Starburst
Theoretical Spectra for Interpreting /UV Spectra from New, Large Telescopes

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Bursty Star Formation Naturally Explains the Abundance of Bright Galaxies at Cosmic Dawn

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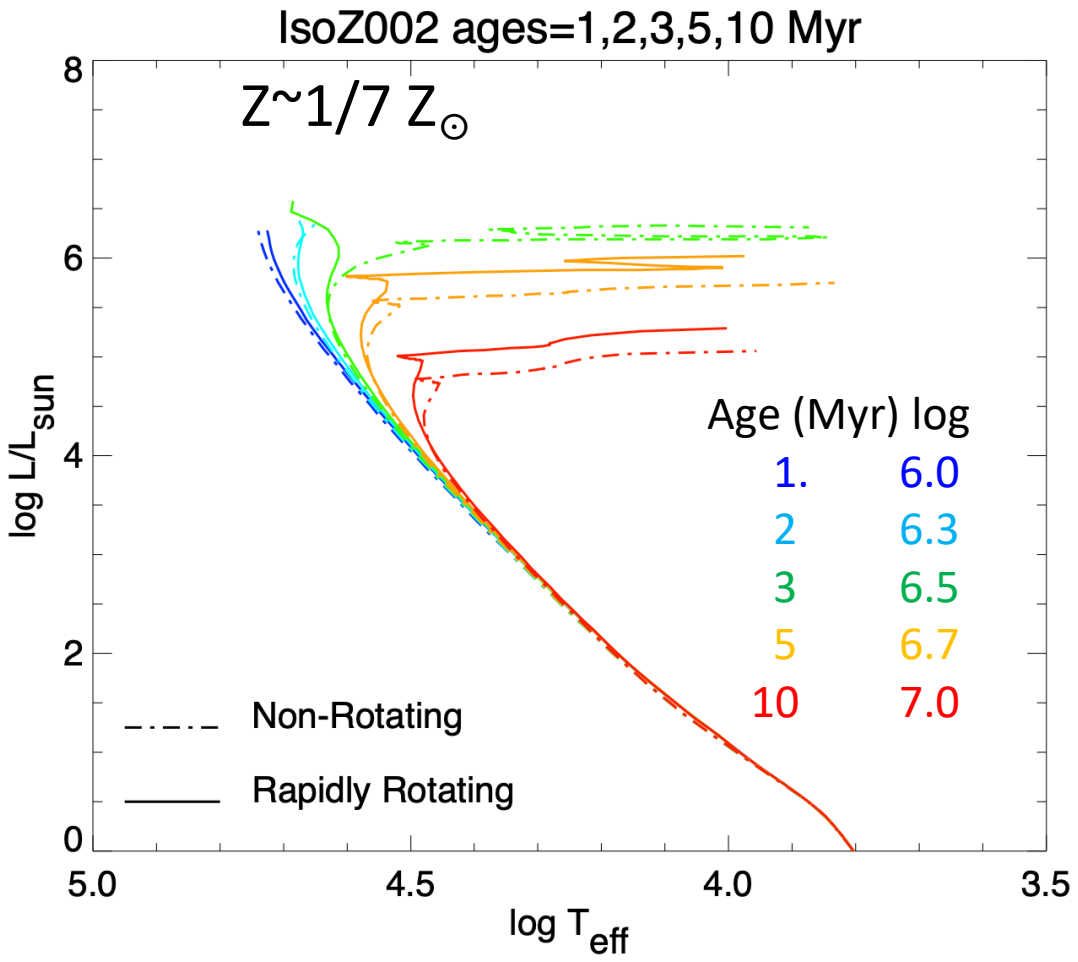
