D IL1 Diffusion in magnetic fields

G. Alecian

LUTH, Observatoire de Paris-Meudon, F-92195 Meudon Cedex, France

Diffusion of elements in stellar plasma is strongly modified by the presence of magnetic fields for two main raisons. The first is that the average motions of ions in outer atmospheres are, because of their charge, substantially constrained by the the magnetic field. Both its intensity and orientation play a role. The second is the Zeeman desaturation of absorption lines that often produces amplifications of the radiative accelerations. These effects are important and must lead to the building of complex surface abundance structures. I will present how these two effects are generally modelised and what results have, up to now, been obtained. Future developments will also be considered.