

Spectroscopic studies of new high proper motion DA white dwarfs

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Abstract: We used the revised New Luyten Two-Tenths (rNLTT) catalog to select high proper motion white dwarf candidates. We studied the spectra of 70 hydrogen-rich white dwarfs, which were obtained at the Cerro Tololo Inter-American Observatory (CTIO) and extracted from the Sloan Digital Sky Survey (SDSS). We determined their effective temperature and surface gravity by fitting their Balmer line profiles to model white dwarf spectra. Using mass-radius relations we determined their mass and cooling age. We also conducted a kinematical study of the white dwarf sample and found that most belong to the thin disk population. We have identified three magnetic white dwarfs and estimated their surface magnetic field. In the studied sample, we have identified 6 white dwarfs that lie within 20 pc from the Sun.