

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 16104 - L2 Version 1  
Chandra X-Ray Center

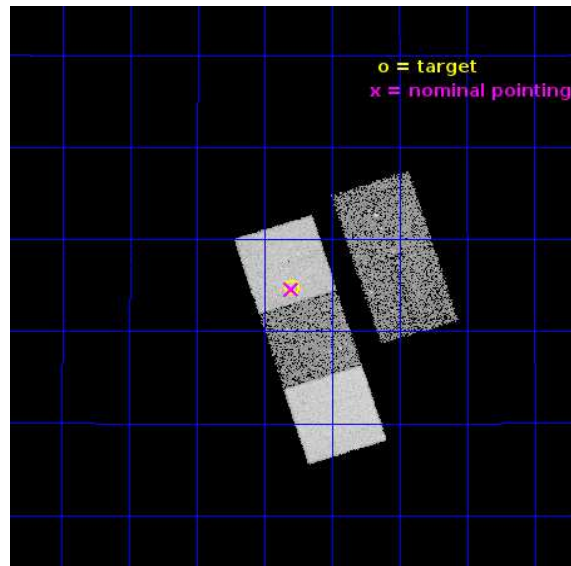
L2 Processing Date : Aug 3 2014

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# 1 Front

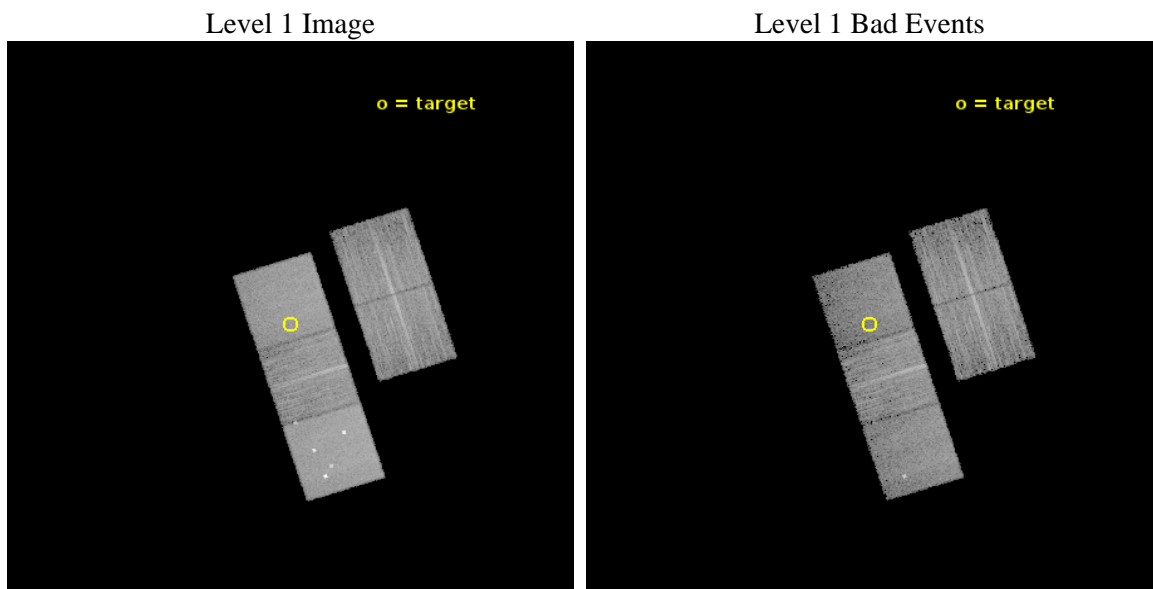
seq_num	702992	Sequence number
obs_id	16104	Observation id
title	Studying AGN evolution with ionization echoes	Proposal title
observer	Dr. Mischa Schirmer	Principal investigator
object	J150517.6+194444	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	226.323333	Observer's specified target RA [deg]
dec_targ	19.745556	Observer's specified target Dec [deg]
ra_nom	226.32536857344	Nominal RA [deg]
dec_nom	19.743109404549	Nominal Dec [deg]
roll_nom	252.28168750511	Nominal Roll [deg]
revision	1	Processing version of data
ontime	15064.682165623	Sum of GTIs [s]
livetime	14867.851002671	Livetime [s]
ontime2	15064.51800561	Sum of GTIs [s]
ontime3	15064.559045613	Sum of GTIs [s]
ontime5	15064.641125619	Sum of GTIs [s]
ontime6	15064.600085616	Sum of GTIs [s]
ontime7	15064.682165623	Sum of GTIs [s]
l2events	108720	Number of level 2 events



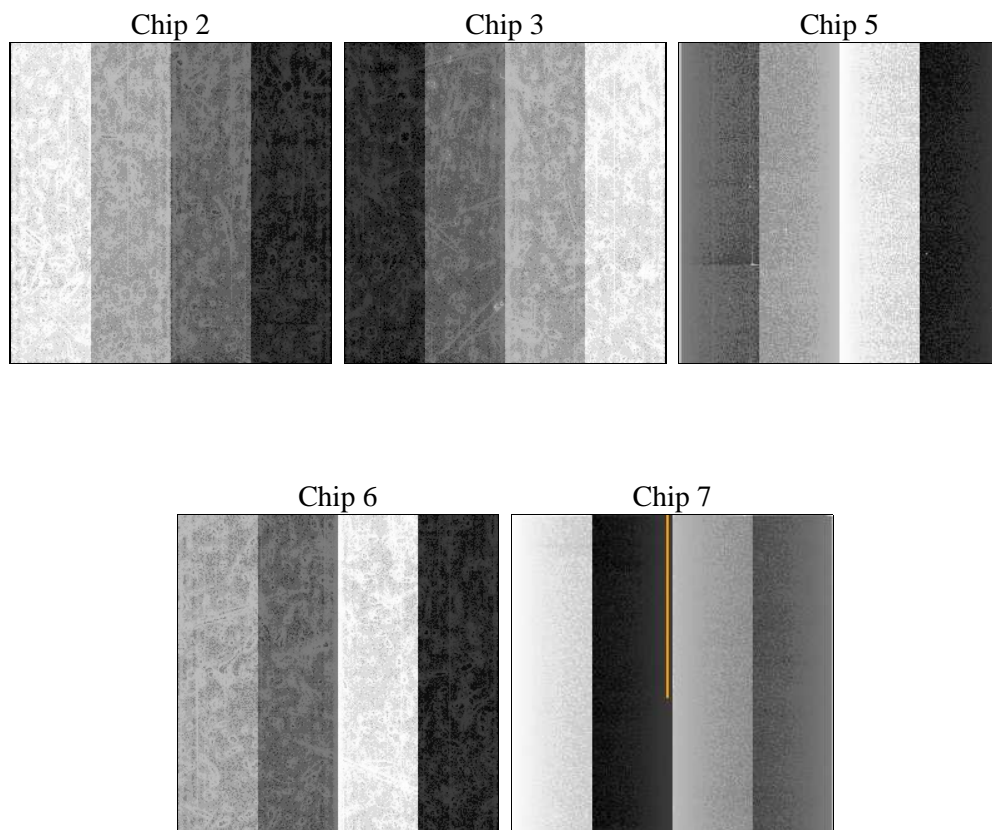
## 2 OBI

### 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	10.2.4	Processing system revision	ontime	15064.682165623	Sum of GTIs [s]
caldsver	4.6.2	&#160	ontime2	15064.51800561	Sum of GTIs [s]
date	2014-08-03T16:25:38	Date and time of file creation	ontime3	15064.559045613	Sum of GTIs [s]
revision	1	Processing version of data	ontime5	15064.641125619	Sum of GTIs [s]
			ontime6	15064.600085616	Sum of GTIs [s]
			ontime7	15064.682165623	Sum of GTIs [s]
			l1events	393989	Number of level 1 events

