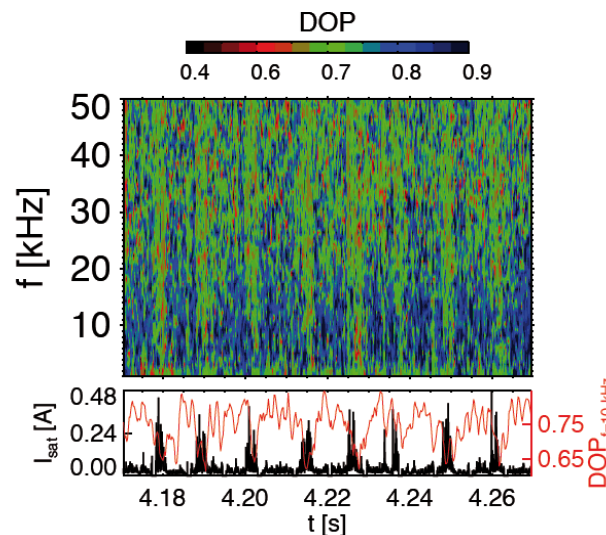
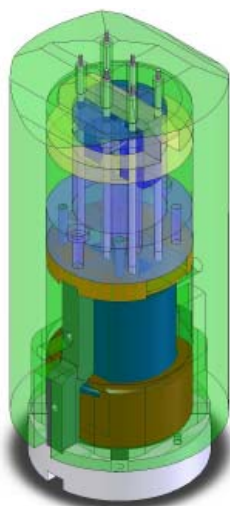


Electric and Magnetic Probe Measurements in the Scrape-Off Layer (SOL) of ASDEX Upgrade

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In spite of strong magnetic fields the radial particle loss in a tokamak on the low field side cannot be completely avoided. In particular during the high confinement mode (H-mode) strong periodic transport events (so-called Edge Localized Modes – ELMs) across the magnetic field lead to loss of plasma and energy which can be potentially dangerous for the plasma facing materials.

In collaboration with the Max-Planck-Institute for Plasma Physics in Garching near Munich, Innsbruck physicists investigate the radial transport by means of complex plasma probe arrangements by which electric and magnetic signals from the plasma can be determined locally. So for instance we have found that ELMs appear as filaments which propagate radially outward carrying a considerable current.