You are welcome to nominate speakers to colloquium@nao.cas.cn. The video and slides of previous colloquia and more information can be found at http://colloquium.bao.ac.cn/.

国台学术报告 NAOC COLLOQUIUM

2016 年 第 10 次 / No. 10 2016

Time: Wed. 2:30 PM, Apr. 20 Location: Multi-Function Hall, NAOC

Supernova 1987A

Prof. Richard McCray

University of California, Berkeley, USA

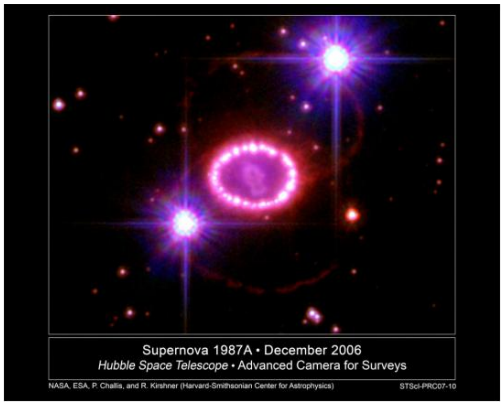
Richard McCray received his Ph.D. in theoretical physics from UCLA in 1967. He was a Postdoctoral Fellow at Caltech (1967-1968) and an Assistant Professor at the Harvard College Observatory (1968-1971). In 1971, he moved to the University of Colorado at Boulder, where he became George Gamow Distinguished Professor of Astrophysics. In 2013 he moved to Berkeley, where he is a Visiting Scholar in the UC Berkeley Astronomy Department.

In 1990 Prof. McCray received the Dannie S. Heinemann Prize for Astrophysics of the American Physical Society. In 1989 he was elected to National Academy of Sciences. In 2002 he was awarded the National Science Foundation Director's Award for Distinguished Teaching Scholars.

Prof. McCray's research is in the theory and observations of the dynamics of the interstellar gas and cosmic X-ray sources, supernovae and supernova remnants. For almost 30 years, he has been deeply engaged in the study of the evolution of Supernova 1987A, through both theoretical modeling and observations with major observatories such as *the Hubble Space Telescope*, *the Chandra X-ray Observatory*, *the Very Large Telescope* and, most recently, *the Atacama Large Millimeter Array*.

Beginning in 1984, Professor McCray has visited China many times. He has had a long and productive relationship with Chinese astrophysicists. He has helped to organize several international symposia and summer schools on astrophysics in China and he has supervised the Ph.D. research of three Chinese graduate students. In 1996, he was appointed as Concurrent Professor of Astrophysics at Nanjing University.

Abstract



Supernova 1987A in the Large Magellanic Cloud is the brightest supernova to be observed since SN1604 (Kepler). Observations taken with almost every type of telescope, on the ground and in space, have yielded a rich story of the evolution of the explosion debris and its interaction with its circumstellar environment. It is a unique laboratory of almost all kinds of physics, at temperatures ranging from 10^9 K to 20 K and densities ranging from 10^{15} to 10^{-23} g cm^{-3}. After a brief review of the physics of SN1987A, I'll describe what we are learning from our recent observations with *the Hubble Space Telescope* and the newly commissioned *Atacama Large Millimeter Array* (ALMA). I'll conclude with a summary of the outstanding mysteries of SN1987A and the prospects for unraveling them.

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