

HotSpots Investigation

Catherine Silvestre (LPSC)

L1 EMCal Trigger

November 30, 2012

Aim

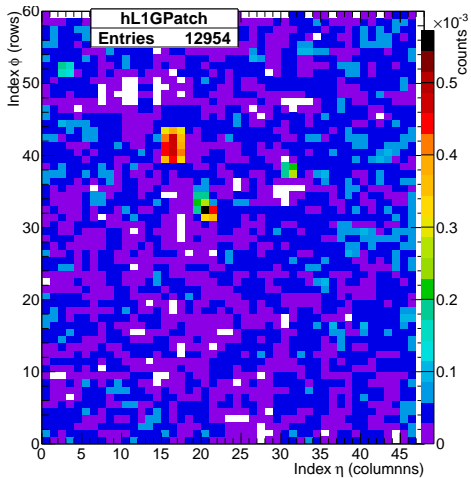
How sensitive are we to fake L1G trigger due to hot spots ?

- Study the $\eta : \phi$ coordinate of patches that are not related to energetic enough cells for different runs with hot spots
- 3 plots with FOR (normalized by the number of L1G events):
 - 1 L1 gamma patches
 - 2 L1 gamma patches with no cell at the same location that are energetic enough to trigger
 - 3 max L1 gamma patch in an event with no energetic cell in this event
- *If you have other suggestions of plots, let me know...*

- Run studied (for now): pp 188123
- Energy threshold used 10 GeV
- root file `/alice/cern.ch/user/c/csilvest/QA_trigger/outputMerged/QA`
- QA code:
`$ALICE_ROOT/PWGGA/EMCALTasks/AliAnalysisTaskEMCALTriggerQA.cxx`

L1GPatch

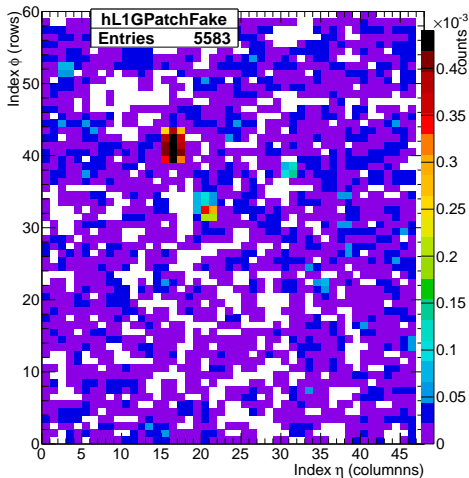
FOR with associated L1 Gamma Patches



2 hot spots visible.

L1GPatchFake

FOR with associated L1 Gamma Patches for which the cells at the same location are below the L1G threshold in the energy : fake patches

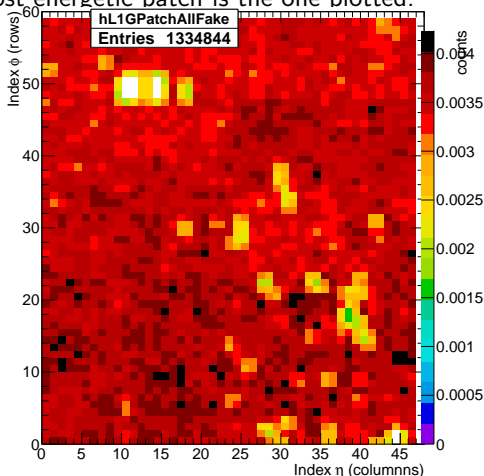


Almost half of the patches are fake.

Hot spots are not associated to energetic cells.

L1GPatchAllFake

FOR in events where none of the cells pass the L1G threshold : fake events. The most energetic patch is the one plotted.



Hot spots structure not here : most energetic fakes are not those of the hot spots...

I will add a 2D plot with all the patches of such fake events.