Exoplanets mass measurement using gravitational microlensing

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Abstract

Galactic gravitational microlensing is a very efficient technique to detect brown dwarfs and extrasolar planets at large orbital distances from their stars, and down to Earth-mass planets. The exoplanets discovered are beyond the snow line and typically close to the habitable zone of their host stars. I will present the specificity of the microlensing method to detect exoplanets, discuss the detections made so far, and present the different methods to constrain the mass of the lens hosting a planet. Finally, I will describe how can interferometry lead to an independent mass determining through the measurement of the lens Einstein radius.

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