



Structure and Evolution of Stars

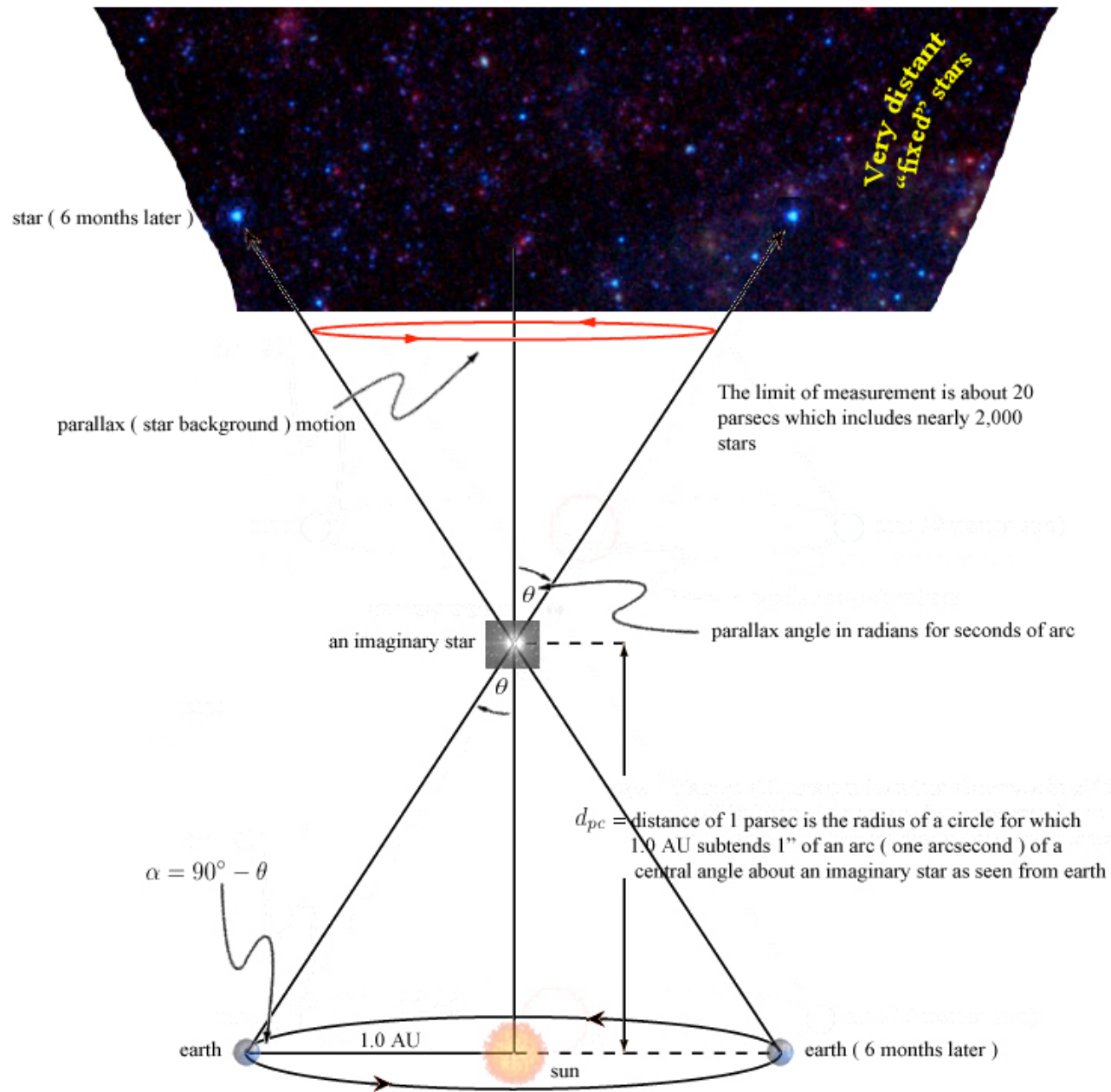
Lecture 2



NASA, ESA, CSA, STScI
Webb ERO Production Team





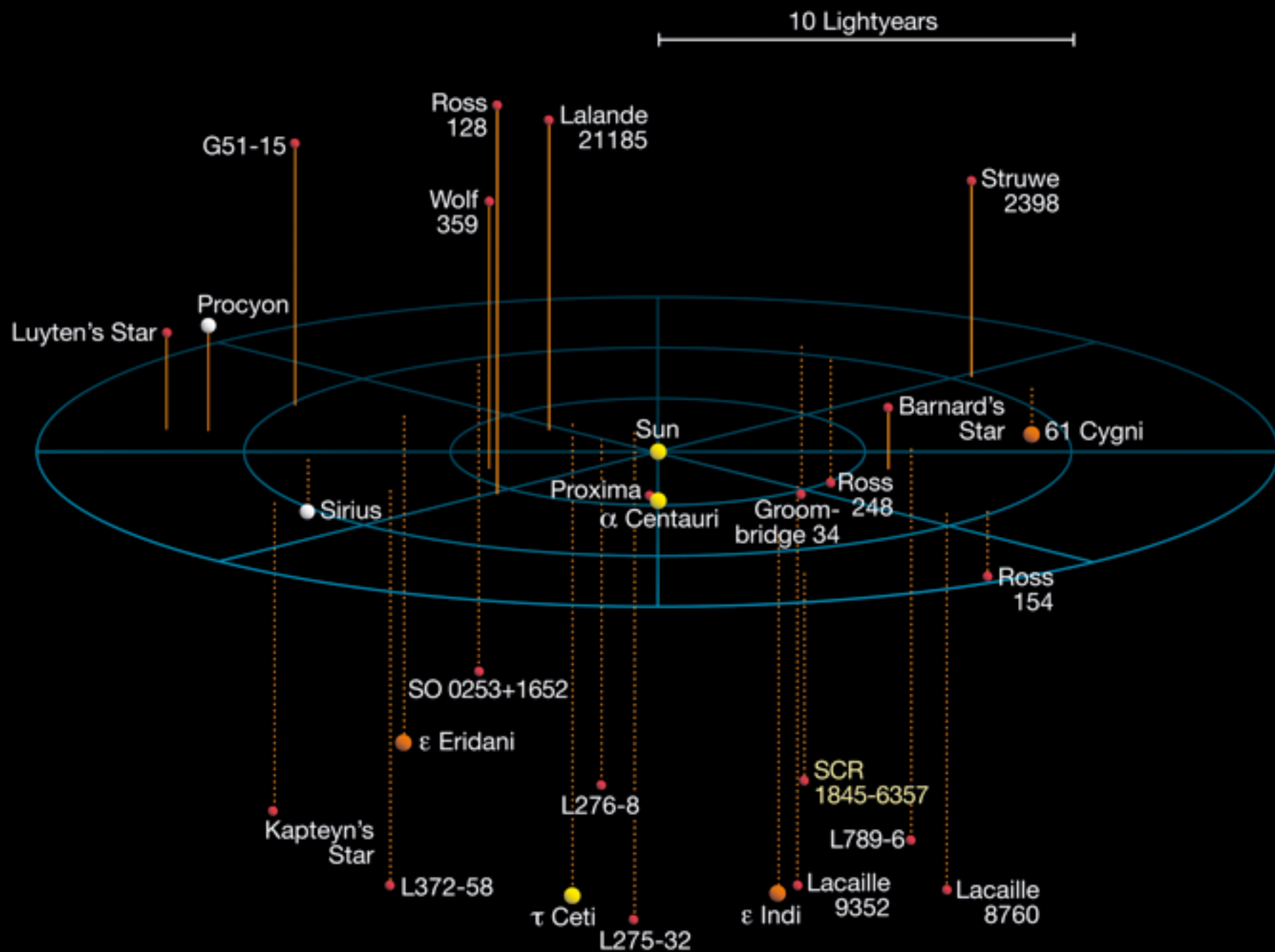


Where:

