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**Turbulent Heat Flux in the Edge of DIII-D<sup>1</sup>** D.L. RUDAKOV, J.A. BOEDO, R.A. MOYER, S. KRASHENNIKOV, D.G. WHYTE, University of California, San Diego, M.A. MAHDAVI, W.P. WEST, GA, P.G. STANGEBY, U. of Toronto, J.G. WATKINS, SNL — Measurements of the cross-field turbulent heat flux have been performed in the edge of DIII-D using a fast reciprocating Langmuir probe array fitted with a fast (100 kHz bandwidth) electron temperature diagnostic. Both conductive (due to correlation between electron temperature and poloidal electric field fluctuations) and convective (associated with the turbulent particle flux) terms of turbulent heat flux were measured in L- and H-mode discharges. In H-mode the two terms are comparable near the separatrix and fall off rapidly with radius (e-folding length  $\sim 1.5$  mm). In L-mode the convective term is usually larger than the conductive one and radial decay is much slower (e-folding length up to 10 mm). Both conductive and convective heat fluxes have “bursty” character and essentially non-Gaussian statistics. About 50% of the total heat flux is carried by intermittent large amplitude ( $>2.5$  times the root-mean-square fluctuation level) events. Statistics of such events and characteristics of an average event are discussed.

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