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Energy-Energy Correlation in the back-to-back region at N³LL+NNLO in QCD

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We consider the Energy-Energy Correlation function in electron-positron annihilation to hadrons. We concentrate on the back-to-back region, performing all-order resummation of the logarithmically enhanced contributions in QCD perturbation theory, up to next-to-next-to-next-to-leading logarithmic (N³LL) accuracy. Away from the back-to-back region, we consistently combine resummed predictions with the known fixed-order results up to next-to-next-to-leading order (NNLO). We present an illustrative comparison with LEP data and a model for inclusion of NP QCD effects.

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