Contribution ID: **91** Type: **Parallel session talk**

Bounds on monopole abundance from acceleration in cosmic magnetic fields

Saturday 20 July 2024 15:15 (15 minutes)

Magnetic monopoles are intriguing hypothetical particles and inevitable predictions of Theories of Grand Unification. They are produced during phase transitions in the early universe, but mechanisms like the Schwinger effect in strong magnetic fields could also contribute to the monopole number density. I will show how from the detection of intergalactic magnetic fields we can infer additional bounds on the magnetic monopole flux, and how even well-established limits, such as Parker bounds and limits from terrestrial experiments, strongly depend on the acceleration in cosmic magnetic fields. I will also discuss the implications of these bounds for minicharged monopoles and magnetic black holes as dark matter candidates.

Alternate track

1. Dark Matter Detection

I read the instructions above

Yes

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Session Classification: Astro-particle Physics and Cosmology

Track Classification: 08. Astro-particle Physics and Cosmology