

The mass discrepancy in massive eclipsing binaries and its effect on ages

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The mass discrepancy in binaries stands for the difference between the stellar component masses inferred from binary dynamics (dynamical masses), and those obtained from spectral characteristics of stars and evolutionary models (evolutionary masses). The discrepancy is a strong indication of our theories/models to contain shortcomings as the dynamical masses are strictly observational and model-independent. The problem is closely related to the problem of internal mixing in evolutionary models, where the overall mixing is typically mimicked by the substantially increased values of the core overshoot parameter, which has a large impact on the inferred ages of the stars. In this talk, we will present an overview of the current status of the research field and will propose a valid recipe of resolving the mass discrepancy problem.

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