

HOME

IfA
Pan-STARRS
PS1 Trac
PS1 SC
PS1 Wiki
Nick's Analysis
Banana(direct)
STARGRASP

DOCUMENTATION

PSDC, Software
Hardware
Analysis
Catalog
The Archive
Management
SVN and Paths
System Admin

**SOURCE
BROWSER**

Software files
Hardware files

GOOOOGLE

Google Calndr
Google Docs
Google Mail

LAB APPS

CD/DVD Burner
Clocking Editor
Cluster Status
(" " by proxy)
Flash-o-matic
Lab Datastore
Metrology
Photos
Status Server
Lab Graphs

PS-1 APPS

PS1 Webcams

Conductor:

Summit Graphs
Dashboard
Data Store
Status Server
Netscan(dead)
Guide Video
Cell Video(old)

GPC1 Tuning Test Log

Correlated row noise and FITs file analysis

- 20091130 Summary

Craig and I started with the run 4 settings, used the modified RESET,VCLAMP and crosstrigger clocking from Sidik and tuned each quadrant of GPC individually with the biastool correction off. The quadrants of 15 OTAs have different device types, namely

AB= 2phase (lower right in data store)

CD= mixed 2phase and 3phase (upper right in data store)

EF= 3phase (upper left in data store)

GH= 2phase (lower left in data store)

The tuning involved changing the phase delay settings for the OTA clocking to minimize the rms values that John's otatool algorithm calculates for overscan,mask,row,plane and tilt.

To date, the best solution we have found is: ABCDEF 2 10 0 8, GH 12 21 10 19. These setting affect the phase delay of both OTAs controlled by one STARGRASP boardset. We made a few attempts to individually tune OTAs but didn't make much progress.

To check this we took two sets of GPC1 images with biastool applied

Exposure	RMSovscn				RMSmask				RMSrow				RMSpln				RMStilt			
AB CD EF 2 10 0 8, GH 12 21 10 19*****																	BETTER**			
c5156g0050b	5.8				6.4				6.2				6.1				6.0			
c5156g0051b	5.8				6.4				6.2				6.1				6.0			
c5156g0052b	5.8				6.4				6.2				6.1				6.0			
c5156g0053b	5.8				6.4				6.2				6.1				6.0			
Versus Run4 2 2 2 2																				
c5156g0054b	5.8				8.3				7.0				6.7				6.3			
c5156g0055b	5.9				8.4				7.1				6.8				6.3			
c5156g0056b	5.9				8.3				7.0				6.7				6.3			
c5156g0057b	5.8				8.3				7.0				6.7				6.3			

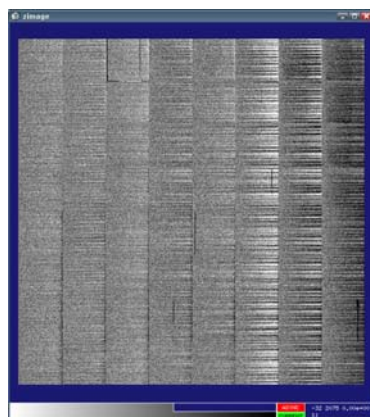
Using Gene's list of identified bad correlated noise OTAS, we generated jpegs for comparison:

```

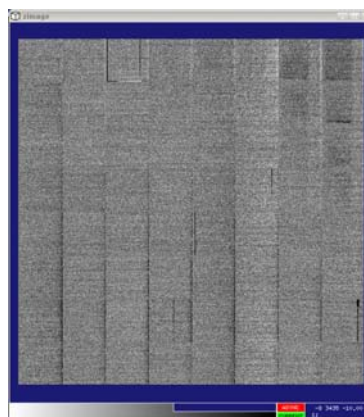
APPLY.XY02  B00L  TRUE
APPLY.XY12  B00L  TRUE
APPLY.XY22  B00L  TRUE
APPLY.XY27  B00L  TRUE
APPLY.XY32  B00L  TRUE
APPLY.XY45  B00L  TRUE
APPLY.XY47  B00L  TRUE
APPLY.XY51  B00L  TRUE
APPLY.XY55  B00L  TRUE
APPLY.XY57  B00L  TRUE
APPLY.XY61  B00L  TRUE
APPLY.XY65  B00L  TRUE
APPLY.XY67  B00L  TRUE
APPLY.XY75  B00L  TRUE

```

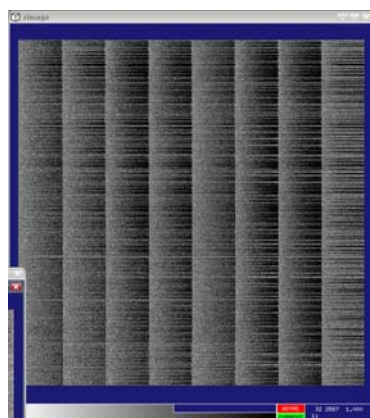
Comparing the new setting **Run4 2 2 2 2 versus ABCDEF 2 10 0 8, GH 12 21 10 19** for these OTAs with **biastool** applied. The stretch is -25 to 25 adu for each image.



