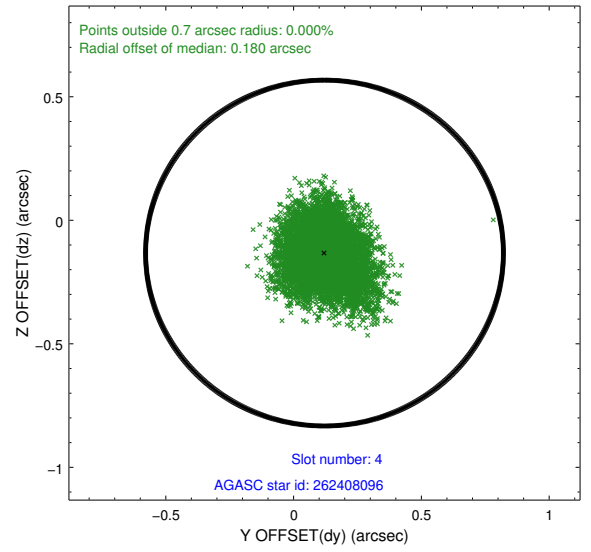
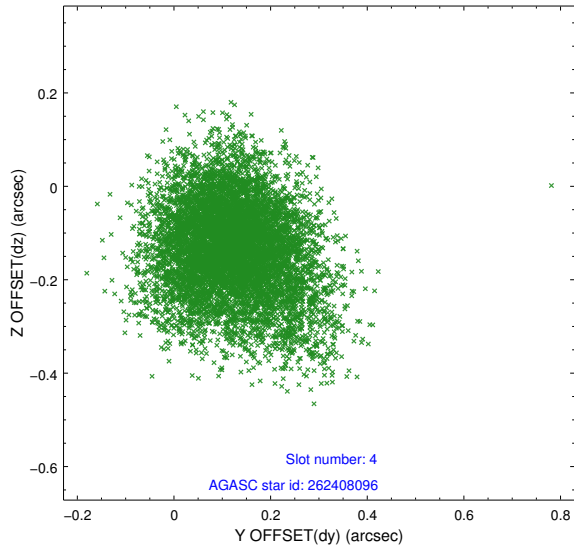
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.06	3702	0.286	-0.218	0.006	0.011	0.000000	0.000000	923.87	-1239.71
1	FID	ACIS-I-5	7.08	3702	-0.508	0.190	0.006	0.010	0.000000	0.000000	-1824.84	657.95
2	FID	ACIS-I-6	7.12	3701	0.131	0.099	0.006	0.010	0.000000	0.000000	388.97	1302.69
3	GUIDE	262407608	9.38	7392	0.097	0.200	0.148	0.228	207.378401	26.435507	-1058.52	-150.70
4	GUIDE	262408096	9.35	7396	0.121	-0.133	0.139	0.229	207.011678	26.515421	-271.38	776.79
5	GUIDE	262408936	9.67	7391	-0.053	-0.249	0.128	0.206	207.154731	26.726554	200.48	23.77
6	GUIDE	262409624	10.08	7373	-0.083	0.015	0.206	0.347	207.610037	27.074851	669.23	-1843.94
7	GUIDE	262275128	10.46	7290	-0.076	0.181	0.252	0.406	206.271046	26.873005	1953.63	2319.50