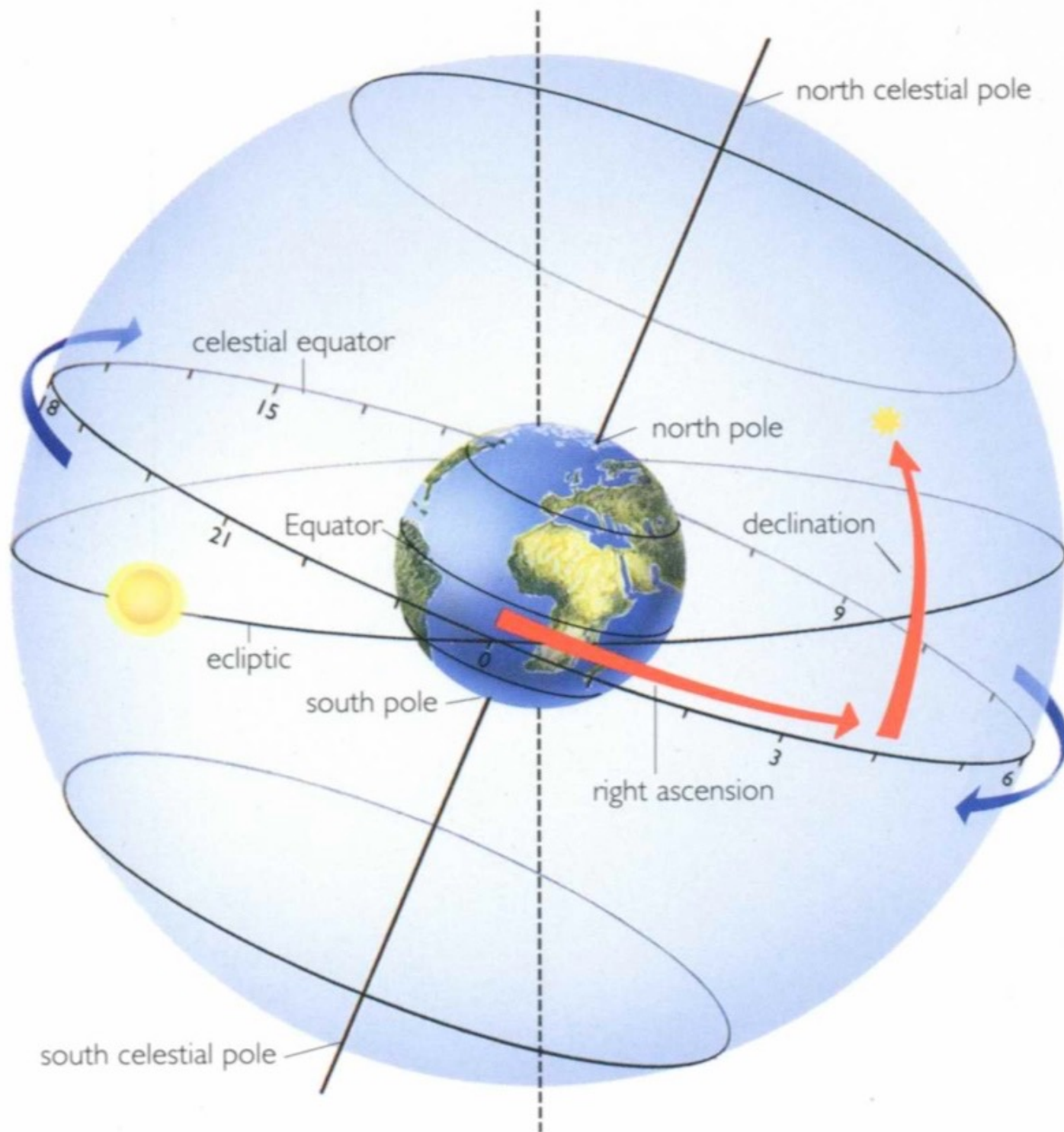
θ = angle of parallax in radians for seconds of arc

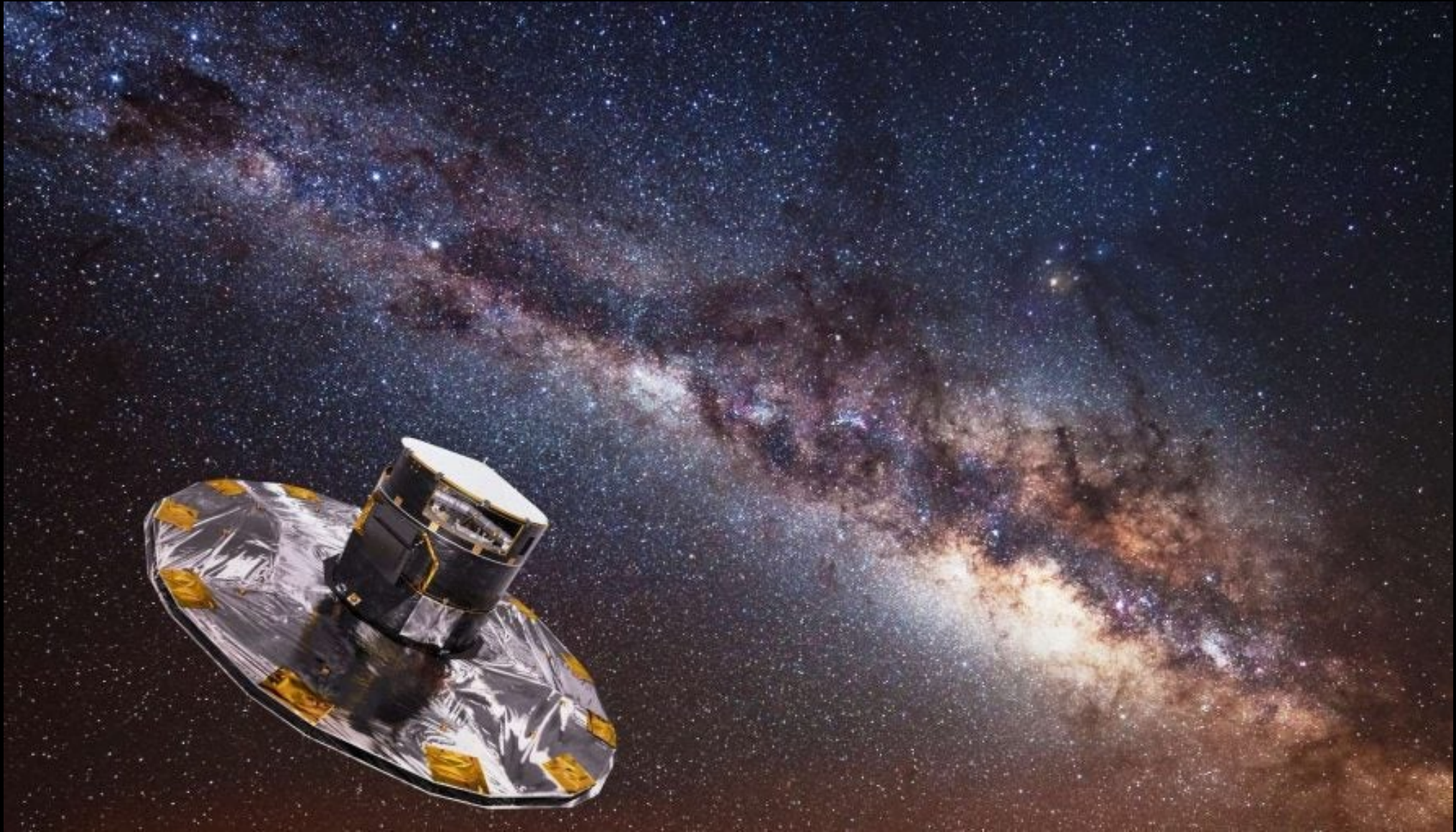
$d_{pc} = 1/\theta$, distance to an imaginary star in parsecs and is the radius of a circle for which 1.0 AU subtends 1.0" (one second) of arc of a central angle about an imaginary star as seen from earth

