東北大学　宇宙創成物理学国際共同大学院プログラム

GPPU Seminar

“Neutrinos from the Big Bang: how they evolved and how to see them”

by Gordon Baym　(University of Illinois at Urbana-Champaign)

Time and Date: 15:00-17:00, Mar 8th, 2024

Place: Room 745, Science Complex B H03 (hybrid)

Registration:" https://us02web.zoom.us/meeting/register/tZEsdO2rqDsiH9T3H__SwweqcLrA1RrMSNkF”

Primordial neutrinos from the Big Bang are about 100 times more numerous than solar neutrinos, and at least two-thirds of them are now non-relativistic. These relic neutrinos, which have never been detected, decoupled in the early universe, with definite helicity (neutrinos left-handed and antineutrinos right handed). However, their subsequent propagation through gravitational inhomogeneities and even background gravitational radiation, as well as cosmic and galactic magnetic fields partially flips their helicities, and can produce noticeable effects in their eventual detection. I will briefly discuss future detection of relic neutrinos.

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