

Café Scientifique Headingley

Monday 13th July 2026

The potential environmental impact of emissions from aviation and space launches

By Wuhu Feng



The SLS (Space Launch System) launches with the Artemis II crew aboard the Orion spacecraft on April 1, 2026, at NASA's Kennedy Space Center in Florida. Credit: NASA/Bill Ingalls

Outline Apart from a temporary decrease during the COVID pandemic, the aviation sector has grown rapidly over the last six decades. The space industry is also one of the fastest growing global economic sectors in the world and this growth certainly provides economic benefits. However, in addition to CO₂ emissions from aircraft and space launches, various other gases such as chlorine compounds, H₂O, NO_x and particles, including black carbon and aluminum, could be released in the atmosphere. All of these have the potential to affect the radiation budget of the Earth, either through acting as greenhouse gases, absorbing solar radiation or potentially affecting ozone depletion, impacting the physical and chemical properties of the atmosphere, the dynamics of the atmosphere and climate change. In this talk, we will discuss the impact on stratospheric ozone due to the aircraft and space launch emissions, mainly focusing on NO_x, Black Carbon, Hydrogen Chlorine and Iodine emissions.

Speaker: Wuhu Feng is a Scientist at the National Centre for Atmospheric Science (NCAS) and University of Leeds, with more than 25-years of experience in atmosphere related research areas and has extensive experience using and developing different atmospheric models. He has contributed to the World Meteorological Organization ozone scientific assessment and was on the Scientific Evaluation Panel for the Kvantum Institute Projects 2021-2024, University of Oulu, Finland.

Venue: The New Headingley Club, 56 St Michaels Road, LS6 3BG

Time: Room opens 7:30pm, Talk begins promptly at 7:45pm

Entry: Donation please for room hire and expenses: £4 at the door



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