Alternative Stellar Evolutionary Paths in Open Star Clusters: Stars Whose Ages Aren't What They Seem

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Open star clusters long have been fundamental benchmarks for stellar age determinations. And yet roughly 25% of the evolved stars in older open clusters do not fall on single-star isochrones, and age determinations for them in isolation would fail. I will review the status of observations, and consequent understanding, of blue stragglers, yellow giants, sub-subgiants and other stars of interest in open clusters with ages greater than 1 Gyr, including recent results from the K2 campaign on M67. Their stories will begin with the well-identified binary populations among solar-type stars in these clusters, very similar to the field binary population in frequency and period distribution less than 10,000 days. It is inevitable that the evolution of the stars in many of these binaries will be affected by the presence of their companions, and follow alternative stellar evolutionary paths.

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