
New evidence for an old debate: the origin of S0 galaxies

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Abstract

The recent discovery by Maschmann, Melchior and collaborators that double-peaked galaxies are predominantly found in hosts of lenticular morphology (Hubble's S0 type) suggests that (minor) mergers may play an important role in the formation of this class of objects. However, S0s are also abundant in clusters, where mergers are inhibited due to the high relative velocities that their deep gravitational potential imprints on member galaxies. Thus, the uniqueness of S0 galaxies lies not only in the central position they occupy in the Hubble's diagram, but also in being the only morphological class that appears to follow more than one radically different formation pathway. In this talk I will review some of the latest findings about the properties of S0 galaxies inferred from large spectroscopic surveys that may shed some new light on an old, long-standing debate, the parentage of S0s, which has yet to be settled after more than 70 years!

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