

JSPS Core-to-Core Program
FY2008 Implementation Plan (Project No. : 18002)

Research Theme International Research Network for Exotic Femto Systems
 Duration of Project 2008/4/1-2011/3/31 (36 months)
 Core Institution in Japan (Co-Chair) School of Science, The University of Tokyo
(Takaharu Otsuka)

Implementing Organizations

○ **Japan**

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

○ **Partner Countries**

USA	Core Institution	Oak Ridge National Laboratory	
	Co-Chair (name and title)	Witold Nazarewicz, Scientific Director	
	Cooperating Institutions	Michigan State University, Argonne National Laboratory, Yale University, Lawrence Berkeley National Lab., University of Notre Dame	Number of Cooperating Institutions 5

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

France	Core Institution	Grand Accelérateur National D'ions Lourds (GANIL)	
	Co-Chair (name and title)	Sydney Gales, Director	
	Cooperating Institutions	IRES Strasbourg, GENBG Bordeaux, CEN Saclay, CEA Bruyeres-le-Chatel, IPN-Orsay	Number of Cooperating Institutions 5
Finland	Core Institution	University of Jyvaskyla	
	Co-Chair (name and title)	Juha Aysto, Professor	
	Cooperating Institutions		Number of Cooperating Institutions 0
Italy	Core Institution	Universita degli Studi di Padova	
	Co-Chair (name and title)	Cosimo Signorini, Professor	
	Cooperating Institutions	INFN, Universita degli Studi di Catania	Number of Cooperating Institutions 2
Norway	Core Institution	University of Oslo	
	Co-Chair (name and title)	Morten Hjorth-Jensen, Professor	
	Cooperating Institutions		Number of Cooperating Institutions 0

Objectives of Research Exchange (including the five years after the project finishes)

The major objective of this program is to develop an international research network for the physics of exotic nuclei (femto systems) including both theoretical and experimental nuclear physicist. By this research, our knowledge on the structure and reactions of exotic nuclei will be deepened dramatically, which is indispensable for future experiments planned at new facilities all over the world. For instance, RIBF (RIKEN) became operational in 2007, and SPIRAL2 (France) and FAIR (Germany) will be completed within coming several years. This project plays an essential role to link the scientific collaborations of these leading countries.

Results to the present

Within the first two years, we have established joint workshops with USA and Germany, which are regularly organized. Also, we have started a new series of workshop with France, and we have sent several scientists to the joint workshop in Finland. The joint researches are also started. Many scientists from partner countries visited Japan using the matching funds. For instance, more than 20 scientists stayed in Japan for various collaborations within these two years. Therefore, the formation of the international research network is going on quite well as it planned.

Summary of FY 2008 Exchange Plan

Joint Research

We are planning 5 Joint Researches in FY 2008: Development of CRIB beam monitor with Italy, Realistic interaction and structure of exotic nuclei with Norway, Particle Tracking Detector for Exotic Beam Experiments with France, The Projection with JEM with USA, Magnetic analysis of Exotic Nuclei with USA.

Seminar

There will be 8 seminars with partner countries. Three of them (with USA, Norway) will be held in Japan, and three of them are in USA. In addition, we will organize joint workshops in Germany and in France.

Researcher Exchanges

We are planning to send about 20 Japanese scientists to partner countries for collaboration including the long-term stays. In addition, we send 9 graduate students to summer schools.