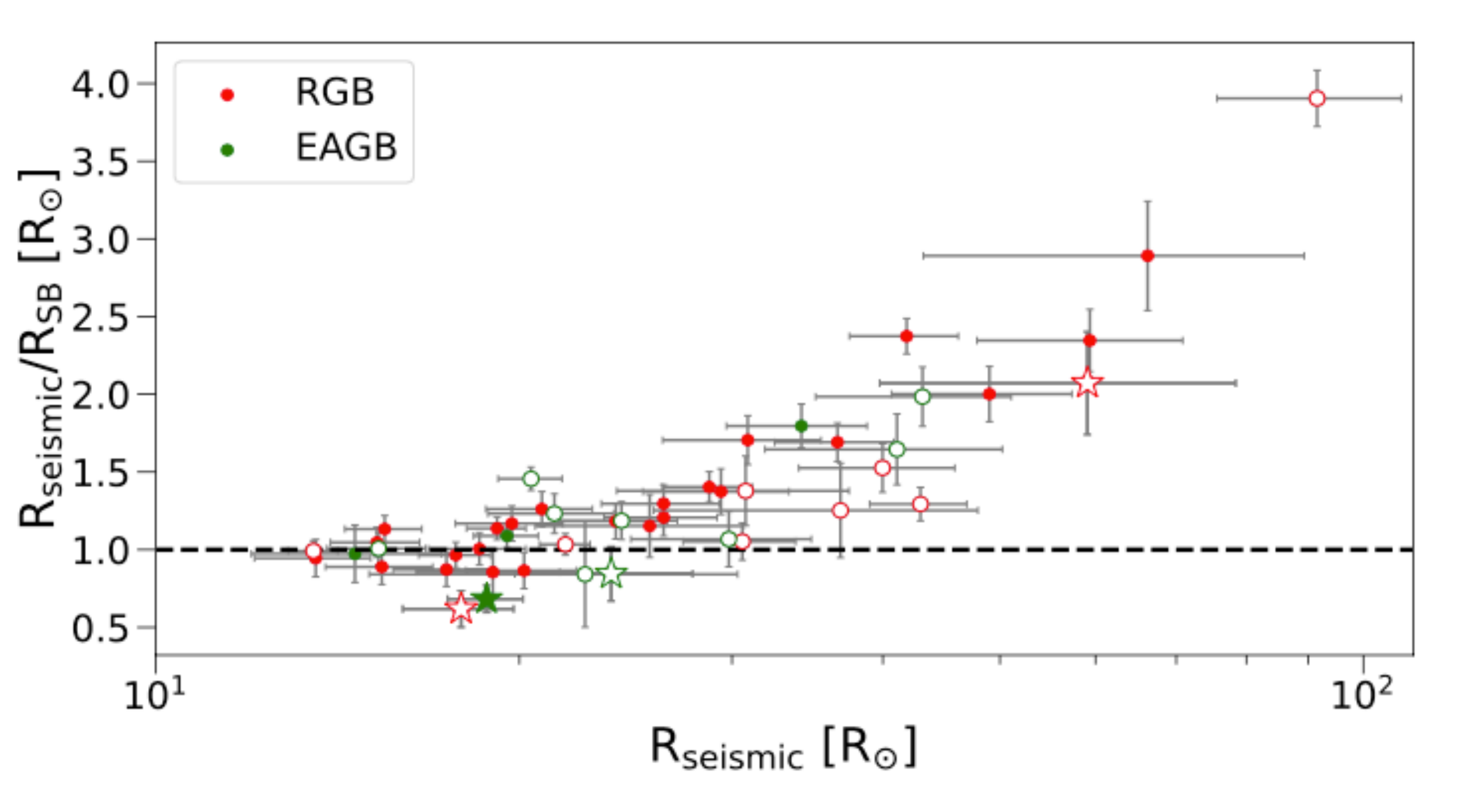


Seismic Quantities

Information that we can obtain

$$\nu_{max} \propto g T_{eff}^{-1/2}$$

$$\Delta\nu \propto \rho^{-1/2}$$



~~$$\left(\frac{M}{M_{\odot}}\right) = \left(\frac{\nu_{max}}{\nu_{max,\odot}}\right)^3 \left(\frac{\Delta\nu}{\Delta\nu_{\odot}}\right)^{-4} \left(\frac{T_{eff}}{T_{eff,\odot}}\right)^{3/2} \quad (1)$$~~

~~$$\left(\frac{M}{M_{\odot}}\right) = \left(\frac{\Delta\nu}{\Delta\nu_{\odot}}\right)^2 \left(\frac{L}{L_{\odot}}\right)^{3/2} \left(\frac{T_{eff}}{T_{eff,\odot}}\right)^{-6} \quad (2)$$~~

$$\left(\frac{M}{M_{\odot}}\right) \simeq \left(\frac{\nu_{max}}{\nu_{max,\odot}}\right) \left(\frac{L}{L_{\odot}}\right) \left(\frac{T_{eff}}{T_{eff,\odot}}\right)^{-7/2} \quad (3)$$

~~$$\left(\frac{M}{M_{\odot}}\right) \simeq \left(\frac{\nu_{max}}{\nu_{max,\odot}}\right)^{12/5} \left(\frac{\Delta\nu}{\Delta\nu_{\odot}}\right)^{-14/5} \left(\frac{L}{L_{\odot}}\right)^{3/10} \quad (4)$$~~

$$\left(\frac{R}{R_{\odot}}\right) \simeq \left(\frac{\nu_{max}}{\nu_{max,\odot}}\right) \left(\frac{\Delta\nu}{\Delta\nu_{\odot}}\right)^{-2} \left(\frac{T_{eff}}{T_{eff,\odot}}\right)^{1/2}$$

$$R_{SB} = \left(\frac{L}{4\pi\sigma T^4}\right)^{1/2}$$

Masses

On RGB and E-AGB

- They found that the distribution of masses in RGB is slightly skewed, so here it's shown the mode
- The symbols of stars are thought to be result of merger events or miss classified objects, and won't be used for the rest of the analysis

