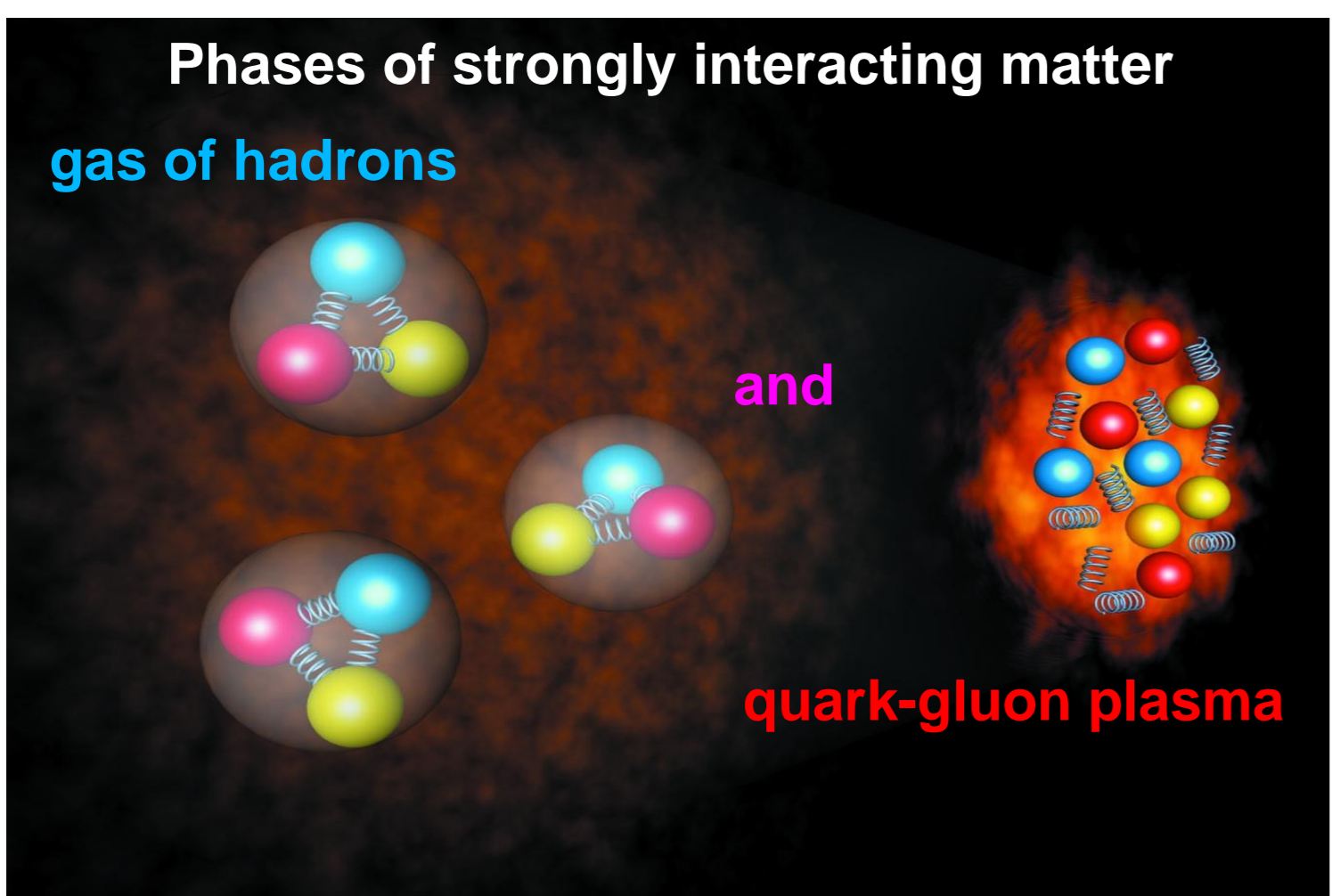


Phases of water

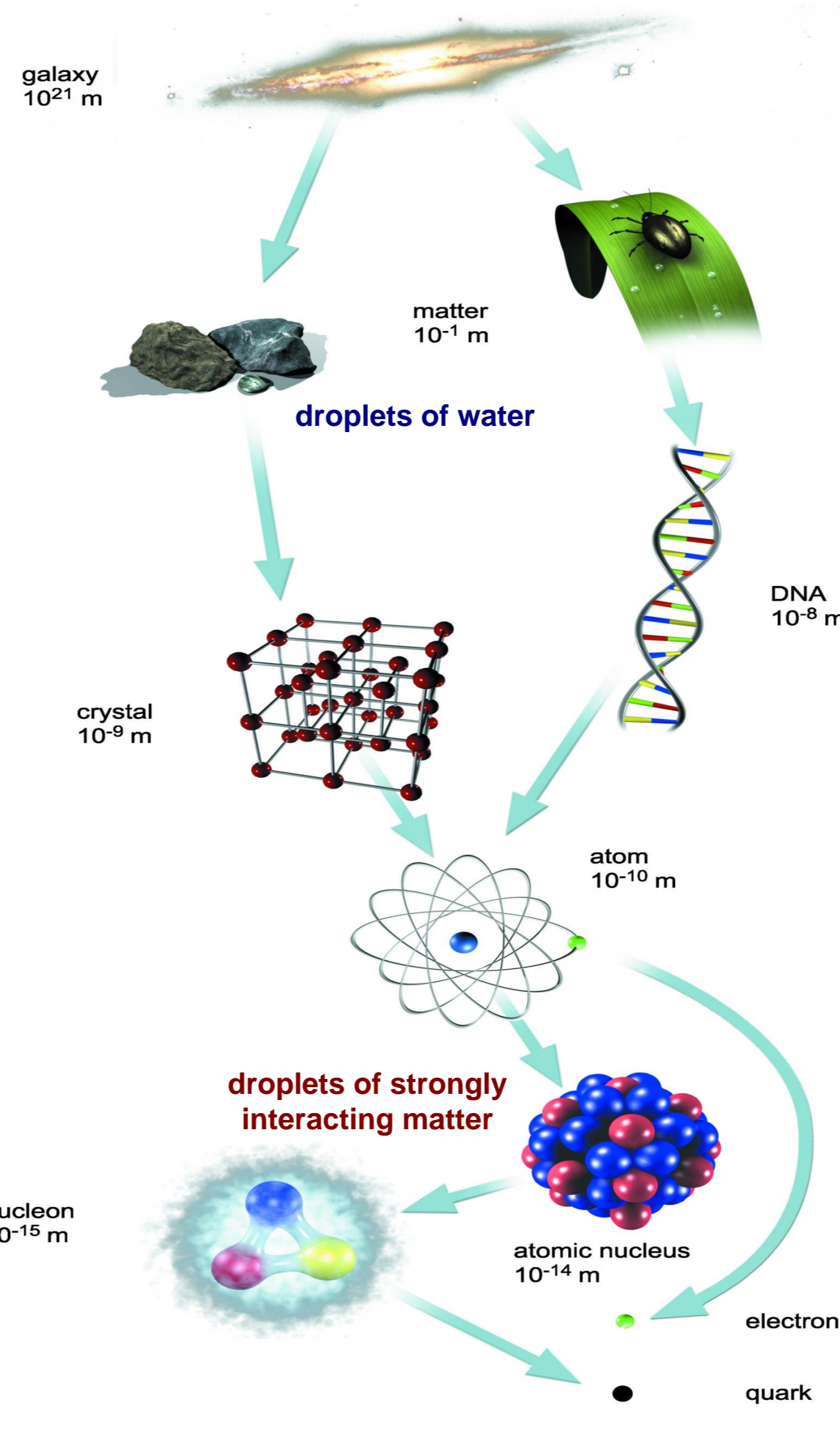
Properties of water, its phases and transitions between them, are defined by electromagnetic interactions and can be easily studied in the laboratory.

Properties of strongly interacting matter, its phases and transitions between them, are defined by strong interactions and can be uncovered only by study of nucleus-nucleus collisions

