

SUPERNOVAE

Workshop

3 – 7 October 2016

Conveners

Andrei Bykov, Ioffe Institute, Russia and ISSI, Bern, Switzerland

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The Workshop is devoted to an in-depth examination of complex astrophysical events with extreme energy release via multi-wavelength observations and modeling. Supernova explosions at the final stages of stellar evolution are known to be the major sources of chemical elements, turbulent energy and relativistic particles in galaxies. They are a key element of galactic ecology and evolution both in starburst and normal galaxies. The extreme physical conditions that are present in supernovae are unreachable in terrestrial laboratories and therefore these sources provide unique opportunities to test physical laws under extreme conditions. Moreover, the study of supernovae has led to new discoveries in fundamental physics as demonstrated by advances made in dark energy cosmology from a thorough analysis of Type Ia supernovae as “standard candles” to measure cosmological distances.