

TGSW 2018
session 8-9

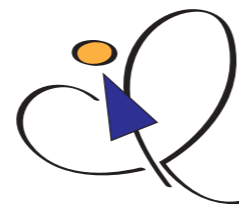
5th international workshop
on

Universe Evolution and Matter Origin



to construct an integrated view on the History of the Universe
through interdisciplinary exchanges among particle-, nuclear- and astro-physics.

Since the 1st workshop held in 2014,
they have been hosted by



Center for Integrated Research
in Fundamental Science and Engineering



reformulated

Oct. 2017

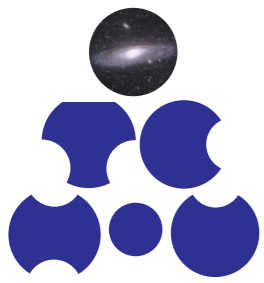


Tomonaga Center for the History of the Universe

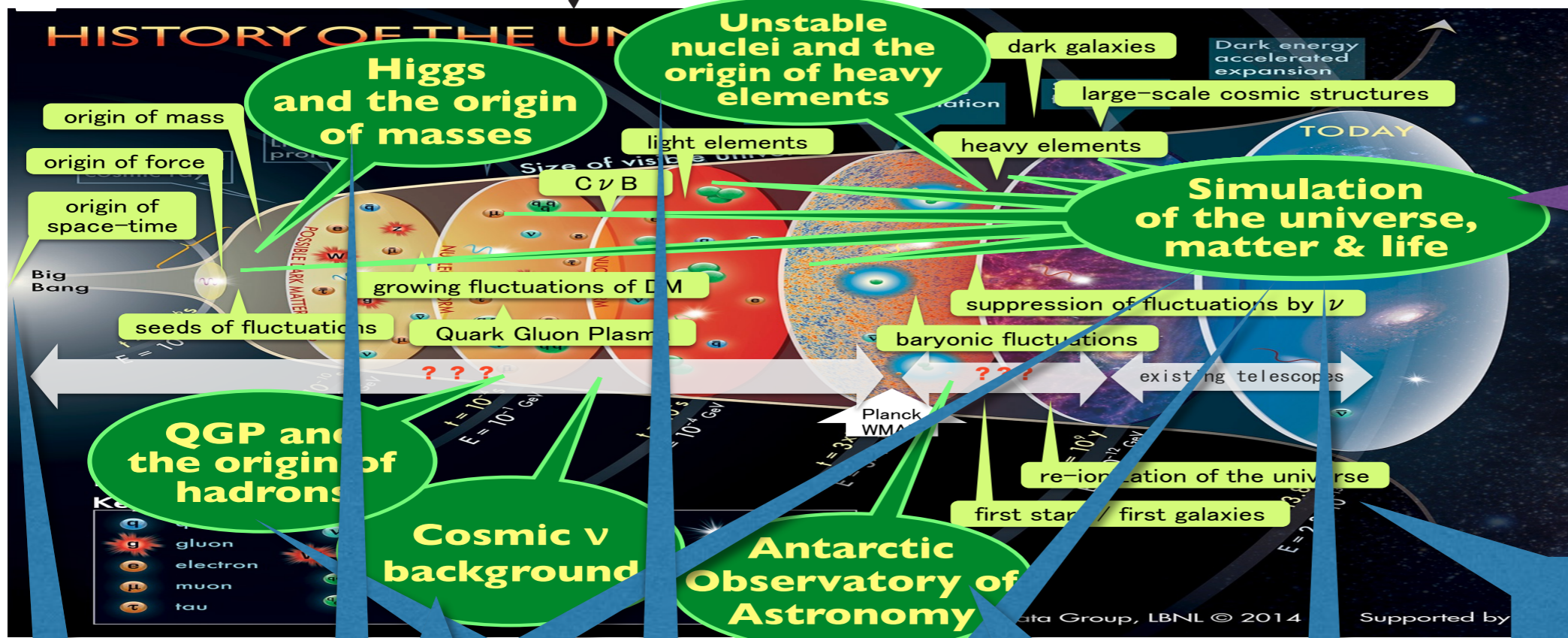
more sharply focused on the issues of the History of the Universe

Mission:

- construction of integrated view on the History of the Universe
- by clarifying key processes in the dynamical evolution of the Universe
- thru interdisciplinary and international cooperations of particle-, nuclear- and astro-physics



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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

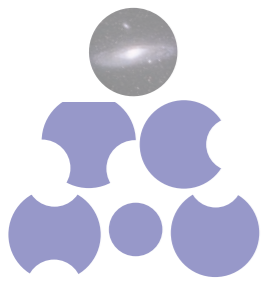
Division of Antarctic Astrophysics

- 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, ...