## 2.4 Star Slots

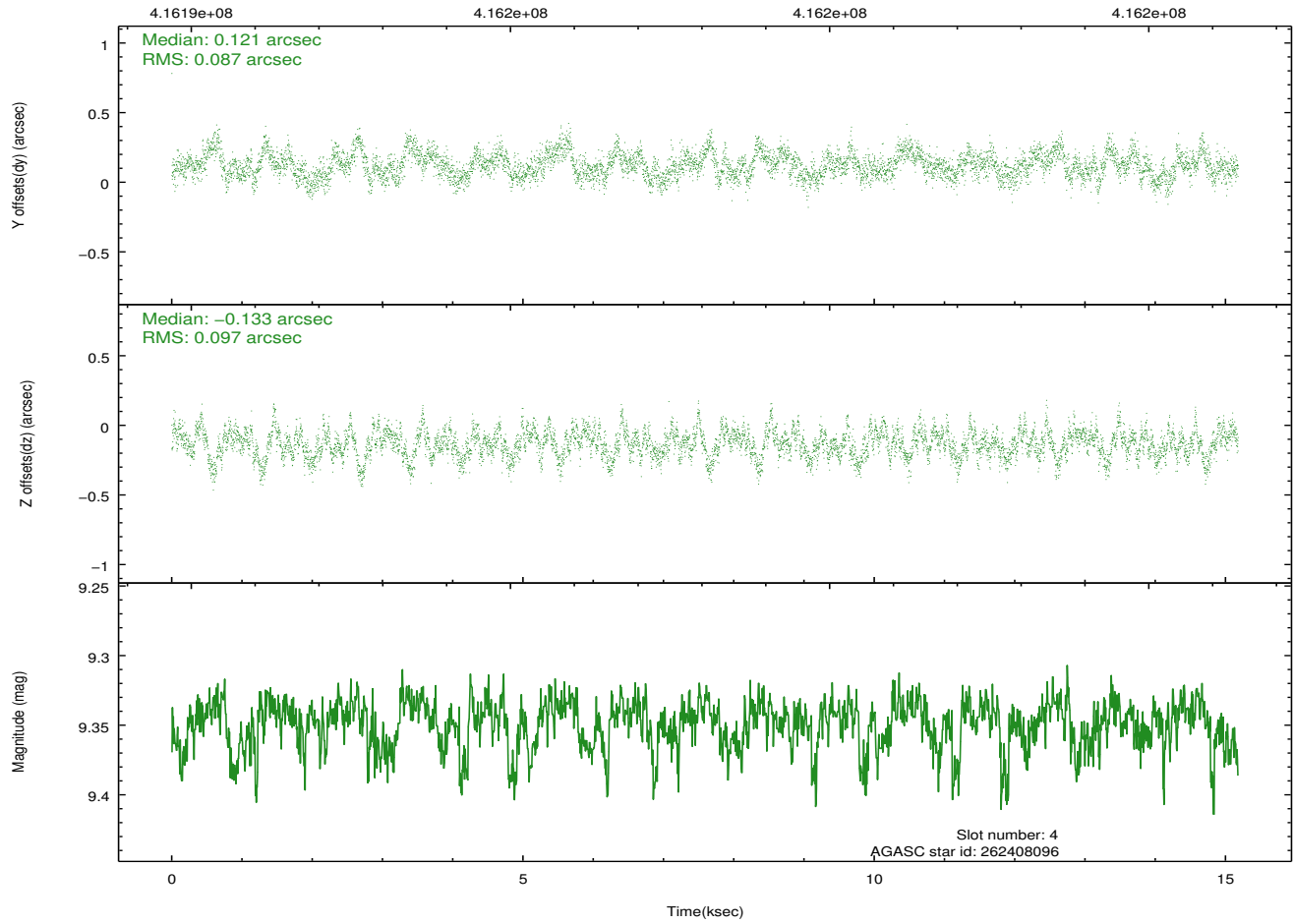
### 2.4.1 Slot 3



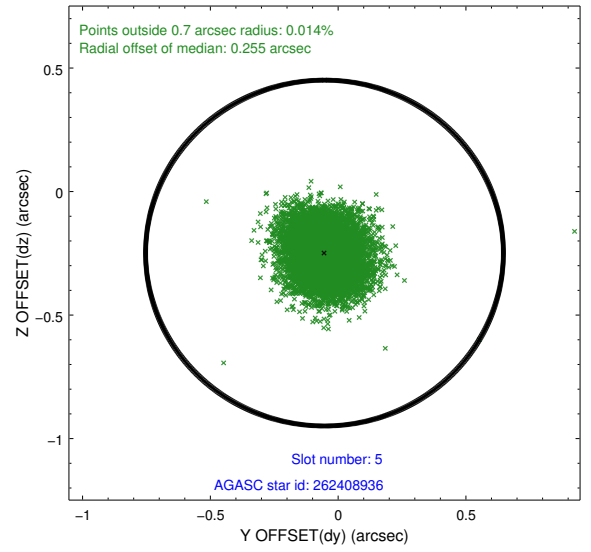
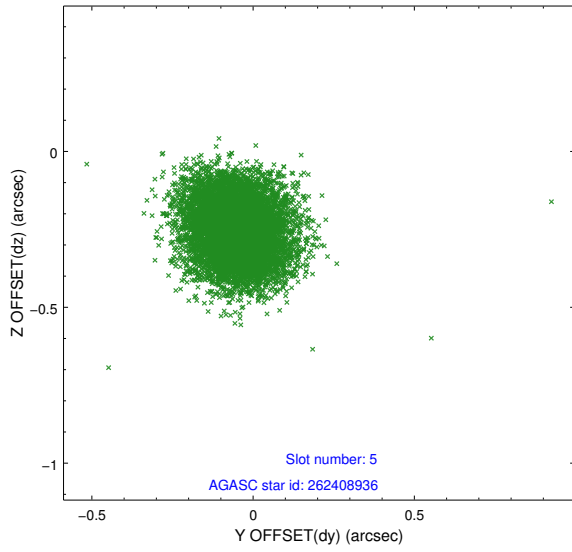
## 2.4.2 Slot 4



