FAKT Workshop 2024: Particle Physics Retreat



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Holographic Odderon at TOTEM?

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In the Regge limit, diffractive pp and $p\bar{p}$ scattering at large \sqrt{s} is dominated by the Pomeron, with a smaller admixture from the Odderon, a tower of C-odd soft gluons. The Odderon is believed to be the C-odd partner of the C-even Pomeron. While the latter in its soft version dominates the diffractive pp cross section at high energy, the manifestation of the former is still being debated, although recent results from the TOTEM collaboration have claimed it. In this talk I will present a holographic bottom-up model that captures all the necessary features required for Regge theory, and try to answer the question whether the currently available data supports the claimed discovery of the Odderon in the context of holography.

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