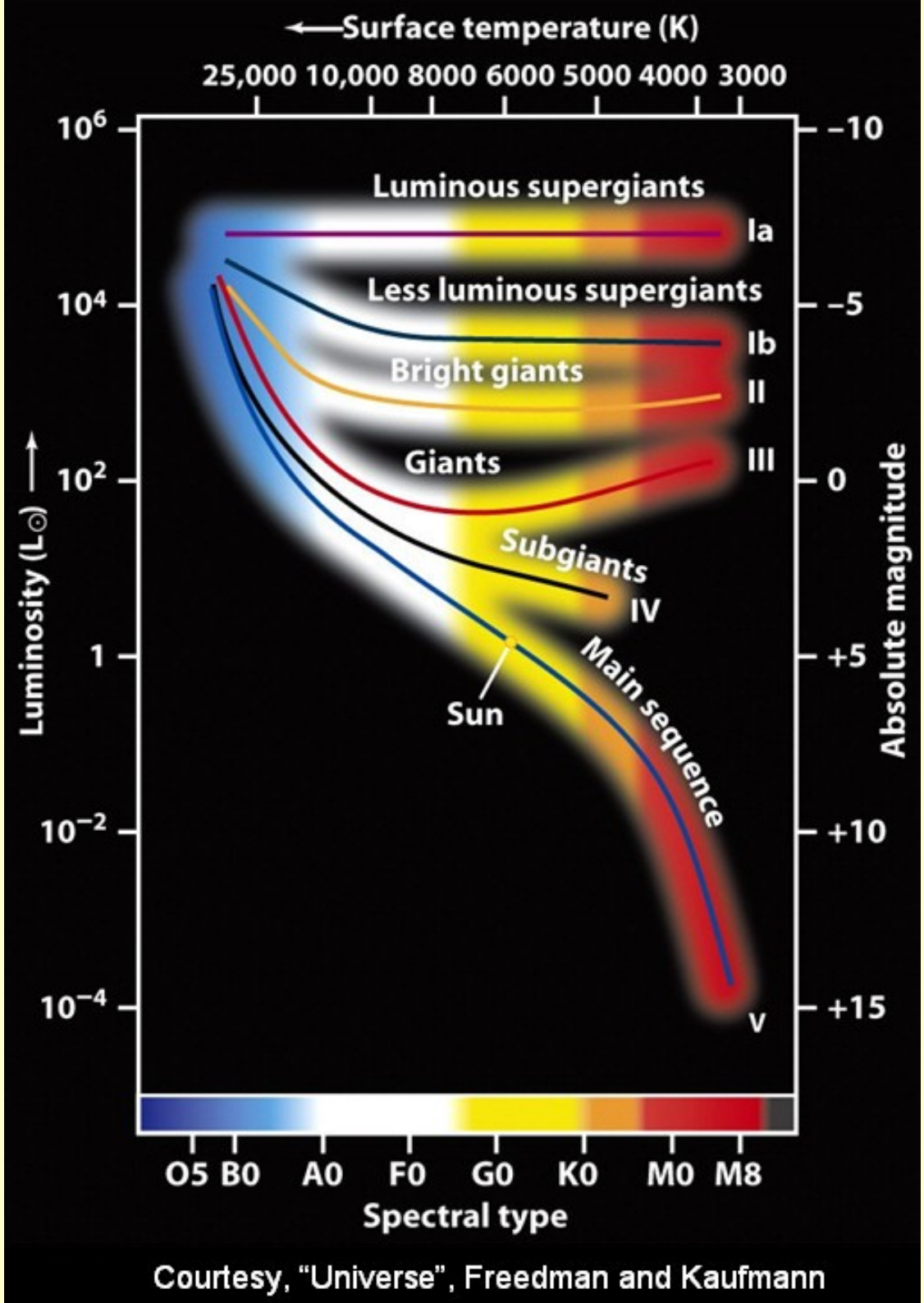
