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Slow flow of a rarefied gas past a sphere: Numerical analysis of fundamental problem[1] SATOSHI TAGUCHI, TOSHIHIRO SUZUKI, University of Electro-Communications — A slow flow of a rarefied gas past a sphere with a uniform temperature is considered with a special interest in the drag exerted on the sphere. It was shown previously [S. Taguchi, J. Fluid Mech. **774**, 363–394 (2015)] that the drag up to the second order of the Mach number is expressed in terms of two fundamental functions depending on the Knudsen number, which are obtained by solving the corresponding linearized problem. The present study aims to obtain these functions on the basis of the ellipsoidal-statistical (ES) model of the Boltzmann equation under the diffuse reflection boundary condition.

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