

Multifrequency analysis of an X-shaped radio galaxy

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The morphological evolution of winged radio galaxies are explained using several theoretical models, including galaxy mergers. However, such a direct link between a perturbed radio morphology and a galaxy merger remains observationally sparse. Here we investigate a unique X-shaped radio galaxy J1159+5820, whose host displays the optical signature of a post merger system. Multifrequency radio observations of the source were conducted and various particle injection models were fitted to its radio spectra. Spectral ageing analysis performed on the wings and lobes of the radio source favours a fast jet reorientation model. We will discuss here our results and possible mechanisms behind the formation of the radio structure.

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