

# V&V Reference Report

## L2 ASCDS Version : 8.5.1

Observation 6112 - L2 Version 4  
Chandra X-Ray Center

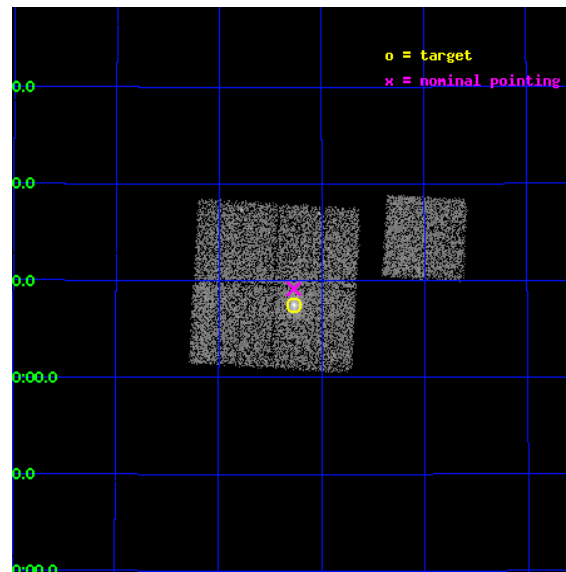
L2 Processing Date : Dec 17 2012

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# 1 Front

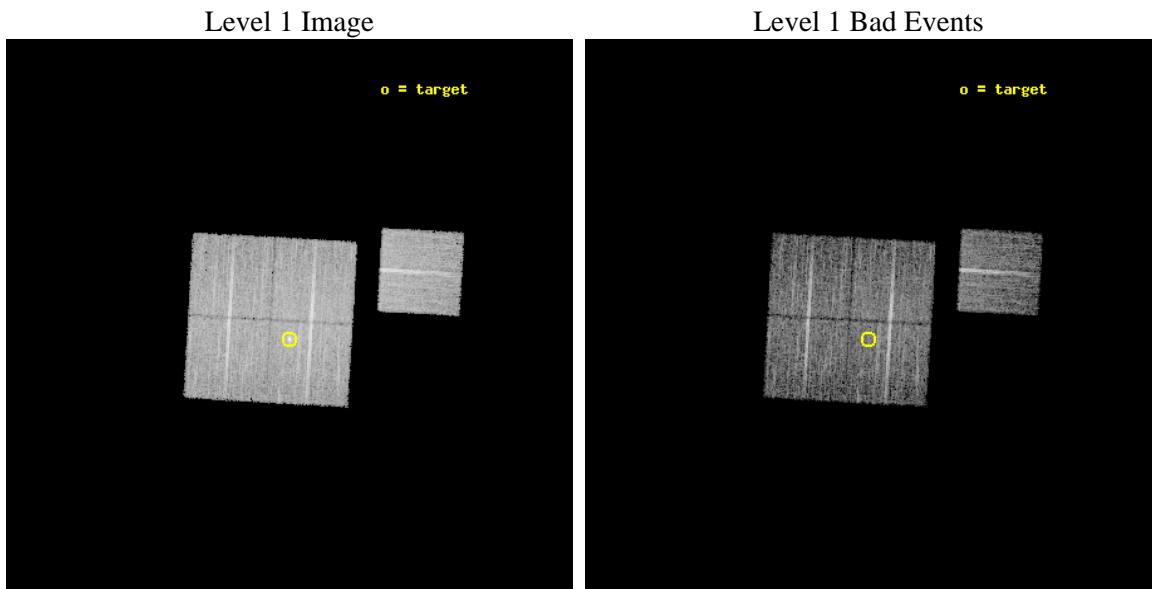
seq_num	800560	Sequence number
obs_id	6112	Observation id
title	Probing dark energy using the X-ray gas mass fraction in dynamically relaxed galaxy clusters	Proposal title
observer	Prof. Steven Allen	Principal investigator
object	MACS1427.2+4407	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	216.817083	Observer's specified target RA [deg]
dec_targ	44.125278	Observer's specified target Dec [deg]
ra_nom	216.81748912366	Nominal RA [deg]
dec_nom	44.152931549219	Nominal Dec [deg]
roll_nom	93.256562986855	Nominal Roll [deg]
revision	4	Processing version of data
ontime	9509.4097808897	Sum of GTIs [s]
livetime	9385.1623413768	Livetime [s]
ontime0	9509.2866608799	Sum of GTIs [s]
ontime1	9509.3277008832	Sum of GTIs [s]
ontime2	9509.3687408864	Sum of GTIs [s]
ontime3	9509.4097808897	Sum of GTIs [s]
ontime6	9506.1046306193	Sum of GTIs [s]
l2events	26503	Number of level 2 events



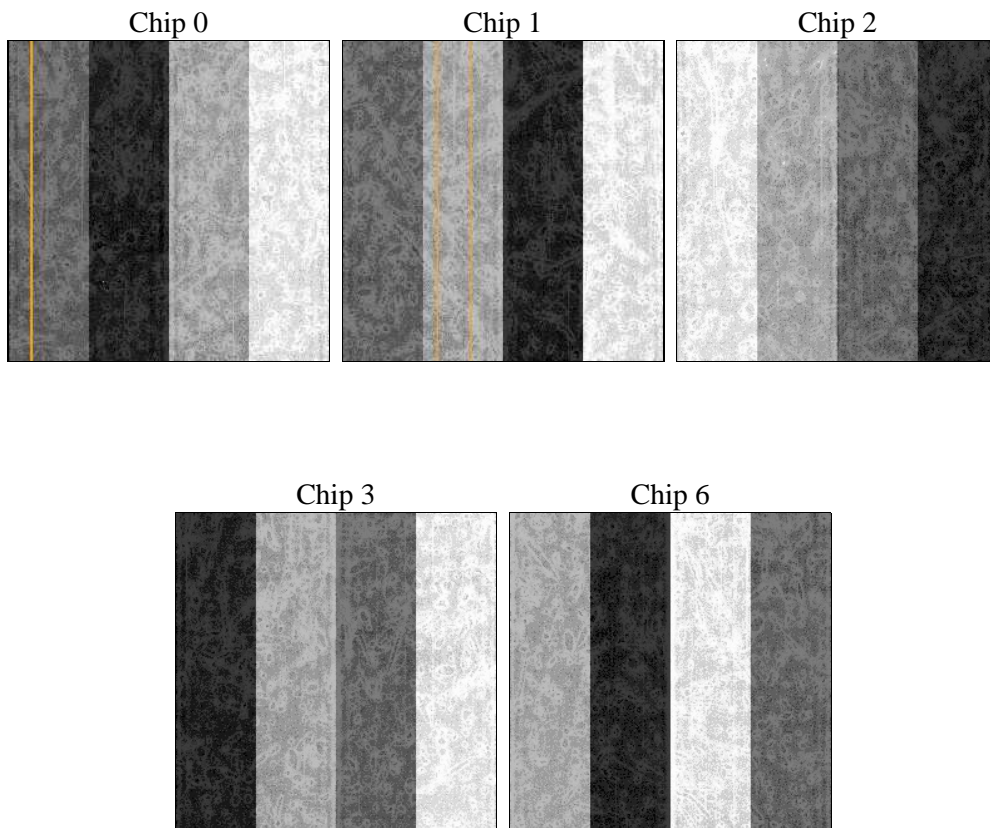
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	9455.116000	[s] Scheduled observation exposure time
ascdsver	8.5.1	Processing system revision	ontime	9509.4097808897	Sum of GTIs [s]
caldbver	4.5.5	&#160	ontime0	9509.2866608799	Sum of GTIs [s]
date	2012-12-17T04:53:53	Date and time of file creation	ontime1	9509.3277008832	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	9509.3687408864	Sum of GTIs [s]
			ontime3	9509.4097808897	Sum of GTIs [s]
			ontime6	9506.1046306193	Sum of GTIs [s]
			l1events	284266	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	53898	53883	59845	59328	57312
rejected events	48196	47597	53908	51628	51536
rejected %	89%	88%	90%	87%	89%

