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Extraction of the isovector magnetic form factor of the nucleon at zero momentum

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The extraction of the magnetic form factor of the nucleon at zero momentum transfer is usually performed by adopting a parametrization for its momentum dependence and fitting the results obtained at finite momenta. We present methods that rely on taking the derivative of relevant correlators to extract directly the magnetic form factor at zero momentum without the need to assume a functional form for its momentum dependence. These methods are explored on one ensemble using $N_f=2+1+1$ Wilson twisted mass fermions.

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