

# Towards a fully NNLO Monte Carlo generator for low energy $e^+e^-$ data into hadrons and leptons.

Friday 19 July 2024 09:30 (15 minutes)

In the last 15 years the “Radio MontecarloLow (“Radiative Corrections and Monte Carlo Generators for Low Energies”) Working Group (WG), see [www.lnf.infn.it/wg/sighad/](http://www.lnf.infn.it/wg/sighad/), has been providing valuable support to the development of radiative corrections and Monte Carlo (MC) tools for low energy  $e^+e^-$  data. By bringing together in more than 20 meeting experts working in the field of  $e^+e^-$  physics, the WG produced the report “Quest for precision in hadronic cross sections at low energy: Monte Carlo tools vs. experimental data” S. Actis et al. Eur. Phys. J. C 66, 585-686 (2010) (<https://arxiv.org/abs/0912.0749>), which is highly cited. All this effort has been recently included in the STRONG2020 project for the realization of a MC event generator with fully NNLO corrections for low energy  $e^+e^-$  data into hadrons and leptons, which is of relevance for precise tests of the Standard Model as the determination of the leading hadronic contribution to the muon  $g-2$ . We will report on this initiative.

## Alternate track

1. Beyond the Standard Model

## I read the instructions above

Yes

**Co-author:** TORRES BOBADILLA, William (University of Liverpool)

**Presenter:** TORRES BOBADILLA, William (University of Liverpool)

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