

CU Physics Department Particle Seminar

Wednesday, September 12, 2007 705 Pupin Hall 1:00 PM

PROFESSOR BRUCE KNUTESON, MIT

“Global Analysis of CDF High- p_T Data”



Data collected in Run II of the Fermilab Tevatron are searched for indications of new electroweak scale physics. Rather than focusing on particular new physics scenarios, CDF data are analyzed for discrepancies with respect to the Standard Model prediction. A model-independent approach considers the gross features of the data, and is sensitive to new large cross section physics. A quasi-model-independent approach emphasizes events with large summed scalar transverse momentum, and is particularly sensitive to new electroweak scale physics. This systematic study of over 300 event types, over 16,000 event properties, and over 2 million individual events collected at the energy frontier represents one of the most encompassing tests of the Standard Model to date.

