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Accessing the topological susceptibility via the Gribov horizon

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The topological susceptibility, χ^4 , following the work of Witten and Veneziano, explains the η' mass, solving the $U(1)_A$ problem. A nonzero χ^4 is caused by the with Veneziano Ghost, an unphysical mass pole in topological current K_{μ} correlator. Recently, Kharzeev and Levin attempted to connect the Veneziano Ghost with confinement and so with Gribrov copies too. However, their result breaks the BRST symmetry. We analyze the topological susceptibility, in SU(3) and SU(2), using Pad{\'e} approximation tool and RGZ gluon propagator in MOM scheme.

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