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Update on the octet baryon charges with $N_f = 2 + 1$ non-perturbatively improved Wilson fermions

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The axial charge of the nucleon, g_A , has been computed extensively on the lattice. However, the axial charges for other octet baryons (hyperons) such as the Σ and Ξ baryons are less well known experimentally and theoretically. Here we present results from our updated analysis of the isovector axial, scalar and tensor charges, as well as first results for the second Mellin moments of isovector PDFs. Our calculations are performed on a large set of $N_f = 2 + 1$ CLS ensembles of non-perturbatively $O(a)$ improved Wilson fermions with tree-level Symanzik improved gauge action.

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