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国台学术报告 NAOC COLLOQUIUM

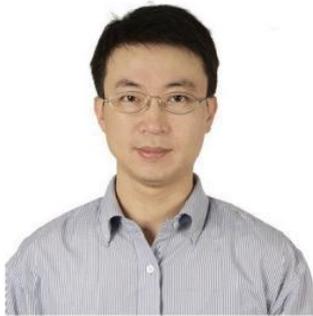
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Time: Wed. 2:30 PM, Nov. 15th Location: A601 NAOC

Multiple Supernova Explosions from A Zombie Star

Prof. Xiaofeng Wang

Tsinghua University



Prof. Xiaofeng Wang is currently a professor of Tsinghua University. He received the PhD degrees in Astrophysics from Beijing Normal University in 2002. After that, he worked as a postdoc at NAOC, UC Berkeley, and Texas A&M University. In 2010, he joined in physics department of Tsinghua University. In 2013, he was awarded for “The National Science Fund for distinguished Young Scholars”. In 2015, he was awarded for the “Huang Shoushu” Prize by the Chinese Astronomical Society. In 2016, he was selected for innovation talent promotion plan by the Ministry of science and technology of China. His research interests include observations and theories of supernovae, supernova cosmology, and time-domain astronomy. His team has discovered more than 300 nearby SNe over the past few years using the telescopes in China, becoming one of the main supernova search engines in the world.

Abstract

A massive star in the universe will usually die in a way of energetic supernova explosion, which will produce a primary light-curve peak, or a plateau in luminosity, lasting approximately 100 days before declining. In this talk, I will introduce the observations of the most weird supernova explosion iPTF 14hls (=SN 2016bse) ever recorded, which shows a light curve with at least five peaks during the observations and remains bright for more than 600 days. And the expansion velocities measured from the absorption lines in the spectra remains nearly constant in time. Unlike other long-lived supernovae, this one does not show signs of interaction with the preexisting circumstellar materials. **This supernova was discovered by iPTF survey in 2014, and was also independently discovered by the Tsinghua-NAOC Transient Survey in 2014 and 2016, and its earliest explosion can be even traced back to 1954 based on the archival DSS images. Such behavior of multiple explosions has never been seen before for any type of supernova and it challenges all existing explosion models.**



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All are welcome! Tea, coffee, biscuits will be served at 2:15 PM