

R011-17

C会場 : 9/27 PM1 (13:45-15:30)

15:00~15:15

学校教育とアウトリーチ活動のための地球惑星科学可視化データベース

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Earth and Planetary Science Visualization Database for School Education and Outreach Activities

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The digital three-dimensional globe, Dagik Earth is an educational digital tool that displays various Earth and planetary data in three dimensions and allows users to view the data in a way that is not possible with ordinary images and movies. It has been developed by Kyoto University and others since 2007 and is used in educational activities at elementary, junior high, and high schools, as well as in outreach activities for earth and planetary sciences. About 60% of the registered users of Dagik Earth belong to schools, 30% to universities and research institutes, and 8% to science museums. In schools, it is used in classes by teachers, and science activities by students. Scientists use it in outreach activities such as open campus, science events, and lectures in schools. Dagik Earth can be used in two ways: (A) a three-dimensional display using a spherical screen, and (B) a flat display using a tablet or other device. (A) is a three-dimensional display using a PC projector to project images of the Earth and planets onto a spherical screen. This allows visitors to feel as if they are looking down at the Earth from outer space. In (B), by using digital textbooks and applications, the contents of Dagik Earth can be viewed by each student at hand. This allows for independent learning, as they can arbitrarily select content, rotate the earth, enlarge it, and still or play it back. In addition to these digital learning materials, hand-made globe sheets are provided for science workshops. The database of Dagik Earth is daily updated. The recent observational data such as global clouds are updated every hour. Some data are updated every year. Some new data are visualized and included in Dagik Earth based on requests from users. The softwares, tools and documents are also provided to users from the database. Besides operation of database, the learning courses of Dagik Earth are held on-line and off-line. The lessons learned from the maintenance of Dagik Earth database will be discussed in the presentation.