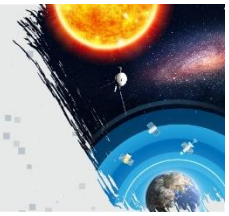

Sergio Dasso

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Sergio Dasso obteve no ano de 2000 o seu doutorado em Física pela Universidade de Buenos Aires. Atualmente é pesquisador permanente no Conselho Nacional de Ciência e Tecnologia (CONICET), Argentina, onde atua desde 2005 no Instituto de Astronomia e Física Espacial (IAFE). Desde 2012 atua também como professor na Universidade de Buenos Aires.

Título da Palestra: "Dynamical evolution of solar ejecta in the interplanetary medium. Consequences on geo-effectiveness and cosmic rays"

Palestrante Convidado da Sessão Clima Espacial e Relações Sol-Terra: Quinta-feira, 25 de março de 2021, das 09h20 às 10h00

Resumo: Interplanetary manifestation of Coronal Mass Ejections (ICMEs) are consequence of coronal magnetic instabilities. When these solar ejecta travel in the heliosphere, they transport huge amounts of mass, energy, magnetic flux, and helicity. They also affect the flux of energetic particles in the solar wind. ICMEs contain different plasma and magnetic field properties, compared with those of the ambient solar wind, which can strongly perturb the geo-space. These transients are the most geo-effective heliospheric objects, with major consequences on new technologies and on live in space. Different physical mechanisms occur during their evolution, and thus determine their impact on the space environment of Earth. These mechanisms include expansion, erosion, dynamics of fluctuations and turbulence, accretion of magnetic field, and drag. The identification of the composing sub-structures, their global 3D shape, as well as how the plasma and magnetic field are typically distributed inside them, are crucial to understand these interplanetary objects. In the present talk I will present a general review of these aspects of ICMEs. In particular, I will focus on the recent observations and models, and will also present some results of the Space Weather laboratory recently deployed by our LAMP (Laboratorio Argentino de Meteorología del esPacio) group in Antarctic, where a cosmic rays detector was installed. The results presented here will help to better understand the interaction of ICMEs with planetary magnetic environments, and in particular to improve the forecast of the solar-terrestrial coupling.