note: the word parsec stands for "Parallax of one arcsecond"





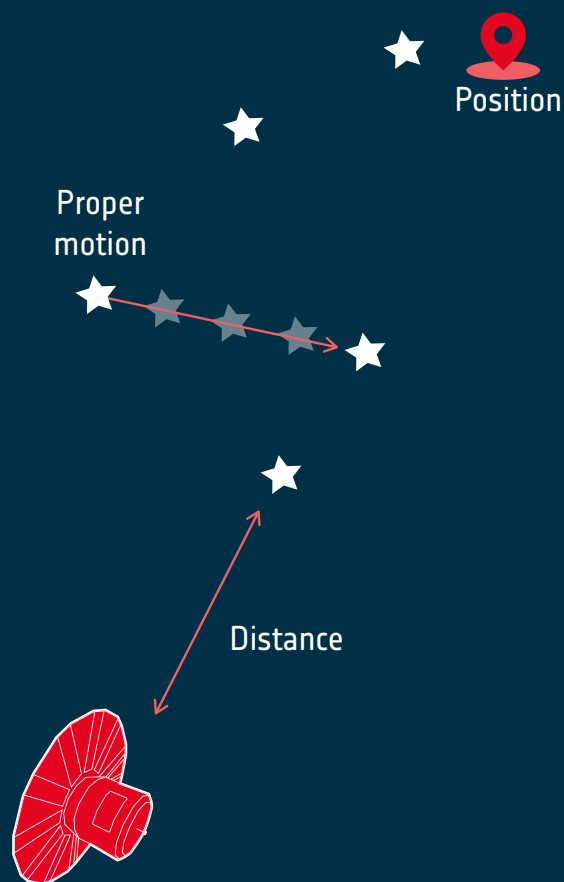




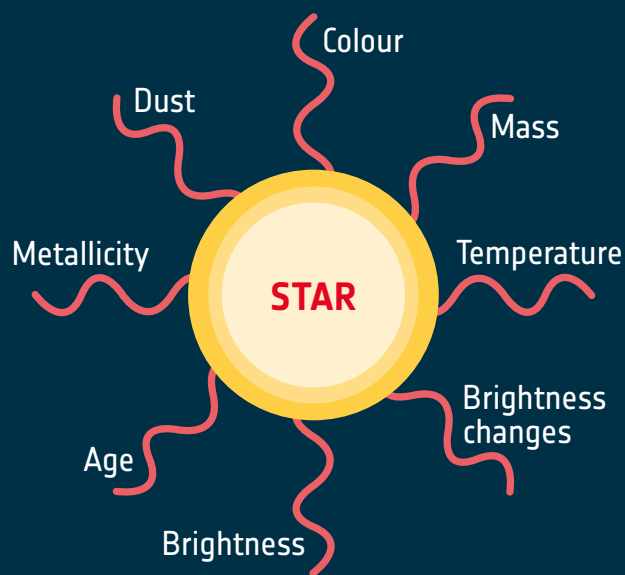
GAIA'S OBSERVING TECHNIQUES



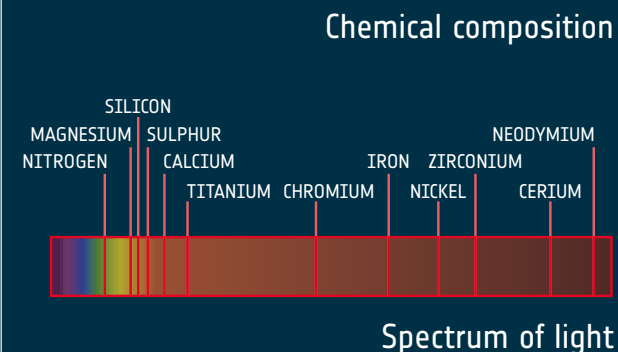
Techniques to study the stars in our cosmic neighbourhood.



