Introduction

- fundamental constituents of strongly interacting matter

  colored quarks and gluons

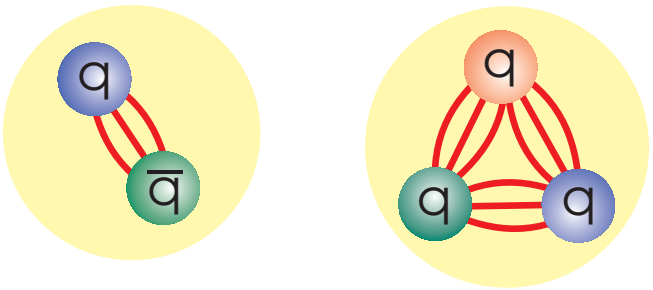
- physical vacuum:

  - vacuum condensed $(\Lambda \sim 1$ GeV)

$\langle \bar{q}q \rangle \simeq -1.8/\mathrm{fm}^3 \qquad n_0 \simeq 0.17/\mathrm{fm}^3$

$\langle G^2 \rangle \simeq 2.1\mathrm{GeV}/\mathrm{fm}^3 \qquad \epsilon_0 \simeq 0.16\mathrm{GeV}/\mathrm{fm}^3$

  - color neutral hadrons



meson **baryon**

- under 'extreme conditions':

  - early universe ($\sim 1\mu s$): $T > 10^{12}$K
  - interior of neutron stars: $\rho > 10^{15}$ g/cm^3