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**Higgs
and the origin
of masses**

**Unstable
nuclei and the
origin of heavy
elements**

**Simulation
of the universe,
matter & life**

**Cosmic ν
background**

**Antarctic
Observatory of
Astronomy**

**Division of
Elementary
Particles**

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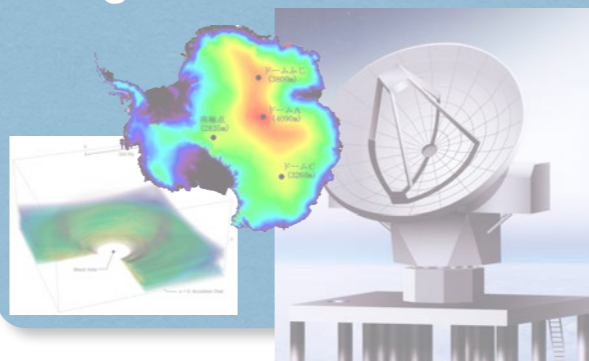
**Division of
Quark Nuclear
Matters**

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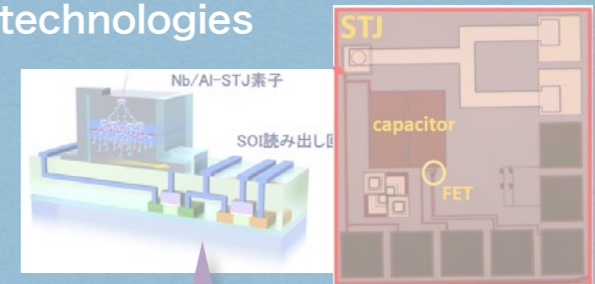
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Antarctic
Astrophysics**

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**Division of
Photon and
Particle
Detectors**

