

1127-76-207

Thomas E Carty* (tcarty@bradley.edu), Bradley University, Department of Mathematics, Bradley Hall 445, Peoria, IL 61625. *Asymptotic analysis of elementary solutions of a Boltzmann-type equation and the concept of grossly determined solutions.*

In the early 1980's, Truesdell and Muncaster conjectured the existence of grossly determined solutions for the Boltzmann equation: a subclass of solutions which are determined at any given instant by the principle moments of the gas (mass density, velocity and temperature). Moreover, they conjectured that if one could find the general solutions to the Boltzmann, then the general solutions should evolve in time to the class of grossly determined solutions. In this talk we will show that the two conjectures hold for Cercignani's time-dependent slip-flow model Boltzmann for initial data of compact support under the Fourier transform. (Received February 03, 2017)