

ORIGIN AND EVOLUTION OF STRUCTURE AND NUCLEOSYNTHESIS FOR GALAXIES IN THE LOCAL GROUP

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The Milky way did not form in isolation, but is the product of a complex evolution of generations of merges, collapse, star formation, supernova and collisional heating, radiative and collisional cooling, and ejected nucleosynthesis.

Moreover, all of this occurs in the context of the cosmic expansion, the formation of cosmic filaments, dark-matter haloes, spiral density waves, and emerging dark energy.

This talk will review recent attempts to reconstruct this complex evolution in a modified version of the Smoothed-Particle hydrodynamics code GADGET-2 in which a sample large-scale structure simulations have been scanned to identify local-group-like poor clusters. Detailed nucleosynthesis in supernovae and stars along with matter heating and cooling have been added to the simulations in an attempt to reconstruct the evolution of stars, gas and elements among the various components of the local group.

We will summarize comparisons with stellar surveys and elemental abundances in metal poor stars in dwarf galaxies of the Local Group. This work highlights the roles which early stellar evolution and nucleosynthesis play in the shaping of our local galactic cluster.

Astrophysics
Seminar

**All interested
persons are
cordially
invited to
attend.**