### 2.1.4 Events

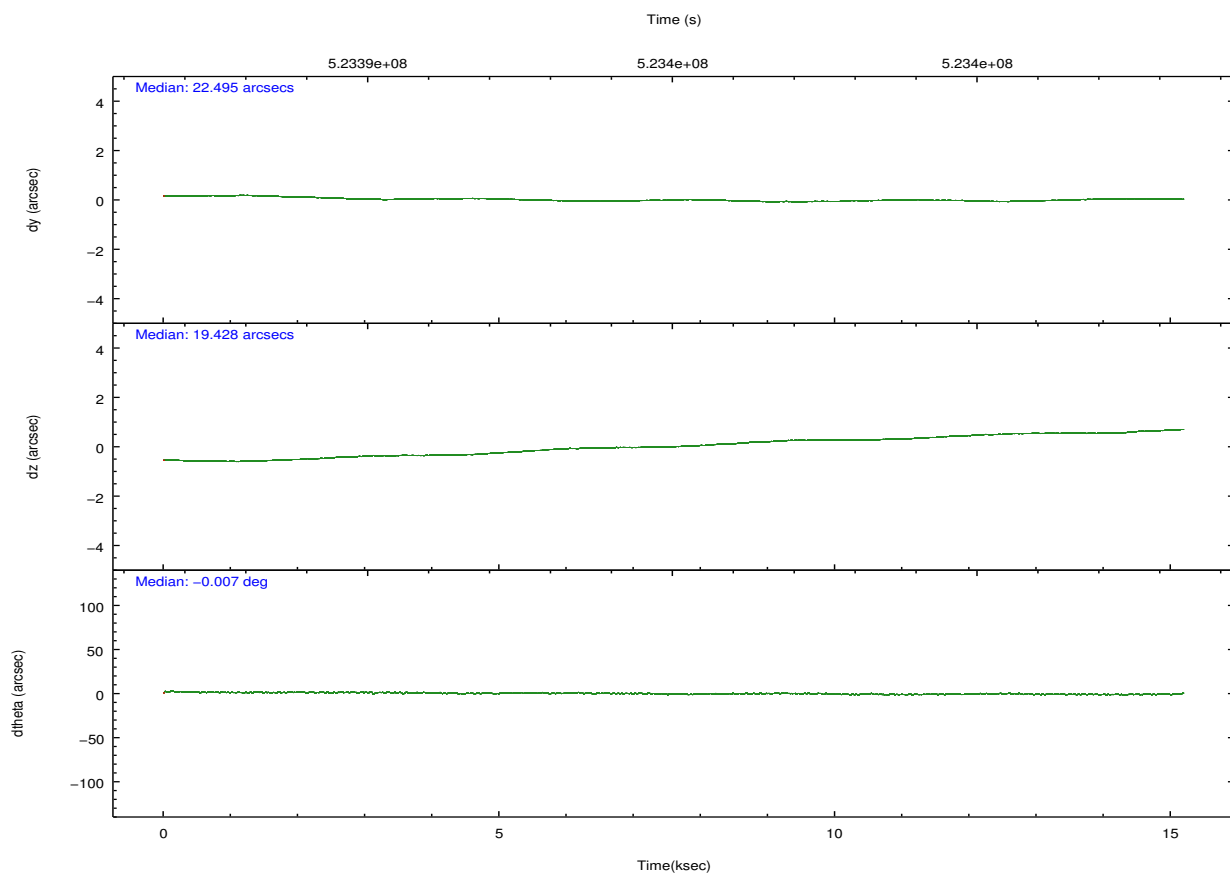
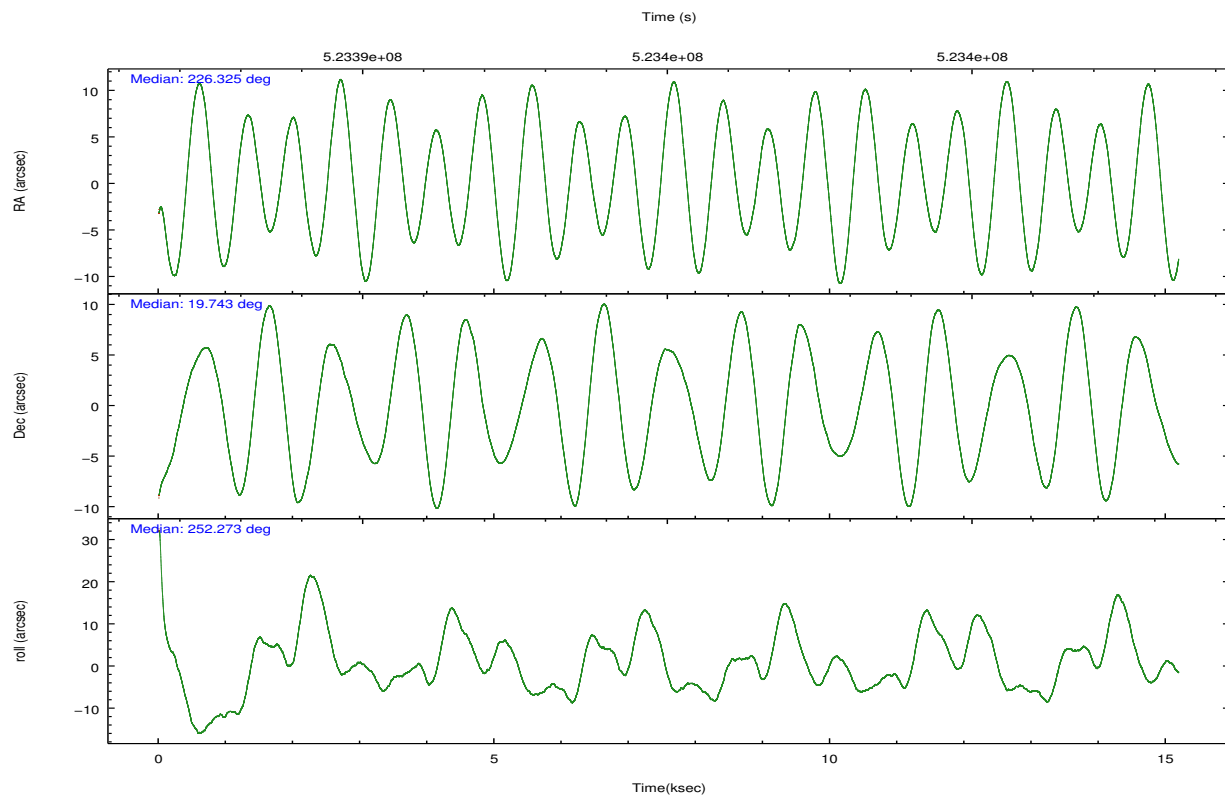
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	66342	63274	113121	69498	81754
rejected events	58575	55641	52903	61061	43031
rejected %	88%	87%	46%	87%	52%

