

A Stream of Globular Clusters on the Magellanic Great Circle : New Evidence for the Galactic Globular Cluster System Formation via Accretion

Suk-Jin Yoon, Young-Wook Lee

CSA, Yonsei

There is now a growing body of evidence that the Galactic globular cluster (GC) system has been developed at least partially by the tidal accretion of GCs from Satellite galaxies. Here we find a stream of the metal-poor ($[Fe/H] < -2.0$) GCs on the Magellanic great circle, which have the positional and orbital characteristics fully consistent with the hypothesis that they were created within a satellite galaxy and later tidally captured by the Milky Way. We suggest that their host galaxy was the Large Magellanic Cloud, based on the spatial and kinematic relationship between these clusters and the Cloud. If our interpretation is correct, these clusters, together with the Sagittarius GC system, would provide direct evidence for ongoing accretion of GCs from satellite galaxies, supporting a tidal capture origin of the Galactic halo globular cluster system.