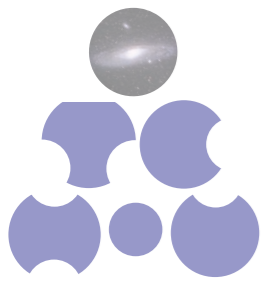
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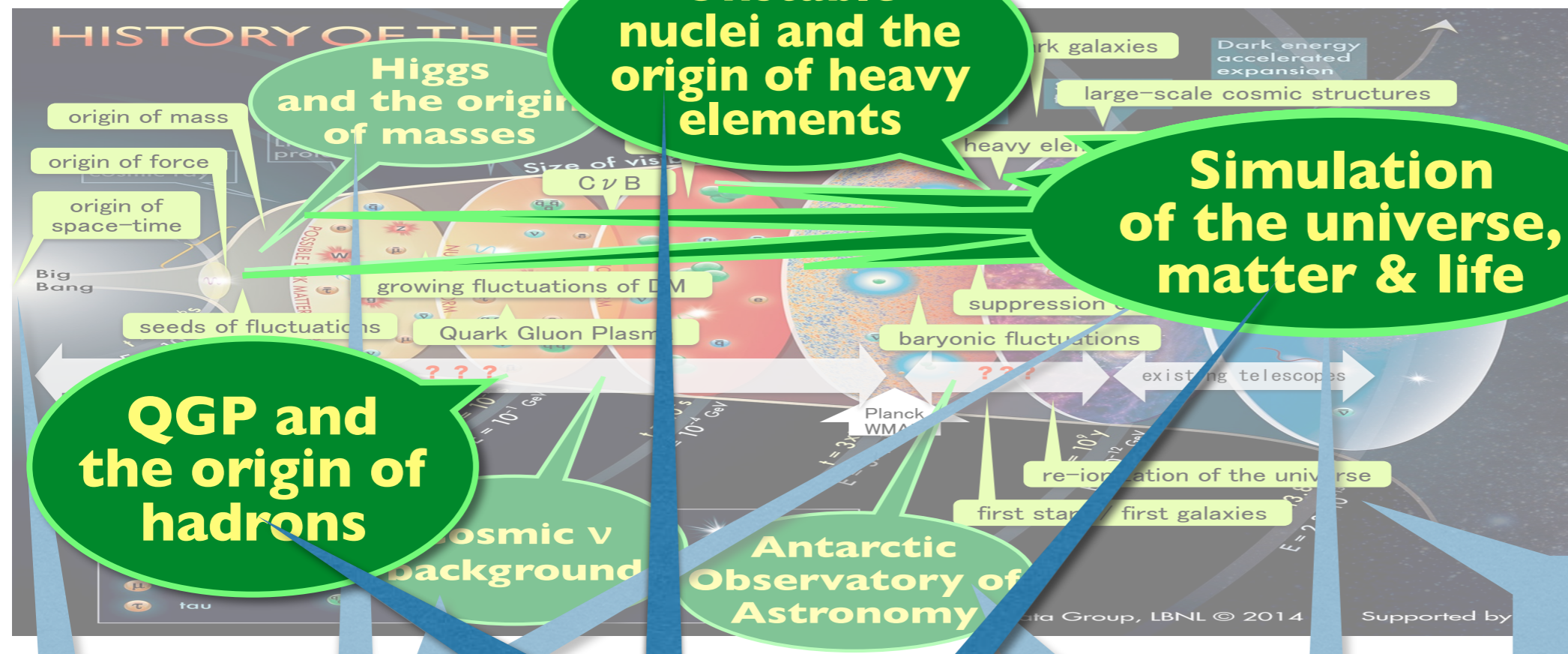
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QGP and the origin of hadrons

Unstable nuclei and the origin of heavy elements

Simulation of the universe, matter & life

