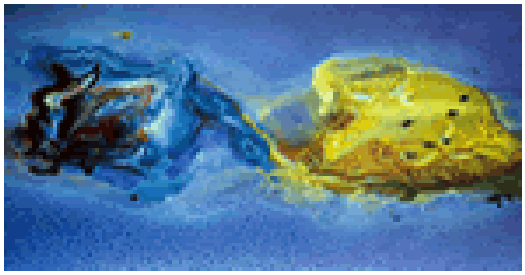

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Continuous signal modelling in a multidimensional space of coupling parameters

Wednesday, 1 August 2018 17:20 (20 minutes)

The plans for the second Run of the LHC changes the focus in the Higgs sector from searches to precision measurements. Effective Lagrangians can be used for parameterisation. A signal morphing method is developed to take all parameters into account simultaneously and model interference effects. It provides a continues description of arbitrary physical signal observables such as cross sections or differential distributions in a multidimensional space of coupling parameters. This method is capable of morphing signal distributions and rates based on a minimal orthogonal set of independent base samples and therefore allows to directly fit the coupling parameters that describe the SM and possible non-SM interactions for, for example, the Higgs boson.

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