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Comparison of Divertor Heat Flux Profiles and Power Balance for Attached and Detached Helium and Deuterium Plasmas¹ C.J. LASNIER, M.E. FENSTERMACHER, D.N. HILL, Lawrence Livermore National Laboratory, W.P. WEST, A.W. LENOARD, T.W. PETRIE, General Atomics, J.G. WATKINS, Sandia National Laboratories, Albuquerque — Divertor heat flux profiles for attached He or D₂ plasmas with otherwise similar parameters are compared. Differences are ascribed in part to different SOL transport properties for He and D₂. Heat flux profiles in detached He and D₂ plasmas were found to be similar, in spite of the very different 2-D radiation distributions seen in bolometer and tangential TV measurements.² This is interpreted by examining power flow along field lines and locations of radiation emission. Overall power balance in the He plasmas is examined using bolometer and IRTV measurements for comparison with the D₂ case. The evolution of divertor heat flux profiles during detachment in He is examined and correlated with the evolution of the 2-D radiation distribution.

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²M.E. Fenstermacher *et. al.*, this session.

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