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## **PD/P8-11: Immediate Influence of Heating Power on Turbulent Plasma Transport**

*Friday, 12 October 2012 14:00 (4h 45m)*

We report the theory that describes immediate impact of heating power on pressure-gradient-driven turbulence and turbulent transport (without waiting the changes of global parameters and those in mean distribution function). New mechanism, that the external source couples with plasma fluctuations in phase space so as to affect turbulence and transport, is investigated. A new thermodynamical force in phase-space (the derivative of heating power by plasma pressure) is identified, in addition to spatial gradients. This theory provides an understanding of abrupt change of transport at onset of heating. The condition under which this new effect can be observed is also evaluated.

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