



CENTRO DE ASTROBIOLOGÍA
ASOCIADO AL NASA ASTROBIOLOGY INSTITUTE



Study of evolved stars with TGAS

Francisco Jiménez-Esteban

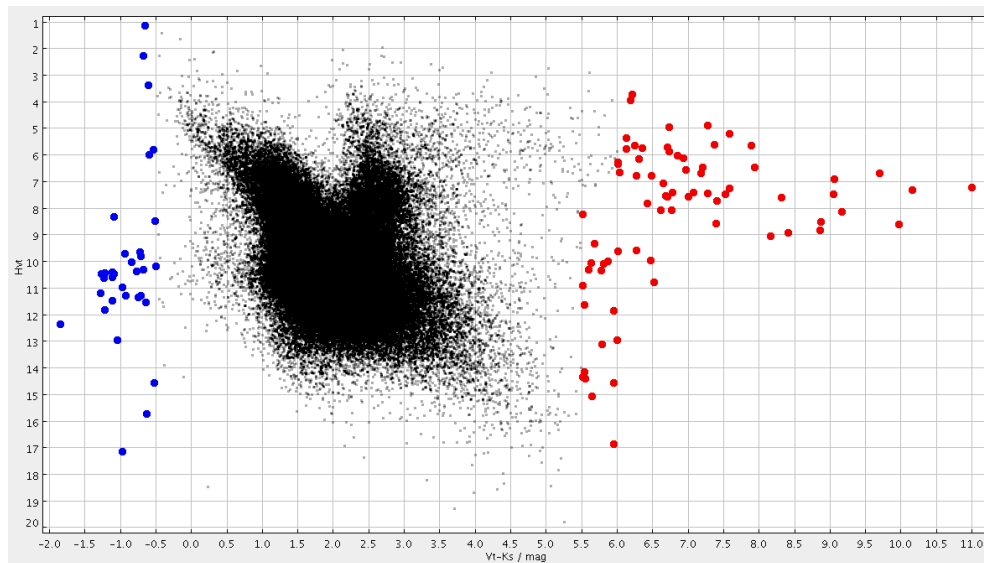
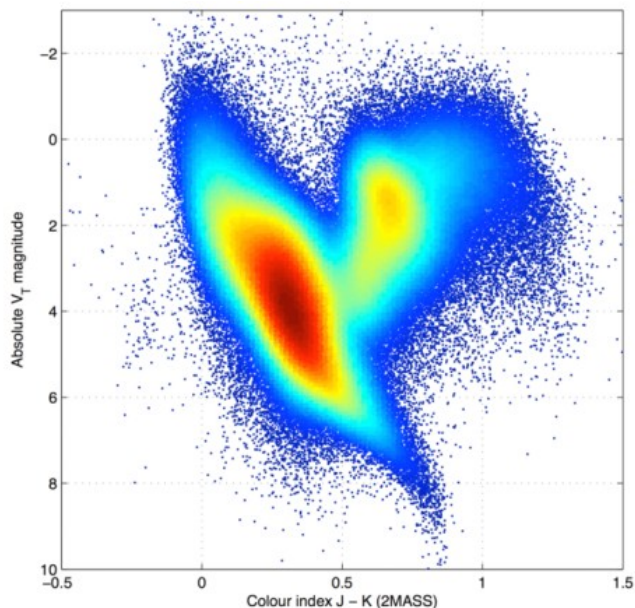
CAB / SVO (INTA-CSIC)



