

Abstract Submitted  
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**Jet-underlying event studies with ALICE detector at the LHC**

BETTY ABELEV<sup>1</sup>, LLNL — Relativistic heavy ion collisions produce a state of strongly interacting matter of quarks and gluons, called the Quark Gluon Plasma (QGP). Measuring particle production via fragmentation (specifically in jets) and understanding parton energy loss in the QGP enables one to directly probe the medium. One of the necessary components in studying jets in heavy ion events is the ability to isolate jets from the soft physics background, i.e., the underlying event. Thus it is important to understand the underlying event properties, in particular, energy fluctuations. This presentation will address the initial studies done to map out the underlying event in  $\sqrt{s} = 7$  TeV pp collisions measured with the ALICE detector at the LHC, as preparation for extending these studies to Pb-Pb collisions. The focus will be on the analyses performed with the ALICE Electro-Magnetic Calorimeter (EMCal). EMCal is especially well-suited for the measurement of high-momentum particles which are produced predominantly in jets and therefore is a useful tool in subtracting the jet cone from the underlying event.

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