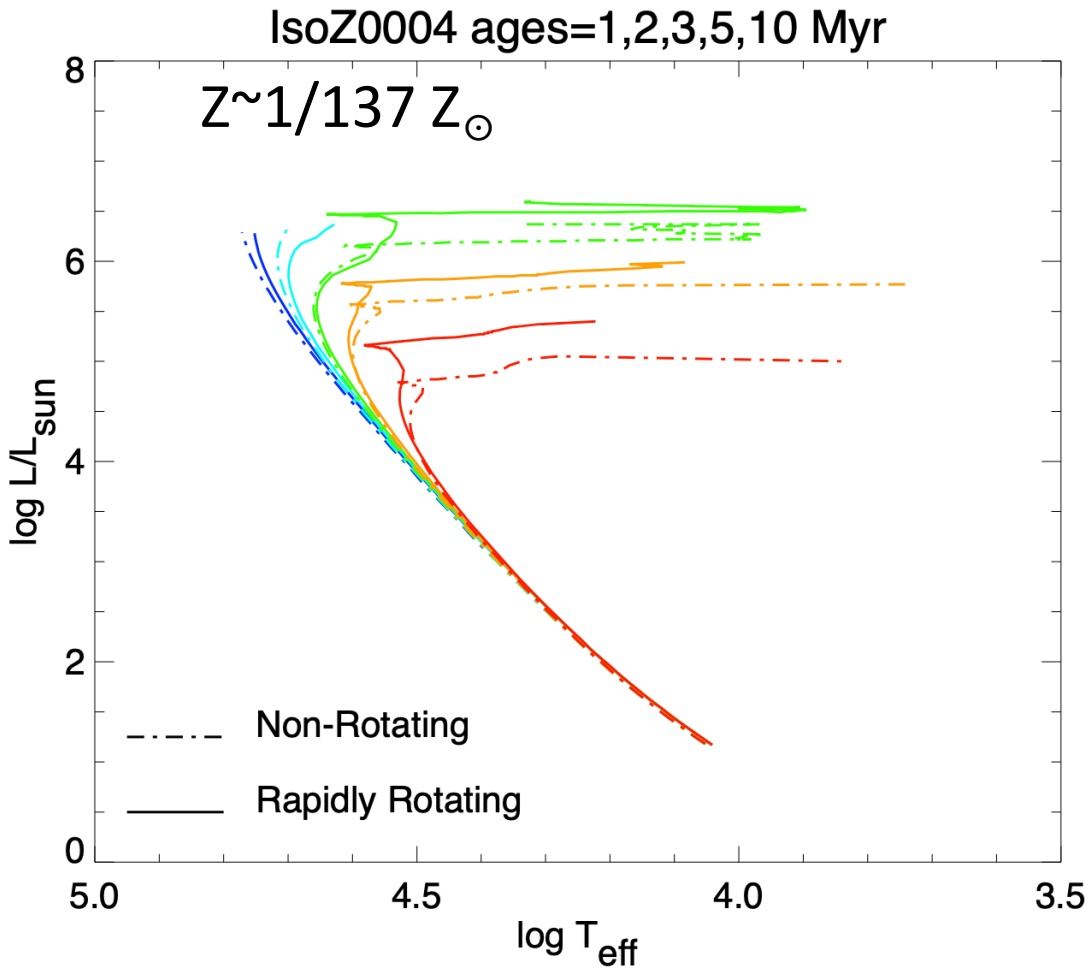
TAKE-AWAY: Get your EUV-UV-Optical spectra from:
https://www.as.arizona.edu/~hubeny/isochrones/

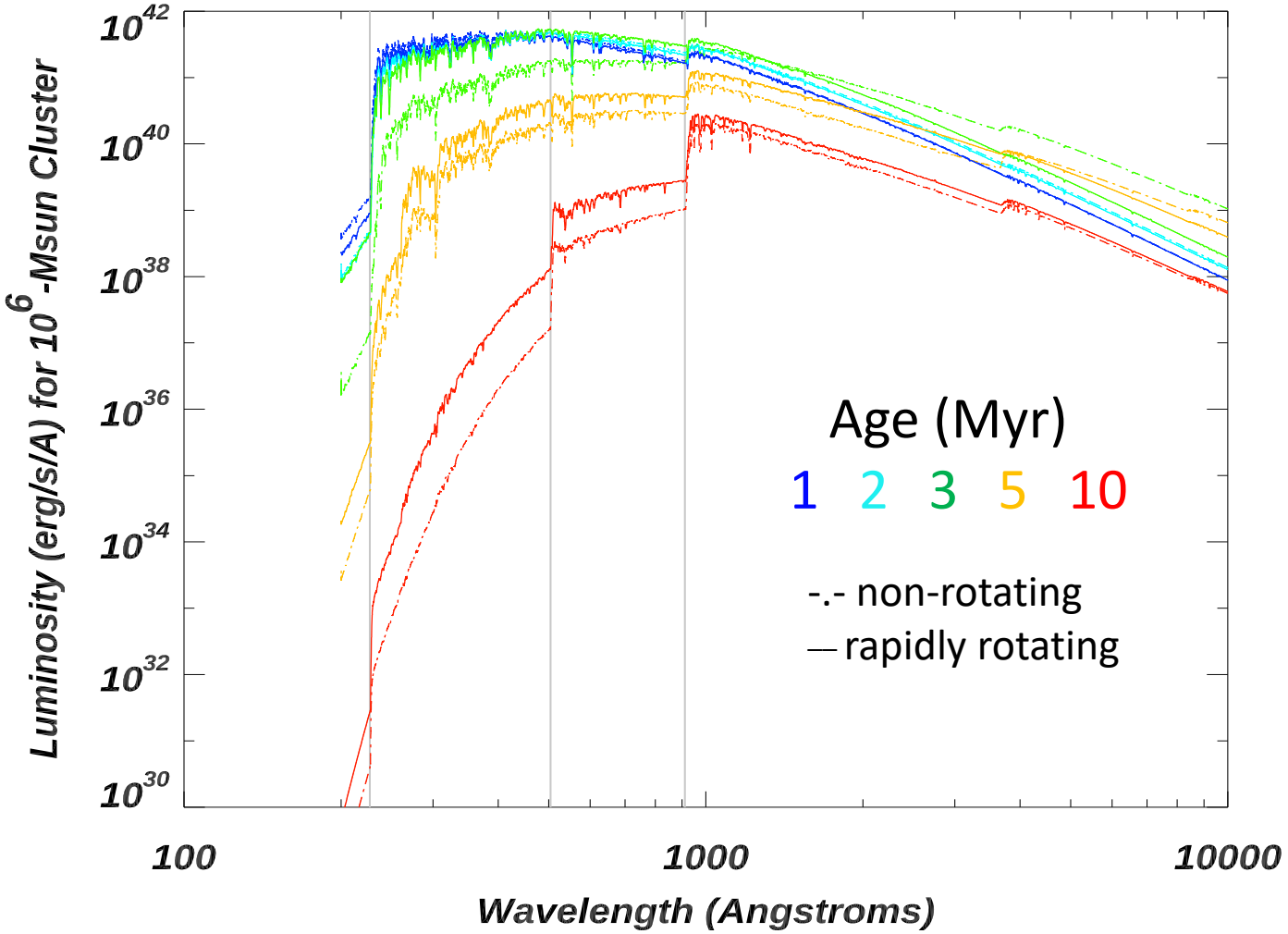
