

## Dark Matter and Halo Kinematics in Elliptical Galaxies

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Elliptical galaxies represent the most advanced state of galaxy evolution, and their dark matter halos are thus of particular interest. The mass distribution in elliptical galaxies cannot be determined from rotation curve data as in spiral galaxies, but is constrained by stellar kinematics, planetary nebula and globular cluster kinematics, HI rings in some cases, X-ray data, and gravitational lensing measurements. With the PN.S instrument, it is moreover possible to measure the stellar kinematics at several effective radii and investigate the angular momentum and dynamics in the outer halos of ellipticals using planetary nebulae velocities. I shall discuss some key results such as (i) kinematics and rotation at large radii, (ii) extended massive envelopes, (iii) approximately flat circular velocity curves, (iv) elliptical galaxies without need for dark matter.

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