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Type: **Talk in a parallel session**

On an electromagnetic analog of MOND

Friday, 12 July 2024 17:40 (15 minutes)

We discuss a possible electromagnetic analog of MOND by extending the recently proposed mechanism of emergence of MOND from quantum fluctuations of spin connection in precanonically quantized general relativity (arXiv:2311.05525 [gr-qc]) to a classical particle in the hybrid electric field that consists of a classical external field and quantum vacuum fluctuations over it. The dispersion of the latter leads to a modification of Newtonian dynamics in the regime of small accelerations, that could be observed.

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Session Classification: Extended theories of electromagnetism and their impact on laboratory experiments and astrophysical observations