
[7ST-05] New Star Cluster Candidates in the Milky Way Found in the Infrared

Jinhyuk Ryu and Myung Gyoon Lee

Astronomy Program, Department of Physics and Astronomy, Seoul National University

It is believed that the current census of star clusters in the Milky Way is far from being complete, because of high extinction. Taking advantage of recent wide-field infrared surveys (the WISE as well as 2MASS, UKIDSS GPS, and VVV), we search for new star clusters in the central region of the Milky Way (720 deg²-wide area at $|l| < 30^\circ$ and $|b| < 6^\circ$). We find 1840 candidates by visual inspection of the WISE images. The spatial distribution of these candidates show a strong concentration along the Milky Way, showing that most of them belong to the Milky Way. Among them, 26 are probably star clusters, considering their morphology, color-magnitude diagrams, and the degree of central concentration of stars. Eighteen of them appear to be very young in the embedded phase, and six of them are considered to be relatively old, showing a developed red giant branch. Implications of the primary results will be discussed.

[7ST-06] Globular clusters with multiple red giant branches as remaining nuclei of primeval dwarf galaxiesYoung-Wook Lee, Sang-Il Han, Seok-Joo Joo, Dongwook Lim, Sohee Jang,
Chongsam Na, and Dong-Goo Roh*Center for Galaxy Evolution Research and Department of Astronomy, Yonsei University*

In the current Λ CDM hierarchical merging paradigm, a galaxy like the Milky Way formed by numerous mergers of ancient subsystems. Most of the relics of these building blocks, however, are yet to be discovered or identified. Recent progress in the Milky Way globular cluster research is throwing new light on this perspective. The discoveries of multiple stellar populations having different heavy element abundances in some massive globular clusters are suggesting that they are most likely the remaining cores or relics of disrupted dwarf galaxies. In this talk, we will report our progress in the (1) narrow-band photometry, (2) low-resolution spectroscopy, and (3) population modeling for this growing group of peculiar globular clusters.