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Investigating Vector Boson Scattering: A Lattice study

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Vector Boson scattering (VBS) is a central process in the search for physics beyond the SM at collider experiments. To correctly identify SM and BSM physics, such as composite Higgs scenarios, at these experiments, it is crucial to gain a clear picture of VBS-like processes.
In our study we therefore analyse this process in a reduced SM-setup for different physical scenarios. To this end we apply a Lüscher-type analysis to extract scattering properties and compare the results with (augmented) perturbative tree-level predictions.
We show that the nonperturbative approach suggests a composite structure for the scalar degree of freedom, being in line with previous investigations. Furthermore we present an alternative way of extracting resonance-like states from the spectrum by using the perturbative prediction as a tool.

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