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A4: Towards the determination of sigma terms for the baryon octet in $N_{\mathrm{f}} = 2 + 1$ QCD with Wilson quarks

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A lot of progress has been made in the determination of nucleon sigma terms. In this work we consider the sigma terms of the other octet baryons as well. These are determined on CLS gauge field ensembles employing the Lüscher-Weisz gluon action and the Sheikholeslami-Wohlert fermion action with $N_{\mathrm{f}} = 2 + 1$. The ensembles have pion masses ranging from $410\,\mathrm{MeV}$ down to the physical value and lattice spacings covering a range between $0.09\,\mathrm{fm}$ and $0.04\,\mathrm{fm}$. We present some preliminary results for $a \approx 0.06$ fm along a trajectory where the sum of the sea quark masses is kept constant, focusing on the quark mass dependence. We discuss multi-state fits to tackle the well-known problem of excited state contamination and detail how we analyse connected and disconnected contributions.

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