

Automated masking

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The automated masking was changed to focus on columns/rows and search for hot pixels that must be masked. The criteria for bad pixels was set to cases where the rate an individual pixel “fired” per event was more than 0.1%. Once a single bad pixel was found, either the entire column or row was flagged. The list of flagged columns/rows were output to separate txt files following the convention:

Sector/Ladder/Sensor/Column/Cut

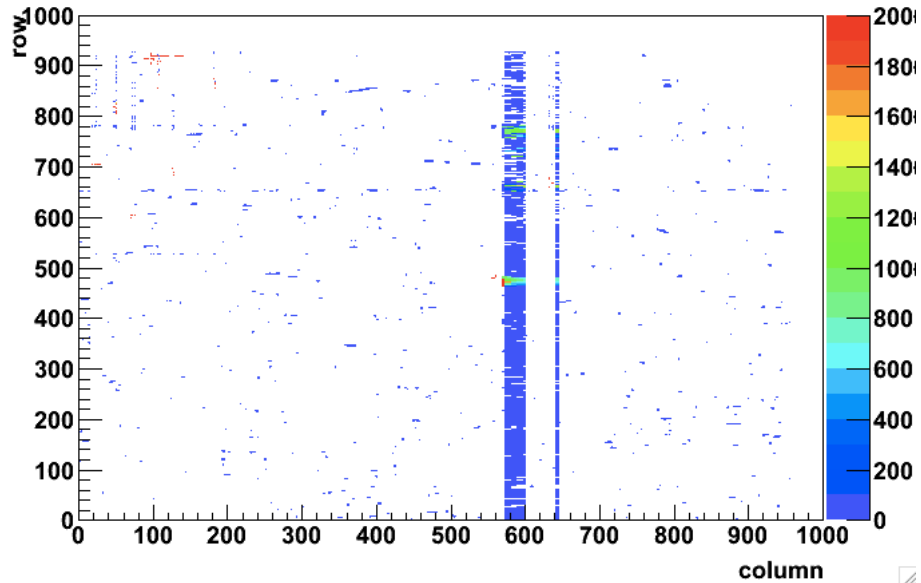
or

Sector/Ladder/Sensor/Row/Cut

As a proof of concept the flagged columns/rows were deleted and the results for run 14150049 (pp500 low luminosity) are shown in the following histograms:

Original Sensor Data

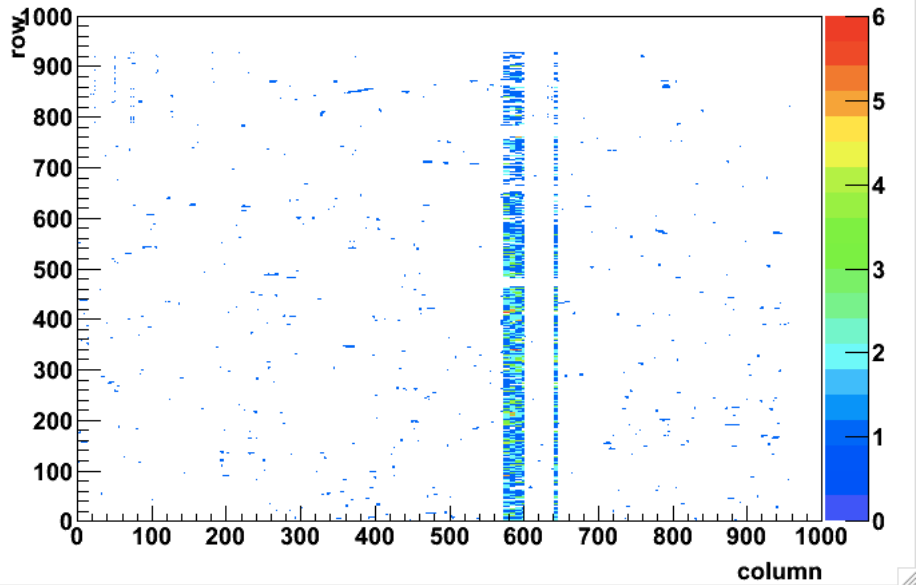
rawHit column vs. row: Sector 2 Ladder 2 Sensor 9



