

Development and Educational Application of Cloud Chambers Targeting Each Generation Level

^{1*}Takehiro TODA, ² Takeshi IIMOTO

¹ RADO Corporation, ² The University of Tokyo,

t-toda@kiribako-rado.co.jp, RADO Corporation, Japan

RADO corporation. is the only manufacturer in Japan specializing in cloud chambers. Since its establishment in 2001, RADO has consistently developed a variety of cloud chambers. RADO's cloud chambers are available in dry ice-cooled, Peltier element-cooled, liquid nitrogen-cooled, and refrigerator-cooled types, depending on the user's needs.

RADO's cloud chambers are used for various purposes, such as permanent displays in science museums and demonstrations at events, as well as in school education. For example, many people can learn about the existence of natural radiation by viewing cloud chambers on permanent display in science museums. This is an opportunity to understand radiation and to develop an interest in nuclear energy.

RADO's cloud chambers have been effectively used in the RAS0065, 0079 and 0091 of TCPs and have also been delivered to Asian and Pacific member countries belonging to the IAEA through the supporting activities of Japanese Volunteer's Expert Team (JVET).

Using these cloud chambers, radiation education such as observation of natural radiation, half-life experiments, and Compton scattering experiments can be conducted. Furthermore, the educational effects of cloud chambers can be expected not only in the field of radiation education, but also in a wide range of other fields such as arithmetic and chemistry in the education track of STEAM.

Cloud chamber is expected to be applied as an educational tool not only to make wow factor but also to teach various subject contents. We have organized some educational stories that can be taught using the cloud chamber fitting to the level of targeting generation in schools. We will show the examples in our poster presentation.