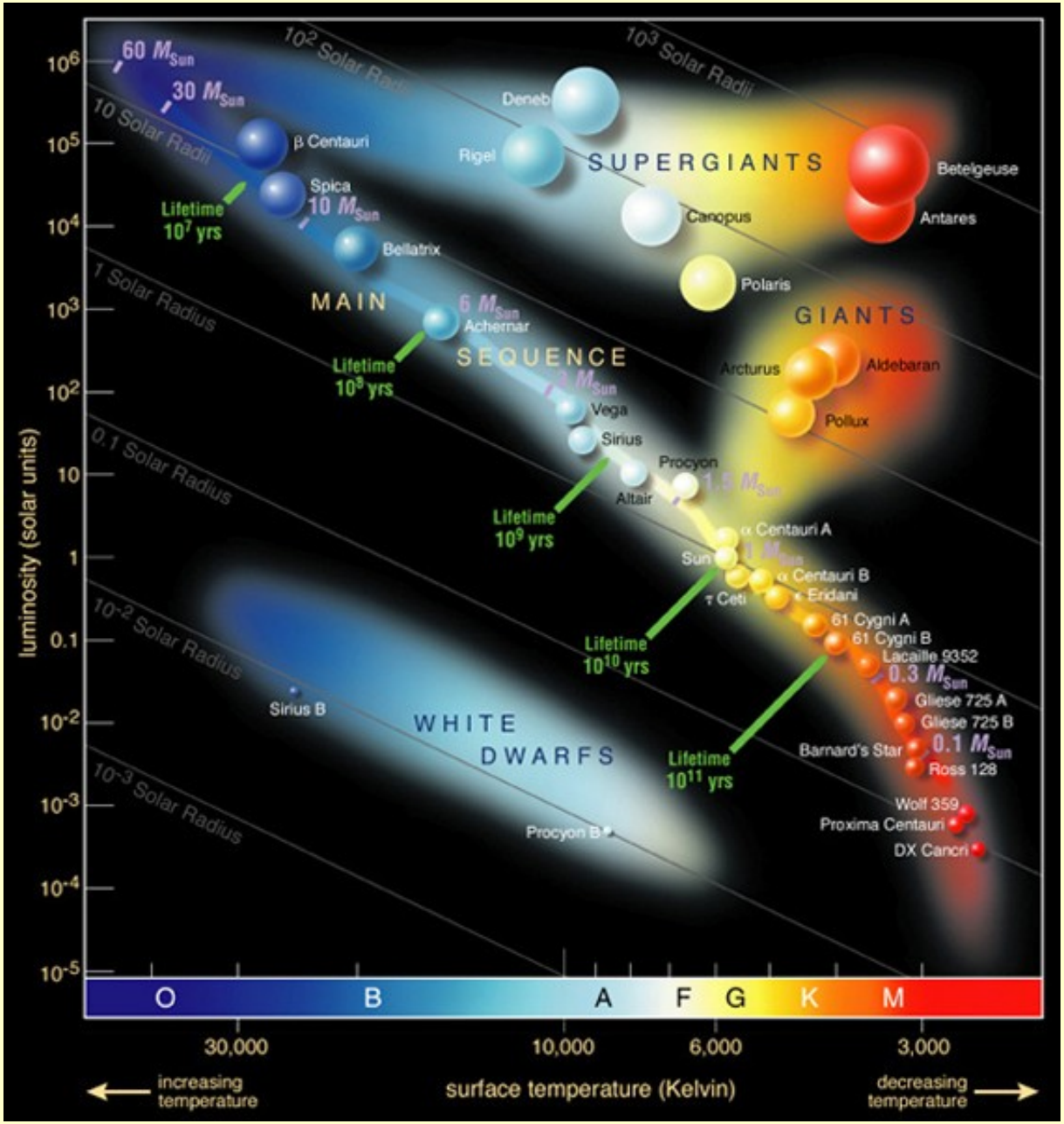
HR diagram

