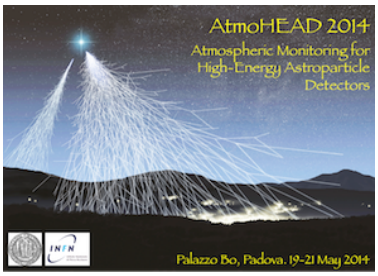


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# Monte Carlo simulations of atmospheric showers in the future

*Tuesday, 20 May 2014 16:00 (30 minutes)*

Last year, the air shower simulation model CORSIKA had a major release opening new windows in term of uncertainty due to hadronic interaction models and of simulation time. On the one hand, the two hadronic models EPOS and QGSJETII were updated taking into account new LHC data. As a consequence the uncertainties in air shower observables were reduced by about a factor of 2 at the highest energies. On the second hand, two new possibilites of running CORSIKA was introduce: either in a parallel mode on big CPU clusters allowing the simulation of unthinned showers in a reasonable time, or using cascade equations to reduce the simulation time by about of factor of 10 on a single CPU. All these improvements togehter with future developments will be presented.

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