

Force	Range	Coupling constant	Acts on	Mediator	Theory
Gravity	∞	$\alpha_g \approx 10^{-39}$	All particles	Graviton ¹	Geometrodynamics
Weak nuclear	$< 10^{-18}$ m	$\alpha_w \approx 10^{-6}$	Lepton, hadrons	W^\pm, Z	Flavor-dynamics
Electromagnetism	∞	$\alpha \approx \frac{1}{137}$	All charged particles	Photon	Electrodynamics
Strong nuclear	$\approx 10^{-15}$ m	$\alpha_g \approx 1$	Hadrons	Gluon	Chromodynamics

¹only hypothesized, not discovered

Table 1: Properties of the four fundamental forces[?]