PDF versions of previous colloquia and more information can be found in “events” at http://gcosmo.bao.ac.cn/

国台学术报告 NAOC COLLOQUIUM

2013 年 第 18 次 / Number 18, 2013

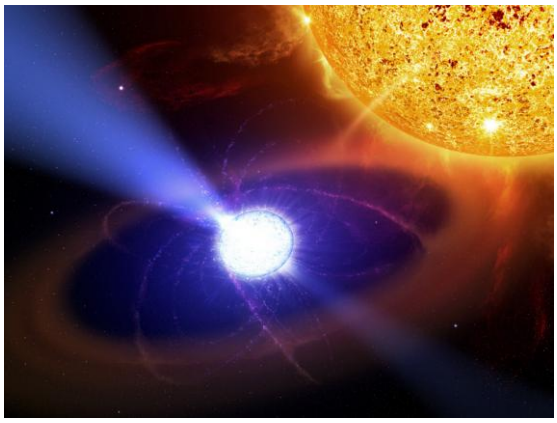
TIME: Wednesday, 2:30 PM, Apr. 24, 2013 LOCATION: A601 NAOC

Formation and evolution of white dwarf binaries

Dr. Alberto Rebassa-Mansergas (KIAA)

Alberto Rebassa-Mansergas did his PhD at the University of Warwick, UK. He then moved to University of Valparaiso, Chile, where he worked as a post-doctorate research assistant for four years. Last January he started a LAMOST fellowship at KIAA-PKU, Beijing. His research interests involve the formation and evolution of compact binaries, the physical properties of white dwarfs and low-mass main sequence stars, and Supernovae Ia progenitors.

Abstract



A large number of stars are born in binaries, of which up to 30 percent will interact at some point during their lives and form close white dwarf binaries (CWDBs). Some of the most interesting and fascinating objects in the Galaxy are CWDBs: cataclysmic variables,double white dwarfs, or supersoft X-ray sources. In addition to producing such fascinating objects, CWDBs are of outstanding importance in the general astrophysical context: type Ia supernovae are used as standard candles to probe the nature of dark energy.

Sad but true, we currently do not quite well understand the formation and evolution of CWDBs. Whilst it is clear that virtually all CWDBs evolve through a common envelope (CE) phase, the energy budget of CE evolution and the current models that describe this important evolutionary phase are still not completely understood, and clearly lack from observational constraints. Since 2006 we have initiated a long-term observational project dedicated to observationally constraint current models of CE evolution. In this talk I will provide details of our observing campaign as well as explain how our results are helping in improving our understanding of CE evolution.

All are welcome! Tea, coffee, biscuits will be served at 2:15 P.M.

You are welcome to nominate speakers to Weimin Yuan (wmy@nao.cas.cn), Mei Zhang (zhangmei@bao.ac.cn), Licai Deng (licai@bao.ac.cn), Xuelei Chen (xuelei@cosmology.bao.ac.cn), Shude Mao (smao@nao.cas.cn)