



Report from US ALICE

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US Tier-1 Capable facilities for ALICE

NERSC @ Lawrence Berkeley Nat. Lab.
Department of Energy (DOE)



<http://www.nersc.gov>

LC @ Lawrence Livermore Nat. Lab.
Department of Energy (DOE)



<http://computing.llnl.gov>

OSC @ Ohio State University
State of Ohio



<http://www.osc.edu>

TLC2 @ University of Houston
State of Texas



<http://tlc2.uh.edu>

Capacities and operational support

- **LBL** - NERSC/PDSF
 - DOE proposal for ~500 CPUs for ALICE
 - HPSS MSS has 22PB current capacity
 - Connected to ESNET via 10GB network
 - 24/7 operation support in place
- **LLNL** - LC/Serial cluster
 - ALICE to run on a subset of ~640 CPUs
 - HPSS MSS has >PB current capacity
 - Connected to ESNET via 10GB network (same as NERSC)
 - 24/7 operation support in place
- **OSC** - Itanium and Xeon clusters
 - ALICE to run on a subset of ~200 CPUs leveraged against NSF proposal
 - HPSS MSS available, tape procurement proposal submitted to NSF
 - 24/7 operation support in place
- **Houston TLC2** - Itanium clusters
 - ALICE to run on a subset of ~200 CPUs from NSF proposal
 - HPSS MSS available
 - 24/7 operation support in place

ALICE operation

■ Sites

- ❑ OSC and Houston TLC2 integrated and running the ALICE Grid Data Challenges since 2004
- ❑ LBL started operation last October
- ❑ LLNL in preparation

■ 2006 CPU/Storage capacity

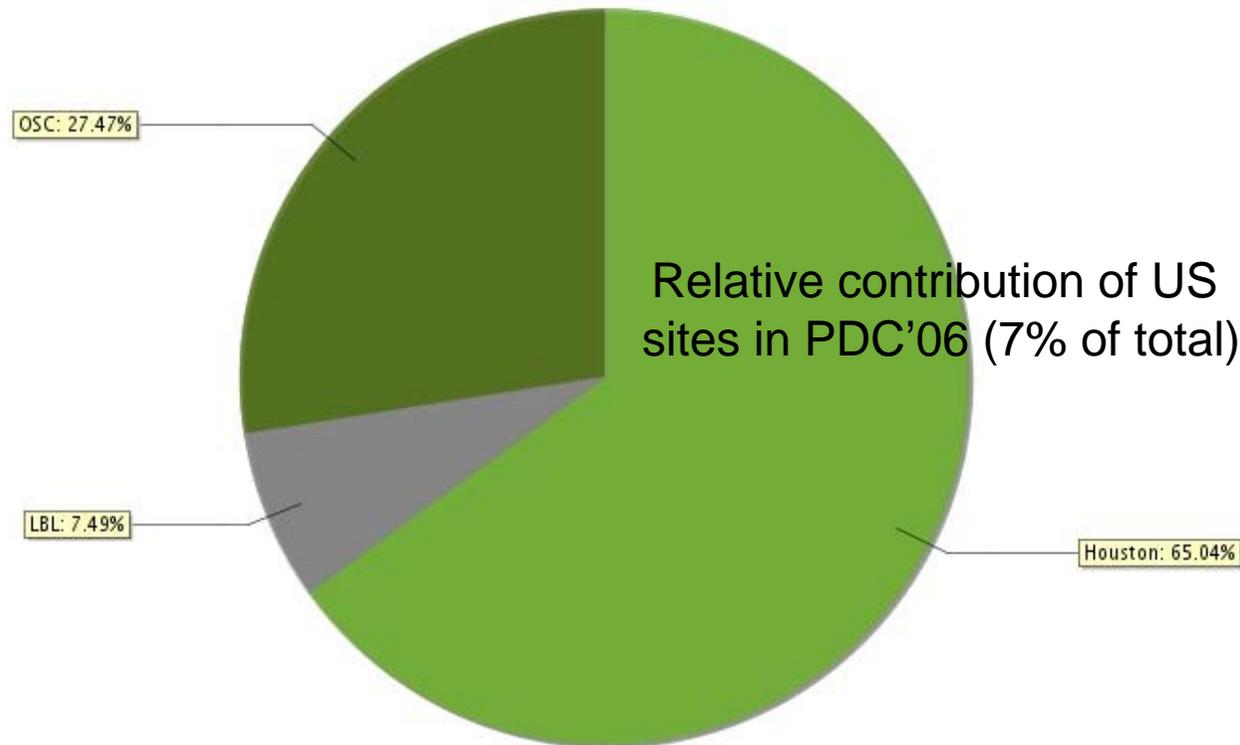
- ❑ ~90 ia64 at Houston/TLC2, 10 TB disk
- ❑ ~50 ia32 at OSC, 35 TB disk, 35 TB MSS
- ❑ ~40 ia32 at LBL, disk and tape storage being organized

■ Middleware

- ❑ Currently running with AliEn
- ❑ Submitted a proposal to NSF to develop AliEn-OSG interfaces

Resources

- US sites are providing ~7% of the total CPU capacity for ALICE
 - In the future, this proportion will be kept



Conclusions

- 4 US computing centres are contributing resources to the ALICE Grid computing
 - The amount of resources will increase in line with the ALICE requirements and in proportion to the US groups participation in the collaboration
- All four have T1 capability (MSS, network, support), especially important in view of the small number of T1s serving ALICE in Europe
- All sites (LLNL ongoing) are incorporated in the ALICE Grid and are participating in the Grid data challenges
- The relations and operational support of the centres are excellent
- The development programme to build interface of the ALICE services to OSG has not started
- Potential T2's connecting: Mexico, Brazil, ...