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Title:	The SAMI galaxy survey: Galaxy Interactions and Kinematic Anomalies in Abell 119
Authors:	Mahajan, Smriti (/jspui/browse?type=author&value=Mahajan%2C+Smriti)
Keywords:	Morphology Galaxy Mergers
Issue Date:	2016
Publisher:	The American Astronomical Society
Citation:	Astrophysical Journal,832(1).
Abstract:	Galaxy mergers are important events that can determine the fate of a galaxy by changing its morphology, star formation activity and mass growth. Merger systems have commonly been identified from their disturbed morphologies, and we now can employ integral field spectroscopy to detect and analyze the impact of mergers on stellar kinematics as well. We visually classified galaxy morphology using deep images ($\mu_{\rm r}=28\,\mathrm{mag}$, arcsec^{-2}) taken by the Blanco 4 m telescope at the Cerro Tololo Inter-American Observatory. In this paper we investigate 63 bright ($M_{\rm r}\lt -19.3$) spectroscopically selected galaxies in Abell 119, of which 53 are early type and 20 show a disturbed morphology by visual inspection. A misalignment between the major axes in the photometric image and the kinematic map is conspicuous in morphologically disturbed galaxies. Our sample is dominated by early-type galaxies, yet it shows a surprisingly tight Tully–Fisher relation except for the morphologically disturbed galaxies which show large deviations. Three out of the eight slow rotators in our sample are morphologically disturbed. The morphologically disturbed galaxies are generally more asymmetric, visually as well as kinematically. Our findings suggest that galaxy interactions, including mergers and perhaps fly-bys, play an important role in determining the orientation and magnitude of a galaxy's angular momentum.
Description:	Only IISERM authors are available in the record.
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