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Perfecting Braginskii's eletron transport coefficients for high collisionality plasmas[1] JEONG-YOUNG JI, E.D. HELD, Utah State University — It is known that Braginskii's transport coefficients for the heat flow and frictional force are in error up to 65% for some finite values of $x = \Omega\tau$ and have significant error in the large-x limit. [2] Here Ω is the electron-cyclotron frequency, and τ is the electron-ion collision time. In this work, we find fitting formulas which are practically exact (less than 1% error) for the whole range of x and Z, the ion charge, checked up to Z=100. The new fitting formulas are based on calculations with 160 moments (Laguerre polynomials) [3] for $x < 100$ and on the asymptotic form for large x-values.

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