ASTROMETRY



PHOTOMETRY



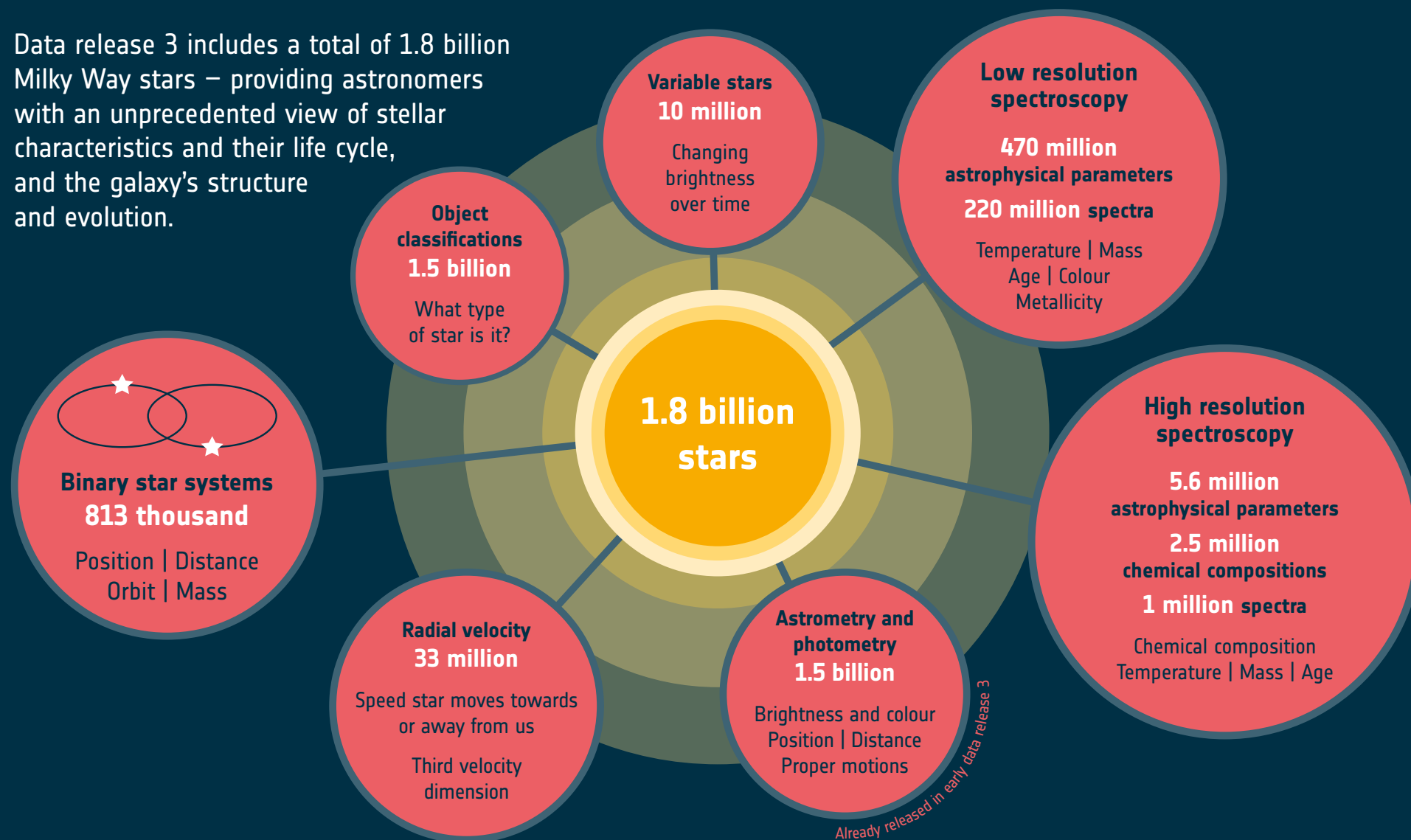
SPECTROSCOPY

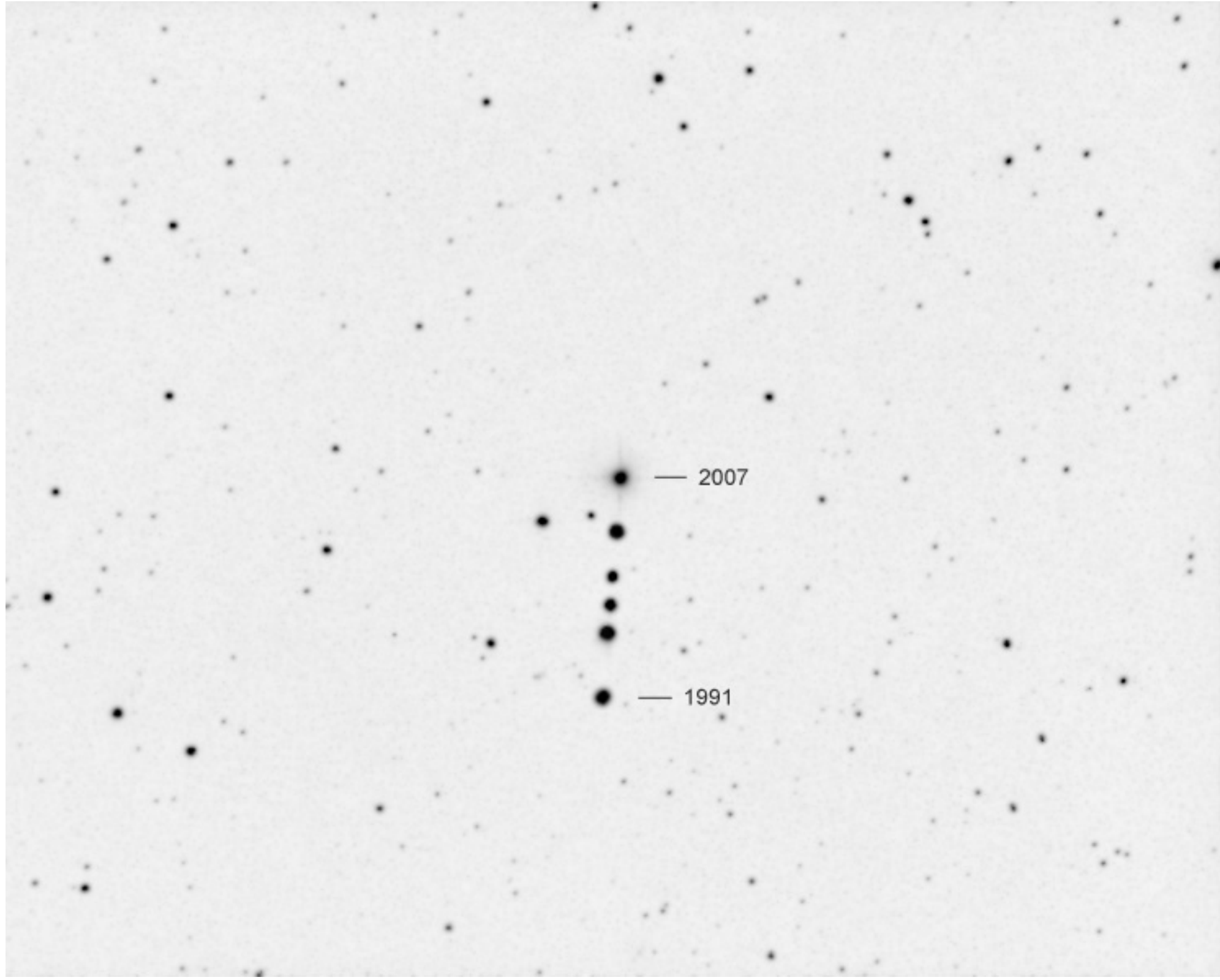


MILKY WAY STARS



Data release 3 includes a total of 1.8 billion Milky Way stars – providing astronomers with an unprecedented view of stellar characteristics and their life cycle, and the galaxy's structure and evolution.





