The White dwarf population in IPHAS

L. Morales-Rueda¹, P. J. Groot¹, R. Napiwotzki², and J. E. Drew³

¹ Department of Astrophysics, Radboud University Nijmegen, The Netherlands  
  e-mail: lmr@astro.ru.nl  
² Centre for Astrophysics Research, University of Hertfordshire, UK  
³ Astrophysics Group, Imperial College London, UK

Abstract. The Isaac Newton Telescope/Wide Field Camera Photometric Hα survey of the  
Northern Galactic Plane (IPHAS) surveys the entire Northern Galactic Plane in r’, i’, and Hα  
down to r’ = 20. Although initially designed to detect Hα emitting sources, IPHAS has  
proven very useful for detecting sources with strong Balmer line absorption. Hydrogen-rich  
white dwarfs (WDs) with temperatures in the range 10 000 to 20 000 K (where the Hα line  
is strongest) can be detected by IPHAS with a very high level of confidence. What frac-
tion of the WD population is hydrogen-rich and in this temperature range is relatively well  
understood. An IPHAS selected sample with well defined temperature limits will there-
fore allow an independent determination of the local WD density at low Galactic latitudes  
where the known sample is highly incomplete, but which is crucial for obtaining correct  
space densities and scale heights.

Key words. surveys - Galaxy: stellar content - white dwarfs

Send offprint requests to: L. Morales-Rueda