

TPC Bad Channel Table and TPC Digitizer Module

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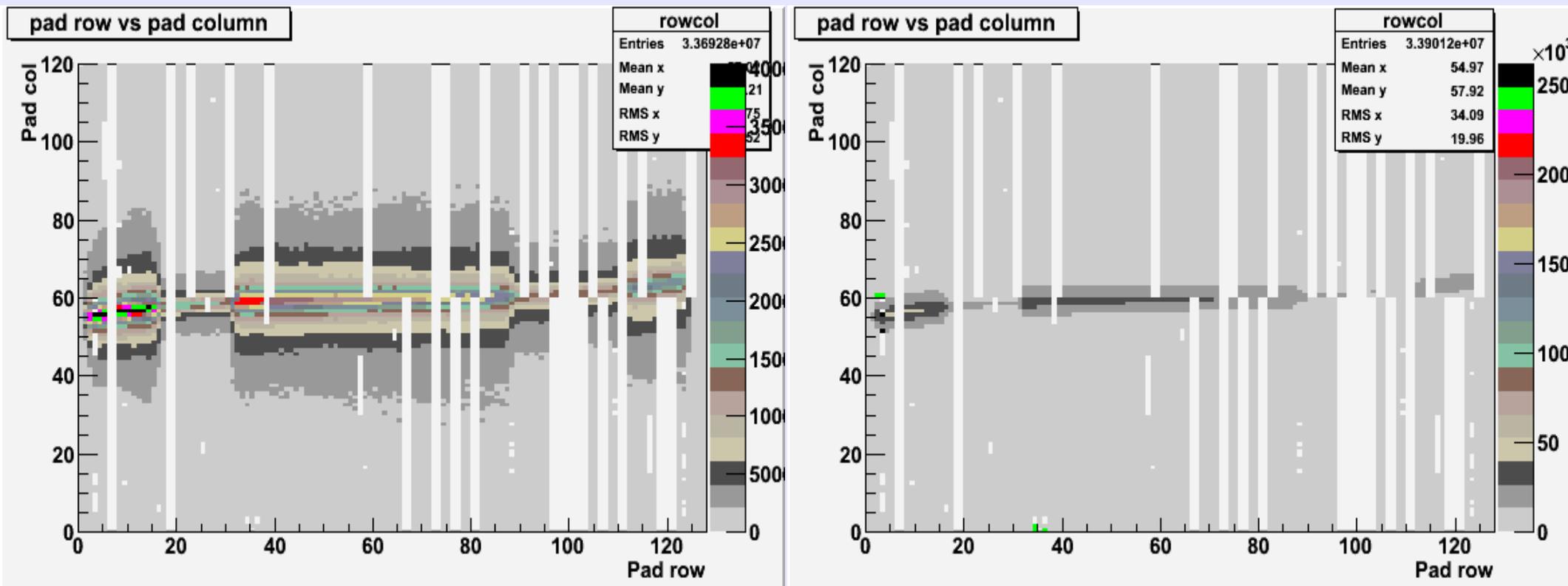
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- There are two functions in TPCBadChanTable interface class IsPadDead and IsPadHot
- These functions can be used in TPCDigitizer module to determine if the pads dead or hot.
- Now in TPCDigitizer, dead pads are fixed according to run number 15634. Hot pads are selected randomly (average number of hot pads is 6). All the buckets in the hot pad are defined as a hot voxel.
- There are also hot voxels other than hot pads. They are selected randomly in TPCDigitizer and average number of hot voxels is 400.
- In TPC Bad Channel Table, the hot pads are defined if the number of raw TPC digits per event is above 40 in a given pad.

