



# Welcome to Madison



**Wesley H. Smith**

***U. Wisconsin – Madison***

**US LHC Users Organization Meeting**

**November 7, 2013**

**Pyle Center**





# Wisconsin People @ the Large Hadron Collider



**Two experiments: CMS & ATLAS, both joined in 1993:**

## **University of Wisconsin CMS Group**

Professors: D. Carlsmith, S. Dasu, M. Herndon, W. H. Smith

Ph. D. Physicists: M. Cepeda, S. Djuric, E. Friis, P. Klabbers, A. Lanaro, R. Loveless, A. Mohapatra, A. Savin, T. Sarangi

Graduate Students: A. Belknap, L. Dodd, A. Levine, I. Ojalvo, T. Perry, D. Taylor, N. Woods

Undergraduate Students: J. Beres, S. Cooperstein

Engineering Staff: M. Blake, D. Bradley, R. Fobes, T. Gorski, J. Tikalsky

Physical Sciences Laboratory Engineers: F. Feyzi, L. Greenler, P. Robl, D. Wenman

## **University of Wisconsin ATLAS Group**

Professor Sau Lan Wu

Ph. D. Physicists: Luis Flores Castillo, William Quayle, Lashkar Kashif, Swagato Banerjee, Yaquan Fang, Lianliang Ma, Isabel Pedraza, Ximo Poveda-Torres, Xin Chen

Graduate Students: Andrew Hard, Yang Heng, Haoshuang Ji, Amanda Kruse, Luca Sabbatini, Haichen Wang, German Carrillo, Alfredo Castaneda, Elizabeth Castaneda, Haifeng Li, Fuquan Wang, Hongtao Yang, Fangzhou Zhang

Engineering Staff: Neng Xu, Werner Wiedenmann, Haimo Zobernig, John Joseph

# Wisconsin ATLAS People

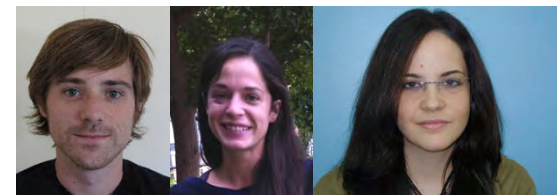
Professors Sau Lan Wu and  
Miron Livny at CERN, 2010



Professors Sau Lan Wu and  
Peter Higgs at CERN,  
July 4 2012



Prof. Wu: "I have been looking for you for over 20 years"  
Prof. Higgs: "Now you have found me!"



4 Faculty, 1 Emeritus  
5 Scientists, 2 Alumni  
2 Postdocs, 1 Alumnus  
5 Students, 7 Recent Ph.D.s  
4 Support Staff, 2 Alumni