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	2878	2850	10199	3019	3871
	4%	4%	9%	4%	4%
grade 1 events	40	51	480	40	117
	0%	0%	0%	0%	0%
grade 2 events	1999	1690	18051	1894	8260
	3%	2%	15%	2%	10%
grade 3 events	728	819	1894	912	3420
	1%	1%	1%	1%	4%
grade 4 events	752	789	1813	841	3326
	1%	1%	1%	1%	4%
grade 5 events	2674	3082	8019	3086	8484
	4%	4%	7%	4%	10%
grade 6 events	1412	1486	28292	1777	19861
	2%	2%	25%	2%	24%
grade 7 events	55859	52507	44373	57929	34415
	84%	82%	39%	83%	42%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23567	ACIS-23567	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	226.318825	226.325368573443	CCD I2 on	O3	Y
[deg] Pointing Dec	19.769865	19.74310940454865	CCD I3 on	O2	Y
[deg] Pointing Roll	252.127248	252.2816875051111	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O4	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	N	N
[s] Observation start time (MET)	523387624.184000	523386593.57529	CCD S5 on	N	N
Observation start date	2014-08-02T17:25:57	2014-08-02T17:09:53	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	523402624.184000	523403559.37624	On-chip summing requested	N	N
Observation end date	2014-08-02T21:35:57	2014-08-02T21:52:39	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect

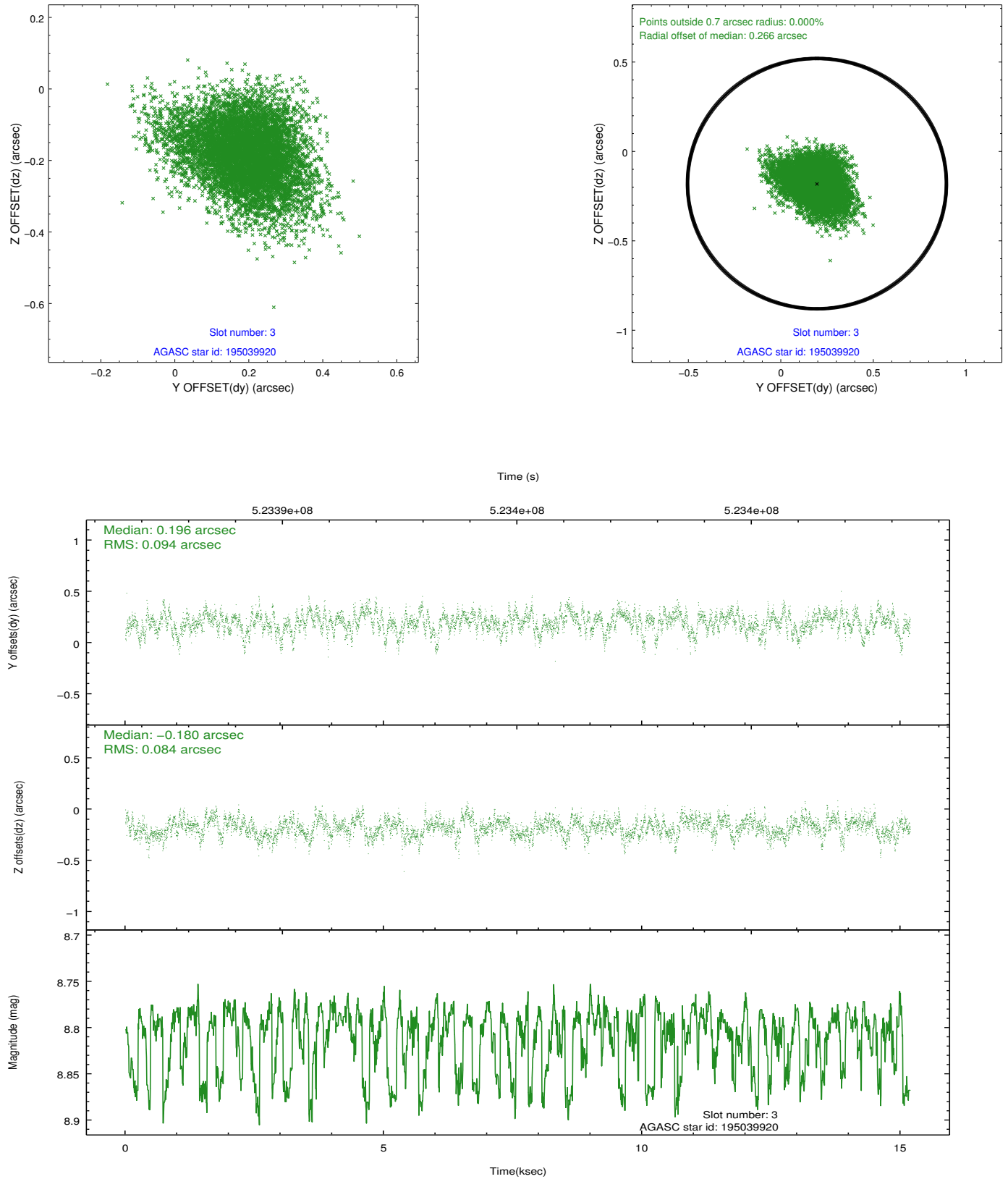


### Slot Statistics

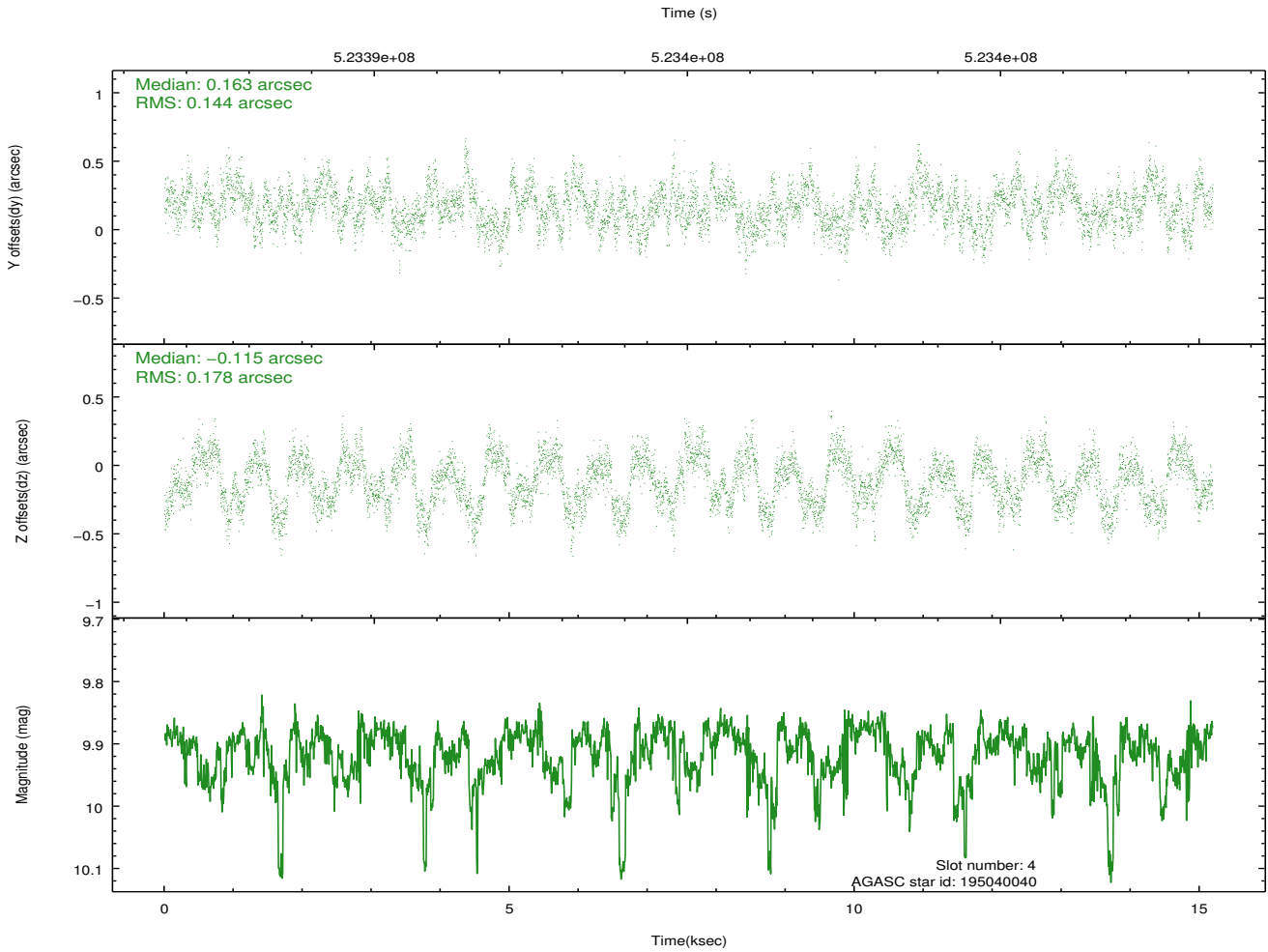
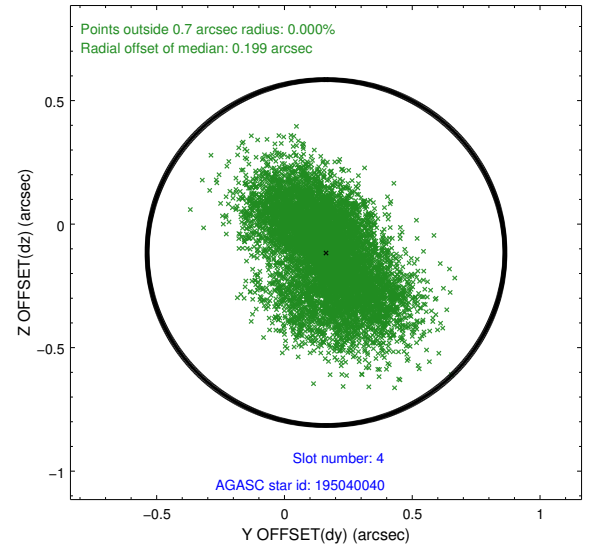
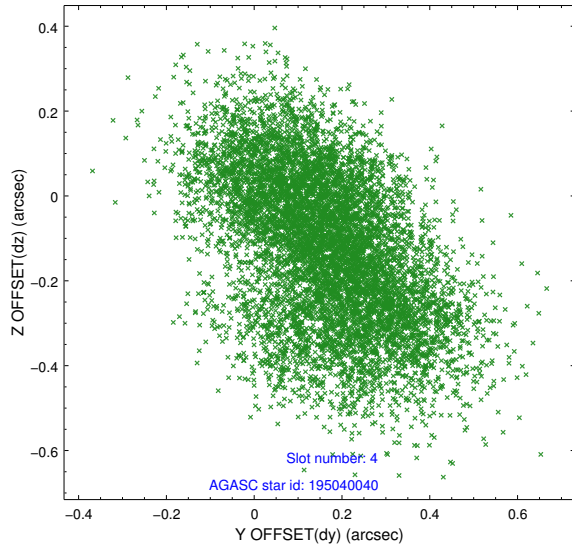
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.09	3705	0.030	-0.004	0.018	0.026	0.000000	0.000000	920.41	-1736.52
1	FID	ACIS-S-4	7.09	3705	0.221	-0.007	0.015	0.022	0.000000	0.000000	2138.13	167.36
2	FID	ACIS-S-5	7.11	3705	-0.279	0.025	0.008	0.015	0.000000	0.000000	-1828.44	161.23
3	GUIDE	195039920	8.81	7407	0.196	-0.180	0.131	0.221	225.579686	19.390589	2066.08	-1971.86
4	GUIDE	195040040	9.91	7404	0.163	-0.115	0.246	0.386	225.511679	19.401940	2096.97	-2203.69
5	GUIDE	195166512	8.58	7408	-0.289	-0.078	0.092	0.147	226.829765	19.860730	-844.66	1545.01
6	GUIDE	195428440	9.81	7243	0.085	0.143	0.178	0.292	225.855510	20.262099	-1207.62	-2032.55
7	GUIDE	195429496	8.82	7406	-0.147	0.248	0.108	0.178	226.418232	20.393166	-2238.53	-369.49

