

# **Space Weather for BKG**

**Monday, 12 June 2023 - Wednesday, 14 June 2023**

**Royal Observatory of Belgium - Directors Building**

## **Scientific Programme**

### **1-Disturbances of Satcom, GNSS and Earth observations**

What sort of disturbances do users of Satcom, GNSS and earth observation space systems have to deal with? Radio signal variations due to passing through the ionosphere, e.g. delay and amplitude

### **2-Space weather and its impact on the Earth's environment and spheres**

Definition of space weather

Earth: atmosphere (troposphere, stratosphere, mesosphere), thermosphere and ionosphere, plasmasphere, magnetosphere

Heliosphere and the Sun

### **3-Intro to the Ionosphere**

Radio waves in the ionosphere

### **4-Ionospheric Weather and Climate - dynamics**

The ionosphere as a dynamical system which changes over time (days, seasons, solar cycle) and place (equator, mid-latitude, high-latitude, North, South)

### **5-Drivers of ionospheric Weather**

Solar drivers: top down

Earth drivers: bottom up

### **6-Extreme space storms and impacts**

### **7-Observations**

Global parameters (climatological and weather) info on space storms.

Observation at the Solar-Terrestrial Centre of Excellence