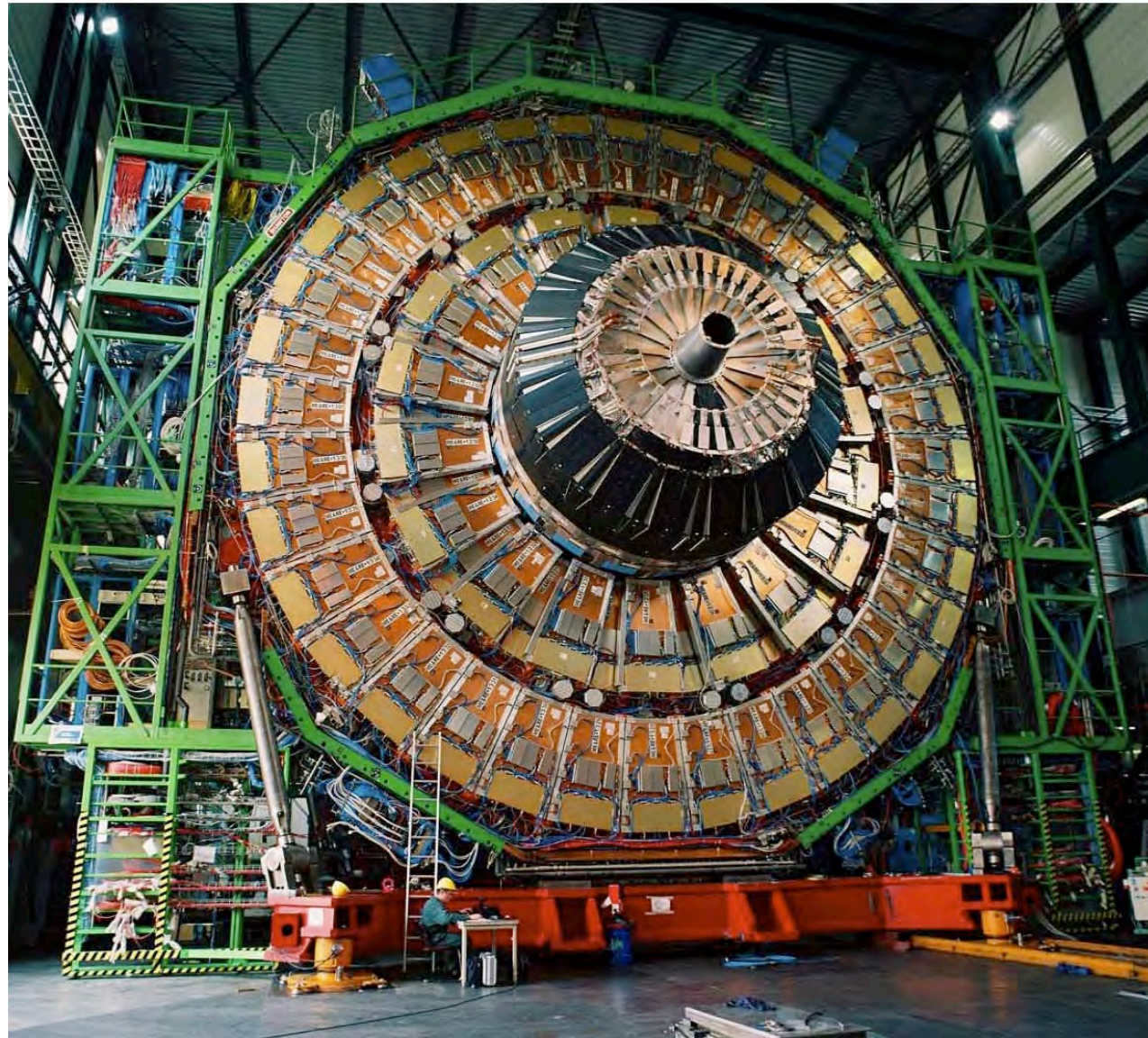


THE UNIVERSITY  
of  
**WISCONSIN**  
MADISON

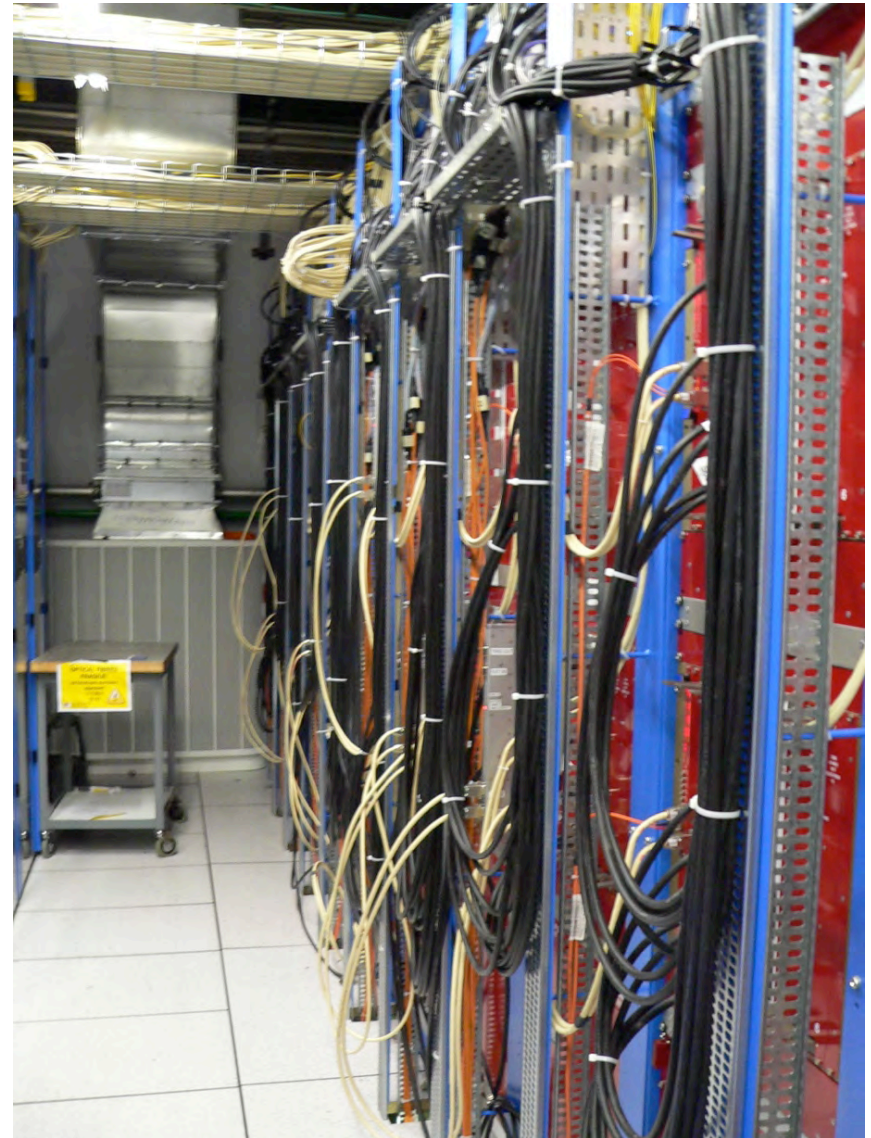
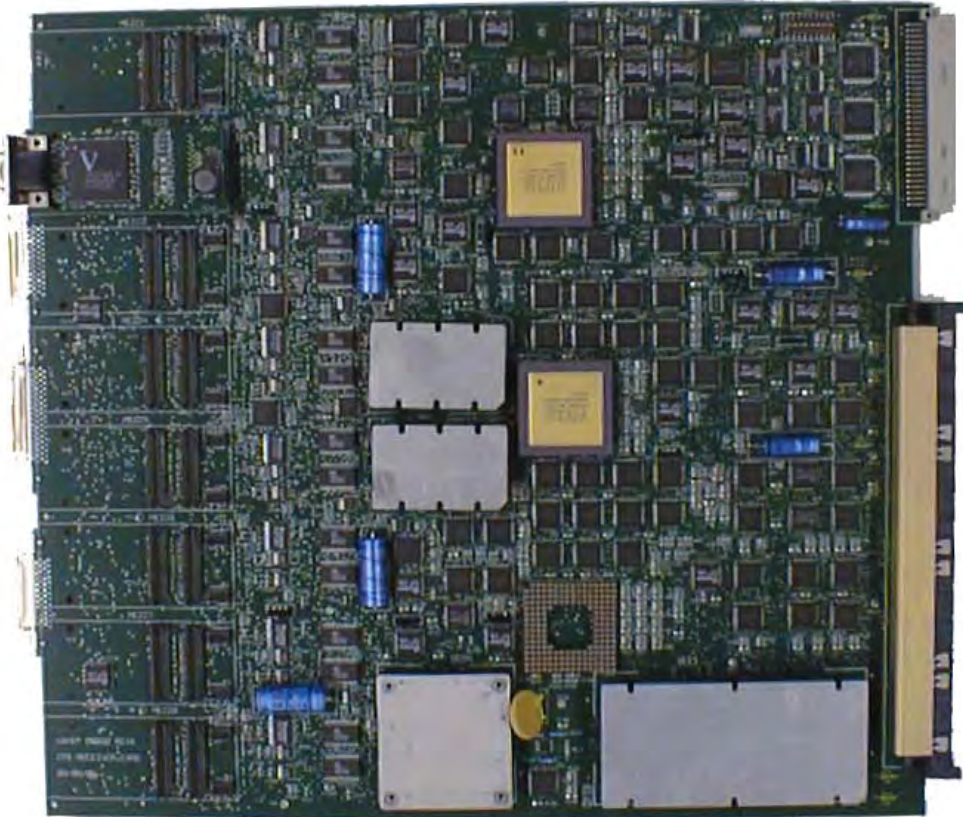
# UW Engineered Disks Instrumented with CSC chambers



PIs: Dick Loveless, Matt Herndon, Duncan Carlsmith with Armando Lanaro, Farshid Feyzi & **Physical Sciences Lab**



# UW Engineered Calorimeter Trigger Electronics



Joe Lackey, Tom Gorski, Pam Klabbbers  
Evan Friis, Maria Cepeda, Sridhara Dasu  
Bob Fobes, Matt Jaworski, ...  
Ten Graduate Students and counting!