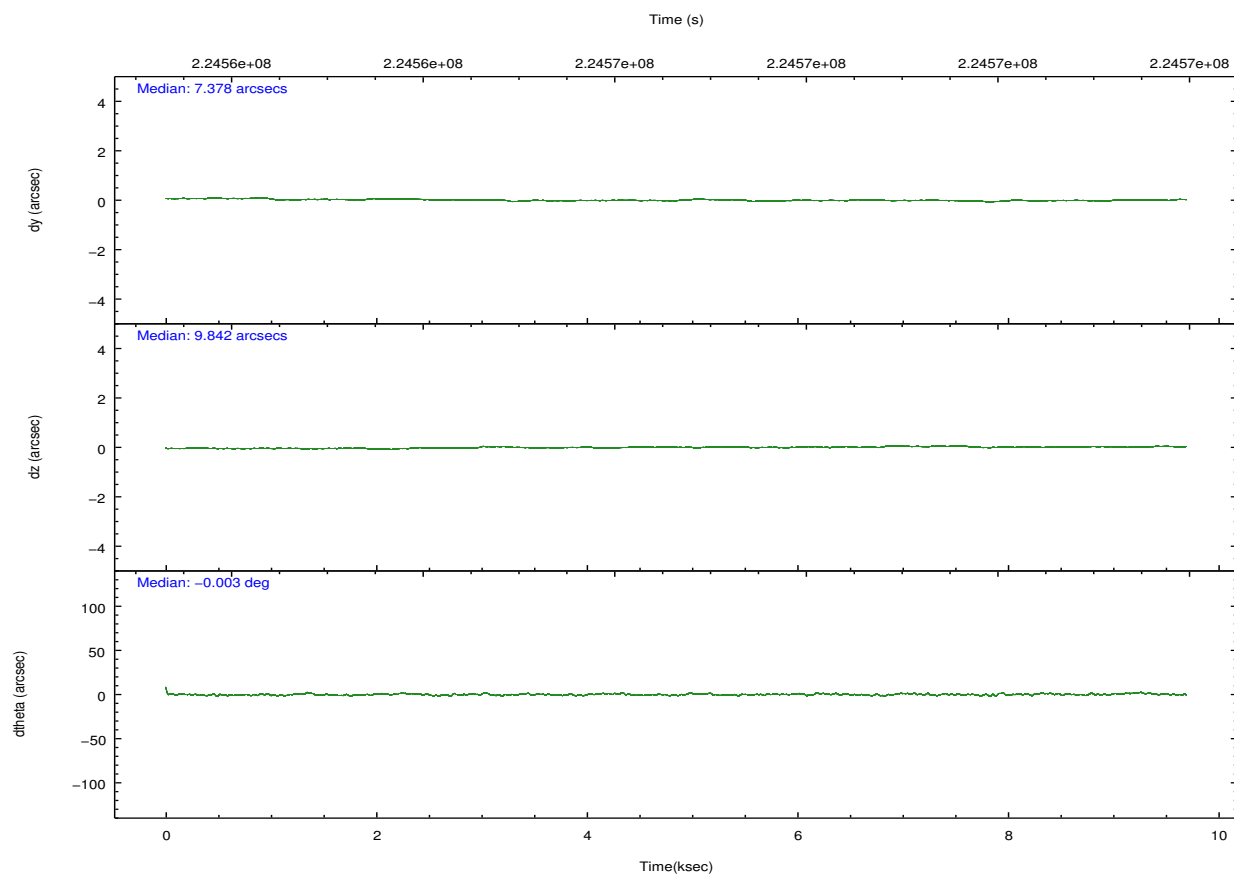
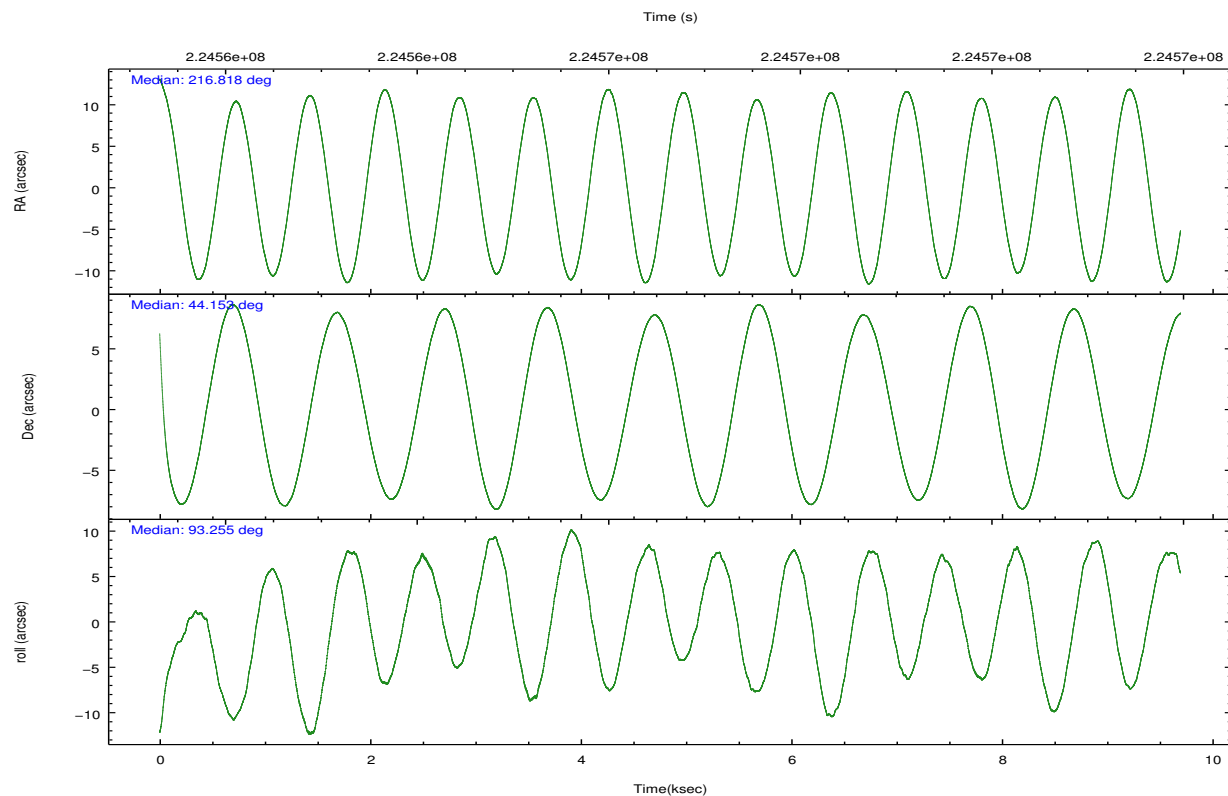
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2025	2262	2272	3845	2028
	3%	4%	3%	6%	3%
grade 1 events	25	30	37	50	23
	0%	0%	0%	0%	0%
grade 2 events	1259	1289	1294	1373	1168
	2%	2%	2%	2%	2%
grade 3 events	688	673	670	666	643
	1%	1%	1%	1%	1%
grade 4 events	591	727	607	671	661
	1%	1%	1%	1%	1%
grade 5 events	2054	2165	1913	2227	2316
	3%	4%	3%	3%	4%
grade 6 events	1149	1338	1098	1157	1278
	2%	2%	1%	1%	2%
grade 7 events	46107	45399	51954	49339	49195
	85%	84%	86%	83%	85%



