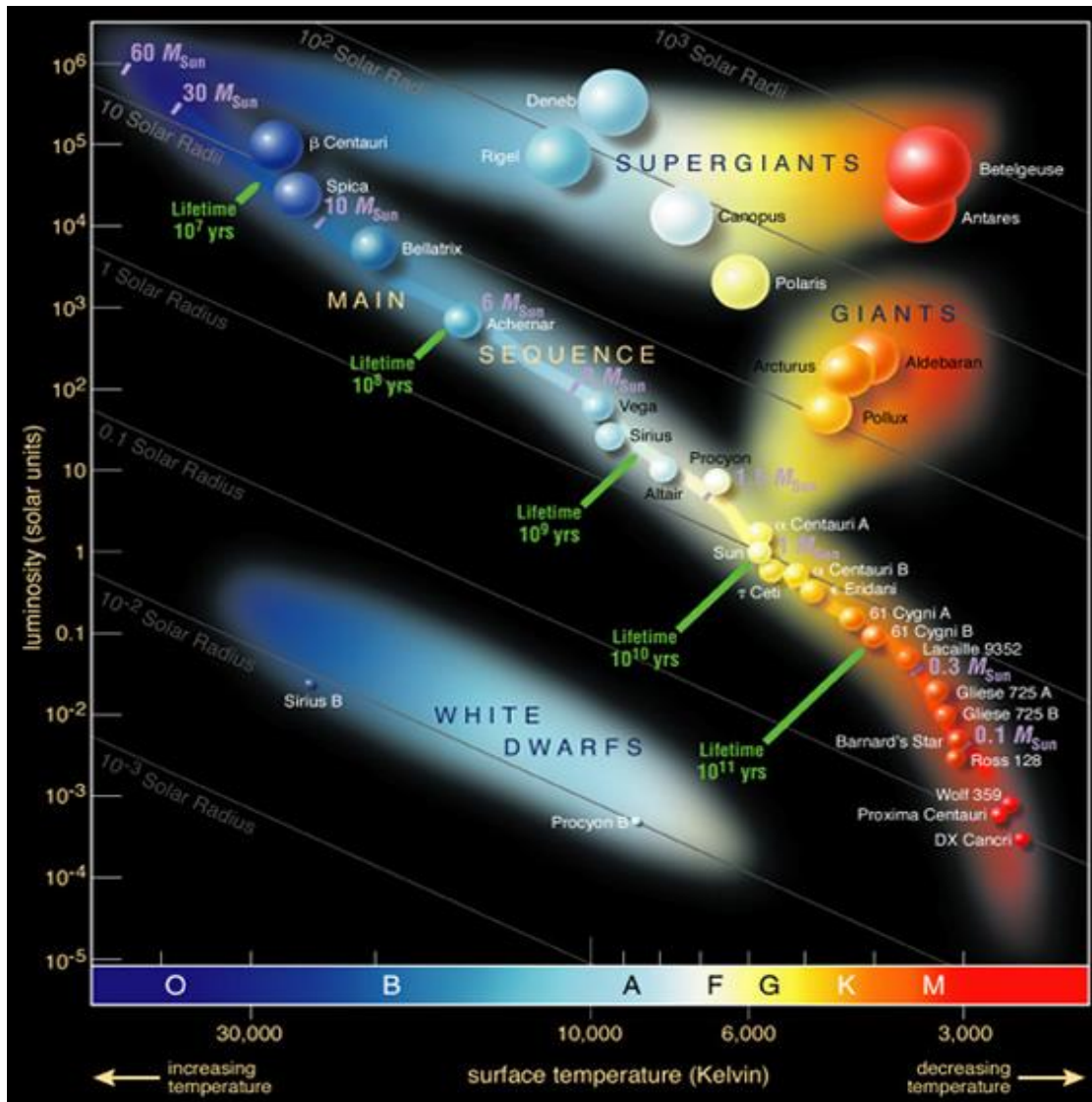
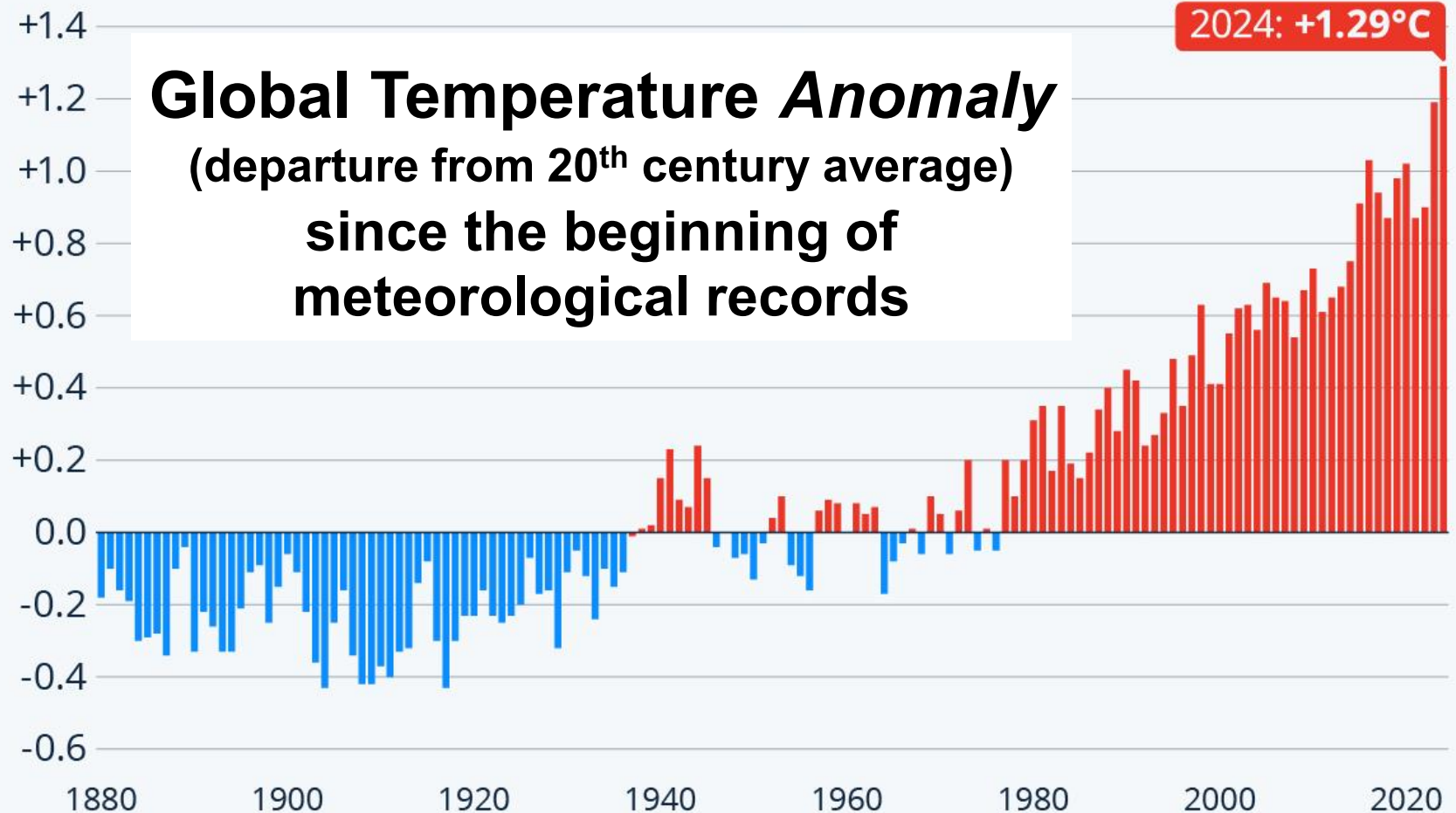


