

Flavor and compositeness

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An attractive solution to the naturalness problem is to require that the Higgs is a composite state arising from some strongly-coupled sector at TeV energies. This possibility has important implications for the theory of flavor, in particular it implies that the origin of the flavor structure must be addressed at low energy. The traditional composite-Higgs flavor models based on the partial compositeness idea (anarchic flavor scenarios) are in tension with the experimental data. New constructions in which the flavor hierarchies arise dynamically from the UV can remove this tension, providing a strong reduction in flavor-changing and CP-violating effects. These new models predict a distinctive pattern of signatures that could be tested in near-future experiments.

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