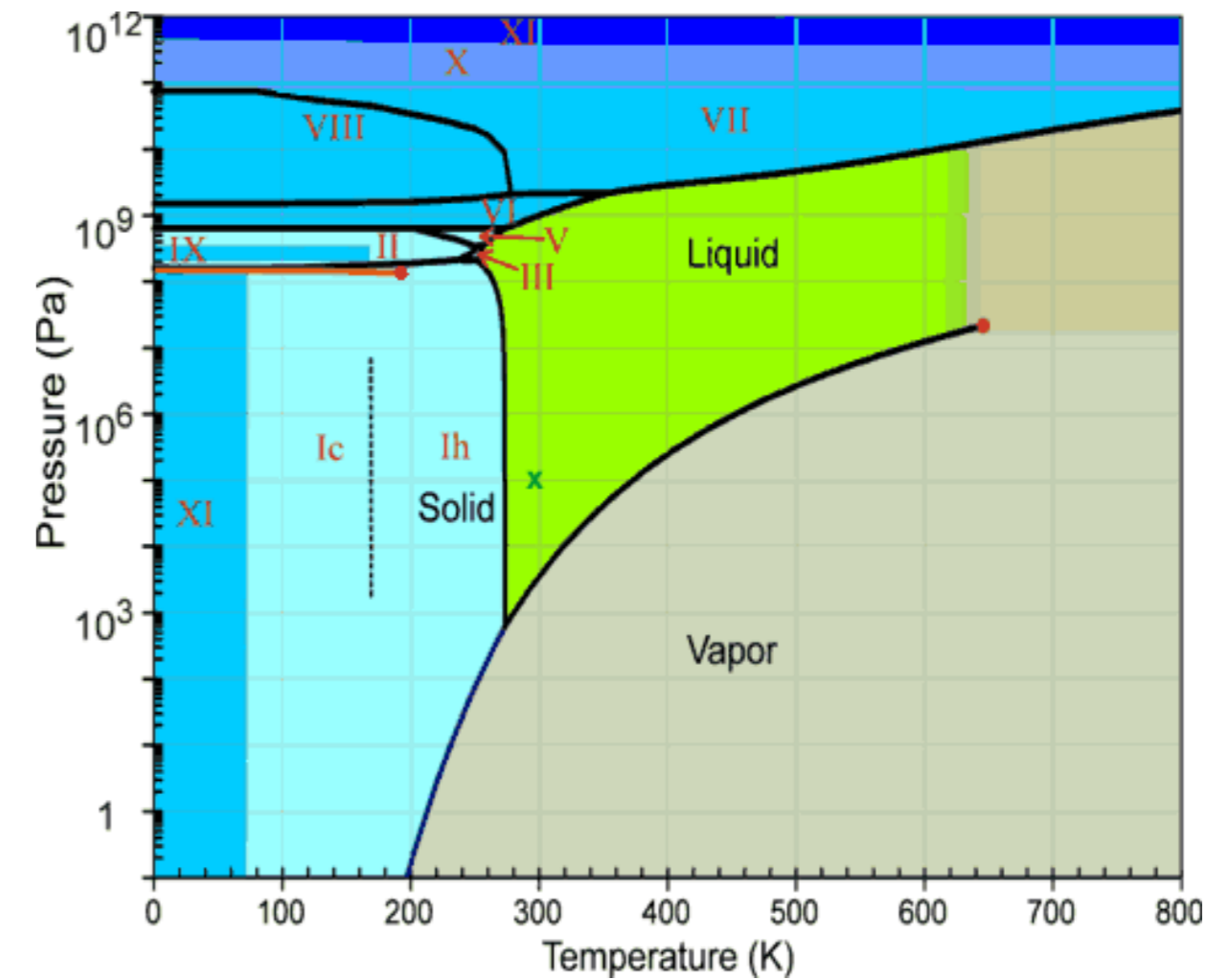


Phases of strongly interacting matter

