EUROfusion

Filamentary transport in high-power H-mode conditions and in no/small-ELM regimes to predict heat and particle loads on PFCs for future devices

N. Vianello, V. Naulin for Topic-21 Scientific Team

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Include scientific team and logos

2017 Top Objectives 12.12.2016

Deliverables listed during the call for manning of last December

1. Provide cross-machine L-Mode shoulder dependence on current both at constant B_t and at constant q_{95}
2. Establish robust scenario for density shoulder profile in H-Mode and establish dependence on fuelling/neutral profiles/divertor conditioon
3. Use the new HHF probe on AUG to study filamentary transport under high-power H-Mode conditions and under different plasma configurations (SN, DN)
4. Study the role of ELM regimes, neutral compression and particle density in filamentary transport and related shoulder formation
5. Identify the contribution of collisionality and seeding on filamentary transport and related shoulder formation
6. Determine the effect of filaments and shoulder formation on target heat loads in different H-mode plasmas

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So far H-Mode operation has been limited to AUG since no operational scenarion in high-density NBH heated plasma on TCV has been established