

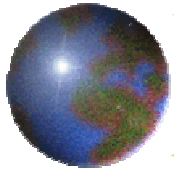
TeV4LHC

Welcome

Dan Green

Fermilab

September 16, 2004



TeV4LHC

First Meeting 15 - 18 Sept. '04 (Verona) • Midterm meetings at Brookhaven & CERN • Final meeting at Veronab, Fall '05

TeV4LHC WORKSHOP



*Using the data & experience
from the Tevatron
to prepare for the LHC*

TeV4LHC Organizing Committee:
Georges Azaulot (U. Montreal)
Ulrich Baur (SUNY at Buffalo)
Marcela Carena, Chair (FNAL)
Sally Dawson (RNL)
Dan Green (FNAL)
Ian Hinchliffe (LBL)
Young-Kee Kim (U. Chicago)
Joe Lykken (FNAL)
Stephen Mrenna (FNAL)
Heidi Schellman (Northwestern)
John Womersley (FNAL)

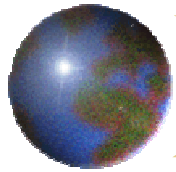
Working Groups
QCD, Top & Electroweak Physics,
Higgs, and Physics Landscape.

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Information & Registration: <http://conferences.fnal.gov/tev4lhc/>

Fermilab National Accelerator Laboratory • 300 North Dearborn Street, Batavia, IL 60007

Welcome on behalf of the organizers and Fermilab as the US CMS host laboratory to the **first meeting.**



Fermilab and TeV4LHC

Director's Corner

Good Morning!

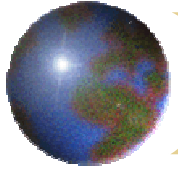
This week we host a workshop here called TeV4LHC. The purpose of this workshop is "to bring together the Tevatron and LHC experimental groups and the theoretical community to make the best possible use of data and experience from the Tevatron in preparing for the LHC experimental program."



Mike Witherell

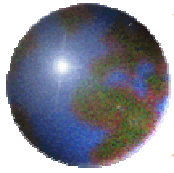
Twenty years ago Fermilab benefited from the experience at the CERN SppS in starting up the Tevatron collider program. Accelerator and experimental lessons learned there were used to inform the newer program here. Many new ideas were added here, of course, most notably the superconducting magnets that extended the energy reach well beyond that of the CERN collider.

The LHC accelerator and detectors are in many ways very advanced compared to what was possible to build twenty years ago, and they will have to operate in a much more challenging environment. But many lessons learned with hard experience at the Tevatron will make it possible for the LHC program to get a fast start. Everything we do in our field builds on the accomplishments of the past.

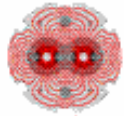


Connections and Synergies

- ✦ There are clear connections between the Tevatron experimental physics program and the LHC experiments – let's strengthen them
- ✦ In addition, there is also a need for theoretical guidance in preparing realistically for the LHC program – e.g $WWjj$ (recall Wjj in the Tevatron top search).
- ✦ We ask that the WGs gird up for a long haul – with follow up meetings at BNL, CERN and again FNAL. The time to dig into realistic details is upon us.



