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Baryon fluctuations in extended linear sigma model.

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The existence and the location of the critical end point (CEP) between the crossover and the first order chiral phase transition in the phase diagram of the strongly interacting matter is a heavily studied area of recent particle physics. The baryon number fluctuations and related quantities such as kurtosis and other susceptibility ratios, that supposed be a good signature of CEP, has been calculated in an (axial)vector meson extended $(2 + 1)$ flavor Polyakov linear sigma model (ELσM) in zero and finite μ_B. It has been compared with the results of lattice calculations and effective models. Divergency of the kurtosis have been found at the critical end point, while unstable behaviour in $\mu_B > \mu_B^{crit}$. In the model next to the scalar and pseudoscalar we also plan to show vector and axialvector curvature masses.

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