

Construction status at the new Tsukuba site

Tatsuya Chujo
University of Tsukuba

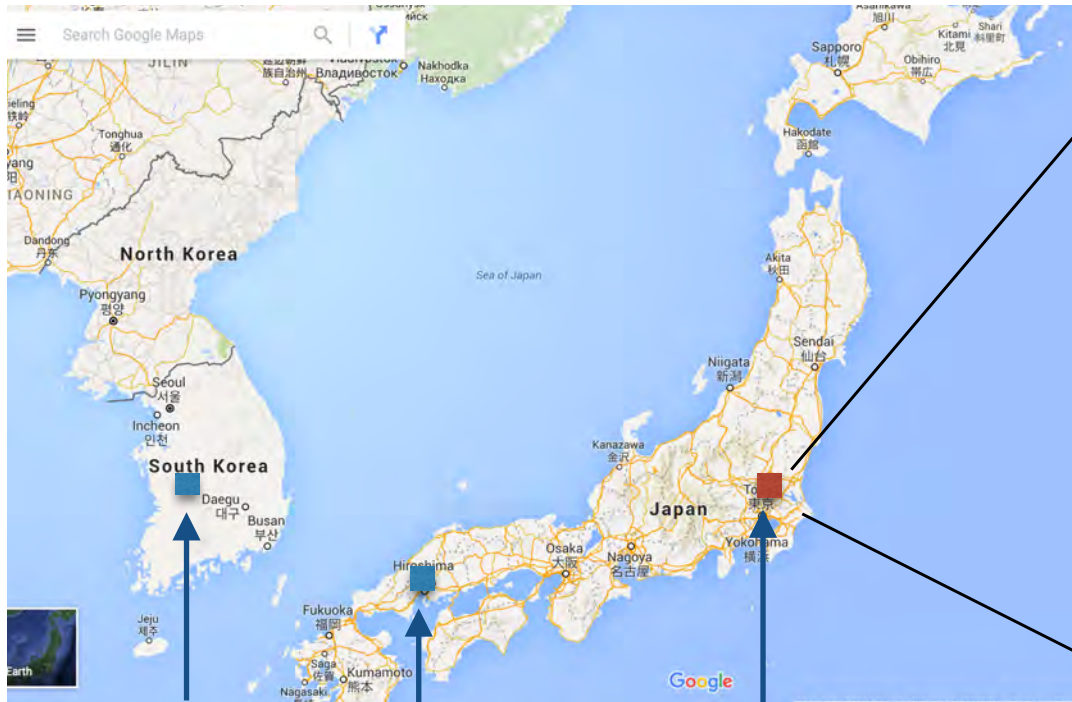
Asia Tier Center Forum
KISTI, Daejeon, South Korea
Sep. 22, 2015



筑波大学
University of Tsukuba



Introduction: University of Tsukuba, ALICE Group



Daejeon

Hiroshima

Tokyo



Univ. of Tsukuba

- 50 km north from Tokyo
- 45 min. to Tokyo by train
- 5 km: U. Tsukuba \longleftrightarrow KEK

Members of University of Tsukuba for the ALICE computing

- Tatsuya Chujo (Responsible, faculty staff)
- Sumio Kato (Technical staff, network and computing)
- Koyoichiro Ito (Master student, M1)



U. Tsukuba (ALICE computing)

Tatsuya Chujo (Responsible, faculty staff)

Sumio Kato (Technical staff, network and computing)

Koyoichiro Ito (Master student, M1)

U. Tsukuba, Academic Computing & Communications Center

Akira Sato (network, SINET4/5)

Norihiko Yokoyama (network, SINET4/5)

Support by other institutes:



KEK

Soh Suzuki (network)

Tomoaki Nakamura (network and computing, ATLAS)

Hiroshima U. (ALICE)

Toru Sugitate (T2 setup & advices)

