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## Physics beyond the Standard Model at the Precision Frontier

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The best way to search for new physics is by using a diverse set of probes - not just experiments at the energy and the cosmic frontiers, but also the low-energy measurements relying on high precision and high luminosity.

One example of ultra-precision experiments is MOLLER planned at JLab, which will measure the parity-violating electron-electron scattering asymmetry and allow a determination of the weak mixing angle with a factor of five improvement in precision over its predecessor, E-158. At this precision, any inconsistency with the Standard Model should signal new physics. Another promising new physics probe, Belle II experiment at SuperKEKB, will study low-energy electron-positron collisions at high luminosity.

The talk will outline the recent developments of the theoretical and computational approaches to higher-order electroweak effects needed for the accurate interpretation of experimental data, and show how new physics particles enter at the one-loop level. For MOLLER and Belle II, we analyze the effects of  $Z'$ -boson and dark photon on the total calculated cross section and asymmetry, and show how these hypothetical interactions carriers may influence the future experimental results.

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