

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 セミナー

"How to burn carbon and make ⁶⁰Fe in stars?"

by Xiaodong Tang (Institute of Modern Physics, Chinese Academy of Sciences) Time and Date : 10:00 - 12:00, Mon July 8th 2019 Venue : Room 745, Science Complex B (H-03)

Abstract:

Carbon burning is a major burning process in massive stars. The primary reaction is the ¹²C + ¹²C fusion reaction, serving as a pathway to create elements heavier than carbon. ⁶⁰Fe is a short-lived isotope with a half-life of 2.62 Myr. It is mainly produced by carbon burning and dispersed into the space after supernova explosion. The detection of ⁶⁰Fe in the solar system indicates the existence of near-earth supernova. In this lecture, I will introduce the nucleosynthesis during the carbon burning and the related problems in nuclear physics.

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