

## 7. Collaboration Using SINET4

SNET is the network for the collaboration research built on SINET4 with L2/L3VPN service. SINET4 is the national-wide academic network operated by National Institute of Informatics (NII). SNET directly connects the universities, research institutes and NIFS. NIFS has operated SNET for the category of “LHD experiment remote participation” since March 2002. The categories of “Remote use of supercomputer system” and “Bilateral collaboration”, which is formerly called “All Japan ST research program”, were added to SNET in FY 2005.<sup>1-4)</sup> The facilities of “Bilateral collaboration” are Kyushu Univ.'s spherical tokamak experiment equipment (QUEST) at Kyushu Univ., GAMMA-10 at Tsukuba Univ. and High Density Plasma Experiment-I (HYPER-I) at NIFS. The number of sites is on the increase; 24 sites participate to the SNET as shown in Fig. 1.

The categories and remote sites connected by L3VPN are followed; *LHD experiment remote participation* Tohoku Univ., JAEA, Univ. of Tokyo (Hongo and Kashiwa campus), Tokyo Institute of Technology, Nagoya Univ., Kyoto Univ. (Yoshida and Uji campus), Kyoto Institute of Technology, Hiroshima Univ. and Kyushu Univ., *Remote use of supercomputer system* JAEA, Nagoya Univ., Kyoto Univ. (Yoshida and Uji campus) and Kyushu Univ., *Bilateral collaboration*: Tsukuba Univ. and Hiroshima Univ.

The categories and remote sites connected by L2VPN are

followed; *Bilateral collaboration*: Univ. of Tokyo (Kashiwa campus), Kyoto Institute of Technology and Kyushu Univ., *Muticast*: Kyushu Univ., *Hyper-I* Kyushu Univ.

GAMMA-10 at Tsukuba Univ. joined the DaaS produced by NII. DaaS stands for Desktop as a service. The server which is connected to L3VPN of GAMMA-10 is located in NII and the user can use the desktop environment with their own PC anywhere on the network. QUEST at Kyushu Univ. had joined DaaS with L2VPN.

A laboratory at Kyoto Institute of Technology (KIT) has newly joined SNET as 13<sup>th</sup> site of “LHD experiment remote participation” category on March 2013. The VLAN configuration for SNET has also been optimized through the campus network at KIT.

A laboratory at Kyoto Univ. has changed the category from “Remote use of supercomputer system” to “LHD experiment remote participation” on March 2013. The configuration of L3 switch at Kyoto Univ. was changed remotely from NIFS.

1) Yamamoto, T., et al., Ann. Rep. NIFS (2008-2009) 333

2) Yamamoto, T., et al., Ann. Rep. NIFS (2009-2010) 367

3) Yamamoto, T., et al., Ann. Rep. NIFS (2010-2011) 461

4) Yamamoto, T., et al., Ann. Rep. NIFS (2011-2012) 453

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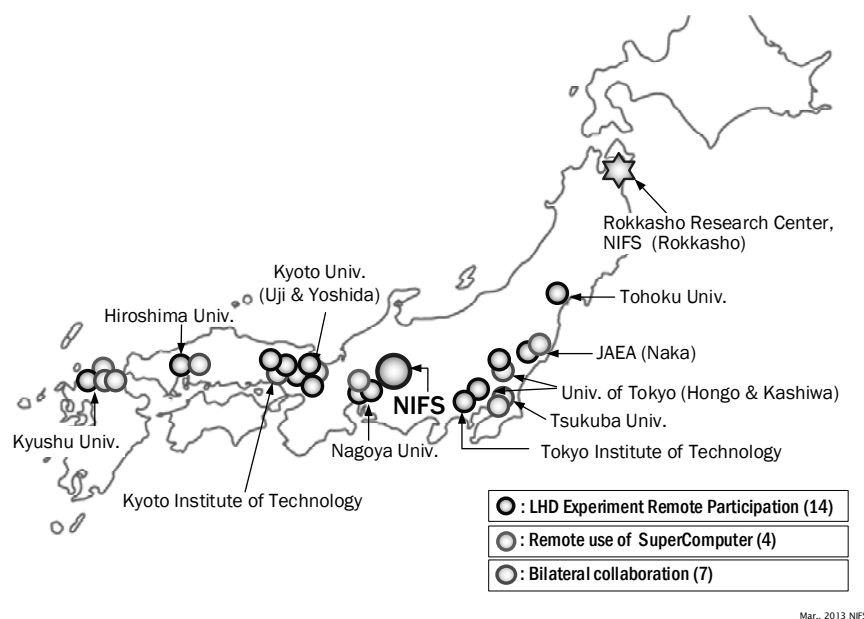


Fig.1 Connection map of SNET