## 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	216.838585	216.8174891236624	Subarray requested	NONE	NONE
[deg] Pointing Dec	44.130107	44.15293154921896	Alternating exposures requested	N	N
[deg] Pointing Roll	93.033189	93.25656298685522	[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	-229.442463	-229.4438428438578			
[mm] SIM translation stage offset	-4.15	-4.148610159071865			
[s] Observation start time (MET)	224562027.184000	224561067.20117			
Observation start date	2005-02-12T02:19:23	2005-02-12T02:04:27			
[s] Observation end time (MET)	224571483.184000	224571719.51415			
Observation end date	2005-02-12T04:56:59	2005-02-12T05:01:59			
Read mode	TIMED	TIMED			

## 2.3 Aspect

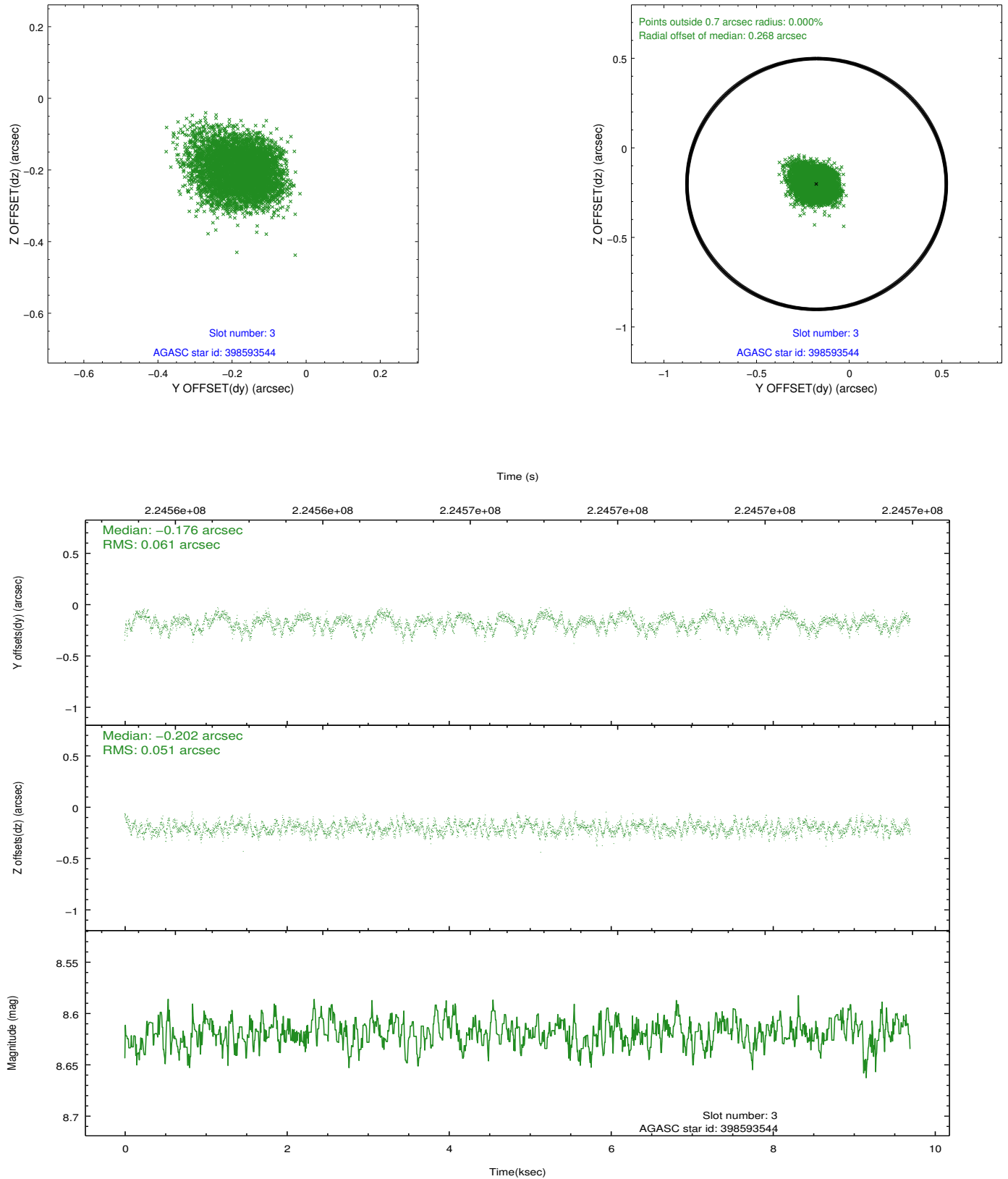


### Slot Statistics

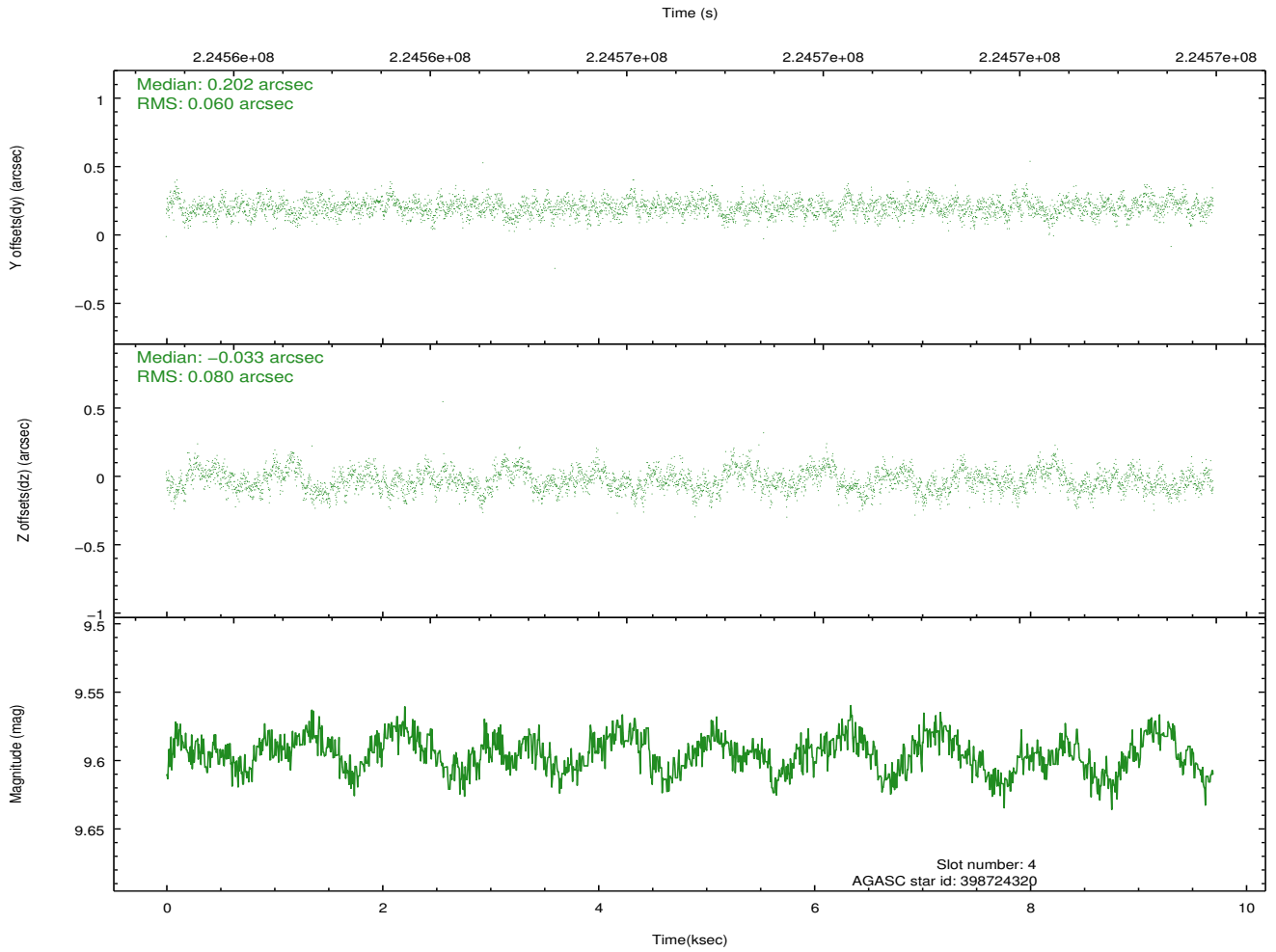
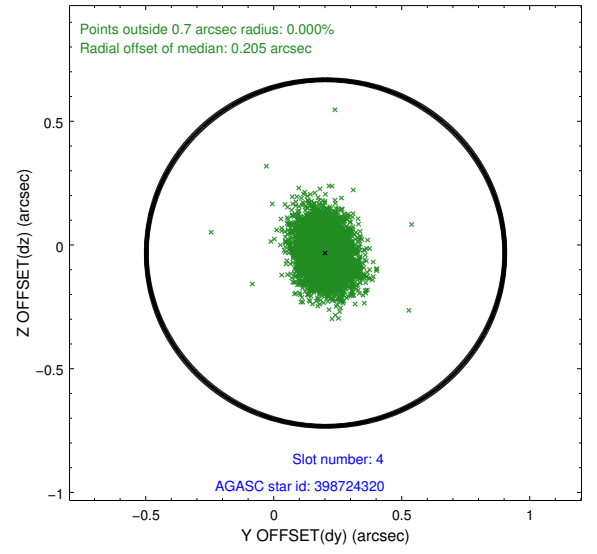
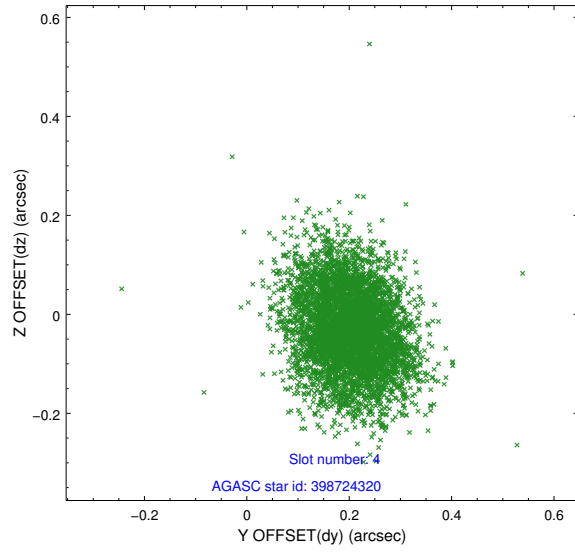
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.16	2364	-0.076	-0.091	0.019	0.037	0.000000	0.000000	-762.24	-924.34
1	FID	ACIS-I-4	7.15	2365	0.132	0.072	0.011	0.019	0.000000	0.000000	2151.73	981.70
2	FID	ACIS-I-5	7.22	2365	-0.157	0.088	0.016	0.028	0.000000	0.000000	-1815.25	979.61
3	GUIDE	398593544	8.62	4731	-0.176	-0.202	0.086	0.136	216.095119	44.392456	1053.04	1859.28
4	GUIDE	398724320	9.60	4729	0.202	-0.033	0.106	0.173	217.327713	43.656759	-1764.44	-1181.95
5	GUIDE	398726944	9.56	4726	0.059	0.103	0.107	0.175	216.859138	44.488148	1284.46	-121.05
6	GUIDE	398727024	9.59	4726	0.057	-0.046	0.097	0.163	217.158424	44.398345	924.32	-872.09
7	GUIDE	398723112	8.80	4727	-0.139	0.179	0.080	0.130	217.784921	43.791453	-1332.99	-2392.09

