International Conference on Science and Technology for FAIR in Europe 2014



Contribution ID: 172

Type: not specified

SU(3) flavour symmetry in the charmed baryon sector from the lattice

Thursday, 16 October 2014 15:40 (20 minutes)

Recently many new charmonium states were discovered but also mesons and baryons with open charm, the latter in particular at the LHC. The spectroscopy and decays of some of these particles should also be relevant for the PANDA experiment. We present results on the spectrum of charmed baryons with and without strangeness as well as of charmonium states. The spectra were obtained in lattice simulations with $n_f = 2+1$ sea quark flavours, keeping the sum of light quark and strange quark masses $2m_{ud} + m_s$ constant. Extrapolations towards the physical point are then made in terms of the SU(3) symmetry breaking parameter in the different relevant representations.

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Session Classification: Parallel Tier 5