

Abstract Submitted  
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**Self Organization Processes in Fusion Burning Plasmas\*** B. COPPI, MIT — The presence of self-organization [1] in well confined plasmas was recognized originally [1] on the basis of the radial profiles of the thermal diffusion coefficients derived from relevant experiments. Thus the principle of “profile consistency” was proposed, and later, amply reconfirmed and applied to plasma pressure profiles. The radial profiles of the spontaneous rotation velocities investigated in recent years have required [2] the introduction of an inflow velocity, with a “profile consistency” feature, in the angular momentum transport equation. In experiments on plasmas close to ignition conditions self-organization should persist, given the variety of factors involved. Then it is justifiable to use transport model based on “profile consistency,” such as the so-called Coppi-Tang model [3], in order to simulate plasmas that Ignitor and ITER [3] should produce. \*Sponsored in part by the US DOE.

[1] B. Coppi, Comments Pl. Phys. Cont. Fus. 5, 6: 261-270 (1980).

[2] B. Coppi, 18th IAEA Fusion Energy Conf. THP 1/17 (2000) and Nucl. Fus. 42, 1 (2002).

[3] T.A. Kasper, W.H. Meyer et al. Nucl. Fus. 51, 013001 (2011).

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