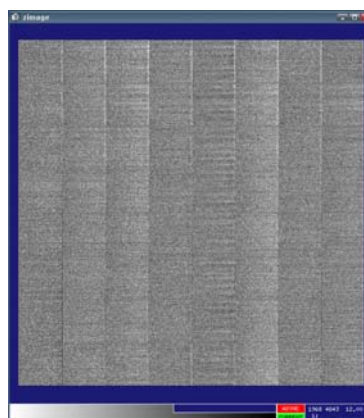
OTA02 2222,
10 0 8, GH 12 21 10 19



OTA02 ABCDEF 2



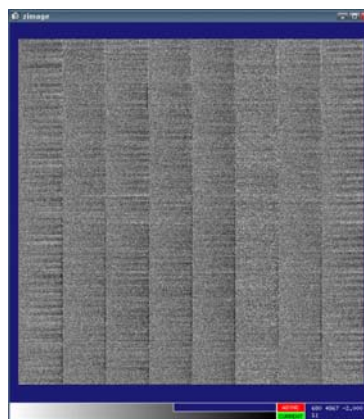
OTA12 2222,
10 0 8, GH 12 21 10 19



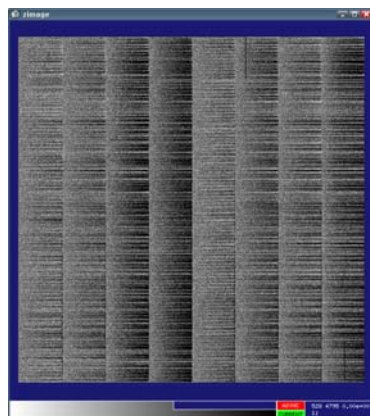
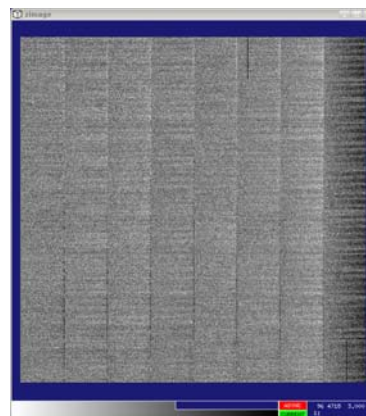
OTA12 ABCDEF 2



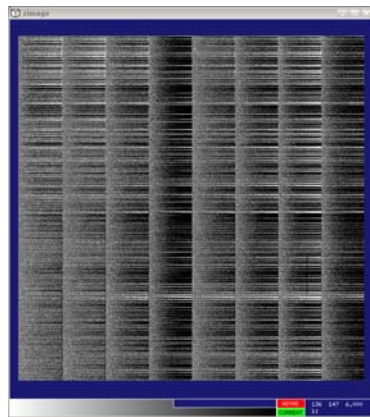
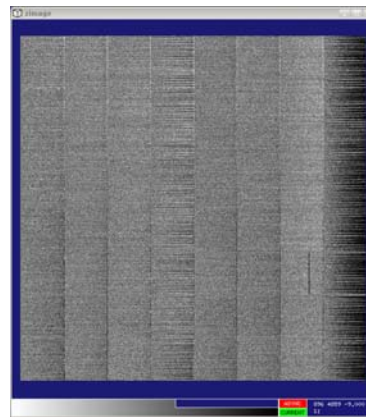
OTA22 2222,
10 0 8, GH 12 21 10 19



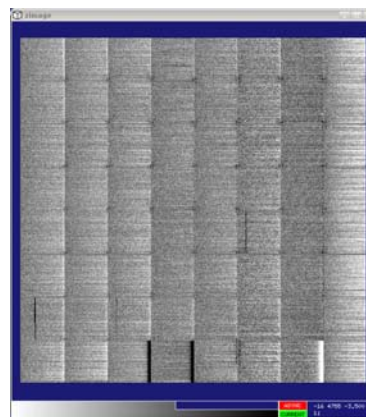
OTA22 ABCDEF 2

OTA32 2222,
10 0 8, GH 12 21 10 19

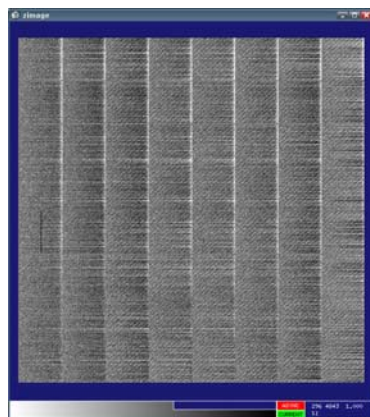
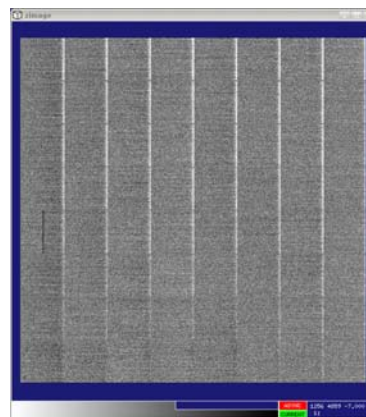
OTA32 ABCDEF 2

OTA45 2222,
10 0 8, GH 12 21 10 19

OTA45 ABCDEF 2

OTA47 2222,
10 0 8, GH 12 21 10 19

OTA47 ABCDEF 2

OTA51 2222,
10 0 8, GH 12 21 10 19

OTA51 ABCDEF 2