Testing the Paleoclassical Model of Electron Heat Transport[1] T.C.
ARLEN, Cal Poly San Luis Obispo, C.M. GREENFIELD, H.E. ST. JOHN, General
Atomics, J.D. CALLEN, U. Wisconsin-Madison — A paleoclassical model for radial
electron heat transport in magnetically confined plasmas has been proposed to explain the anomalous behavior that has been experimentally observed in tokamaks
[1]. Energy transport in the electron thermal channel is not well understood, as
evidenced by the fact that the experimentally inferred electron heat transport often
exceeds the theoretical classical and neoclassical values by factors of about 10^4 and
10^2 respectively. The paleoclassical model has recently been implemented in the
ONETWO transport analysis and simulation code, allowing comparison between
predictions from this model and experimental data from DIII-D. Results of such
comparisons will be shown for several different confinement regimes.

[1] J.D. Callen, Phys. Rev. Lett. **94**, 055002 (2005).

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