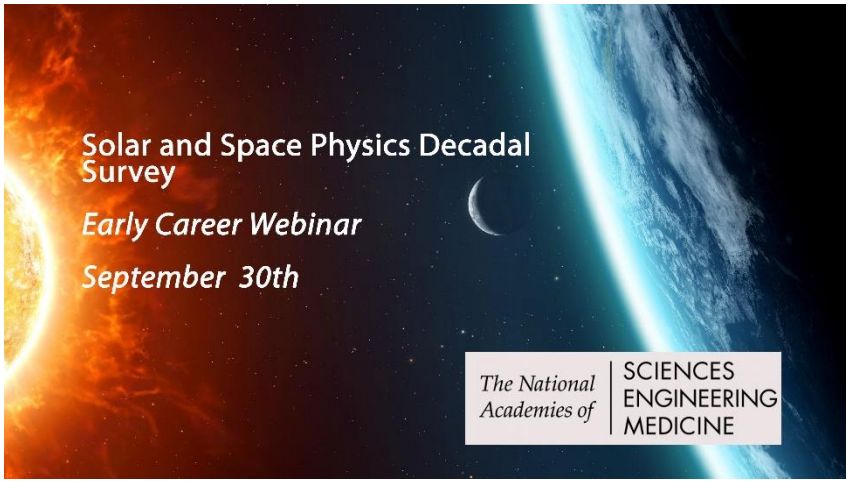

Event 1: Introduction to Decadal Surveys and Their Impacts

September 30, 2021

Speaker Bios

- **Dr. Colleen N. Hartman** joined the National Academies of Sciences, Engineering, and Medicine in 2018 after nearly four decades in space science and exploration. Now Director of three National Academy Boards, the Space Studies Board, the Aeronautics and Space Engineering Board, and the Board on Physics and Astronomy, Colleen contributes to science and aerospace management. After beginning her government career as a presidential management intern, Colleen worked on Capitol Hill, as a senior engineer building spacecraft at NASA Goddard, and as a senior policy analyst at the White House. She has served as Planetary Division Director, Deputy Associate Administrator and Acting Associate Administrator at NASA's Science Mission Directorate, Deputy Assistant Administrator at NOAA, and Deputy Center Director for Science and Exploration at NASA's Goddard Space Flight Center, in addition to teaching at GWU. She has built and launched scientific balloon payloads, overseen the development of hardware for a variety of Earth-observing spacecraft, and served as NASA program manager for dozens of missions, the most successful of which was the Cosmic Background Explorer (COBE), which led to two NASA-sponsored scientists receiving the 2006 Nobel Prize in physics. She helped gain administration and congressional approval for a new class of funded missions called "New Frontiers" to explore the planets, asteroids, and comets in the Solar System. Dr. Hartman has received numerous awards, including two prestigious Presidential Rank Awards, and has received several master's degrees and a Ph.D. in physics.

- **Robyn Millan** is the Margaret Anne and Edward Leede '49 Professor of Physics at Dartmouth College. Dr. Millan's research includes the use of high-altitude scientific balloon experiments and small satellites to study energetic particles in near-Earth space. She was principal investigator (PI) for the Balloon Array for Radiation-belt Relativistic Electron Losses (BARREL), and is currently PI for the Relativistic Electron Atmospheric Loss (REAL) CubeSat that will characterize the mechanisms responsible for scattering radiation belt electrons. Dr. Millan received her Ph.D. in physics at the University of California, Berkeley, in 2002. She has served as secretary for the

Space Physics and Aeronomy section of the American Geophysical Union and was co-chair for the COSPAR Scientific Roadmap on Small Satellites for Space Science (2017-2019). She has participated in several National Academies studies, most recently, "Achieving Science Goals with Cubesats", and "Review of the Draft 2019 Science Mission Directorate Science Plan", and served as co-chair for the midterm assessment, "Progress Toward Implementation of the 2013 Decadal Survey for Solar and Space Physics". Dr. Millan is a recipient of NASA's Exceptional Public Achievement Medal (2017) and Dartmouth's John M. Manley Huntington Award for Newly Promoted Faculty (2017).

