ISET-R Projects for Fostering Young Researchers

Visits to IAEA headquarters, CTBTO, and research laboratories in Seibersdorf.

Since fiscal 2013, we’ve been supporting young researchers to improve their quality by offering research experiences in different research fields through visits to research laboratories.

For the first time this year, we held a tour to IAEA (International Atomic Energy Agency) headquarters in Vienna and research laboratories in Seibersdorf on April 25, 2014. Total of nine young researchers and students participated in this tour.

Here’s a report by the participants.

IAEA headquarters: Whole body counting system and radiation detector

We received explanations on equipment measuring internal and external exposure to radiation.

Canberra’s bed-type whole body counter

This whole body counting system with two HPGe detectors is large enough for two grown-up men to lie down. The system automatically moves and scans through a subject on the bed and measures radioactivity of the subject body (running time: 40 minutes). The system can provide information on type, intensity, and location of radionuclides found in the body. An anatomical model of the human body is used as a standard. Calibration method using this human body model is vital in keeping measured values accurate.

Two types of measuring equipment were introduced: survey meters for alpha, beta, and gamma emitters to indirectly monitor internal exposure and personal cumulative dosimeter worn by staff members to monitor external exposure. It was emphasized that both current dose and cumulative dose should be monitored. Even though
the current dose level is low, it will be as dangerous as high radiation when exposed for a long time.

**Visit to CTBTO headquarters**

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