Run 15860 Subrun 0 MC TPC Digit Distribution 120 GeV/c proton on Carbon target

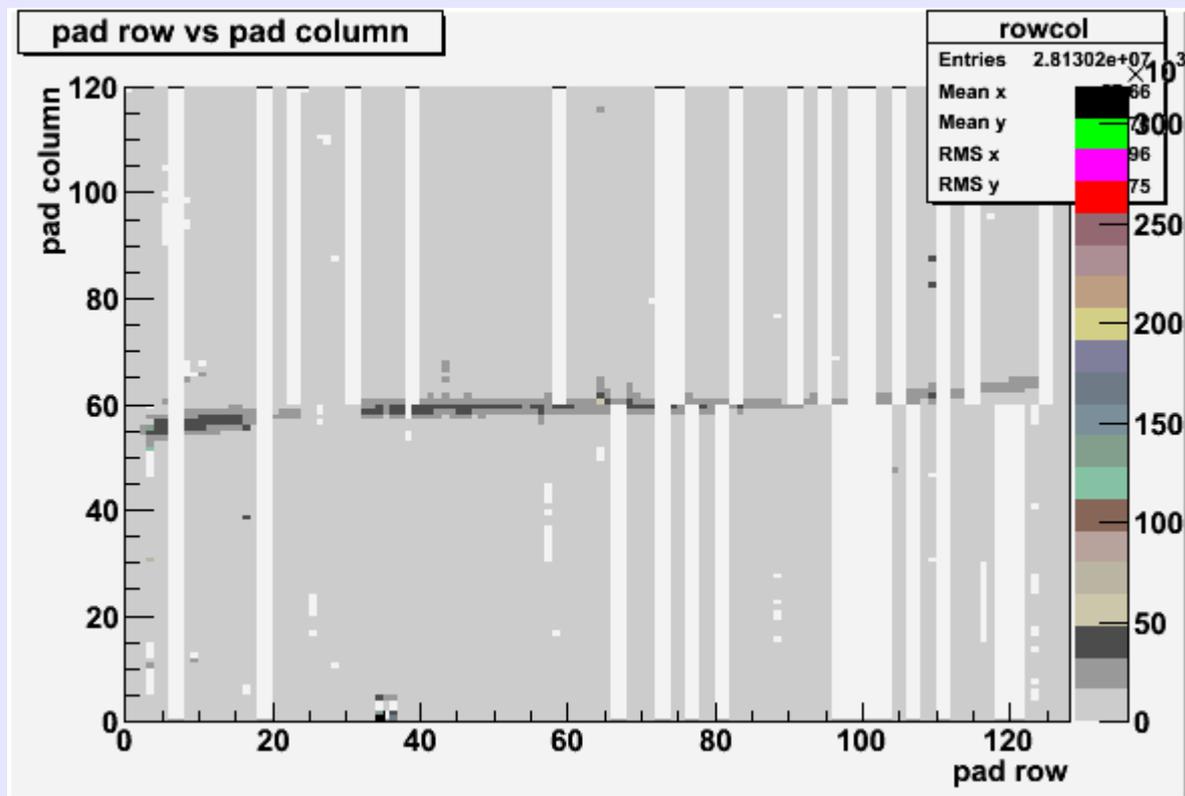
Randomly Selected hot pads

Hot Pads from database



- 3000 events were run. Dead pads were taken from database.
- Total number of tpc digits is close for both plots.
- The number of digits per event for randomly selected hot pad run: 11230
- The number of digits per event if hot pads are read out from database:11300

