東北大学　宇宙創成物理学国際共同大学院プログラム

GP-PU (Graduate Program on Physics for the Universe）Seminar

“Understanding the cosmological origin of elements in the universe (From Big Bang to Stellar Evolution) ”

by Myung-Ki Cheoun (Soongsil Univ.)

Time and Date: 15:00-17:00, Jan 17th, 2022

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

Registration:"https://us02web.zoom.us/meeting/register/tZwsc-urrTooGtLHm-AsYBt3TikguSx6NWT1”

Abstract: In this talk, I discuss origin of elements produced in the universe and the stellar evolution. First, I discuss a few scenarios beyond the standard Big Bang nucleosynthesis. For example, I discuss dynamical screening effects in the primordial plasma and the effects from Starobinsky gravity model. As for the neutrino process, I present the nucleosynthesis by the neutrino in the core collapse supernova (CCSN), which is a unique nucleosynthesis, with more interesting effects such as neutrino oscillation in matter, neutrino self-interactions, shock effects, magnetic field and neutrino-induced reactions with nuclei. Finally, I discuss the nucleosynthesis with the cosmochronometer using the neutrino process.

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