III. International Collaboration

Many research activities in the National Institute for Fusion Science (NIFS) are strongly related to the international collaborations with the institutes and universities in the world. These collaborations are carried out in various frameworks: multilateral international collaborations, bilateral ones, programs based on governmental or inter-institutional agreements and finally personal exchanges. They are mostly supported by Grant-inaid of Scientific Research of the Ministry of Education, Culture, Sport, Science and Technology (MEXT) and various programs of the Japan Society for the Promotion of Science (JSPS).

NIFS has following four programs of multilateral collaborations: the US-Japan (Universities) Fusion Cooperation Program, the IEA PWI Collaboration (former IEA TEXTOR Collaboration), IEA Stellarator-Heliotron Agreement, and IEA Spherical Tori Agreement. Agreements on academic exchange and cooperation have been signed up in order to promote scientific exchanges between NIFS and foreign institutes. Table I shows these

agreements in the order of the time of enforcement. A new Agreement was concluded between NIFS and HiLASE Center (Czech) in FY2015. Grant-in-Aid for International Scientific Research programs and individual travel grants for participating overseas international symposia and conferences (both being supported by MEXT) have effectively functioned to promote international activities of NIFS

Guest professors (supported by MEXT), who stayed for more than three months, and research fellows (JSPS research fellowship) are listed in Tables II and III, respectively. The 25th International Toki Conference on "Creating the Future -Innovative Science of Plasma and Fusion-" was held on 3 - 6 in November, 2015, NIFS being as the host institute.

Statistics of visitors and visit by NIFS staffs in FY2015 are as follows: foreign scientists from 14 countries visited NIFS 176 person-times, and NIFS staffs went abroad 348 person-times to 25 countries.

(Masuzaki, S.)

Table. I List of Academic Exchange and Cooperation Agreement with NIFS

| Organization | Country | Effective from |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------|
| Institute of Plasma Physics, Academia Sinica | China | June 27, 1992 |
| Max-Planck Institute for Plasma Physics | Germany | May 11, 1993 |
| Kurchatov Institute of Nuclear Fusion | Russia | May 13, 1993 |
| Kharkov Institute of Physics and Technology | Ukraine | Oct. 7, 1994 |
| The Australian National University | Australia | May 8, 1995 |
| National Fusion Research Institute | Korea | March 6, 1996 |
| Karlsruhe Institute of Technology | Germany | Oct. 6, 2005 |
| Princeton Plasma Physics Laboratory | U.S.A. | March 3, 2006 |
| Institute for Fusion Studies, The University of Texas at Austin | U.S.A. | March 6, 2006 |
| Oak Ridge National Laboratory | U.S.A. | May 25, 2006 |
| UCLA, Center for Energy Science and Technology Advanced Research | U.S.A. | Nov. 28, 2006 |
| Aix-Marseille University | France | July 19, 2007 |
| A.M. Prokhorov General Physics Institute | Russia | Oct. 15, 2007 |
| Associated International Laboratory (LIA): Centre National de la Recherche Scientifique (CNRS), Aix-Marseille University, Kyushu University, Osaka University | France | Oct. 22, 2007 |
| Research Center for Energy, Environment and Technology (CIEMAT) | Spain | Feb. 26, 2009 |
| ITER International Fusion Energy Organization(ITER) | | Feb. 2, 2011 |
| FOM Institute for Plasma Physics'RIJNHUIZEN | Netherland | Feb. 4, 2011 |
| Southwest Institute of Physics | China | April 18, 2012 |
| CEA, Institut de Recherche sur la Fusion par confinement Magnétique (IRFM) | France | Feb. 21, 2015 |
| Institute of Ionized Gas (IGI) | Italy | Feb. 23, 2015 |
| Consorzio RFX | Italy | Feb. 23, 2015 |
| HiLASE Center of the Institute of Physics of the Czech Academy of Sciences | Czech | March 23, 2016 |

Table. II List of Guest Professors in FY2015

| Name | Organization | Country | Term |
|-----------------------------------|----------------------------------------|---------|-----------------------|
| VYACHESLAVOV, Leonid, Nikolaevich | Budker Institute of Nuclear Physics | Russia | June 1 – Sep. 4, 2015 |
| HUDSON, Stuart | Princeton Plasma Physics Laboratory | U.S.A. | June 1 – Aug.31, 2015 |
| Pegourie, Bernard | Institute for Magnetic Fusion Research | France | Sep.10 – Dec.15, 2015 |

Table III. List of JSPS invited fellows for NIFS in FY2014

(1) Postdoctral Fellowships for foreign Researchers

Timothée Nicolas (Apr.25, '14-Apr.24, '16)

(2) Invitation Fellowship Programs for Research in Japan None