- **Nicola Fox** is the Heliophysics Division Director in the Science Mission Directorate at NASA Headquarters in Washington, DC. Heliophysics is not only vital to understanding Earth's most important and life-sustaining star, but the study of key space phenomena and processes supports situational awareness to better protect astronauts, satellites, and robotic missions exploring the solar system and beyond. Until August 2018, Fox worked at the Applied Physics Lab at the Johns Hopkins University in Laurel, Maryland, where she was the chief scientist for Heliophysics and the project scientist for NASA's Parker Solar Probe – humanity's first mission to a star. Fox is a proven leader with extensive project, program and supervisory experience, having served as the deputy project scientist for the Van Allen Probes, and the operations scientist for the International Solar Terrestrial Physics program. She has authored numerous scientific articles and papers in addition to delivering science presentations worldwide. In addition to her research, she is also keenly involved with science education and outreach activities.

- **Dr. Lisa Winter** is Program Director for Magnetospheric Physics and GEM in the Division of Atmospheric and Geospace Sciences. She has been at NSF for three years and recently served as Acting Section Head for Geospace Sciences and was awarded a Director's Award for Special Group Accomplishment for her work in the Spectrum Innovation Initiative. Previously, Dr. Winter was a scientist at Los Alamos National Laboratory where she was the recipient of an Early Career Research Award. She also worked at Atmospheric and Environmental Research and was a NASA Hubble Fellow at the University of Colorado. Her research spanned disciplines from black holes to solar flares and access of solar energetic particles into the geomagnetic field.

- **Dr. Carrie Black** is the Program Director for Operations of the National Solar Observatory (NSO) in NSF's Division of Astronomical Sciences. Her responsibilities include overseeing operations of the Daniel K. Inouye Solar Telescope and the solar astronomy grants portfolio. Dr. Black joined NSF as a program director in the Atmospheric and Geospace Sciences Division in 2015, where she supported all of the Geospace programs. In 2020, she transitioned from Program Director for Geospace Facilities to the Division of Astronomical Sciences. Dr. Black has a PhD in plasma physics from the University of New Hampshire and was an awardee of the NASA Postdoctoral Program Fellowship and the NSF-AGS Postdoctoral Research Fellowship.

- **Dr. Elsayed Talaat** is the Director of the Office of Projects, Planning, and Analysis (OPPA) at NESDIS. In this role, he provides leadership and oversight of the development, acquisition, integration, installation, and acceptance of major system elements for NOAA's operational

environmental satellite systems. Before joining NOAA, Dr. Talaat was the Chief Scientist of the Heliophysics Division at NASA Headquarters. In this role, he directed overall development efforts for the Heliophysics space science program in Solar, Heliospheric, Magnetospheric, and Ionospheric, Thermospheric, and Mesospheric physics. Previously, he was a Program Scientist at NASA Headquarters where he served as Program Scientist for the Living with a Star mission and science line, grant research lines, and Heliophysics and Planetary missions. Before joining NASA, he was Supervisor of the Earth and Planetary Atmospheres Section at the Johns Hopkins University Applied Physics Laboratory (APL), where his research focused on developing remote sensing techniques as well as data analysis and modeling of geophysical and planetary phenomena.

- **Dr. Joel Parriott** is the Deputy Executive Officer and Director of Public Policy at the American Astronomical Society (AAS). Here, he leads the Society's public policy and advocacy efforts and serves on the senior management team having overseen the scholarly journal, scientific conference, and membership departments. Joel brought to the AAS a decade of experience at the White House Office of Management and Budget (OMB), where he oversaw the budgets and management initiatives for the National Science Foundation (NSF) and the Department of Energy's Office of Science (DOE/SC) and on behalf of the President. Prior to his service at OMB, Joel was a senior program officer at the National Academies of Science, Engineering, and Medicine, where he staffed numerous high-level advisory committee studies on policy issues in physics and astronomy for NSF, DOE/SC, and NASA. Joel earned his doctorate in astronomy & astrophysics at the University of Michigan.