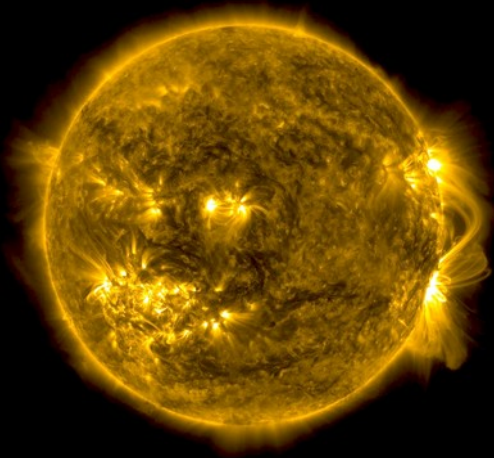


Weakened Magnetic Braking in the Exoplanet Host Star 51 Peg

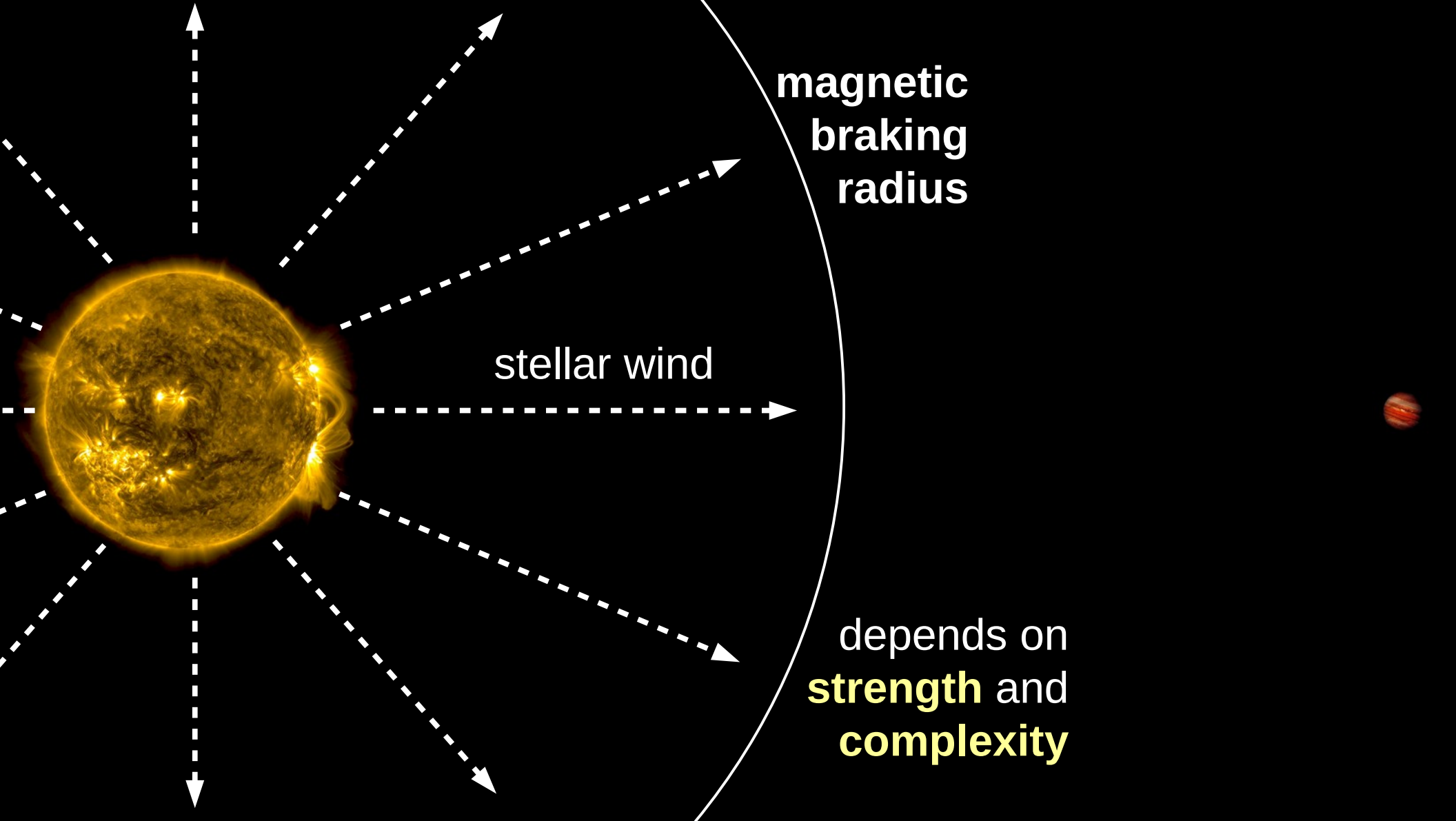


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51 Peg illustrated **to scale**