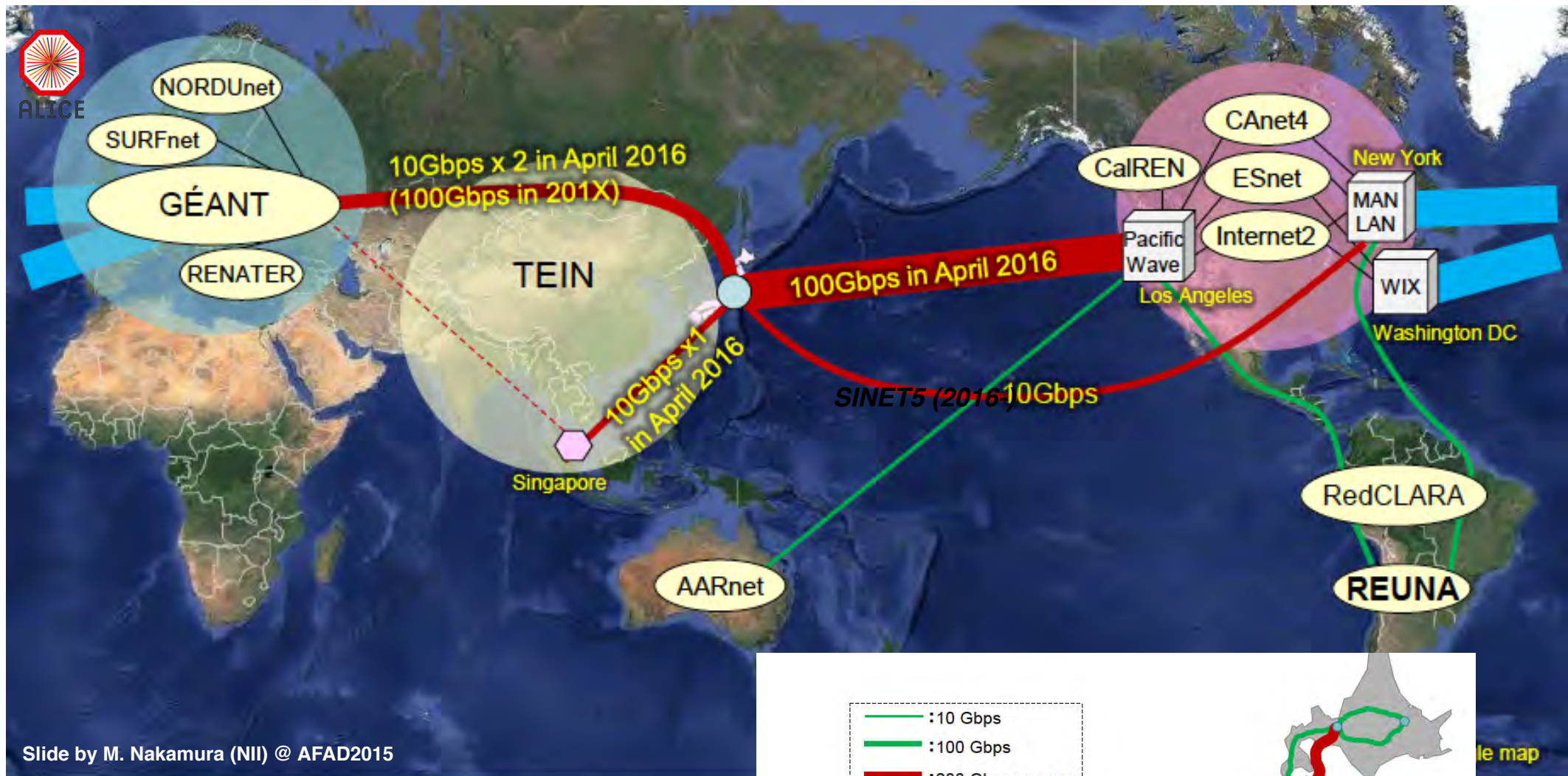


Why ALICE Tier-2 in Tsukuba ?



