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Sesión Científica: La via lactea y sus componentes

Título: Preliminary study of the kinematic structure in the association Cygnus OB1

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Resumen:

The main objective of this project is the characterization of the velocity field in the Cygnus OB1 association using the current available data in the literature. This association is part of a larger star-forming complex located in the direction of Cygnus, but whose main sub-systems may be distributed at different distances from the sun. This project is a necessary study previous to the definition of a new scientific case to study Cygnus OB1 in a denser and deeper way with WEAVE. WEAVE is a future multi-object spectrograph to be attached at the William Herschel Telescope (WHT). The field of view is of two degrees in diameter, with almost 1000 fibres and two resolution modes. The first light is scheduled for 2018 and the survey will last 5 years with 236 guaranteed nights per year. The survey is divided in several scientific cases; one of them is named "Galactic Archaeology". The study of the open clusters and associations belongs to it. Our main scientific objective is the study of the kinematic properties of some star-forming regions in terms of age, metallicity, and position. We are interested in determining the spatial structure of the velocity field in the association Cygnus OB1, which includes several young stellar clusters. We found 5 previous catalogues of radial velocities and some studies of the clusters in the area. From current literature, we have collected more than 300 stars in the area of 5 x 5 squared degrees centred in the association. This area also covers part of the Cygnus OB3 and OB9 associations. In this talk, we want to make a description of the different stellar populations present in the area and to show a preliminary analysis of the phase-space groupings found in the region.