

Multiple AE resonances and transition to the hard MHD limit: enhanced EP transport during AE bursting activity

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Shot #: 188992 - 189026

Experimental conditions: (R_{ax} , Polarity, B_t , γ , B_q) = (3.6 m, CW, 0.8 and 1.375 T, 1.254, 100 %)

Motivation and objective: analysis of bursting AE / EIC activity in plasma with multiple EP populations

Results:

- Scan of AE / EIC stability with respect to the thermal plasma density, magnetic field intensity and heating pattern (tangential and perpendicular NBI heating as well as ICH).
- The shear flows measured using CXS.
- Identification of bursting activity: MHD and EIC bursts.
- AE / EIC activity modified by the ICH injection.
- Wider AE frequency bands due to the combination of tangential NBI, perpendicular NBI and ICH.
- Induced EP transport will be analyzed.

