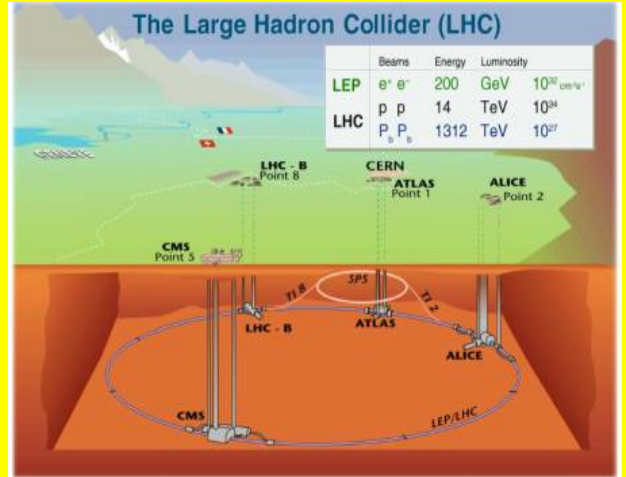
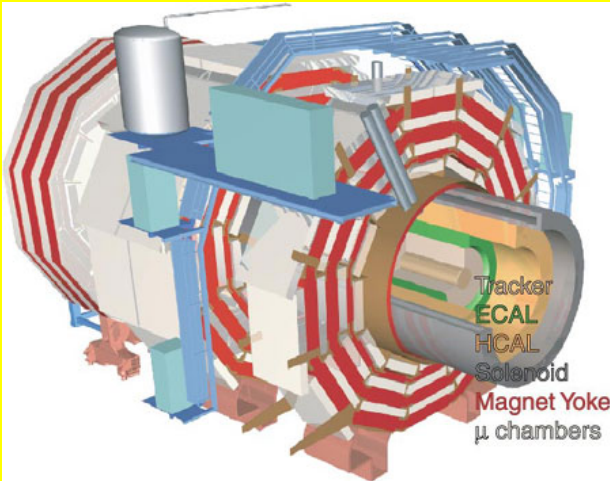




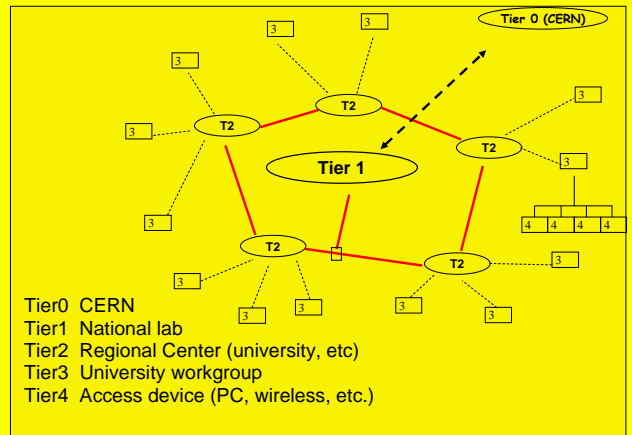
Physics Grids for Enabling Large Hadron Collider (LHC) – Compact Muon Solenoid (CMS) Science

Shaowen Wang, Ransom Briggs, Yan Liu, Anand Padmanabhan, Boyd Knosp, Jun Ni. ITS Research Services
Alexi Mestvirishvili, Ahmet Sedat Ayan, Jon Olson, Ugur Akgun, Yasar Onel. Department of Physics & Astronomy



Infrastructure Development and Resources

- A proof-of-concept Tier-2 Physics Grid center has been prototyped for Compact Muon Solenoid (CMS) collaboration
- Athlon Linux cluster
 - 6 Athlon 2200+ CPUs, 0.5 TByte SCSI RAID storage, and Gigabit Ethernet
- Pentium Linux cluster
 - 10 P4 CPUs
- Xeon cluster
 - 20 CPUs, 1 TByte SCSI RAID storage

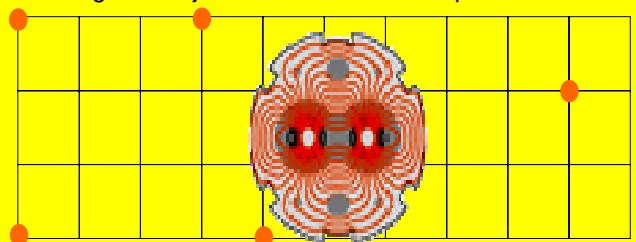


Grid-based Collaboration

- US-CMS Grid Community Support Center
 - Integration Grid Testbed (DGT) – Pentium Cluster.
 - Production Grid – Athlon cluster
 - LCG TestZone site – Xeon cluster
- A member of the iVDGL (international Virtual Data Grid Laboratory) and OSG (Open Science Grid)
- Development of interfaces between Grid-based data handling (e.g., Oracle) and analysis (e.g., ROOT)
- Developing and testing MOP – a US-CMS production tool
- Testing McRunjob – another US-CMS production tool

Research and Education

- ◆ CMS-domain-specific Grid middleware
- ◆ Grid information services
- ◆ Education via QuarkNet (<http://quarknet.fnal.gov>)
- ◆ Extension to other Midwest Universities



For further information, please contact Shaowen Wang (telephone: 319-335-6713)
(email: shaowen-wang@uiowa.edu).