**Atomic and Laser Physics Seminar**

**Monday, 8 October**

**11.30**

**Audrey Wood Seminar Room**

**Dr Gwenael Giacinti**

Department of Physics

***Propagation of Cosmic Rays***

***in the Milky Way***

The Cosmic Ray (CR) flux at Earth mostly consists of relativistic protons and nuclei. CRs with TeV energies are thought to be accelerated in Galactic supernovae remnants. On their way to the observer, CRs scatter on inhomogeneities of the Galactic magnetic field. Consequently, their propagation resembles a random walk, and can be described as a diffusive process through the "diffusion approximation". After reviewing the current knowledge in the field, we will discuss two topical cases the diffusion approximation cannot account for. We will notably propose an explanation for the enigmatic small scale anisotropies that are observed in the CR arrival directions on the celestial sphere.