Sixth European Space Weather Week



The sixth annual meeting of European experts on space weather will take place in Bruges this year, from November 16 to 20.

Space Weather:

Space weather is a full-blown, independent scientific discipline, often defined as the study of the "collection of conditions that determine the variable state of our interplanetary environment." Perturbations from the sun are the main cause for changes in these conditions, so a major contribution to space weather research comes from observations and predictions of solar activity as well as their influence on the Earth's magnetosphere and ionosphere.

This Sun-Earth connection has a big influence on technologies that we depend on every day. Geomagnetic storms can cause interruptions in radio communications, disruptions to satellite navigation systems like GPS, damage to power grids, and problems with electronics on aircraft and satellites. So being able to anticipate these disturbances plays a critical role in protecting sensitive technologies, and the people who depend on them, from the effects of space weather.

Special events during the week:

-The organizing committee is honored to welcome Professor Willy Benz from the University of Bern to give the **Keynote lecture**. He will discuss the search for planets outside the solar system, the technological challenges faced by those who try to observe them, and the possibility of the presence life beyond the Earth. *Monday 16 November, 18h00-19h00, Bruges, Oud Sint-Jan Congress center, Ambassador room*

-We have also organized a **debate evening** centered on the question "Space weather and Earth's climate: What are the influences and the effect of an unusually deep solar minimum?"

The solar cycle has an average length of 11 years. Typically after a period of quiet, solar activity resumes within a few years, peaks, and then gradually declines to the next minimum. The current minimum, however, is particularly weak and persistent. The first signs of the new cycle have only recently appeared, much overdue compared to previous cycles. This situation presents a puzzle for scientists who study the behavior of our star and try to predict its future activity. It also raises the important question of the possibility of impacts to the climate on Earth. *Tuesday 17 November: 18h30-19h30, Bruges, Oud Sint-Jan Congress center, Ambassador room*

This debate is open to the press, the public and the scientific community.



Sunspot number for the most recent solar cycle, showing the long and deep minimum of the past several years.

-The week will also feature a **fair** where data users will be able to meet representatives of space weather prediction centers, industry influenced by space weather, and other scientific institutes. This informal meeting has been organized in the hope of stimulating new collaborations.

Wednesday 18 November: 16h30-18h00, Bruges, Oud Sint-Jan Congress center, Witte roos room

The rest of the program features several conference sessions that will examine the impact of space weather on telecommunications, the link between space weather and health, space weather applications, and space weather services.

More information can be found at: <u>www.sidc.be/esww6</u>

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