

Future direction of Marine Earth Informatics

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In advancing the research of marine Earth science, observation and computer simulation is an essential element. In recent years, the performance of the observation apparatus is dramatically improved, along with the means of observation is diversified. It is becoming possible to observe in a resolution, which was not imaginable so far. Such data to be generated from the observation is tremendously large in quantity and its quality is drastically improved. To handle these huge and high quality dataset for data analysis, we need to have a high speed and large memory computer system but such a system now becomes within reach in our hands by the recent dramatic improvement of high performance computer system. On the other hand, researchers who can use this kind of large-scale computer in their studies are still quite limited. In this session, we try to review the situation of observation data that has undergone a dramatic change regarded with both quality and quantity in recent years of marine Earth science research. We also try to review the situation from a professional standpoint of simulation about the status of the high performance computer system to analyze these “big data”. We focus on the state of the art data analysis technique and aim to share the outlook from the professional standpoint of computational science and professional position of observation science about the future direction of the marine Earth informatics research.