

Overview of the Path to 0.01% Theoretical Luminosity Precision for the FCC-ee and Its Possible Synergistic Effects for Other FCC Precision Theory Requirements

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To exploit properly the precision physics program at the FCC-ee, the theoretical precision tag on the respective luminosity will need to be improved from the 0.054 % (0.061%) results at LEP to 0.01%, where the former (latter) LEP result has (does not have) the pairs correction. We present an overview of the roads one may take to reach the required 0.01 % precision tag at the FCC-ee and we discuss possible synergistic effects of the walk along these roads for other FCC precision theory requirements.

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