The local white dwarf birthrate from

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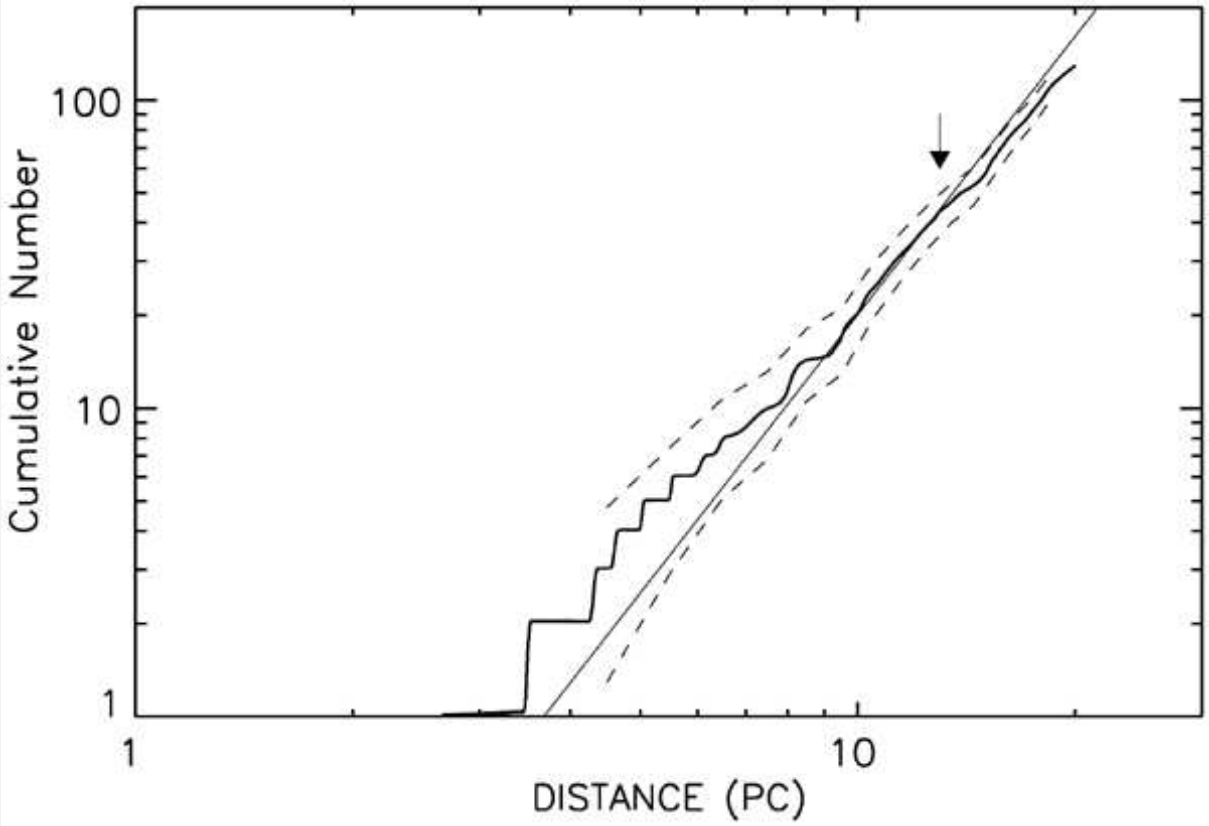
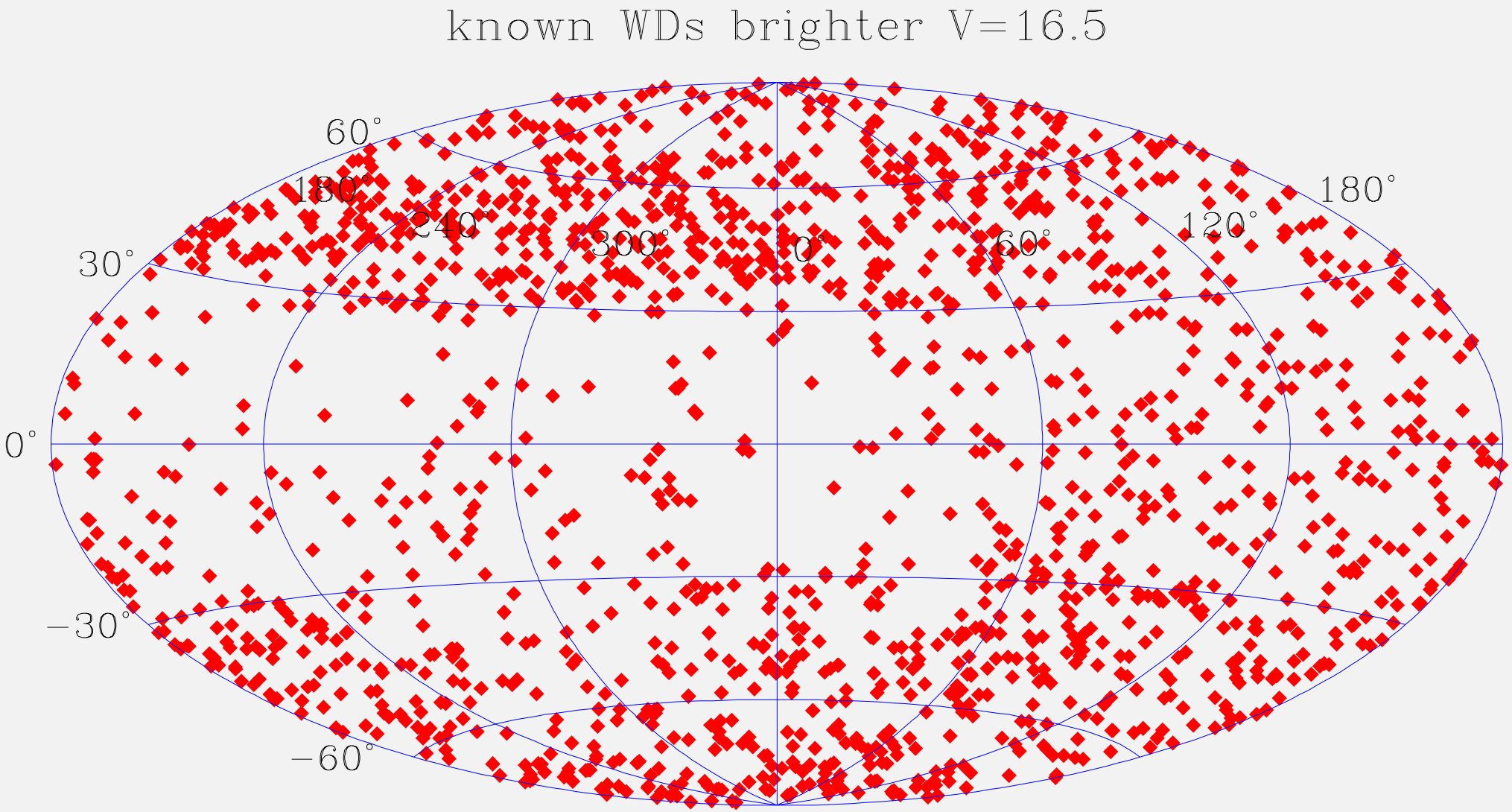
The local WD sample



