

Update on the WHISP combined analysis of muon measurements from air shower experiments

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I am presenting an update of the results from the Working group on Hadronic Interactions and Shower Physics (WHISP) on the meta-analysis of muon measurements. In this analysis, muon data from several experiments from a few PeV to tens of EeV were combined and studied in a unified framework. Above 10 PeV, we find a muon excess with respect to simulations for all hadronic interaction models considered. This excess is increasing with shower energy, and for the models EPOS-LHC and QGSJet-II.04 the slope of the increase is found to be significant with more than 8 sigma. In this talk we review the analysis and show an investigation of the influence of each experiment on the positive slope of the z-scale and its significance.

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