Poster Session #E
Astrophysics and Gravitational Waves

E02

Neutron Stars Mass-Radius relationship and Electromagnetic follow-up of Kilonovae

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Authors: D. Barba, C. Albertus, M. A. Pérez-García Neutron Stars (NSs) are compact objects that arise in the aftermath of a Supernova explosion. When these objects ,usually found in binaries, merge they may form another NS or a Black Hole. A Kilonova (KN) is a transient event that is thought to take place in a merger event of two compact objects. Electromagnetic emission arises from microscopic decay reactions of heavy elements being ejected in the bulk of matter in the dynamical process. In this contribution we study how, in the case of two NSs, the mass-to-radius ratio can be determined from optical radiation obtained with accurate measurements. This will shed light on the characteristics of this emission and provide new, complementary probes in addition to the gravitational wave (GW) emission expected.