

XXIV International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS16)



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Relation between the on-shell and $\overline{\text{MS}}$ mass at four loops

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In this talk the relation between heavy quark masses defined in the on-shell and $\overline{\text{MS}}$ scheme is discussed at four-loop order in QCD. Special emphasis is put on the top quark mass where the four-loop result is used to estimate the remaining renormalon uncertainty. The relation between the $\overline{\text{MS}}$ and on-shell mass can also be used to establish precise relations between so-called threshold masses and the $\overline{\text{MS}}$ mass which has important applications both for bottom and top.

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