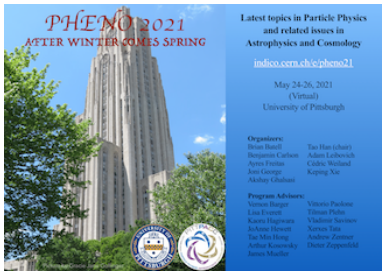

Contribution ID: **1311** Type: **Higgs**

Off-shell Higgs Couplings in H*→ZZ→ℓℓνν

Wednesday 26 May 2021 17:30 (15 minutes)

We explore the new physics reach for the off-shell Higgs boson measurement in the $pp \to H^* \to Z(\ell^+\ell^-)Z(\nu\bar{\nu})$ channel at the high-luminosity LHC. The new physics sensitivity is parametrized in terms of the Higgs boson width, effective field theory framework, and a non-local Higgs-top coupling form factor. Adopting Machine-learning techniques, we demonstrate that the combination of a large signal rate and a precise phenomenological probe for the process energy scale, due to the transverse ZZ mass, leads to significant sensitivities beyond the existing results in the literature for the new physics scenarios considered.

Summary

Primary authors: GONCALVES, Dorival (Oklahoma State University); QIN, Han (University of Pittsburgh); LEUNG, Sze Ching Iris (University of Pittsburgh); HAN, Tao (University of Pittsburgh)

Presenter: QIN, Han (University of Pittsburgh)

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