Rapidly rotating stars are hotter and more luminous than non-rotating stars



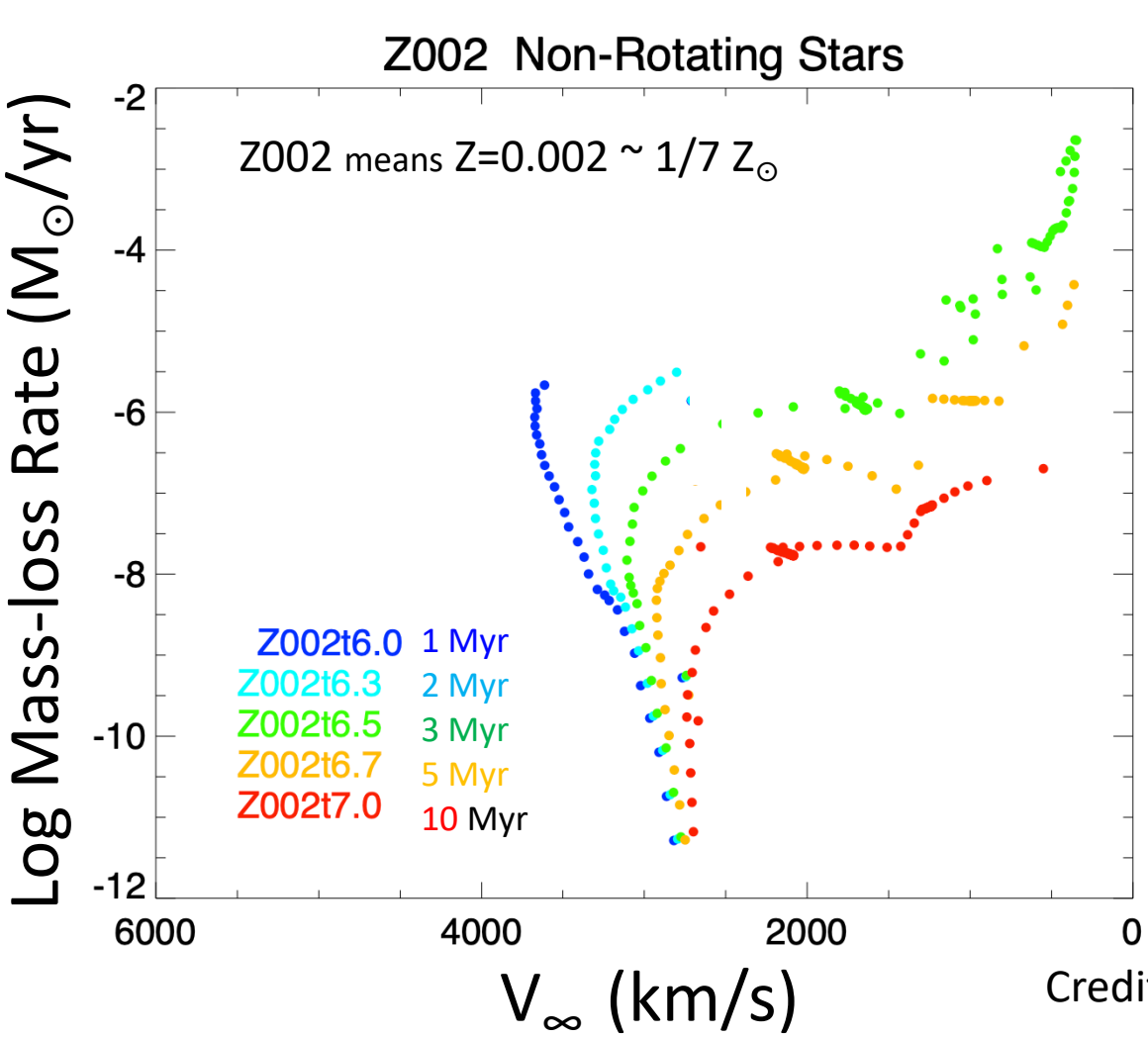


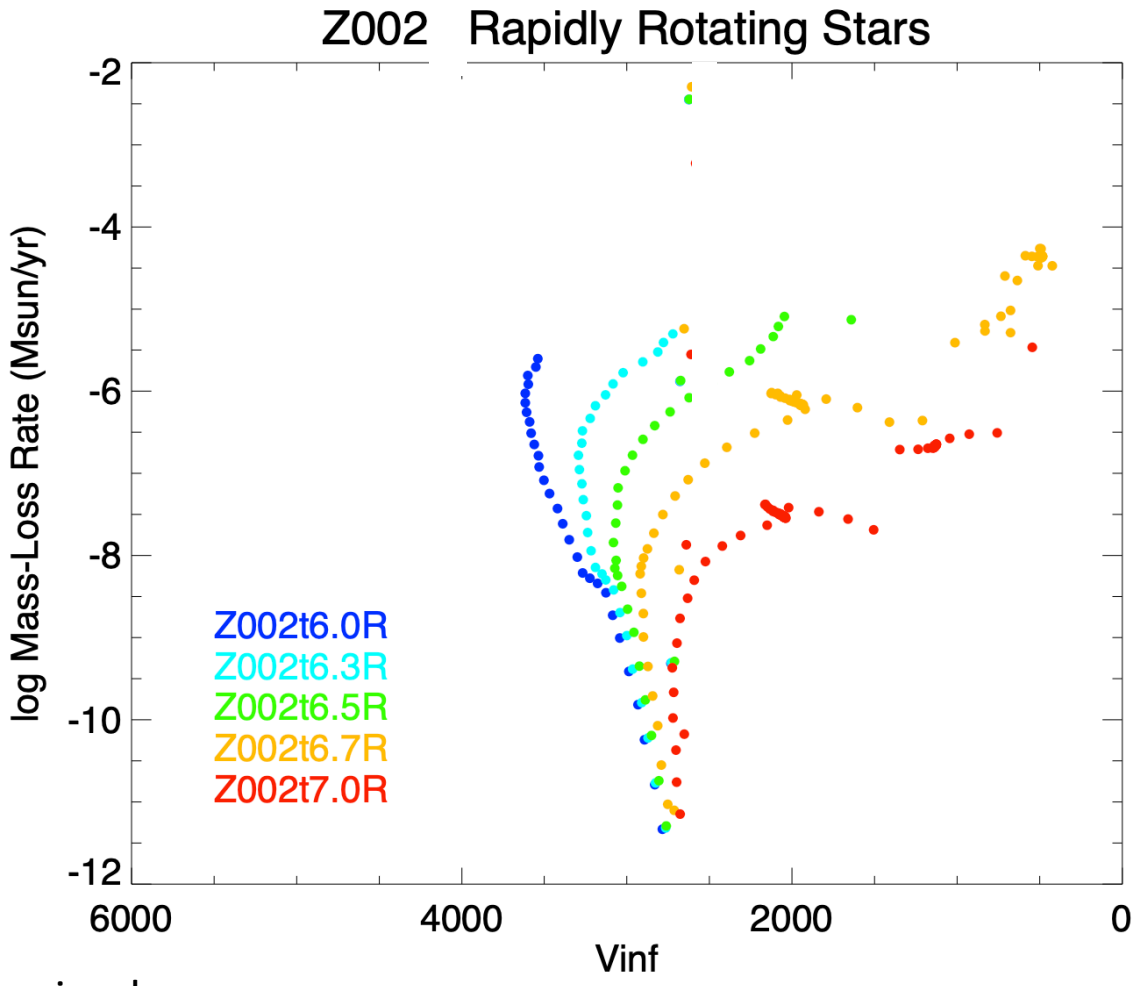
Credit: Geneva evolutionary tracks and isochrones

The spectral isochrones cover 200-10,000 Å at RP=20,000.
The EUV spectrum can be used to predict the nebular & ISM spectrum.
