

## International collaborations of public outreach activities for the space science using 3D digital globe

# Akinori Saito[1]; Takuya Tsugawa[2]; Yoko Odagi[3]; Chia-Hung Chen[4]

[1] Dept. of Geophysics, Kyoto Univ.; [2] NICT; [3] WDC for Geomagnetism, Kyoto Univ.; [4] Earth Science, NCKU

<http://earth.dagik.org/>

The importance of the public outreach activities of science have increased in these years. It is regarded as the obligation of scientists to contribute to the society by expanding the knowledge that they have achieved, and educating especially young generations with their expertise. Although some fields of science, such as astronomy, has spent a large number of efforts for the public outreach activities, the activity of the space scientists is generally low in most countries. The public outreach is very important for the space science because it is a relatively new field of study, and the social awareness of the crucial effects of the space science phenomena is quite low. To support the public outreach activities, we developed a portable three-dimensional digital globe system, Dagik Earth, and promote the activities using it under international collaborations. Three-dimensional digital globe is a powerful tool for audience to understand the global phenomena occurring on the Earth and planets. Miraikan, Japan, developed Geo-cosmos that is a 6-m spherical screen covered by LEDs, and NOAA, USA, developed Science on a sphere (SOS) that is a 1.8-m spherical screen projected by four PC projectors. Although these systems have great success in science museums, they are too complicated and expensive to be widely used out of the science museums. Dagik Earth is a portable and low cost system because it uses ordinal PC and one PC projector. It uses a spherical screen that can be an inflatable balloon for portable usage. The size of the spheres that have been used is from 8-cm to 16-m. A group led by Kyoto University has developed the software and contents of Dagik Earth, and distribute them with free of charge for the science and education usages. In Japan, it has been widely used for education and public outreach in schools, local science museums, universities and research institutes. Under the collaboration with the scientists in Taiwan, the Chinese version of Dagik Earth has been developed, and widely used in the science activities at schools and museums in Taiwan. It was also used in science public outreach events in Thailand, Indonesia, Singapore and Australia. We hope to expand the usage of Dagik Earth in the public outreach activities for the space science in the Asia-Oceania region under the international collaborations.