Famous Graph: HR (Hertzprung-Russell) Diagram



- Created in 1910: a major step towards our understanding of stellar evolution or "the lives of stars".
- Temperature (x) vs Luminosity (y) plot.
- Stars tend to group into certain areas; most of the stars occupy the region in the diagram along the line called the main sequence.
- During that stage stars are fusing hydrogen inside their cores.

Most Watched Graph: Climate Change



Source: NOAA National Centers for Environmental Information

Measurement

- the **assignment of numbers** to objects or events
- a type of **quantitative observation** made with a **measuring instrument**
- includes both a **number** and a **unit**
- a **comparison** against a **specified (*known*) quantity**
- **units** of measurement are essentially **arbitrary**:
people make them up and then **agree to use them**

Measuring is an important part of everyday life!

What can we measure?
Why do we measure?

How can we measure?
How well can we measure?

WHAT can we measure?

- Length
- Distance on land
- Depth of water
- Mass
- Time
- Temperature
- Electric current
- Light
- Color

And HOW?

- ✓ Ruler
- ✓ Measuring Chain/Tape
- ✓ Rod/Cable/Sonar
- ✓ Weighing scale
- ✓ Clock, timer
- ✓ Thermometer
- ✓ Ammeter
- ✓ Photometer
- ✓ Spectrometer

**AND
SO
ON...**