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The muon $g-2$ with four flavors of staggered quarks

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We present updated results for the light-quark connected part of the leading hadronic contribution to the muon $g-2$ from configurations with $2+1+1$ flavors of HISQ quarks using the time-momentum representation of the electromagnetic current correlator. We have added statistics on two ensembles as well as a fourth lattice spacing using configurations that have been generated by the MILC collaboration at the physical pion mass. Additionally we account for the leading finite-volume and taste-breaking effects using Staggered Chiral Perturbation Theory at NNLO.

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