150 JAHRE DOPPLER-PRINZIP

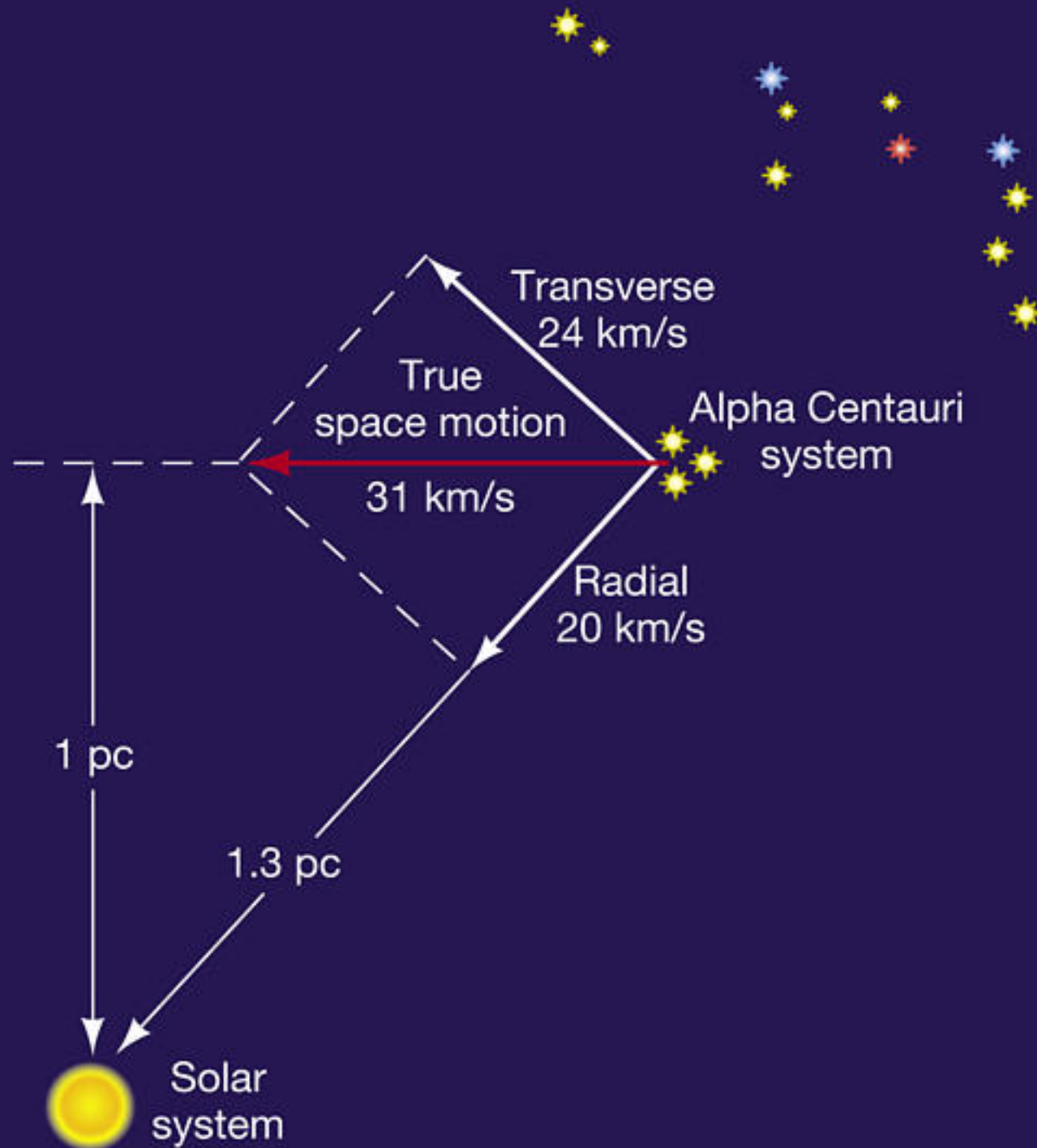
PHYSIKER



REPUBLIK ÖSTERREICH

H. HERGER

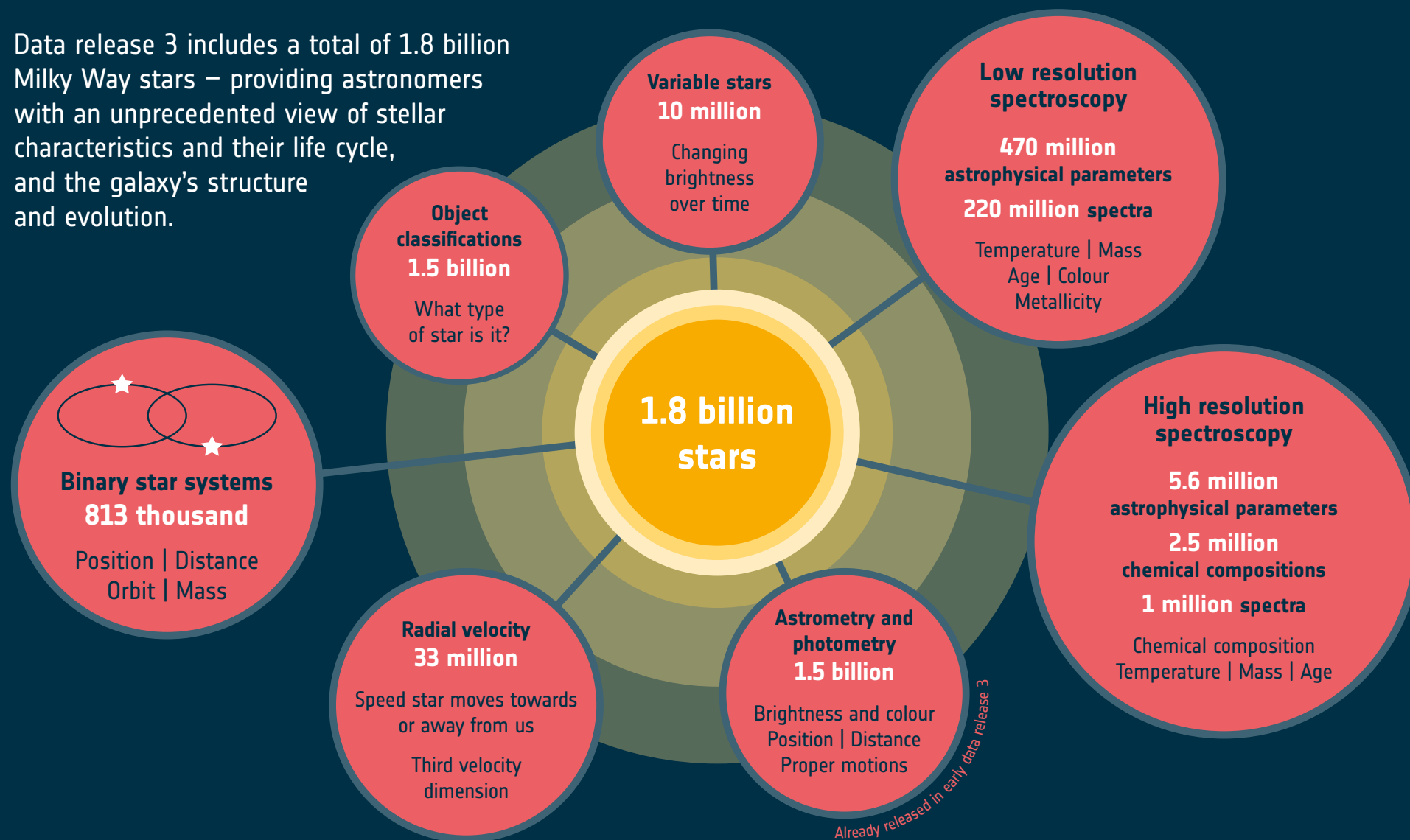
1992

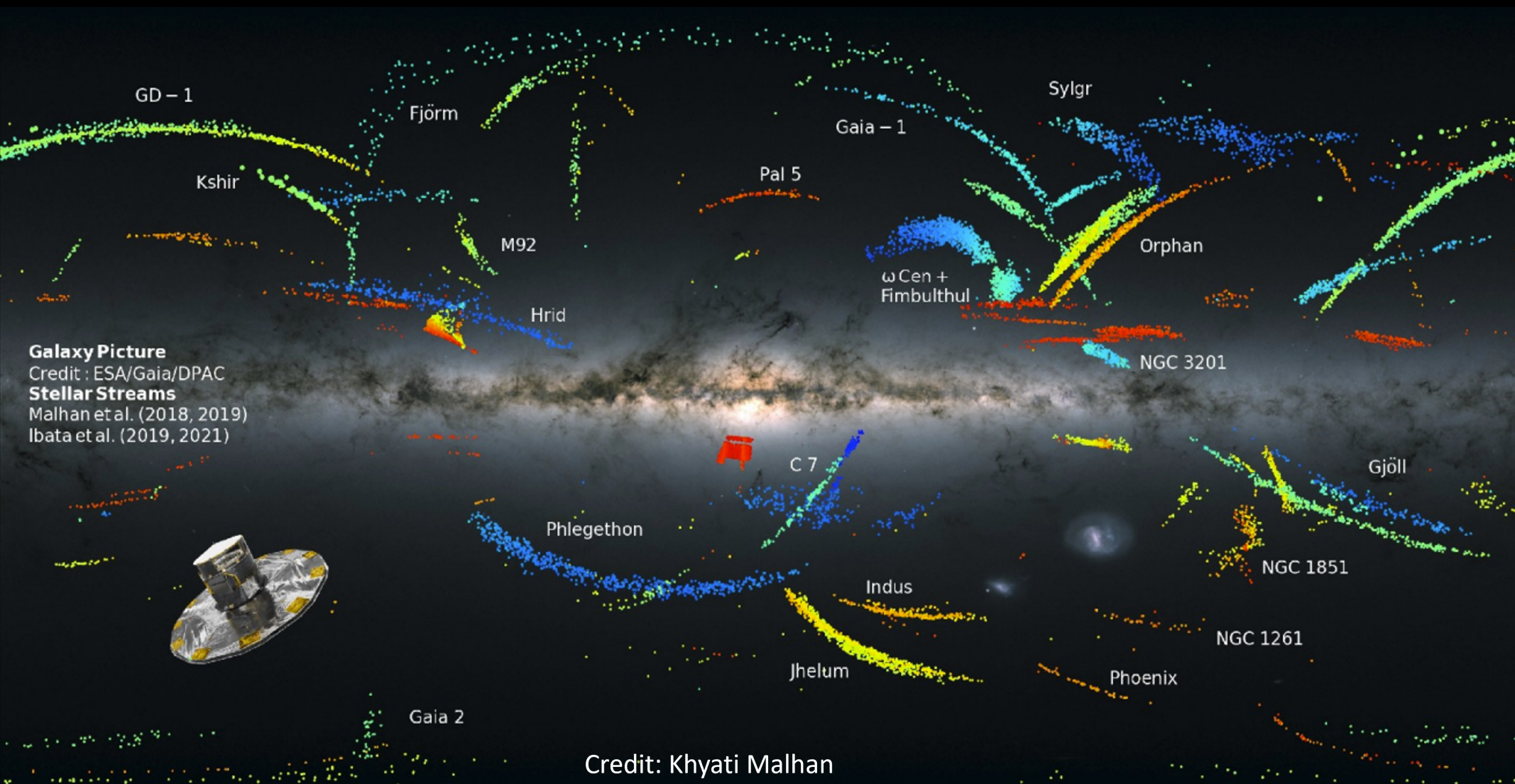


MILKY WAY STARS