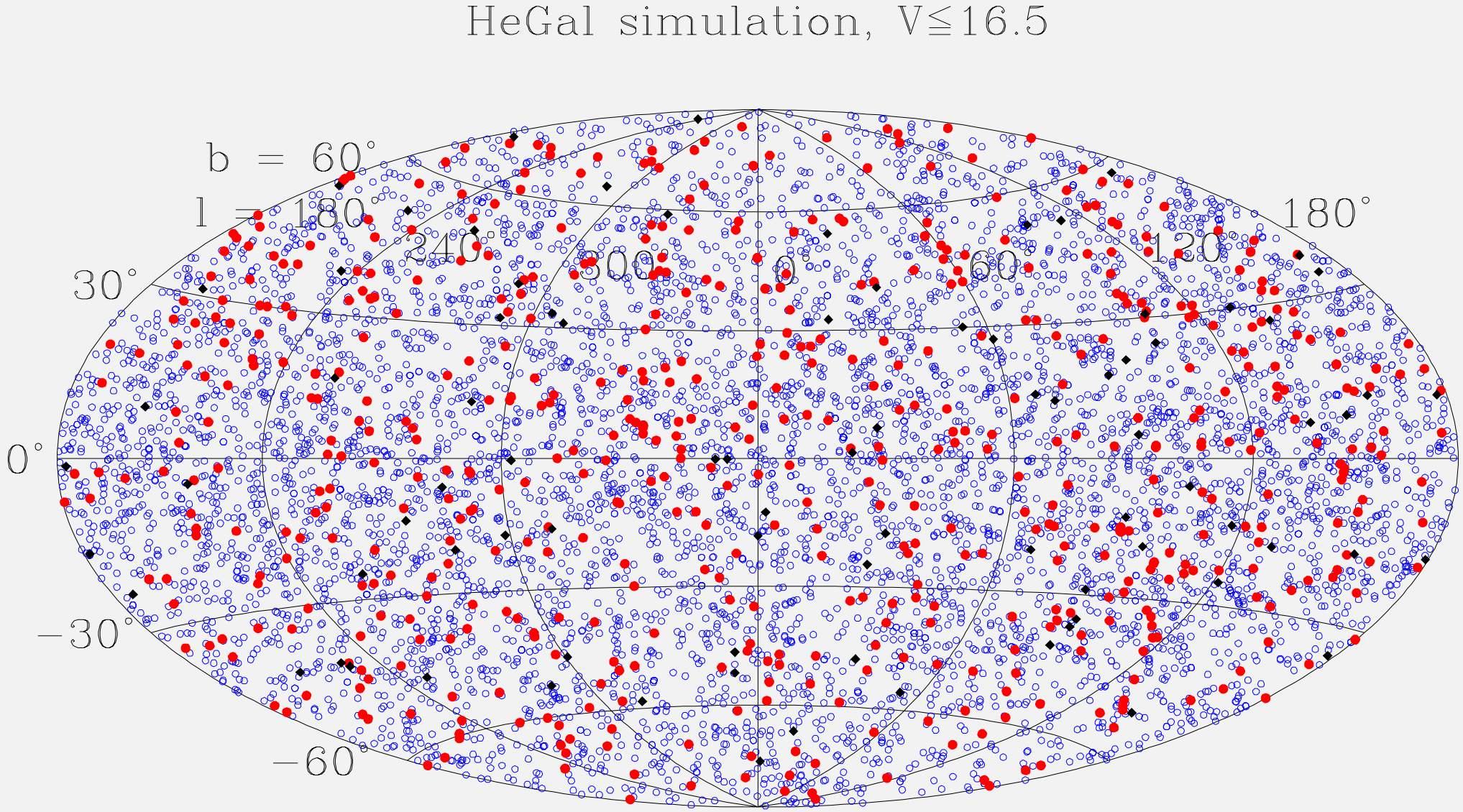
Incompleteness starts at $d = 13\,\mathrm{pc}$ (or earlier)

Cumulative distribution of local WDs as function of distance (Holberg et al. 2008).

