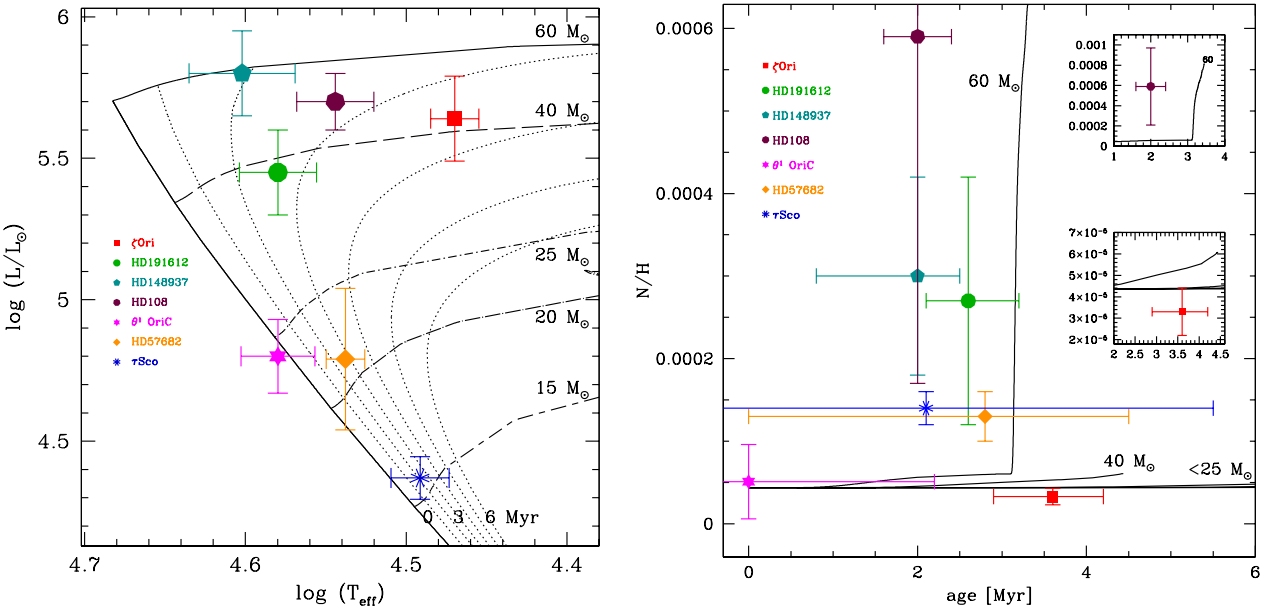

(a) v=100 km s^{-1} (b) v=100 km s^{-1}