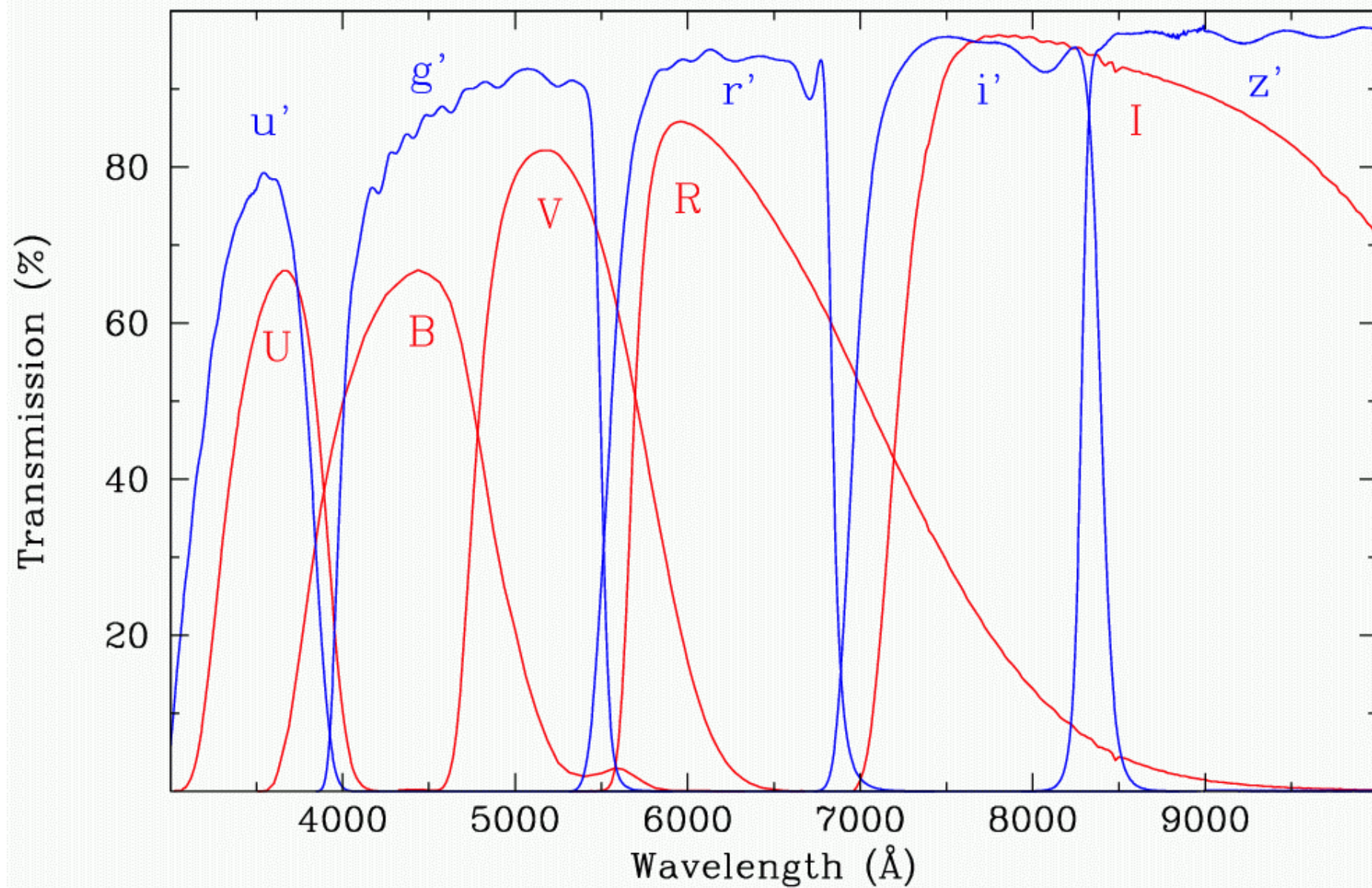


Data release 3 includes a total of 1.8 billion Milky Way stars – providing astronomers with an unprecedented view of stellar characteristics and their life cycle, and the galaxy's structure and evolution.