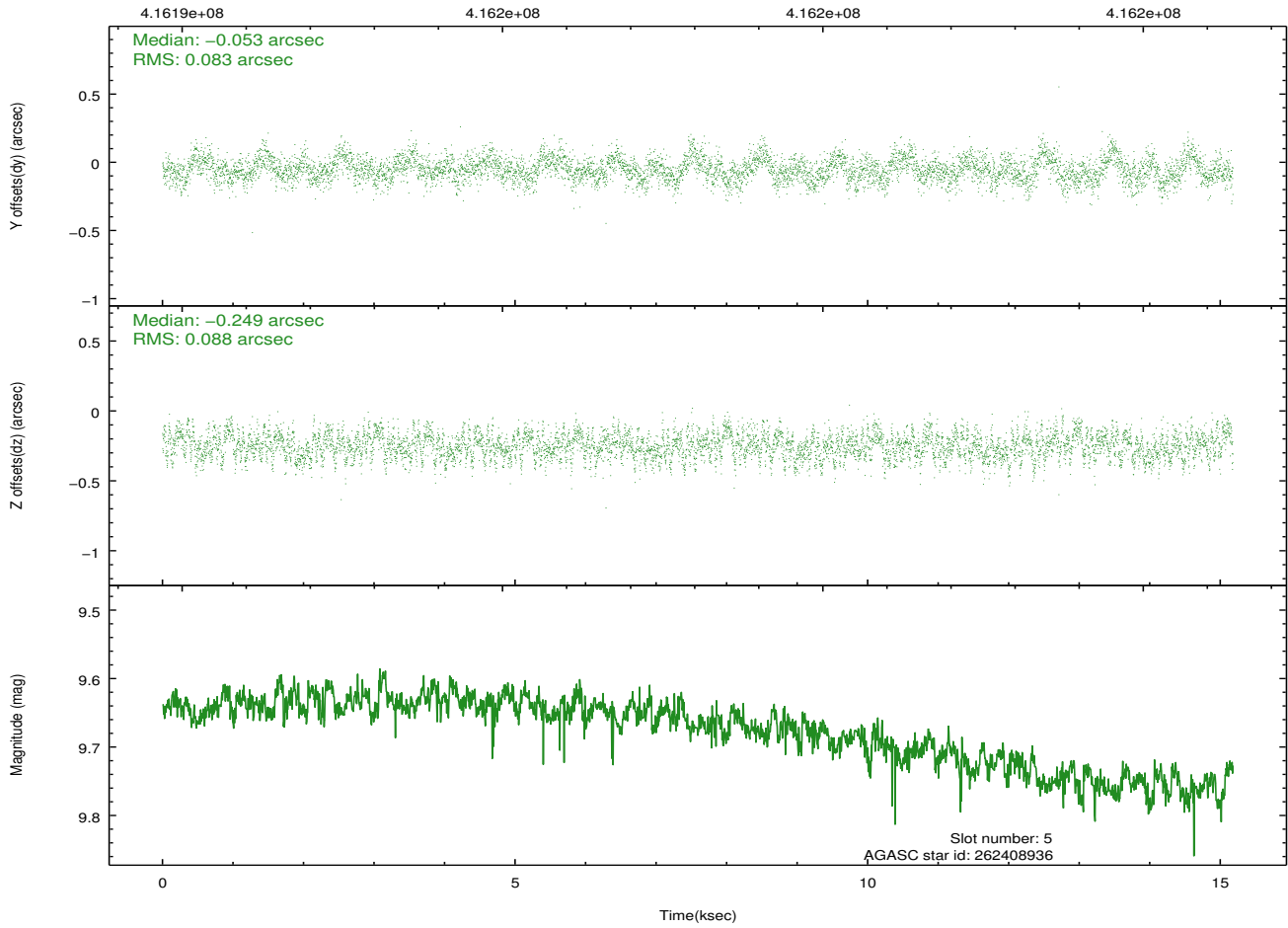
Time (s)



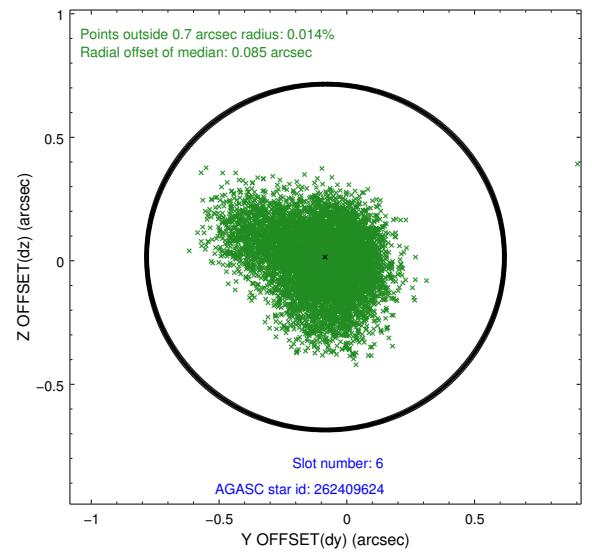
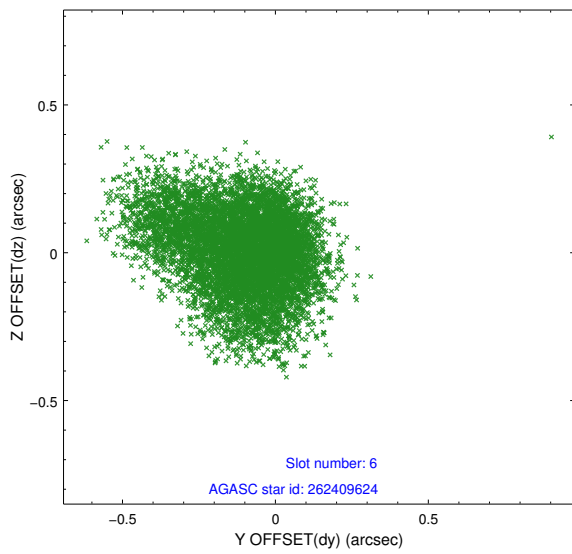
### 2.4.3 Slot 5