Antarctic Observatory of Astronomy

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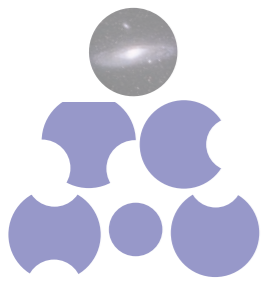
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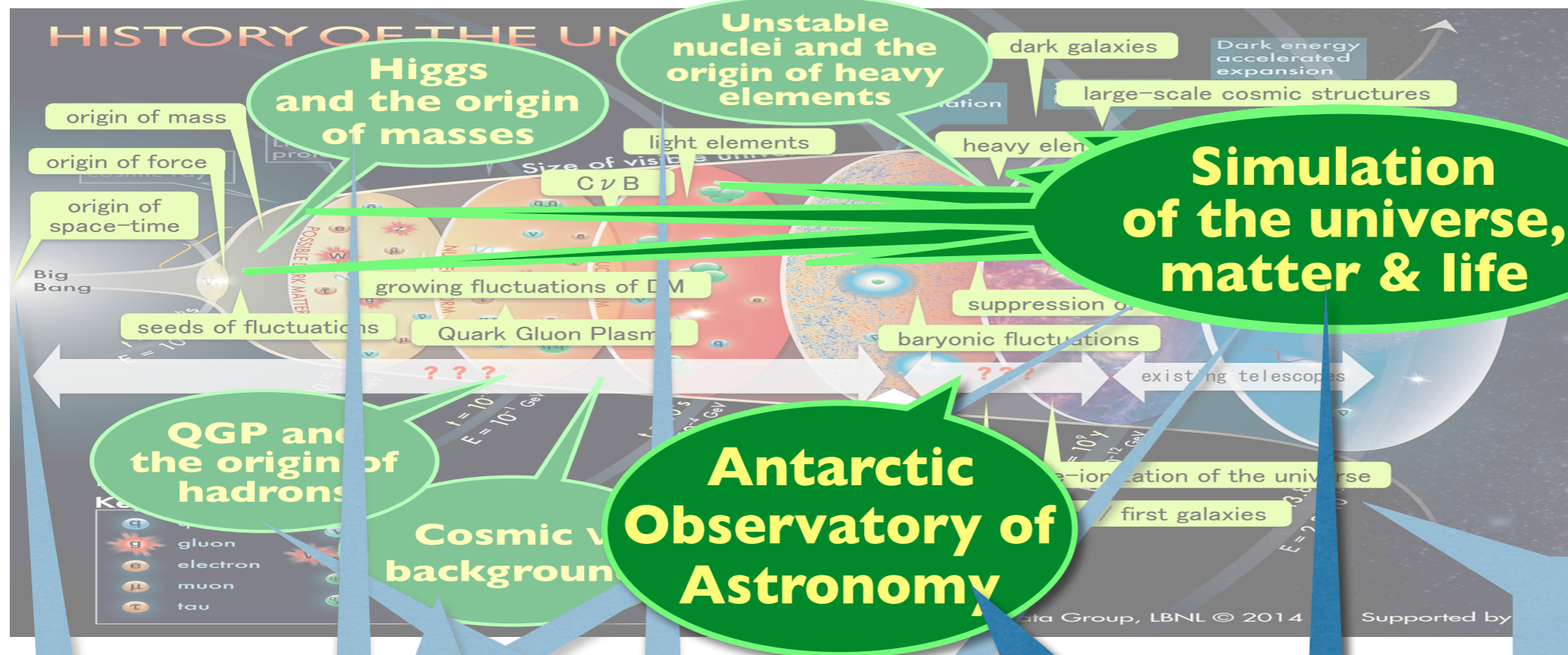
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Simulation of the universe, matter & life

