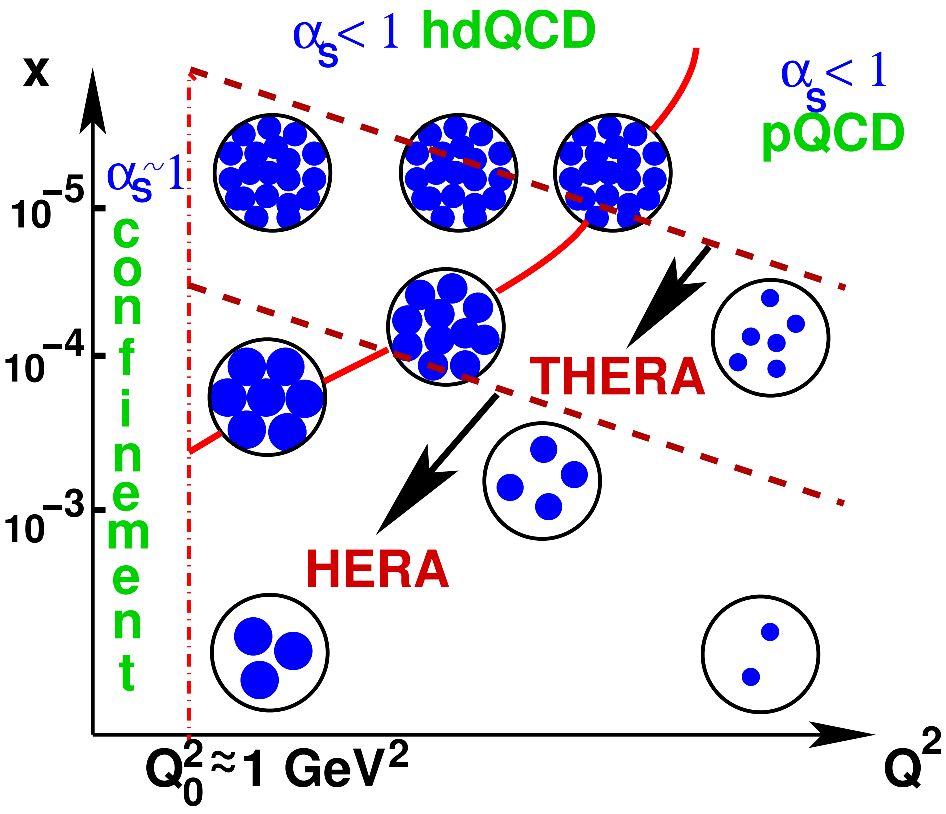
The High-Density Phase of QCD



Snapshots of the proton constituents (full dots) taken with different resolution ($\Delta r \approx 1/Q$) at different values of x. The solid line shows the estimated position of the transition from the perturbative region to the high-density phase of QCD (hdQCD). The resolution scale diminishes with Q^2 in the pQCD region but with x in the hdQCD region. The vertical dash-dotted line delimits the confinement region. The dashed lines and the corresponding arrows indicate the HERA and THERA measurement ranges. The observation of signatures allowing the identification of the various regions is a challenge for THERA.