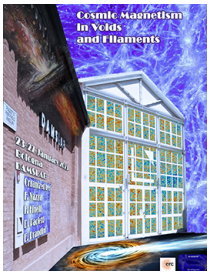

Contribution ID: **59** Type: **not specified**

Primordial magnetic field signals in the 21 cm background

Wednesday, 25 January 2023 09:00 (30 minutes)

There are several effects of large scale, cosmological magnetic fields which potentially could influence the 21 cm line signal. On the one hand primordial magnetic fields present since before decoupling influence the linear matter power spectrum. On the other hand due to the interaction with the cosmic plasma magnetic fields dissipate in the post recombination universe due to decaying MHD turbulence and ambipolar diffusion (or plasma drift). This leads to additional heating of matter and thus changes the thermal and ionisation history. In my talk I will address the implications of these effects on the 21 cm line signal and estimate its detectability with experiments such as the Square Kilometre Array (SKA).

Presenter: KUNZE, Kerstin (University of Salamanca)

Session Classification: Wednesday