Project No.: 18002 Core Institution in Japan: School of Science, The University of Tokyo

JSPS Core-to-Core Program -Strategic Research Networks-
FY2010 Research Report

Project No.	18002
Research Theme	International Research Network for Exotic Femto Systems
Duration of Project	2008/4/1-2011/3/31
Core Institution in Japan	School of Science, The University of Tokyo

Implementing Organizations

Country	Japan
Core Institution	School of Science, The University of Tokyo
Co-Chair (name and title)	Takaharu Otsuka, Professor
Number of Cooperating Institutions	3
Cooperating Institutions	RIKEN, Tokyo Institute of Technology, National Astronomical Observatory of Japan

Country	USA
Core Institution	Oak Ridge National Laboratory
Co-Chair (name and title)	Witold Nazarewicz, Scientific Director of HRIBF
Number of Cooperating Institutions	7
Cooperating Institutions	Michigan State University, Argonne National Laboratory, Yale University, Lawrence Berkeley National Lab, University of Notre Dame Iowa State University University of Washington
Matching Fund	JUSTIPEN (DOE)

Country	Germany
Core Institution	Gesellschaft fuer Schwerionenforschung
Co-Chair (name and title)	Karlheinz Langanke, Director of Theory Department
Number of Cooperating Institutions	4
Cooperating Institutions	Technische Universitaet Darmstadt, Universitaet zu Koeln, Technische Universitaet Muenchen, University of Frankfurt
Matching Fund	EMMI (Helmholtz-Gemeinschaft)

Country	France
Core Institution	Grand Accelerateur National d'Ions Lourds
Co-Chair (name and title)	Sydney Gales, Director
Number of Cooperating Institutions	5
Cooperating Institutions	IRES Strasbourg, CENBG Bordeaux, CEA Bruyeres-le-Chatel, IPN-Orsay, CEN Saclay
Matching Fund	Nuclear Physics (IN2P3 / CNRS)

Country	Italy
Core Institution	University of Padova
Co-Chair (name and title)	Cosimo Signorini, Professor
Number of Cooperating Institutions	3
Cooperating Institutions	INFN, University of Catania, Laboratori Nazionali di Legnaro
Matching Fund	Nuclear Physics. INFN experiments: ASFIN, EXOTIC, CT31, PI32

Country	Finland
Core Institution	University of Jyvaskyla
Co-Chair (name and title)	Juha Aysto, Professor
Number of Cooperating Institutions	0
Cooperating Institutions	
Matching Fund	Bilateral cooperation with Japan (Academy of Finland)

Country	Norway
Core Institution	University of Oslo
Co-Chair (name and title)	Morten Hjorth-Jensen, Professor
Number of Cooperating Institutions	0
Cooperating Institutions	
Matching Fund	Science and Technology (Research Council of Norway)

Result of Program Implementation

We have carried out four types of activities: developing the collaboration projects, organizing seminars with partner countries, sending researchers, including young ones, abroad, and organizing the summer school. Regarding the collaborative works, we have carried out six projects. Many experimentalists and theoreticians have been sent abroad, and all the programs are quite successful. As for the joint workshops, we have organized seven workshops and all of them were quite fruitful. Also, young scientists have been sent to partner countries for educational purpose and starting collaborations. As for the summer school, Japanese graduate students have been sent to the summer schools in Germany and USA, and we have invited lecturers and students to CNS-EFES summer school from the partner countries.

Achievements in FY2010 (Self Review)

The JSPS core-to-core program "Research Network on Exotic Femto Systems" went extremely well also in the fifth year of the program (2010-2011). Seven seminars (joint workshops) were organized and many scientists from Japan and also from partner countries have participated in. Not only the present status of the research, it was possible for us to discuss the future plan and perspectives of the research on the Exotic Femto Systems. Also, the workshops gave unique opportunities for many young Japanese scientists to give presentations, which is an indispensable experience for them. Many collaborative works, both experimental and theoretical, have been initiated. The program enables us to send young scientists to summer schools. These activities are expected to play significant roles for educating the researchers of the next generation. In fact, one of such young reserachers sent in the past received an award from the Physical Society of Japan. Many scientists visited Japan using the matching-funds of the JSPS core-to-core program, for instance, JUSTIPEN program of DOE, US, LIA of CNRS, France, and EMMI of Helmholz, Germany.

Future Plan

As for the education of young scientists, we are planning to send several graduate students to summer schools in USA and Germany, even after EMMI is terminated. Also, by using some funds, we are planning to send young scientist to institutes of the partner countries as short-term visitors. As for the joint workshops, we are going to organize some international workshops with the partner countries, especially US, Germany, and France. In addition, we have established three strong collaboration programs with partner countries. In addition to the developments of experimental technique (with USA, France), we continue the theoretical collaborations with Norway, Germany and USA, by which the understanding of nuclear structure from fundamental nucleon-nucleon interaction will become feasible.