getting ready for the LHC

moderator: J. Lykken
your world is about to change
Tonight’s Lineup

- Gordon Kane (Michigan)
- Giacomo Polesello (CERN ATLAS)
- Maria Spiropulu (CERN CMS)
- virtual Konstantin Matchev (Florida CMS)
- Howard Baer (Florida State)
- Tao Han (Madison)
- Tilman Plehn (Edinburgh/MPI)
- You
LHC Olympics

CERN 25-26 July 2005 and 9-10 Feb 2006
next meeting: 24-25 August 2006 KITP
West Coast LHC Theory Network

http://www.slac.stanford.edu/~mpeskin/LHCTheory/
LBNL 3 Feb 2006, UCSD 5 May 2006
next meeting: ?
LPC Physics Group @ FNAL

http://www.uscms.org/LPC/physics/physics.html
biweekly meetings at Fermilab + VRVS
highest density of USCMS experimenters gearing up for physics analysis
LHC Theory Initiative

- http://www.pas.rochester.edu/~orr/LHC-TI.html
- most recent meeting: 17 May 2006, Madison
- seeking NSF funding
- Jon Bagger, Uli Baur, Sekhar Chivukula, JoAnne Hewett, Fred Olness, Lyn Orr, ...
CERN Theory Dept Workshops

- KITP-style thematic programs at CERN
- starting in 2007
“Physics at the Large Hadron Collider”

- program at the KITP Santa Barbara
- dates: 4 Feb 2008 to 20 June 2008
- organizers: Csaba Csaki, Tao Han, JoAnne Hewett, James Wells
Evidence for squark and gluino production in pp collisions at $\sqrt{s} = 14$ TeV

CMS collaboration

Abstract

Experimental evidence for squark and gluino production in pp collisions $\sqrt{s} = 14$ TeV with an integrated luminosity of 97 pb$^{-1}$ at the Large Hadron Collider at CERN is reported. The CMS experiment has collected 320 events of events with several high $E_T$ jets and large missing $E_T$, and the measured effective mass, i.e. the scalar sum of the four highest $p_T$ jets and the event $E_T$, is consistent with squark and gluino masses of the order of 650 GeV/$c^2$. The probability that the measured yield is consistent with the background is 0.26%.

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Lyn Evans’ worst nightmare