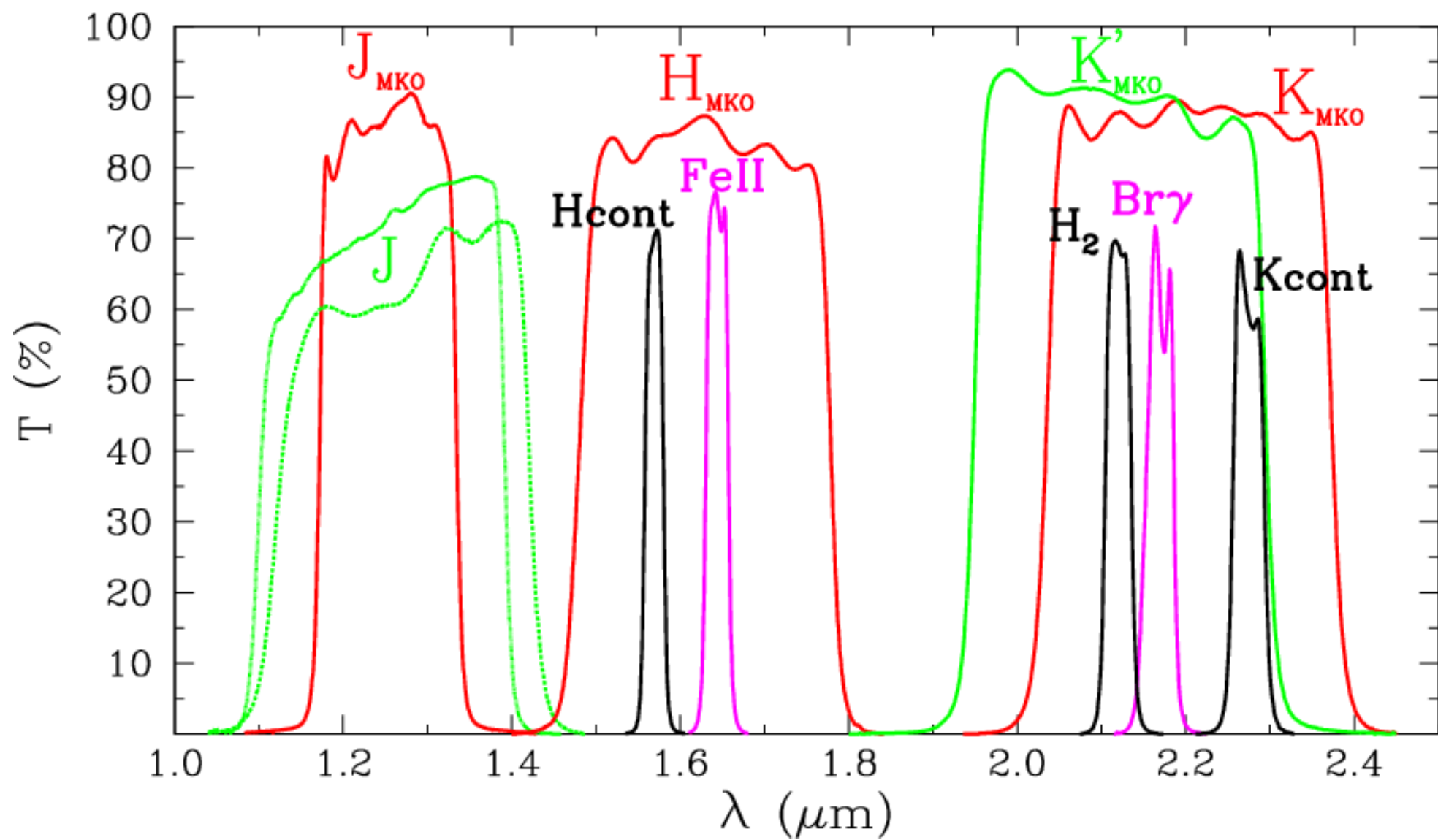




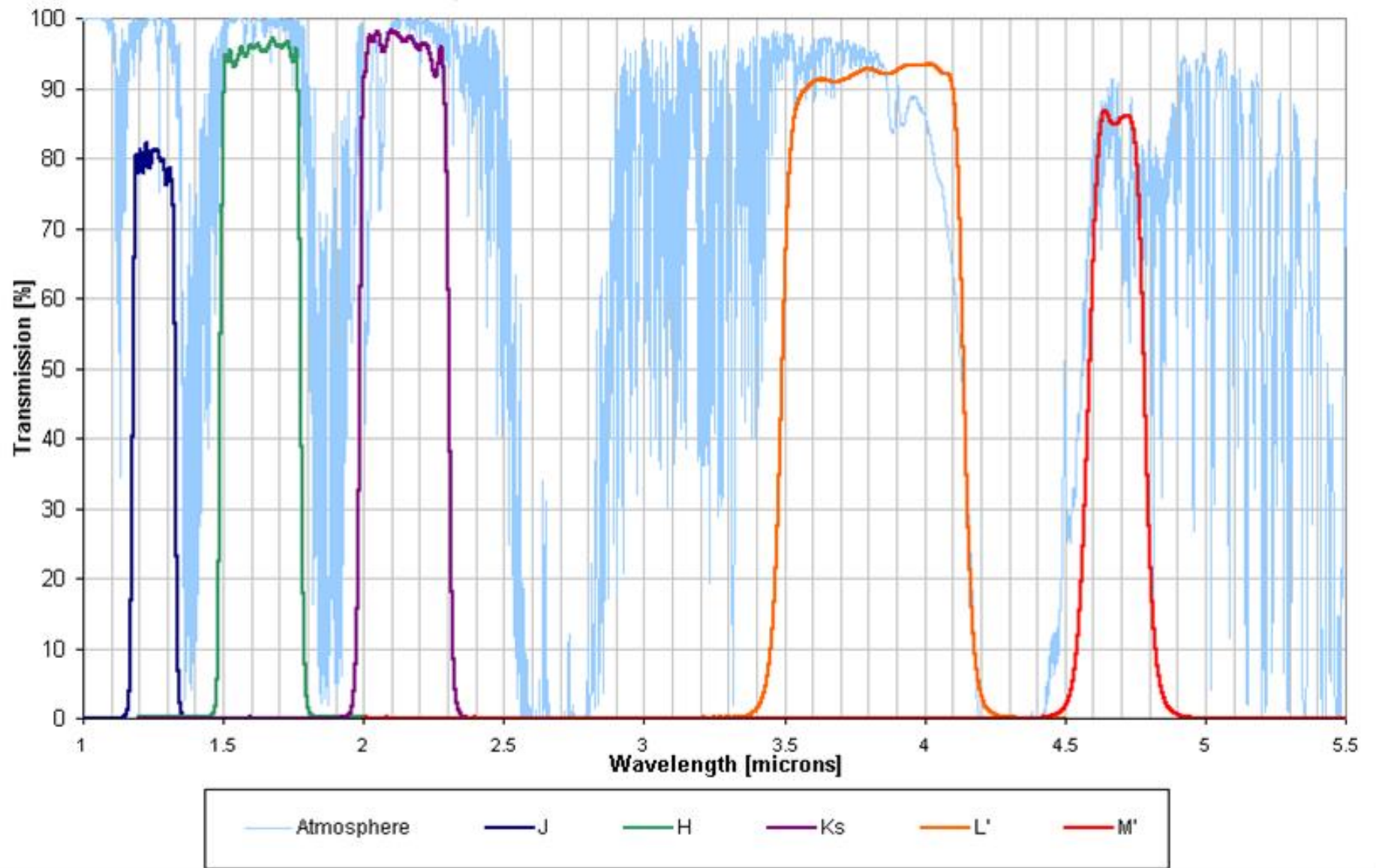
TNG standard optical broad band filters



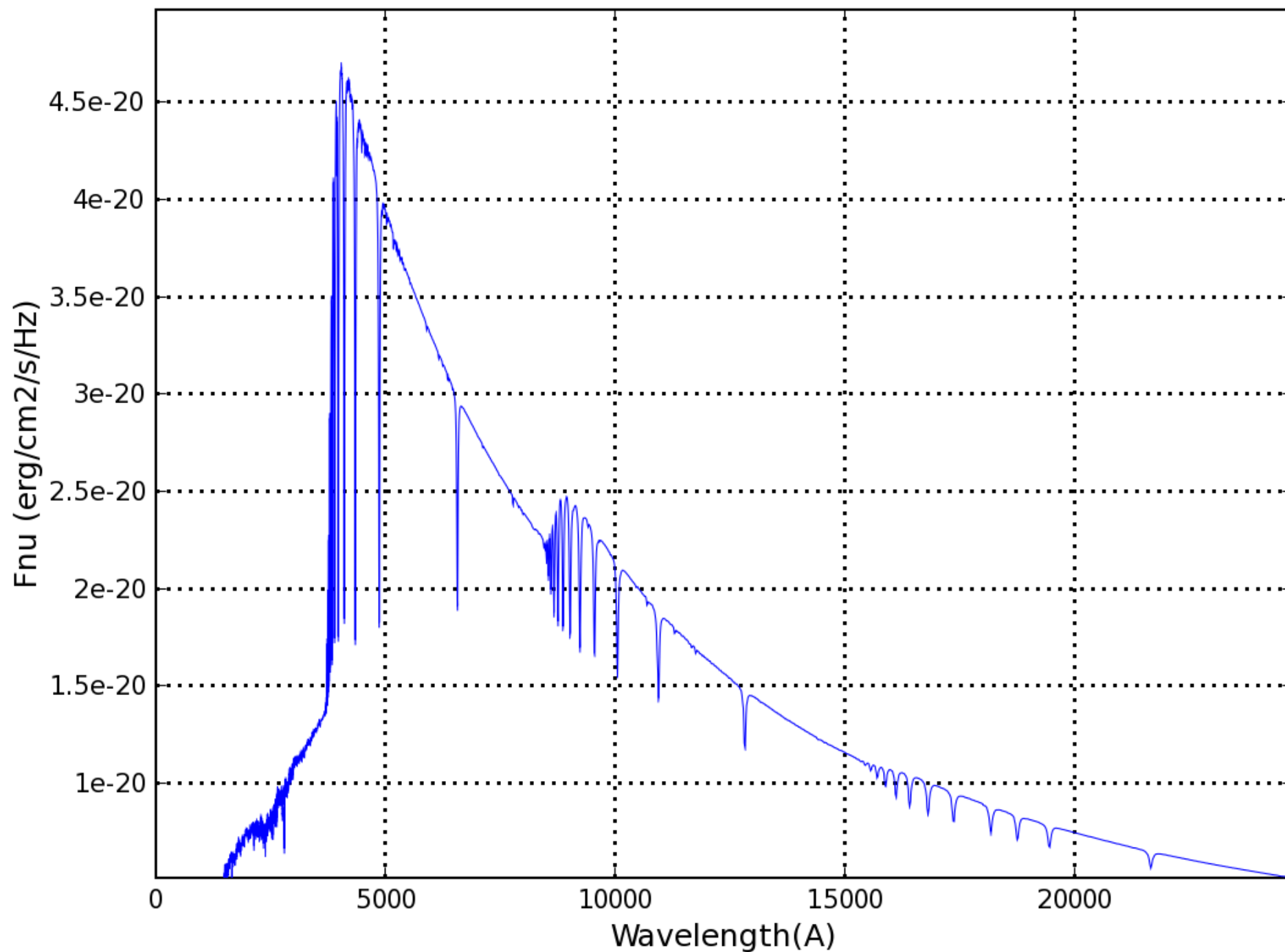




