



Practice in making cloud chambers at the a campus festival of the Fukushima National College of Technology, “Banyo-Sai”,

Technical college students explained the characteristics and effects of radiation to the visitors

Japan Atomic Energy Agency participated in the campus festival of the Fukushima National College of Technology.

The Japan Atomic Energy Agency (JAEA) participated in the campus festival named “Banyo-Sai” held by the Fukushima National College of Technology following the last fiscal year. This year, JAEA helped the students to answer the questions about radiation by the visitors, and introduce the results of observations for radiation using “cloud chambers”. JAEA also helped the students to examine the internal radiation exposure of the visitors or measure the environmental samples by bringing “Whole-Body-Counter Car” and “Mobile Laboratory” into the campus. Prior to the festival, the JAEA staff gave various kinds of lectures and conducted operational practices for the technical college students in charge of cloud chambers or the



measurement of the internal radiation exposure. On the day of the festival, the students of Fukushima National College of Technology mainly took responsibility for the introduction and the operation of the equipment.

“Banyo-Sai” is the campus festival held by the Fukushima National College of Technology every year. In this fiscal year, the festival was held on November 2, 2014. JAEA participated in the planning of the “Banyo-Sai” under the cooperative agreement with the Institute of National College of Technology, Japan.



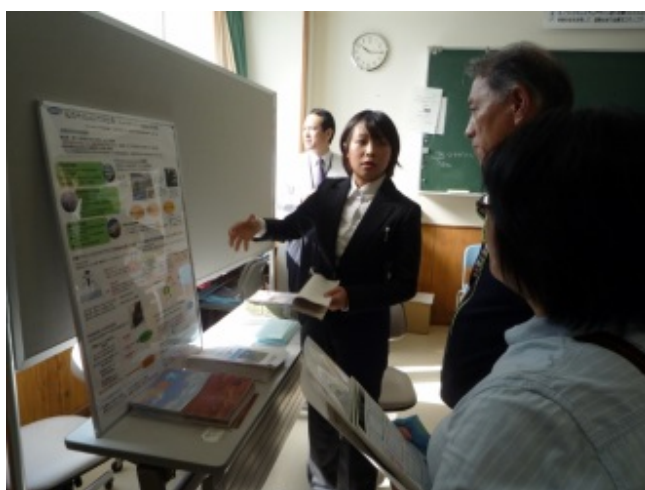
One of the main plans for the festival was the introduction of a

cloud chamber. On the day of “Banyo-Sai”, the students who received a training by the JAEA staff in advance explained the principle of a cloud chamber and characteristics of radiation along with simple experiments to the visitors. Near the booth, the students also helped approximately 100 children to make cloud chambers (photo in the first page and upper photo in this page). A student in charge of explaining the cloud chamber has an experience in attending the “Practice Course on Radiation Handling” held in Oarai Town, so the student appropriately responded to the experimental operation and answering the questions.

The “Whole-Body-Counter Car” is equipped with a whole body counter (WBC) that can measure the radiation doses both on the surface and inside of the body. The car is frequently used for inspecting the internal radiation doses for inhabitants in Fukushima Prefecture, because, with this car, the internal exposures can be measured in a short time at the public facilities near their houses. On the day before, the students in charge learned the internal exposure and how to operate PC. On the day of the festival, they alternatively explained the equipment to the visitors, and measured the radiation doses for approximately 40 visitors (lower photo in this page). Regarding the results of the

measurements, the JAEA staff explained and answered the questions. The measurements attracted many visitors including the parents and the local people who have not yet been inspected by a whole body counter, so they formed a queue in front of the reception of the booth. In “Mobile Laboratory” that is equipped with germanium semiconductor detector, the students experienced the measurements of soil and water with the visitors.

The JAEA staff participating in the festival this fiscal year were the members of Fukushima Environmental Safety Center (Sector of Fukushima Research and Development), Nuclear Plant Decommissioning Safety Research Establishment, and Fukushima Fuels and Materials Department (Oarai Research and Development Center).



On the day of the festival, the JAEA staff answered the questions by the visitors about the influence of radiation, and the results of health survey for inhabitants in Fukushima Prefecture (left photo). They also explained the research on environmental dynamics that is conducted to identify the migration behavior of radioactive cesium in soil, and research for the decommissioning of the Fukushima Daiichi Nuclear Power Station. In addition, the staff supported the students who assumed a variety of roles in the campus festival.

JAEA has been cooperating with the Fukushima National College of Technology concerning the nuclear safety field and human resource development for restoration, by people exchange, dispatch of lecturers and experts, and lecture/practices for technical college students under the agreement between JAEA and Institute of National College of Technology, Japan.

The participation in the “Banyo-Sai” is one of the activities under this agreement. This year, the students themselves communicated their knowledge and thought which they developed through the practices in advance to the visitors. It is expected that the plain explanation by the students regarding the experiments or radiation that is hard to understand will lead to the promotion of the understanding and the removal of anxieties

about radiation. Many visitors admired the experiments and explanation by the students. One of the visitors said, “I learned that many kinds of radiation exist around us.” The other visitors said, “I was able to learn through the experiments that the alpha-ray is easily stopped.”, and “I would like to thank the students”. The visitors who were inspected by the whole body counter for the first time seem to be relieved. JAEA will continue to support the students for their activities. JAEA expects to foster human resources that will be engaged in the projects, research and development that contribute to the restoration from nuclear disaster in Fukushima.

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