## Nucelosynthesis in Supernova Explosion

# Toshikazu Shigeyama[1]

[1] RESCEU

Most of heavy elements in the present universe have been synthesized in stars at least 10 times more massive than the sun and ejected by supernova explosions at the end of their lives. The elemental abundance measured on the surface of the sun is the consequence of repetition of the above process till the birth of the sun. I will introduce the present status of both theoretical and observational attempts to understand the elemental evolution in the Milky Way. From the theoretical point of view, it is essential to describe the evolution of massive stars and supernova explosions from the first principle. In addition, the measurement of the elemental abundance on the surfaces of stars with various ages in the Milky Way galaxy has been a key observational issue.

Most of heavy elements in the present universe have been synthesized in stars at least 10 times more massive than the sun and ejected by supernova explosions at the end of their lives. The elemental abundance measured on the surface of the sun is the consequence of repetition of the above process till the birth of the sun. I will introduce the present status of both theoretical and observational attempts to understand the elemental evolution in the Milky Way. From the theoretical point of view, it is essential to describe the evolution of massive stars and supernova explosions from the first principle. In addition, the measurement of the elemental abundance on the surfaces of stars with various ages in the Milky Way galaxy has been a key observational issue. This has been done by spectroscopic observations of visible light from stars using big telescopes.