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Observational Cosmology from the Local Group of Galaxies

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In recent years there has been tremendous advance in our understanding of the galaxy formation process. Detailed observations of individual galaxies are key to the successful development of these theories, by providing a test-bed against which models are compared. The Local Group of galaxies, consisting of the Milky Way, Andromeda and some 35 or so dwarf systems, are the closest galaxies to us. They provide us with the opportunity to study the detailed structure and evolution of a range of 'typical' galaxies through the analysis of their resolved stellar components. In the same way as fossils preserved in rocks tell us about the Earth's history, so too can fossils preserved in the motions and chemical signatures of stars tell us about the formation and evolutionary history of these galaxies. In this talk I will review some of the most recent observational studies of these objects and present some new results which show how the Local Group is providing unique insight into the fundamental problem of galaxy formation.