## 2.4 Star Slots

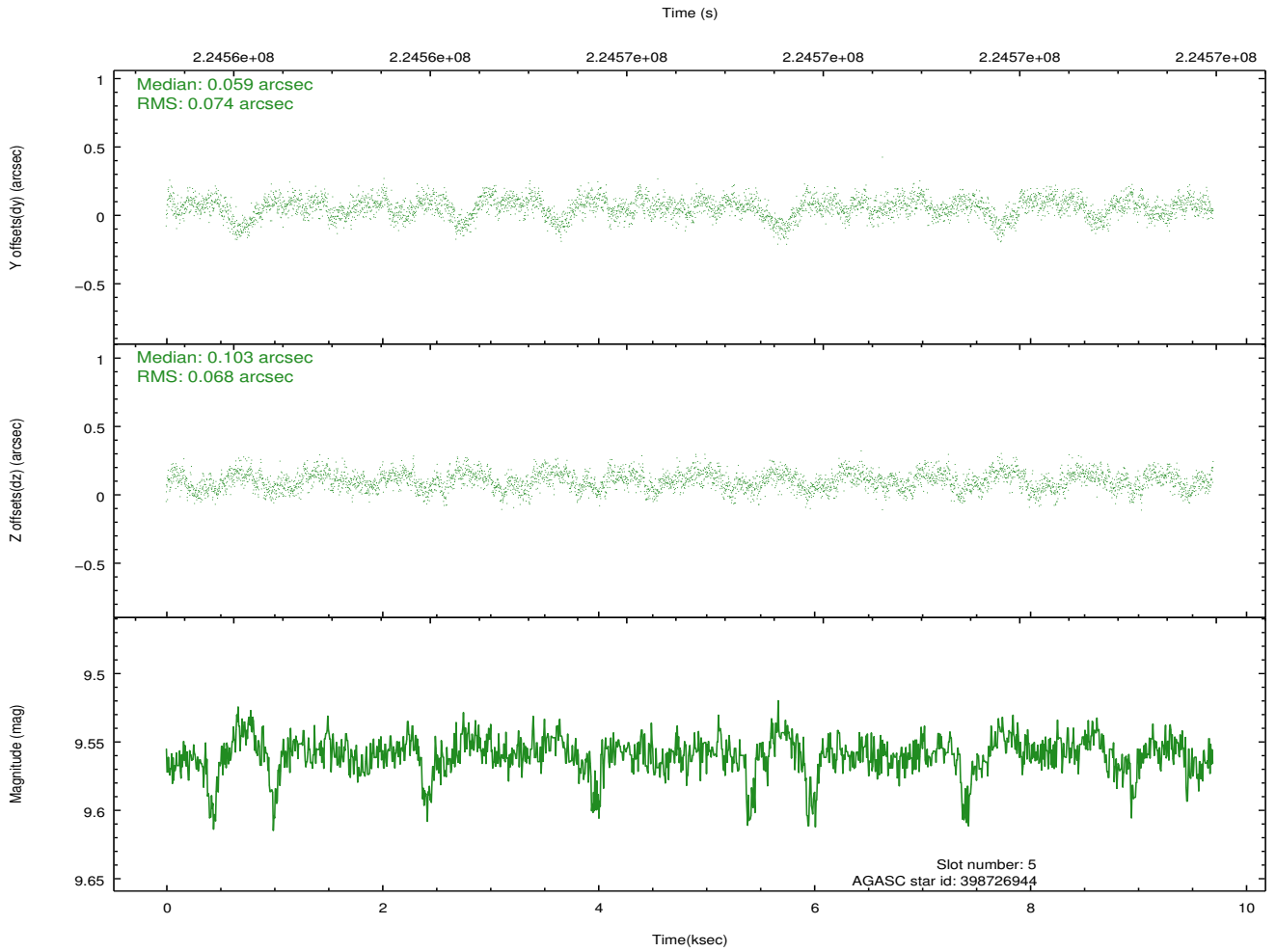
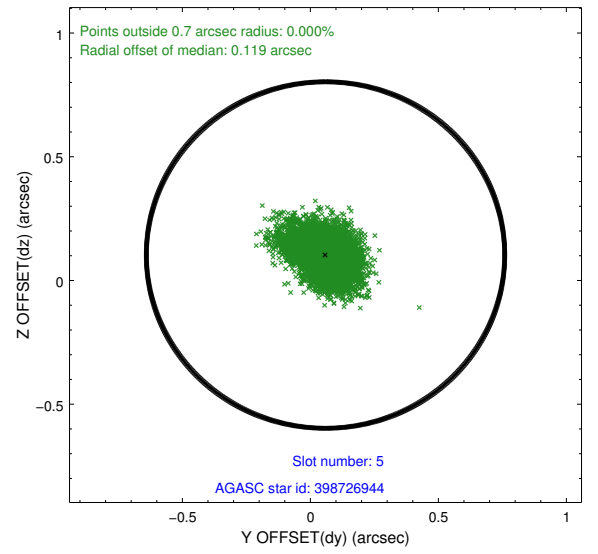
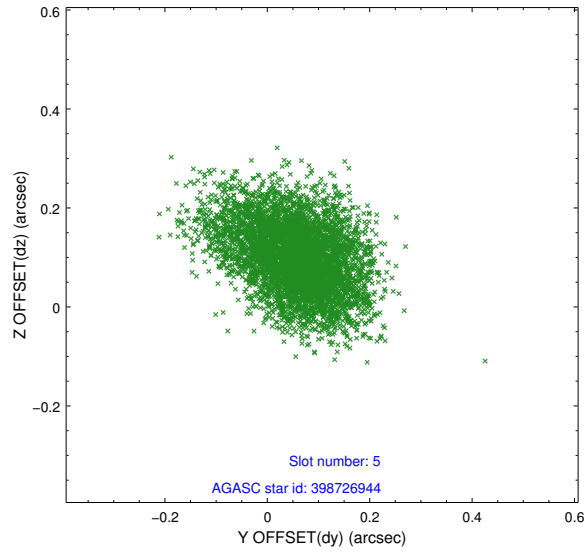
### 2.4.1 Slot 3



