

Statistics of magnetic fields

Niels Oppermann



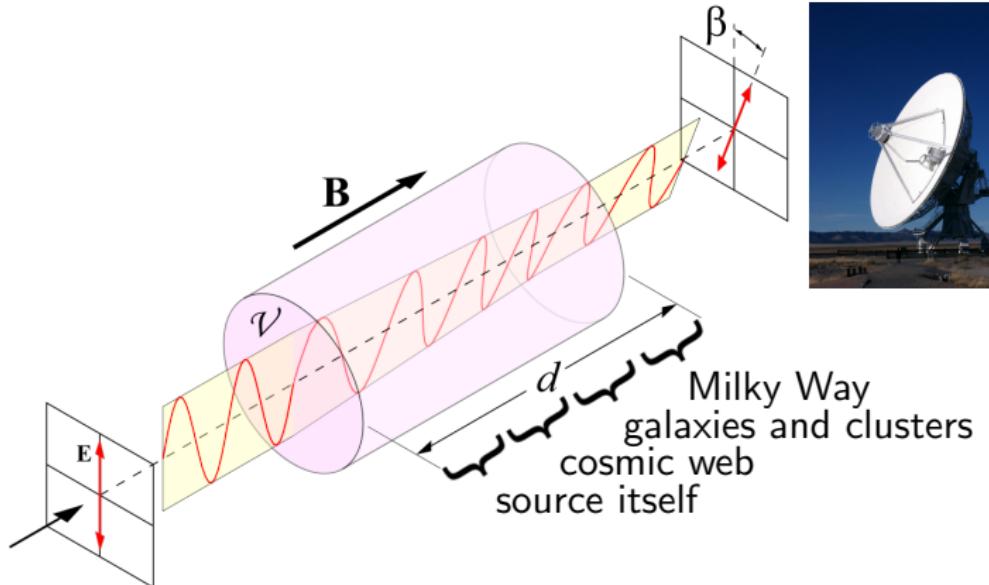
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Canadian Institute for
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L'institut Canadien
d'astrophysique théorique

CITA jamboree, Toronto, 2014-09-15

Faraday rotation

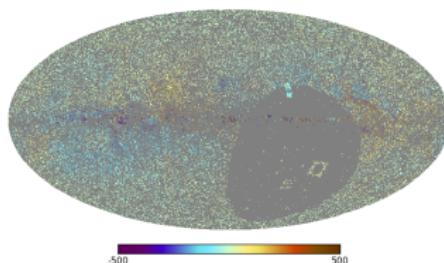


$$\text{Faraday depth: } \phi \propto \int_{r_{\text{source}}}^0 n_e(\vec{x}) B_r(\vec{x}) dr$$

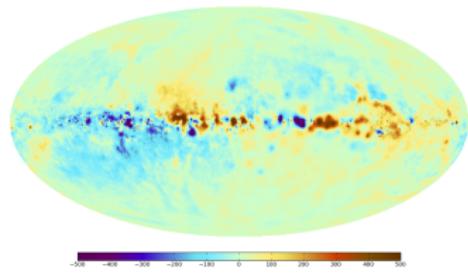
$$\beta = \phi \lambda^2$$

Faraday rotation

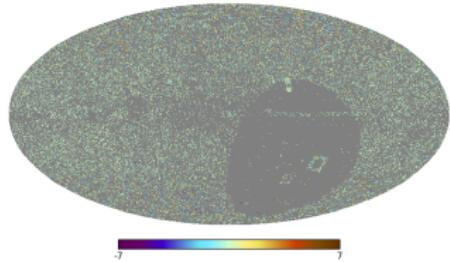
observed



Milky Way



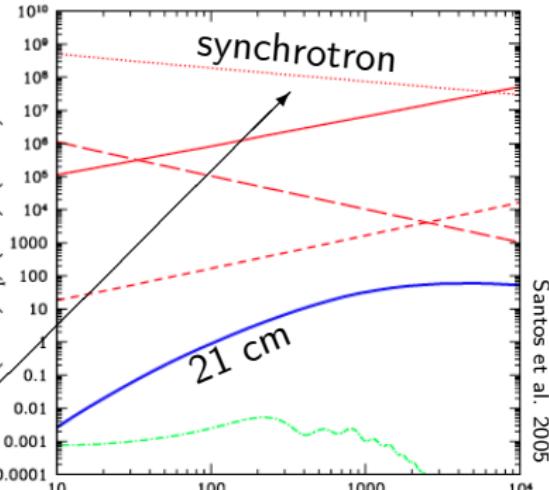
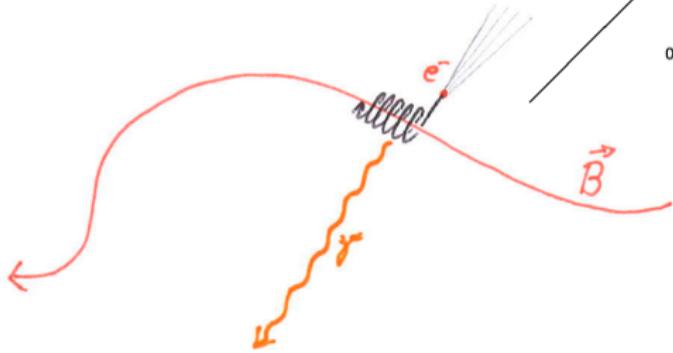
extragalactic



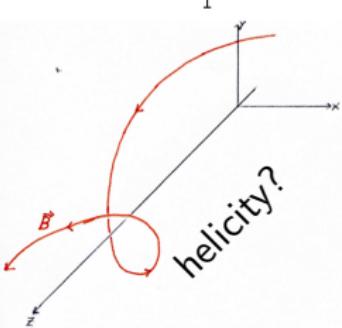
clusters, filaments, voids,...

21 cm foregrounds

GBT



Santos et al. 2005



Planck