Run 15860 Subrun 0 Real Data TPC Digit Distribution

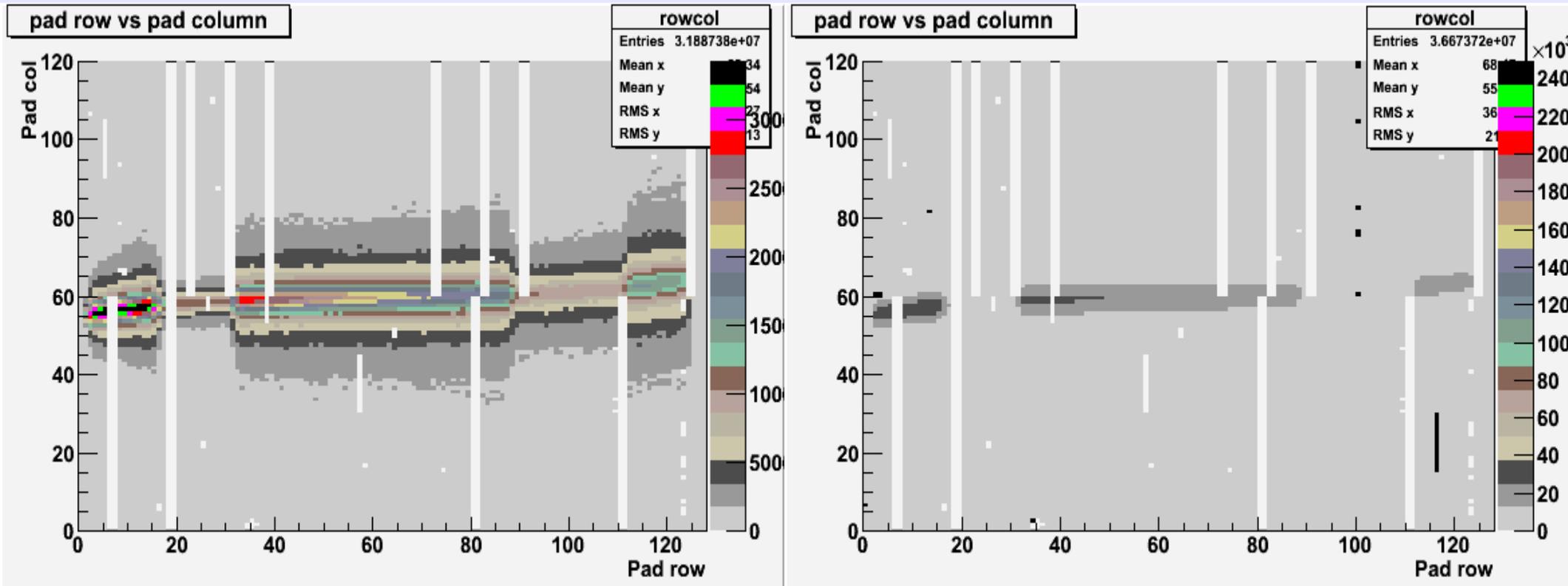


-The number of digits per event: 9376

Run 13526 Subrun 1 84 GeV/c LH2 target MC TPC Digit Distribution

Randomly selected hot pads

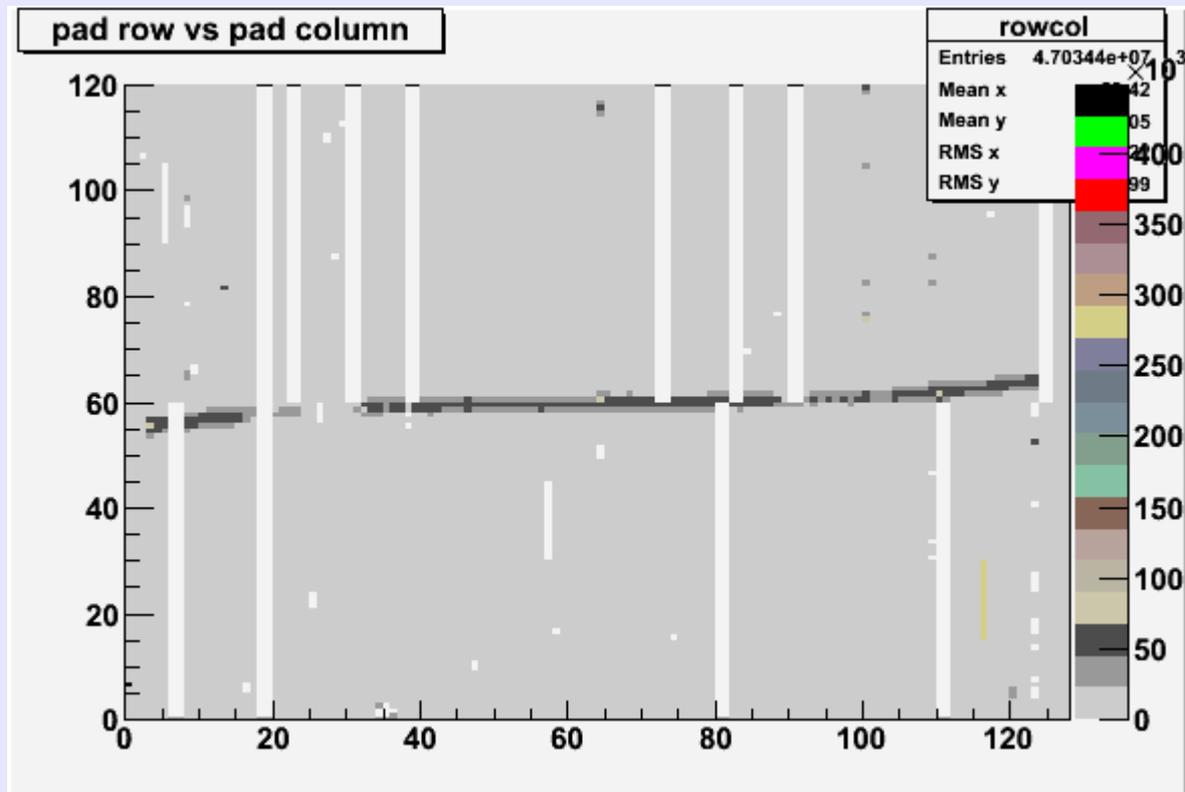
Hot pads from database



-The number of digits per event for randomly selected hot pad run: 10629

-The number of digits per event if hot pads are read out from database: 12224

Run 13526 Subrun 1 Real Data TPC Digit Distribution



The number of digits per event: 15678