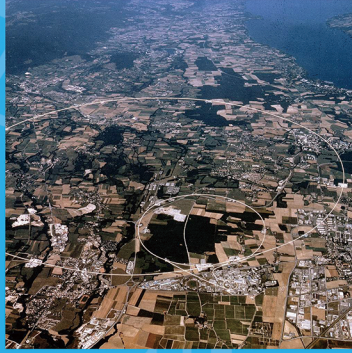


## CERN, GENEVA

The LHC revved up to 8 TeV in March 2012, and it will attempt to create 14 TeV events at last.



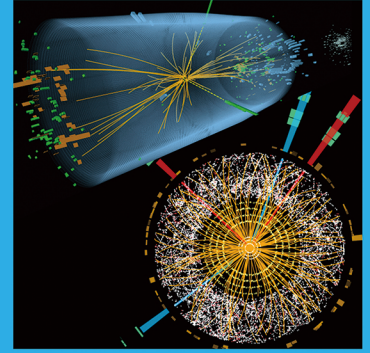
## TUHEP, BEIJING

The TeV Physics Working Group is established in 2005. It is led by Prof. Yu-Ping Kuang and contains dozens of professors and researchers.



## Higgs Search

Latest results from ATLAS and CMS Higgs Search



# 7TH WORKSHOP OF TeV PHYSICS WORKING GROUP

John Ellis, Jie Gao, Wei-Ming Yao,  
Liang Li, Dan Hooper, Qian Yue,  
Xiangdong Ji, Xiao-Jun Bi, Zong-Guo Si,  
Shou-Hua Zhu, Chun Liu, Tao Han,  
Jin Min Yang, Ming-Xing Luo,  
Chong Sheng Li, Yuanning Gao,  
R. Sekhar Chivukula, Hong-Jian He,  
Qing Wang, Bin Zhang, Henry Tye,  
Yifang Wang, Yu-Qi Chen,  
Werner Wetzel, Ren-Yuan Zhu, Xin Chen,  
Liang Han, Shan Jin, Ya-Jun Mao,  
Qing-Hong Cao, Li-Lin Yang,  
Yong-Liang Ma, Dirk Zerwas,  
Xinmin Zhang, Elizabeth H. Simmons

## IN HONOR OF PROFESSOR YU-PING KUANG

The 7th workshop of TeV physics working group is organized by Tsinghua University from Nov.12 to Nov. 15, 2012. All the lectures are given in ZhengYT Lecture Hall of New Science Building in Tsinghua. The workshop this year is also in honor of professor Yu-Ping Kuang's eightieth birthday.

# LHC Program

(New Science Building, ZhengYT Lecture Hall, Tsinghua, Beijing, Nov.12-15, 2012)

## Monday (Nov.12)

### Morning Session

8:00-8:50 Registration

(Session Chair: Hong-Jian He)

8:50-9:00 Welcome (Qi-Kun Xue (Dean) and Tao Han)

9:00-9:40 John Ellis (CERN/King's College), To Higgs or Not to Higgs? [Opening Lecture]

9:40-10:10 Jie Gao (IHEP), ILC Status and Higgs Factory

10:10-10:30 Coffee Break

(Session Chair: Liang Han)

10:30-11:00 Wei-Ming Yao (LBL): Probing the Higgs Boson Coupling to Bottom Quarks at the Tevatron

11:00-11:30 Liang Li (SJTU), Top Quark Experiments at the Tevatron

11:30-1:30pm **Lunch**

### Afternoon Session

(Session Chair: Shou-Hua Zhu)

1:30-2:00 Dan Hooper (FNAL): Searching for Dark Matter in the Discovery Age

2:00-2:30 Qian Yue (Tsinghua): Status of CDEX Experiment

2:30-3:00 Xiangdong Ji (SJTU/PKU/Maryland): Progress in PandaX

3:00-3:30 Xiao-Jun Bi (IHEP), Status of Dark Matter Detection

3:30-3:50 Coffee Break

(Session Chair: Xiao-Jun Bi)

