In 2012 the last particle predicted by the SM was detected at CERN the Higgs Boson. Yet again proving the success of the SM. But this also means no more free parameters in the SM for new particles. All interactions found obey the local $SU(3) \times SU(2) \times U(1)$ gauge symmetries and later data only strengthens the SM prediction. While no data was found suggesting inconsistencies with the electroweak symmetry breaking $SU(2) \times U(1) \rightarrow U(1)$. This means physicist have to search for new interactions.

(a) Considerably weaker than gravitation with infinite range

(b) Shorter range than the weak interaction of any strength

(c) Range between weak interaction and nuclear force and considerably weaker than the wea interaction

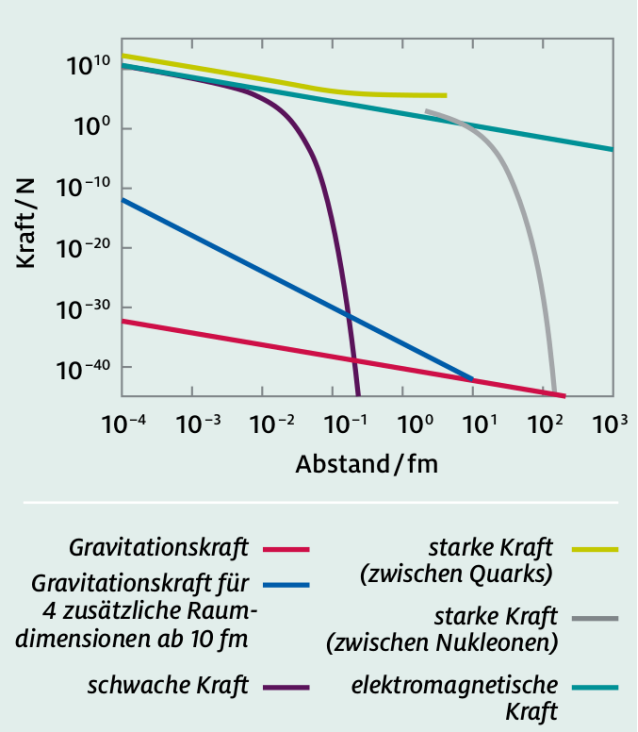

Figure 0.1: Translation of the interaction [**Teilchenwelt**]