Spectroscopic observations of new high proper motion DA white dwarfs

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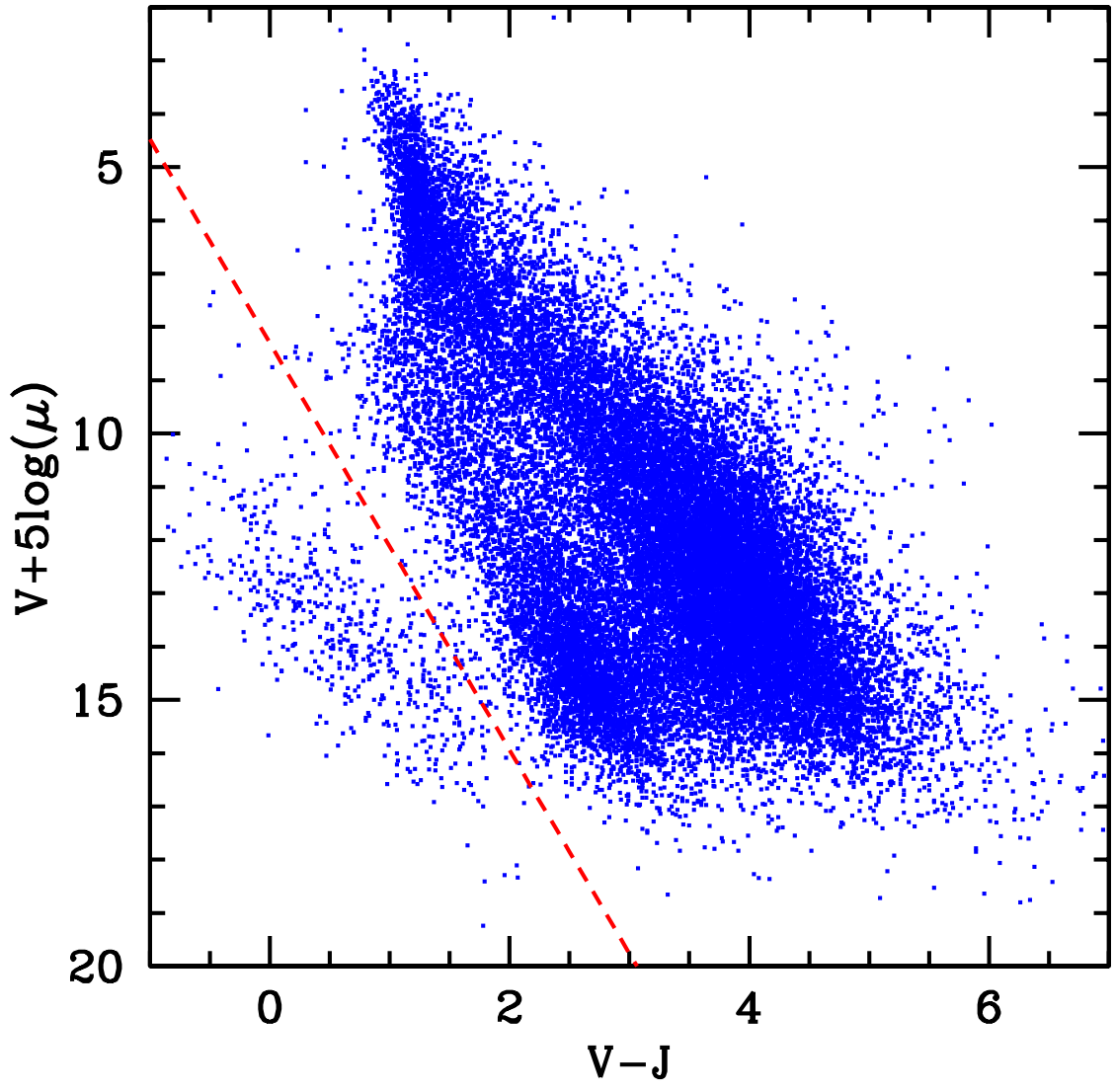
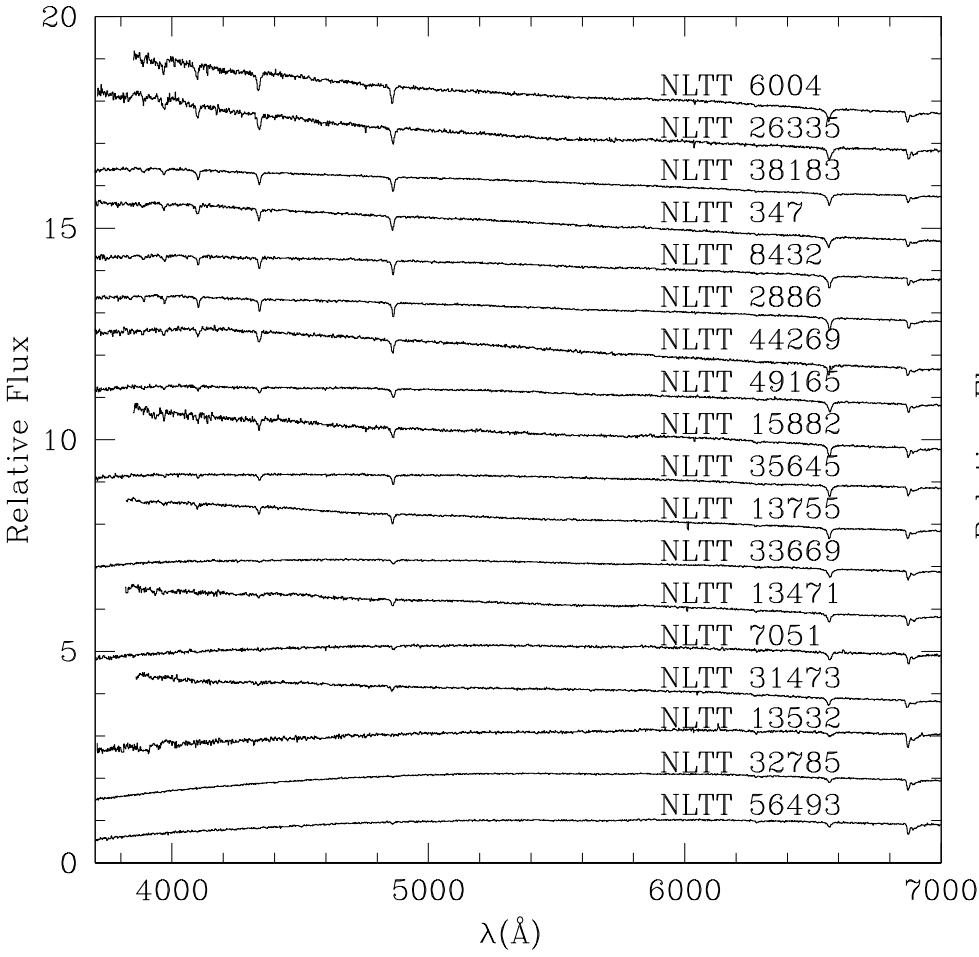
White dwarfs

