Abstract Submitted
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The energy of the quasi-free electron in near critical point H_2, D_2 and O_2[1] CHERICE EVANS, KAMIL KRYNSKI, Queens College – CUNY, ZACHARY STREETER, GARY L. FINDLEY, University of Louisiana at Monroe — Field enhanced photoemission is used to measure the density (ρ) dependent quasi-free electron energy $V_0(\rho)$ in the repulsive fluids H_2 and D_2, and the attractive fluid O_2, for the first time. $V_0(\rho)$ in each of these fluids was obtained from low density to the density of the triple point liquid, at noncritical temperatures and on an isotherm near the critical isotherm. A novel critical point effect is observed in each of the fluids and is accurately explained by the local Wigner-Seitz model with the selection of appropriate intermolecular potentials for each fluid.

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