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Measurement of the N-point energy-energy correlator from the collinear limit to the back-to-back limit in e+e- collisions at 91 GeV with the ALEPH experiment

Hard probe measurements in e+e- collisions are vital for comparative studies in proton-proton and heavy-ion environments, offering a clean reference free from hadronic initial state effects. The interest in N-point energy correlation functions (ENC) has been revitalized for studying QCD, due to their distinct resolution of scales that helps in exploring QCD from perturbative to non-perturbative regimes. Recently a result has been presented for the two-point energy correlator (EEC) in e+e- collisions spanning from the collinear limit all the way to the back-to-back limit, providing vital input to the study of QCD. In this poster, we will discuss new analyses of N-point correlators from the ALEPH e+e- dataset at LEP as well as future prospects.

Category

Experiment

Collaboration (if applicable)

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