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Mean Multiplicity of Quark and Gluon Jets as a Function of Opening Angle in e^+e^- \rightarrow b\overline{b} g Events

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Abstract: A comparison of the properties of quark and gluon jets has been madeby Monte Carlo simulation of the reaction Z \rightarrow b \overline{b} g. The jet energy is held fixed for every 5 GeV between 15--30 GeV energies and the mean multiplicity of b-quark and gluon jets are obtained as function of the angle between them. It is seen that the jet properties not only depend on the jet energies but also on the angle between the jets.

Key Words: Jets; Quarks; Gluon; Jet energy.

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