

S. Brull: Fredholm property of the linearized Boltzmann operator for a mixture of polyatomic gases

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In this talk I will present the proof of the Fredholm alternative for the linearized Boltzmann operator. The model is described with a distribution function with an additional continuous energy variable. The collision operator is based on the Borgnakke-Larsen procedure. We present the proof in the case of a single gas and of mixtures. The cornerstone of the proof is the introduction of a kernel on the perturbation part in order to prove that the operator is Hilbert Schmidt.