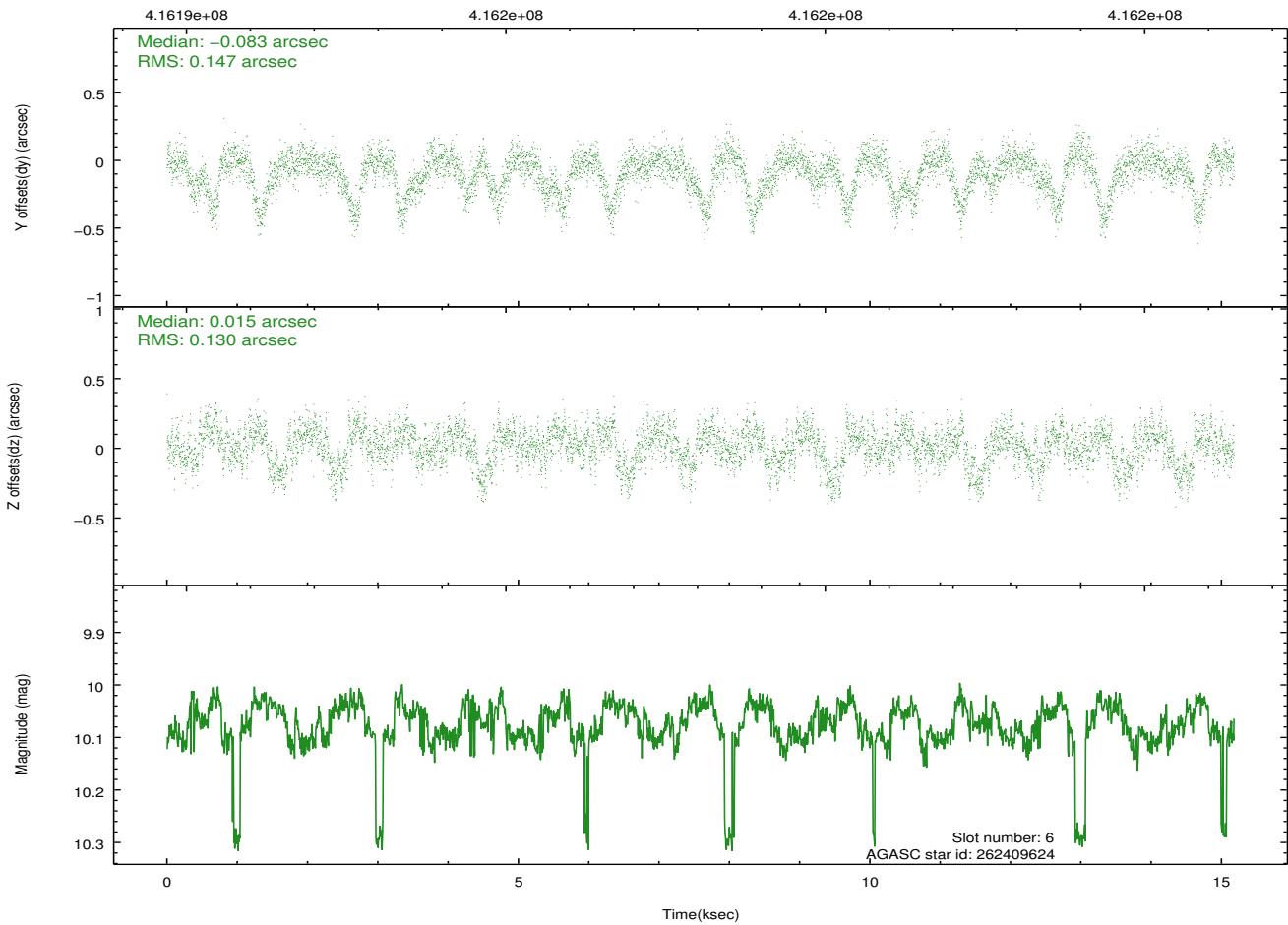
Time (s)



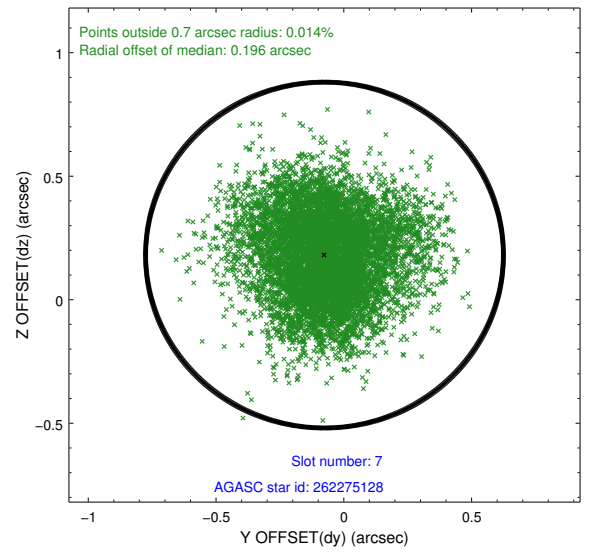
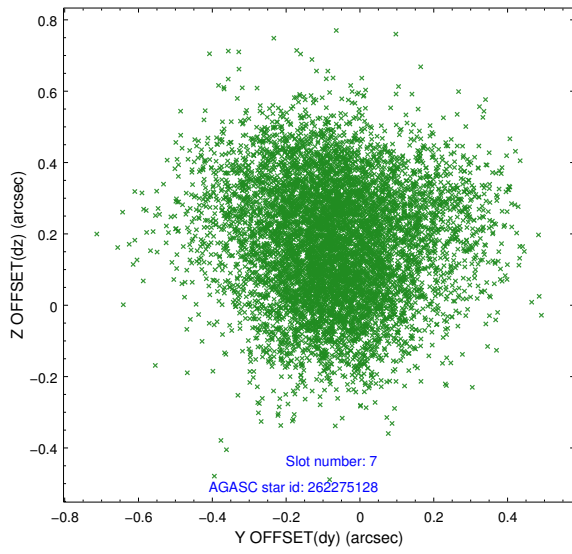
## 2.4.4 Slot 6



