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Dust models compatible with Planck and starlight polarization data

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The HFI instrument onboard the Planck satellite has allowed us to characterize the statistical and spectral properties of dust polarized emission over the whole sky in the submillimeter wavelength range.
Dust polarization is not only useful to trace the magnetic field orientation or to test alignment theories. It is also a way to characterize the spectral properties of the dust population that is aligned with the magnetic field.
I will summarize the main results of the analysis of Planck polarization data, and show how they challenge existing dust models.
I will also describe how we updated the DUSTEM model (Guillet et al 2018) to integrate polarization and account for these new constraints on dust emission in both total intensity and polarization.

Consider for a poster?

Yes

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