Different luminosity classes.



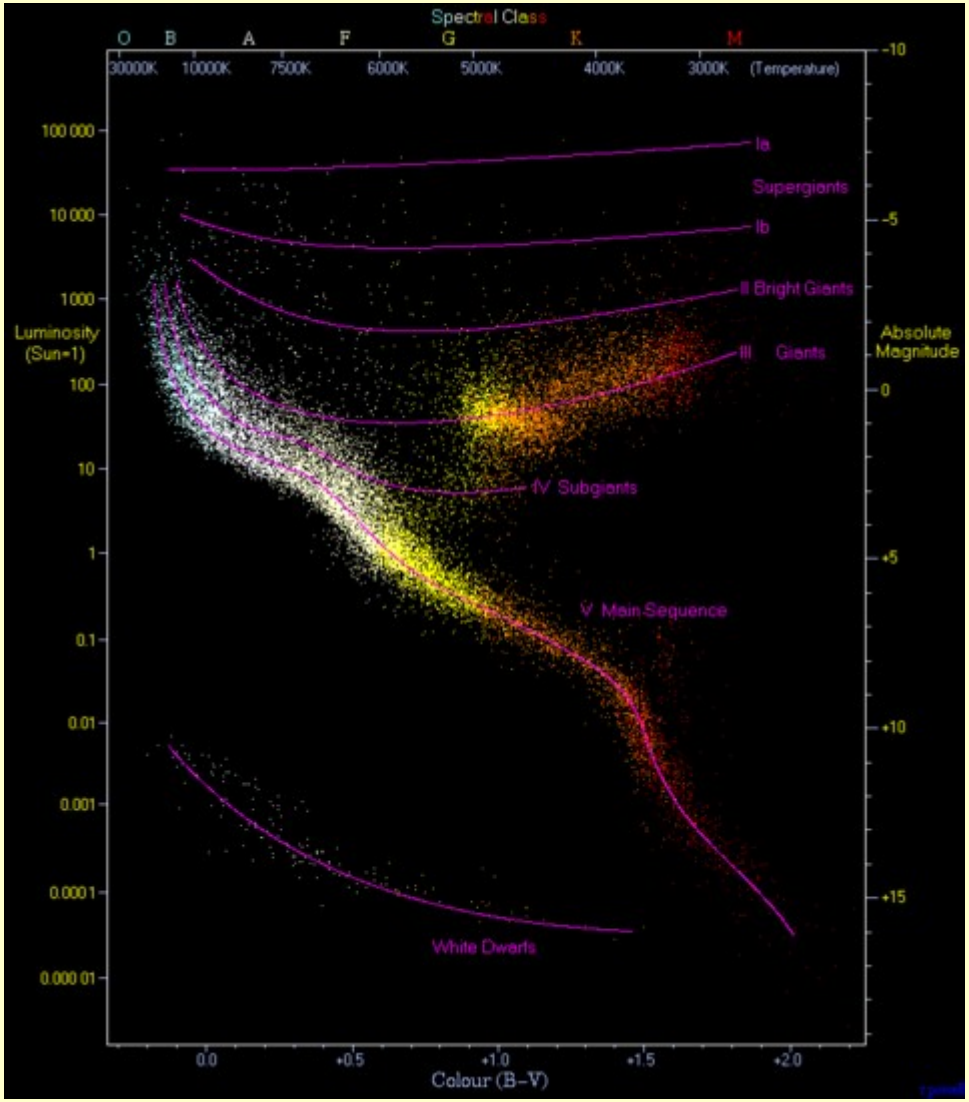
Hertzsprung-Russel diagram

An HR diagram showing many well known stars in the Milky Way galaxy.



