

# Determinations of $\alpha_s$ from hadronic event shapes and tests of analytic hadronization models using $e^+e^-$ annihilation data

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QCD predictions of hadronic event shapes, in complete 3rd order (NNLO) and in resummed 3rd order (NNLO & NLLA) perturbation theory, are applied to  $e^+e^-$  annihilation data in the c.m. energy range of 14 to 200 GeV, in order to precisely determine the running coupling  $\alpha_s(Q)$ . Moments of event shape distributions and respective predictions in NLO QCD are used to test different regions of phase space and various analytic models of hadronisation.

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