Workshop

Stellar End Products: The Low Mass - High Mass Connection

ESO Garching, 6-10 July, 2015

Mark Hollands University of Warwick, UK

Title:

Ancient planetary systems around white dwarfs

Abstract:

White dwarfs are now known to routinely accrete rocky planetesimals that have survived evolution off of the main-sequence. The observational hallmarks of such planetary systems are metal absorption lines in white dwarf atmospheres and excess IR emission from dusty debris discs. Using SDSS spectroscopy, we have identified more than 200 very cool (and hence very old, up to 7 Gyr) metal-polluted white dwarfs, demonstrating an early onset of planet formation in the Galaxy. Serendipitously, we have also found that a large fraction of these objects harbour strong magnetic fields of up to 11 MG.