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Neutron Star or Neutral Star - the 90-anniversary of Landau (1932)

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What is the real nature of compact stars/pulsars? This is a question historically judged exactly 90 years ago by Lev Landau for the first time, and is also focused to be the first big problem to be solved in this era of multi-messenger astronomy, including the gravitational-waves. Nucleons were supposed to be elementary particles in Landau's time, but actually quarks are instead in the standard model of particle physics. I would like to explain that Landau's original idea should be improved if one thinks in the same way with the inclusion of strangeness in today's physics. More and more astrophysical phenomena, e.g., cosmic Gamma-ray bursts and fast radio bursts, are closely coupled with the answer to the big problem.

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