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Revisiting Magnetic Monopoles bounds in light of new results of the Intergalactic Magnetic Field

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Although significantly fainter than the Galactic Magnetic Field (GMF), the Intergalactic Magnetic Field (IGMF) is believed to pervade the vast Cosmic voids. The IGMF was lately constrained by novel upper and lower experimental limits which motivated us to investigate the scenario in which Magnetic Monopoles (MMs) are accelerated in the IGMF and GMF. We found that IGMF acceleration demands an update of the long-standing Parker bound. MMs are fascinating composite fields emerging naturally in several Beyond Standard Model physics. In this contribution we elaborate the acceleration scenario, and are therefore able to connect in a unique framework the MM mass, flux and speed at the Earth. This allows us to revisit the latest experimental limits solely expressed in terms of Lorentz factor. A dedicated attention will be made on the prospects for present and future Imaging Atmospheric Cherenkov Telescopes such as the Cherenkov Telescope Array in search of MMs.

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