



## **SEMINAIRE régulier du Service d'Astrophysique**

### **THE BOWEN SURVEY; DETECTING DONOR STAR SIGNATURES IN LOW MASS X-RAY BINARIES**

**Remon CORNELISSE**  
(IAC, Tenerife, Spain)

**Jeudi 29 octobre 2009**

**11h00**

For most persistent low mass X-ray binaries (LMXBs) and transients in outbursts the optical emission is dominated by reprocessing of the X-rays in the outer accretion disk. This has severely hampered any dynamical studies and thereby our knowledge of their system parameters. A new avenue opened thanks to the discovery of narrow high-excitation emission components arising from the irradiated companion star. These lines are most prominent in the Bowen region (a blend of NIII and CIII lines between 4630 and 4650 Angstrom). In this talk I will discuss this new technique, give an overview of the main results of our survey on the optically brightest LMXBs, and discuss the implications for their system parameters. Furthermore, I will point out the main limitations of this technique and how they might be overcome.



**Un café sera servi 15 minutes avant le séminaire**

**Ce séminaire aura lieu au CEA Saclay – Orme des Merisiers –bâtiment 709, Salle 003.**