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**A Simplified Method to Estimate Transport Coefficients of Laser Plasmas and H-Rich White Dwarf Stars** VITHAL L. PATEL<sup>1</sup>, Berkeley Research Associates, Inc., JAECHUL OH, Research Support Instruments, Inc. — High intensity laser-matter interactions generate large magnetic fields of several 100s MG [1]. Hydrogen-rich white dwarf stars are known to exhibit large magnetic fields of 10kG to 10MG. Laser generated laboratory plasmas as well as astrophysical plasmas such as the ones in the crust of white dwarf stars may be weakly Landau quantized. Estimates of transport properties are important for the energy transport in the laboratory plasmas and thermal evolution of these stars. A complex weakly Landau quantization problem can be simplified [3] by reducing it to simple equations without evaluating elaborate integrals. We calculate transport coefficients for hydrogen and helium plasmas for a range of magnetic fields relevant to laser plasmas and white dwarf stars. This research was performed in the Laser Plasma Branch, Plasma Physics Division, Naval Research Laboratory and supported by DOE/NNSA. [1] U. Wagner et. al., Phys. Rev. E, 70, 026401, 2004 [2] A. Kawka et. al., Astrophys. J., 654, 499, 2007 [3] A. Y. Potekhin, Astron. Astrophys., 346, 345, 1999

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