



Photo Credit: Martin Archer / Imperial

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Eutelsat OneWeb to collaborate with Imperial College London to support critical research for space weather monitoring

Eutelsat OneWeb and Imperial College London to explore harnessing the power of its LEO satellite constellation to enable global space weather monitoring to help protect satellite operations as well as power, communications, navigation, and transport systems.

London, UK – 5 December 2023: Eutelsat OneWeb, part of Eutelsat Group, the world's first GEO-LEO satellite operator, has collaborated with Imperial College London to explore harnessing the power of its LEO satellite

constellation to enable global space weather monitoring to help protect satellite operations as well as power, communications, navigation and transport systems.

The changing conditions in near-Earth space, known as space weather, pose a threat to a wide range of everyday technologies that people rely upon globally. Space weather can impact a satellite's electronics and orbits, disturb communications reception, and disrupt power grids on Earth, among many other hazards on crucial systems. Global monitoring of space weather is crucial not only to mitigate its effects in real time, but to improve understanding of how and why these risks occur.

To develop this innovative new capability, Dr. Martin Archer from Imperial College London has been awarded a UKRI Future Leaders Fellowship to work with Eutelsat OneWeb. Together they will investigate data taken from the magnetometer equipment used aboard its satellites for controlling their orientation. These sensors, however, may also be able to detect tiny magnetic signals due to space weather. Identifying these signals in the data will reveal the previously unobserved evolving patterns caused by space weather globally – making it possible to prevent interruptions to technology both in space and on the ground, as well as providing researchers with valuable insight to help improve space weather predictions in the future.

“This fellowship will revolutionise space weather monitoring by harnessing data from the hundreds of satellites in orbit around our planet, thanks to the constellation launched by Eutelsat OneWeb,” said Dr. Martin Archer, Advanced Research Fellow at Imperial College London. “This unprecedented amount of data, distributed globally in space will enable us to monitor space weather better than ever before, boosting our ability to mitigate this hazard to society. It will also provide researchers with crucial observations to unveil how space weather works, improving our ability to predict its effects upon our everyday lives.”

On the collaboration, Maurizio Vanotti, VP New Markets at Eutelsat OneWeb said “We believe the space industry has a responsibility to work sustainably, and to advance causes that can positively help solve some of the world's most challenging problems. Space weather is certainly one of these societal challenges, even modest space weather can affect our satellite operations. We are committed to enabling this ambitious research and innovation at the intersection of academia and business and we look forward to working

together to see how our vast data capabilities can help inform our actions in the future.”

For the fellowship, Dr. Archer will use data from Eutelsat OneWeb’s Gen1 satellite Magnetometer and the fellowship will support researchers beginning in 2024 through 2028.

This partnership exemplifies Eutelsat OneWeb’s continued commitment to innovation and scientific discovery.

Eutelsat OneWeb has released data services to deepen intelligence and improve decision making in the areas of financial analysis, insurance, national security, space management, environmental analysis and Earth observation. It’s the first data stream to be made commercially available from a low Earth orbit satellite constellation and ground network and can be accessed via AWS Marketplace: [AWS Marketplace: Satellite Constellation Flight Data by Eutelsat OneWeb \(amazon.com\)](https://aws.amazon.com/satellite-constellation/)

About Eutelsat Group

Eutelsat Group is a global leader in satellite communications, delivering connectivity and broadcast services worldwide. The Group was formed through the combination of the Company and OneWeb in 2023, becoming the first fully integrated GEO-LEO satellite operator with a fleet of 36 Geostationary satellites and a Low Earth Orbit (LEO) constellation of more than 600 satellites.

The Group addresses the needs of customers in four key verticals of Video, where it distributes more than 6,500 television channels, and the high-growth connectivity markets of Mobile Connectivity, Fixed Connectivity, and Government Services.

Eutelsat Group’s unique suite of in-orbit assets enables it to deliver integrated solutions to meet the needs of global customers. The Company is headquartered in Paris and the Eutelsat Group employs more than 1,700 people across more than 50 countries. The Group is committed to delivering safe, resilient, and environmentally sustainable connectivity to help bridge the digital divide. The Company is listed on the Euronext Paris Stock

Exchange (ticker: ETL) and the London Stock Exchange (ticker: ETL)

Media enquiries

Anita Baltagi

Tel. +33 1 53 98 4747 abaltagi@eutelsat.com

Armand Noury

Tel. +33 6 60 07 16 97

eutelsat@agenceproches.com

Katie Dowd

kdowd@oneweb.net

Alastair Elwen

Tel. +44 20 7 251 3801

EutelsatGroup@fgsglobal.com

Investors

Thomas Cardiel

Tel. +33 6 99 07 86 47

tcardiel@eutelsat.com

Hugo Laurens Berge

hlaurensberge@eutelsat.com

Christine Lopez

Tel.: +33 1 53 98 47 02

clopez@eutelsat.com