

# Measurement of Z boson production in association with heavy flavor jets at D0

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Associated production of a Z boson with a charm or bottom quark can serve as an important test of perturbative quantum chromodynamic calculations. The ratios of cross sections,  $\sigma(Z+c\text{-jet})/\sigma(Z+\text{jet})$  and  $\sigma(Z+c\text{-jet})/\sigma(Z+b\text{-jet})$  are measured for associated production of a Z boson with jets as a function of the jet and Z boson transverse momentum. Measurements use data collected by the D0 experiment in Run-II of the Tevatron ppbar collisions at a center-of-mass energy of 1.96 TeV, and correspond to an integrated luminosity of  $9.7 \text{ fb}^{-1}$ . Results are compared to predictions from next-to-leading order calculations and various Monte Carlo event generators.

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