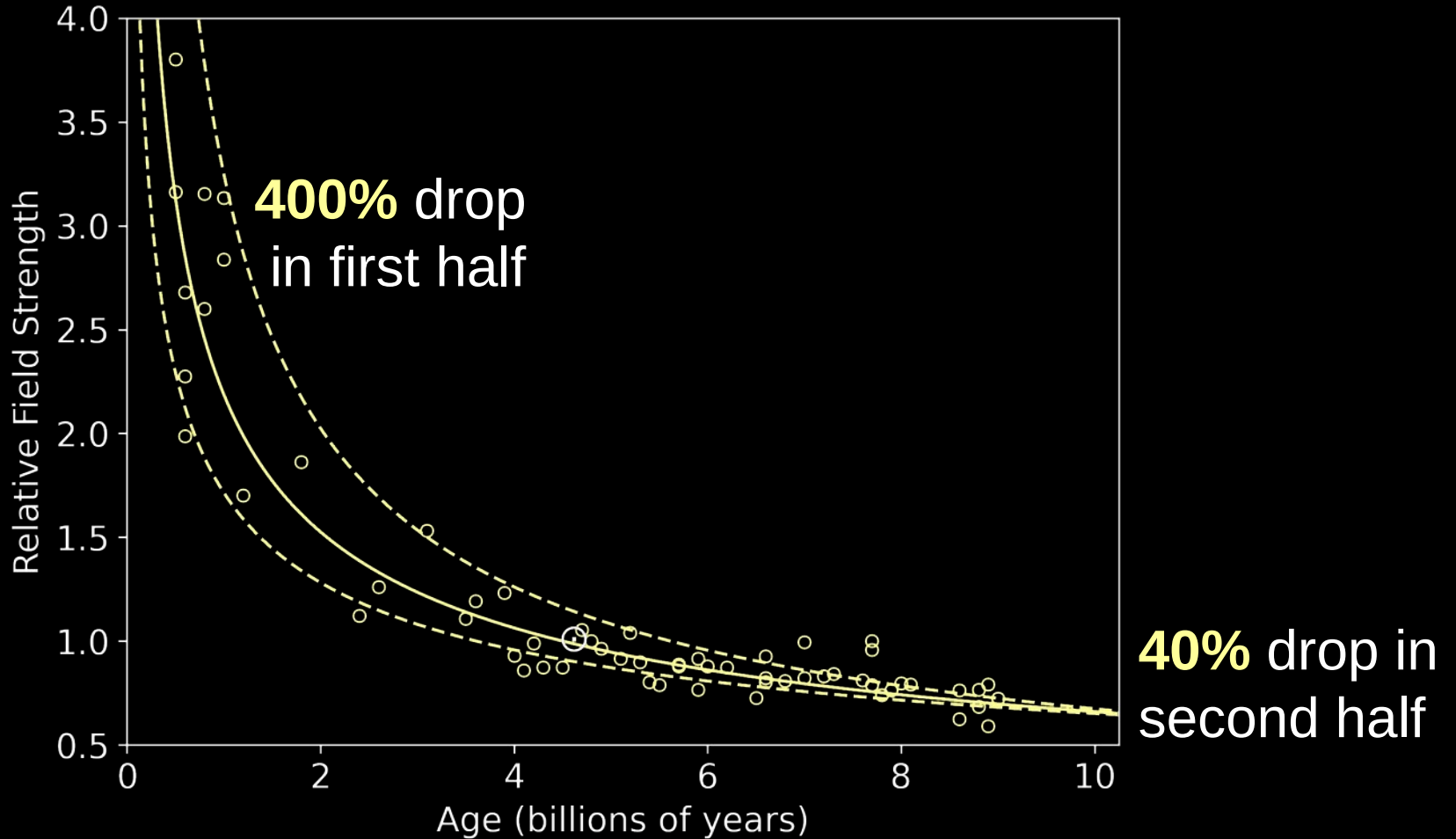


magnetic
braking
radius

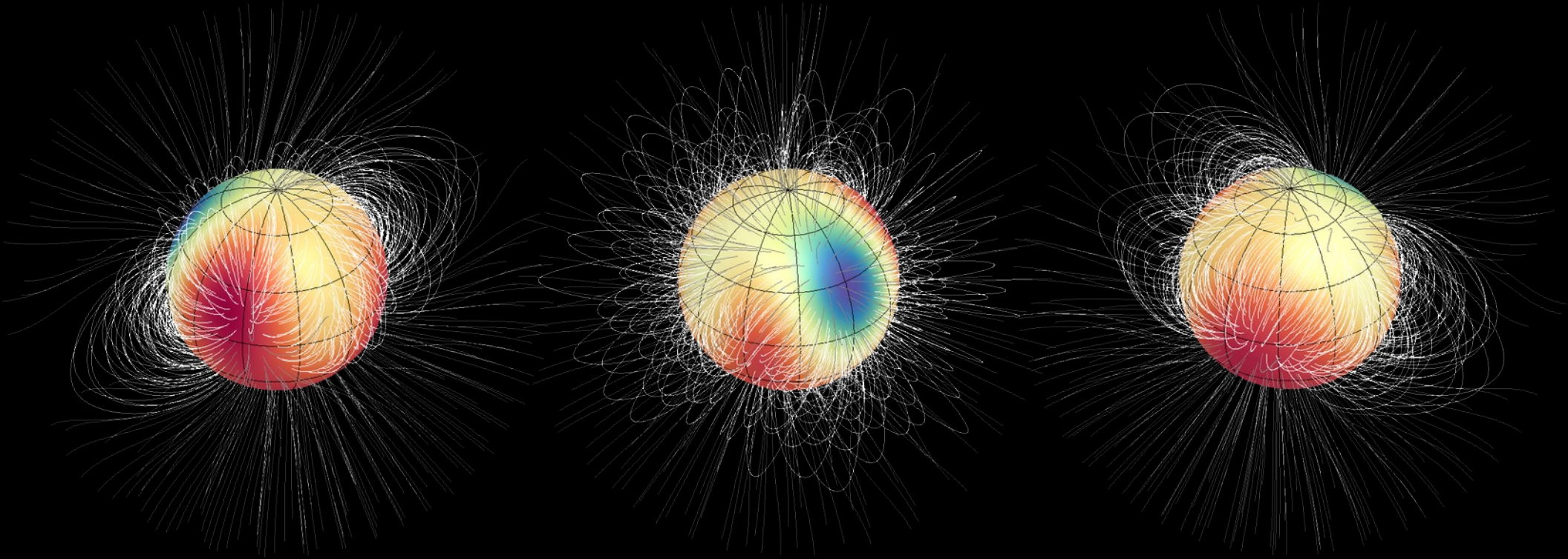
stellar wind

depends on
strength and
complexity

Strength evolves slowly in older stars

