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Investigation of Low Temperature Opacities in Simulations of V838 Monocerotis[1] STEPHEN MILCAREK, JAMES C. LOMBARDI JR., Allegheny College — We present results of Smoothed Particle Hydrodynamics simulations of merging stars, motivated by the transient V838 Monocerotis. We use different models of the molecule and dust grain mixture present in the outflow of the object, which primarily affects the low temperature opacities and therefore the luminosity, photospheric temperature, and photospheric radius of the merger product. We also present results of simulations investigating the scenarios proposed by Tylenda et al. (2005) for the progenitor of V838 Mon.

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Stephen Milcarek
Allegheny College

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