
Double-peaked features in stellar population: stellar counter-rotation phenomena

Ivan Katkov^{*1,2}, Damir Gasymov², and Alexei Kniazev^{2,3,4}

¹New York University Abu Dhabi – United Arab Emirates

²Lomonosov Moscow State University – Russia

³South African Astronomical Observatory – South Africa

⁴Southern African Large Telescope – South Africa

Abstract

One of the important ingredients of galaxy evolution is how galactic discs have been grown. This process is still not fully understood. Investigating kinematically peculiar galaxies hosting two counter-rotating stellar discs can shed light on the role of the external material acquisition in galactic disc formation.

In this contribution, we review a recently started project on the study of stellar counter-rotating galaxies identified in the MaNGA survey. The dedicated analysis of the integral spectra allows revealing a double-peaked structure in the stellar line-of-sight velocity distribution in such galaxies. Applying a two-component full spectral fitting we are trying to determine properties of stellar populations of both discs which provide crucial information for understanding the evolution of these galaxies.

*Speaker