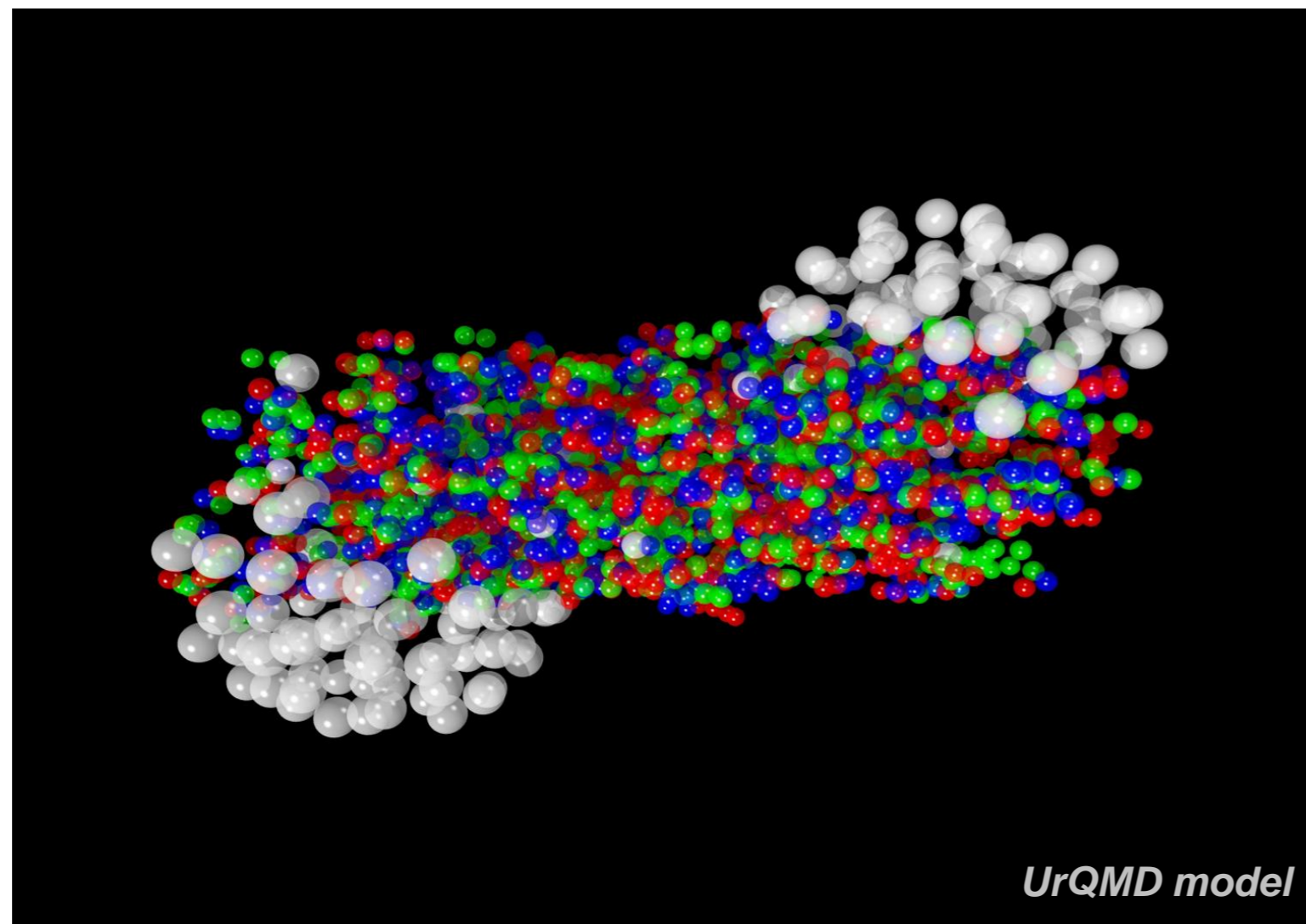
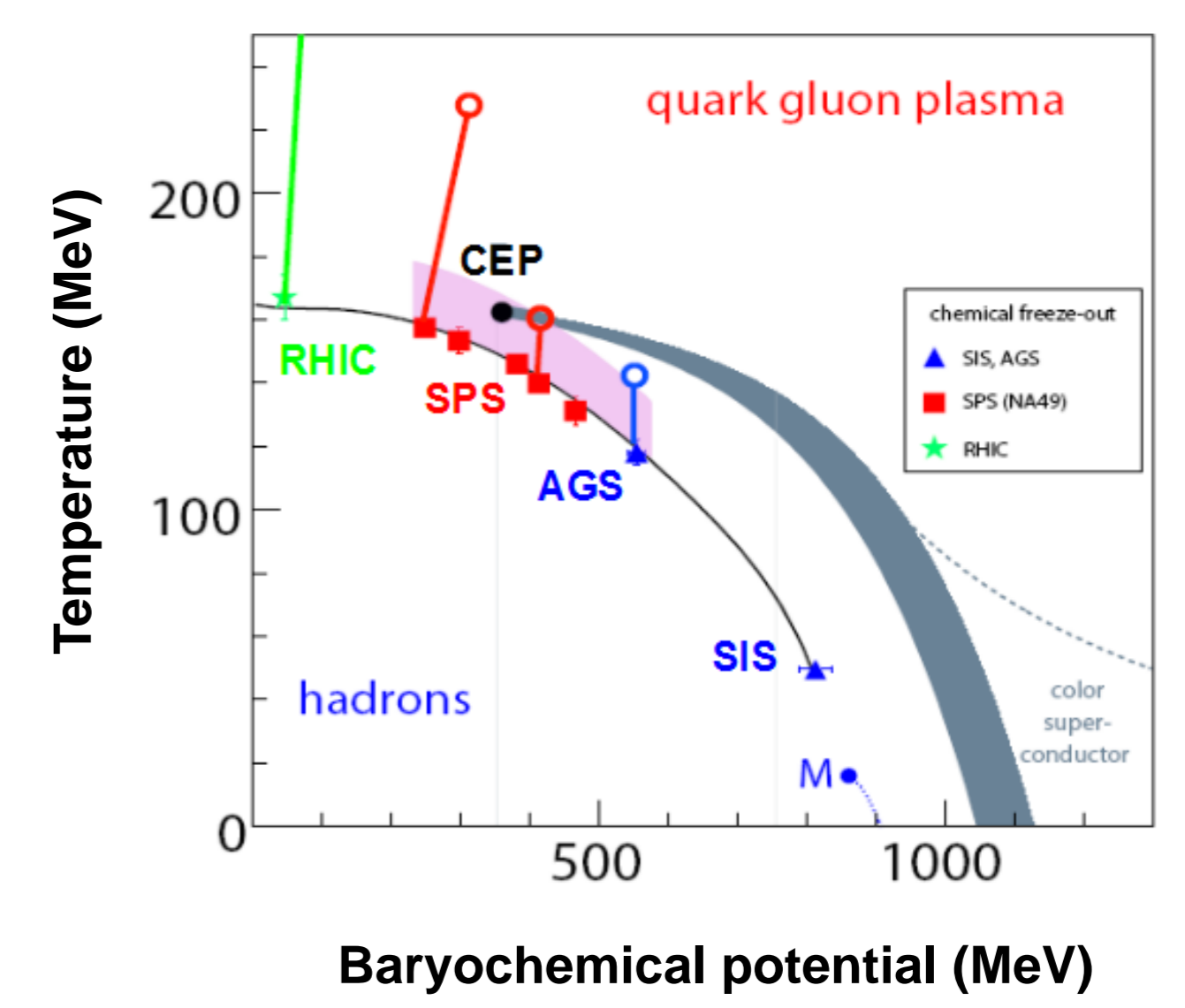
gas of hadrons and quark-gluon plasma



