

ESTRELLAS Be: FORMACION DE LINEAS DE MG II EN UN VIENTO ESTELAR

L. Cidale (FCAGLP, CONICET)

Se resuelve la ecuación de transporte para un medio con simetría esférica, campos de velocidad y una estructura cromosférica. Se calculan perfiles teóricos de líneas de Mg II considerando un átomo con 14 niveles de energía más un continuo. Analizando la influencia de la estructura cromosférica - campo de velocidad y una cromósfera - sobre dichos perfiles podemos determinar las líneas que son más aptas para el diagnóstico de las atmósferas extendidas; de aquí surgen importantes consecuencias en el comportamiento de λ 4481.

MHD FLOWS IN BE STARS

María E. Iglesias(FCAGLP,CONICET) y Adela E. Ringuélet (FCAGLP,CONICET)

ABSTRACT. We have worked out the equations of conservation of mass, momentum and energy for the case of steady outflows in a rotating magnetic field, introducing a polytropic-type relation between pressure and density, with a variable index. We have determined sets of parameters that bring up the critical points that are needed to select a unique solution for the wind and finally, we have chosen those sets that can reproduce better the conditions observed in Be stars.

Each solution depends on the choice of six non-dimensional parameters which are related to the fluxes of energy at the base of the wind and at infinity, to the gravitational field, to the effective temperature of the star, to rotation and to the magnetic field.

The corotation induced by the magnetic field increases the centrifugal force and accelerates the wind. The choice of a particular functional form for the polytropic index allows the formation of a heating-accelerating region where the temperature increases with expansion and where larger temperatures and larger expansion values are obtained for strongly magnetized flows.

Outside this region, temperature and rotation decay and the magnetic field yields two solutions of different asymptotic behaviour; in one solution the velocity accelerates and in the other the velocity decelerates, until they reach constant values.