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Quark-Novae : Implications to High-Energy and Nuclear Astrophysics

Monday 15 June 2015 16:15 (30 minutes)

After a brief account of the physics of the Quark-Nova (explosive transition
of a neutron star to a quark star), I will discuss its implications and
applications to High Energy and Nuclear Astrophysics. The talk will focus on Quark-Novae in the context of Super-Luminous Supernovae and in the context of
the origin of heavy elements (r-process nucleosynthesis). The Quark-Nova has the potential to provide new insight into explosive astrophysical phenomena and the origin of some elements in the periodic table, by naturally combining the might of researchers in nuclear physics, sub-nuclear physics and astrophysics.

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