## Sixteenth Marcel Grossmann Meeting



Contribution ID: 215

Type: Talk in the parallel session

## The Hubble tension and the magnetic universe

Thursday, 8 July 2021 18:52 (19 minutes)

Magnetic fields, if present in the plasma prior to last scattering, would induce baryon inhomogeneities and speed up the recombination process. As a consequence, the sound horizon at last scattering would be smaller, helping to relieve the Hubble tension and the S8 tension. Intriguingly, the strength of the magnetic field required to alleviate the Hubble tension happens to be of the right order to also explain the observed magnetic fields in galaxies, clusters of galaxies and the intergalactic space. I will review this proposal and provide an update on its status in the context of the latest data.

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Session Classification: Status of the H\_0 and Sigma\_8 Tensions: Theoretical Models and Model-

**Independent Constraints** 

**Track Classification:** Cosmic Microwave Background: Status of the H\_0 and sigma\_8 tensions: theoretical models and model-independent constraints