

Abstract Submitted
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H-mode Snowflake Divertor Plasmas on TCV FRANCESCO PIRAS, STEFANO CODA, BASIL P. DUVAL, BENOÎT LABIT, JANOS MARKI, CRPP/EPFL, SERGEI YU MEDVEDEV, Keldysh Institute of Applied Mathematics, JEAN-MARC MORET, ANDREAS PITZSCHKE, OLIVIER SAUTER, CRPP/EPFL, TCV TEAM, KELDYSH INSTITUTE COLLABORATION — An ELMy H-mode “snowflake” divertor is established and studied for the first time in the TCV tokamak. The H-mode access and the ELM dynamics is compared to a conventional single-null diverted configuration. The snowflake configuration exhibits 15% higher confinement and 2 to 3 times lower ELM frequency. Ideal MHD stability analysis suggests enhanced stability of the snowflake H-mode pedestal to mid- to high-toroidal-mode-number modes. The capability of the snowflake to redistribute the edge power on the additional strike points has been confirmed experimentally.

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