

THE MASS RATIO DISTRIBUTION OF BINARY STARS

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ABSTRACT. The forthcoming large surveys will provide us with an amazingly large set of new binaries. Most of these will be single-lined spectroscopic binaries (SB1) - including exoplanets - for which, because of the unknown inclination angle, we will unfortunately not have a direct knowledge on the masses of the components, an essential ingredient to apprehend the evolution of these systems and understand the various mass transfer mechanisms. Fortunately, statistical methods allow us to derive the mass ratio distribution of large samples of SB1 (and in the case of planets, on the planet mass distribution), that is, when they are applied properly. I will show how these methods have already been applied to a wide range of different binaries and how they will prove extremely useful in the future.

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