Symmetry and truth
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When you look into a mirror, do you see your normal self, or does your face appear distorted? For elementary particles this question is far from being trivial. Once we get to the miniscule dimensions probed by modern colliders, the world becomes increasingly asymmetric. Up to this point it was believed that the “mirror”-symmetry is only broken in weak interactions. As suggested by recent results from the Tevatron and LHC, top quarks, originally referred to as “truth”, exhibit the forward-backward asymmetry in their production. This might indicate that strong interactions are no immune to symmetry breaking. I will discuss the experimental evidence and possible explanations for the unexpected results.