中国科学院数学与系统科学研究院

偏微分方程及其应用中心

学术报告

报告题目： **Diffusion limit of the fluid models for the coupling of radiation and hydrodynamics**

报 告 人： 琚强昌教授，北京应用物理与计算数学研究所

时　　间： 2023.11.17(周五)，下午 14:00--15:00

地　　点： 思源楼 615

摘　　要： In this talk, I will introduce the famous diffusion limit of the fluid models for the coupling of radiation and hydrodynamics. We consider the coupling of the classical Euler system of inviscid gas dynamics and the transfer equation for photons. The formal expansions for both the equilibrium and non-equilibrium diffusion limits will be presented. Finally , I will introduce our recent works on the rigorous proof of the limit for some simplified approximations models with non-relativistic source terms.