## 2.4 Star Slots

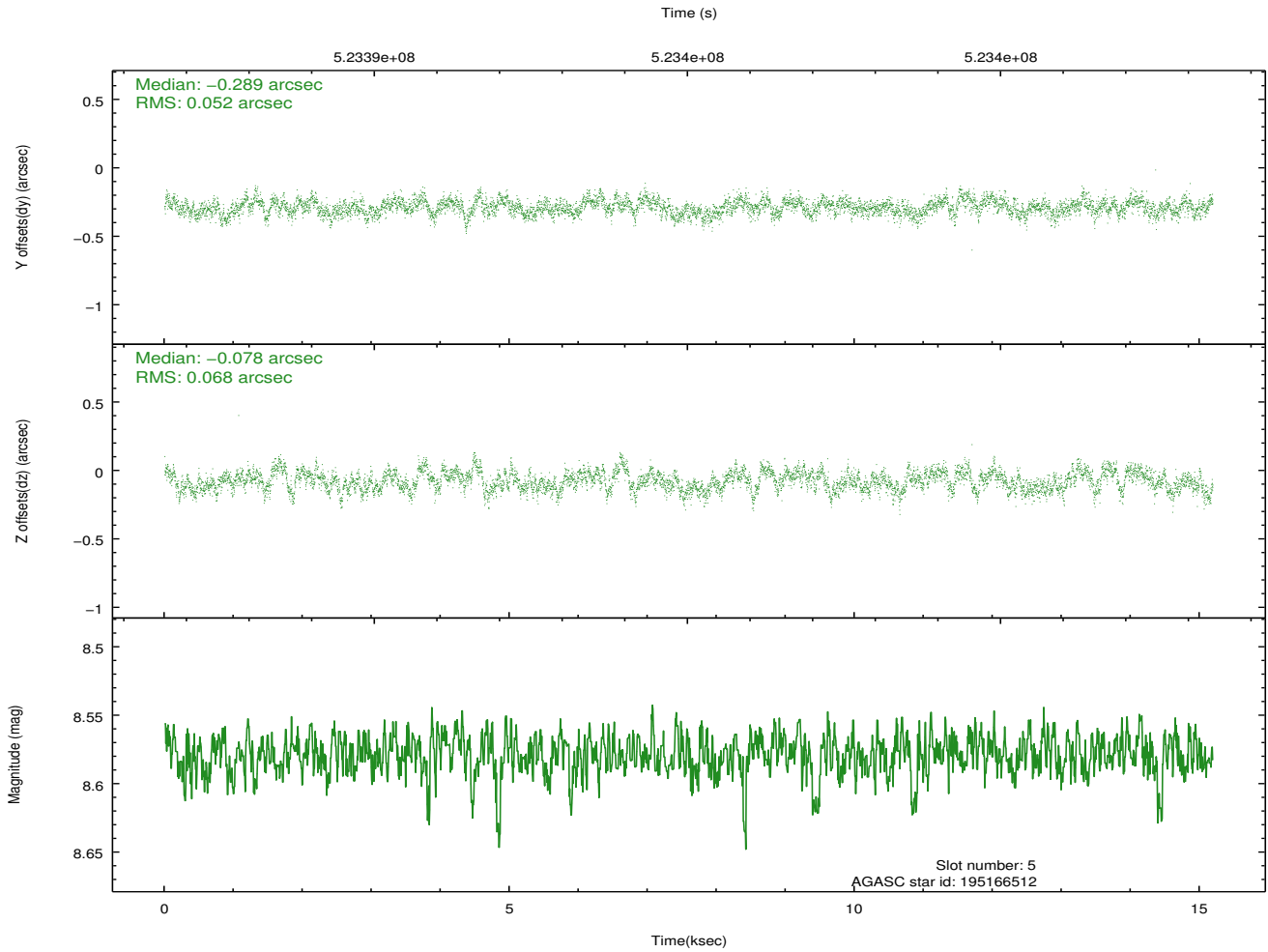
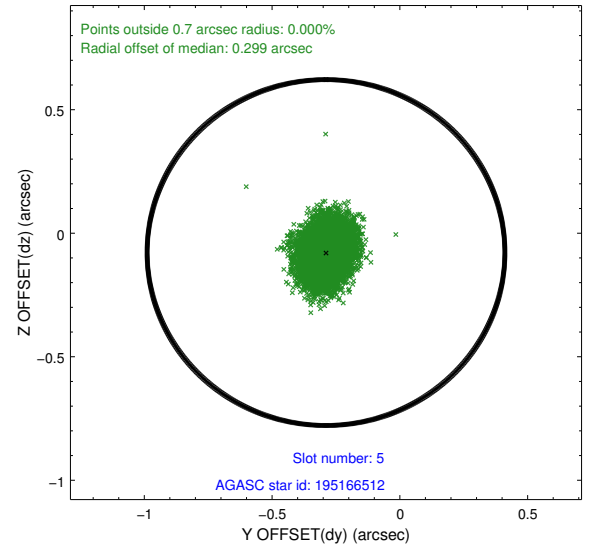
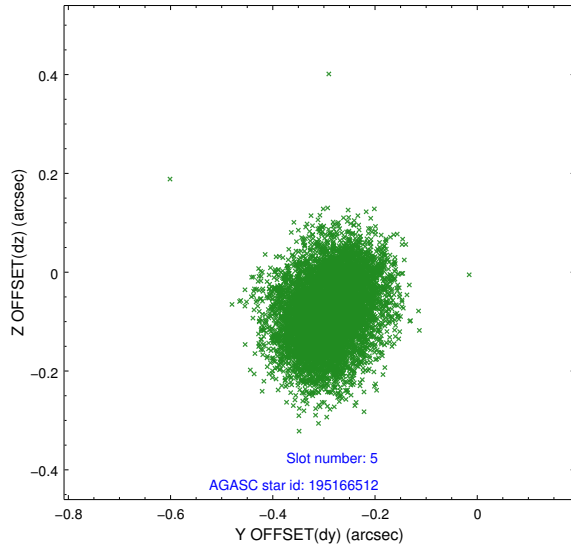
### 2.4.1 Slot 3



