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Title:	Galaxy And Mass Assembly (GAMA): blue spheroids within 87 Mpc
Authors:	Mahajan, Smriti (/jspui/browse?type=author&value=Mahajan%2C+Smriti)
Keywords:	Galaxies: active galaxies: star formation Galaxies: structure
Issue Date:	2018
Publisher:	Oxford University Press
Citation:	Monthly Notices of the Royal Astronomical Society, 475(1), pp.- 788-799
Abstract:	In this paper, we test if nearby blue spheroid (BSph) galaxies may become the progenitors of star-forming spiral galaxies or passively evolving elliptical galaxies. Our sample comprises 428 galaxies of various morphologies in the redshift range $0.002 < z < 0.02$ (8–87 Mpc) with panchromatic data from the Galaxy and Mass Assembly survey. We find that BSph galaxies are structurally (mean effective surface brightness, effective radius) very similar to their passively evolving red counterparts. However, their star formation and other properties such as colour, age, and metallicity are more like star-forming spirals than spheroids (ellipticals and lenticulars). We show that BSph galaxies are statistically distinguishable from other spheroids as well as spirals in the multidimensional space mapped by luminosity-weighted age, metallicity, dust mass, and specific star formation rate. We use H I data to reveal that some of the BSphs are (further) developing their discs, hence their blue colours. They may eventually become spiral galaxies – if sufficient gas accretion occurs – or more likely fade into low-mass red galaxies.
Description:	Only IISER authors are available in the record.
URI:	https://academic.oup.com/mnras/article/475/1/788/4733292 (https://academic.oup.com/mnras/article/475/1/788/4733292) http://hdl.handle.net/123456789/2098 (http://hdl.handle.net/123456789/2098)
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