Extragalactic Dark Matter Haloes and QSO properties Through Microlensing

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In this talk we make a review on the most recent work of our group in the field of extragalactic microlensing. Based upon information derived from parametrized sets of magnification maps, we offer an interpretation of the spectra of some real lensed sistems that leads to important conclusions regarding different aspects of lens Galaxies and QSO, namely the low content in MACHOs of the dark matter haloes or the structure of the -otherwise unresolved- quasar accretion disk.

This talk summarizes the both the paper published in ApJ under "Microlensing-based Estimate of the Mass Fraction in Compact Objects in Lens Galaxies" (2009ApJ...706.1451M) and the ongoing work of the group on the accretion disk structure of QSOs as well.

Exoplanet searches with micro and pixel lensing

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Gravitational microlensing (including pixel-lensing) is among the most promising techniques with an opportunity of detecting Earth-like planets at distances about a few astronomical units from their host stars. So, this technique could give a possibility to find exoplanets in the habitable zone even in other galaxies, in Andromeda galaxy, for instance. We compare the microlensing technique with other methods to discover new exoplanets.

References

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