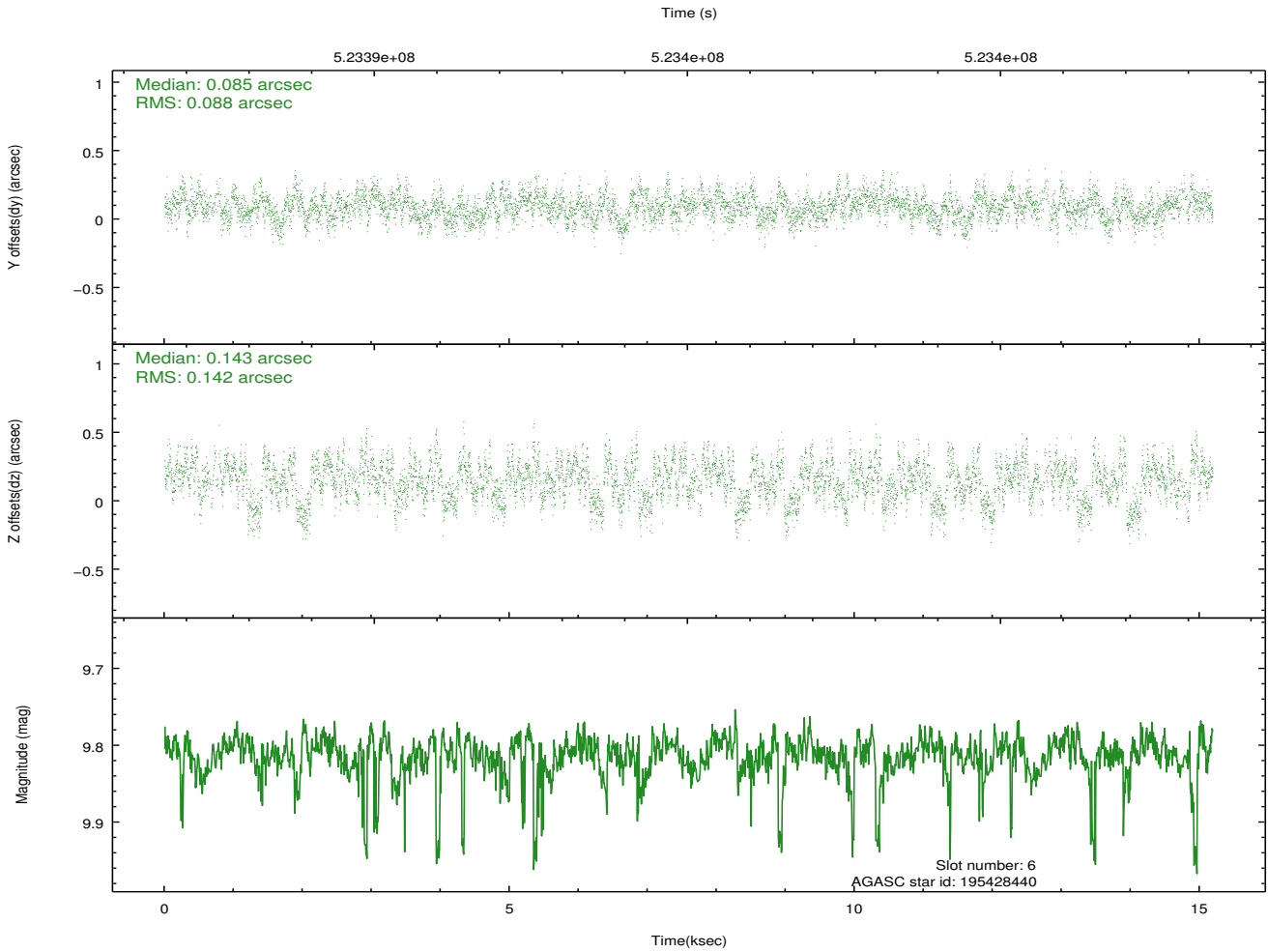
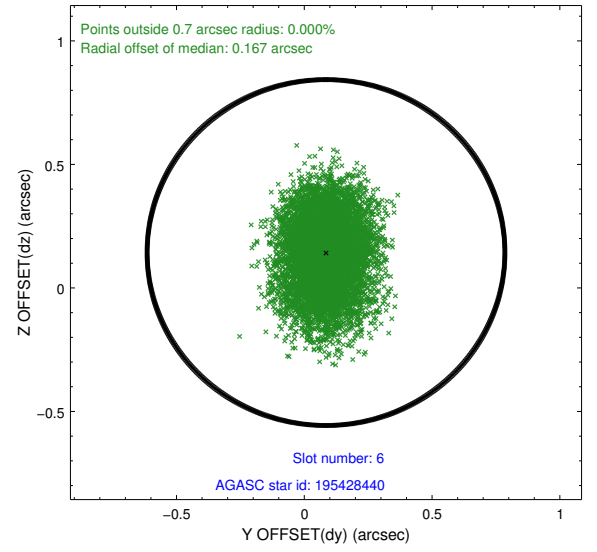
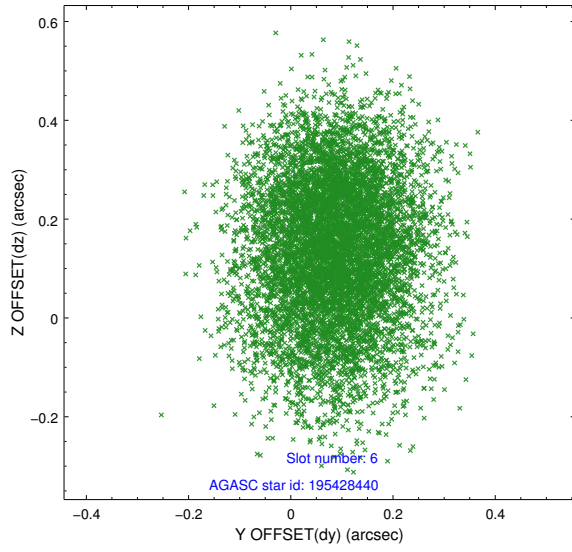