PI: Wesley Smith

# UW Tier-2 Computing Center

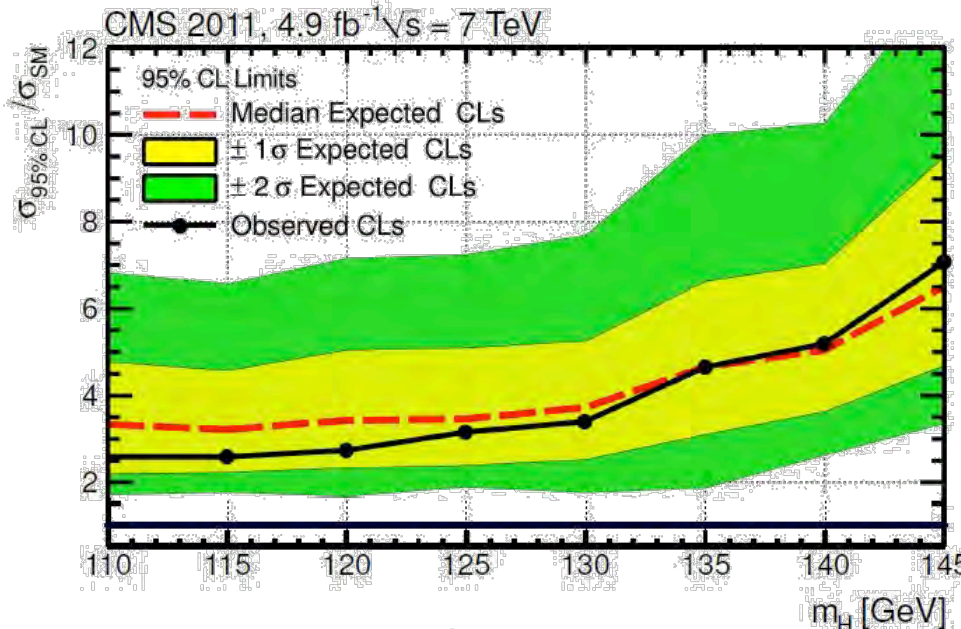


Dan Bradley, Ajit Mohapatra, Tapas Sarangi, Will Maier, Steve Rader, 5 Graduate and UG Students and counting! **PI: Sridhara Dasu**

Advisor: Sridhara Dasu

Heavy Neutral Particle Decays to Tau Pairs at  $\sqrt{s}=7$  TeV with CMS at the Large Hadron Collider

## Upper Limits on SM Higgs

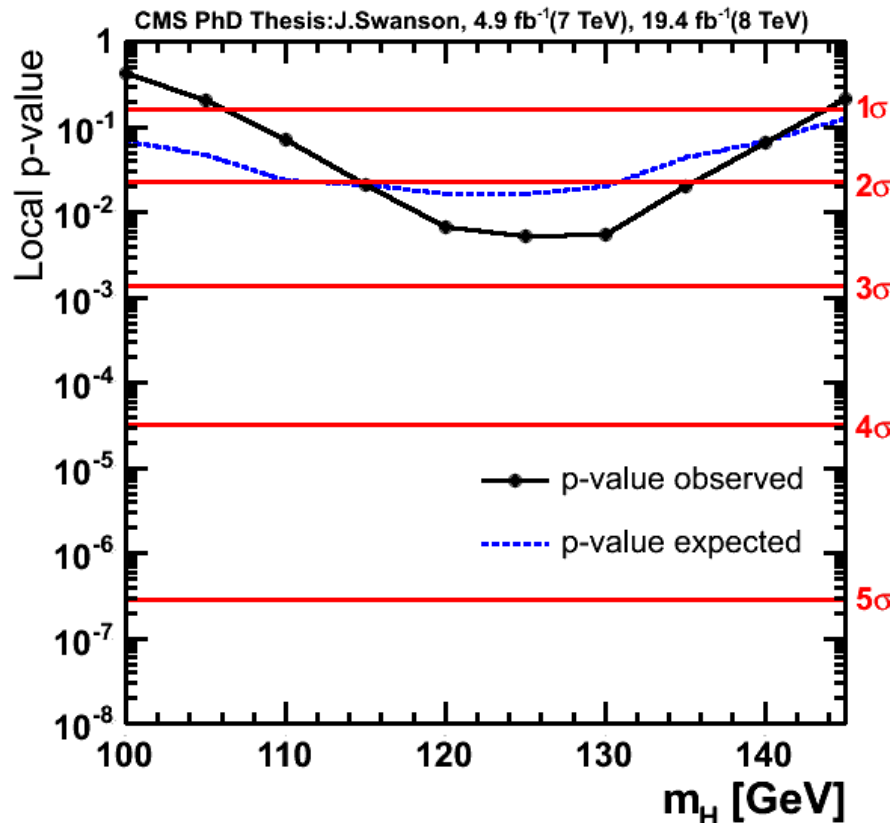


Defined the program for Higgs decays to tau pairs  
 Won 2012 CMS Best Thesis Award



