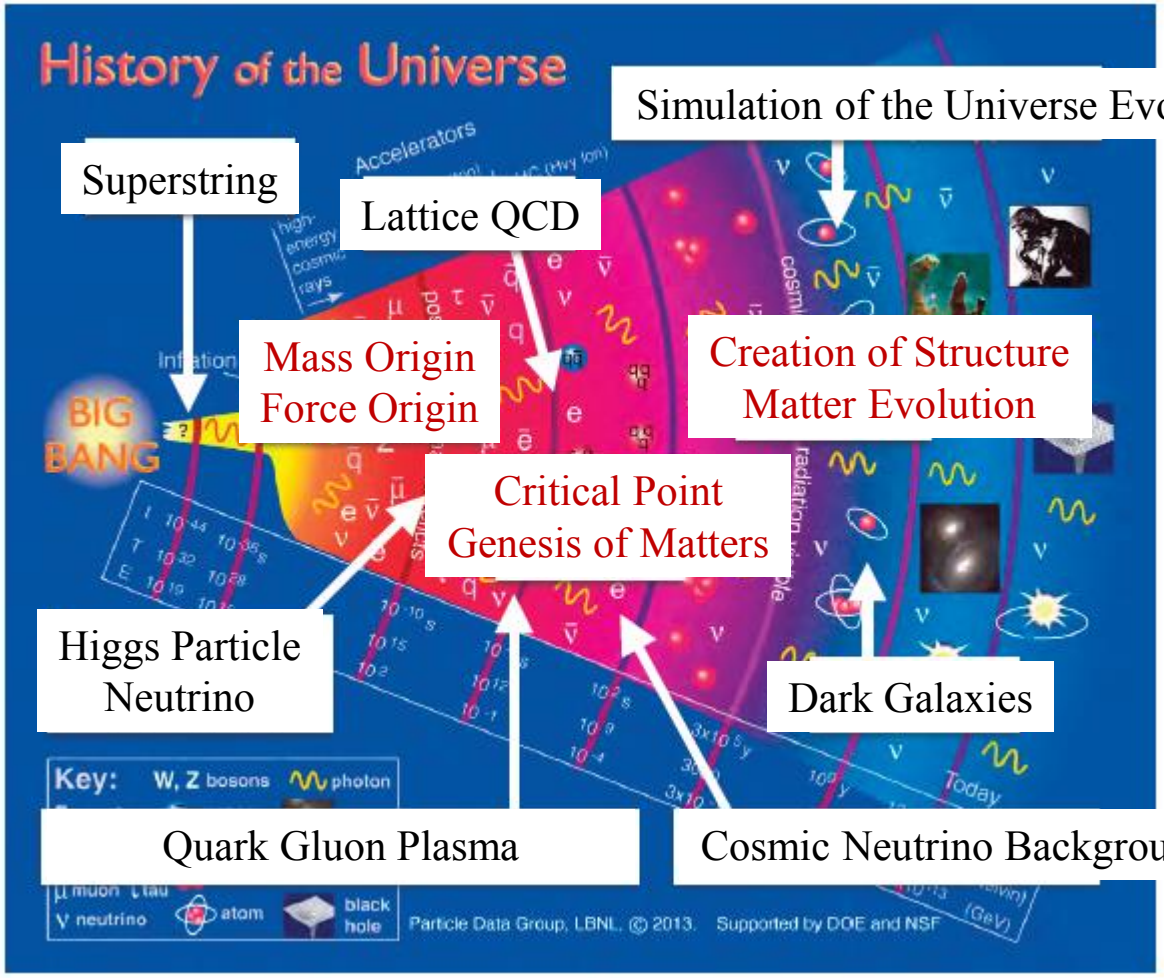
Research Core for the History of the Universe

under Center for integrated Research in Fundamental Science and Engineering
(founded on Sep. 1, 2014)

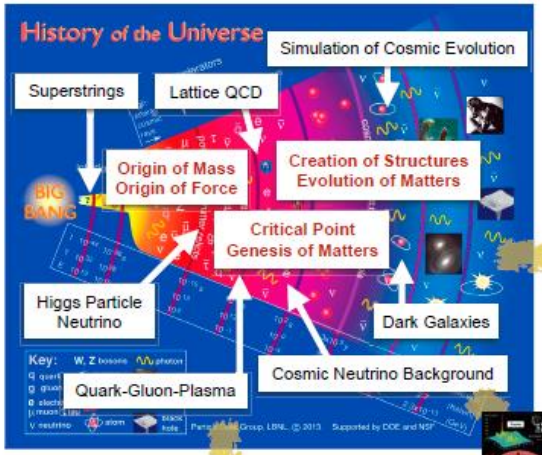
Mission: coordinate the studies in elementary particles, quark nuclear matters and astrophysics to construct an integrated view of the History of the Universe.



Illuminate the "Darkness":
=>Dark matter, Dark energy , Dark galaxies
=>Genesis of matters, creation of structure and their evolution

宇宙史国際研究拠点

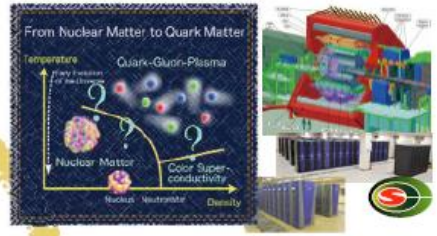
Research Core for the History of the Universe



Mission: Coordinate the studies in the elementary particles, quark nuclear matters, and the astrophysics to construct an integrated view of the History of the Universe.

Coordinator: Prof. Shinhong Kim

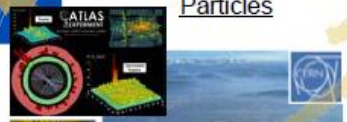
Division of Quark Nuclear Matters



Principal Investigator: Asso.Prof. Shinichi Esumi

Clarification of the nature of the high-temperature quark-gluon-plasma state several μ seconds after the Big Bang as well as the high-density nuclear matter in the core of neutron stars. Identification of the critical point expected at intermediate temperature and density.

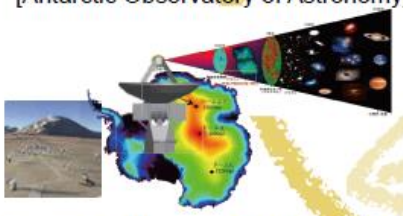
Division of Elementary Particles



Principal Investigator: Prof. Fumihiko Ukegawa

Through experimental study of Higgs particle and neutrinos together with theoretical study of superstrings, understand the fundamental structure of particles and clarify the History of the Universe.

Division of Antarctic Astronomy
[Antarctic Observatory of Astronomy]



Principal Investigator: Prof. Naomasa Nakai

Clarification of the formation and evolution of the first galaxies and the Universe through deep space observation by the Antarctic Telescope and other Observatories.

"Consortium of Antarctic Astronomy"

"Consortium of the History of the Universe"

Development of data analysis methods in collaboration with Lab. for Inverse Problems

Illuminate the "Darkness":
=> Dark Matter, Dark Energy, Dark Galaxies, ...
=> Genesis of matters, creation of structures, and their evolution.

http://hep.px.tsukuba.ac.jp/~skim/RCHOU/eng/hou.html