Theory and simulations of solar system plasmas

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"Theory and simulations of solar system plasmas" aims to highlight results from microscopic to global scales, achieved by theoretical investigations and numerical simulations of the plasma dynamics in the solar system. The theoretical approach must allow evidencing the universality of the phenomena being considered, whatever the region is where their role is studied; at the Sun, in the solar corona, in the interplanetary space or in planetary magnetospheres. All possible theoretical issues concerning plasma dynamics are welcome, especially those using numerical models and simulations, since these tools are mandatory whenever analytical treatments fail, in particular when complex nonlinear phenomena are at work. Comparative studies for ongoing missions like Cassini, Cluster, Demeter, Stereo, Wind, SDO, Hinode, as well as those preparing future missions and proposals, like, e.g., MMS and Solar Orbiter, are especially encouraged.