

# Halo K-Giant Stars from LAMOST: Kinematics and Galactic Mass Estimate

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We analyze the line-of-sight velocities of several thousand halo K-giant stars from the third data release of the spectral survey LAMOST. We make use of a new method to estimate the enclosed dark halo mass of the Milky Way within 100 kpc from the Galactic Center using the velocities and distances of these K giants. We derive estimates for the virial radius and concentration parameter from our mass profile, as well as estimate the circular (rotational) velocity curve out to 100 kpc. Tens of thousands of such stars are expected to become available to this analysis by the end of the five year survey. We find a nearly constant line-of-sight velocity dispersion profile, no large dips or peaks, in a Galactocentric radial range of 10 to 30 kpc, where such dips have been seen in other surveys. The flatness of the profile may be an indication that the Milky Way's halo star velocity ellipsoid is isotropic.