Grid Activity for Lattice QCD Research
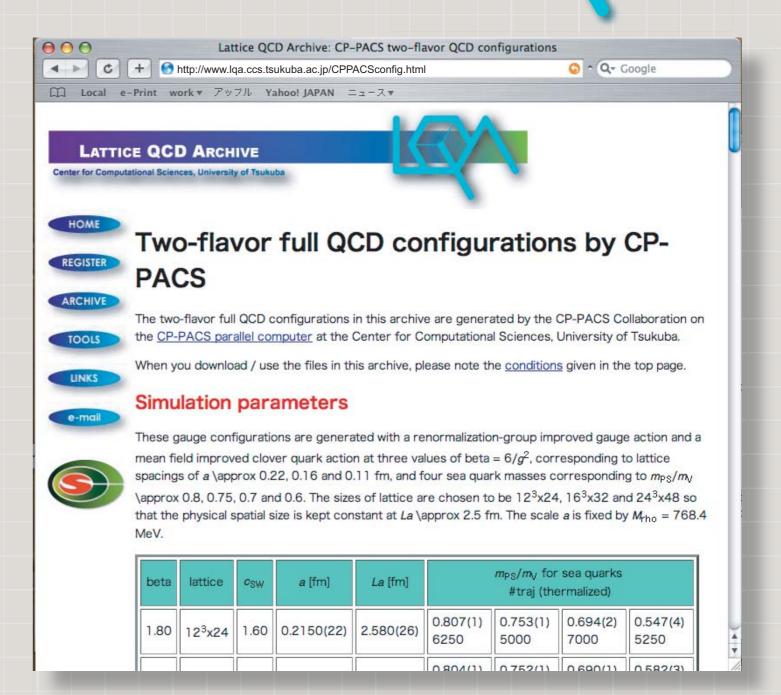
Lattice QCD Archive

▶ **About the Archive**
This Archive stores gauge configurations and other data of lattice QCD, and makes them available to lattice field theory community world-wide.

▶ **Files stored**
The main set of files currently in the Archive are the two-flavor full QCD configurations generated by the CP-PACS parallel computer at the Center for Computational Physics. There are four sets of files corresponding to four lattice spacings, all generated with the renormalization-group improved Iwasaki gluon action and the Wilson-clover quark action with tadpole-improved cover coefficient.

International Lattice Data Grid

- An international collaboration to share Lattice QCD configurations generated at several sites.
- To develop an international datagrid for the lattice field theory community.
- Design of QCD configuration markup language (QCDml 1.1) was completed in June 2004.
- Developing middleware for ILDG is in progress.
- *http://www.lqcd.org/ildg*

▶ **International Lattice Data Grid**
This Archive forms one of the sites of the International Lattice Data Grid (ILDG). It will serve as a gateway to the other sites of ILDG in Europe and USA. The query system of the Archive is designed to eventually allow world-wide search and retrieval of configurations stored in ILDG.

▶ Web GUI interface for meta-database:
http://www.lqa.ccs.tsukuba.ac.jp/

HEPnet-J/sc - Japanese National Lattice QCD network -

▶ HEPnet-J/sc is a network of NAS storages and supercomputers for lattice QCD using SuperSINET, which is a 10 Gbps network backbone connecting major universities and research institutions in Japan.
Since winter 2002, mirroring of gauge configurations generated by SR8000 (1.2 TFlops) at KEK and by CP-PACS (0.6 TFlops) and VPP5000 (0.77 TFlops) at University of Tsukuba has been operational. Mirroring was expanded to six sites in spring 2004.