## AGENDA

1. **Current Status**

2. **Current/Future Plans**

3. **Funding**

# Current Status

- **National lattice data grid**
  - daily data sharing in research group
  - 15 physics research groups, 65 users
- **Regional grid of ILDG**
  - ILDG gateway is working
  - Working to constructing new ILDG web site using Mediawiki
  - Inca monitoring service installation (cont'd)
- **Storage**
  - Gfarm distributed file system
    - 7.5 PB on 39 servers in 9 sites
  - Almost full (> 90%) and try to increase the capacity
- **HPCI Shared Storage**
  - 20 PB Gfarm distributed file system to share data among K and supercomputers in Japan
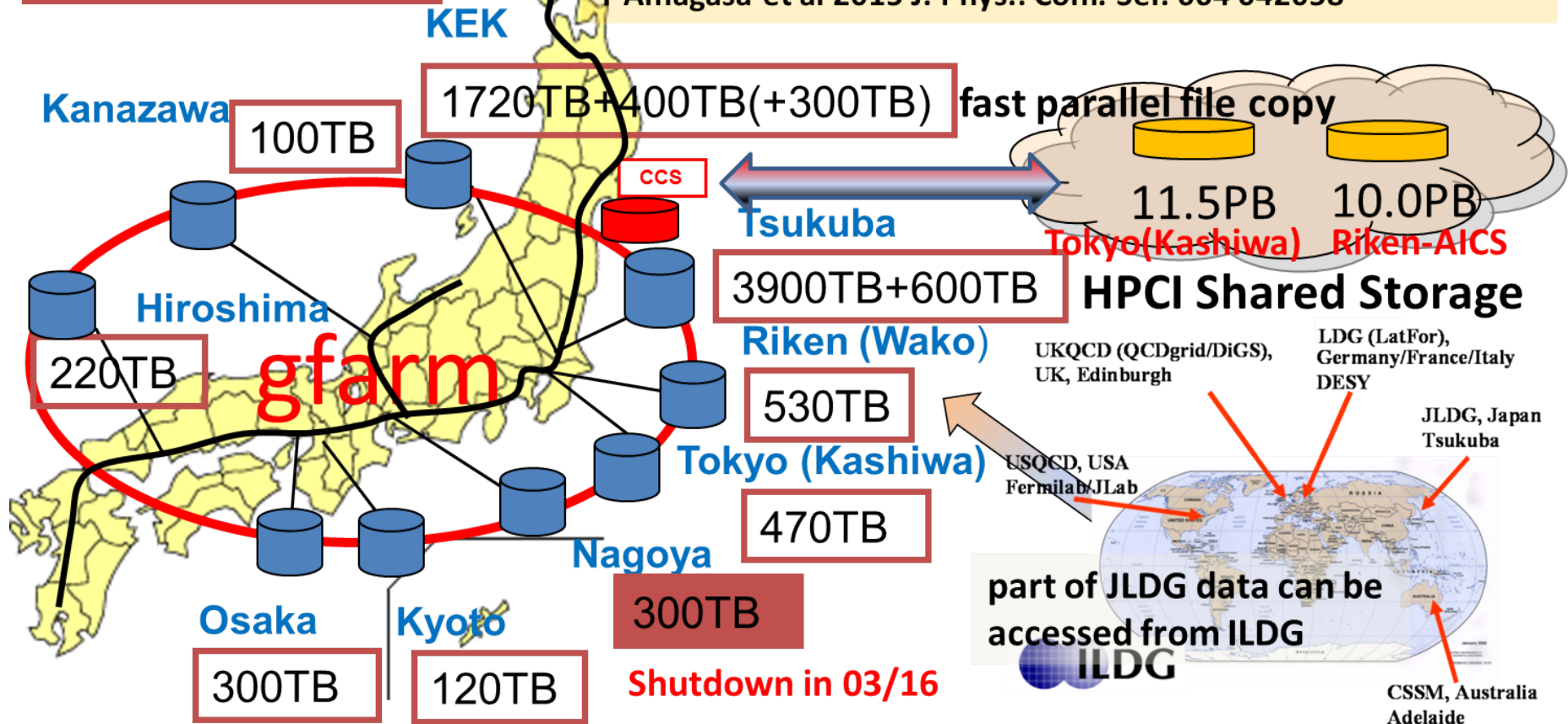  - a JLDG subsystem to mount HPCI and JLDG file systems and supports fast file copy between them in multiple stream