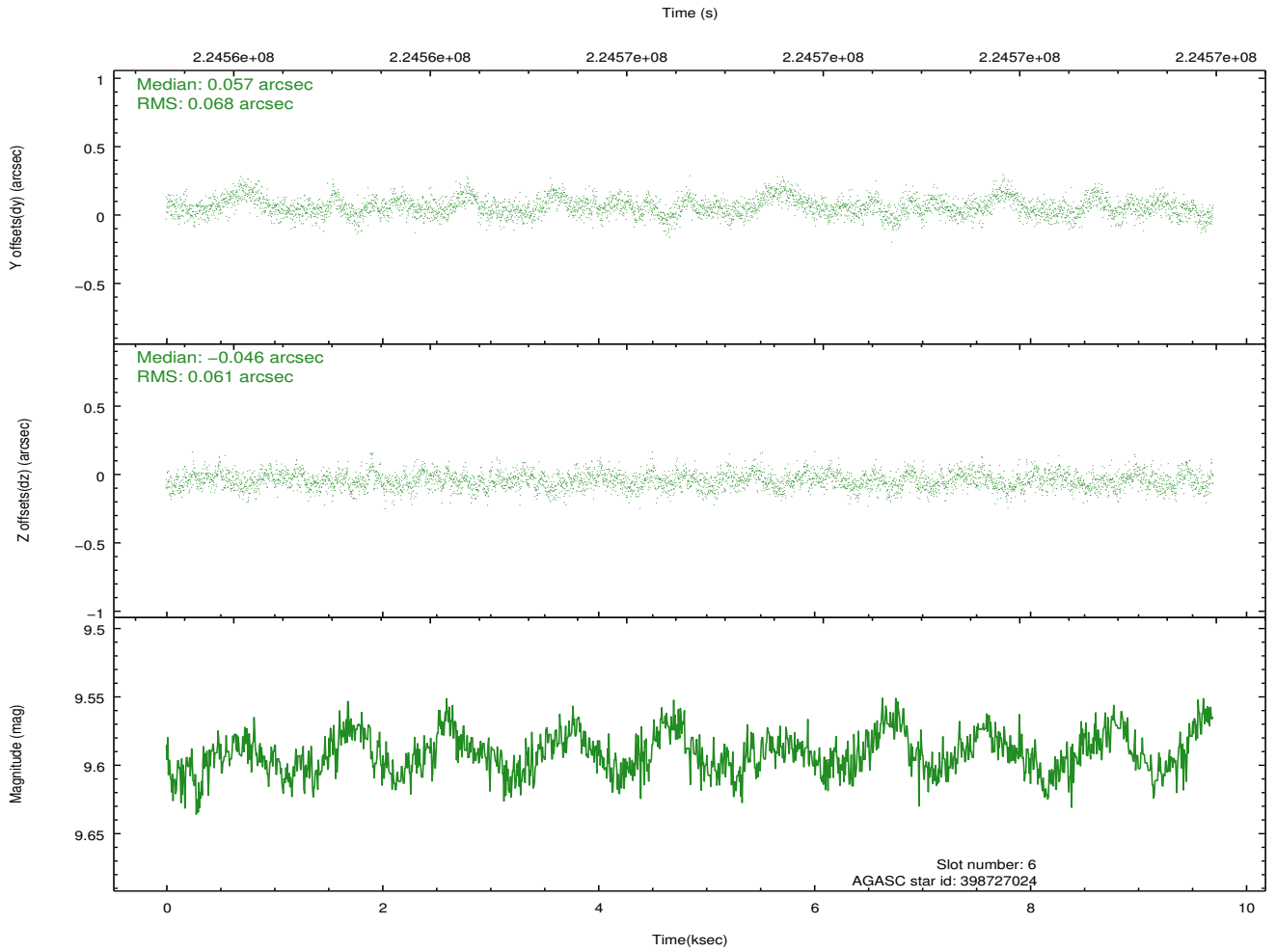
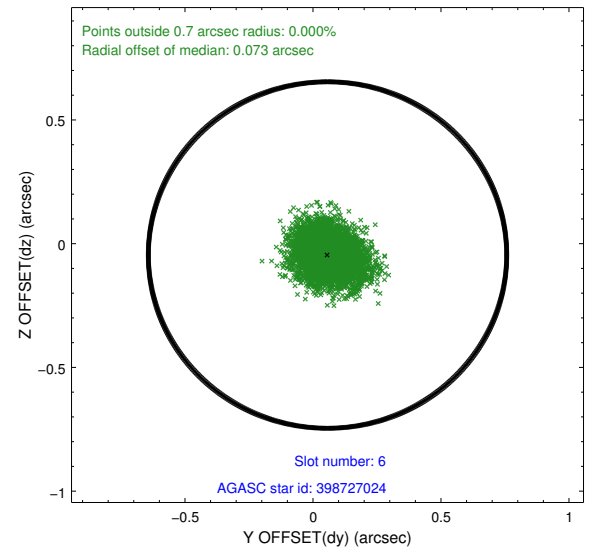
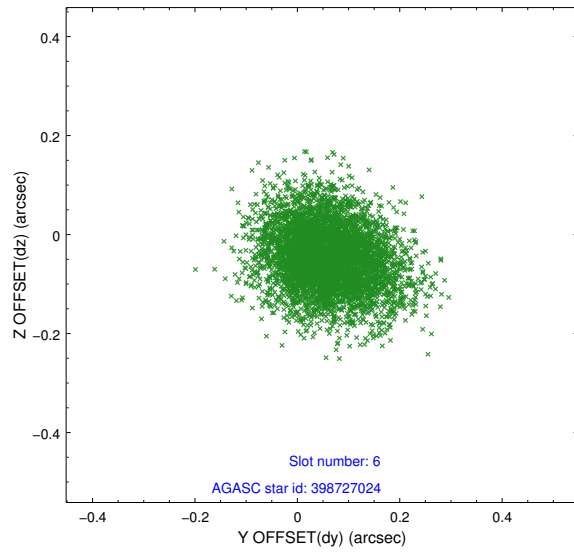
