Nuclear/Particle Seminar
Wednesday March 30th, 2005
4:00 pm Room 705 Pupin

Dr. Andy Haas, Columbia University

"Latest Results of the Search for Neutral Higgs Bosons at D0"

Many extensions of the Standard Model, such as Supersymmetry, can predict an enhanced coupling of neutral Higgs bosons to the bottom quark. 260 pb^-1 of data from the D0 detector at Fermilab has been used to search for the production of neutral Higgs bosons in association with a pair of bottom quarks, where the Higgs decays to yet another bottom quark pair (pp->bbh->bbbb). The data agree well with SM backgrounds, as derived from data and verified with Monte Carlo simulations. Results are interpreted in the MSSM, and currently provide the most stringent limits on tanB for neutral Higgs masses beyond the kinematic reach of the LEP experiments.