[JJ] Evening Poster | U (Union) | Union

[U-08]Developing the Future Plan and Road Map for Earth and Planetary Science Research

convener:Ryoichi Fujii(Research Organization of Information and Systems), Shigeko Haruyama(Department of Environmental Science, Graduate School of Bioresouces,Mie University), Eiichi Tajika(東京大学大学院理学系研究科地球惑星科学専攻, 共同), Hodaka Kawahata(Atmosphere Ocean Research Institute, the University of Tokyo)

Mon. May 21, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

This session offers an opportunity for scientists from across the country to discuss what it takes to advance earth and planetary science research. This comes at a time when the Science Council of Japan is preparing to revise the Masterplan for Advancing Major Academic Research in 2020. In order to advance earth and planetary science studies, it is essential to have an action plan that provides the framework for building upon basic and applied research work by individual scientists to further expand the scopes of the studies. Thus, this session aims to engender discussions and ideas that would help further flesh out the Dream Roadmap for Science and Engineering Research as part of the masterplan. Cognizant of the importance of defining steps to reach its goals, the Science Council of Japan has created the masterplan, which includes the roadmap. In earth and planetary sciences, there is a separate roadmap for each of the following: Space and planetary science; hydrospheric atmospheric science; human geosciences; solid earth sciences; and earth life sciences. This segmentation corresponds with how the Japan Geoscience Union subdivides the field. The masterplan 2017 calls for large-scale research projects on 12 different themes. Of those, seven projects were selected for hearings before the Council chose one of them as the Focus large-scale research project. This Union Session kicks off the project to take a close look at the changes that occurred in the field of earth and planetary sciences since 2014 and update each of those roadmaps with the nuts and bolts. The new roadmaps should reflect the large-scale projects being considered in each research segment as well as cross-segment projects. The session should spur ambitious proposals and active discussions about the future of earth and planetary sciences and roadmaps for research in all of the five segments as well as cross-segment research.

[U08-P04]Study of coupling processes in the solar-terrestrial system

*Mamoru Yamamoto[1], Hiroyuki Hashiguchi[1], Hiroshi Miyaoka[2], Yasunobu Ogawa[2], Kazuo Shiokawa[3], Satonori Nozawa[3], Akimasa Yoshikawa[4], Toshitaka Tsuda[5] (1.Research Institute for Sustainable Humanosphere, Kyoto University, 2.National Institute of Polar Research, 3.Institute for Space-Earth Environmental Research, Nagoya University, 4.Graduate School of Science, Kyushu University, 5.Research Organization of Information and Systems)

Keywords:Large research project, Coupling processes in the solar-terrestrial system, Atmospheric and ionospheric radar

Energy from the sun is divided into radiation and solar wind (high-speed particles), which are maximum at the equatorial and polar regions, respectively. We study the flow of the energy and materials in the whole atmosphere by establishing two large atmospheric radars at these singular points, and global observation network. We elucidate energy and plasma flow from the Sun to the Earth, response of the Earth’s atmosphere, ionosphere and magnetosphere to short/long period variability of the Sun, and coupling processes between these regions, which leads us quantitative understanding of the solar-terrestrial environment as a whole system.