

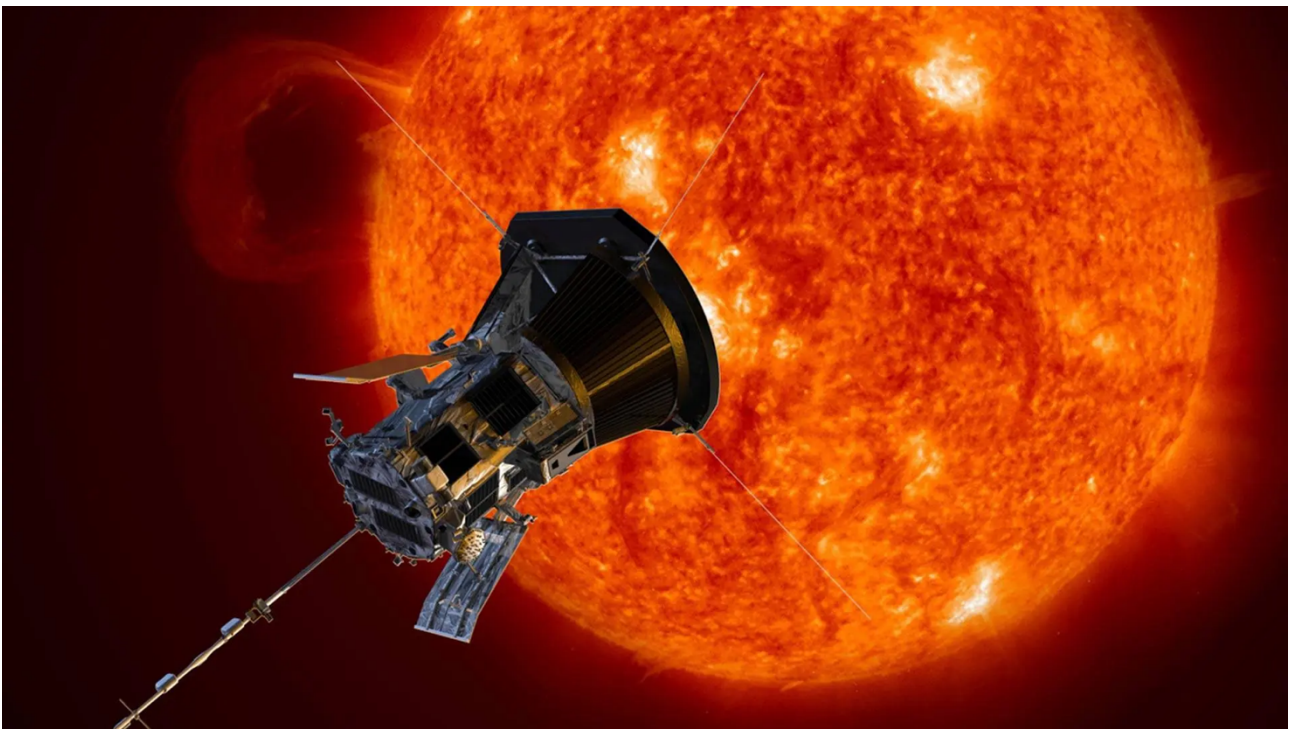
Seminar Announcement

Mr Anmol Kumar

from the

Solar And Magnetospheric Theory Group, University of St Andrews (UK)

“Investigating Solar Wind Phenomena: Models, Observations and Acceleration Processes ”



Thursday, September 21st 2023, at 3pm

Aula B, DIFC, Via Archirafi 36, DIFC

Abstract: The solar wind, a continuous stream of magnetized plasma emanating from the Sun into the interplanetary medium, significantly influences planetary magnetospheres, atmospheres, space weather, and (exo-)planetary habitability. It is also considered to host magnetohydrodynamic waves, the dissipation of whose energy is believed to be linked to coronal heating and solar wind acceleration. In this talk, I will talk about a numerical model to study these waves over a steady solar wind background — spanning right from the chromosphere to planetary distances — and compare the model results with Parker Solar Probe's (PSP) and Solar Orbiter's (SolO) pristine solar wind observations. Additionally, I will talk about a recently observed phenomenon of short-term magnetic field reversals, called switchbacks, that are believed to be remnants of Alfvénic fluctuations in the young solar wind. Recent investigations have shown their intimate connection with the solar wind acceleration problem.