Contribution ID: **214** Type: **Poster**

【228】Plasma fuelling in tokamaks

Wednesday 23 August 2017 12:37 (1 minute)

The scrape-off layer (SOL) sets the boundary conditions of a tokamak, determining the plasma confinement, the heat exhaust, the impurity levels, and controlling the fuelling of the device. Therefore, a first principles understanding of the physical mechanisms governing SOL turbulence is crucial on the way towards fusion energy. We describe SOL simulations carried out by using GBS, a three-dimensional numerical code that solves the drift-reduced Braginskii equations for the two-fluid model of the plasma and consistently includes neutrals dynamics as well. In this work, results from GBS simulations are used to understand the tokamak fuelling.

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Session Classification: Poster Session

Track Classification: Applied Physics and Plasma Physics