Maria Hebe Cremades

CONICET, Mendoza, Argentina

Maria Hebe Cremades Fernández é formada em Engenharia Eletrônica e de Telecomunicações pela Universidade de Mendoza, Argentina, no ano de 2001. Em 2005 concluiu o seu doutorado pela Max-Planck-Institut für Sonnensystemforschung and Universität Braunschweig. Entre 2005-2007 foi pós-doutoranda no Max-Planck-Institut für Sonnensystemforschung, na NASA/GSFC e na National Research Council (NRC). Desde 2007 atua como pesquisadora no CONICET e, paralelamente desde 2009 como professora na Universidade Nacional de Tecnologia (UTN), em Mendoza, Argentina.

Título da Palestra: “Expansion of coronal mass ejections from the low to the outer corona“

Palestrante Convidada da Sessão de Física Solar, Meio Interplanetário e Magnetosferas Planetárias: Quarta-feira, 24 de março de 2021, das 09h20 às 10h00

Resumo: Coronal mass ejections (CMEs) constitute the most spectacular dynamic events in the solar system, and are key players in determining space weather conditions. So far, it has been impossible to predict when a CME will erupt from the Sun, thus the best attempt at forecasting is to assess if and how they will impact Earth once erupted. Understanding how magnetic fields are organized within CMEs and how they evolve from the low corona into the heliosphere, is crucial. The stereoscopic-view images provided by the STEREO/SECCHI instrument suite in combination with images from Earth's perspective recorded by SDO/AIA and SOHO/LASCO provide a unique opportunity to study the morphological evolution of CMEs. The set of CMEs under study arises from an appropriate combination of spacecraft vantage points and CME propagation direction, which is helpful to reduce uncertainties in their forward modeling. These events are carefully analyzed as they originate low in the corona by means of simultaneous multi-viewpoint observations in the extreme UV, and followed up to the outer fi elds of view of the STEREO and SOHO coronagraphs. In particular, we examine how CMEs expand along their main symmetry axis and orthogonal to it, as well as the evolution of their global configuration.