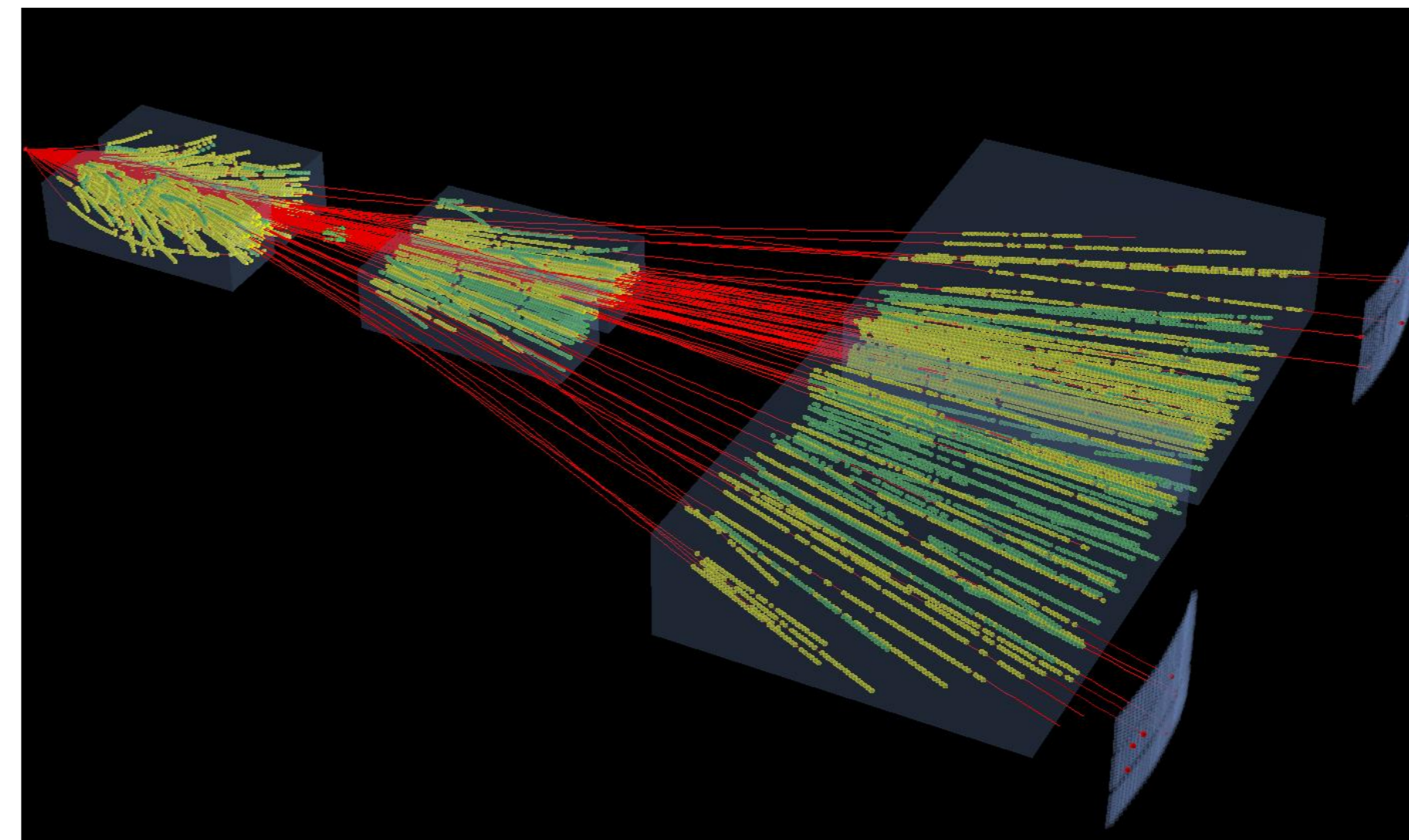
Phase diagram of water is well established