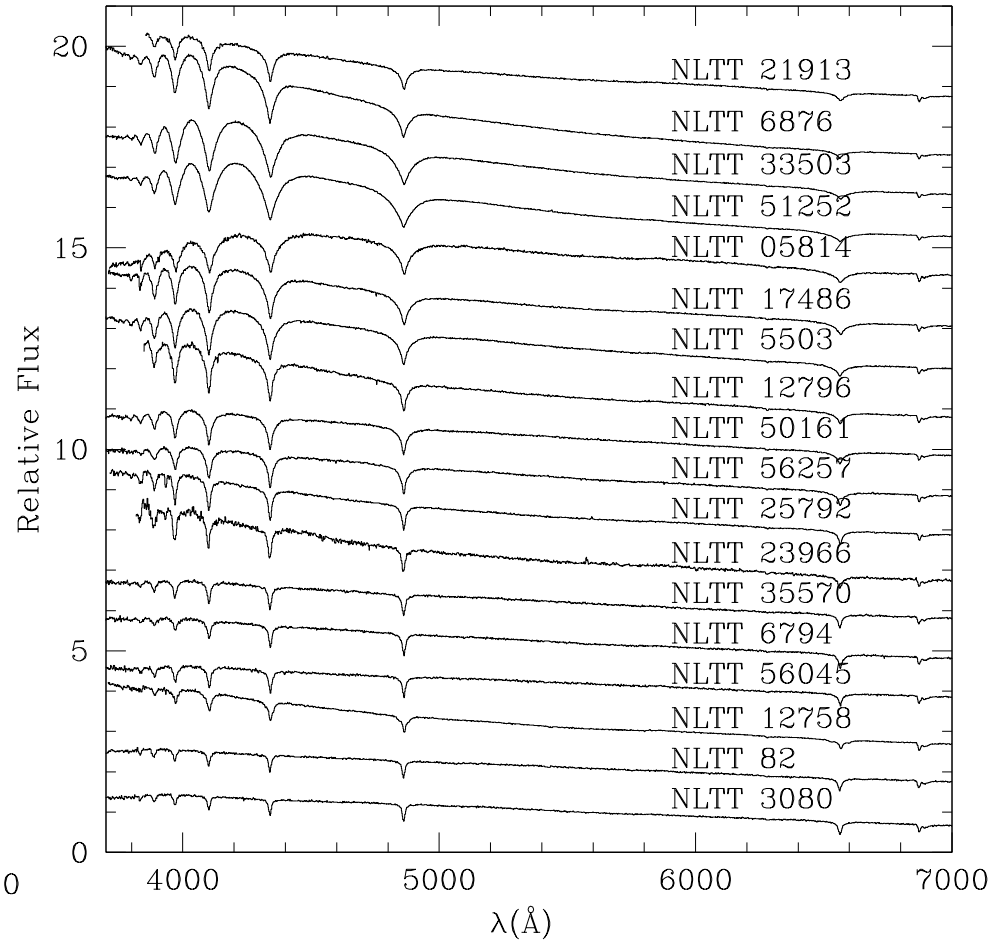
- 90% of stars evolve into a white dwarf
- local sample is complete $\approx 80\%$ up to 20 pc
- revised New Luyten Two-Tenths catalog (rNLTT)
- Cerro Tololo Inter-American Observatory (CTIO)
- Sloan Digital Sky Survey (SDSS)

