

## CAROLINE HERSCHEL PRIZE LECTURESHIP 2021 WINNER CITATION



### Dr JENNY CARTER

Dr Carter is a post-doctoral Research Associate in the School of Physics and Astronomy at the University of Leicester. Her current research is in solar-terrestrial physics, investigating the effect of the solar wind on the Earth's magnetic environment. Previously, she carried out influential and highly cited X-ray-astronomy research. She is, highly unusually, expert in two fields of research. Currently, she is using the synergy of the two in support of the upcoming Solar wind Magnetosphere Ionosphere Link Explorer (SMILE) satellite mission, a joint effort between the European Space Agency and the Chinese Academy of Science to be launched in 2024. In particular, Dr Carter leads the efforts to combine data from SMILE's Soft X-Ray imager with ground-based experimental data, using skills from both her current and previous research fields.

In her Caroline Herschel Prize lecture, entitled 'Earth versus Sun: a precarious relationship in space', Dr Carter will explore the science behind the solar wind-magnetosphere interaction and its impact on society and technology. The solar wind - a stream of charged particles released from the Sun - interferes with our planet's outer atmosphere and magnetic fields, and the products of these interactions hold the potential to cause mass disruption to technology on a global scale.