## 2.4.2 Slot 4



### 2.4.3 Slot 5

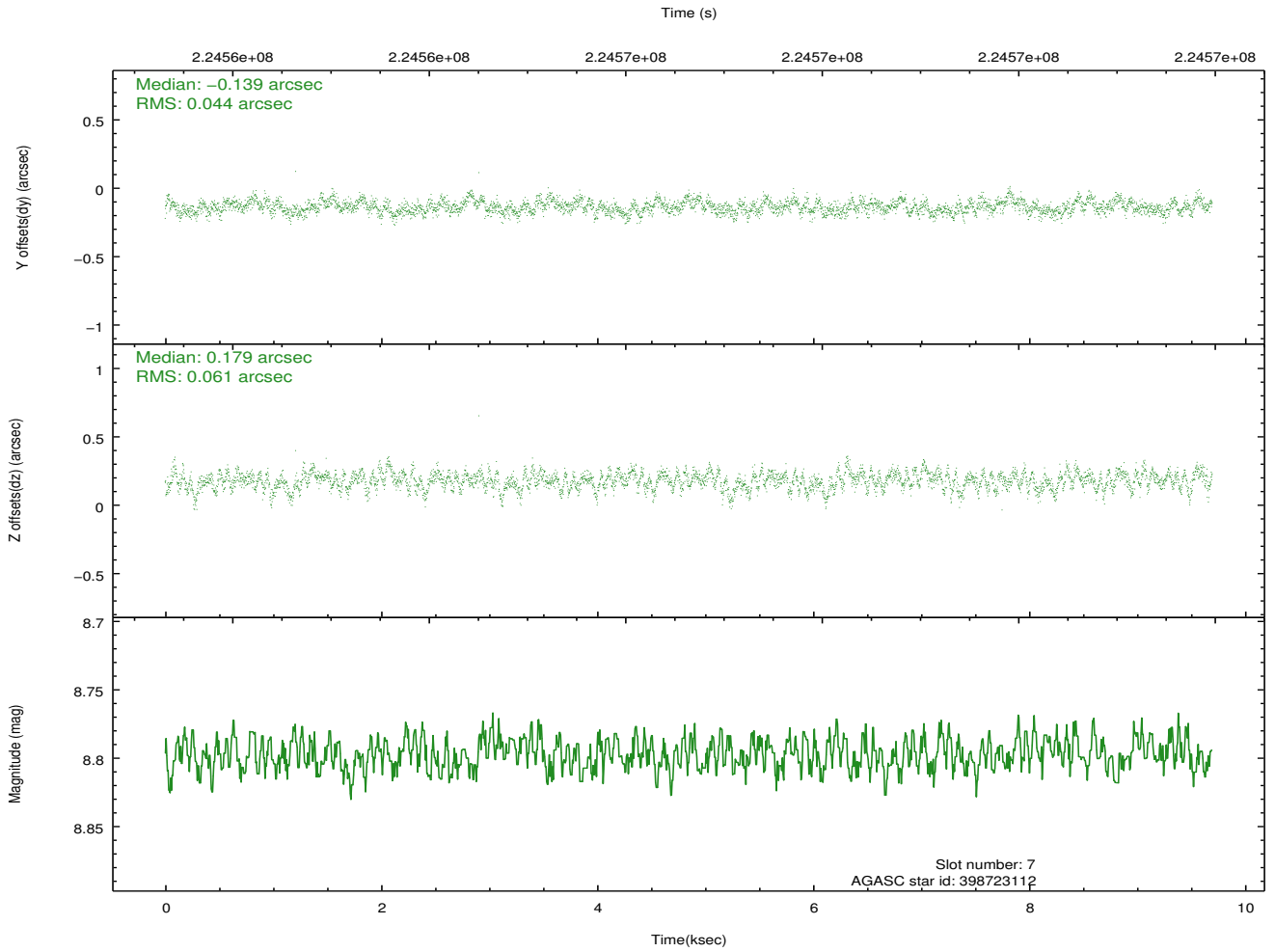
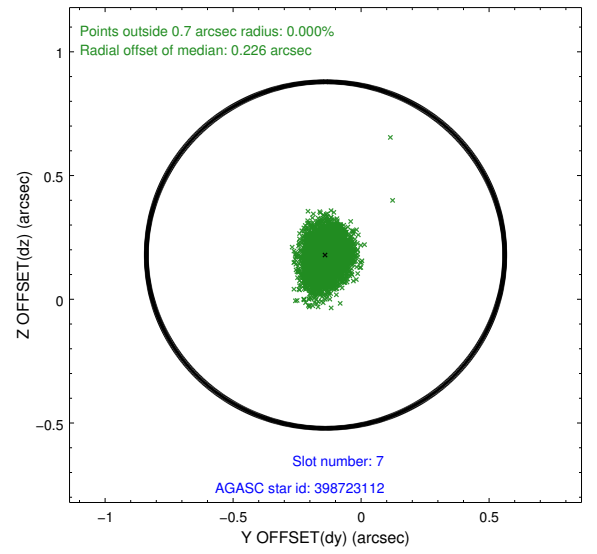
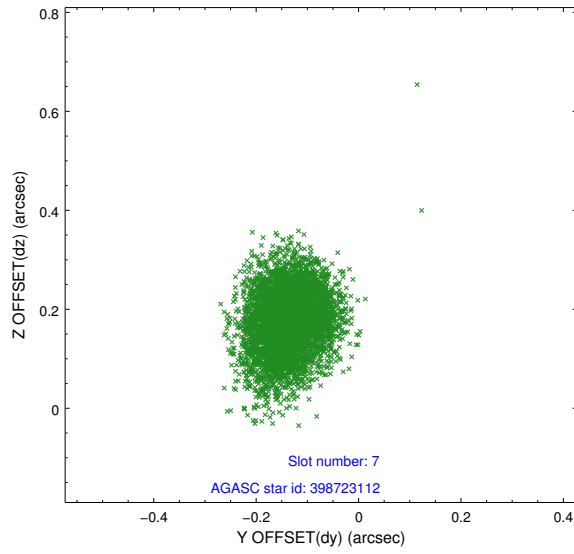


