

New Vector Boson Near the Z-pole and the Puzzle in Precision Electroweak Data

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We show that a Z' with suppressed couplings to the electron compared to the Z-boson, with couplings to the b-quark, and with a mass close to the mass of the Z-boson, provides an excellent fit to forward-backward asymmetry of the b-quark and R_b measured on the Z-pole and ± 2 GeV off the Z-pole, and to A_e obtained from the measurement of left-right asymmetry for hadronic final states.

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