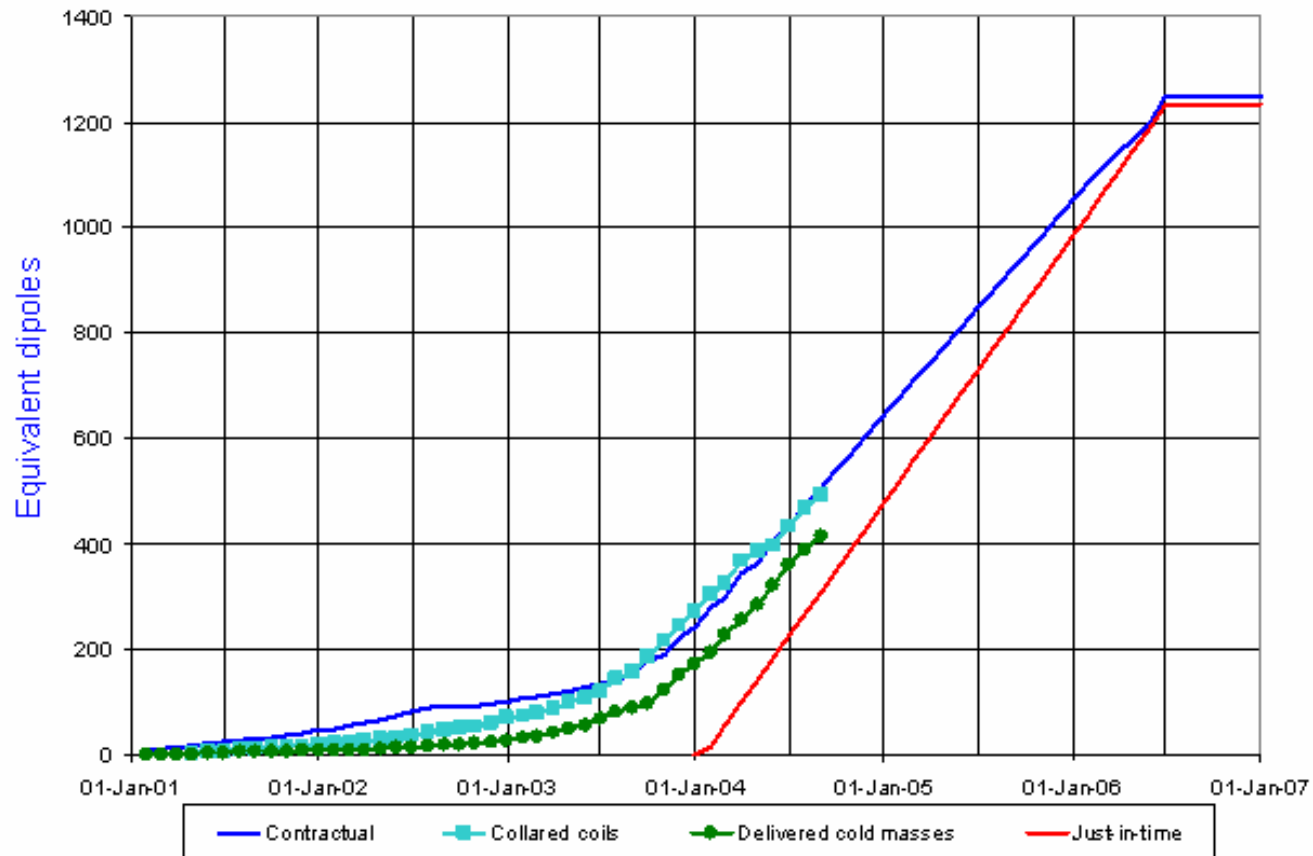
LHC Schedule

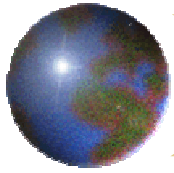


LHC Progress
Dashboard



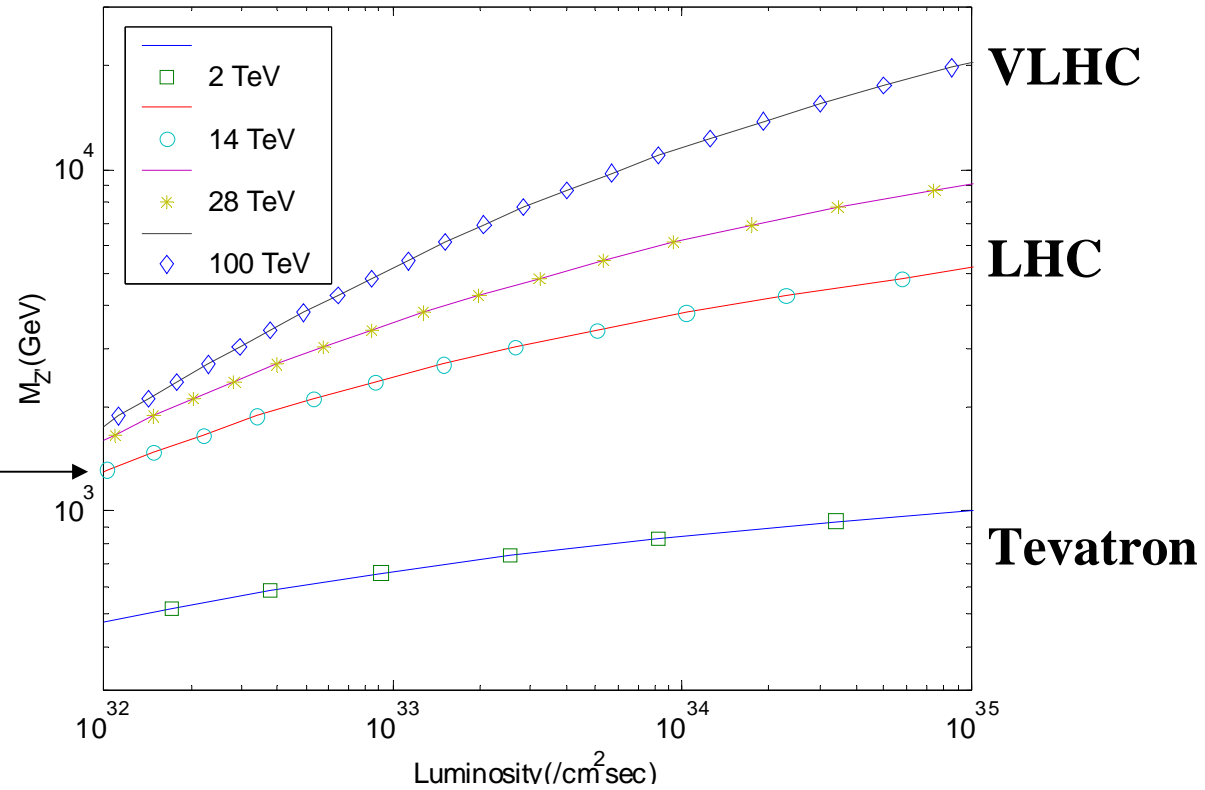
Dipole cold masses





Energy Matters – “Day 1”

N=100 Events, Z' Coupling



At 10^{32}
reach for
Z' is
already 2
TeV