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Electrical conductivity of Helium-Hydrogen mixtures SEBASTIEN HAMEL, LLNL, MIGUEL MORALES, ERIC SCHWEGLER, LLNL, N/A TEAM
— Mixtures of helium and hydrogen at high pressures and temperatures are major components of jovian planets. The pressures and temperatures in their deep interiors can reach several Mbar and several 1000 K, conditions corresponding to the fluid metallic phase. Using quantum molecular dynamics, we explore the properties of these mixtures at planetary conditions. In particular we discuss the electrical conductivity at high pressure and high temperature of those mixtures in comparison to pure hydrogen. Prepared by LLNL under Contract DE-AC52-07NA27344.

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