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### Leading chiral logarithms for the nucleon mass

*Monday 8 September 2014 14:30 (20 minutes)*

We present the method of calculation of leading logarithms for the nucleon sector of chiral perturbation theory in heavy baryon formulation and in the relativistic invariant formulation. We have studied the leading logarithm behavior of the nucleon mass up and present the expression for it up to four-loop order exactly. We also present some results up to six-loop order as well as all-order conjecture. The same methods allow to calculate the main logarithm multiplying the terms with fractional powers of quark mass.

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