

# Plasma Convective Stability at Magnetic Field Lines of Alternating-Sign Curvature

Mikhail M Tsventoukh <sup>1</sup>, Galina V Krashevskaya <sup>2</sup>

<sup>1</sup> *Lebedev Physical Institute RAS, 53 Leninsky ave. Moscow, Russia*

<sup>2</sup> *National Research Nuclear University MEPhI, 31 Kashirskoe sch. Moscow, Russia*

It has been found that the plasma confinement by magnetic field of alternating-sign curvature - with convex-concave field lines results in a strong stabilizing action against convective (flute-interchange) perturbations [1]. For simple combinations of mirrors and cups the calculations give a strongly, centrally peaked stable plasma pressure profiles instead of a shallow ones [1-2]. For the experimental research of this effect, a compact magnetic confinement device [3] has been modified to fulfill the curvature requirements. The results on the stable plasma pressure peaking due to the alternating-sign field line curvature will be discussed.

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- [3] G.V. Krashevskaya et al 2012 *Proc. VIII International Workshop MICROWAVE DISCHARGES: FUNDAMENTALS AND APPLICATIONS (MD-8) Russia, Zvenigorod, September 10-14, 2012. Edited by Yu.A. Lebedev. Moscow 2012, pp 101-104*