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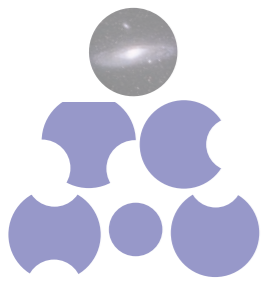
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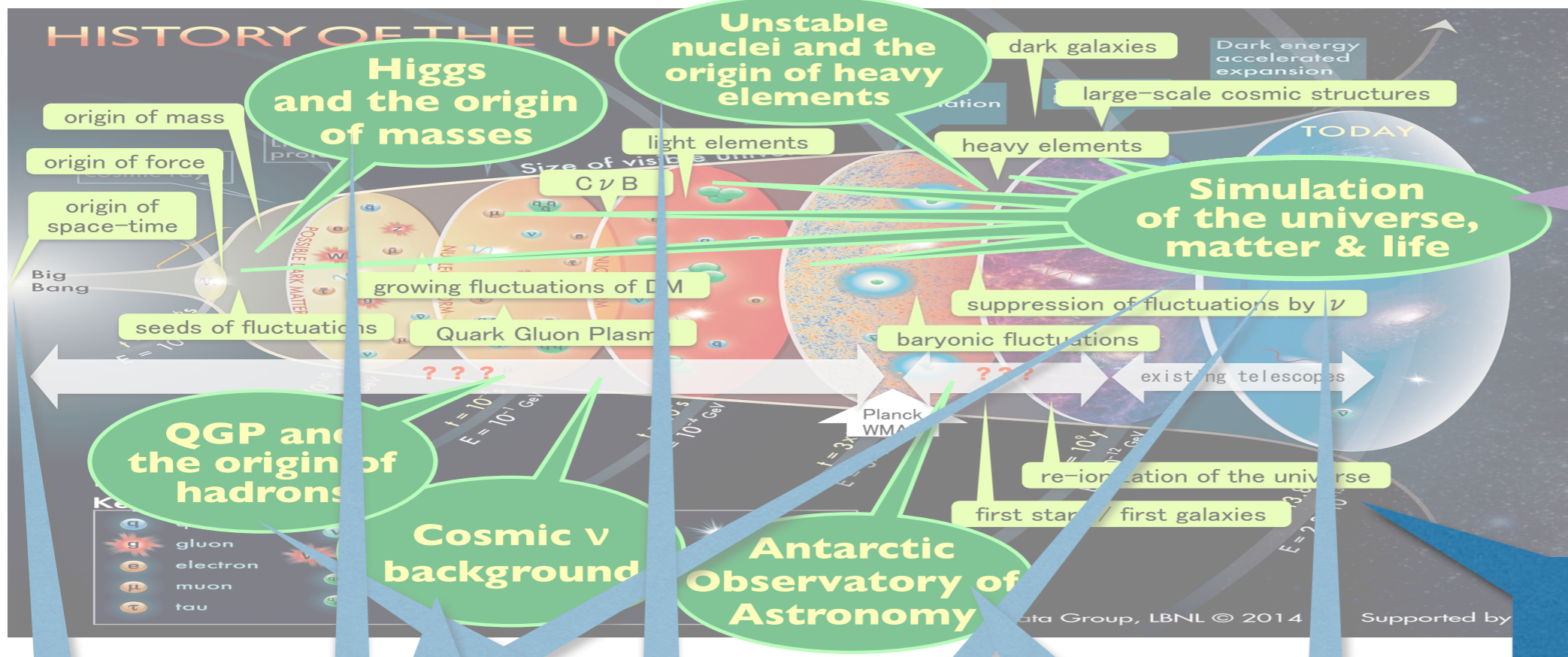
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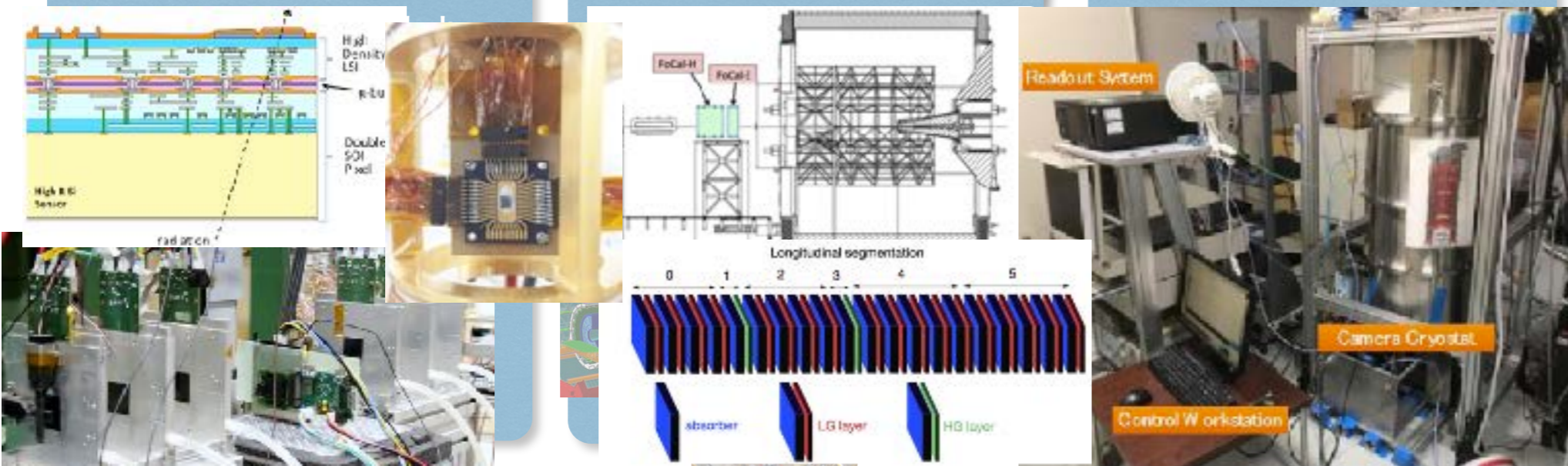
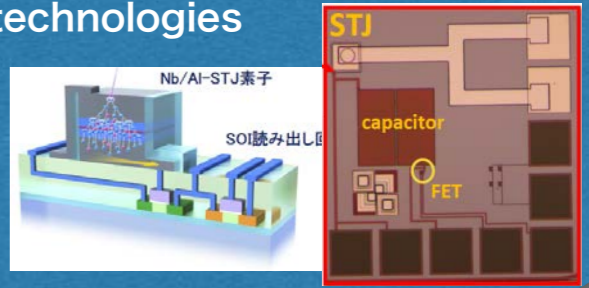
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Division of Quark Nuclear Matters