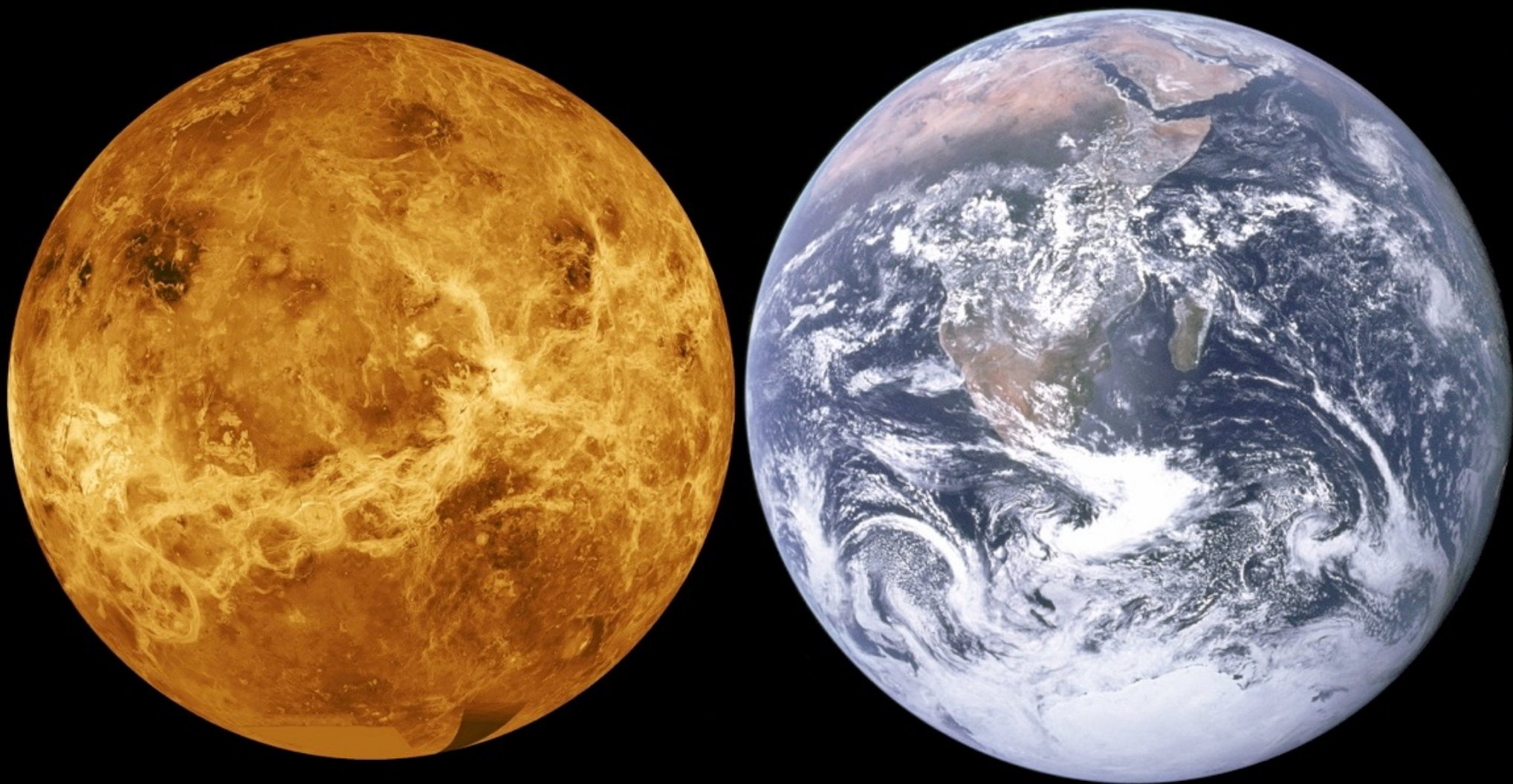
Atmospheric Transmission and Near-IR Filters



Vega Spectrum







Sun's Spectrum vs. Thermal Radiator

of a single temperature $T = 5777 \text{ K}$

