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New Development in EPOS 2

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Since 2006, EPOS hadronic interaction model is being used for very high energy cosmic ray analysis. Designed for minimum bias particle physics and used to have a precise description of SPS and RHIC heavy ion collisions, EPOS brought more detailed description of hadronic interactions in air shower development. Thanks to this model it was possible to understand why there was less muons in air shower simulations than observed in real data. With the start of the LHC era, a better description of hard processes and collective effects is needed to understand deeply the incoming data. I will describe the basic physics in EPOS and the new developments and constraints which are taken into account in EPOS 2, and their consequences on air shower development.

Primary author: Dr PIEROG, Tanguy (KIT, IK) **Co-author:** Prof. WERNER, Klaus (SUBATECH)

Presenter: Dr PIEROG, Tanguy (KIT, IK)

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