

SCOSTEP 2022 DISTINGUISHED SCIENTIST AWARD



SCOSTEP is pleased to announce that the **2022 Distinguished Scientist Award** is given to

Professor David J. McComas
Princeton University, USA

Citation: For original research, technical leadership and wide-ranging discoveries that have significantly advanced our knowledge and understanding of the global structure and evolution of the solar wind and revolutionized our understanding of its interactive stellar medium.

Professor David McComas is Professor of Astrophysical Sciences at Princeton University, and Vice President for Princeton Plasma Physics Laboratory. He has a long record of contributions to Solar-Terrestrial research in the form of distinguished service and cutting-edge research.

Professor McComas has contributed significantly to experimental physics, to space plasma physics in the magnetosphere and in the interplanetary medium, and to plasma astrophysics. His work has had major impact on theoretical descriptions of space physics. His published work is prolific and highly cited, with approximately 750 refereed papers and more than 41,000 citations on google Scholar. He is a superb leader in service, chairing and participating in key NASA advisory committees, and in the planning of a number of missions of discovery.

Professor McComas is the principal investigator (PI) of important plasma instruments including the plasma instrument in Ulysses (SWOOPS) and the proton-electron instrument in the Advanced Composition Explorer (ACE – SWEAPAM). These instruments have been key in discovering much of what we know about the three dimensional structure of the heliosphere and the properties of the interplanetary medium near Earth orbit. Another major area of accomplishment is the Interstellar Boundary Explorer, or IBEX, mission, with instruments of his design and construction. IBEX has during the past decade, returned data that for the first time describes the plasma interaction of the solar system with the interstellar medium. This truly notable accomplishment was among the top NASA science stories a few years ago and continues to inspire many theoretical and numerical studies to explain these findings. David is also PI of the IMAP mission, selected in 2018 and scheduled for launch in 2024. IMAP will dramatically expand the scientific capabilities of IBEX. IMAP also provides a solar wind monitor at the L1 Lagrange point, an essential resource for space weather applications. IBEX and IMAP represent a prodigious legacy of impact on heliospheric physics.

A current mission that is very much in the public eye is the Parker Solar Probe Mission, a monumental community effort in which Prof. McComas once again played a key role in leadership and science. David was Chair of two Science and Technology Definition teams that formulated both the science and required technology to implement this generational mission. He is, furthermore, PI of the ISOIS suite on the Parker Solar Probe, consisting of two energetic particle instruments; these instruments are uniquely responsible for attaining one of the three major science goals of the mission- to understand the origin and propagation of energetic particles in the inner heliosphere.

For all of his accomplishments, Professor David J. McComas has contributed at the highest level within the field of SCOSTEP science and is most deserving of the SCOSTEP Distinguished Science Award.