# P 4: Hauptvortrag

Zeit: Montag 14:00–14:30 Raum: 6C

**Hauptvortrag** P 4.1 Mo 14:00 6C

**Dynamics of magnetic islands in tokamaks** — •Emanuele Poli, Arthur Peeters, Andreas Bergmann, and Alberto Bottino — Max-Planck-Institut fuer Plasmaphysik, Garching, Germany

Perturbations of the magnetic configuration of fusion plasmas can assume the form of magnetic islands arising from magnetic-field reconnection near a resonant surface. Many features of the dynamics of islands in tokamaks are strongly related to the toroidal geometry of the system. The theoretical description of the island evolution is complicated by the fact that the island width can be comparable to the orbit width of the plasma particles. This is in contrast with the ordering on which analytic predictions are usually based. Moreover, turbulence-induced radial energy transport influences the growth of the island, at least in its initial phase. The impact of these kinetic effects on the stability of island structures is discussed in this paper.