IS ANYONE HOME?

Your guide to exoplanet habitability
(for life as we know it)

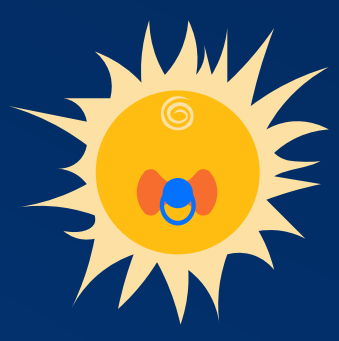
STARS

ACTIVITY

Stars release UV light, X-rays, and energetic particles, all of which can be harmful to life and strip away a planet's atmosphere.

Some stars are more active than others.

AGE

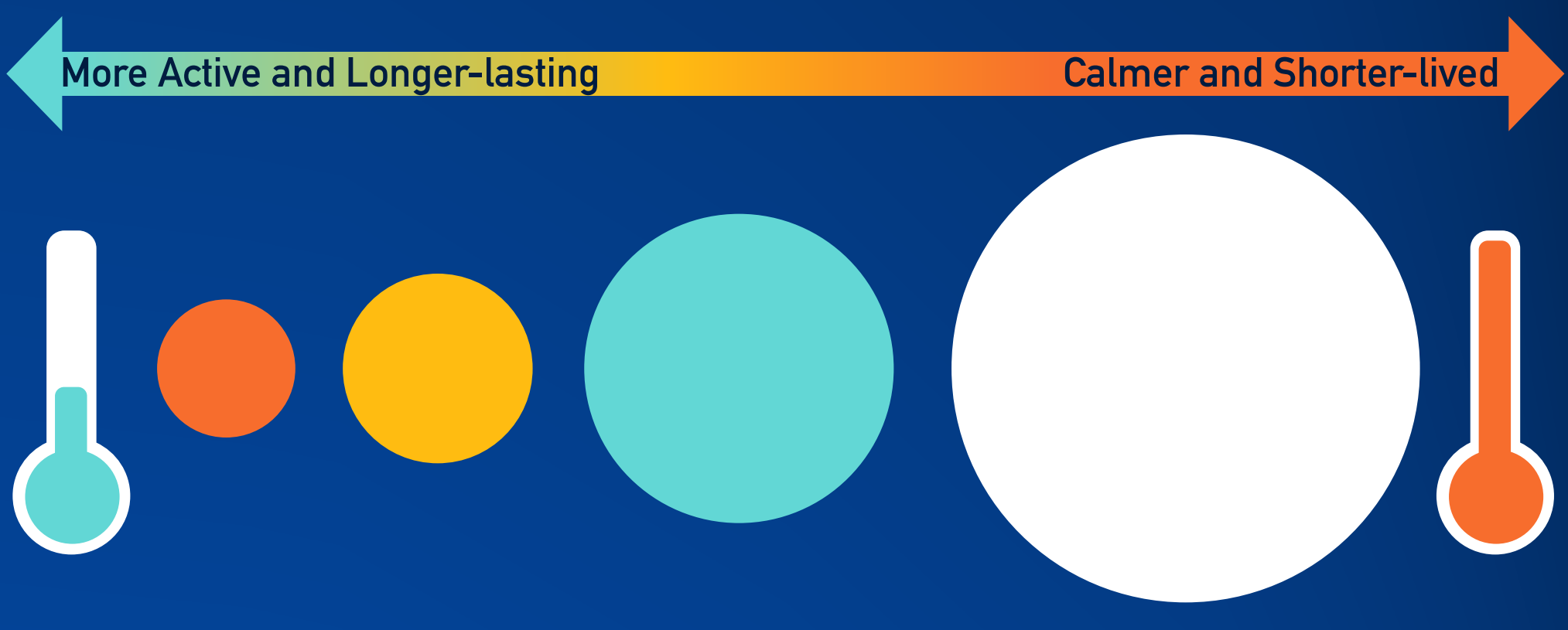


Young stars are often very active.

Old stars expand quickly, engulfing nearby planets.

SIZE AND TYPE

Some stars may be good for life, others may just be too extreme. These stellar factors determine where a habitable planet might be found and if life could survive there at all.



Planets around small stars must be very close to their volatile hosts. Any life could be fried by stellar activity.

Planets around large stars have to be far from their star and may not have enough time to develop life before the star dies.

SOURCES

Based on "Impact of Space Weather on Climate and Habitability of Terrestrial Type of Exoplanets," Airapetian et al. (2019).
Specific contributions from Ravi Kumar Kopparapu, Wade Henning and Joshua Schlieder.

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