

[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 Bioresources,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-P02]Mission plan for exploration of the space weather and climate at Mars

*Kanako Seki¹, Atsushi Yamazaki², Naoki Terada³, Ayako Matsuoka², Hiromu Nakagawa³, Shoichiro Yokota⁴, Satoshi Kasahara¹, Yoshifumi Saito², Takeshi Sakanoi³, Takeshi Imamura⁵, Yasumasa Kasaba³, Keigo Enya², Yoshifumi Futaana⁶, Atsushi Kumamoto³, Tomohiro Usui⁷, Hiroyuki Maezawa⁸, YASUKO KASAI⁹, Hideo Sagawa¹⁰, Makoto Taguchi¹¹, Yoshizumi Miyoshi¹², Takuya Hara¹³, Takeshi Kuroda⁹, Shotaro Sakai¹, Kazuhisa Fujita¹⁴, Sho Sasaki⁴, MSWC team (1.Graduate School of Science, University of Tokyo, 2.ISAS, JAXA, 3.Graduate School of Science, Tohoku University, 4.Graduate School of Science, Osaka University, 5.Graduate School of Frontier Sciences, University of Tokyo, 6.Swedish Institute of Space Physics, 7.Earth Life Science Institute, Tokyo Institute of Technology, 8.Osaka Prefecture University, 9.National Institute of Information and Communications Technology, 10.Faculty of Science, Kyoto Sangyo University, 11.Faculty of Science, Rikkyo University, 12.ISEE, Nagoya University, 13.SSL, UC Berkeley, 14.Research and Development Directorate, JAXA)

Keywords:Mars, Orbiter exploration, Habitable planet, climate change, atmospheric escape, radiation environment

Mars is a unique planet in terms of understanding of conditions for terrestrial planets to obtain a habitable environment. Recent discoveries from Martian explorations such as MAVEN have indicated importance of extreme solar variations and suggested new technical possibilities to measure Martian environment. In this presentation, a mission plan to explore key issues of space weather and climate at Mars will be presented.