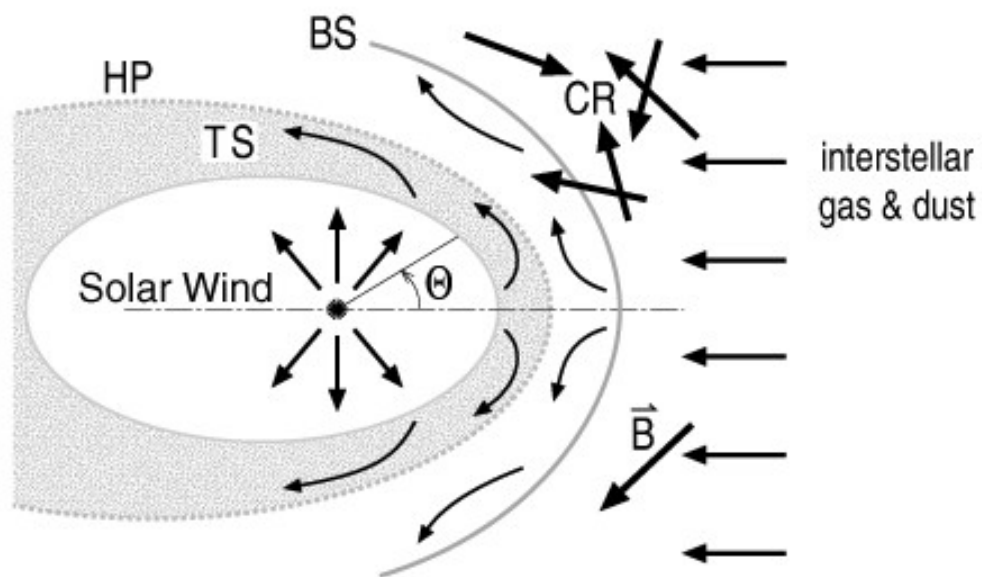


# IAU GA 2018 Division E Commission E3

## Solar Impact throughout the Heliosphere: Space Weather, Space Climate and Physical Processes



### SOC:

Ingrid Mann - Norway (President)

Carine Briand - France (Vice-President)

Margit, Haberreiter - Switzerland

Kanya KUSANO - Japan

Olga Malandraki - Greece

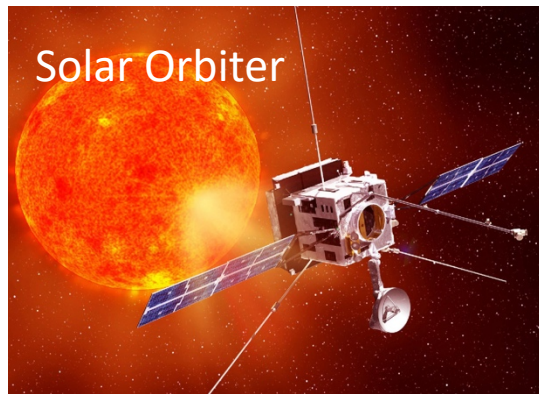
Dibyendu Nandi - India

Ilya G. Usoskin - Finland

*ingrid.b.mann@uit.no*  
IAU Division E - Vienna 2018

# IAU GA 2018 Division E Commission E3

## Solar Impact throughout the Heliosphere: Space Weather, Space Climate and Physical Processes



The entire solar system is influenced by plasma, particle and radiation disturbances launched by the Sun, and their consequences throughout the heliosphere: energetic particles, galactic and anomalous cosmic rays, microphysics of the solar wind and dusty plasma interactions.

Timely topics for basic research activities are:

- Using the new observations in the vicinity of the Sun to study heliospheric phenomena including the **small-scale phenomena**;
- Using **high-performance computing** for heliospheric studies
- Connecting **heliospheric and magnetospheric** studies

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## Solar Impact throughout the Heliosphere: Space Weather, Space Climate and Physical Processes

**Space weather** describes the immediate impact on the Earth of the time-varying cosmic environment, which is influenced by e.g. plasma, particles, magnetic field, and radiation launched by the Sun, the disturbances they cause and physical processes they represent.

There is an international effort related to coordinating space weather studies and a representative of the commission participated in **the United Nations Expert Group on Space Weather: “Strategy for Developing an International Framework for Space Weather Services (2018-2030)”**. Work of the expert group was presented to the IAU membership during a related IAU symposium.

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## Solar Impact throughout the Heliosphere: Space Weather, Space Climate and Physical Processes

IAU Symposium 335 Space Weather of the Heliosphere- 185 participants from 30 countries  
University of Exeter, United Kingdom, 17 - 21 July 2017  
Co-chaired by commission E3 members Claire Foullon (UK) & Olga Malandraki (Greece)

Topics included:

Impact of solar wind on magnetospheres, ionospheres and atmospheres of planets

Solar drivers of space weather

How to predict the propagation and evolution of solar disturbances;

Long-term trends and predictions

Forecast models, data handling and assimilation:

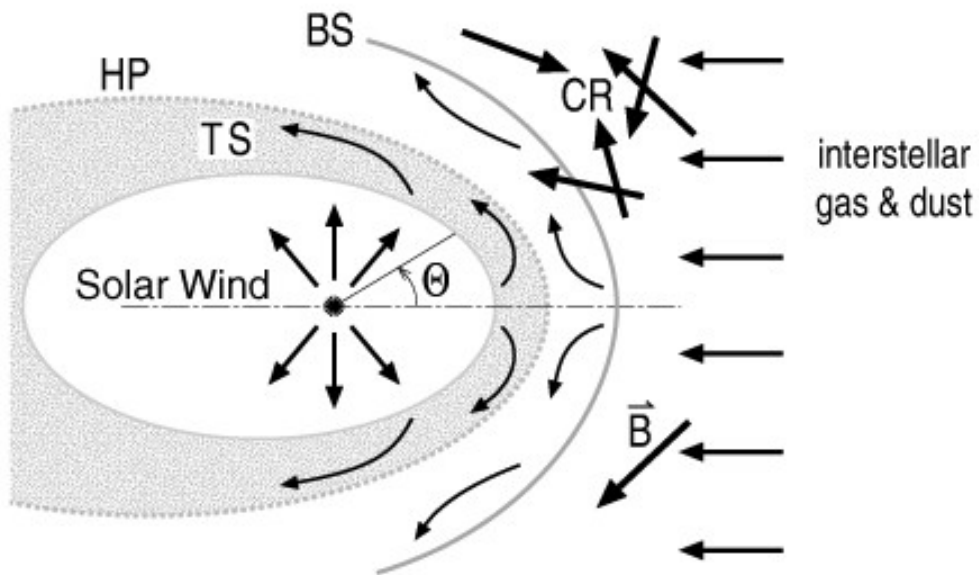
Future missions and Instrumentation

Societal needs, predictability requirements, disaster & risk reduction

*ingrid.b.mann@uit.no*  
**IAU Division E - Vienna 2018**

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## Solar Impact throughout the Heliosphere: Space Weather, Space Climate and Physical Processes



### NEW SOC (tbc):

Nicole Vilmer - France (President)

Claire Foullon – UK (Vice - President)

Margit, Haberreiter - Switzerland

Olga Malandraki - Greece

Dibyendu Nandi - India

Ilya G. Usoskin - Finland

*ingrid.b.mann@uit.no*

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