Gluon splitting to $b\bar{b}$ and $c\bar{c}$ at the Z resonance

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Abstract

The measurements of the gluon splitting rates into $b\bar{b}$ and $c\bar{c}$ pairs ($g_{b\bar{b}}$ and $g_{c\bar{c}}$) at the Z resonance are presented and compared with theory. Combined estimations for each measurement are performed, taking into account correlations. For the first time, the measured value for $g_{b\bar{b}}$ has an error smaller than the predicted value; it is now possible to use the combined value presented here as input to heavy flavour measurements.