数学与系统科学研究院

计算数学所学术报告

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报告题目：

Fast Method to Numerical Calculate the Landau Integral in Plasma Physics

邀请人： 毛士鹏 副研究员

报告时间：2015 年 11 月 6 日（周五）

下午 14:00~15:00

报告地点： 科技综合楼三层

311 报告厅

Abstract:

To calculate the infinite kinetic integral in plasma physics, such as the Landau damping problem, many numerical methods can be used.However, most of them would be very slow or not accurate. A unified, fast, and effective approach is developed for numerical treatment of this issue.The method is based on orthogonal basis function expansion, which can further be transformed to Fourier series thus can be calculated by FFT. The analytic continuation is also treated carefully to make sure the result is valid in all complex plane.

Ref: [Xie2013] H. S. Xie, Generalized plasma dispersion function: One-solve-all treatment, visualizations, and application to Landau damping, Physics of Plasmas, 2013, 20, 092125.

欢迎大家参加！