

Abstract Submitted
for the APR09 Meeting of
The American Physical Society

Extensive air shower simulation: 10^{19} eV and beyond BENJAMIN STOKES, Department of Physics and Astronomy, Rutgers, The State University of New Jersey, TELESCOPE ARRAY COLLABORATION — The history of ultra-high energy cosmic ray observation is now approaching 50 years. However, until quite recently, the full simulation of an extensive air shower was computationally impossible due to the vast quantity of daughter particles involved. However, with the advent of modern cluster computing, simulations that once would have taken years to complete can be done in a matter of hours or even minutes. Full shower simulations produced by a parallelization scheme employing the Karlsruhe Extensive Air Shower Simulation Code (CORSIKA) will be presented in conjunction with a “dethinning” technique that attempts to recover information lost by the CORSIKA statistical thinning algorithm.

Benjamin Stokes
Department of Physics and Astronomy,
Rutgers, The State University of New Jersey

Date submitted: 13 Jan 2009

Electronic form version 1.4