Credit to Wikipedia-Website

HR diagram

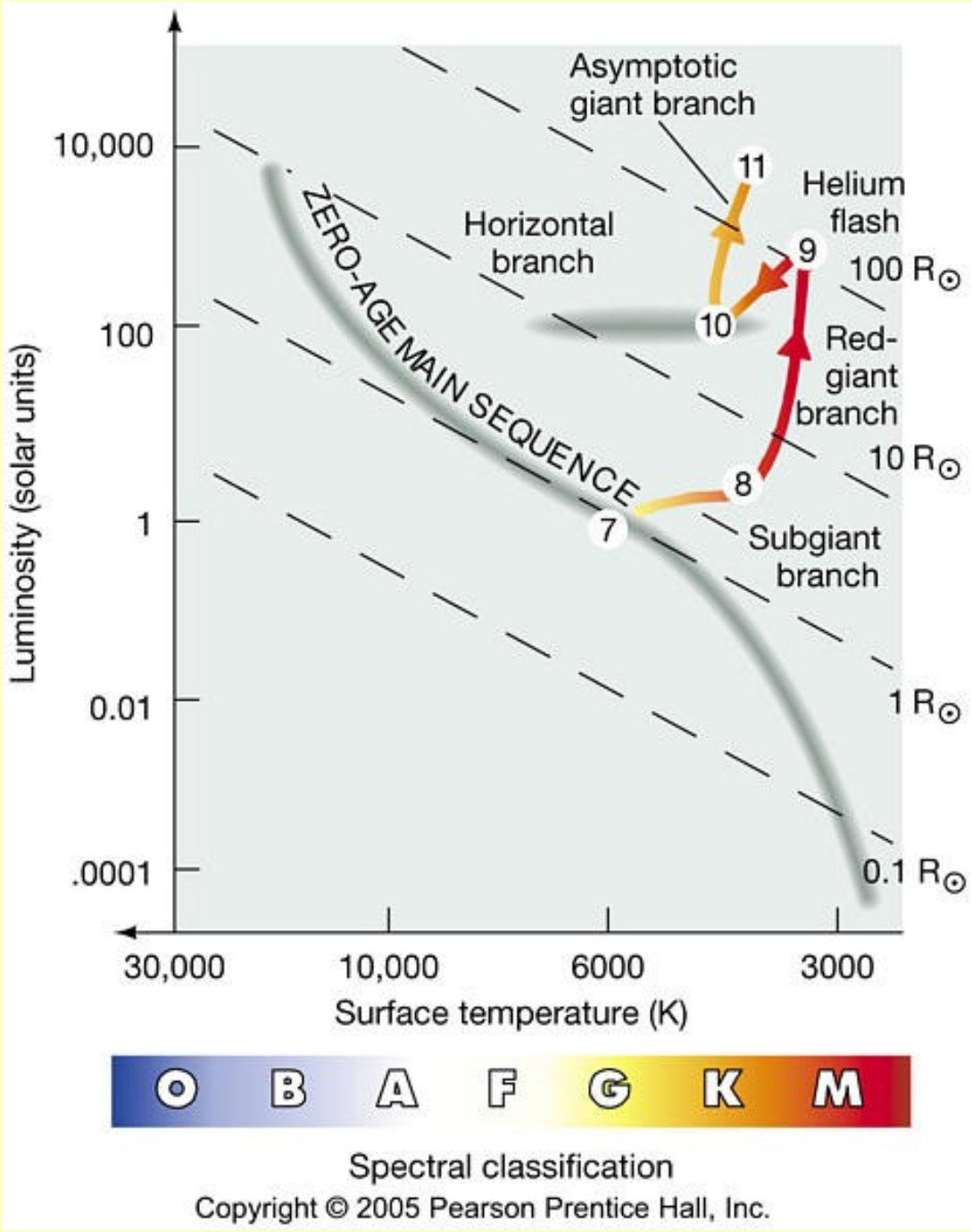


Hertzsprung–Russell diagram with 22,000 stars plotted from the Hipparcos Catalogue and 1,000 from the Gliese Catalogue of nearby stars.

