

Contribution ID: 109

Type: Parallel

The light baryon spectrum in the continuum limit

Thursday 20 June 2019 14:20 (20 minutes)

We present continuum limit results of the quark mass dependence of octet and decuplet baryon masses. These are obtained on large volumes, employing three different trajectories in the quark mass plane, including the physical point. The five different lattice spacings reach down to below 0.04 fm. This became possible by introducing open boundary conditions in time at the smaller lattice spacings, thereby eliminating the freezing of the topological charge. This is part of the CLS programme of simulating $N_f = 2 + 1$ flavours of non-perturbatively improved Wilson fermions. We also determine the scale and low energy constants.

Primary authors: Prof. BALI, Gunnar (Universität Regensburg); COLLINS, Sara (University of Regensburg); KORCYL, Piotr (Jagiellonian University & University Regensburg); SCHAEFER, Andreas (Regensburg University); SCHOLZ, Enno E. (University of Regensburg); SIMETH, Jakob (University of Regensburg); SÖLDNER, Wolfgang (University of Regensburg)

Presenter: Prof. BALI, Gunnar (Universität Regensburg)

Session Classification: Hadron Spectroscopy and Interactions

Track Classification: Hadron Spectroscopy and Interactions