

# Commission 37: Star Clusters

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## 1. Symposia and Colloquia and Reviews

During the period 2004 to 2005, the following symposia and colloquia were related to the activities of the commission: The A-Star Puzzle (IAUS224), Massive Star Birth: A Crossroads of Astrophysics (IAUS227), and From Lithium to Uranium: Elemental Tracers of Early Cosmic Evolution (IAUS228).

There were a number of reviews related to star clusters during the period 2002–2005. Many appeared in conference proceedings, but the most notable is that by von Hippel (2005) which focuses on Galactic open clusters.

## 2. Discussion

Star clusters as an astrophysical tool are extremely flexible. They serve as laboratories for the study of stellar evolution and dynamics. In addition, as ‘points’ in space, time, and chemical composition, they are probes of the formation and evolution of their parent galaxy. As such, the area of star cluster research has been very active. For example, von Hippel (2005) examines the publication rate of papers on open and globular clusters over the past 40 years. They have both outpaced the overall astronomical publication rate from Abt (1998).

The advances in star cluster research have largely been in a few broad areas. New and improved stellar evolution models have been steadily appearing from a number of groups. Similarly, new and improved dynamical models of clusters are also becoming prevalent including those that include the effects of stellar evolution on dynamics. Models used in the construction of synthetic spectra of the integrated light of star clusters have also been greatly improved lately.

In terms of databases of star cluster information, the standard for open clusters (and SMC clusters) appears to be the WEBDA database maintained by Jean-Claude Mermilliod. For globular clusters, the ongoing efforts of Bill Harris have been highly valuable in the establishment of the Harris (1996) database.

## References

Abt, H. 1998, *PASP*, 110, 210

Harris, W. E. 1996, *AJ*, 112, 1487

von Hippel, T. 2005, in *Resolved Stellar Populations*, ASP Conf. Ser. (astro-ph/0509152)