Credit to Wikipedia-Website

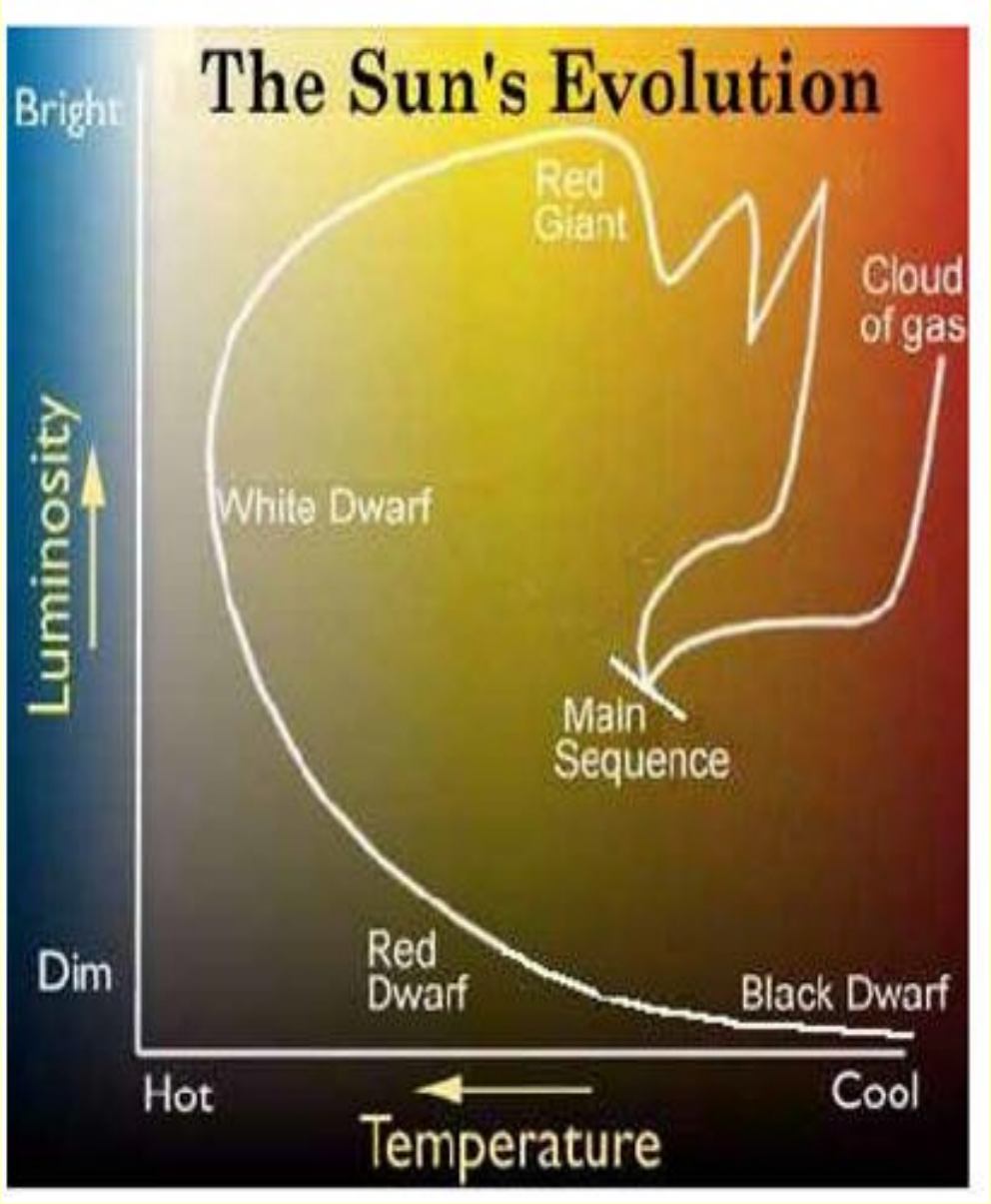
HR diagram

Evolution of a sun-like star.



