



Contribution ID: **260**

Type: **Talk**

## Higgs factories: Accuracy vs. Energy

*Tuesday 21 October 2025 09:00 (18 minutes)*

There is broad agreement that the next major collider should include an  $e^+e^-$  Higgs factory mode. Yet, given the remarkable progress expected from the HL-LHC, I argue that a program focusing too heavily on Higgs coupling measurements is not ambitious enough, be it linear or circular. The critical question is what additional capabilities each design offers. Circular machines provide unparalleled low-energy luminosity, enabling production of trillions of Z bosons, while linear colliders excel at multi-TeV energies. To this end, I compare the indirect sensitivity to BSM physics from a circular Tera-Z precision program with that of a linear collider operating at energies above 1 TeV. To maximize BSM discovery potential, linear collider proposals should re-focus on cost-effective designs exceeding the 1 TeV threshold.

**Author:** STEFANEK, Ben (Valencia)

**Presenter:** STEFANEK, Ben (Valencia)

**Session Classification:** Global Analysis

**Track Classification:** Physics: Global Analysis