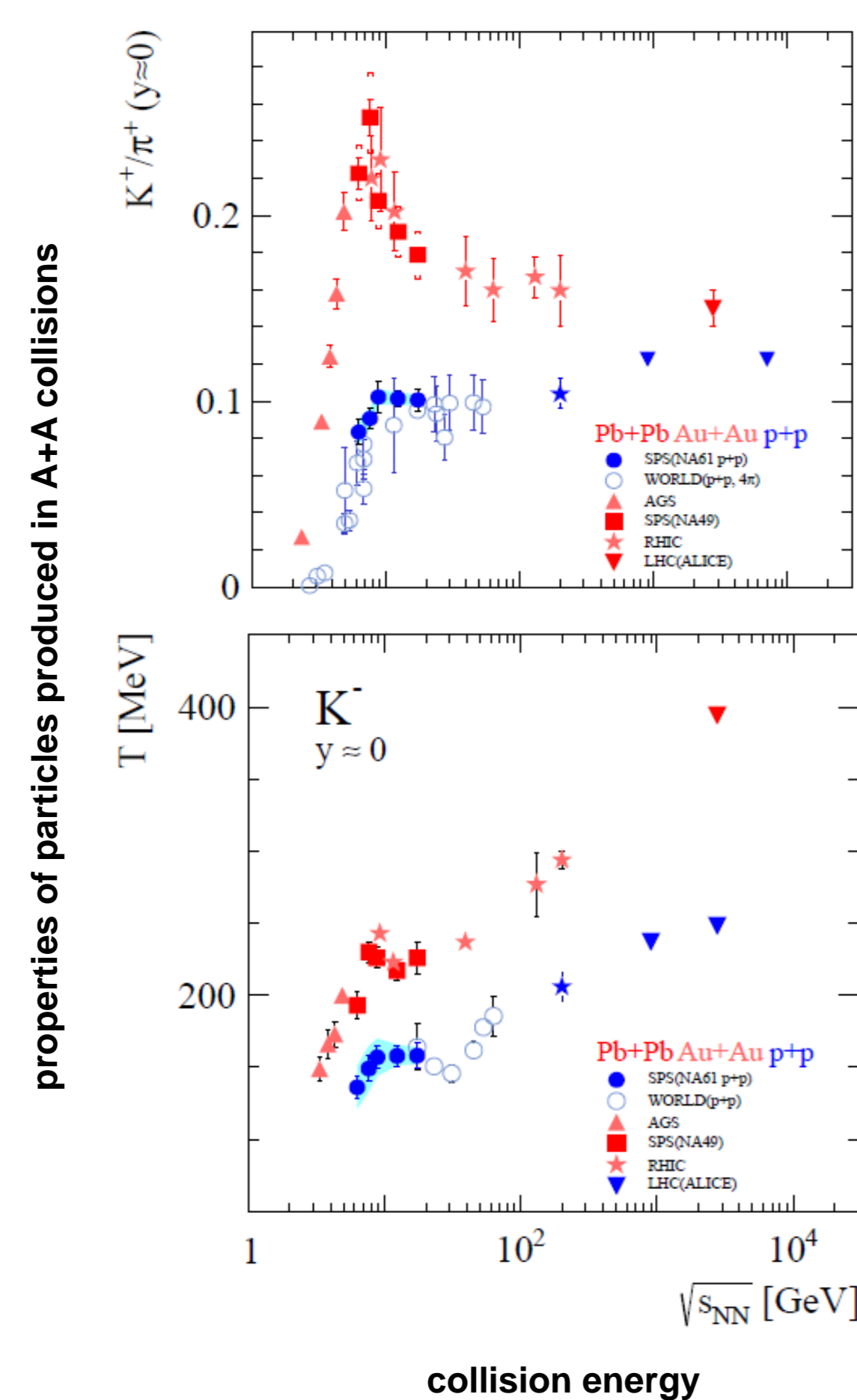
Phase diagram of strongly interacting matter is studied by NA61/SHINE



Snapshot of very dense strongly interacting matter produced in A+A collisions at the CERN SPS (scale  $10^{-14}$  m)

