

---

## Additional Astronomical Information from the Astrometric Observations of Gravitational Microlensing Events

Cheongho Han

Department of Astronomy & Space Science, Chungbuk National University

Current searches for gravitational microlensing events are being carried out only by a photometric method. In this review paper, we demonstrate that the nature of Galactic lenses can be significantly better constrained with the additional astrometric observations of microlensing events. First, by astrometrically observing lensing events, one can resolve the lens parameter degeneracy, and thus the lens mass can be determined with improved precision. Second, by being free from the blending problem, astrometric observations of lensing events will allow one to improve the uncertainties in the determined Einstein time scales. Third, the lens brightness, which could not be measured photometrically, can be measured from the astrometric observations of lensing events, and thus the nature of lens matter can be better constrained. Finally, with the help of astrometric followup observations of a binary-lens event, one can uniquely determine the solution of lens parameters, allowing one to obtain important astronomical information about the source star and the lens itself.