



量子物理学・ナノサイエンス第 252 回セミナー

The Restless Universe (How the Periodic Table Got Built up)

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- 日程** : 2月21日(木) 17:00-
- 場所** : 本館2階 284A 物理学系輪講室

概要

The Universe began only with hydrogen and helium. It is cosmic explosions which build up the periodic table! Astronomers have now identified several classes of cosmic explosions of which supernovae constitute the largest group. The Palomar Transient Factory was an innovative 2-telescope experiment, and its successor, the Zwicky Transient Factory (ZTF), is a high tech project with gigantic CCD cameras and sophisticated software system, and squarely aimed to systematically find "blips and booms in the middle of the night". The speaker will talk about the great returns and surprises from this project: super-luminous supernovae, new classes of transients, new light on progenitors of supernovae, detection of gamma-ray bursts by purely optical techniques and troves of pulsating stars and binary stars. ZTF is poised to become the stepping stone for the Large Synoptic Survey Telescope.



An aerial view of the Palomar Observatory (California). The discovery engine is the 48-inch telescope (extreme left) and the photometric classification is done at the 60-inch telescope (extreme right). Spectral classification is undertaken at the 200-inch telescope (center). The very first synoptic survey undertaken with a wide field Schmidt telescope was F. Zwicky's 18-inch and is the small dome to the right of the 200-inch.

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