Cloud Computing and Computational Science Center at Fresno State

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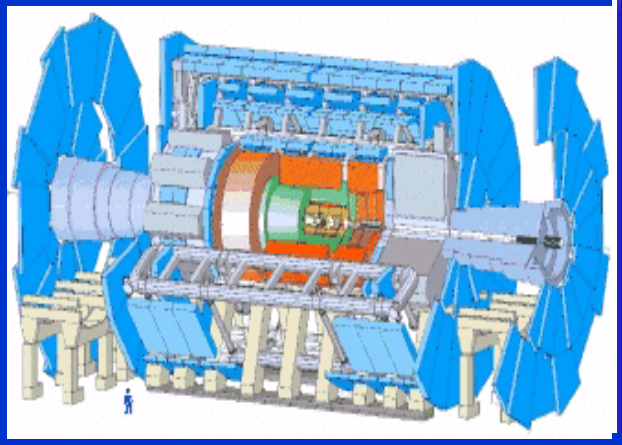
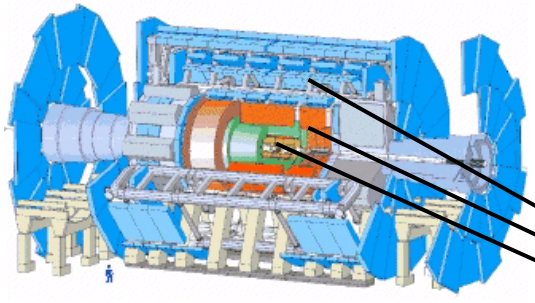
2/14/2012 Webinar on CSU Consortium



ATLAS Tier 3 at CSUF



~PByte/sec

CERN/Outside Resource Ratio ~1:2
Tier0/(Σ Tier1)/(Σ Tier2) ~1:1:1

Online System

~100-400 MBytes/sec

>10 PB/Yr!

Tier 0 +1

Offline Farm,
CERN Computer Ctr

HPSS

Tier 1

10+ Gbits/sec

France

UK

Italy

BNL

Tier 2

Tier2 Center

Tier 3

~2.5+ Gbps

Institute

100 - 10000
Mbits/sec

Fresno State

Our Tier 3: 136 cores, 108 TB storage
Funded by 2-year $620K NSF MRI to
all 9 NSF funded institutions on ATLAS

ATLAS Cloud Computing

- Cloud Computing will be the future solution for rapidly increasing ATLAS computing needs
- CS faculty Cui Lin joined our ATLAS program in 2011 and is leading our new effort in ATLAS cloud computing
- Goal: Build up the first Cloud-based Tier 3 cluster for US ATLAS, then expand to all US ATLAS institutions
- In collaboration with CS faculty and Ph.D students from Chinese research universities (Nanjing University and University of Electronic Science and Technology) who are coming to Fresno later this month to work on ATLAS Cloud Computing projects

CSC at Fresno State

- Prof. Cui Lin is director of the Computational Science Center (CSC) at College of Science and Mathematics
- CSC received $250K from Keck Foundation to develop computational education programs for CSM depts.
- Existing ATLAS Tier 3 cluster and ongoing ATLAS Cloud cluster are important parts of the CSC
- Dedicated computational cluster (cloud based) for student education is being set up at CSC.
- Excellent platform for future online computing courses across the CSU HEP Consortium campuses