

25 April 2013

Monju WS Communiqué
International Workshop on International Collaborative Research Using Monju

The International Workshop on International Collaborative Research Using Monju was held on April 25, 2013, in Tsuruga-shi, Fukui Prefecture. It was cohosted by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Japan Atomic Energy Agency (JAEA).

MEXT and the JAEA attended from Japan, while agencies responsible for fast reactor-related R&D from the U.S., France, Russia, China, Republic of Korea, India, the International Atomic Energy Agency (IAEA) and Generation-IV International Forum (GIF) attended from overseas.

Reports by Japanese attendees:

- MEXT reported on the current situation of Japan's energy policy and fast reactor development as well as the direction of Monju research.
- JAEA reported on Monju and related R&D in JAEA.

Reports by participants from each country and agency:

- Each country and agency reported on the current situation for fast reactor development in each country and agency as well as expectations for Monju.
- IAEA reported the benefits of IAEA Coordinated Research Projects (CRPs) on Monju which was carried out between 2008 and 2012 and expressed strong expectations for a new IAEA CRP based on new experimental data from Monju.
- China reported that National status on Sodium-cooled Fast Reactor (SFR) development in China.
- France reported on present status of French program ASTRID and expectation of cooperation on Monju, including minor actinides transmutation R&D.
- India reported that information exchange between Fast Breeder Test Reactor (FBTR) and Monju will be beneficial for both countries.
- Republic of Korea indicated interest not only in R&D using Monju but also related areas of research, such as Advanced Technology Experiment Sodium Facility (AtheNa).
- Russia reported that status of the activities on SFR in Russia and prospects of collaboration on Monju.
- The U.S. reported on present status of Fast Reactor R&D and outlook for Monju collaborations.
- GIF reported present status of SFR collaboration in GIF and its work toward the effective use of Monju.

During the general discussion:

- Each country had great interest in when Monju will be restarted.
- There was debate about individual areas of cooperation between Japan and each country and agency, and about the methodology for joint research in which all participating countries can participate.

The following particular points were confirmed in the report on the general discussion:

- First, participants agreed that Monju plays an important role as a venue to share operation experience in order to promote an innovative fast reactor, because there are few reactors now in operation all over the world. Several countries are operating, building and planning new FRs in near future.
- Participants also emphasized that open communications between regulators, designers and operators are important to enhance the safety of FRs and, in particular, benchmarking of neutronic and thermal hydraulic codes is indispensable to develop effective regulations.
- Participants reached consensus on conducting joint international research over a broad range, including analysis using data disclosed from Monju. A new project should be launched as a successor to the Monju CRP under IAEA.
- Further, the restart and operation of Monju will provide valuable experience to the international SFR community to help flesh out SFR safety design criteria (SDC), which are under development in GIF framework and now being debated under the IAEA framework. The aim will be to build safety design guidelines (SDG), now under discussion in GIF, as a first step toward fleshing out SDC.
- The use of the AtheNa and related facilities would be very beneficial to the international community.
- Last, participants emphasized irradiation tests using Monju will provide extremely meaningful data in order to confirm the feasibility of actinide multi-recycle and the effectiveness of reducing volume and the toxic level of radioactive wastes, which is a feature of fast reactors.

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