

Contribution ID: 42 Type: not specified

Parton Distribution Amplitudes

Monday, 14 June 2010 18:00 (20 minutes)

We calculate the first two moments of the light-cone distribution amplitudes for the pseudoscalar mesons (pi and K) and the longitudinally polarised vector mesons (rho, K^* and phi) as part of the UKQCD and RBC collaborations' $N_f=2+1$ domain-wall fermion phenomenology programme. These quantities were obtained with a good precision and, in particular, the expected effects of SU(3)-flavour symmetry breaking are observed. Operators are renormalised nonperturbatively and extrapolations to the physical point are made, guided by leading order chiral perturbation theory. The main results presented are for two volumes (16 and 24 cubed) with a common lattice spacing. Further to this, preliminary results for a lattice with a finer lattice spacing (32 cubed) will be discussed.

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Talk, Poster

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Session Classification: Parallel 02: Hadronic structure and interactions

Track Classification: Hadronic structure and interactions