

**Japanese URSI Commission H (Waves in Plasmas)
Activity Report
April 2015 - July 2015**

[1] Status of projects related with plasma wave observation

1. "Study on north-south conjugacy of Aurora phenomena by high time-resolution observation"

Advanced VLF wave observation starts at Iceland as a part of Grants-in-aid for Scientific Research (A), Overseas Academic Research,

PI: Akira Kadokura (National Institute of Polar Research, Japan) from 2015.

2. "Study of lower ionospheric disturbances by VLF radio waves at Syowa Station" will continue until 2016 as a part of The 8th Japanese Antarctic Research Project.

PI: Yasuhide Hobara (University of Electro-Communications, Tokyo)

3. Akebono (EXOS-D)

<http://www.stp.isas.jaxa.jp/akebono/>

The Akebono was launched on February 22, 1989 and operated for 26 years. Its observation activities were terminated on April 23, 2015, due to deterioration of onboard instruments and reduced flight altitude after 26 years and two months of operation. The main objective of Akebono was to investigate the magnetospheric phenomena associated with the acceleration process of aurora particles. Because of its unique orbit, it achieved various observation results not only in the auroral region but also in the radiation belt. Plasma wave instruments named VLF and PWS, and radiation monitor (RDM) were achieved regular data acquisition for 26 years and contributed important science output in the long-term periodical changes of the Van Allen radiation belt.

4. The ERG project

<http://ergsc.stelab.nagoya-u.ac.jp/index.shtml.en>

The ERG (Exploration of energization and Radiation in Geospace) project is a mission to study acceleration and loss mechanisms of relativistic electrons around the Earth. The ERG satellite is scheduled to be launched in the summer of 2016. Flight model of the Plasma Wave Experiment (PWE) is now undergoing its functions, and onboard software is also under development.

5. BepiColombo/MMO

http://www.stp.isas.jaxa.jp/mercury/p_mmo.html

BepiColombo is a Mercury exploration project jointly planned by JAXA and the European Space Agency (ESA). It consists of two orbiters; the Mercury Planetary Orbiter (MPO) and the Mercury Magnetosphere Orbiter (MMO). JAXA is responsible for development of the MMO.

Final AIV (Assembly, Integration and Verification) test of the MMO scheduled in Japan was successfully completed in March 2015, and the MMO was shipped to Europe and arrived at the European Space Research and Technology Centre (ESTEC) in the Netherlands in April.

6. STEL VLF/ELF observations are carried out in Canada and Japan.

Details of the data are available at

<http://stdb2.stelab.nagoya-u.ac.jp/vlf/index.html>

[2] Recent Meetings

1. ERG Mission Science Workshop, Taipei, 9-10 April, 2015.

<http://events.asiaa.sinica.edu.tw/workshop/20150409/>

2. European Geosciences Union (EGU) General Assembly 2015, Vienna, Austria, 12-17 April, 2015.

<http://www.egu2015.eu/>

3. 4th International Symposium on the Arctic Research (ISAR-4), Toyama, Japan, 27-30 April, 2015.

<http://www.assw2015.org/>

4. Japan Geoscience Union Meeting 2015, Chiba, Japan, 24-28 April, 2015.

http://www.jpгу.org/meeting_e/

5. ISSI team meeting, ISSI (Switzerland), June 1-5, 2015.

Physics of the Injection of Particle Acceleration at Astrophysical, Heliospheric, and Laboratory Collisionless Shocks

<http://www.issibern.ch/teams/partaccelhelio/>

The meeting was led by R. Yamazaki and S. Matsukiyo.

6. 42nd European Physical Society Conference on Plasma Physics, Lisbon, Portugal, 22-26 June, 2015.

<http://www.ipfn.ist.utl.pt/EPS2015/>

A plenary talk titled “Generation mechanism of whistler-mode chorus emissions” was given by Y. Omura.

7. The 26th General Assembly of the International Union of Geodesy and Geophysics (IUGG) , Prague, Czech Republic, 22 June - 2 July, 2015.

<http://www.iugg2015prague.com/>

Sessions related to plasma waves:

A17 The Earth’s Plasmasphere: Remote Sensing and Modelling (Div. II-VERSIM)

A19 ULF Waves: Space-Ground Coordination (Div. III)

A20 ULF waves in the inner magnetosphere (Div. III)

8. The 12th International School/Symposium for Space Simulations (ISSS-12), Prague, Czech Republic, July 3-10, 2015.

<http://wave.asu.cas.cz/iss12/>

[3] Future Meetings

1. Asia Oceania Geosciences Society (AOGS) 12th Annual Meeting, Singapore, 2-7 August, 2015.

Sessions related to plasma waves:

ST01 Energetic particle acceleration and transport in the geospace and interplanetary space (Co-convener: Y. Miyoshi)

ST09 Sun-Earth system response to extreme solar and seismic events (Co-convener: Y. Omura)

ST12-31 Observation, theory and modeling of ULF, ELF and VLF waves in geospace, and general session on magnetosphere (Main convener: M. Nosé, Co-convener: Y. Katoh)

PS05 Solar wind interaction with planetary environments (Co-convener: Y. Kasaba)

2. GEMSIS-International Workshop, 22-25 March, 2016

This workshop focuses on the dynamical behavior of the space environment from the Sun to the Earth including various kinds of plasma waves in the solar atmosphere and geospace.