



Tomonaga Center for the History of the Universe

The name Tomonaga Center is from Dr. Sin-Itiro Tomonaga, the second Nobel Laureate from Japan, who made fundamental contributions in constructing relativistic quantum field theories, the renormalization theory, theory of collective motions, etc. and also a founder of the physics institute at Tsukuba.



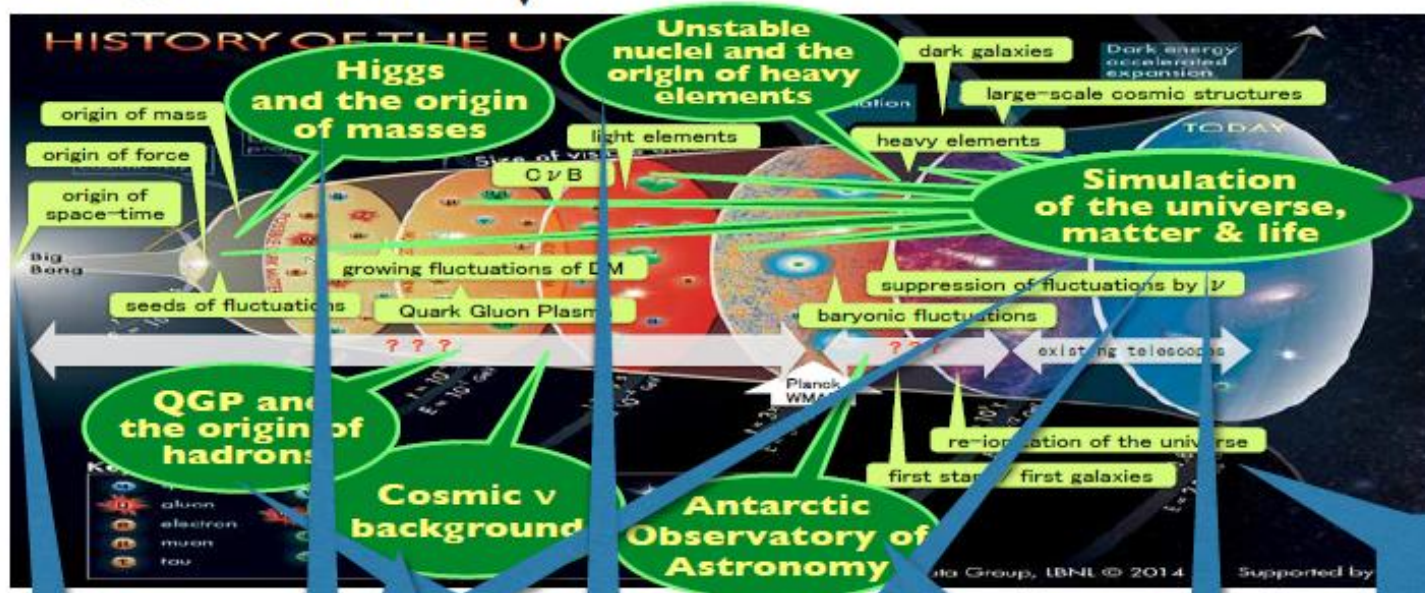
Sin-Itiro Tomonaga

1906 – 1979

(Tomonaga Memorial Room, Univ. Tsukuba)



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Center for
Computational
Sciences







Division of Elementary Particles

- Higgs precision study by ATLAS experiment
- Detection of cosmic neutrino background by COBAND experiment
- Theory of quantum gravity and superstrings

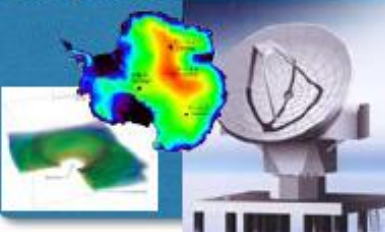
Division of Quark Nuclear Matters

- QGP study by ALICE and STAR experiments
- Study of unstable nuclei by RI-beam factory
- QCD simulations towards QGP and nuclear matters


Division of Antarctic Astrophysics

- Construction of Antarctic Observatory of Astronomy towards dark galaxies
- Simulation of universe and galaxies