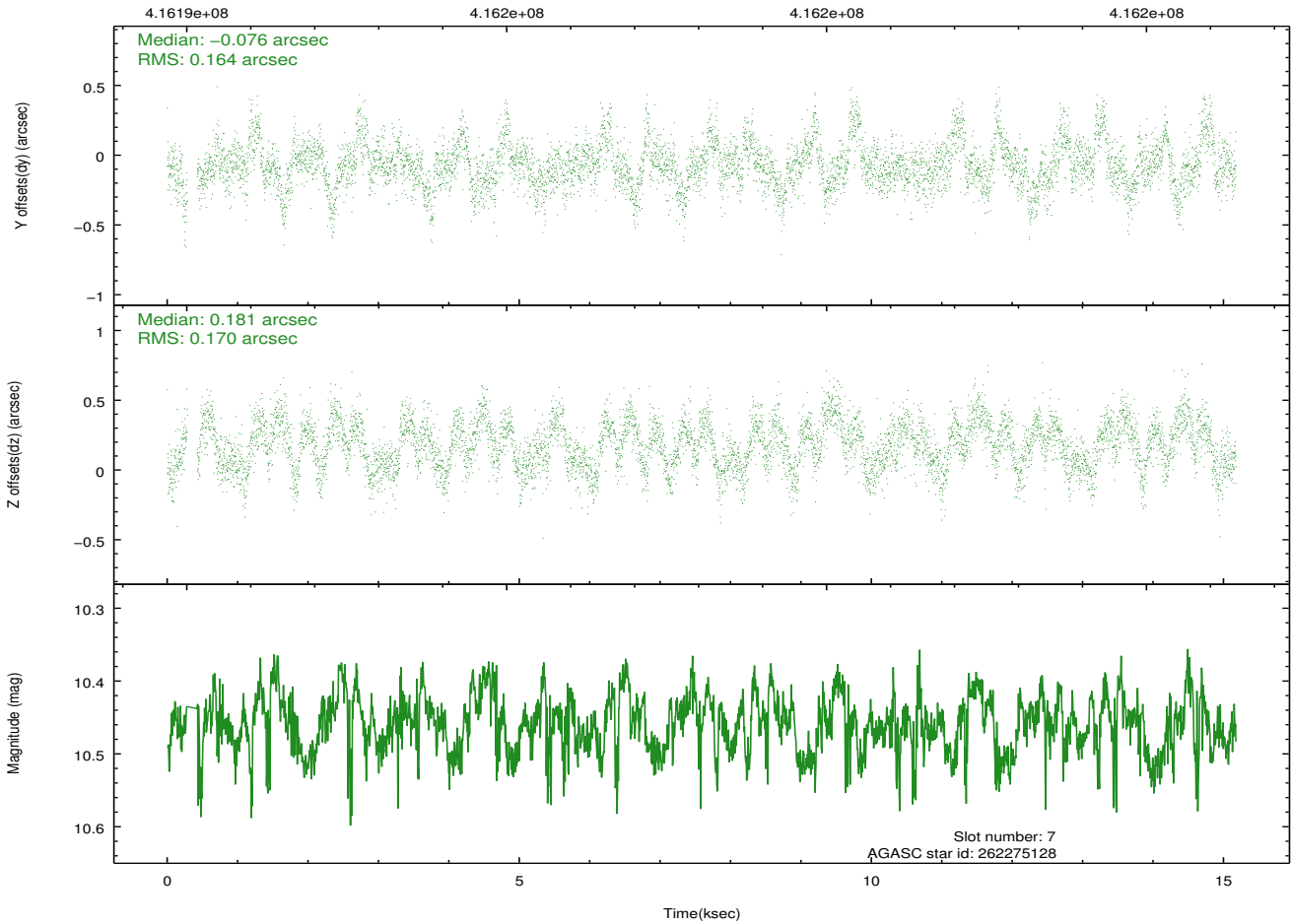
Time (s)



