

Abstract Submitted  
for the SES08 Meeting of  
The American Physical Society

**Adaptation of a Fortran-Based Monte-Carlo Microscopic Black Hole Simulation Program to C++ Based Root** C.M. JENKINS, R. GODANG, University of South Alabama, M. CAVAGLIA, L. CREMALDI, D. SUMMERS, University of Mississippi — The 14 TeV center of mass proton-proton collisions at the LHC opens the possibility for new Physics, including the possible formation of microscopic black holes. A Fortran-based Monte Carlo event generator program called CATFISH (**C**ollider **g**r**A**vi**T**ational **F**ield **S**imulator for black **H**oles) has been developed at the University of Mississippi to study signatures of microscopic black hole production (<http://www.phy.olemiss.edu/GR/catfish>). This black hole event generator includes many of the currently accepted theoretical results for microscopic black hole formation. High energy physics data analysis is shifting from Fortran to C++ as the CERN data analysis packages HBOOK and PAW are no longer supported. The C++ based root is replacing these packages. Work done at the University of South Alabama has resulted in a successful inclusion of CATFISH into root. The methods used to interface the Fortran-based CATFISH into the C++ based root will be presented. Benchmark histograms will be presented demonstrating the conversion. Preliminary results will be presented for selecting black hole candidate events in 14 TeV/ center of mass proton-proton collisions.

Charles Jenkins  
University of South Alabama

Date submitted: 18 Aug 2008

Electronic form version 1.4