## 2.4.2 Slot 4



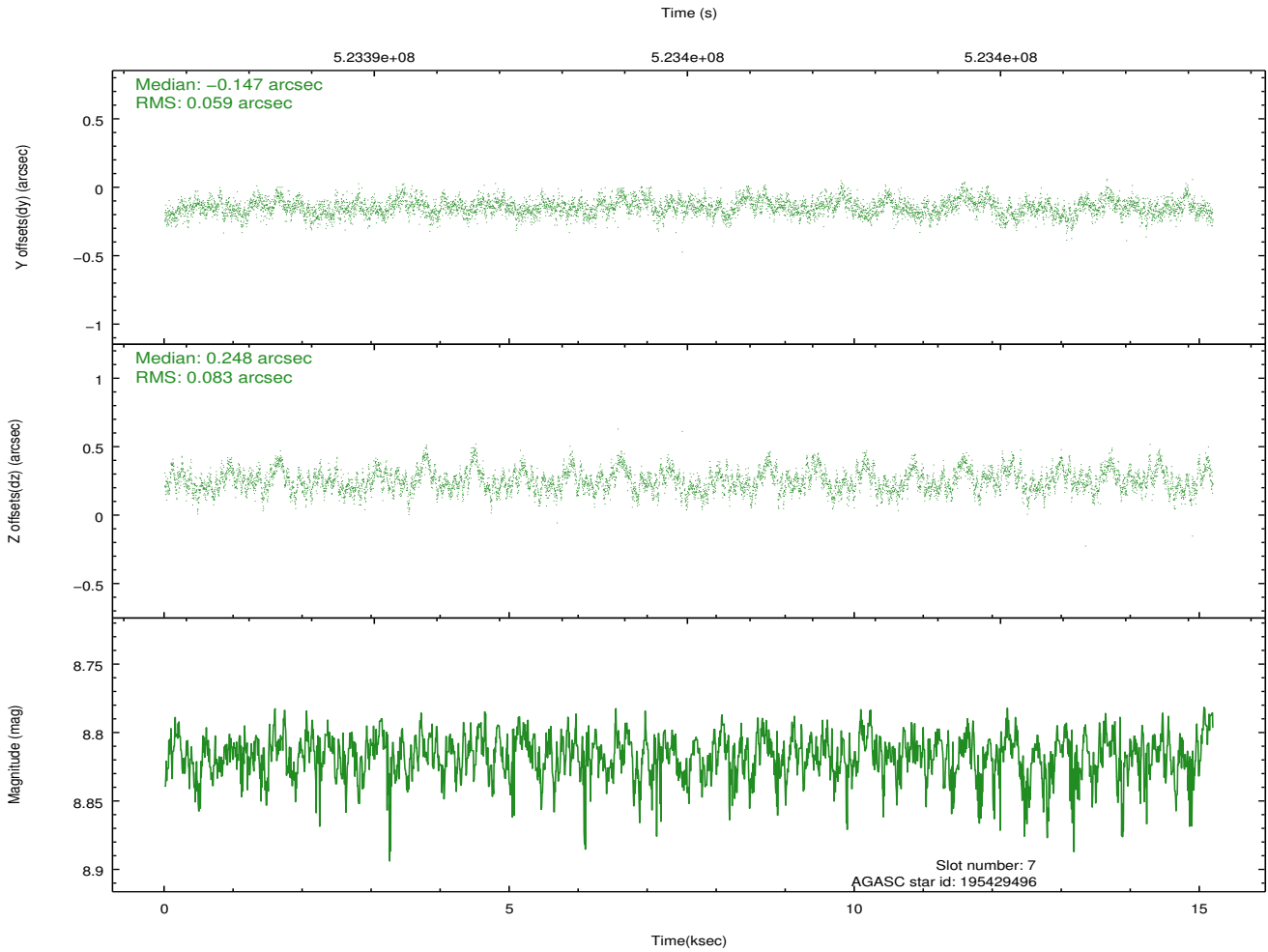
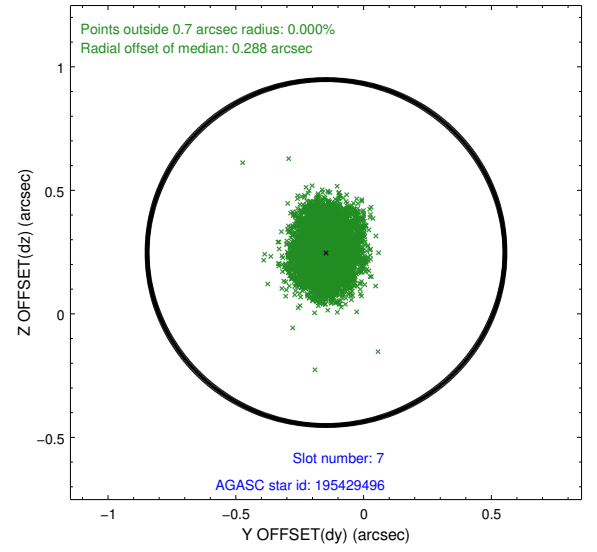
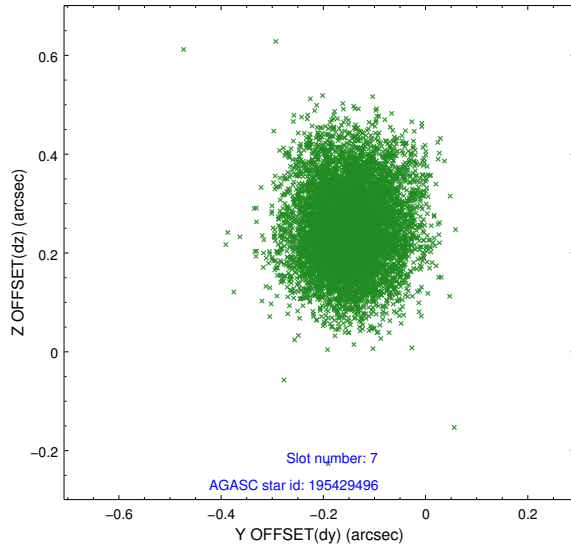
### 2.4.3 Slot 5



