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## Determination of $\alpha(m_Z)$ – ALPHA collaboration

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We review the ALPHA collaboration strategy for obtaining the QCD coupling at the electroweak scale via Lattice QCD simulations. In the three-flavor effective theory we compute non-perturbatively the running of the strong coupling from hadronic scales to the electroweak scale. The result for the Lambda parameter in the three-flavor effective theory is used to obtain an accurate value of the strong coupling by means of (high order) perturbative relations between the effective theory couplings at the charm and beauty quark “thresholds”.

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**Classification de Session:** SM measurements (cont)

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