

MDPH480/PHYS480/ASTR480/MAPH480 Research Projects 2009

Project Title: Where are the EBHB stars in NGC 2808?

Supervisor(s): Michael Albrow

Abstract of the Proposed Research (use this page only)

NGC 2808 is one of only a few galactic globular clusters that contain a significant population of *Extreme Blue Horizontal Branch* (EBHB) stars. These are very hot giant stars that seem to have lost almost all of their hydrogen envelopes, exposing their helium cores. The origin of EBHB stars, and why they appear in some clusters but not others is a mystery. Various scenarios such as binarity, fast rotation and elevated helium abundance have been suggested as explanations but none of these is accepted as the definitive cause.

The object of this project is to use Hubble Space Telescope images of NGC 2808 to identify EBHB stars and investigate their spatial distribution in the cluster. The student will learn how to acquire and process HST data.