

Abstract Submitted
for the DPP11 Meeting of
The American Physical Society

Transport studies in the snowflake divertor in TCV¹ H. REIMERDES, G.P. CANAL, S. CODA, B.P. DUVAL, B. LABIT, F. PIRAS, W. VIJVERS, CRPP/EPFL, Switzerland, G. DE TEMMERMAN, J. ZIELINSKI, FOM, The Netherlands, B. TAL, KFKI, Hungary, S.Y. MEDVEDEV, Keldysh Institute, Russia, T.D. ROGNLIEN, D.D. RYUTOV, M.V. UMANSKY, LLNL, USA — The transport of heat and particles in a tokamak plasma with a snowflake divertor has been studied in recent TCV experiments. Estimates of the power flux onto the divertor plates are obtained from measurements with multiple infrared cameras and Langmuir probes. The studies include L- and ELMy H-mode plasmas and confirm some of the advantageous properties of the snowflake configuration, such as the distribution of the exhaust power on more strike points than the two that characterize conventional divertor configurations. Modifications of the divertor configuration from single null towards a perfect snowflake (second-order null) show that already near-snowflake configurations lead to an appreciable power flux across the region of weak poloidal magnetic field.

¹This work is partly funded by the Fonds National Suisse de la Recherche Scientifique. LLNL work was performed under DOE contract DE-AC52-07NA27344.

Holger Reimerdes
CRPP-EPFL

Date submitted: 11 Jul 2011

Electronic form version 1.4