# Cool White Dwarfs Found in the UKIRT Infrared Sky Survey

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We present the results of a search for cool white dwarfs in the UKIRT Infrared Deep Sky Survey (UKIDSS). The UKIDSS photometry was paired with the Sloan Digital Sky Survey, and cool hydrogen-rich white dwarf candidates were identified by their neutral optical colors and blue near-infrared colors, as well as faint Reduced Proper Motion magnitudes. Optical spectroscopy of the candidates was obtained at Gemini Observatory, and showed the majority of them to be previously unknown cool degenerates, with a small number of subdwarf contaminants. Of thirteen objects observed to date, ten are newly identified white dwarfs. Seven of these have an effective temperature ($T_{\rm eff}$) around 4000 K, and three have $T_{\rm eff}$ 5000 – 5500 K. Assuming a typical white dwarf mass and gravity, the implied cooling age is 7 – 10 Gyr for the cooler objects, with distances of 50 – 80 pc and tangential velocities ($V_{\rm tan}$) of 25 – 70 km/s. The three warmer white dwarfs have cooling ages of 3 – 6 Gyr, and the implied distances and velocities are larger: 90 – 130 pc and 75 – 125 km/s. Thus our search has revealed new old members of the thin and thick disk, as well as warmer objects which are either relatively young thin disk white dwarfs with unusually high space motions, or old remnants of low-mass stars.