# Kinematics and population membership of white dwarfs from the MMT survey

S. Weich (1), S. Kreuzer (1), U. Heber (1), M. Dorsch(1), A. Irrgang(1), R. Raddi(2), D. Koester(3)

*1) Dr. Karl Remeis-Observatory and ECAP, Astronomical Institute, Friedrich-Alexander University Erlangen-Nuremberg (FAU), Sternwartstr. 7, 96049 Bamberg, Germany*
*2) Universitat Politcnica de Catalunya, Departament de Fsica, c/ Esteve Terrades 5, 08860 Castelldefels, Spain*
*3) Institut für Theoretische Physik und Astrophysik, Christian-Albrechts-Universität, Kiel 24118, Germany*

A spectroscopic survey for blue horizontal branch stars and blue stragglers was carried out at the MMT observatory (Brown et al. 2010a). Spin-offs of this survey were the discovery of enigmatic objects such as hyper-velocity stars and extremely low mass (ELM) white dwarfs, which led to the launch of daughter surveys dedicated to search for such objects (Brown et al. 2006, 2010b).

In the full MMT sample of about 1800 objects 401 DA white dwarfs with surface gravities log (g) >7.0 have recently been identified and quantitative spectroscopic analyses were carried out (see Heber et al, this conference). The unprecedented precision of *Gaia* EDR3 astrometry allows us to verify spectroscopic distances. Morever, a kinematic analysis using *Gaia* proper motions and measured radial velocities makes it feasible to derive the kinematical properties of the sample and to assign individual stars to stellar populations.

**References:**

Brown et al. 2006, ApJ, 647, 303
Brown et al. 2010a, AJ, 139...59B
Brown et al. 2010b, ApJ, 723, 1072