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Measurements of Anisotropy in Non-LTE Low-Density, Iron-Vanadium Plasmas L. C. JARROTT, M. E. FOORD, R. F. HEETER, D. A. LIEDAHL, M. A. BARRIOS, G. V. BROWN, W. GRAY, E. V. MARLEY, C. W. MAUCHE, K. WIDMANN, M. B. SCHNEIDER, Lawrence Livermore National Laboratory — We report on Non-LTE anisotropy experiments carried out on the Omega Laser Facility at the Laboratory for Laser Energetics, Rochester NY. In these experiments, a 50/50 mixture of iron and vanadium, 2000A thick and 250um in diameter is contained within a beryllium tamper, 10um thick and 1000um in diameter. Each side of the beryllium tamper is then irradiated using 52 of the 60 Omega beams with an intensity of 3e14 W/cm^2 over 3ns in duration. Iron-Vanadium line ratios indicate a plasma temperature of greater than 2 keV was produced. The geometrical aspect ratio ranged from 0.8 to 4.0; allowing for the characterization of optical-depth-dependent anisotropy in the iron-vanadium line emission. Results of this characterization and its comparison with modeling will be presented. This work performed under the auspices of U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

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