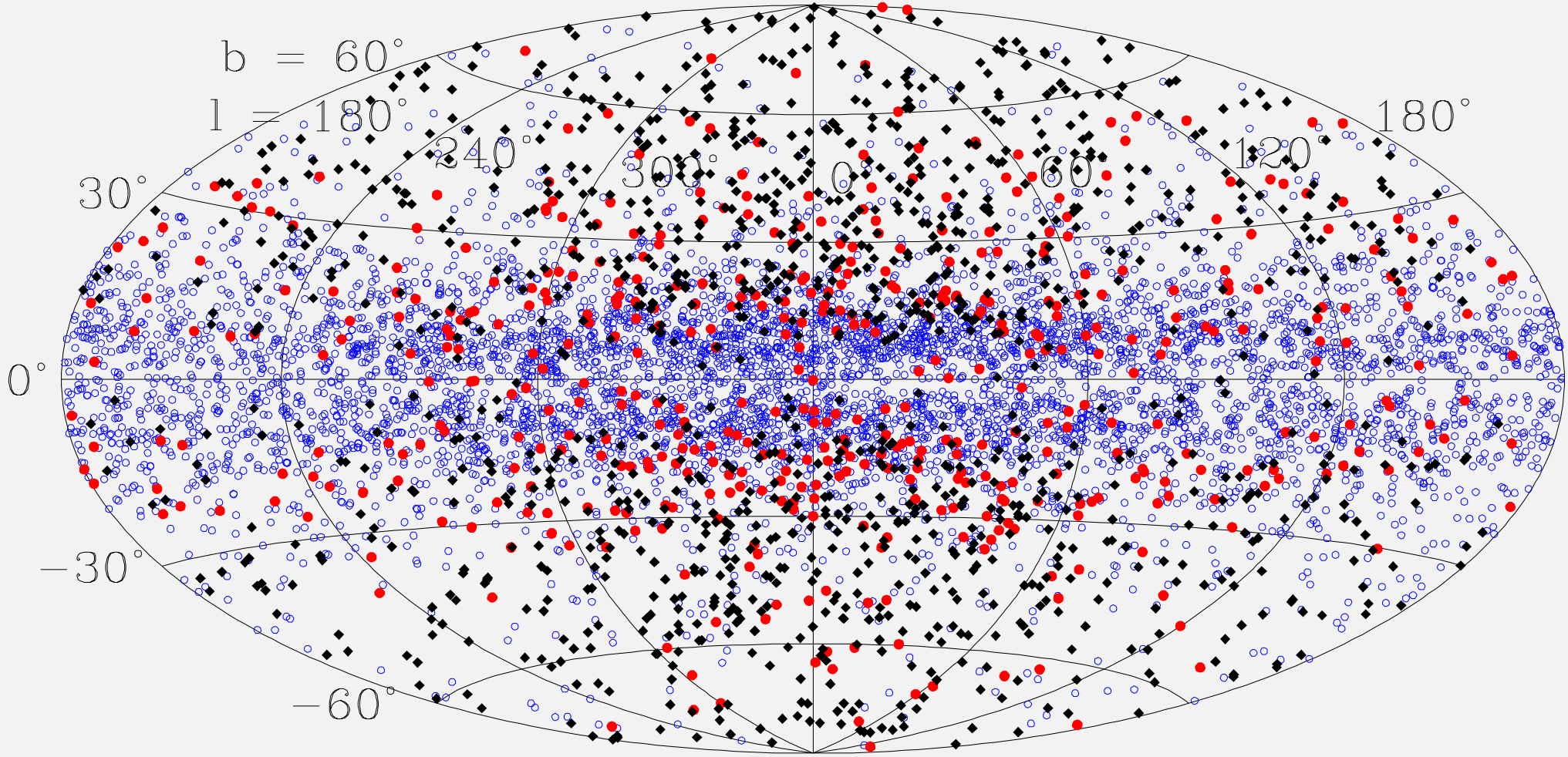
Bright WDs in galactic coordinates



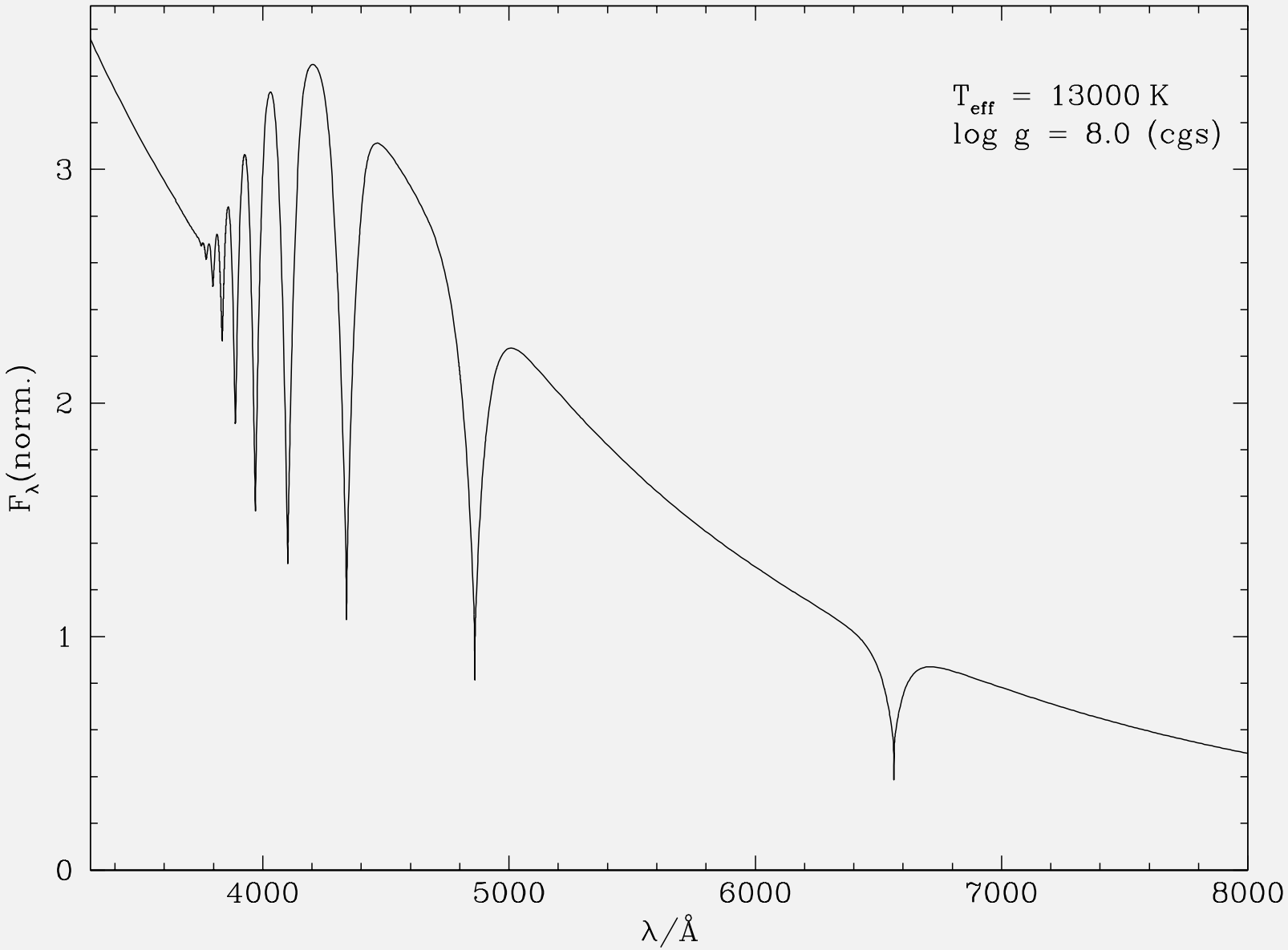
Simulated bright WDs



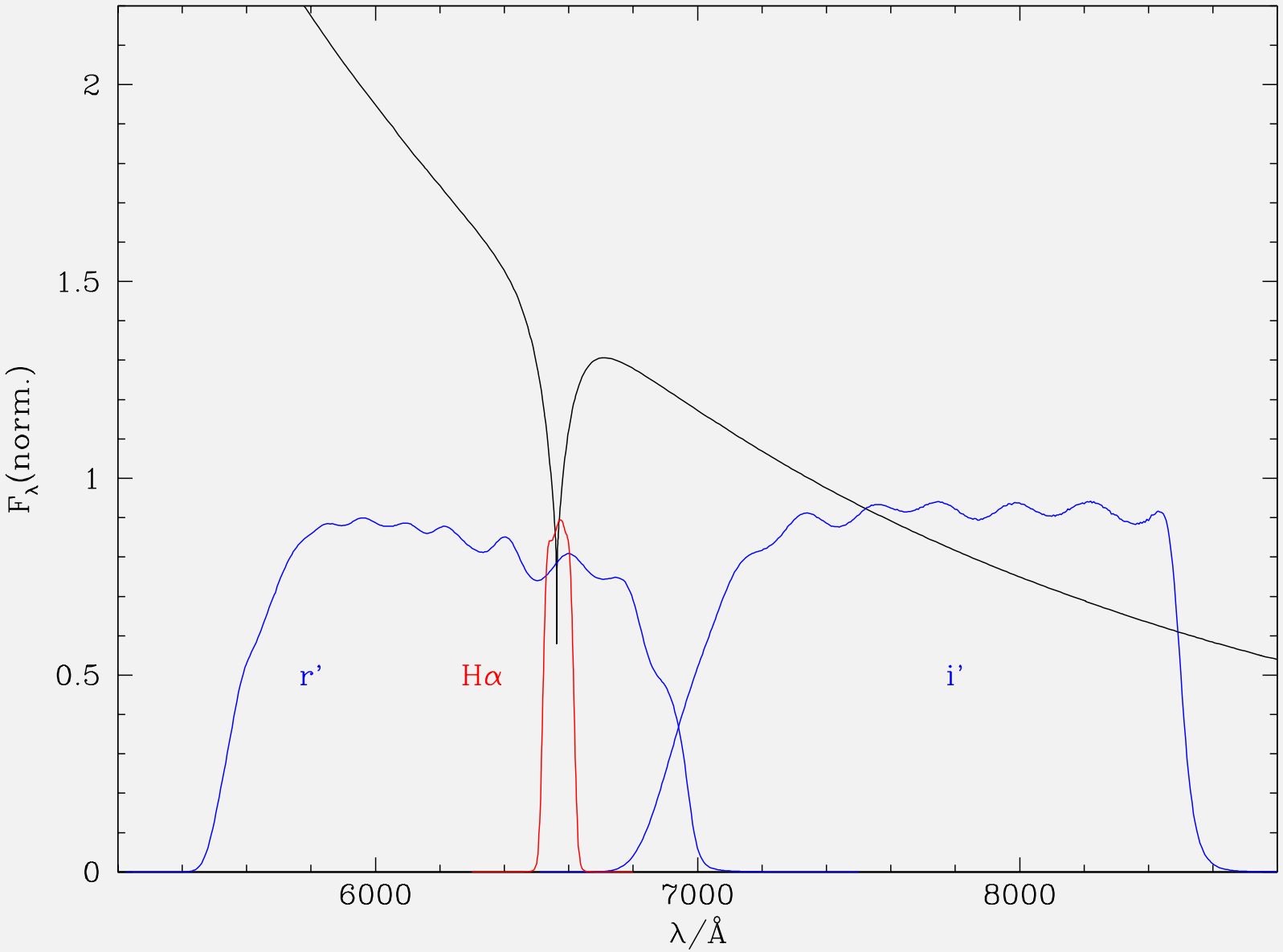
Simulated post-AGB stars



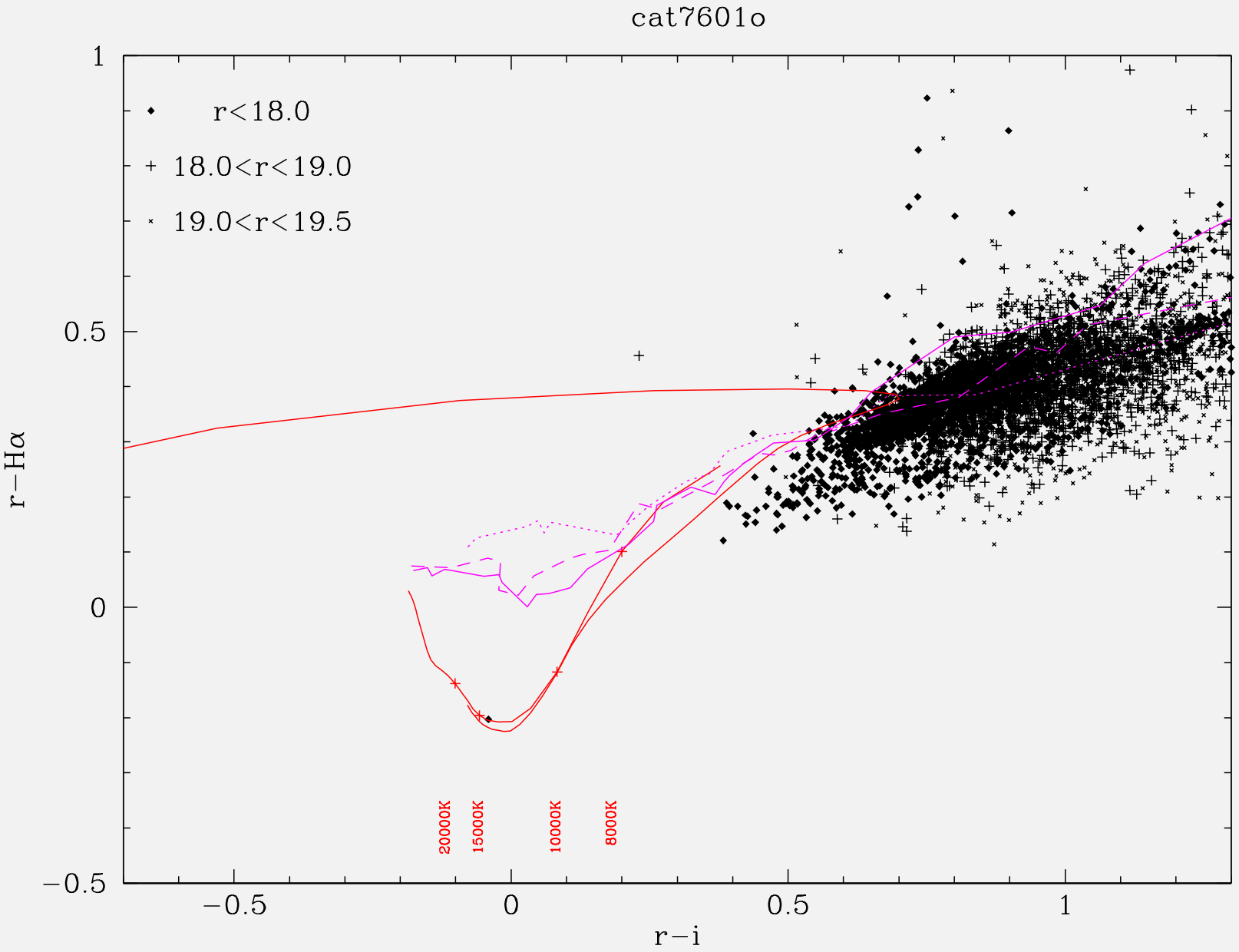
