Coulomb gauge Green functions and Gribov copies in SU(2) lattice gauge theory

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We reconsider the lattice measurement of Green functions in Coulomb gauge, both in 2+1 and 3+1 dimensions, using an improved gauge fixing scheme. The influence of Gribov copies is examined and we find clear indications that Green functions are more strongly affected than previously assumed, in particular for low momenta. Qualitatively, our improved lattice results in the infra-red compare more favourably with recent continuum calculations in the Hamiltonian approach.