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Glueball masses in 2+1 dimensional SU(N) gauge theories with twisted b.c.

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We analyze 2+1 dimensional Yang-Mills theory regularized on a lattice with twisted boundary conditions in the spatial directions. In previous work it was shown that the observables in the non-zero electric flux sectors obey the so-called x-scaling, i.e. depend only on the variable x~NL/b and the magnetic flux, given by the parameters of the twist (L being the length of the spatial torus and b the inverse 't Hooft coupling). It is conjectured that this scaling is obeyed by all physical quantities. In this work we extend the previous analyses to the zero-flux (glueball) sector. We study the x-scaling conjecture in this sector from the perturbative smallvolume regime to the non-perturbative one.

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