See also http://astronomy.nju.edu.cn/~lixd/GA/AT4/AT420/HTML/AT42002.htm

HR/CM diagram

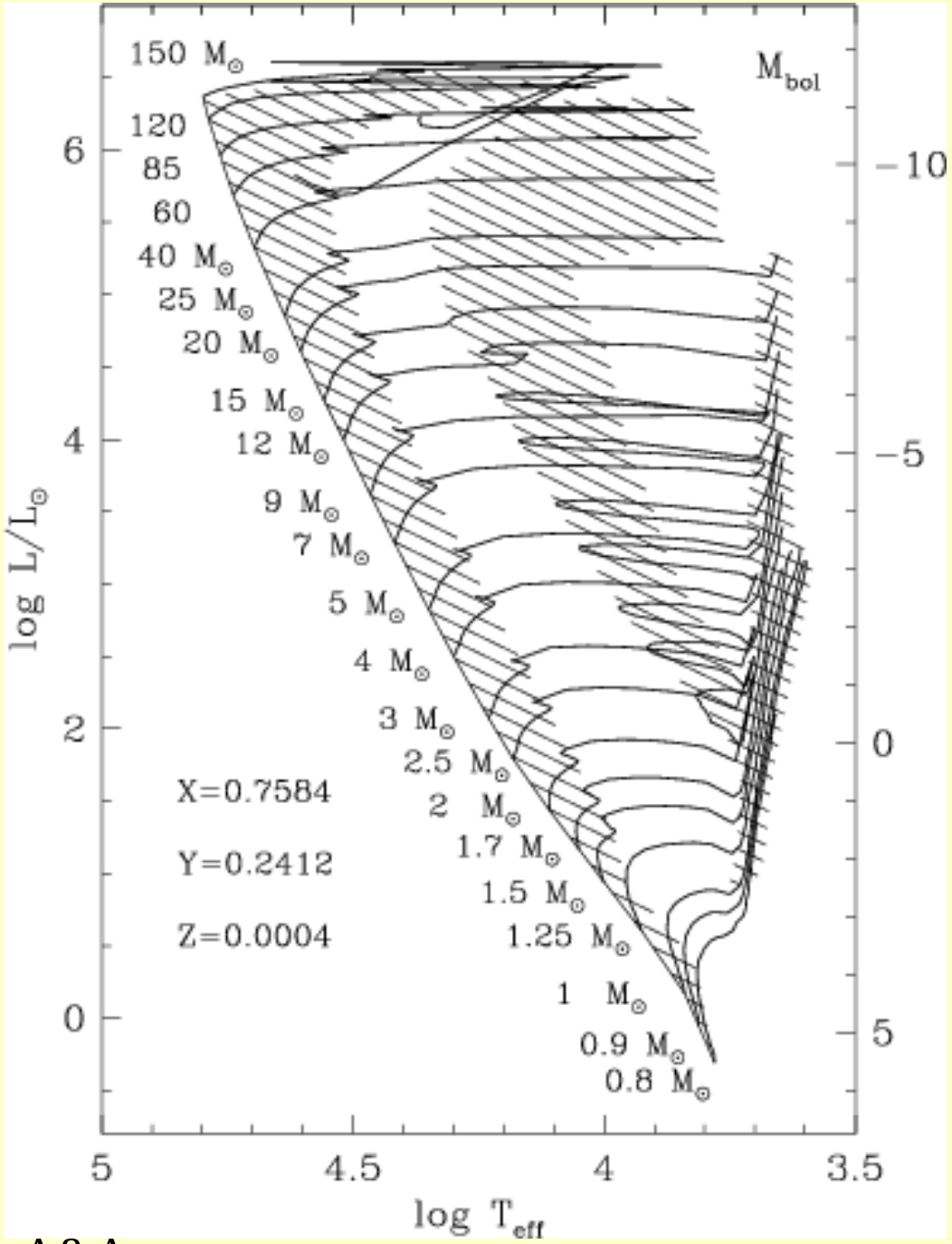


From
http://myspace.pc.edu/rarts/public_html/courses/astronomy/notes/Individual_Stars/Individual_Stars.html

HR/CM diagram

An example of theoretical HR diagram for the ensemble of the calculated models.

Please. See the course of Prof. Matteucci for the topic “Star Evolution”.

