



AUGUST 2006

Meetings and Events

GGF18

Washington, D.C.
September 11–14, 2006

EGEE'06

Geneva, Switzerland
September 25–29, 2006

SC06

Tampa, Florida
November 11-17, 2006

[View Full Calendar](#)



August 2006 Consortium
Meeting Attendees

Summer Grid Workshop Wrapup



Image Courtesy Mike Wilde

You can view all the [materials](#) from the 2006 Summer Grid Workshop which took place June 26-30 on South Padre Island, Texas. The workshop was co-sponsored by The Center for Gravitational Wave Astronomy (CGWA), the Grid Physics Network (GriPhyN) and the International Virtual Data Grid Laboratory (iVDGL).

The presenters included Gabrielle Allen, Rachana Ananthakrishnan, Ben Clifford, Jaime Frey, Archit Kulshrestha, Jorge L. Rodriguez, and Mike Wilde, who was the overall

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From the Executive Director

We are all just back from the OSG Consortium meeting last week. Many thanks to Gordon Watts and his team for hosting. There was much interest in the plenaries -- especially the science presentations and the work being done in campus and other grid organizations. There were lively discussions at the parallel sessions and we solidified requirements for the software releases in the next months -- now to address priorities and the schedule. Mark your calendars for the next face-to-face meeting at UCSD/SDSC either 5th or 12th March.



New Compute Elements from LeHigh University and Notre Dame, and Storage Element from SPRACE in Brazil have joined the OSG infrastructure. We continue to work to enable effective use of OSG for LIGO, NanoHub and GLOW. Purdue, a new member of the OSG Council since the February meeting, presented their Campus infrastructure and goals of being part of the OSG.

In the past two weeks the overall job throughput on OSG has increased by about 10% due to smaller VOs increasing their testing of the infrastructure and one of the "big three" CMS running production for the analysis challenge in the fall.

Ruth Pordes

CDF Data Analysis on the OSG

coordinator.

The 40 students included mechanical and bio engineers from as far away as Uruguay and Puerto Rico. Some of the students were able to convert their applications to run over the TeraGrid and OSG sites that were available to the workshop participants

Mike Wilde, University of Chicago

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CDF, with a 1.4PB dataset stored on tape at Fermilab, is a physics experiment at the forefront of the exploration of extensions to the "Standard Model" of particle physics. Two examples of this research are illustrated in Figures 1 and 2. Both of these results were presented at international conferences this summer by the Collider Detector at Fermilab (CDF) experiment. Both benefited from jobs running on the OSG and EGEE grid infrastructures.

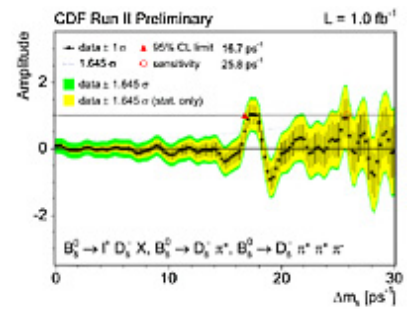


Figure 1 (click to view larger image): A scan through matter anti-matter oscillation frequencies for the Bs meson. The peak at 17.33ps⁻¹ leads to a measurement of the oscillation frequency to within 1.4%

Figure 1 shows the precision measurement of matter anti-matter oscillations in the Bs sector. Figure 2 depicts a search for same-sign di-lepton events at high energy. Both of these measurements impose stringent constraints on extensions to the Standard Model, including Supersymmetry, a theory that would explain the observation of dark matter in the Universe.

There are typically 4000 to 5000 CDF analysis jobs running at all times and about 600TB of data accessible on disk, with roughly half locally at Fermilab and half at remote clusters. Data is handled globally using SAM which accesses the Fermilab tape archives via the dCache disk caching and Enstore mass storage systems.

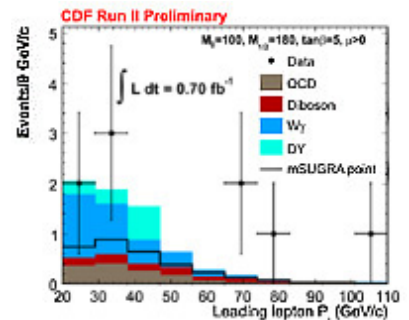


Figure 2 (click to view larger image): The leading lepton transverse momentum (pt) in the same-sign di-lepton search. With more data, a hint of Supersymmetry might show itself at large pt.

Today the majority of the CDF computing resources outside Fermilab are accessible only via OSG or LCG compute elements. To enable access for more than 700 CDF collaborators worldwide, a group of UCSD and INFN physicists and computer scientists modified the CDF job portal infrastructure to submit workloads transparently through Grid interfaces. CDF is today one of the three largest users of the OSG, with a peak of close to 1200 jobs running simultaneously and a typical weekly consumption of 20,000 to 90,000 hours.

The hiding of the grid technology was simplified dramatically by using condor glide-in technology. CDF had to develop a "glide-in factory" that controls the glide-in submission to the grids. Once a glide-in starts at an arbitrary grid site, it calls home, and adds itself as an additional batch slot to a condor batch cluster. This batch cluster fed by glide-ins looks no different to the CDF portal than any of the dedicated condor pools at FNAL.

Frank Würthwein, University of California San Diego