The ionizing power drops off in only a few million years



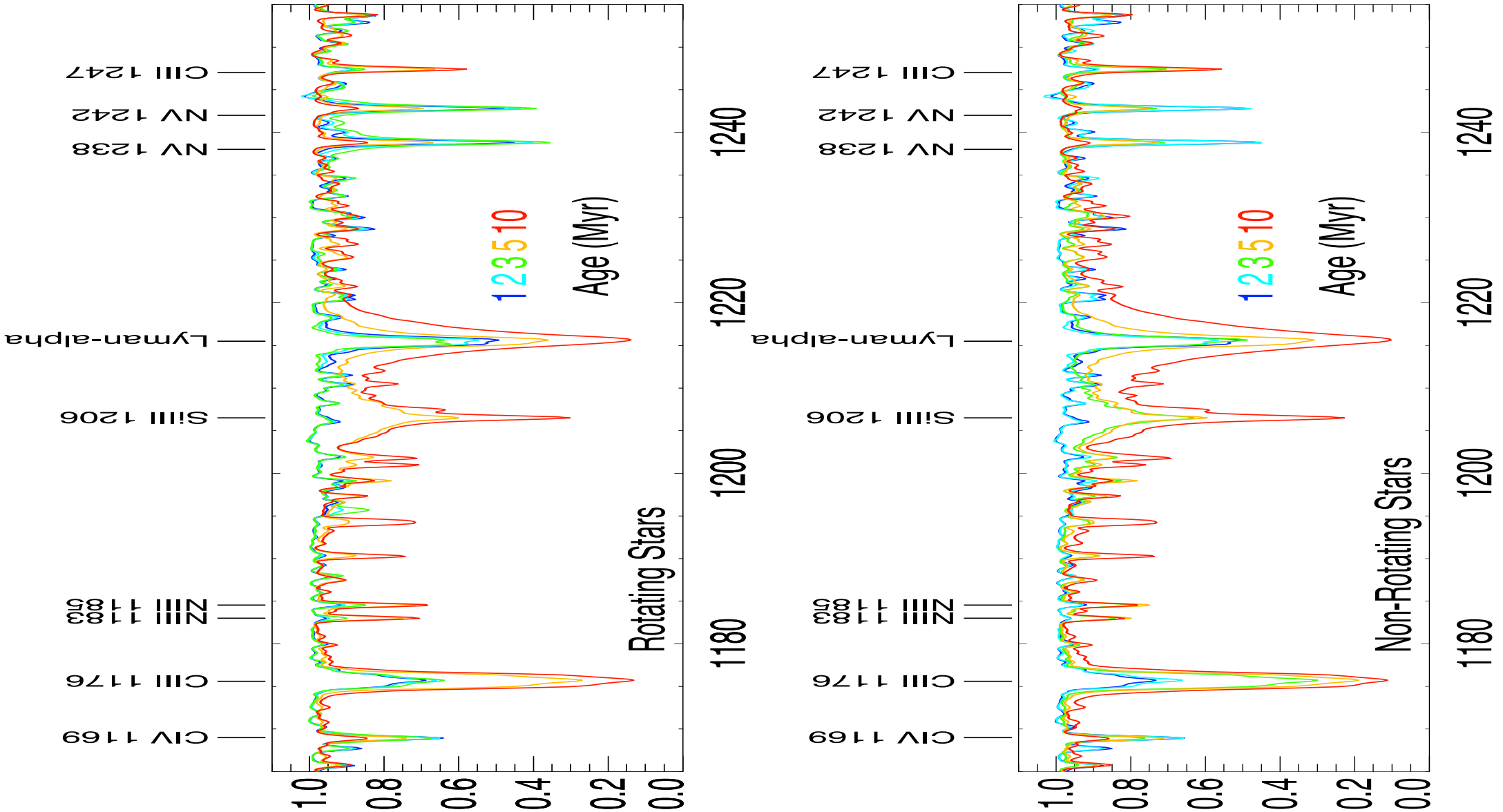
Winds of younger clusters have higher $\dot{M}$ and V_∞



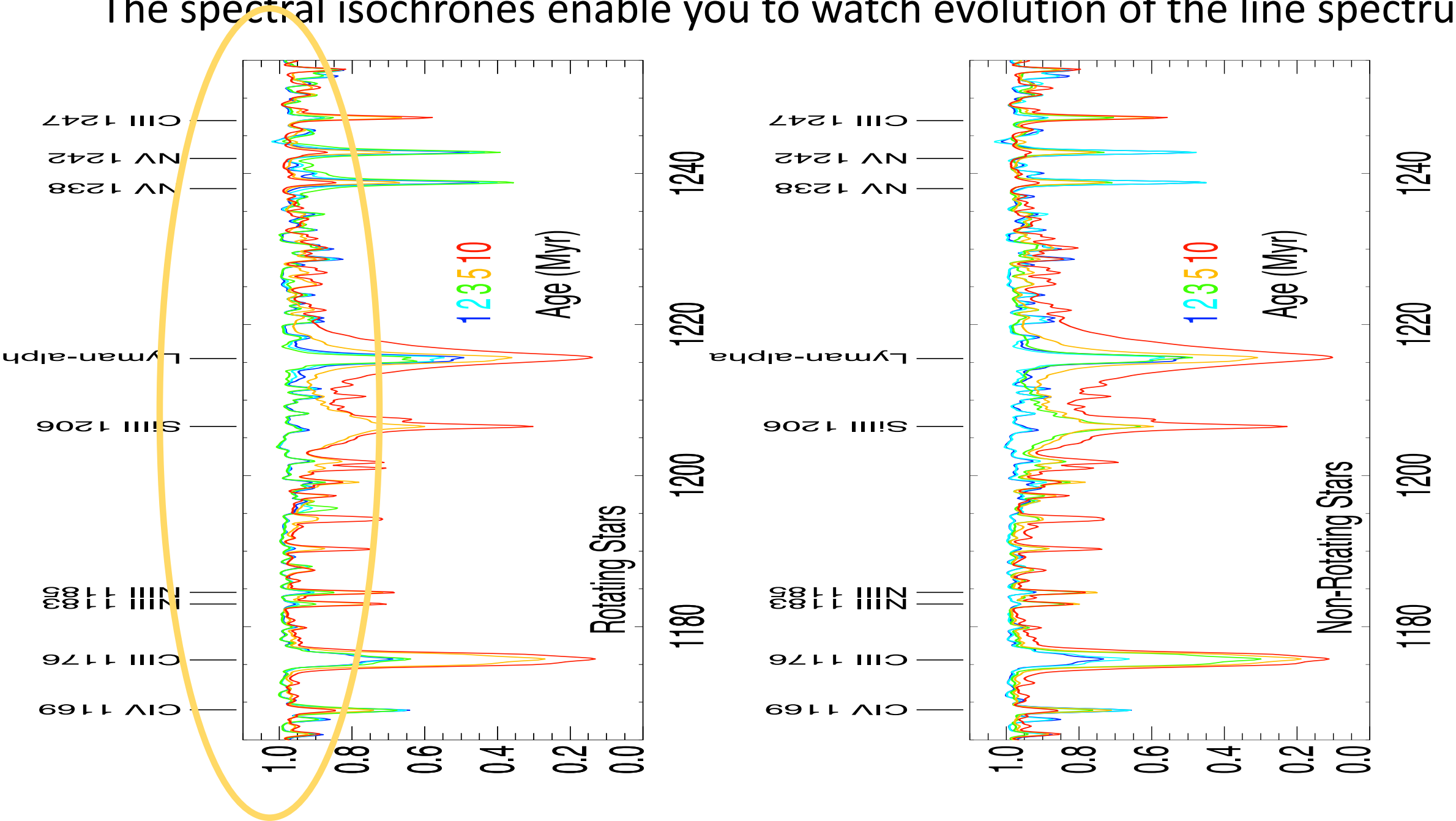


Credit: Geneva isochrones

The library has NLTE photospheric spectra of rotating & non-rotating stars



The spectral isochrones enable you to watch evolution of the line spectrum



The computed spectra can be compared to observed spectrum (black), e.g. HST/COS spectrum of NGC 5253 cluster #5