Salim & Gould (2002)



Spectra from CTIO

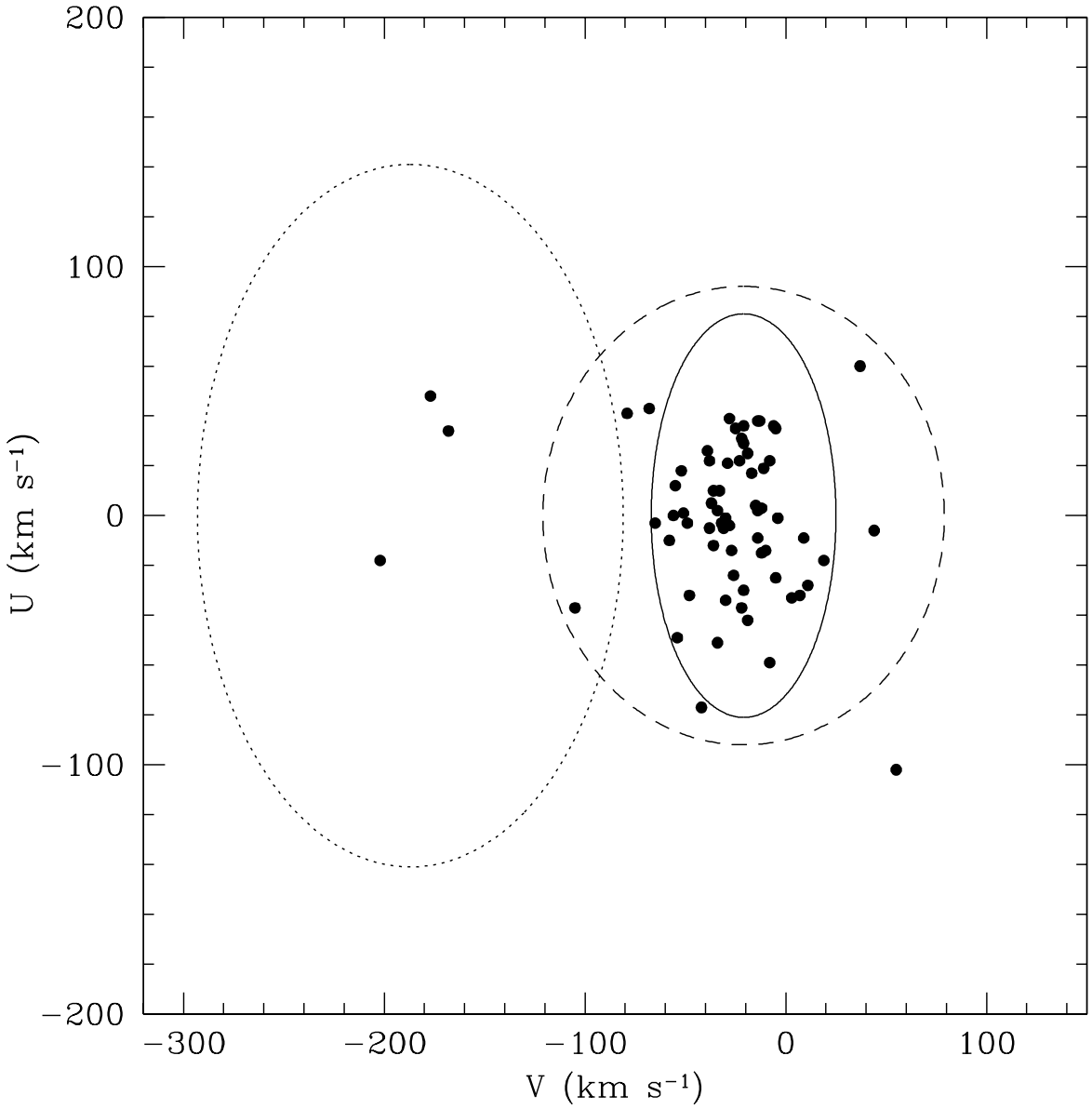




Analysis of spectra

- hydrogen-rich LTE models (Kawka et al., 2007)
- T_{eff} = 4 500 K till 100 000 K for log(g) = 7.0 till 9.5
- effective temperature, surface gravity
- 3 magnetic white dwarfs: NLTT 20629 B = 1.2 MG, NLTT 24770 B = 1.3 MG and NLTT 12758 B = 1.7 MG
- ultramassive white dwarf NLTT 43827 - 1.31 $M_{\odot}$
- ZZ Ceti star NLTT 33108
- masses, cooling ages, absolute magnitudes, distances (Althaus & Benvenuto, 1997, 1998)
- velocity components U, V and W (Johnson & Soderblom, 1987)

U vs. V diagram



- 4 possible halo candidates, only NLTT 31473 cool enough
- 6 candidates within 20 pc: NLTT 33669, NLTT 13532, NLTT 19653, NLTT 56257, NLTT 12758, NLTT 7051

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