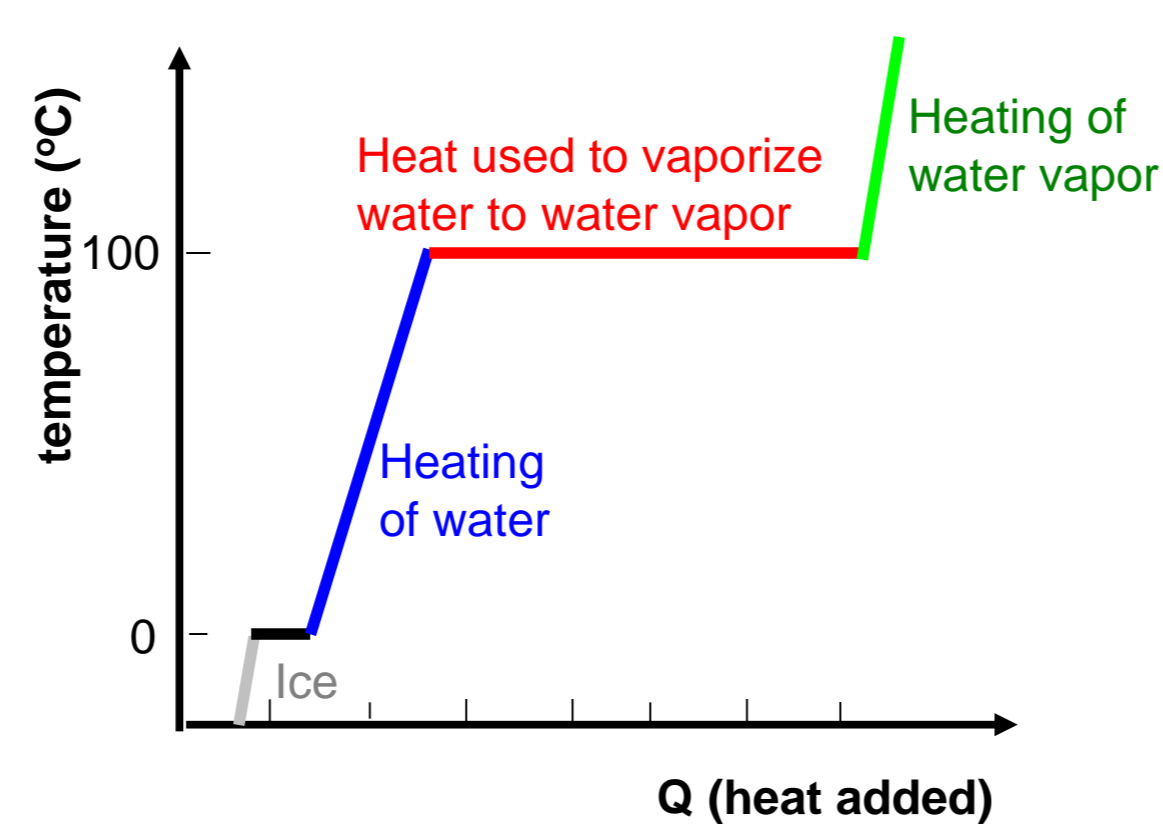


Central Ar+Sc collision at 150A GeV/c registered by the NA61/SHINE detector



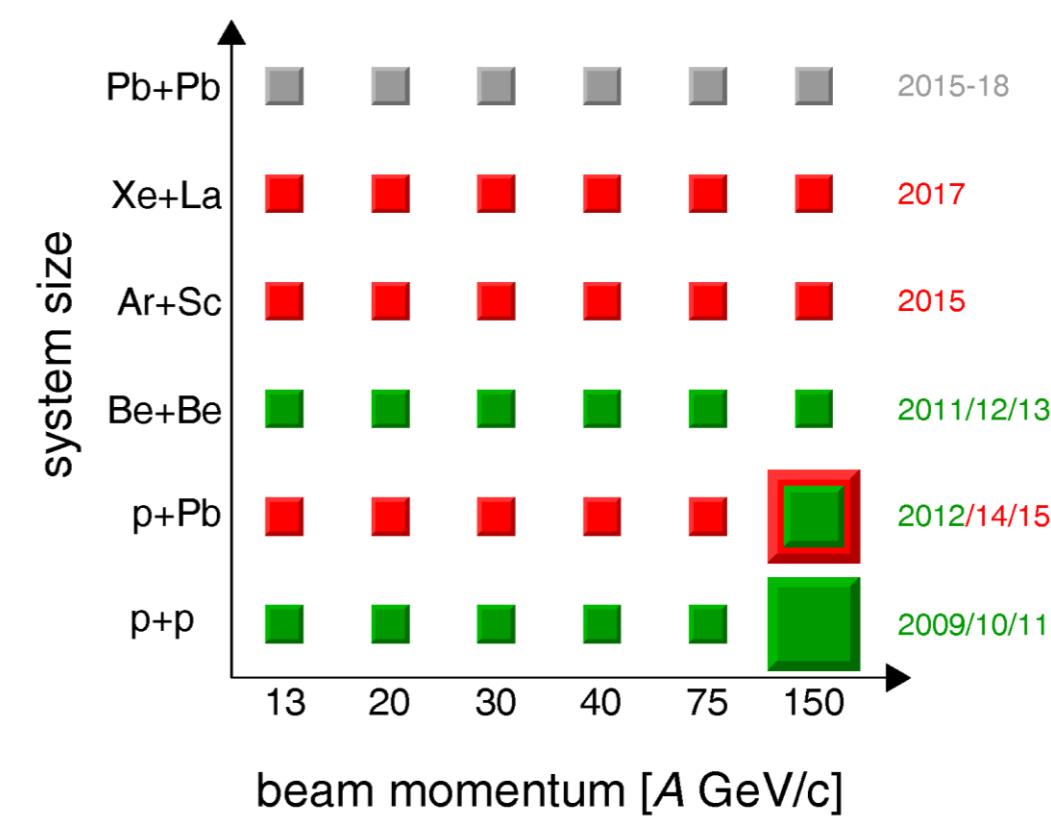
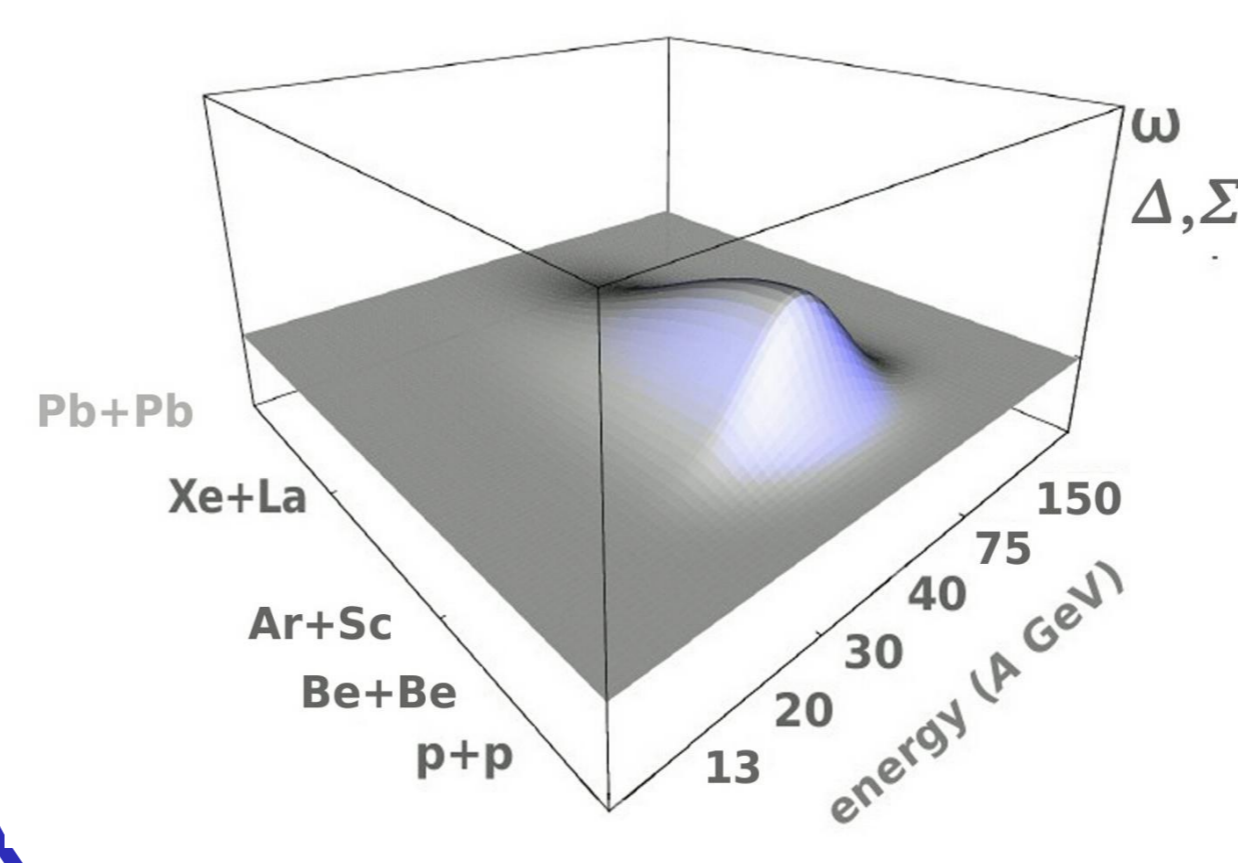
Heating curves of strongly interacting matter measured by NA61/SHINE and NA49 at the CERN SPS serve as evidence for a transition between hadron gas and quark gluon plasma

Similar heating curve of water shows the transitions between different phases of water



NA61/SHINE performs a comprehensive scan in energy and size of colliding nuclei. It studies properties of the transition between hadron gas and quark gluon plasma which may lead to the discovery of the critical point of strongly interacting matter

Critical point  $\rightarrow$  hill of fluctuations



Status of the NA61/SHINE search

