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## Call for papers – Special issue of *Journal of Plasma Physics*

Dear Colleagues,

*The Journal of Plasma Physics* is under new management and the new editorial team is embarking on a series of initiatives to stimulate broad diffusion of leading research in all areas involving plasma physics, focusing especially on the understanding of this field as a fundamental discipline.

As part of this effort, we would like to call your attention to a planned Special Issue of *JPP* entitled: *Collisions in Collisionless Plasmas*

When studying the kinetic dynamics of a plasma, the effects of particle collisions are often considered negligible – the class of so-called collisionless plasmas. However, the assumption of weak collisionality in many plasma systems is only a rough approximation, and particle velocities may differ significantly from a Maxwellian distribution.

On the basis of the H-theorem, according to which the only way to increase entropy (and therefore heat) in a plasma is via collisions, these departures from Maxwellians should enhance locally the plasma collisionality and play a determinant role in the process of plasma thermalization and heating.

The problem of collisions in a plasma is a wide subject with a huge historical literature since the late 1930s, when Landau proposed his multi-dimensional nonlinear integro-differential collisional operator. The description of realistic plasmas based on the complete Landau model has been always considered a challenge for scientists of different scientific fields. A full understanding of the collisional phenomena in weakly collisional plasma systems would surely represent a relevant step forward in attacking the problem of the heating of the interplanetary medium and of laboratory plasmas.

This special issue of *Journal of Plasma Physics* aims to provide a panoramic view of the state of the art on the subject of collisionality in weakly collisional plasma systems, by collecting relevant contributions from a wide range of different scientific fields in plasma physics, including experiments, theory and numerical modeling.

We propose a submission deadline of **May 1, 2014**.

Best Regards,

Francesco Valentini, Guest Editor, JPP