Study of evolved stars with TGAS



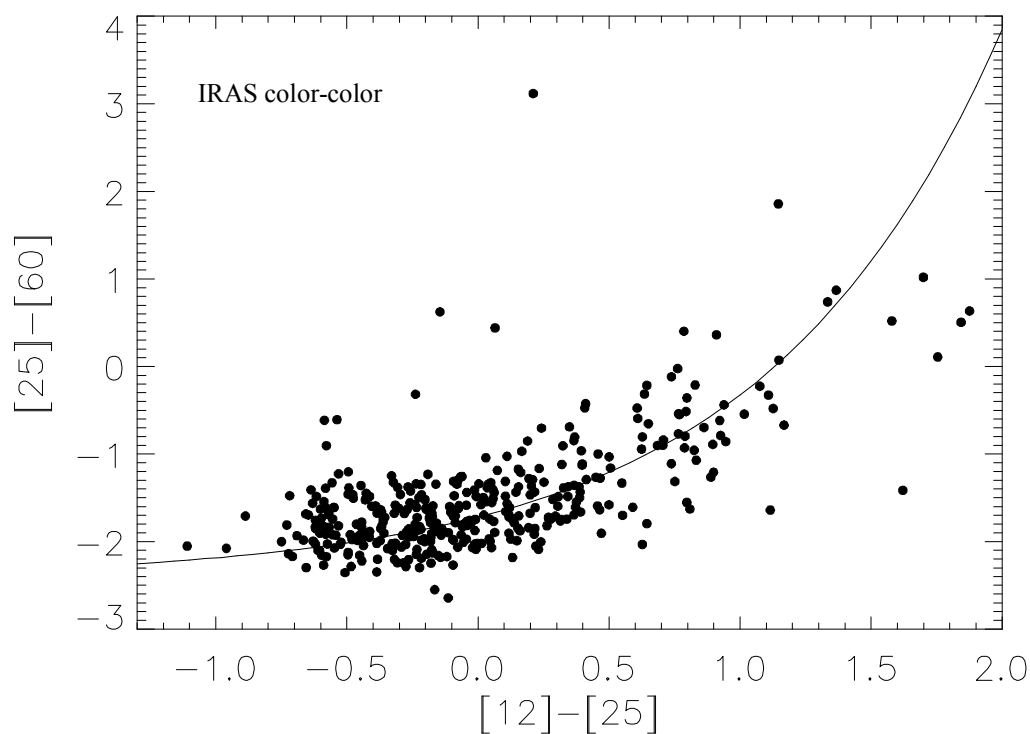
What do I mean? AGB & WD





Study of AGB with TGAS

The O-rich AGB sequence

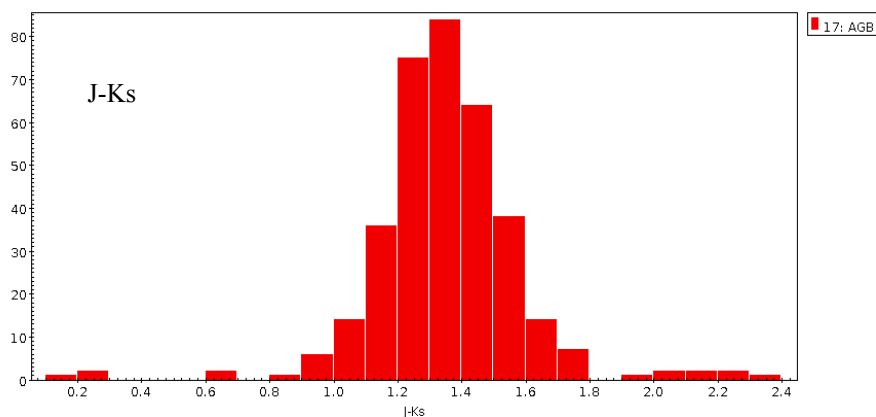


- Bedijn 1987
- Increase mass-loss sequence
- Mass??
- Evolution??

