

Abstract Submitted  
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**Characteristics of energy transport of Li- and non-Li-conditioned plasmas in NSTX** SIYE DING, Chinese Academy of Sciences, Inst. of Plasma Physics, Hefei, China, STANLEY KAYE, RON BELL, ROBERT KAITA, HENRY KUGEL, BENOIT LEBLANC, STEPHEN PAUL, PPPL, Princeton University, Princeton, NJ, BAONIAN WAN, Chinese Academy of Sciences, Inst. of Plasma Physics — The transport properties of NSTX plasmas obtained during the 2008 experimental campaign have been studied and are reported here. Transport trends and dependences have been isolated, and it is found that both electron and ion energy transport coefficients have strong dependences on local values of  $n \cdot \text{grad } T$ , which in turn is strongly dependent on local current density profile. Without identifying this dependence, it is difficult to identify others, such as the dependence of transport coefficients on poloidal magnetic field (or  $q$ ), plasma current and heating power. In addition, a comparison between discharges with and without Lithium wall conditioning has been made. While the trends in the two sets of data are similar, the thermal transport loss, especially in the electron channel, is found to strongly depend on the amount of Lithium deposited, decreasing by up to 50% of its no-Lithium value.

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