

Revisiting old questions on massive stars using new large spectroscopic surveys of Galactic OB stars

S. Simón-Díaz¹

¹*Instituto de Astrofísica de Canarias & Universidad de La Laguna*

Abstract

In the last decade, several spectroscopic surveys of Galactic OB stars have been conducted independently by different groups (GOSSS, OWN, IACOB, CAFE-BEANS, NoMaDs, GES, MiMeS, BOB). The scientific exploitation of this unique observational material, using the most modern tools, is currently under way and will without any doubt quantitatively change our view of the properties and evolution of massive stars. The compiled observations, once combined with the accurate distances that will be provided by the Gaia mission, will not only open the frontiers of a new era in the study of Galactic OB stars, but also will be of key importance for the design of future large surveys of Galactic massive stars using new facilities under development such as WEAVE and 4MOST. In this contribution, I will provide a general overview of the various on-going surveys of Galactic OB stars and will present first results obtained by the IACOB project, an ambitious long-term project aimed at building a large database of high-resolution, multi-epoch, spectra of Galactic OB stars (using the FIES@NOT2.5m and HERMES@MERCATOR1.2m facilities at the ORM observatory, La Palma, Spain), and the scientific exploitation of the database using state-of-the-art models and techniques.