Sector 2 Ladder 2 Sensor 9

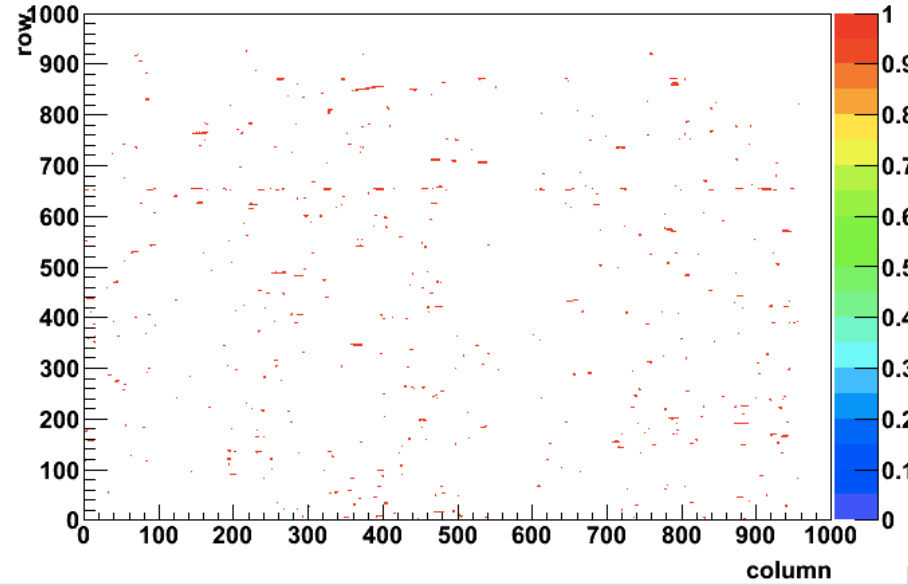
Masked Sensor Row

rawHit column vs. row: Sector 2 Ladder 2 Sensor 9



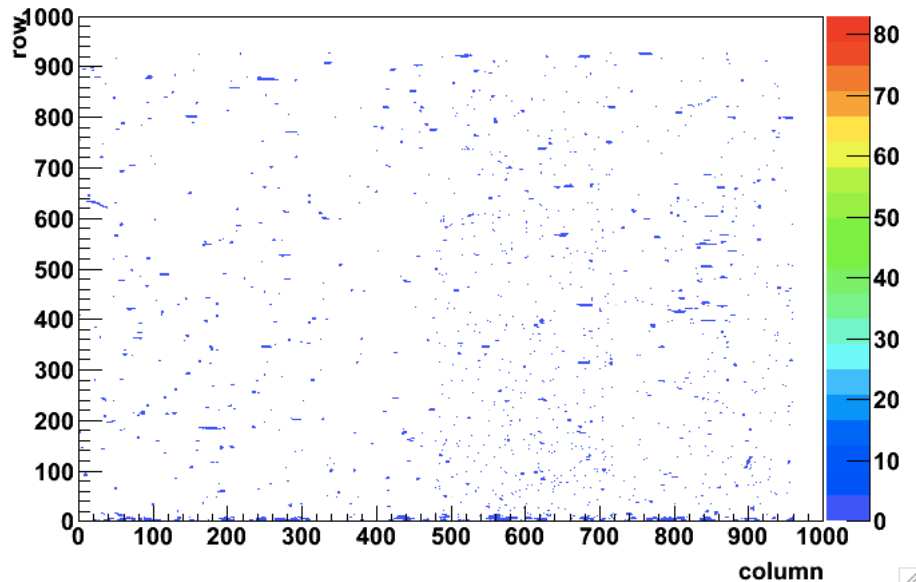
Masked Sensor Column

rawHit column vs. row: Sector 2 Ladder 2 Sensor 9



Original Sensor Data

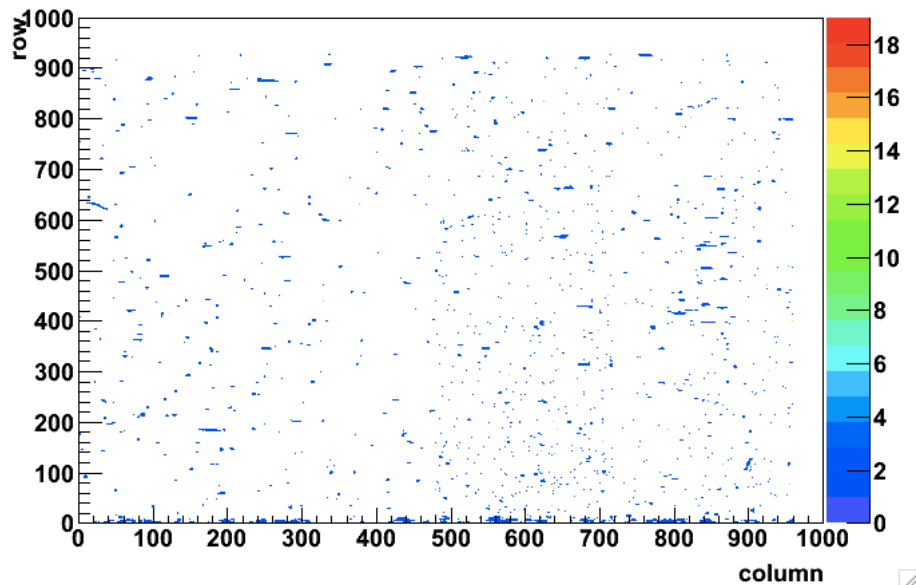
rawHit column vs. row: Sector 7 Ladder 4 Sensor 7



Sector 7 Ladder 4 Sensor 7

Masked Sensor Row

rawHit column vs. row: Sector 7 Ladder 4 Sensor 7



Masked Sensor Column

rawHit column vs. row: Sector 7 Ladder 4 Sensor 7