DA white dwarfs



DA and IPHAS filters



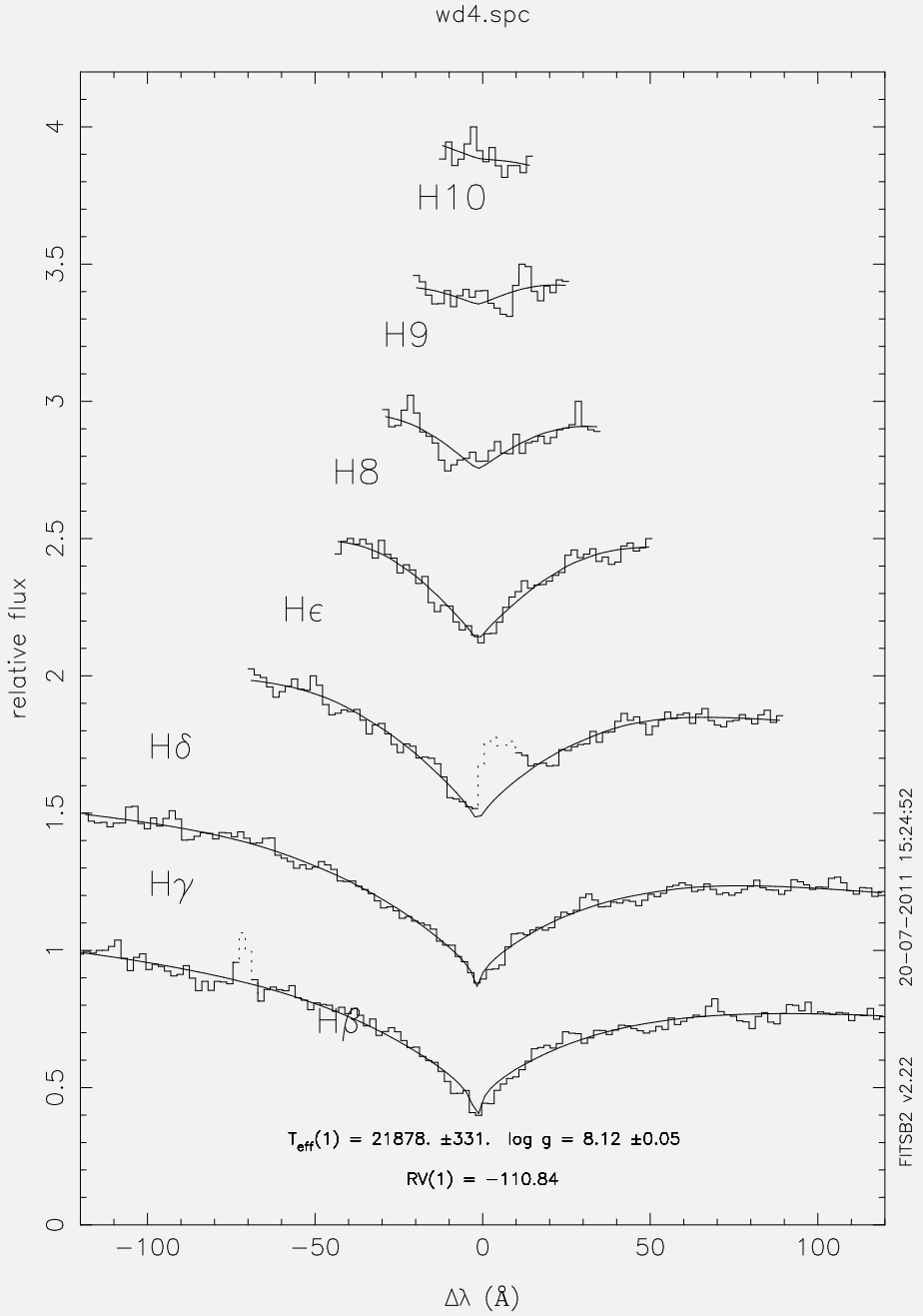
DAs in the IPHAS colour–colour plot

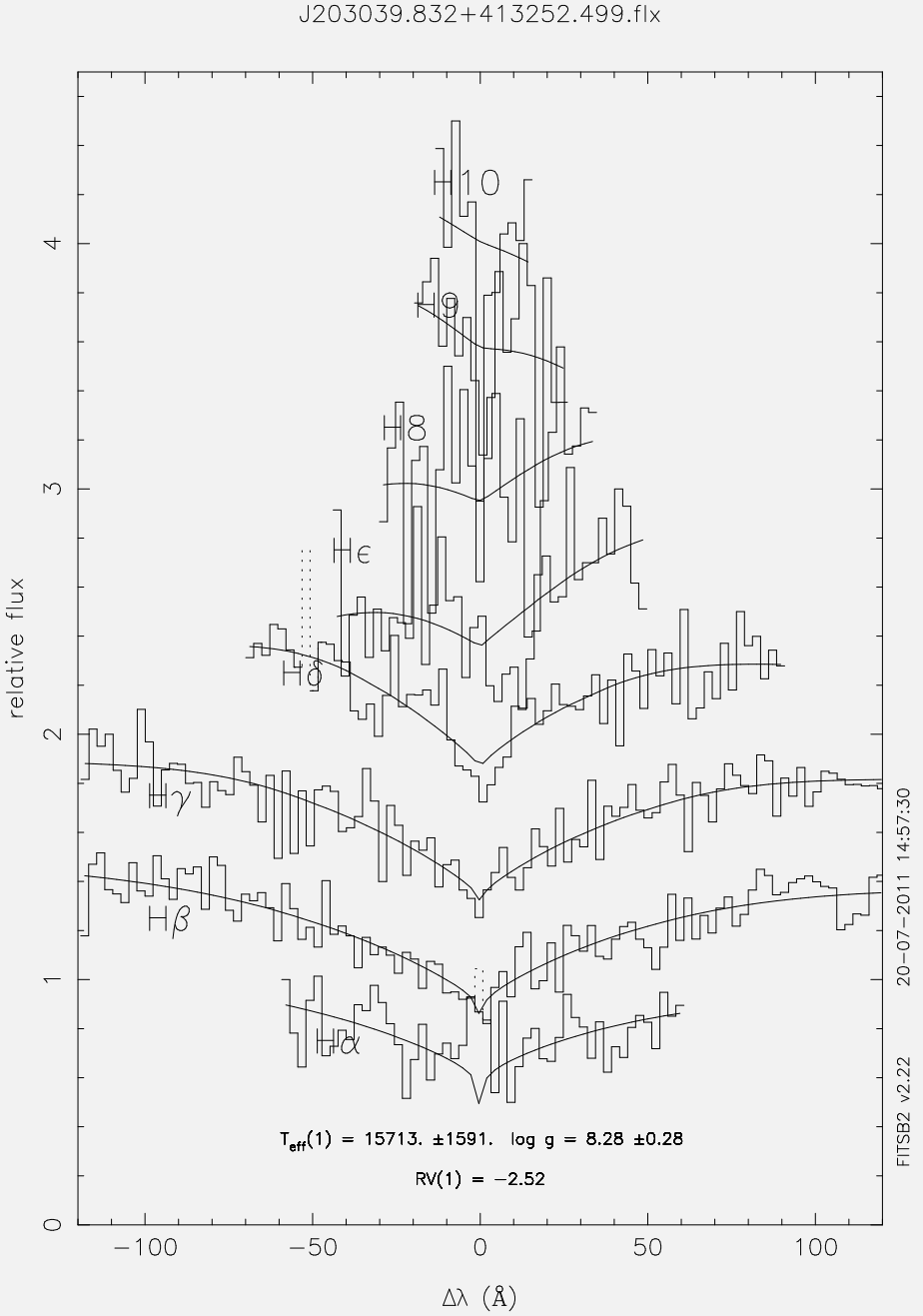


Follow-up spectroscopy

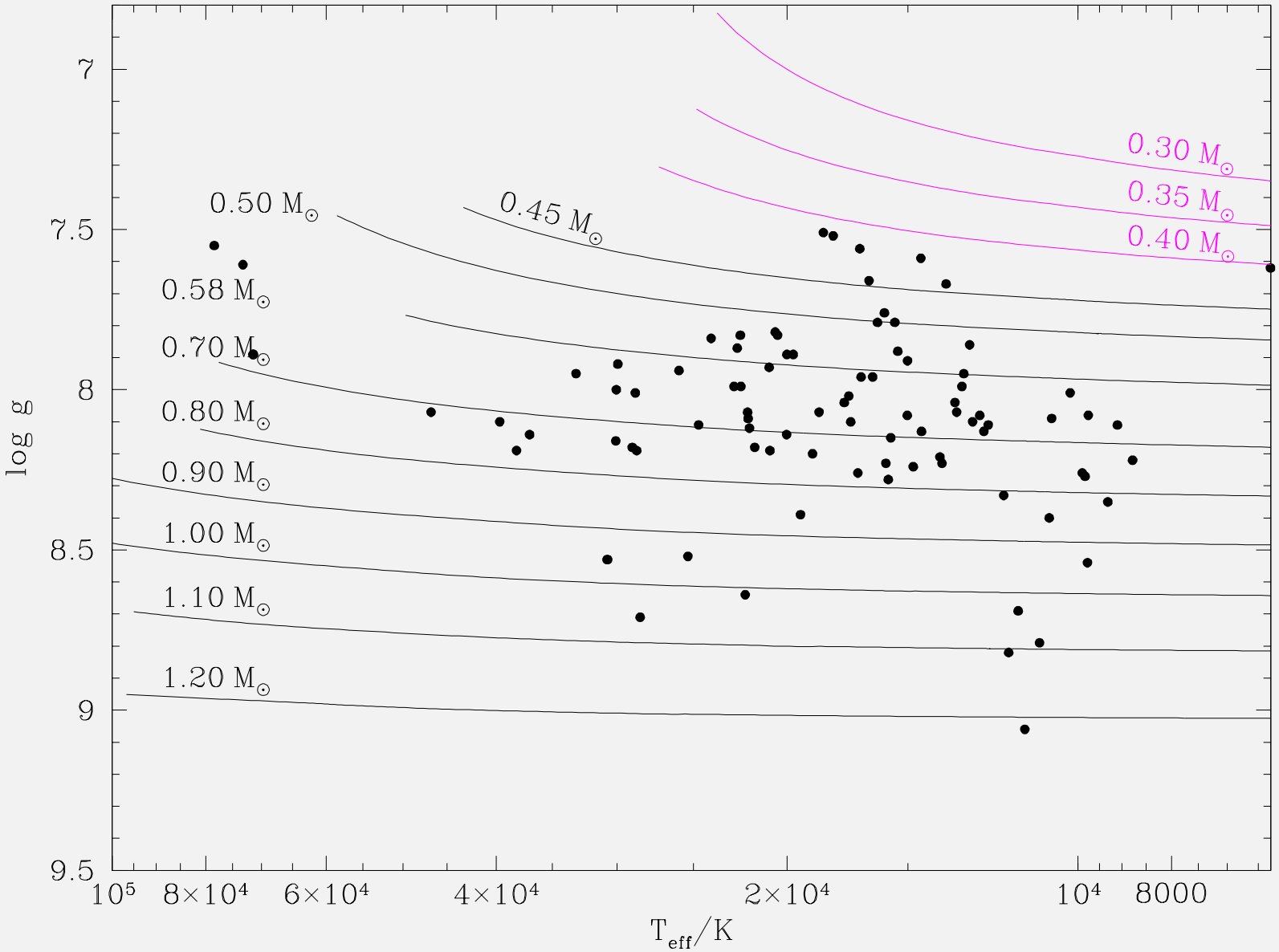
- Follow-up spectroscopy of WD candidates (among other types) with MMT/Hectospec, NOT, INT, . . .
- Total sample from IPHAS and UVEX: 95 DA WDs
- Temperature and gravity from fitting of the Balmer lines with model spectra
- Latest generation of Detlev Koester's model atmospheres was used.

