

2/5/08 Lecture outline

- 4-fermi effective Fermi theory of weak interactions, and scale where it breaks down. Replaced with electroweak theory, with its massive vector bosons. Propagator of massive W and Z bosons.

- Scale where massive vector boson theory breaks down, as seen from unitarity conditions on scattering amplitudes, and its violation in high energy scattering. Something UV completes the massive vector boson theory to fix this. Higgs mechanism. Fundamental scalar is the simplest possibility. Mention a bit about composite Higgs, technicolor.

- Higgs scalar and naturalness issues.