

Invited lecture

**STARK BROADENING OF CARBON AND OXYGEN LINES
IN HOT DQ WHITE DWARF STARS: RECENT RESULTS
AND APPLICATIONS**

P. Dufour

Département de Physique, Université de Montréal, Montréal, H3C 3J7, Canada

E-mail: dufourpa@astro.umontreal.ca

White dwarfs stars are traditionally found to have surface compositions made primarily of hydrogen or helium. However, a new family has recently been uncovered, the so-called Hot DQ white dwarfs, which have surface compositions dominated by carbon and oxygen with little or no trace of hydrogen and helium. Deriving precise atmospheric parameters for these objects (such as the effective temperature and the surface gravity) requires detailed modeling of spectral line profiles. Stark broadening parameters are of crucial importance in that context. I will thus present the results from our new generation of model atmosphere including the latest Stark broadening calculations for the CII and OII ions (Ben Nessib, Sahal-Bréchet, Dimitrijević).

Invited lecture

THE EMISSION LINES IN QUASARS - WHAT THEY TELL US

G. J. Ferland

Physics, Univ. of Kentucky, Lexington KY 40506, USA

I will discuss the current treatment of line formation, and resulting profiles, in the spectral simulation code Cloudy. I will emphasize the broad line region of AGN. Particular emphasis will be placed on unsolved problem related to the formation of the ultraviolet and optical emission lines.