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Renormalization of overlap quark bilinear operators with hypercubic smearing

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Renormalization constants of the scalar and tensor currents are calculated for overlap fermions on domain-wall fermion configurations. We perform zero, one or two steps of hypercubic smearing in constructing the overlap Dirac operator and examine the discretization effects in the renormalization constants of quark bilinears and check the dependence of those effects on the level of smearing. Both the SMOM and MOM schemes are used and the results are compared.

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