## 2.4.4 Slot 6

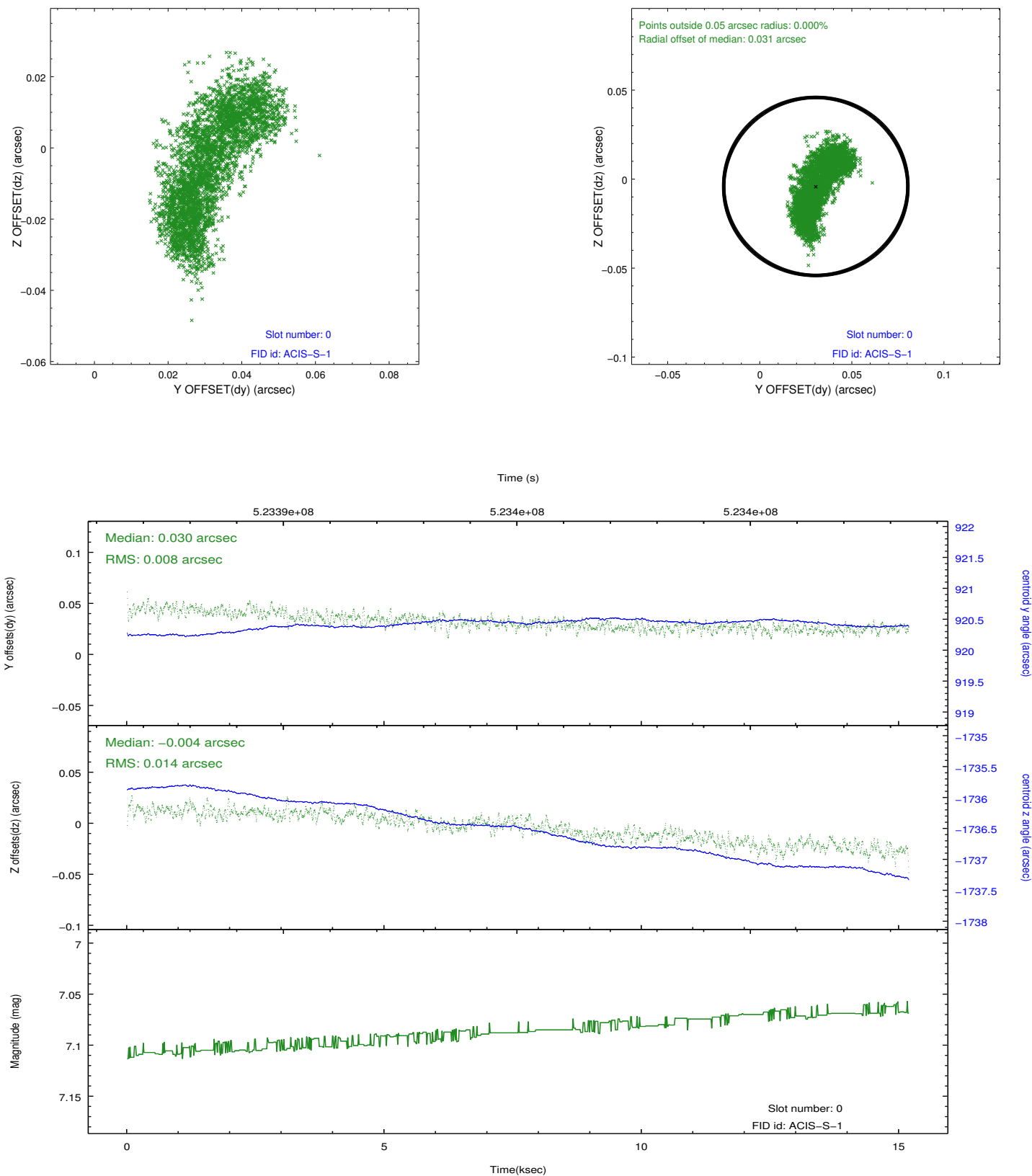


## 2.4.5 Slot 7

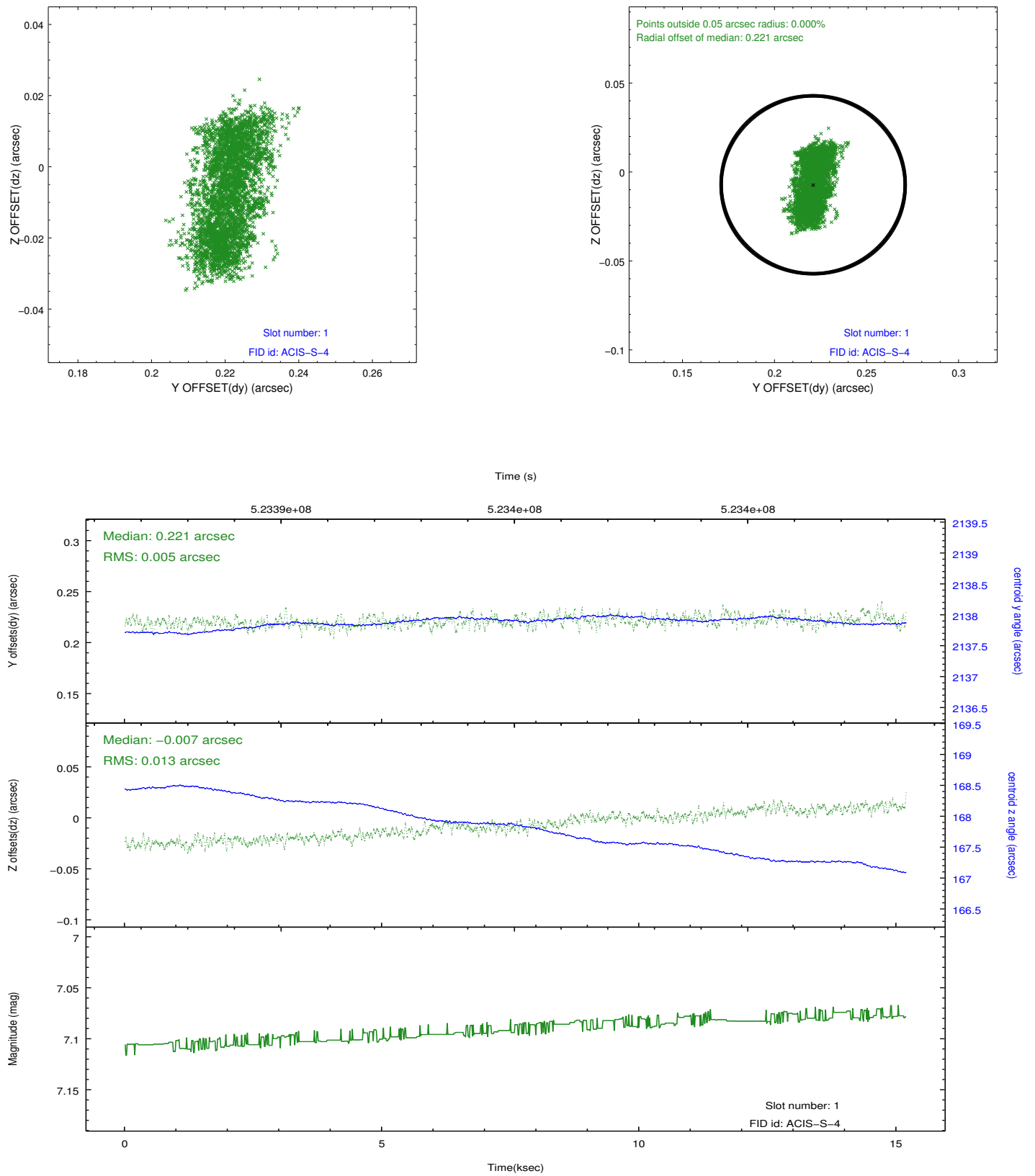


## 2.5 FID Slots

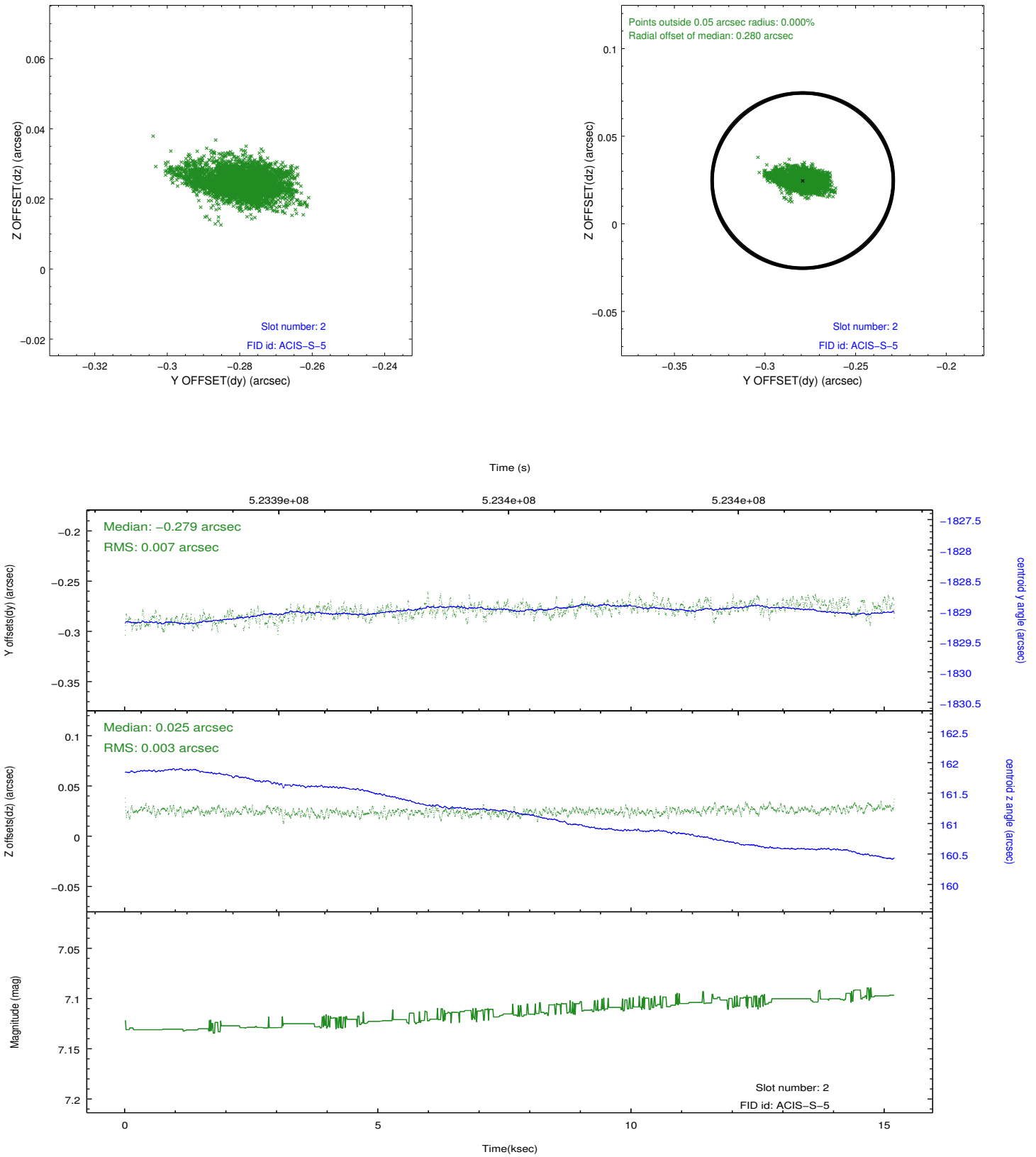
### 2.5.1 Slot 0



## 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)	2014.08.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.064682165623

### A.2 Comments