Stellar Age Distribution at the Central Few Parsecs of Our Galaxy

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Near-IR AO observations of the central few parsecs of the Milky Way from the Gemini telescope have been analyzed to produce H, K, and two narrow-band (K_cont & CO) photometry. We show that the late-type stars that were identified by the Keck high-resolution spectrometry (Figer et al. 2003, in preparation) are well separated from early-type stars in the narrow band color-magnitude diagram (Kcont vs. Kcont-CO). We present the extinction map toward th! e stars in the Galactic centerregion with the same assumed intrinsic color for both early- and late-type stars. By adding artificial stars on the observed images, we calculated recovery fractions of stars as a function of magnitudes. Dereddened, completeness-corrected luminosity functions are presented as a function of Galactocentric radius. An analytical surface number density profile was fitted for late-type stars brighter than K'=10 mag, which implies an asymptotic volume density profile of $r^-1.3$ at r<3 pc. This late-type only density profile is significantly flatter than previously calculated profiles ($r^-1.8$) for both late- and early-type stars.