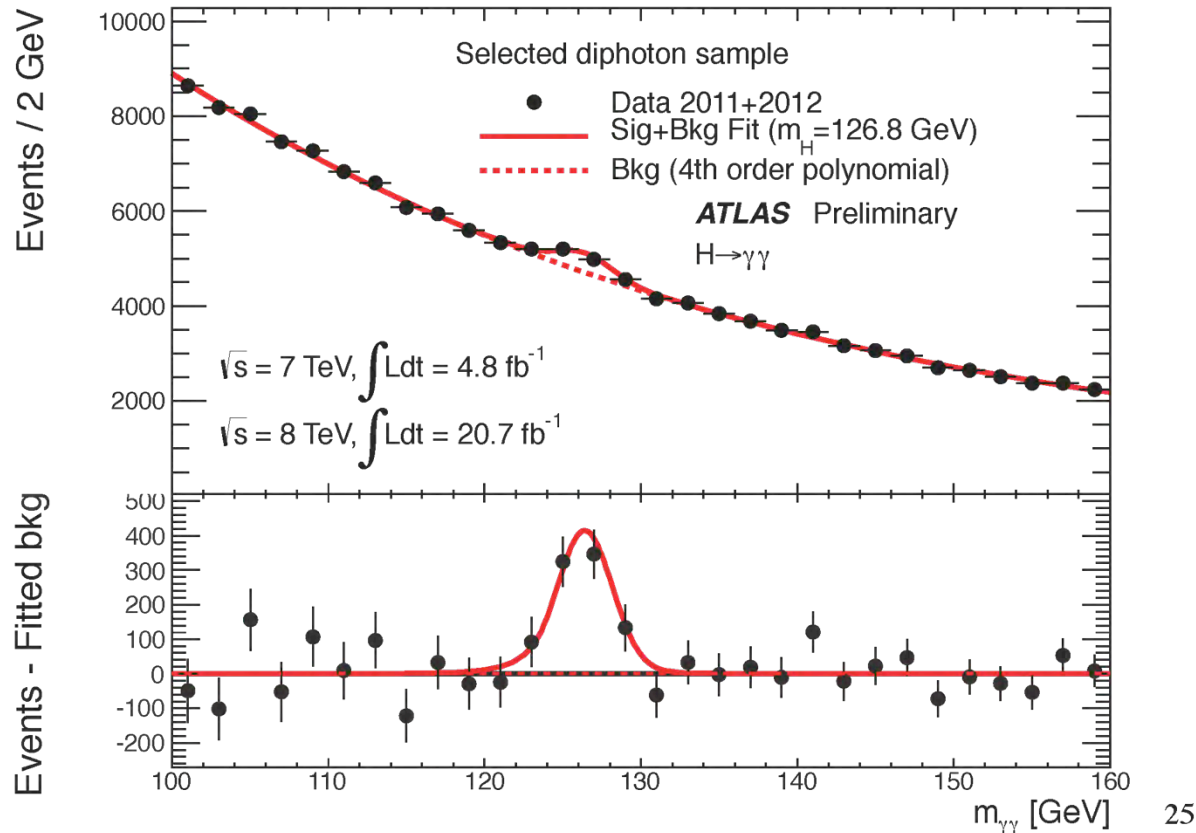
Advisor: Wesley Smith

## Search for a Neutral Higgs Boson Decaying to Tau Leptons using CMS at the LHC



Advisor: Sau Lan Wu

## Discovery of a New Boson in the Search for a Standard Model Higgs Boson in the DiPhoton Final State with the ATLAS Detector



**HEP @ Wisconsin: 60 Year Program**

**LHC Experimental Program:**

- **ATLAS & CMS**

**Theory programs:**

- **Cosmology, Phenomenology, String Theory**

**Graduating Students:**

- **105 Ph.D.s awarded 1999 – 2012**
  - **13 in 2011, 12 in 2012, 7 in 2013 so far**

**Excited to be hosting USLUO in Madison!**

**Again...Welcome!**