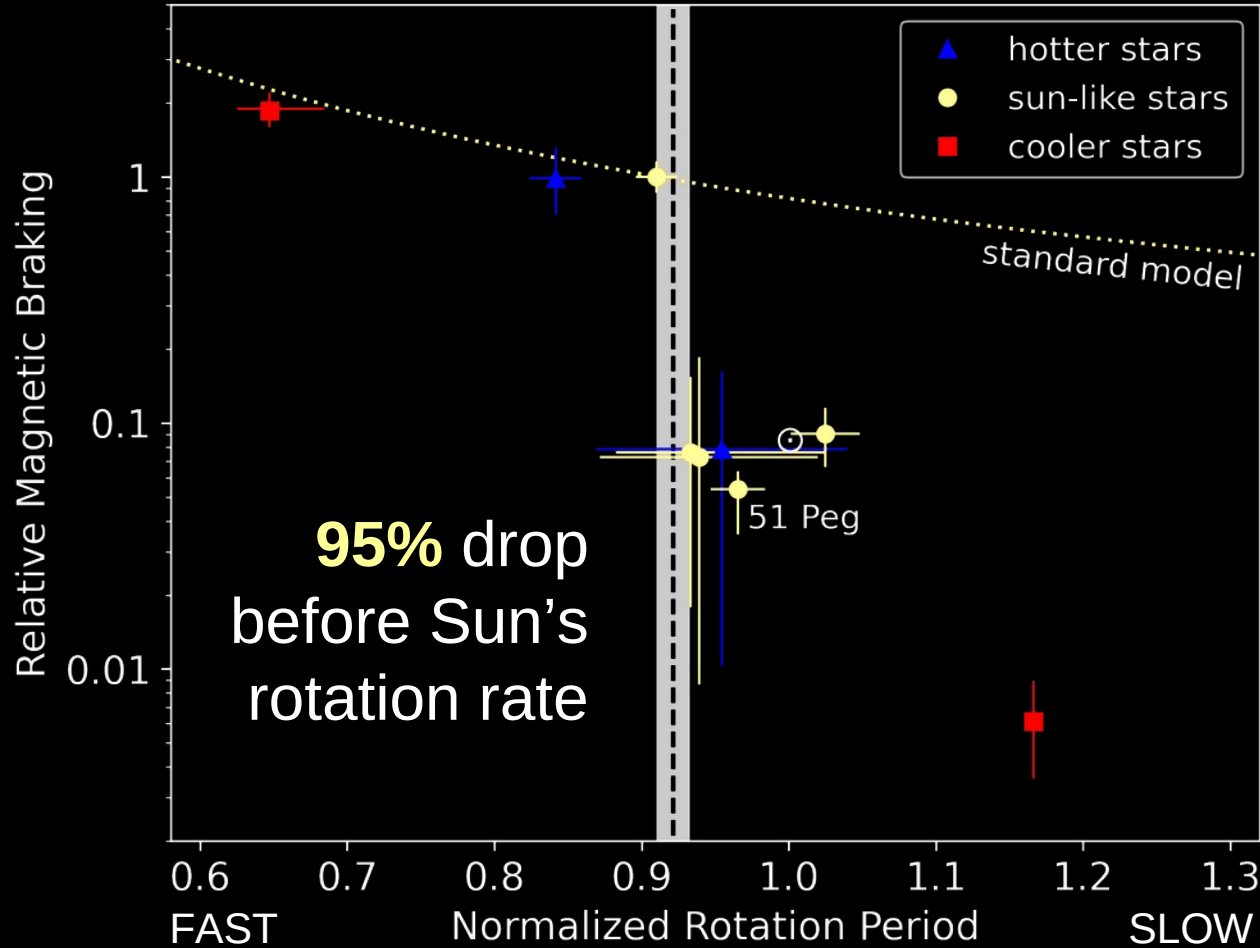


A mid-life shift in magnetic complexity



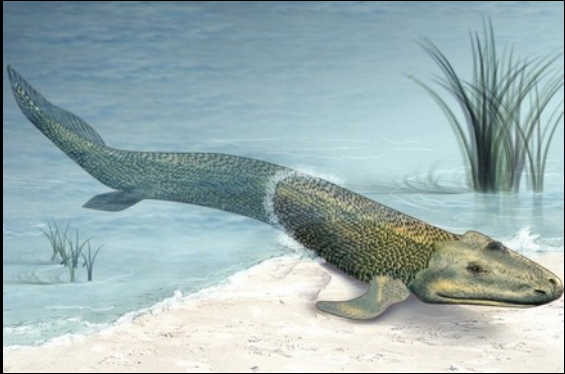
complex field **throttles** stellar wind
and **diminishes** magnetic braking

Weakened magnetic braking in the Sun



standard models fail to consider **complexity**

Coincides with land-based life on Earth



~400 million years ago



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