Young star clusters in external galaxies

S. S. Larsen (Utrecht University, the Netherlands)

(Submitted on 20 Jul 2011)

I review the characteristics of cluster populations in other galaxies, with particular emphasis on young star clusters and a comparison with the (known) open cluster population of the Milky Way. Young globular cluster-like (compact, massive) objects can still form at the present epoch, even in relatively quiescent spiral discs, as well as starbursts. Comparison with other nearby spiral galaxies, like M83 and NGC 6946, suggests that the Milky Way should host about 20 clusters with masses above 10^5 Msun and ages younger than about 200 Myr. No such clusters have been found, however. I discuss the important roles of selection and evolutionary effects that may account for many of the apparent differences between cluster populations in different galaxies. One potentially important difference between ancient GCs and young star clusters is the presence of complex star formation / chemical enrichment histories in the GCs. Little is currently known about the presence or absence of such features in massive (>10^5 Msun) young star clusters, but some tantalizing hints of extended star formation histories are now emerging also in young clusters.

Comments:	Invited talk presented at "Stellar Clusters and Associations - A RIA workshop on GAIA", 23-27 May 2011, Granada, Spain
Subjects:	**Cosmology and Extragalactic Astrophysics (astro-ph.CO)**
Cite as:	**arXiv:1107.4133 [astro-ph.CO]**
	(or **arXiv:1107.4133v1 [astro-ph.CO]** for this version)

Submission history

From: Soeren S. Larsen [view email]

[v1] Wed, 20 Jul 2011 22:26:32 GMT (2355kb,D)

Which authors of this paper are endorsers?