**Very High Momentum Particle Identification Detector (VHMPID) for ALICE**[1] KAREN COSSYLEON, EDMUDNO GARCIA, Chicago State University, VHMPID COLLABORATION — We propose the construction of a new detector to extend the capabilities of the ALICE heavy ion experiment at the LHC (Large Hadron Collider) in the high transverse momentum ($p_T$) region. The proposed VHMPID detector performs charged hadron identification on a track-by-track basis in the $10 \text{ GeV/c} < p < 25 \text{ GeV/c}$ momentum range and provides ALICE with new opportunities to study parton-medium interactions at LHC energies. This capability will be unique to all LHC experiments and it builds on the already existing particle identification capabilities of the ALICE detector in the lower momentum range. It provides the opportunity to measure triggered and tagged particle jets, allowing for the first time identified charged hadron measurements in the parton fragmentation region. In this talk, we will describe the project, some results from preliminary beam tests of a new prototype and the physics possibilities that it will bring to ALICE.

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