

The JAGB stars as distance indicator

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To investigate possible ways to resolve the Hubble tension other distance indicators than cepheids, TRGB and SNIa and have seen a renewed interest in the past years.

The Mira PL-relation is one of them, but in this contribution I want to discuss the so-called JAGB stars that were introduced by Madore and Freedman in 2020. The name refers to the fact that the sample of interest are (carbon) stars located in region J of the classical 2MASS colour-magnitude diagram of the LMC by Weinberg and Nikolaev (2001)

and that the J-band magnitude is the magnitude of interest to provide the standard candle.

Some have advocated that the mean magnitude in a certain range in (J-K) colour is independent of metallicity and provides the standard candle. However, the situation is more complicated as pointed out in the literature. Here I will give an introduction, and provide some new results on the SMC and LMC [that confirm results from the literature], and the Milky Way and M31 as well.

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