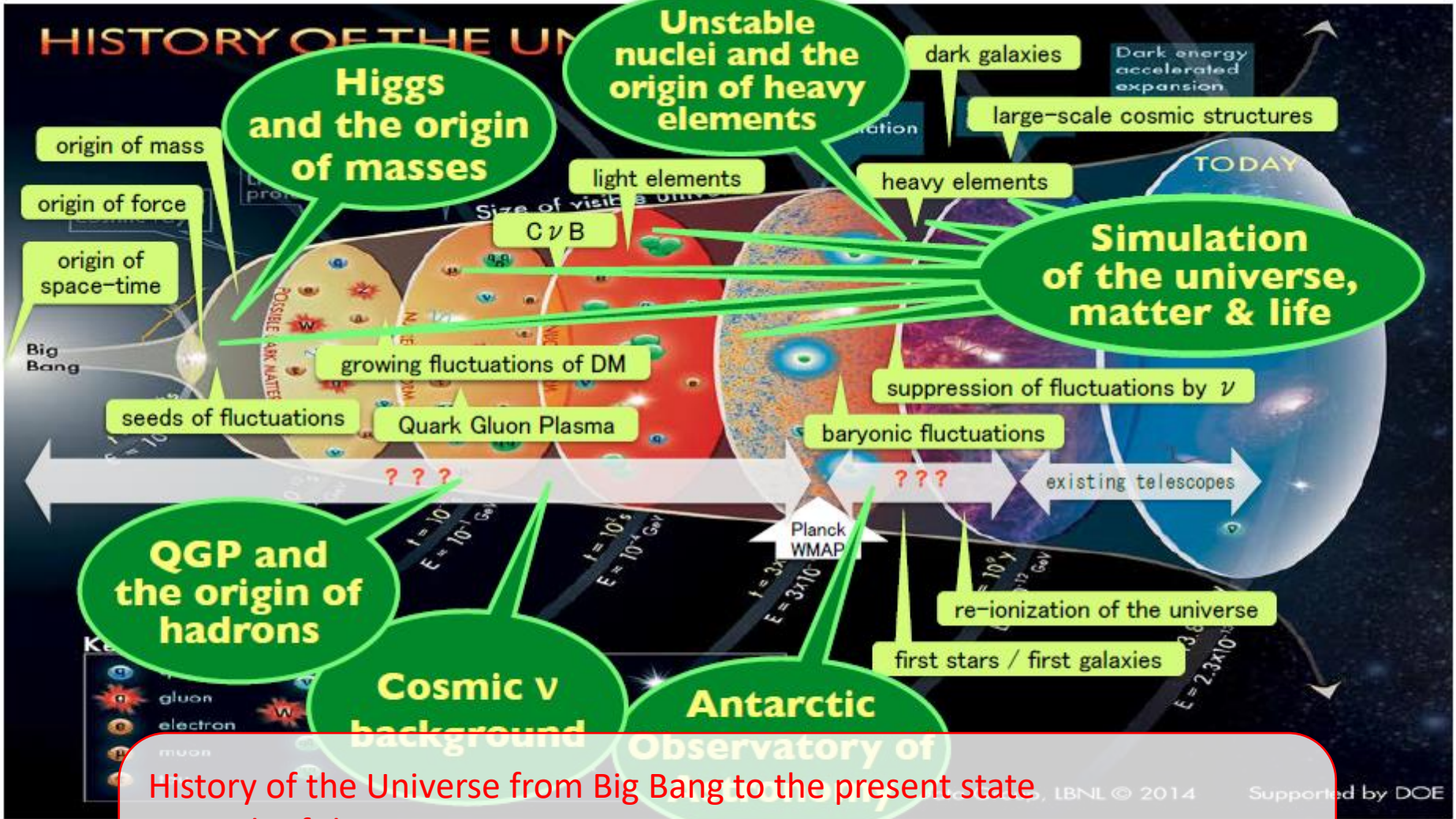
Division of Photon and Particle Detectors

- Development of PPD by superconducting and SOI technologies



Tsukuba Research Center
for Energy Materials Science

TIA-ACCELERATE, ...

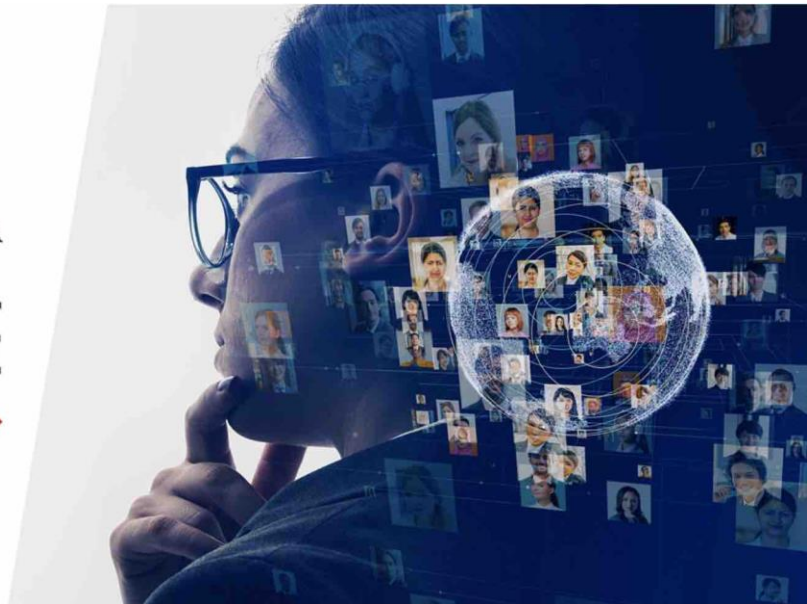


History of the Universe from Big Bang to the present state

- Birth of the universe
- Origin of matter
- Formation of galaxies, stars and planets
- Origin of life



- **Seeds of new research fields**
 - **Interaction and collaboration with researchers of various fields and other institutes**



4-11 Universe Evolution and Matter Origin