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SU(2) gauge theory with $N_f=2$ fundamental fermions - a template for Composite Higgs models

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We investigate a UV completion of a pseudo-Goldstone Composite Higgs model based on a SU(2) gauge theory with two fundamental flavours of Dirac fermions. The model is based on the SU(4) to Sp(4) chiral symmetry breaking pattern and can be viewed as a minimal template to explore the phenomenological signatures of Composite Higgs models. To characterize the model, lattice calculations are used to fix some of the low energy parameters that enter into the effective description of processes at energies explored by current accelerators. The scattering processes of Goldstone bosons are of particular interest, due to their sensitivity to the vector and scalar resonances of the strongly interacting sector. In this talk, we present our latest results concerning the scattering of Goldstone bosons in the scalar channel.

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