## 2.4.5 Slot 7

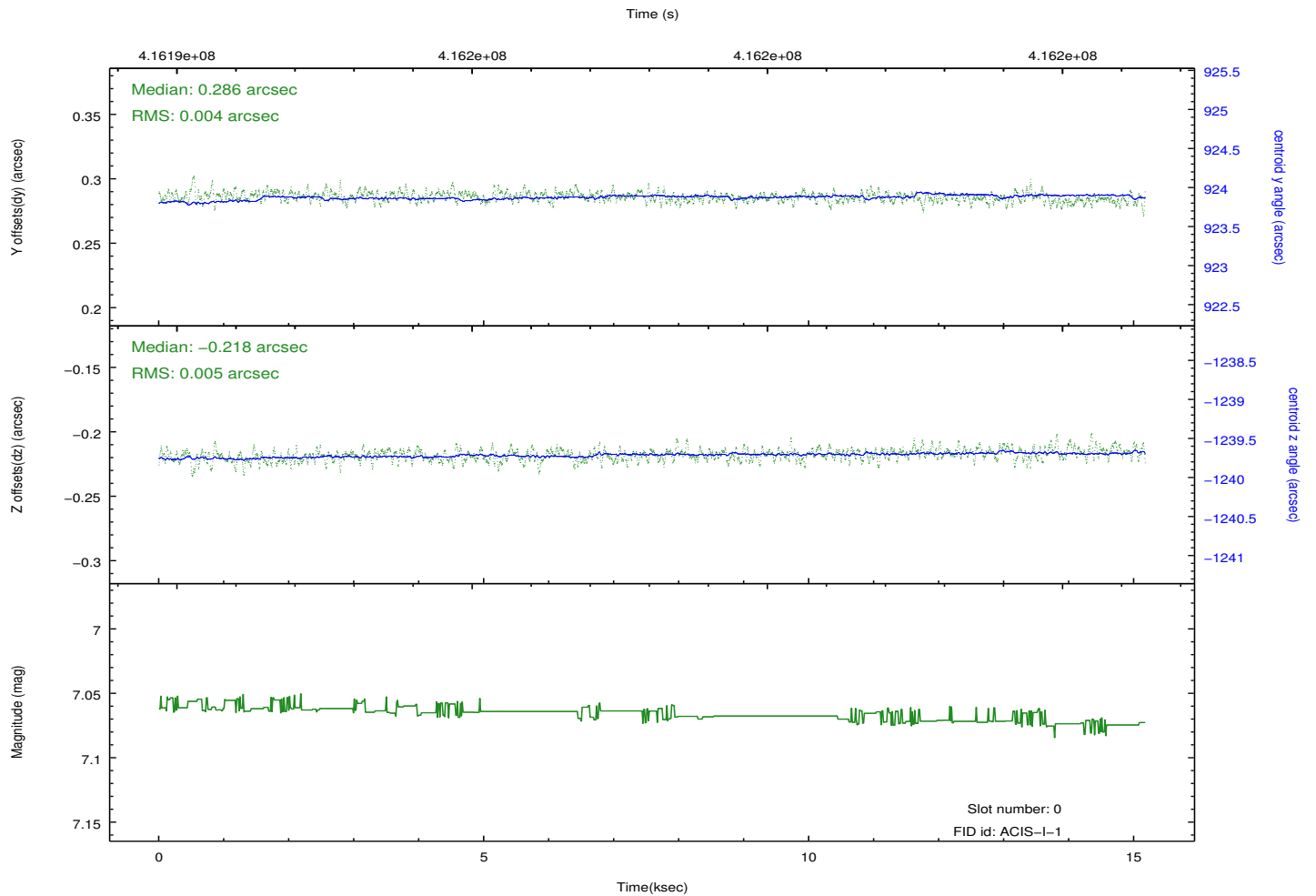
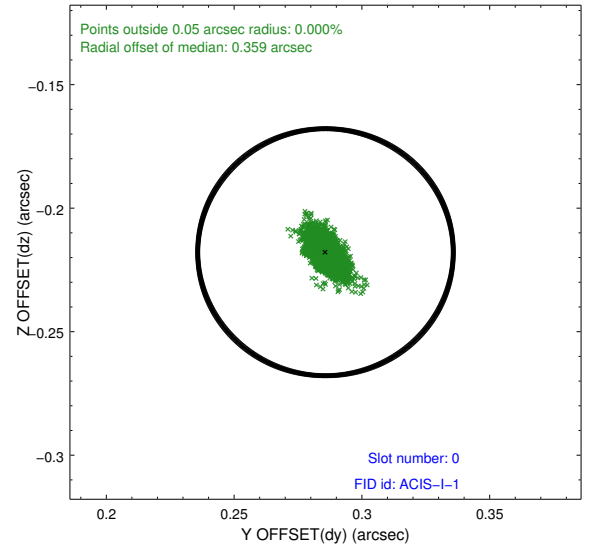
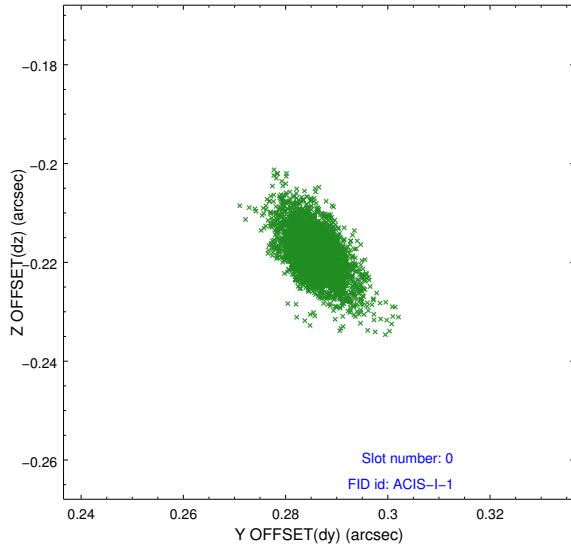


Time (s)

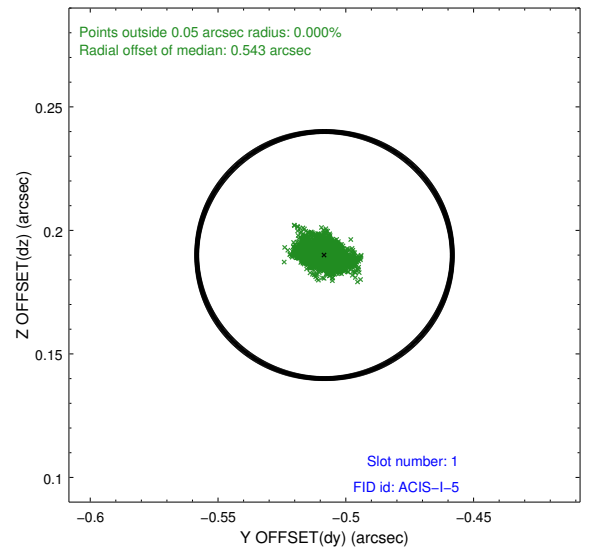
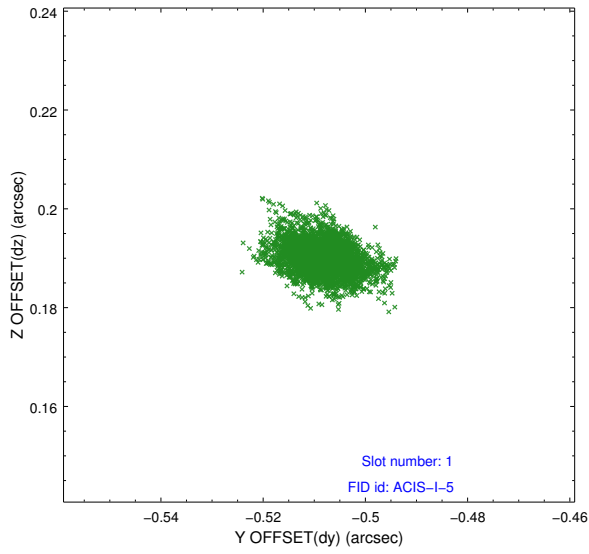


