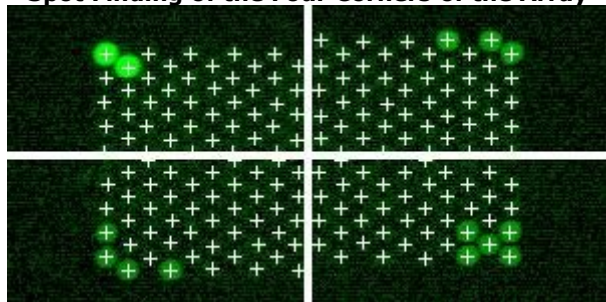


## QC Report - Agilent Technologies : 1 Color Gene Expression

Date	Friday, March 04, 2011 - 16:01	Grid	027516_D_F_20100501
Image	US81603235_252751610048_S01 [1_2]	BG Method	No Background
Protocol	GE1_107_Sep09 (Read Only)	Background Detrend	On(FeatNCRRange, LoPass)
User Name	rockstro	Multiplicative Detrend	True
FE Version	10.7.3.1	Additive Error	2(Green)
Sample(red/green)		Saturation Value	778048 (g)

### Spot Finding of the Four Corners of the Array

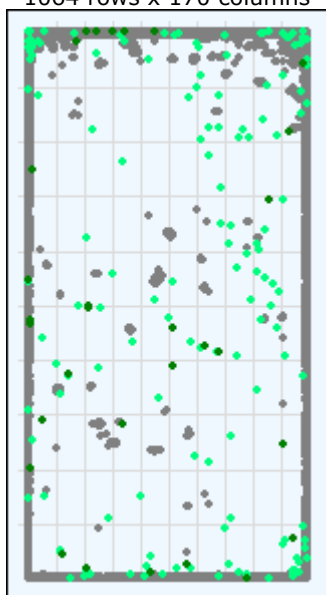


Grid Normal

Feature	Green	Local Background	Green
Non Uniform	34		0
Population	159		6543

### Spatial Distribution of All Outliers on the Array

1064 rows x 170 columns



# FeatureNonUnif (Green) = 34(0.02%)

# GeneNonUnif (Green) = 27 (0.015 %)

- BG NonUniform ● BG Population
- Green FeaturePopulation ● Green Feature NonUniform

### Net Signal Statistics

#### Agilent SpikeIns:

Green

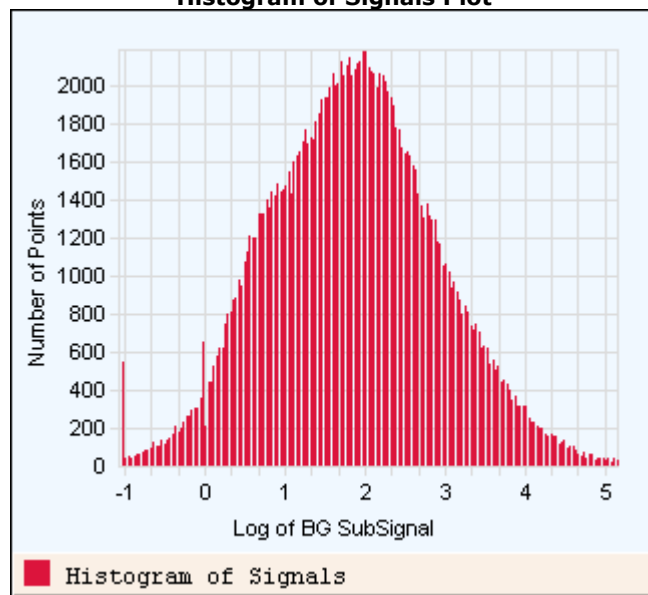
# Saturated Features	0
99% of Sig. Distrib.	256829
50% of Sig. Distrib.	566
1% of Sig. Distrib.	28

#### Non-Control probes:

Green

# Saturated Features	0
99% of Sig. Distrib.	16284
50% of Sig. Distrib.	73
1% of Sig. Distrib.	24

### Histogram of Signals Plot



# Features (NonCtrl) with BGSubSignal < 0: 15829 (Green)

### Negative Control Stats

Green

Average Net Signals	25.69
StdDev Net Signals	2.02
Average BG Sub Signal	-2.83
StdDev BG Sub Signal	1.89