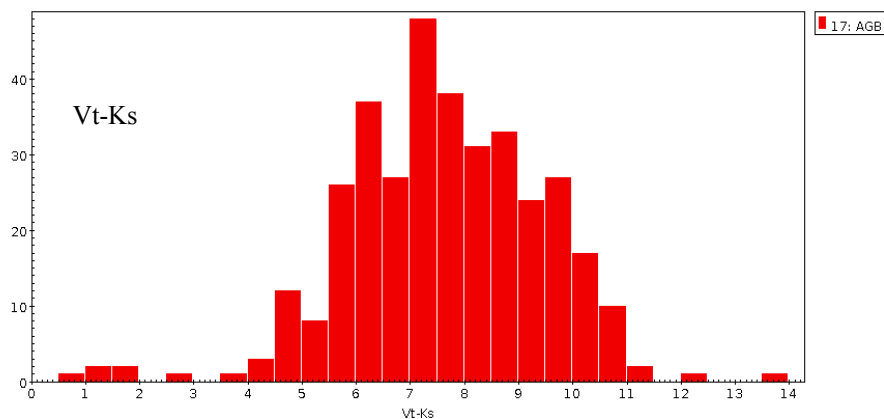


Study of AGB with TGAS

Tycho2-2MASS-Simbad-IRAS



- ~ 350 AGB, Miras o OH/IR
 - $J-K_s > 0.8$
 - $V_t-K_s > 4.0$

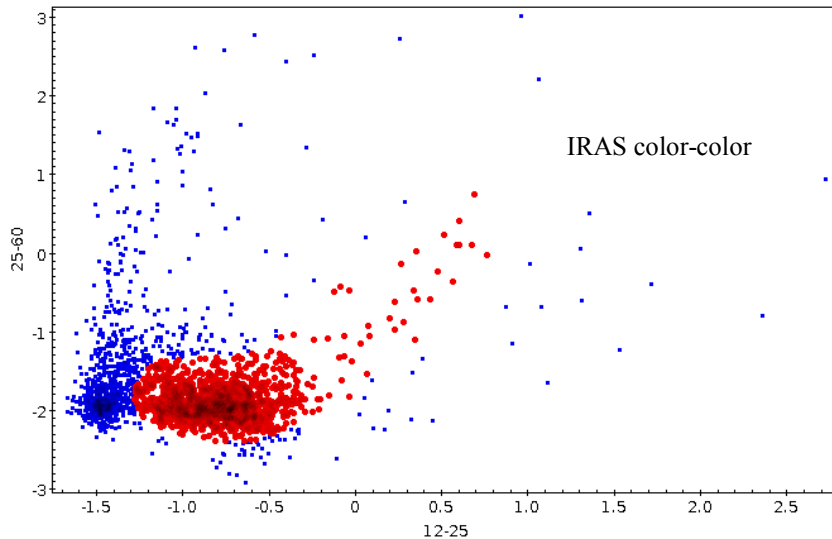


- $\sim 10^5$ AGB candidates



Study of AGB with TGAS

Tycho2-2MASS-Simbad-IRAS



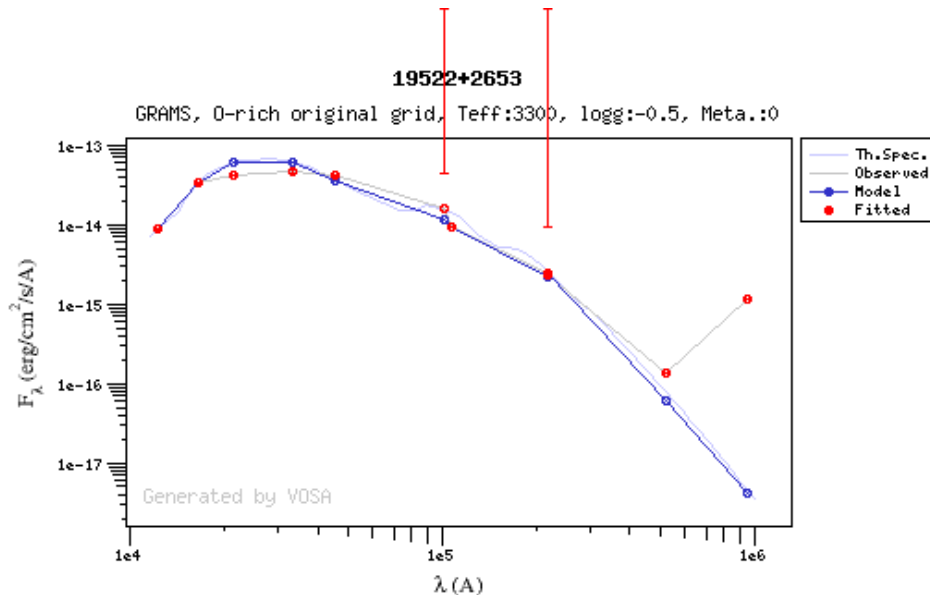
• 10: good_IRAS
• 10: O-rich-seq

- ~ 350 AGB, Miras o OH/IR
 - $J-K_s > 0.8$
 - $V_t - K_s > 4.0$
- $\sim 10^5$ in TGAS
- ~ 30.000 with IRAS counter.
- ~ 1200 O-rich AGB candidate



