The 2MASS Wide-Field T Dwarf Search. II. Discovery of Three T Dwarfs in the Southern Hemisphere
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abstract: We present the discovery of three new Southern Hemisphere T dwarfs identified in the Two Micron All Sky Survey. These objects, 2MASS 0348−6022, 2MASS 0516−0445, and 2MASS 2228−4310, have classifications T7, T5.5, and T6.5, respectively. Using linear absolute magnitude/spectral type relations derived from T dwarfs with measured parallaxes, we estimate spectrophotometric distances for these discoveries; the closest, 2MASS 0348−6022, is likely within 10 pc of the Sun. Proper motions and estimated tangential velocities are consistent with membership in the Galactic disk population. We also list Southern Hemisphere T dwarf candidates that were either not found in subsequent near-infrared imaging observations and are most likely uncatalogued minor planets, or have near-infrared spectra consistent with background stars.