### Local Bkg (inliers)

Green

Number	174337
Avg	25.16
SD	1.50

### Foreground Surface Fit

Green

RMS_Fit	0.80
RMS_Resid	2.20
Avg_Fit	34.19

### Multiplicative Surface Fit

Green

RMS_Fit	0.20
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### Reproducibility: %CV for Replicated Probes

Median %CV Signal (inliers)

Non-Control  
probes

Agilent SpikeIns

Green

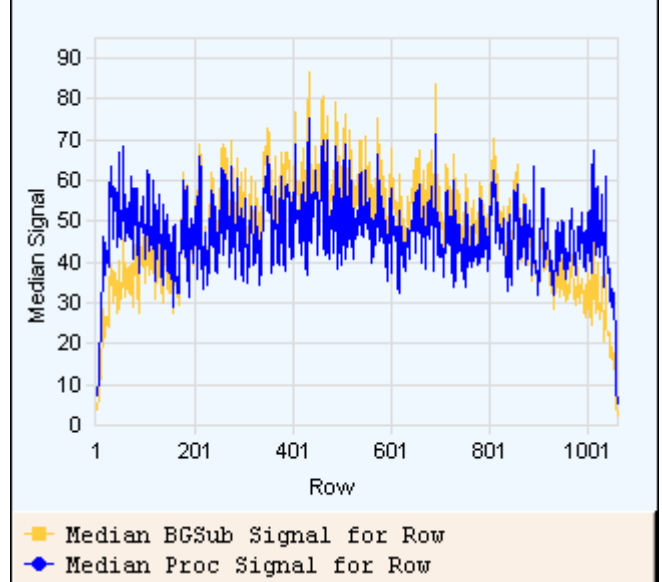
Green

BGSubSignal	20.37	22.87
ProcessedSignal	13.17	16.02

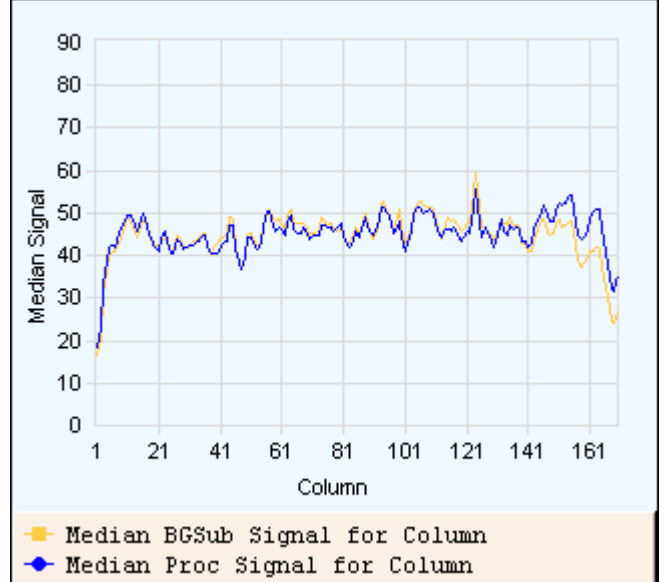
### Agilent SpikeIns Signal Statistics

Probe Name	Log (Relative Conc.)	Median (Log Proc. Sig.)	% CV	StdDev
(+)E1A_r60_3	0.30	1.00	40.83	0.22
(+)E1A_r60_a104	1.30	0.59	345.69	0.29
(+)E1A_r60_a107	2.30	1.53	16.30	0.07
(+)E1A_r60_a135	3.30	2.33	14.20	0.12
(+)E1A_r60_a20	3.83	2.64	19.26	0.16
(+)E1A_r60_a22	4.30	3.33	15.50	0.23
(+)E1A_r60_a97	4.82	3.94	16.02	0.13
(+)E1A_r60_n11	5.30	4.52	10.40	0.06
(+)E1A_r60_n9	5.82	4.79	19.88	0.20
(+)E1A_r60_1	6.30	5.33	18.92	0.11

