



Institute for Space Weather Sciences Colloquium

Thursday March 9, 2023, 1pm EST

via njit.webex.com Meeting ID: 2621 411 5229, password: isws

Dr. Sophie Musset, European Space Agency

Coronal Jets, Their Impact on the Heliosphere, and How to Catch Them with Citizen Science

Solar eruptive events produce energetic particles that fill the heliosphere, interact with planetary atmospheres and magnetosphere, and participate to space weather. Solar coronal jets are small ejections of plasma which have been observed in many regions of the solar atmosphere, with various shapes and sizes. They follow magnetic field lines that connect the solar corona to the heliosphere, and therefore could play a role in injecting energetic and plasma from the solar corona to the interplanetary medium. I will review what we currently know about the impact of coronal jets on the heliosphere, and present the “Solar Jet Hunter” citizen science project, launched one year ago, to catalogue jets observed in extreme ultraviolet images from the Solar Dynamics Observatory.



Sophie Musset obtained her PhD from Paris Observatory in 2016, studying particle acceleration and transport in the solar corona via their X-ray emission. She has been working at the University of Minnesota and the University of Glasgow, before joining the European Space Agency as research fellow. Sophie’s research aims to understand the origin of solar energetic particles using X-ray and radio diagnostics of the energetic electrons, and by developing the future high-energy solar-dedicated missions. Sophie is also interested in the use of citizen science to analyze solar physics datasets.