# Current Status : JLDG at a glance



**storage: 7.5PB (9sites, 39servers) 6.8P(90%) used 98M files stored as of March, 2016**

**In progress**
- backbone : SINET4 (1Gbps) -> SINET5 (max 10Gbps)
- new server : 600TB(Tsukuba)+400TB(KEK) ~ 1PB

『Sharing lattice QCD data over a widely distributed file system』, T Amagasa et al 2015 J. Phys.: Conf. Ser. 664 042058

**KEK** 1720TB+400TB(+300TB)  **fast parallel file copy**

**Kanazawa** 100TB

ccs

**Tsukuba** 3900TB+600TB

11.5PB  10.0PB
Tokyo(Kashiwa)  Riken-AICS

**HPCI Shared Storage**

**Hiroshima** 220TB

gfarm

**Riken (Wako)** 530TB

UKQCD (QCDgrid/DiGS), UK, Edinburgh

LDG (LatFor), Germany/France/Italy DESY

JLDG, Japan Tsukuba

**Tokyo (Kashiwa)** 470TB

USQCD, USA Fermilab/JLab

**Nagoya** 300TB

part of JLDG data can be accessed from ILDG

**ILDG**

**Osaka** 300TB  **Kyoto** 120TB

**Shutdown in 03/16**

CSSM, Australia Adelaide

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# Current/Future plans

- **Storage elements (9 sites in total)**
  - CCS (U Tsukuba), KEK, Hiroshima U, Osaka U, Kanazawa U, Nagoya U, U Tokyo, RIKEN and Kyoto U
  - Nagoya U will quite by the end of March, 2016
- **Statistics**
  - #users: 65 (+ users from ILDG)
  - data size: 6.8 PB, 98 M files  (was 5.0 PB, 70 M files as of ILDG23)
  - public via ILDG: 59 ensembles, 39K configurations (unchanged since ILDG21)
- **Hardware replacement**
  - machines for MDC/FC are being replaced
  - backbone update: SINET4 (1 Gbps) to SINET5 (max 10 Gbps)

# DOI

- **Status**
  - ▶ Agreed on registering DOI to JLDG ensembles
  - ▶ Promote as a project in JICFuS and launched preparatory WG
  - ▶ Negotiation with JaLC (Japan LinkCenter, a registration authority) has been made
- **Some details** (still under discussion)
  - ▶ CCS-Tsukuba will be a member to JaLC and register DOI for all JLDG ensembles to DataCite via JaLC
  - ▶ One DOI prefix for all JLDG ensembles, suffix consists of collab. name and sequential number (e.g. doi:10.1234/PACS-CS.000001)
  - ▶ Plan to generate DataCite (JaLC) metadata and landing pages automatically from ILDG ensemble/config XML and supplemental info.
  - ▶ Plan to allow a DOI to a set of ensembles (makes it easy to cite in papers/reports)

JICFus: Joint Institute of Computational Fundamental Sciences (CCS-Tsukuba, KEK, NAOJ), a research body to promote HPCI Strategic Program Field 5 and Post-K Priority Issues Theme9

# Funding

- **JLDG has been / will be supported**
  - by an HPCI strategic program "Origin of matter and the universe" (FY2011 – FY2015)
  - by a Post-K Priority Issues Theme9 (Development of basic science) "Elucidation of the fundamental laws and evolution of the universe" (FY2015-FY2019)
  - for hardware and outsourcing of maintenance and upgrading

## Thank you for your attention!