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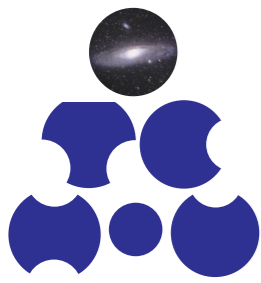
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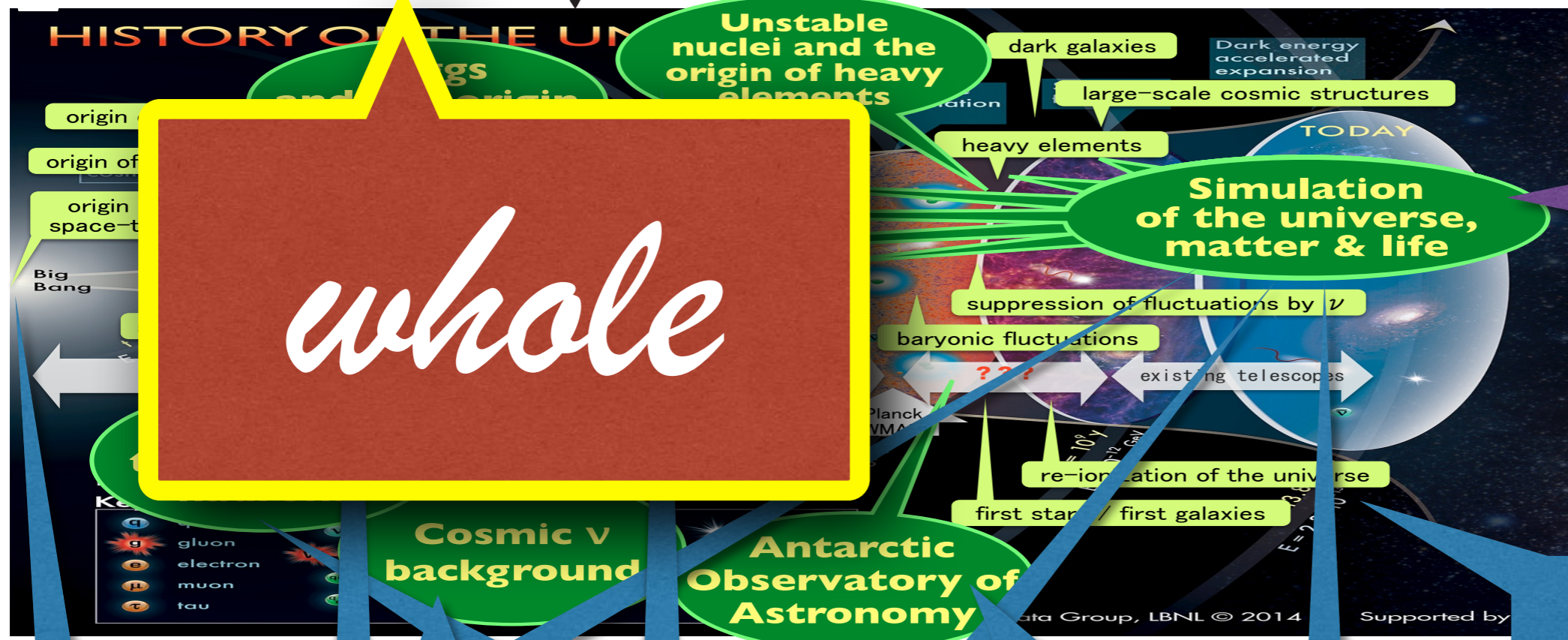


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SIN-ITIRO TOMONAGA

1906-1979

Basic contributions to the foundation of

- relativistic quantum field theory
- renormalization theory
- theory of collective motions

=> Nobel prize in Physics 1965
together with Julian Schwinger
and Richard Feynman
(2nd Nobel laureate from Japan)



A founder of physics institutes at Tsukuba.



Standing exposition at the Tomonaga Memorial Room
in the University Gallery, Univ. of Tsukuba

Please enjoy the exchanges with different fields
(and informal meetings tomorrow if you join),

and also the City of Tsukuba and around!