## 2.4.4 Slot 6



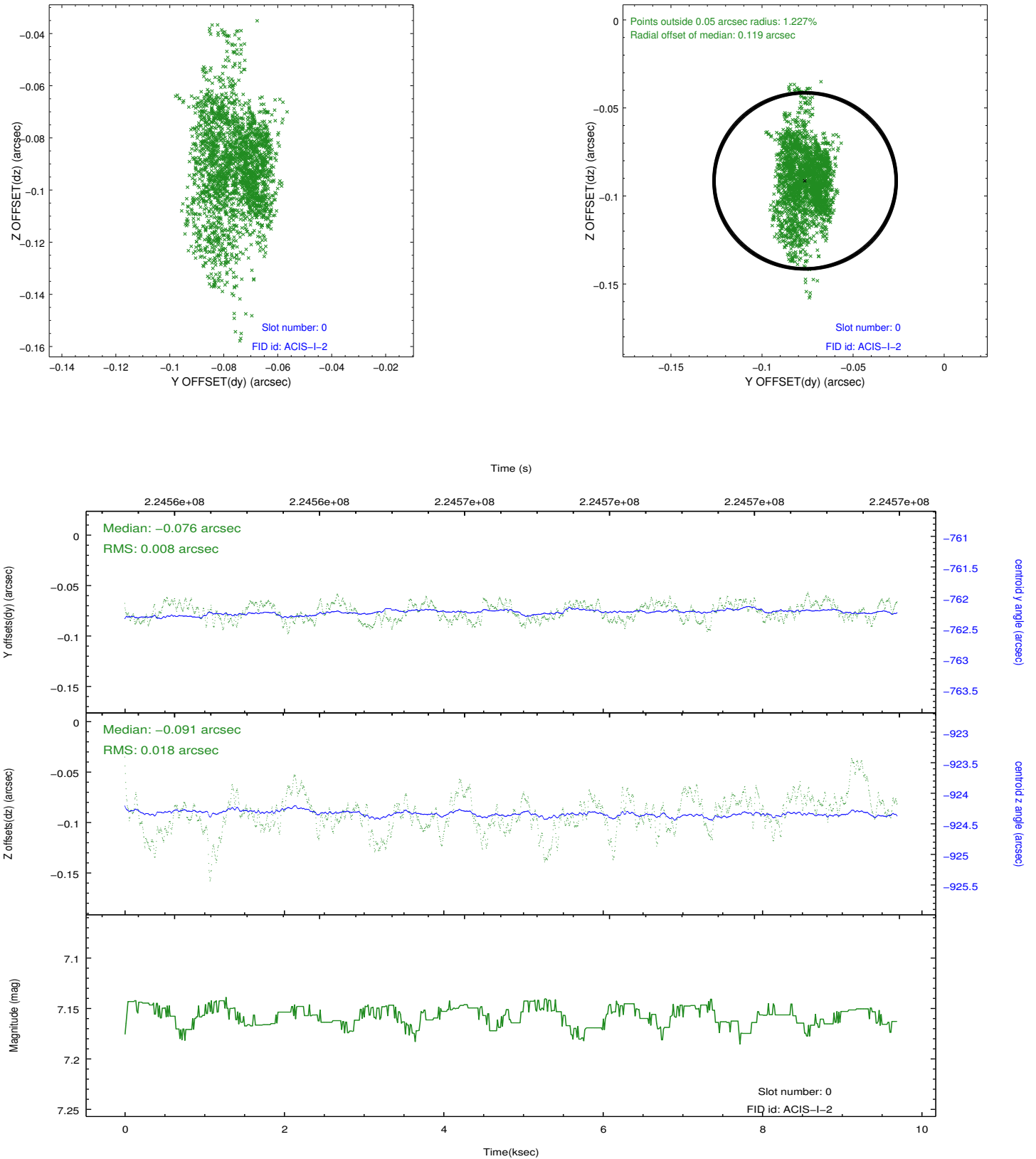


## 2.4.5 Slot 7

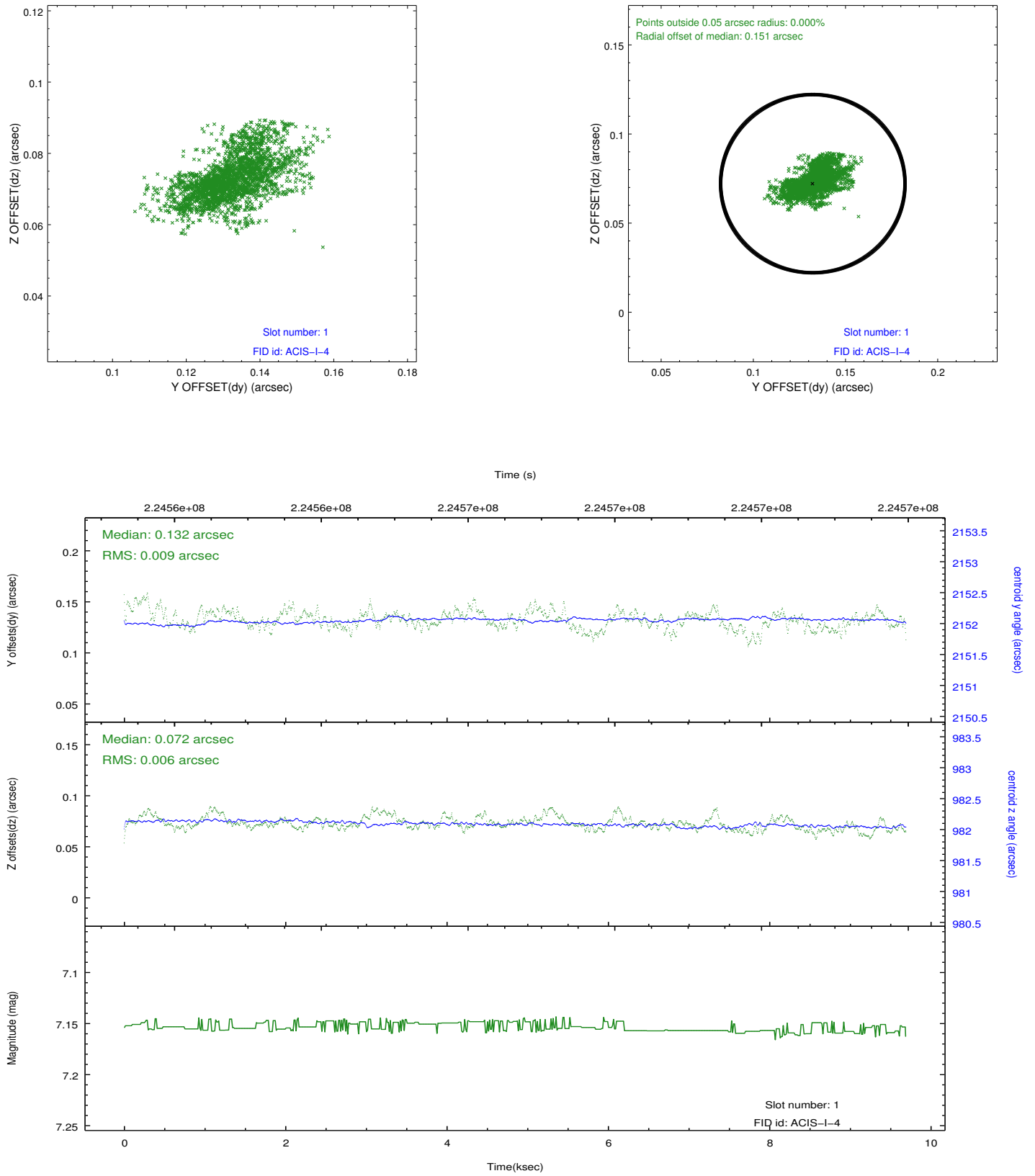


## 2.5 FID Slots

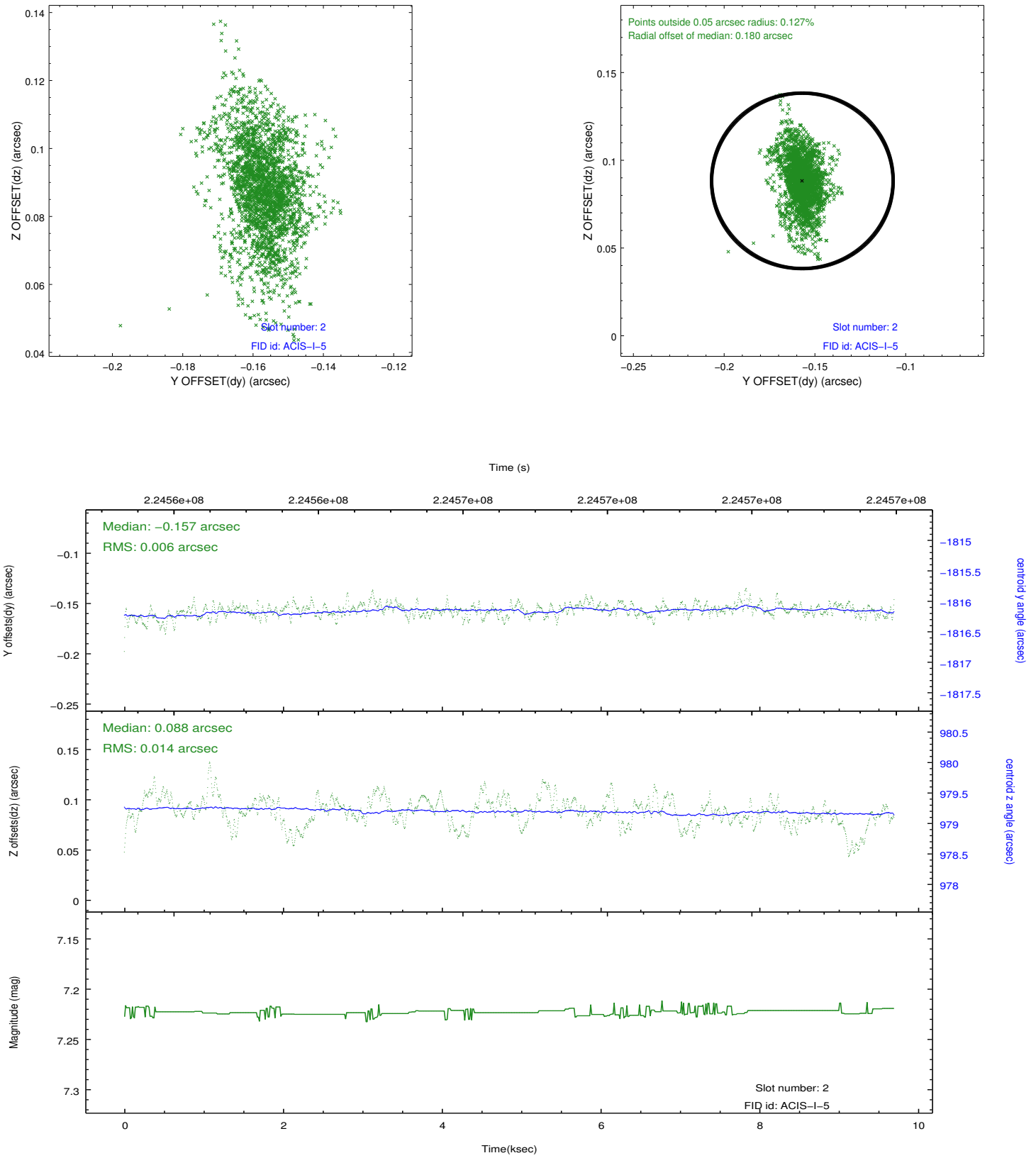
### 2.5.1 Slot 0



## 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)	2013.01.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.510799

### A.2 Comments