The Faraday sky and its connection to the Galactic magnetic field

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Résumé

The Faraday effect is a key puzzle piece for the characterization and modeling of the structure of the Milky Way's magnetic field.

A better understanding of this structure is not only an interesting topic on its own merit, but

it may also provide a pathway to understanding the origin of the magnetic field in the Universe as a whole.

Thus, a primary objective of research on cosmic magnetism has been the investigation of the polarimetric properties of our Galaxy.

In my talk I will present how one can turn the dense coverage of available extragalactic Faraday rotation point source data into a full sky estimate of the Galactic

Faraday sky.

This will involve a discussion on statistical methods, modelling and the physical implications of our results. In particular, I will outline how we can combine the Galactic Faraday sky with other data sets to get a direct quantitative estimate of the Galactic magnetic field.

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