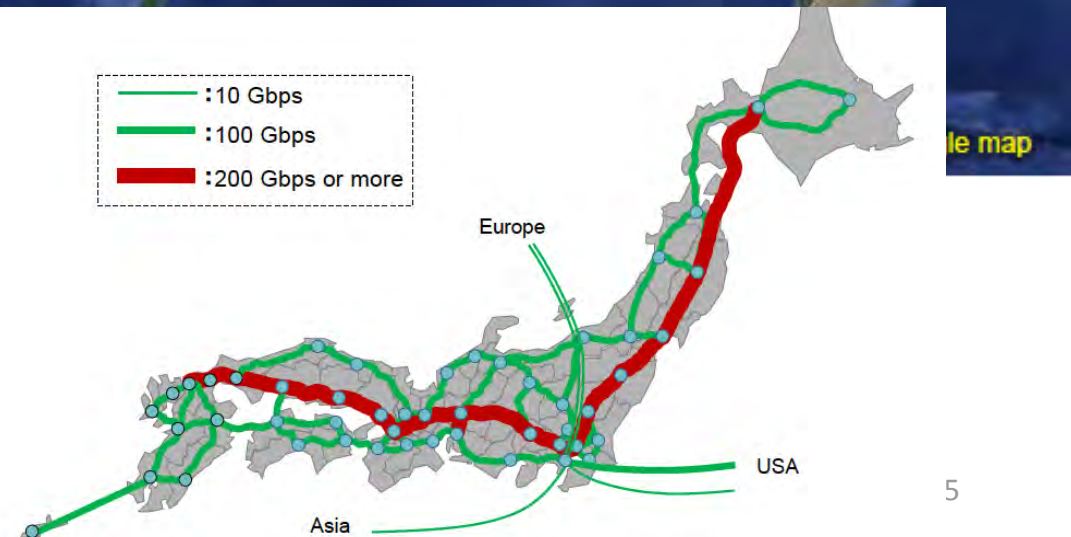
- Contributions to ALICE by Tsukuba (-2015):
 - EMCal/ DCal detector construction, installation, operation
 - Data analysis (jets, bulk properties)
- After LS2, ALICE data volume in Run-3 will be x100, needed computing resources worldwide.
- ALICE offline management asked U. Tsukuba to contribute to computing (ALICE analysis and T1/2 workshop in Tsukuba, March. 2014)
- Recent talks on the future ALICE computings:
 - AFAD2015: The ALICE computing upgrade project and network in Asia (TC, Jan, 2015)
 - JPS 2015 spring symposium: Computing in LHC ALICE (TC, Mar. 2015)
 - WLCG 2015 at OIST: Evolution of the ALICE Computing Model in Run 3 (TC, Apr. 2015)
- **Goals:**
 - For the future of ALICE, establish another T2 site in Japan.
 - Utilize a fast and wide bandwidth only among T2 sites (WLCG, LHCONE), without degradation of data transfer speed by firewalls.

SINET5 (2016-)



SINET 5 (April 2016-), by NII

Domestic: 200Gbps backborn,
International: 100 Gbps direct link JPN \rightleftharpoons US & EU





16 WN's (provided by Hiroshima U) as a proto-type of T2 in Tsukuba (marked by yellow labels)
2015, May

Goal:

- Another ALICE T2 in Japan
- Academic backbone SINET 4/5

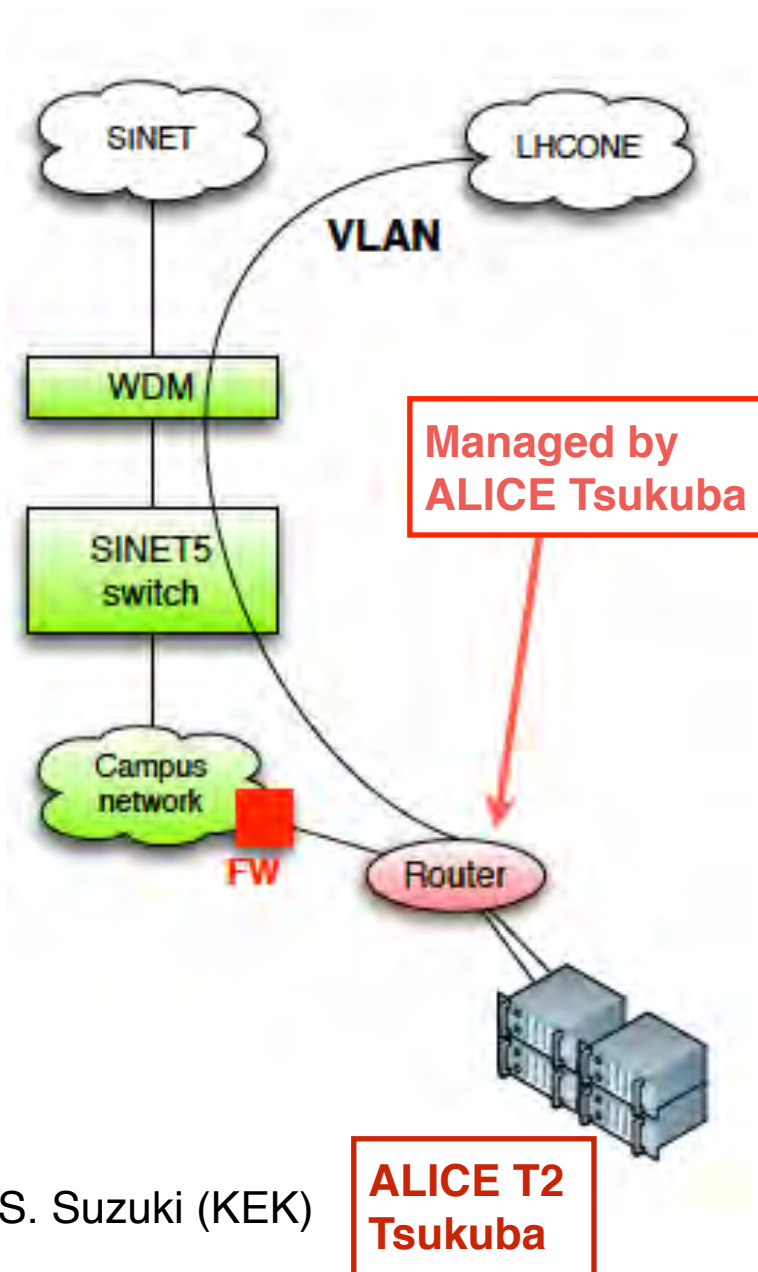
Status:

- Infrastructures (space and power) ready.
- 16 WN's (X5355 x2, 4c@2.6GHz) in a rack.
- Visited Hiroshima T2 to learn on May 28.
- Installation of EMI 3.1 and host certification has been finished.
- Installation of basic services is almost done.
- Used IP: HepNet-J (well establish connection (old) for HEP community)
- Connected to SINET-4 (via HepNet-J).

Plan:

- Establish basic services in Oct. and start test operation in Nov. (ask ALICE for test job submission).
- Connection to SINET-5 will start Oct.
- Will use Univ. IP for head nodes towards the future connection to WLCG and LHCONE.
- Communication with WLCG in Oct-Nov.
- Also need to communicate with U.Tsukuba info. center

Plan: Connection to SINET-5 and LHCONE



- Use University's IPs.
- Connect to LHCONE via VLAN.
- Path control for LHCONE by own router (read), managed by us (ALICE Tsukuba).
- FW: managed by University.
- Need a ICSIRT.
- No such framework so far, need to communicate w/ Univ. academic info center.

by S. Suzuki (KEK)

- The setup of prototype for Tsukuba T2 site (minimum setup) is almost finished, still need to install several services (sBDII, DPM-SE, CREAM-CE) on head nodes.
- After the setup is done, we would like to ask for site tests.
- In parallel, we are working on the network on campus to establish the lines for Grid, WLCG and LHCONE.
- Will communicate with ALICE and WLCG soon.
- A new JSPS Grant application will be submitted for ALICE detector upgrade and a larger scale Tsukuba T2.