## 2.5 FID Slots

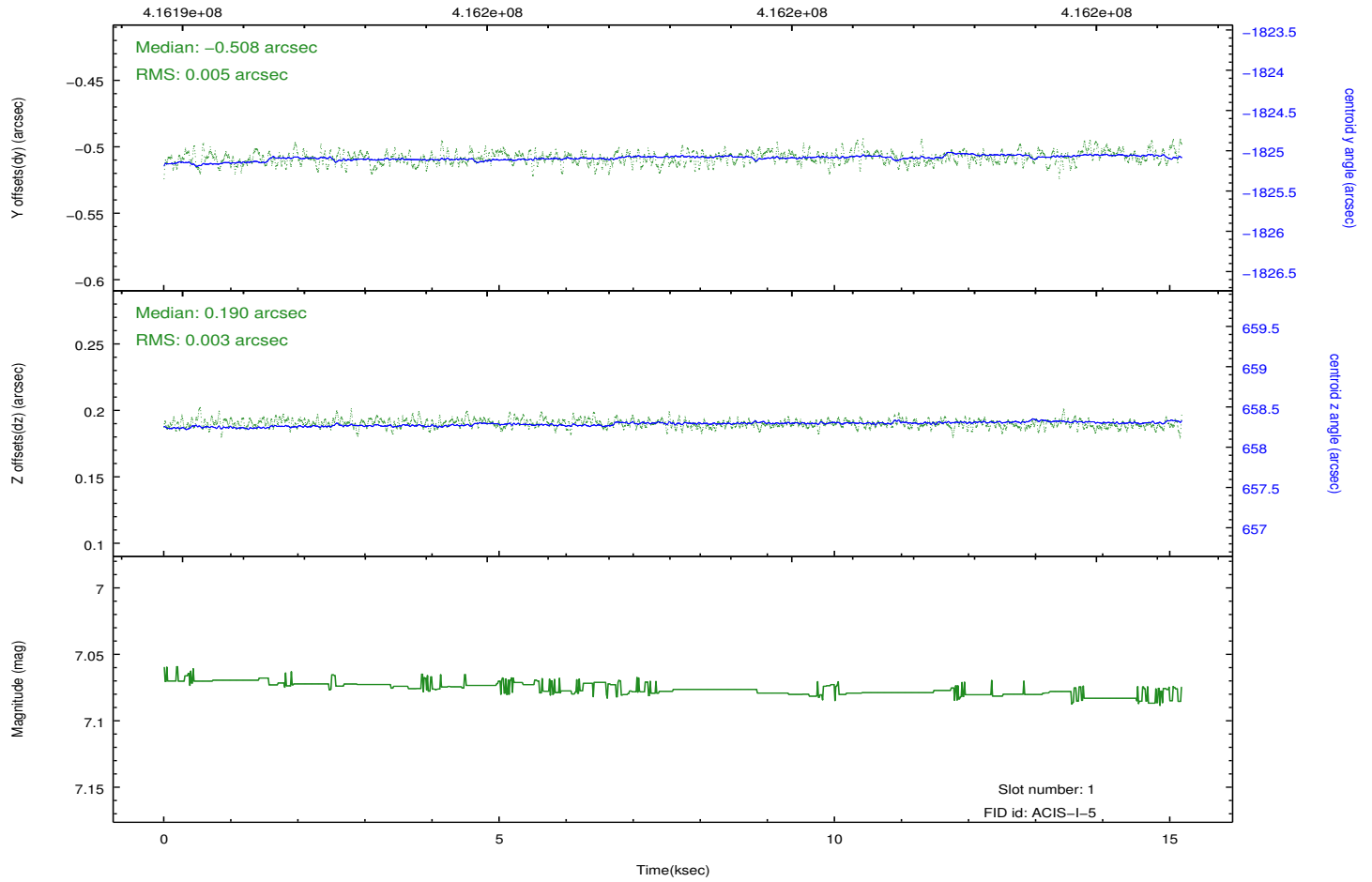
### 2.5.1 Slot 0



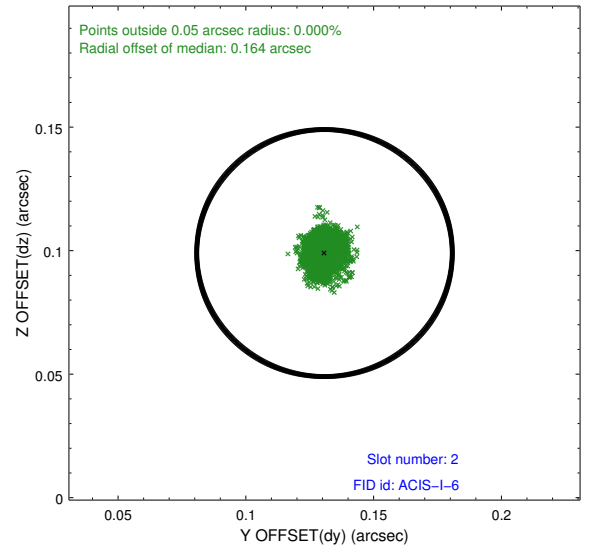
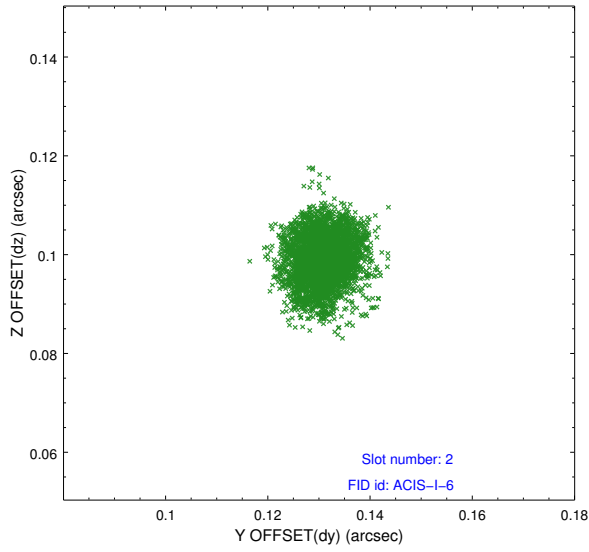
## 2.5.2 Slot 1



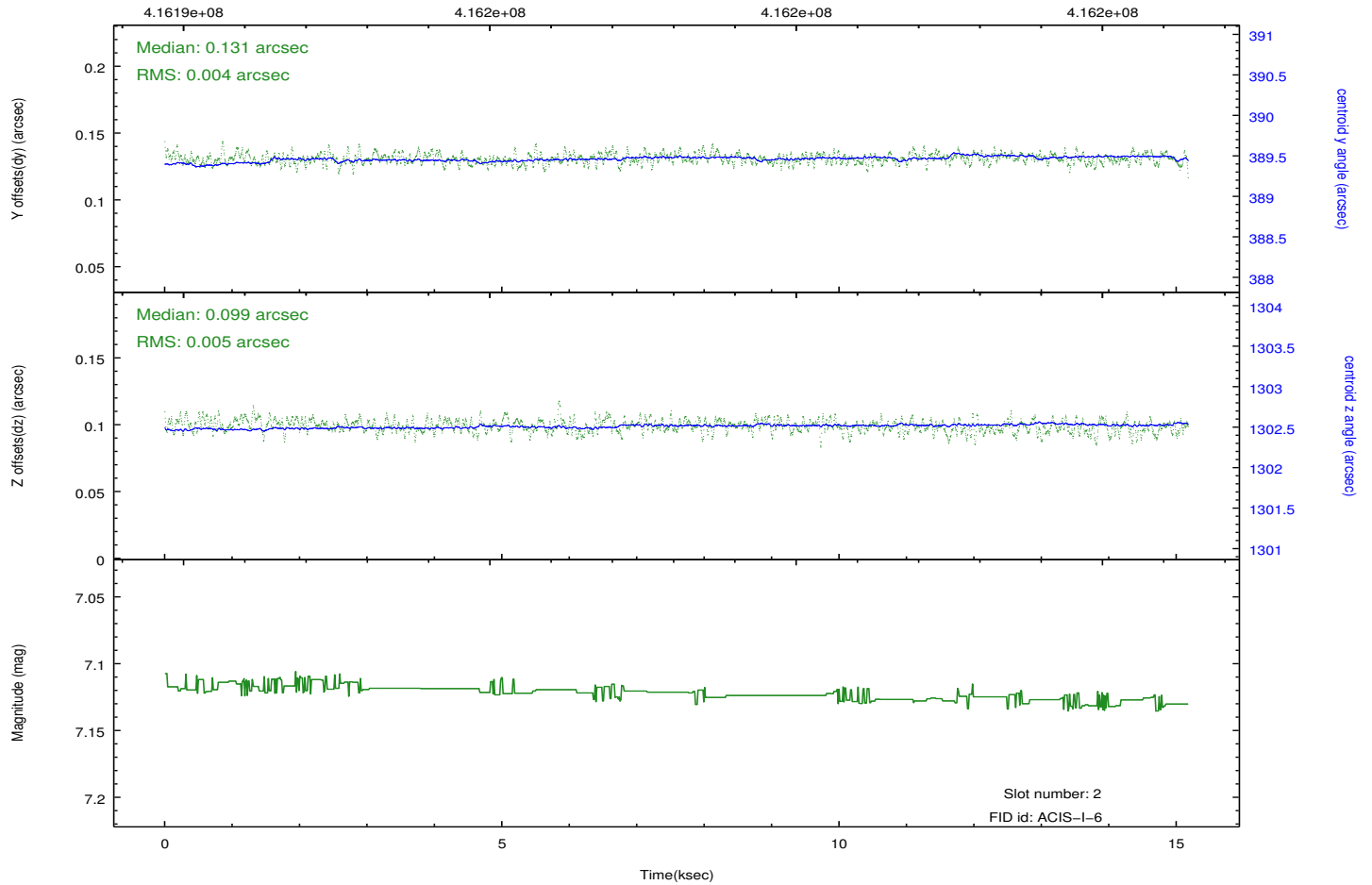
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.02.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.770546263456

## A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.

==

This observation was performed with a large SIM offset. As a result, the fid light positions are beyond normally expected ranges, but the fid light position correction has compensated for this offset.