Workshop

Stellar End Products: The Low Mass - High Mass Connection

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Title:

Searching for Evidence of Mass Loss on the Cepheid Instability Strip

Abstract:

For decades, a discrepancy of 10-15% has persisted between the masses of Cepheid variables derived from stellar evolution models compared with values based on the Period-Luminosity relation. This "Cepheid mass discrepancy" highlights an embarrassing gap in our understanding of the evolution of intermediate mass stars. Mass loss on the Cepheid instability strip has long been postulated as a likely solution to the mass discrepancy, but empirical confirmation has remained elusive. I will summarize results from recent searches for mass loss signatures from Cepheids and discuss their implications.