

ID 291

Tipo de Comunicación: Poster

Sesión Científica: La via lactea y sus componentes

Título: Binary Stars in the AB Doradus Moving Group

Nombre (Autor que presenta): Rebecca

Apellidos (Autor que presenta): Azulay Romero

Apellidos y nombre de los autores: Guirado, José Carlos; Marcaide, Juan María; Martí-Vidal, Iván; Ros, Eduardo

Resumen:

We present a study of the radio emission and kinematics of a sample of stars belonging to the AB Doradus moving group through VLBI observations. The main aim of our study is to obtain precise estimates of the dynamical mass of young, low-mass stars, which in combination with photometric measurements provide precise benchmarks for calibrating pre-main-sequence (PMS) stellar evolutionary models. Previous studies show that model predictions are in disagreement with experimental results for masses below $1.2 M_{\odot}$. Among the stars included in our study, we emphasize the results obtained in two of them: AB Dor B and HD 160934, from which we have measured both the relative and absolute orbital motion. Accordingly, we obtained precise estimates of the mass of the components of these binaries (ranging from 0.25 to $0.7 M_{\odot}$). Comparisons of the dynamical masses with the prediction of PMS evolutionary models show that the models underpredict the dynamical masses of the binary components by 10--40%.