NATIONAL CENTRE FOR PHYSICS
Islamabad

Announcement

FIRST SCHOOL ON LHC PHYSICS

12 - 30 October, 2009

The Experimental High Energy Physics Group of National Centre for Physics (NCP) is organizing the First School on Large Hadron Collider (LHC) Physics in collaboration with Pakistan Atomic Energy Commission. The main objective of this school is to prepare a group of trained young scientists who will analyze the data generated at LHC using CMS (Compact Muon Solenoid) and ALICE (A Large Ion Collider Experiment) detectors. This will provide them an opportunity to carry out research in the fields of High Energy and Heavy Ion Physics. The first two weeks of this school will cover the Physics and Topics related to the CMS detector, whereas in the third week, the subject of the Heavy Ion Physics and ALICE detector will be discussed. At the end of the school, certificates of participation will be awarded to the participants.

Venue and Date

National Centre for Physics, QAU Campus, Shahdara Valley Road, Islamabad
October 12th -30th 2009 (five days a week)

Registration

Registration Form: Available at NCP's website at the following link
http://www.ncp.edu.pk/fslp.htm

Registration Deadline: 20th September 2009

Participants

A total of 50 participants will be invited from all over the country to attend this school. All the interested students of M.Sc, MS, M.Phil or Ph.D who intend to participate in this school may apply.

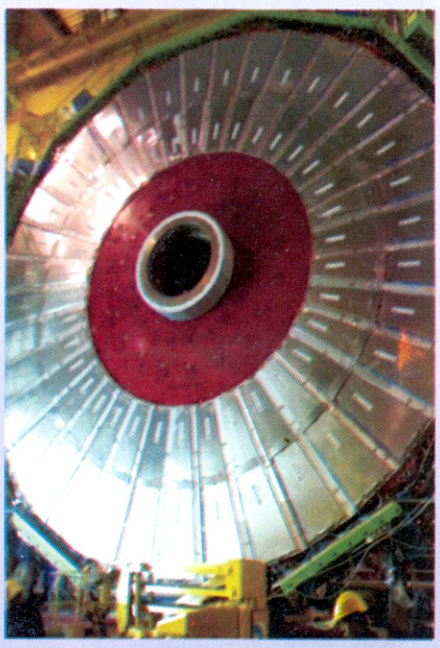
Who can Participate

- Students of M.Sc, MS, M.Phil or Ph.D.
- Scientists of academic and R&D organizations.

Topics to be Covered

First two weeks (October 12th - 23rd 2009):

1. Introduction to LHC Project:
   - LHC Machine
   - CMS Detector
   - RPC Detector
   - Grid Computing
2. Physics potentials of LHC:
   - Standard Model
   - Heavy Flavor
   - Higgs Searches
   - New Physics (Super-symmetry, Extra-dimensions)



3. Analysis Tools for Data:
   - Linux
   - C++
   - Event Generator
   - Physics Data Objects
   - Analysis Techniques
4. Report on Physics Analyses going on at NCP

Third week (October 26th - 30rd 2009):

1. Introduction to High Energy Physics:
   - Introduction to Quantum Mechanics, Group Theoretical and Mathematical Methods, QED, QCD, etc.
2. Theoretical Overview of Heavy Ion Physics:
   - Theoretical models of heavy ion reactions, Heavy Ion Observable, Hot and Dense Matter, Particle Production in Heavy Ion Collisions.
3. ALICE Detector and Experimental Conditions:
   - ALICE Detector, Heavy ion observable in ALICE, Nucleus-Nucleus Collisions, etc.
4. Signatures of QGP:
   - QGP, Photons, dileptons, multiplicity distribution, diquarks and jet quenching as QGP signals, strangeness abundance, J /ψ Suppression and open charm enhancement, etc.
5. ALICE Data Analysis:
   - Monte Carlo generators for heavy ion collisions, off-line computing and AliRoot etc.
6. Grid Computing for ALICE

Speakers of the Event

First two weeks (October 12th - 23rd 2009):

1. Dr. Riazuddin
2. Dr. Fayyazuddin
3. Dr. Pervez Hoodbhoy
4. Dr. Hafeez Hoorani
5. Dr. Jamila Bashir
6. Dr. Shamona Fawad
7. Dr. Ijaz Ahmed
8. Mr. Usman Malik
9. Mr. Irfan Asghar
10. Mr. Sajjad Asghar
11. Mr. Adeel ur Rahman

Third week (October 26th - 30rd 2009):

1. Dr. Kamal-ud-Din Ahmed
2. Dr. Ehsan Ullah Khan
3. Dr. M. Ikram Shahzad
4. Dr. Mahnaz Haseeb
5. Dr. Farida Tahir
6. Dr. Yashar Husein Aliyev
7. Dr. Mais Suleymanov
8. Dr. Bilal Masud
9. Dr. Muhammad Ayub
10. Mr. Asif Usman
11. Mr. Shahid Aslam

Contact Persons

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