

08 RADIATIVE CORRECTIONS

Status and accuracy of the Monte Carlo generators for luminosity measurements

G. Montagna^{1,2}, G. Balossini^{1,2}, C. Bignamini^{1,2}, C. M. Carloni Calame³, O. Nicrosini², F. Piccinini²

¹ Dipartimento di Fisica Nucleare e Teorica, Università di Pavia, Pavia, 27100, Italy

² Istituto Nazionale di Fisica Nucleare, Sezione di Pavia, Pavia, 27100, Italy

³ School of Physics & Astronomy, University of Southampton, Southampton SO17 1BJ, U.K.

收稿日期 2010-2-22 修回日期 2010-2-22 网络版发布日期 2010-5-5 接受日期 2010-5-5

摘要

The status and accuracy of the precision Monte Carlo generators used for luminosity measurements at flavour factories is reviewed. It is shown that, thanks to a considerable, long-term effort in tuned comparisons between the predictions of independent programs, as well as in the validation of the generators against the presently available calculations of the next-to-next-to-leading order QED corrections to Bhabha scattering, the theoretical accuracy reached by the most precise tools is of about one per mille. This error estimate is valid for realistic experimental cuts, appears to be quite robust and is already sufficient for very accurate luminosity measurements. However, recent progress and possible advances to further improve it are also discussed.

关键词 [Luminosity, QED, Bhabha scattering, radiative corrections, Monte Carlo, NNLO calculations.](#)

分类号

DOI:

通讯作者:

G. Montagna Guido.Montagna@pv.infn.it

作者个人主页:

G. Montagna^{1,2}; G. Balossini^{1,2}; C. Bignamini^{1,2}; C. M. Carloni Calame³; O. Nicrosini²; F. Piccinini²

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