Follow-up spectroscopy

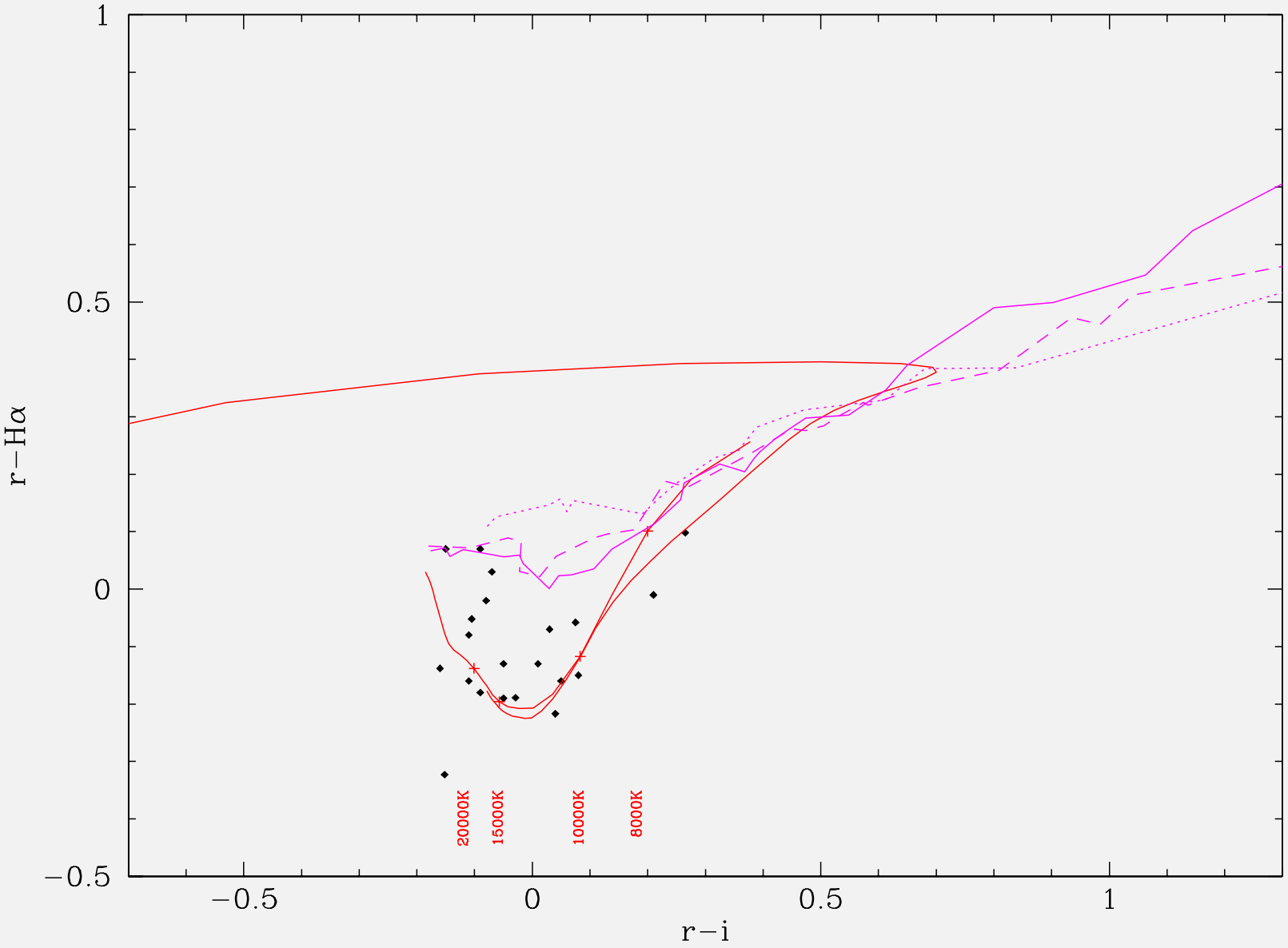




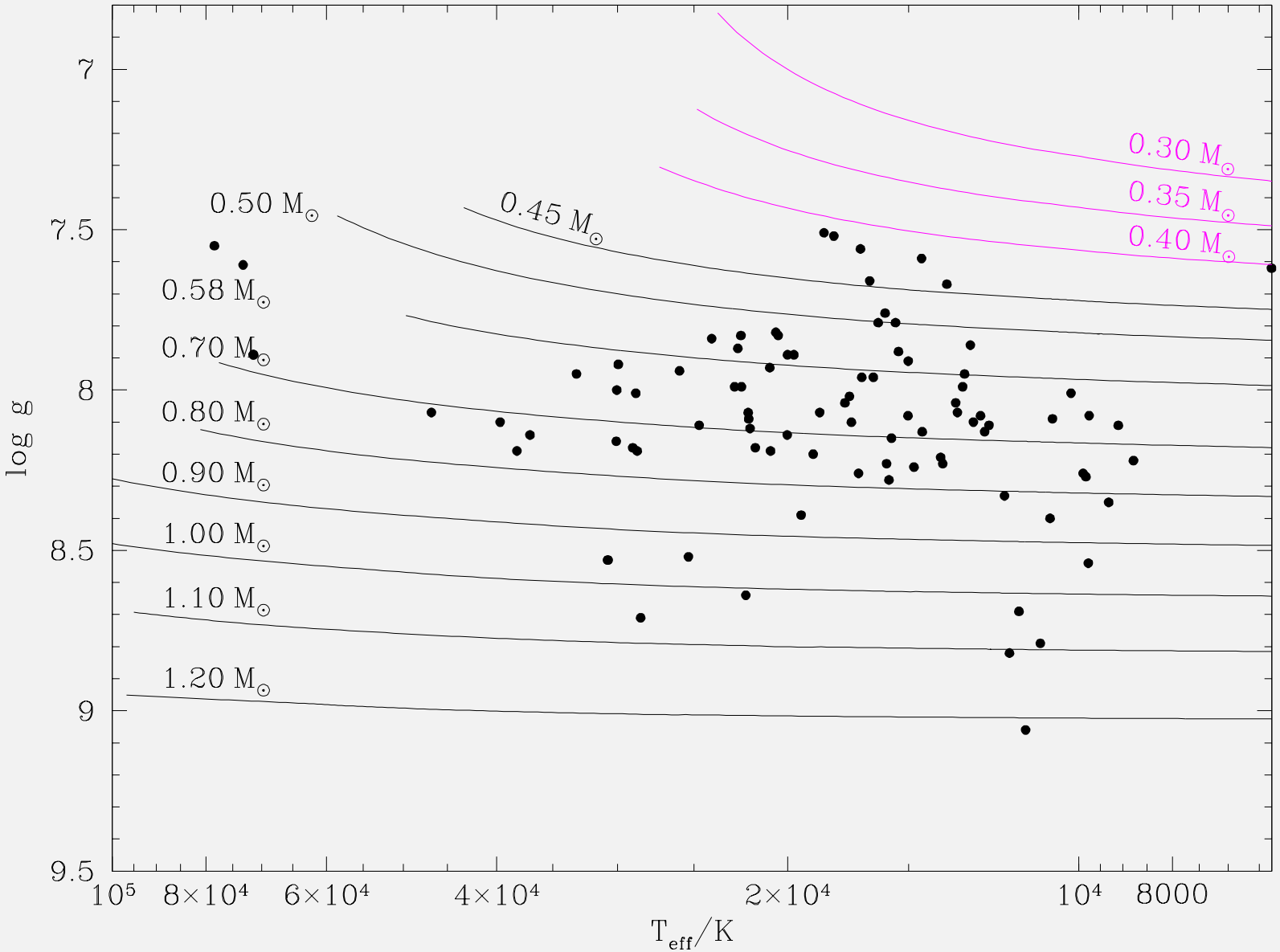
DAs in temperature–gravity diagram



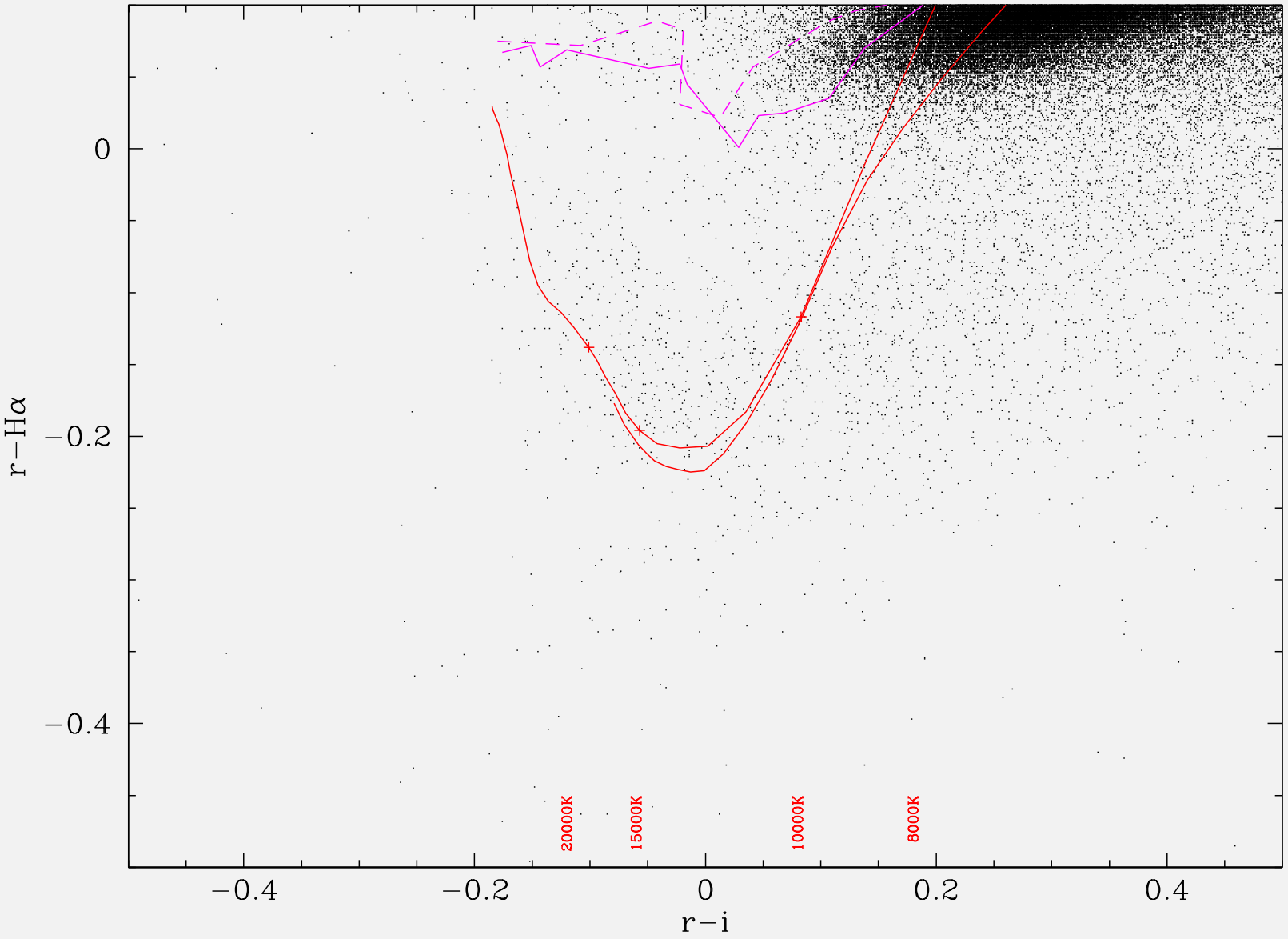
Fitted DAs in colour–colour diagram



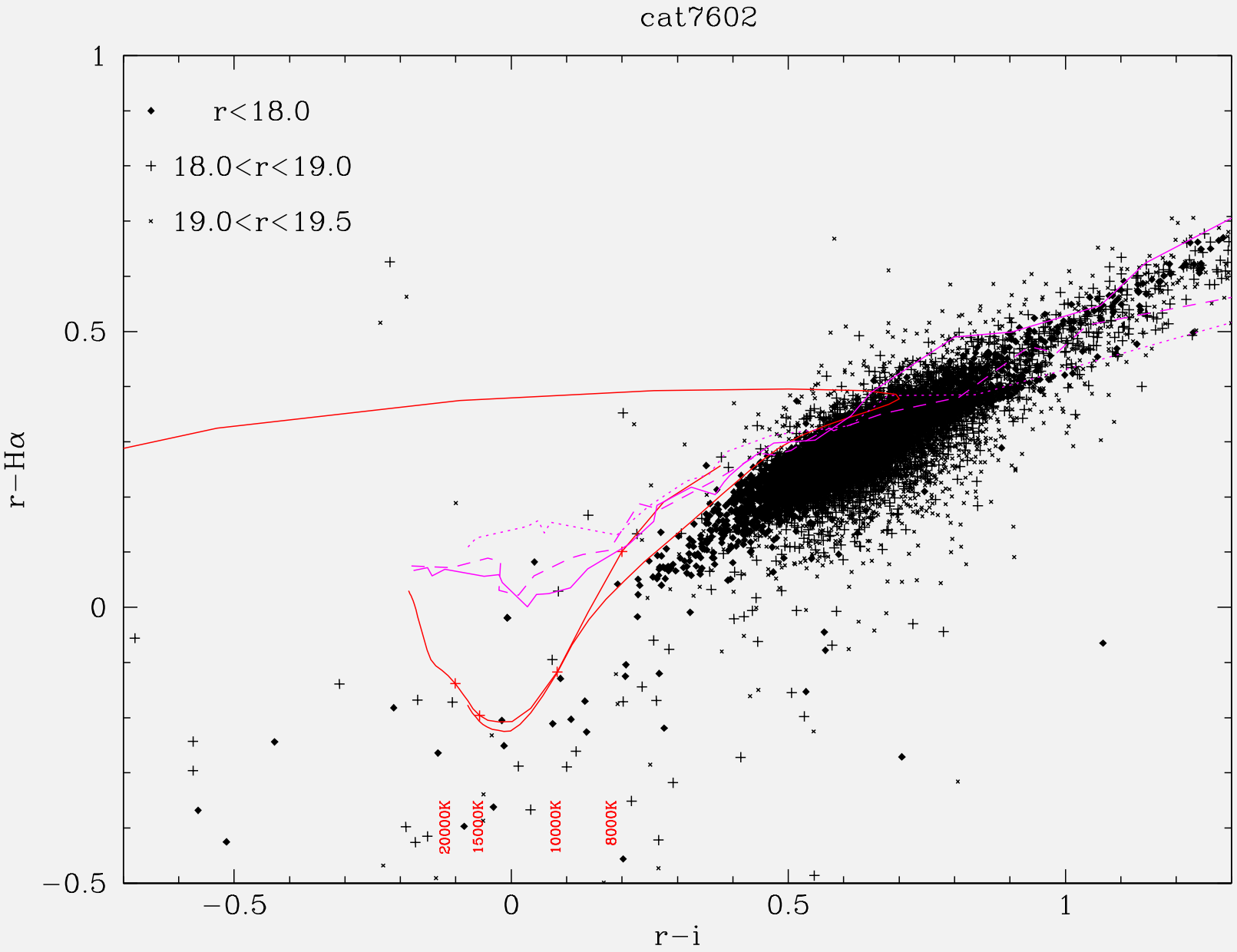
DAs in temperature–gravity diagram



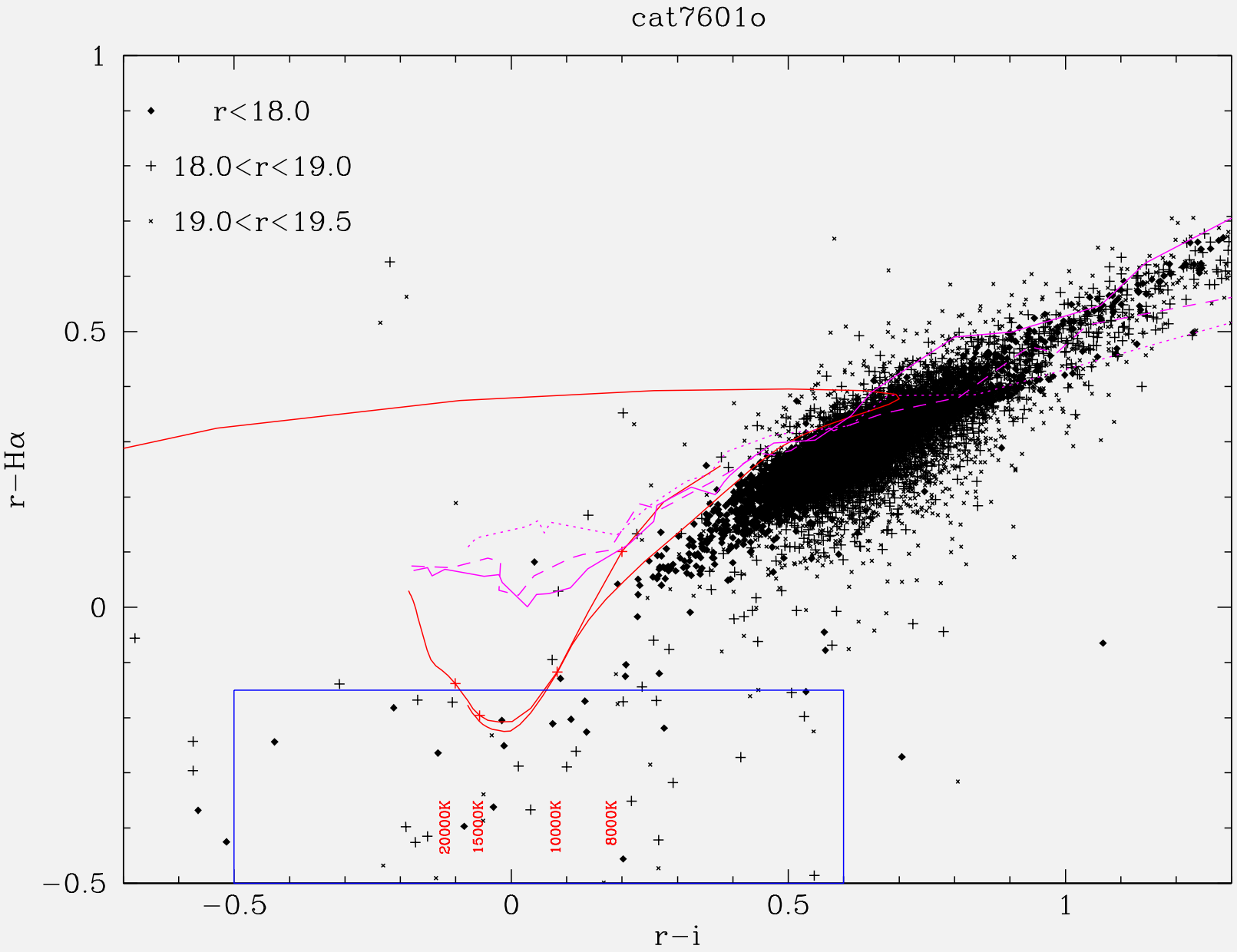
