

A. Irrgang, S. Kreizer & U. Heber 2018

Abstract:

- Tidal disruption ~~from~~ of a binary system from SMBH

Introduction:

- HVS3 found by Edelman et al. 2005
- LMC not known to host SMBH so triple ejection from GC
& rejuvenation been discussed
 - ↳ Guclandts, Portegies 2007
 - ↳ Perets 2009
 - ↳ Fargare & Guclandts 2018

Stellar Properties:

- Used Spectral energy distr. to find stellar distances w/ interstellar reddening

Mass Models:

- Used 3 diff M models

Irrgang et al. 2018

- ↳ 1. Potential of Allen & Santillan 1991
- ↳ 2. Truncated, flat rotation curve of Wilkinson & Evans 1999
- ↳ 3. Host Component \rightarrow Navarro et al. 1997

- Mark Coro simulations to propagate uncertainties of input parameters assuming Gaussian distr. & account error bars

4. LMC origin of HVS3:

- Differential abundance args & spectra should LMC as sub solar abundance pattern found - Consistent with arg in B stars origin of LMC
- Spectrophotometric distance $\sim 62.3 \pm 7.7$ kpc
 - Computed stellar angular diameter Θ ; Colour excess $E(B-V)$
 - details @ Heiter et al. 2018
 - Found SED based on atmospheric parameters & derived by Przybylski (2008b) & fit with photometric observations by changing Θ & $E(B-V)$

Find d by
$$g = \frac{PIG}{R^2} \rightarrow \Theta = \frac{2R}{d}$$

- Freedman et al. 2001 → LMC dist
- Van der Marel - 2002 → LMC V_{rad}
- Kallivayalil - 2013 → proper motion
- Blaauw 1961 suggested SN binary mechanism