

Yasunori Yamazaki

senior visiting scientist, RIKEN (professor emeritus, Univ. Tokyo)

Research Field: Antimatter science with low energy/ultra-cold* antiparticles

(低エネルギー/極低温反物質科学)

*High precision measurements require long measurement time (uncertainty principle)

Purpose: Search for the matter-dominant universe via missing antimatter

(消えてしまった反物質で物質優位の宇宙を探る)

Approach: High precision measurements** of antiproton and antihydrogen

(反陽子と反水素の超高精度測定)

**The magnetic moment of antiproton was once determined with higher precision than that of proton, the most abundant element in the universe!

Tool: Antiproton decelerator at CERN

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Research Field: Antiparticles

(低エネルギー)

*High precision measurement

Purpose: Search for dark matter

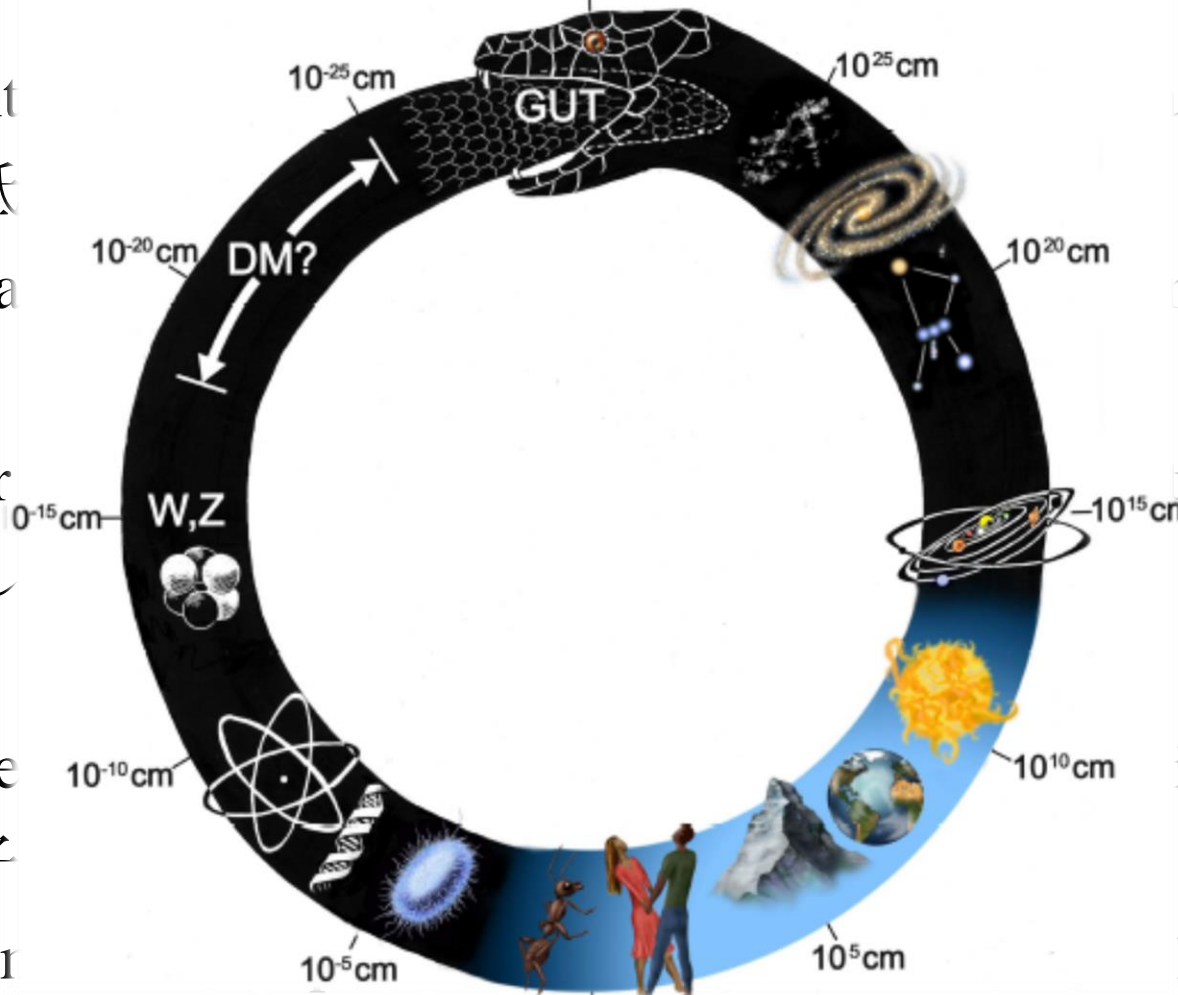
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Approach: High precision measurement

(反陽子)

**The magnetic moment of proton, the most abundant element in the universe!

Tool: Antiproton decelerator at CERN



antiparticles

(uncertainty principle)

dark matter

hydrogen

higher precision than that

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Research Field

*High precision

Purpose: Search for Higgs boson (消滅)

Approach: High energy collisions (圧縮)

**The magnet is made of superconducting niobium-titanium, cooled to 2 K. It is the largest superconducting magnet in the world. It is made of proton, the most abundant element in the universe!

Tool: Antiproton decelerator at CERN



es

principle)

recision than that