Study of AGB with TGAS

Tycho2-2MASS-Simbad-IRAS

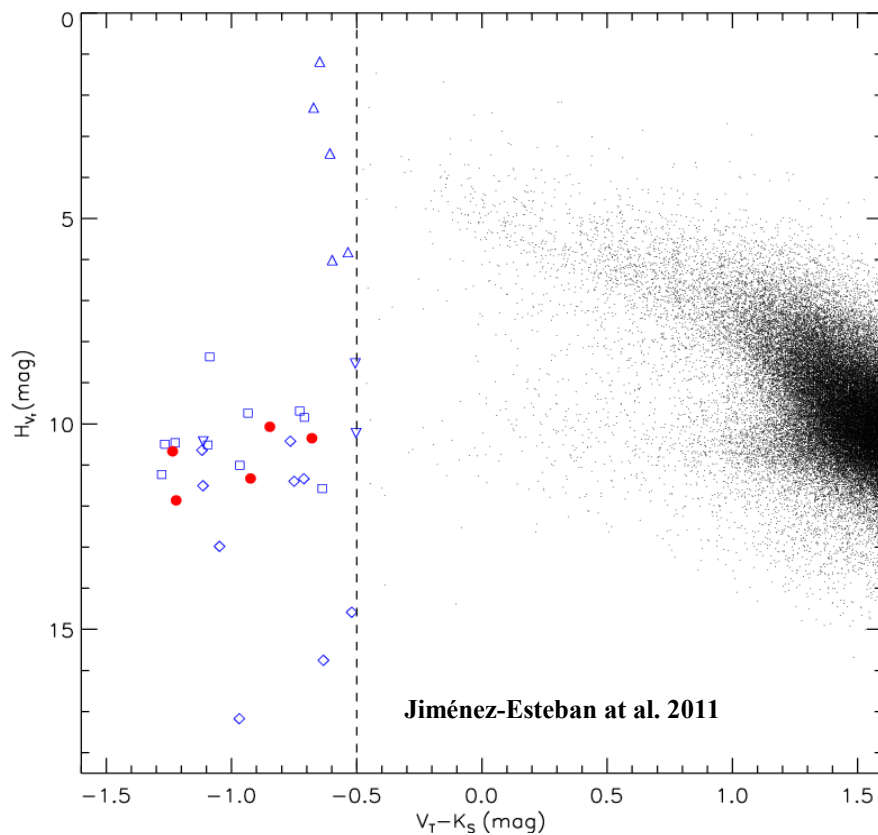


- ~350 AGB, Miras o OH/IR
 - J-Ks>0.8
 - Vt-Ks>4.0
- ~10⁵ in TGAS
- ~30.000 with IRAS counter.
- ~1200 O-rich AGB candidate
- VOSA: SED, L, Teff



Study of WD with TGAS

Tycho2-2MASS-Simbad

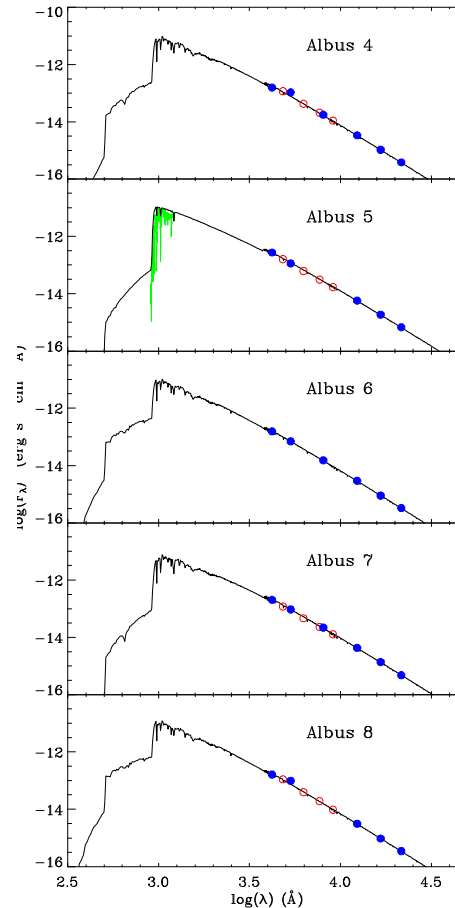


- $V_t - K_s < -0.5$
 - Os
 - sdB
 - WD
 - 5 unknown
- ~ 1100 in TGAS
 - $\sim 50\%$ unknown



Study of WD with TGAS

Tycho2-2MASS-Simbad



Jiménez-Esteban et al. 2011

- $V_t - K_s < -0.5$
 - Os
 - sdB
 - WD
 - 5 unknown
- ~1100 in TGAS
 - ~ 50% unknown
- VOSA: SED, L, T_{eff} , $\log(g)$



Study of evolved stars with TGAS



Thanks!!