Development of a visualization and analysis system for earth science information

*Daisuke Matsuoka[1], Hideo Miyachi[2], Koji Koyamada[3], Isamu Kuroki[4]

1. Japan Agency for Marine-Earth Science and Technology, 2. Tokyo City University, 3. Kyoto University, 4. Cybernet Systems Co., Ltd.

We have been developing a new visualization and analysis system which combines three-dimensional visualization software, multi-dimensional scatter plot matrix and parallel coordinate plot as the commissioned projects of A-STEP NexTEP B sponsored by JST. The system is able to treat various types of data format of numerical simulation and observation such as NetCDF and HDF5. In addition, the users can extract and visualize characteristic features of atmosphere and ocean by interactively setting of multi-dimensional color maps based on scatter plots matrix and/or parallel coordinate plots of multiple physical quantities. In this presentation, we introduce the prototype of the software and application results to atmospheric and ocean simulation data.

Keywords: Visualization, Scatter plot matrix, Parallel coordinate plot