IPHAS – full dataset



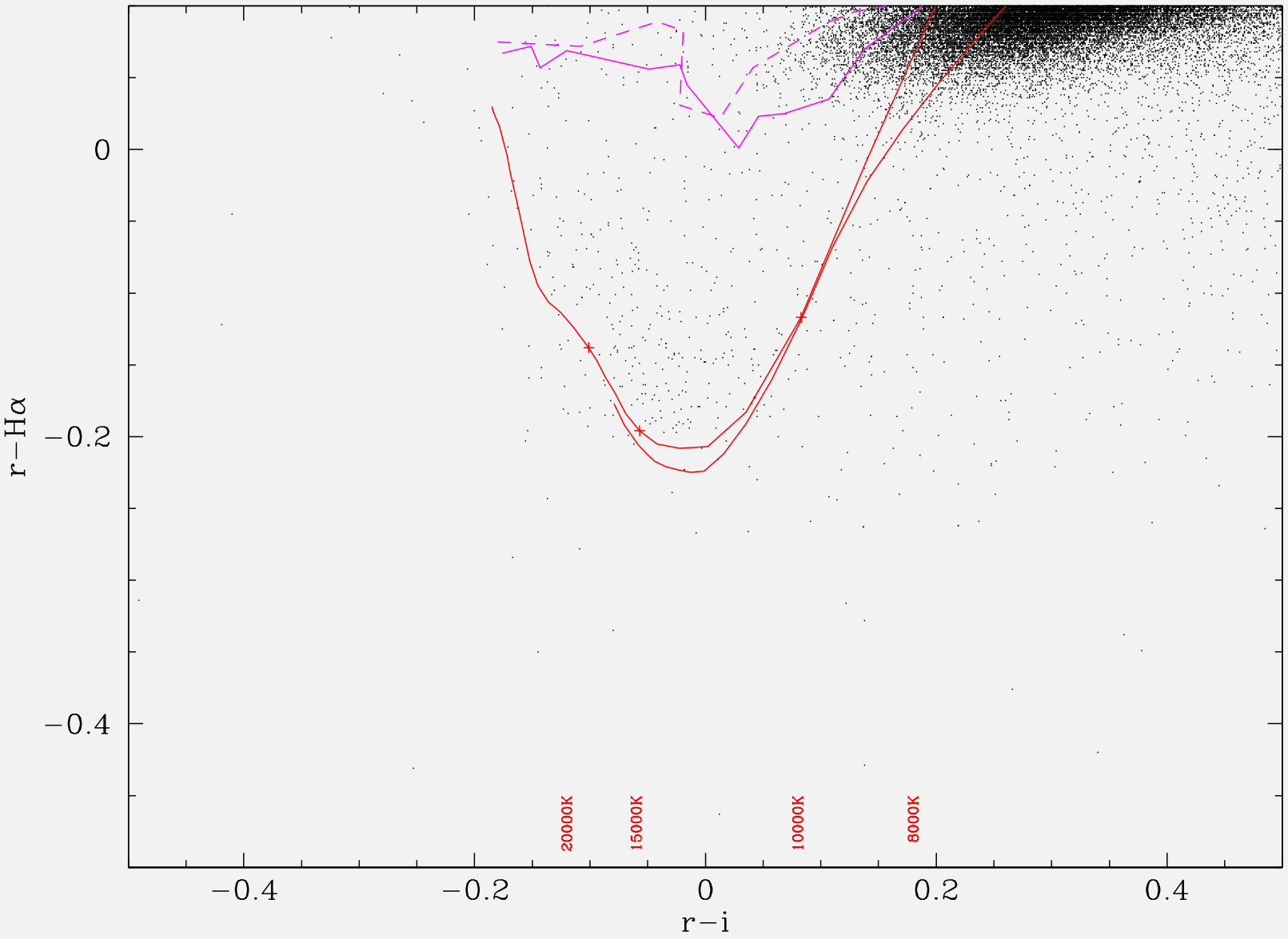
IPHAS colour–colour plot – rain



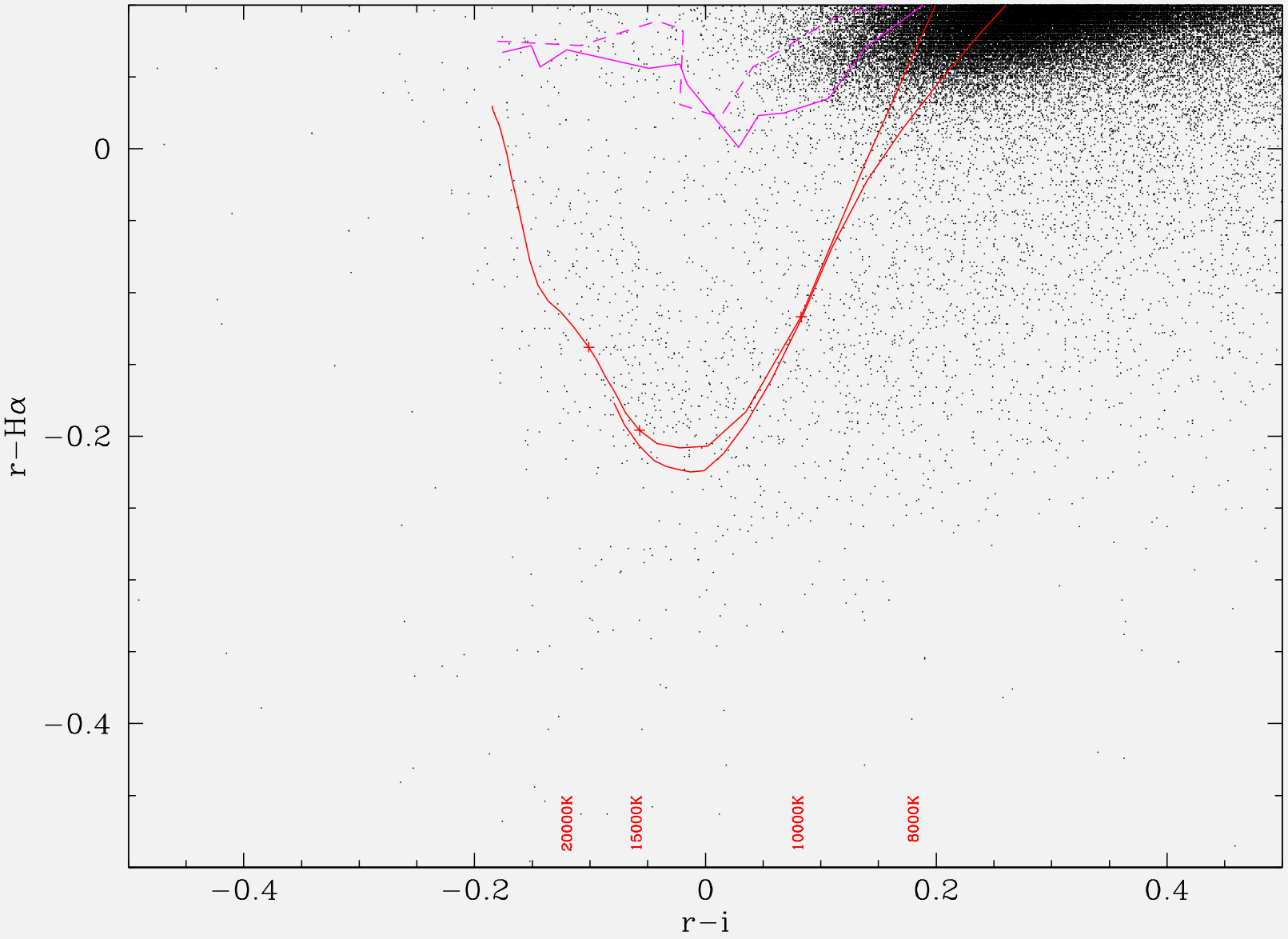
Rejection criteria



IPHAS – cleaned dataset



IPHAS – full dataset



Summary

- Selected DA white dwarfs from IPHAS using colour-criteria
- Follow-up spectroscopy and model atmosphere analysis of 95 DAs
- Estimate of birthrate hampered by contamination problem.
- Possible sources of contamination
  - Remaining artifacts – better filtering possible?
  - DA binaries with very later type companions
  - Reddended hot white dwarfs and subdwarfs
- By-product: computer program to apply calibration and match all detections of sources (`Wheel v1.2842` ?).
- Final thought . . .