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Cosmological Seed Magnetic Field from Inflation

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A cosmological magnetic field of nG strength on Mpc length scales could be the seed magnetic field needed to explain observed few microG large-scale galactic magnetic fields. I first briefly review the observational and theoretical motivations for such a seed field, two galactic magnetic field amplification models, and some non-inflationary seed field generation scenarios. I then discuss an inflation magnetic field generation model. I conclude by mentioning possible extensions of this model as well as potentially observable consequences.

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