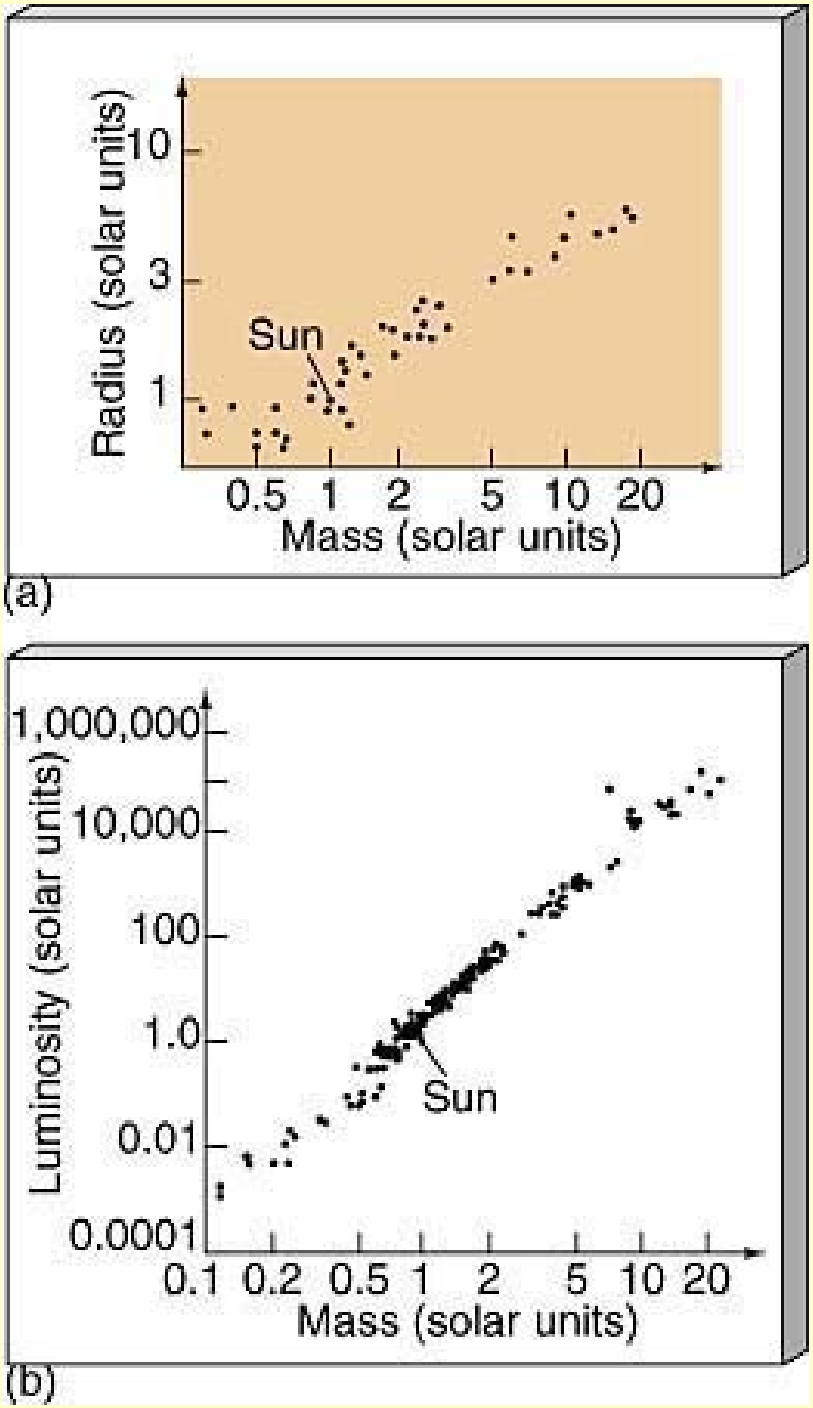


Credit to Lejeune &Schaerer, 2001, A&A

Mass-Radius

and

Mass-Luminosity relations.



(a) Dependence of stellar radius on mass for main-sequence stars. The radius increases roughly in proportion to the mass over much of the range. (b) Dependence of luminosity on mass. The luminosity increases much faster than the mass.

Credit to http://staff.on.br/jlkm/astron2e/AT_MEDIA/CH17/CHAP17AT.HTM