Excess Higgs to gauge boson couplings

We predict slightly enhanced signal strengths in the Higgs coupling to the intermediate \(W\) and \(Z\) gauge bosons with a three percent excess relative to those of the Standard Model. The base of the prediction is a slightly different electroweak energy scale. The modified electroweak energy scale follows from an intrinsic conception of baryon dynamics that links to electroweak decays. Here electroweak interactions are fostered by a spontaneous symmetry break in baryonic configurations described on an intrinsic \(U(3)\) configuration space. The electroweak flavour degrees of freedom become intermingled with the colour degrees of freedom via a spontaneous \(U(2)\) pairing of two toroidal degrees of freedom in the intrinsic dynamics. The intrinsic potential thereby shapes the Higgs potential. This leads to the up-down quark mixing matrix element modifying the gauge boson couplings relative to the Standard Model expectations. Copyright (C) EPLA, 2019 Published by the EPLA under the terms of the Creative Commons Attribution 3.0 License (CC BY).