

第 53 回 RESCEU コロキウム



東京大学大学院理学系研究科 附属ビッグバン宇宙国際研究センター

日 時: 2021 年 12 月 6 日(月) 10:30 ~11:30

場 所: 理学部4号館1階セミナー室 (+ Zoom)

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Kilonova: Electromagnetic signature of heavy-element nucleosynthesis

Abstract

Coalescence of binary neutron stars (NSs) gives rise to kilonova, thermal emission powered by radioactive decays of newly synthesized heavy elements. Multi-messenger observations of the NS merger event GW170817 revealed that heavy elements are synthesized in the NS merger. Observational properties of kilonova are largely affected by opacities of heavy elements. It is thus important to understand atomic properties of heavy elements to link the observed signals with nucleosynthesis in NS mergers. In this talk, I will briefly review the basic physics of NS mergers and kilonovae, and introduce the latest studies on the atomic properties of heavy elements. Then, I will discuss prospects for element identification in kilonova spectra.

興味をお持ちの方の聴講を歓迎致します。