

## **Planetary Atmospheric Erosion – Europlanet Workshop 2018**

*Session I. Atmospheric escape mechanisms, variability, controlling factors, impact*

*Session II. Comparative atmospheres and long term evolution*

*Session III. Innovative data analysis and ongoing/upcoming space missions/proposals*

### **Monday, June 11**

*14:45 – 15:00 Opening*

*15:00 – 16:30 Session I.1*

Uwe Motschmann - Non-thermal Atmospheric Erosion Processes

Andreas Keiling - Global Aspects of Alfvén-Wave-Driven Ion Outflow

Anita Aikio - Ionospheric heating

*16:30 – 17:00 Coffee*

*17:00 – 18:30 Session II.1*

Herbert Gunell - Why an intrinsic magnetic field does not protect a planet against atmospheric escape

Christian Mazelle (remote) - Foreshock electrons impacts on Hydrogen exosphere at Mars

Manuel Scherf (invited) - Early evolution of Venus and Earth constrained by the reproduction of measured Ar, Ne isotope and K/U elemental ratios

*19:00 – 21:00 Ice Breaking & Dinner*

### **Tuesday, June 12**

*09:30 – 11:00 Session III.1*

Matthew Fillingim - Terrestrial molecular ion outflow observed at the Moon

Iannis Dandouras - Simultaneous detection of terrestrial ionospheric molecular ions in the Earth's inner magnetosphere and at the Moon

Yong Liu (invited) - The Rising Chinese Space Mission

*11:00 – 11:30 Coffee*

*11:30 – 13:00 Session I.2*

Romain Maggiolo (invited) - Long term measurements of the plasmashet composition: implications on ionospheric outflow

Kun Li (invited) - Estimating the kinetic energy budget of the polar wind outflow

Hans Nilsson (invited) - Small scale comets, a mass loading laboratory

*13:00 – 14:30 Lunch*

*14:30 – 16:00 Posters*

Horia Comisel - On ion heating by the decay of large amplitude Alfvén waves (I)

Costel Bunescu - Scale dependence of the field-aligned current and relationship to Joule heating: Tentative analysis framework (I)

Marko Gacesa - Photochemical escape of oxygen atoms from Mars from MAVEN data (I)

Mike Chaffin - Hydrogen escape from Mars: A template for exoplanet escape (II)

Mike Chaffin - Photochemical escape of Oxygen at Mars constrained with MAVEN remote sensing: a nonthermal process operating at all low-mass planets (II)

*16:00 – 16:30 Coffee*

*16:30 – 18:00 Session III.2*

Yong Liu - Mars Ion and Neutral Particles Analyzer (MINPA) for Chinese Mars Mission

Mircea Ciobanu - The PADI ASIC for Time of Flight measurements

Yasuhito Narita - Venus magnetic environment: Lessons from Venus Express to BepiColombo flybys

## **Wednesday, June 13**

### *09:30 – 11:00 Session I.3*

Lukas Maes - The effect of solar illumination on ionospheric outflow.

Audrey Schillings - Ionospheric ion response to the space weather event during 6-8 September 2017

Vlad Constantinescu - Space weather data repository of solar and geomagnetic indices for atmospheric modelling and drag calculation

### *11:00 – 11:30 Coffee*

### *11:30 – 13:00 Session III.3*

Iannis Dandouras (invited) - European SpaceCraft for the study of Atmospheric Particle Escape (ESCAPE): a planetary mission to Earth, proposed to ESA in response to the M5-call

Masafumi Hirahara (invited) - In-situ observation plans in next Japanese space exploration mission (FACTORS)

The MeMeX Team (Stein Haaland) - MEMEX: Mechanisms of Energetic Mass Ejection Explorer - NASA mission proposal

### *13:00 – 14:30 Lunch*

### *14:30 – 16:00 Session II.2*

Masatoshi Yamauchi - Mass-loading energy extraction from the solar wind to the planetary system and resultant additional ion escape

Valery Shematovich (invited) - Icy moons exospheres

Arnaud Beth (invited; remote) - Radiation pressure effects on planetary exospheres and atmospheric erosion

### *16:00 – 16:30 Coffee*

### *16:30 – 18:30 Session I.4*

Stein Haaland - Hemispheric asymmetries in atmospheric escape

Yasunobu Ogawa (invited) - Characteristics of CME and CIR driven ion upflows in the polar ionosphere

Audrey Schillings - Atmospheric loss from the Earth's plasma mantle and its dependence on solar wind conditions

Raluca Ilie (invited; remote) - The consequences of heavy ion outflow on the near-Earth plasma dynamics

### *20:00 – 21:00 Evening Talk & Discussion*

Beverly Smith-Keiling (invited) - Broadening participation: Inclusion and diversity in science

## **Thursday, June 14**

*09:30 – 18:00 Excursion to Pădurea Letea (Letea Woods)*

*19:00 – 22:00 Workshop Dinner*

## **Friday, June 15**

*09:30 – 11:00 Ad-hoc talks & Forum discussion: Towards an international mission to study atmospheric erosion and exosphere?*

*11:00 – 11:30 Coffee*

*11:30 – 12:45 Ad-hoc talks & Forum discussion: Planetary atmospheric erosion – Summary and prospects*

*12:45 – 13:00 Closing*

*13:00 – 14:30 Lunch*

*15:00 Bus to Bucharest*