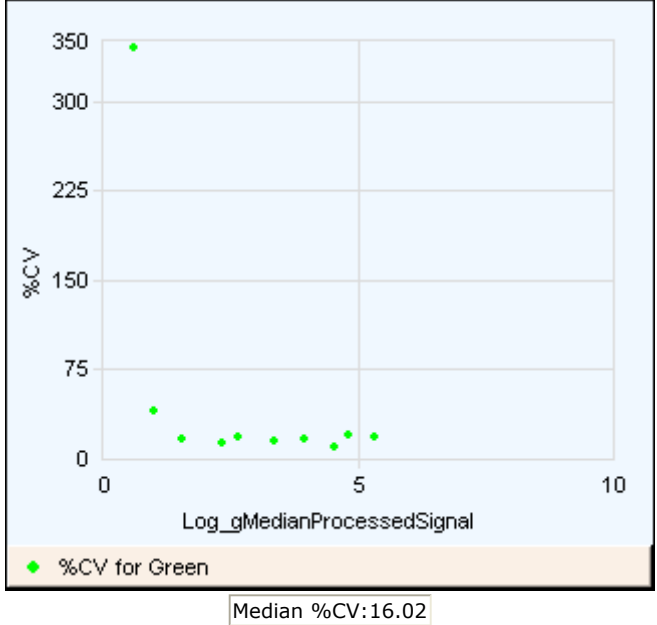
### Spatial Distribution of Median Signals for each Row



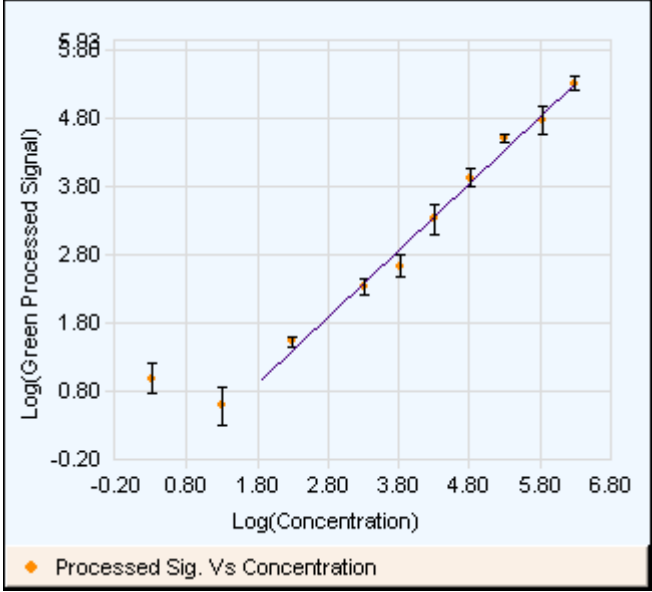
### Spatial Distribution of Median Signals for each Column



Agilent SpikeIns: %CV of Avg. Processed Signal Plot



Agilent SpikeIns: Log(Signal) vs. Log(Relative concentration) Plot



Evaluation Metrics for GE1\_QCMT\_Sep09 :

Good (8) ; Evaluate (2)

Metric Name	Value	Excellent	Good	Evaluate
IsGoodGrid	1.00		>1	<1
AnyColorPrcntFeatNonUn...	0.02		<1	>1
gNegCtrlAveNetSig	25.69		<40	>40
gNegCtrlAveBGSubSig	-2.83		-10 to 5	<-10 or >5
gNegCtrlSDevBGSubSig	1.89		<10	>10
gSpatialDetrendRMSFilt...	2.20		<15	>15
gNonCtrlMedCVProcSign...	13.17		0 to 8	<0 or >8
gE1aMedCVProcSignal	16.02		0 to 8	<0 or >8
absGE1E1aSlope	0.98		0.90 to 1.20	<0.90 or >1.20
DetectionLimit	1.57		0.01 to 2	<0.01 or >2

◆ Excellent ◆ Good ◆ Evaluate

Agilent Spike-In Concentration-Response Statistics  
Linear Range Statistics:

Low Signal	0.98
High Signal	5.74
Low Relative Concentration	1.88
High Relative Concentration	6.72
Slope	0.98
R^2 Value	0.99

Signal Detection Limit Statistics

Saturation Point	5.89
Low Threshold	0.65
Low Threshold Error	0.36
Spike-In Detection Limit	1.57