On Discrete Goldstone bosons

Exact discrete symmetries, if non-linearly realized, can reduce the ultraviolet sensitivity of a given theory. The scalars stemming from spontaneous symmetry breaking are massive without breaking the discrete symmetry, and those masses are protected from divergent quadratic corrections. This is in contrast to non-linearly realized continuous symmetries. In this talk we use invariant theory to develop the specific case of a scalar in a triplet of A_4, showcasing the substantial improvements and compelling phenomenological consequences of this setup.

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