

RADIATION PROTECTION

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In the year 2007, the AVF cyclotron, the ring cyclotron and the experimental facilities ran satisfactory without any serious trouble. The contamination levels of the cyclotron vaults and the experimental rooms are kept well below the legal limit. Notable increase of the radiation level in the vicinity of the cyclotron buildings has not been observed.

New accumulation tank system (150l) has constructed (Old one was 90l). This new tank is able to check from the six directions.

The periodical inspection for the cyclotron facilities was carried out by Nuclear Safety Technology Center at April.

Routine area monitoring

Continuous monitoring has been done for neutron and gamma-ray radiation levels at several points inside and outside of the cyclotron building using ^3He counters, proportional chambers, luxel badges and TLDs. No prominent gamma and neutron radiation levels were observed outside the cyclotron facilities. No increase of radiation level which is correlated to operation of the new facilities has been observed.

The floor surfaces of the cyclotron vault are periodically checked by smear tests. The tests prove that the contamination level is below permissible level. The contamination level related to the renewal works is also below permissible level.

Dose rates at the experimental area are checked every one-month redundantly by outside inspectors. The results of the measurements are put up at the entrance gate of the AVF Cyclotron building as the safety information for users of the facilities.

Routine personal dose monitoring

Personal dose monitoring has been made using a luxel badge (detection limit 0.1mSv) and a solid state pocket chamber (detection limit 0.001mSv). When one works at high radiation environment, a pocket chamber is used together with the luxel badge. Results of personal dose are shown in Figs. 1 and 2. The number of people who follow the radioactive works at the year 2007 is 76.

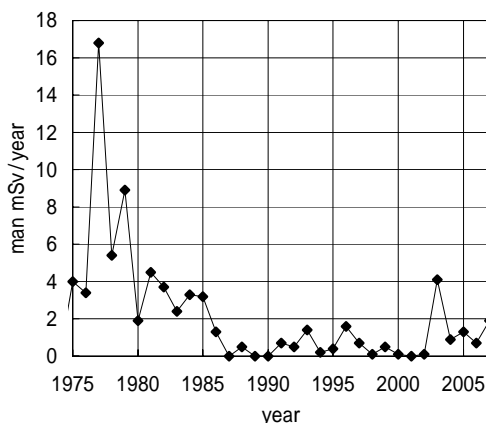


Fig.1. Collective dose per year for member of RCNP and SAS (Sumijyu Accelerator Service Ltd.).

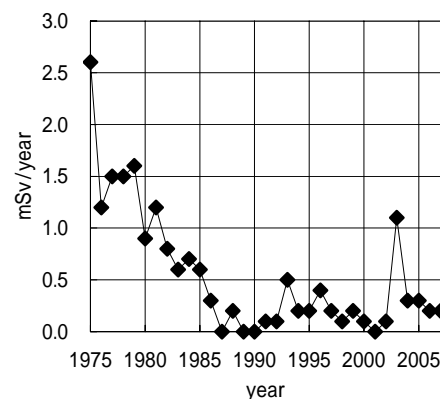


Fig.2. Maximum exposure value received by a person.