3:50-4:20 Zong-Guo Si (Shandong), Top Quark Physics at the LHC

4:20-4:50 Shou-Hua Zhu (PKU), Higgs Boson: the Guiding Star for Physics beyond Standard Model

4:50-5:20 Chun Liu (ITP), High Scale Supersymmetry as the Physics of Fermion Mass Hierarchies

### Dinner

## Tuesday (Nov.13)

### Morning Session

(Session Chair: Qing Wang)

8:30-9:00 Tao Han (Pittsburgh), SUSY in the Light of the Higgs

9:00-9:30 Jin Min Yang (ITP), Status of Low Energy SUSY After the LHC-8TeV Data

9:30-10:00 Ming-Xing Luo (Zhejiang), Revisit to Nondecoupling MSSM

10:00-10:20 Coffee Break

(Session Chair: Jin Min Yang)

10:20-10:50 Chong Sheng Li (PKU), Top Quark Decay at Next-Next-to Leading Order in QCD

10:50-11:20 Yuanning Gao (Tsinghua), Overview of LHCb

11:20-1:30pm **Lunch**

### **Afternoon Session**

(Session Chair: Tao Han)

1:30-2:00 R. Sekhar Chivukula (MSU), Vector Boson Signals of Electroweak Symmetry Breaking

2:00-2:30 Hong-Jian He (Tsinghua), New Higgs Signatures for LHC

2:30-3:00 Qing Wang (Tsinghua), First Principle Calculation of Low Energy Effective Theory

3:00-3:30 Werner Wetzel (Heidelberg), UV-divergence Structure of  $\phi^4$  Theory in the Broken Phase

3:30-3:50 Group Photo and Coffee Break

(Session Chair: Chong Sheng Li)

3:50-4:20 Henry Tye (HKSTU/Cornell), How to get a Small Cosmological Constant?

4:20-4:50 Yifang Wang (IHEP), Physics at BEPC

4:50-5:20 Yu-Qi Chen (ITP), Hadronic Transitions and the Effective Field Theory for Heavy Quarkonium

5:20-5:50 Bin Zhang (Tsinghua), Anomalous Coupling Detecting at High Energy Colliders

**Banquet dinner (birthday party)**

## **Wednesday (Nov.14)**

### **Morning Session**

(Session Chair: Wei-Ming Yao)

8:30-9:05 Ren-Yuan Zhu (CalTech), CMS Higgs Results

9:05-9:40 Xin Chen (Wisconsin), Higgs and BSM Searches at LHC: Results and Perspective

9:40-10:15 Liang Han (UCST), ATLAS Diboson Measurement

10:15-10:30 Coffee Break

(Session Chair: Ren-Yuan Zhu)

10:30-11:05 Shan Jin (IHEP), Progress of Chinese Group at ATLAS

11:05-11:40 Ya-Jun Mao (PKU), Progress of Chinese Group at CMS

11:40-1:30pm **Lunch**

### **Afternoon Session**

(Session Chair: Zong-Guo Si)

1:30-2:00 Qing-Hong Cao (PKU): Measuring Top-quark Polarization in Top-pair plus Missing Energy Events

2:00-2:30 Li-Lin Yang (PKU): Higgs Pair Production in the  $bbWW$  Channel

2:30-3:00 Yong-Liang Ma (Nagoya), Holographic Techni-Skyrmion

3:00-3:20 Coffee Break

(Session Chair: R. Sekhar Chivukula)

3:20-3:50 Dirk Zerwas (Orsay): The SFitter Project

3:50-4:20 Xinmin Zhang (IHEP): Dark energy and Baryogenesis

4:20-5:00 Elizabeth H. Simmons (MSU): Coloron Models and LHC Phenomenology  
[+ Closing Remarks]

**Dinner**

**Thursday (Nov.15):** Excursion day