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# Studies of a high-pt trigger with the ALICE High-Level Trigger for p-p and Pb-Pb collisions

## Content :

The ALICE experiment has started data-taking of p-p collisions at  $\sqrt{s} = 7$  TeV early this year and is expected to see first Pb-Pb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV in November 2010.

Taking into account ALICE's limited storage capabilities, a high pt single particle trigger was studied in the High-Level Trigger to achieve a physics driven data-reduction and at the same time the enrichment of high pt charmonia in the stored data set. Input to the simulation is the measured performance of the on-line event reconstruction of the High-Level Trigger. The studies show that the efficiency is about 94% for pt-thresholds of 3 GeV/c while the purity drops to only 91%. Reduction factors of around 25 can be obtained.

In the upcoming Pb-Pb collisions the HLT will give an on-line estimate on centrality and multiplicity which will be studied for a further enhancement of the high pt trigger. The studies and measurements of the ALICE High-Level Trigger high pt capabilities in both p-p and Pb-Pb collisions will be discussed in this presentation.

## Collaboration :

for the ALICE Collaboration

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