The influence of Jupiter, Mars and Venus on Earth's orbital evolution

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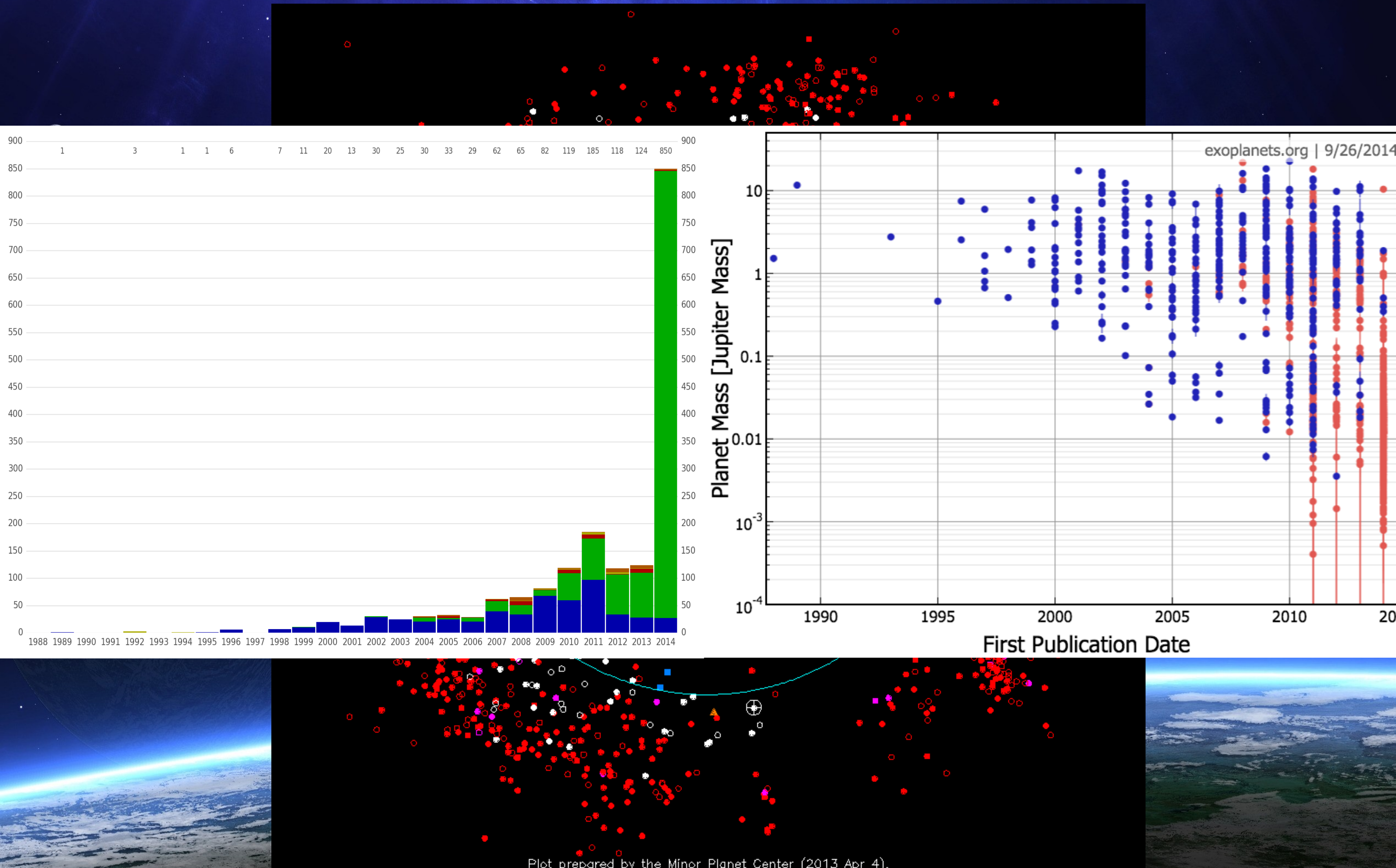
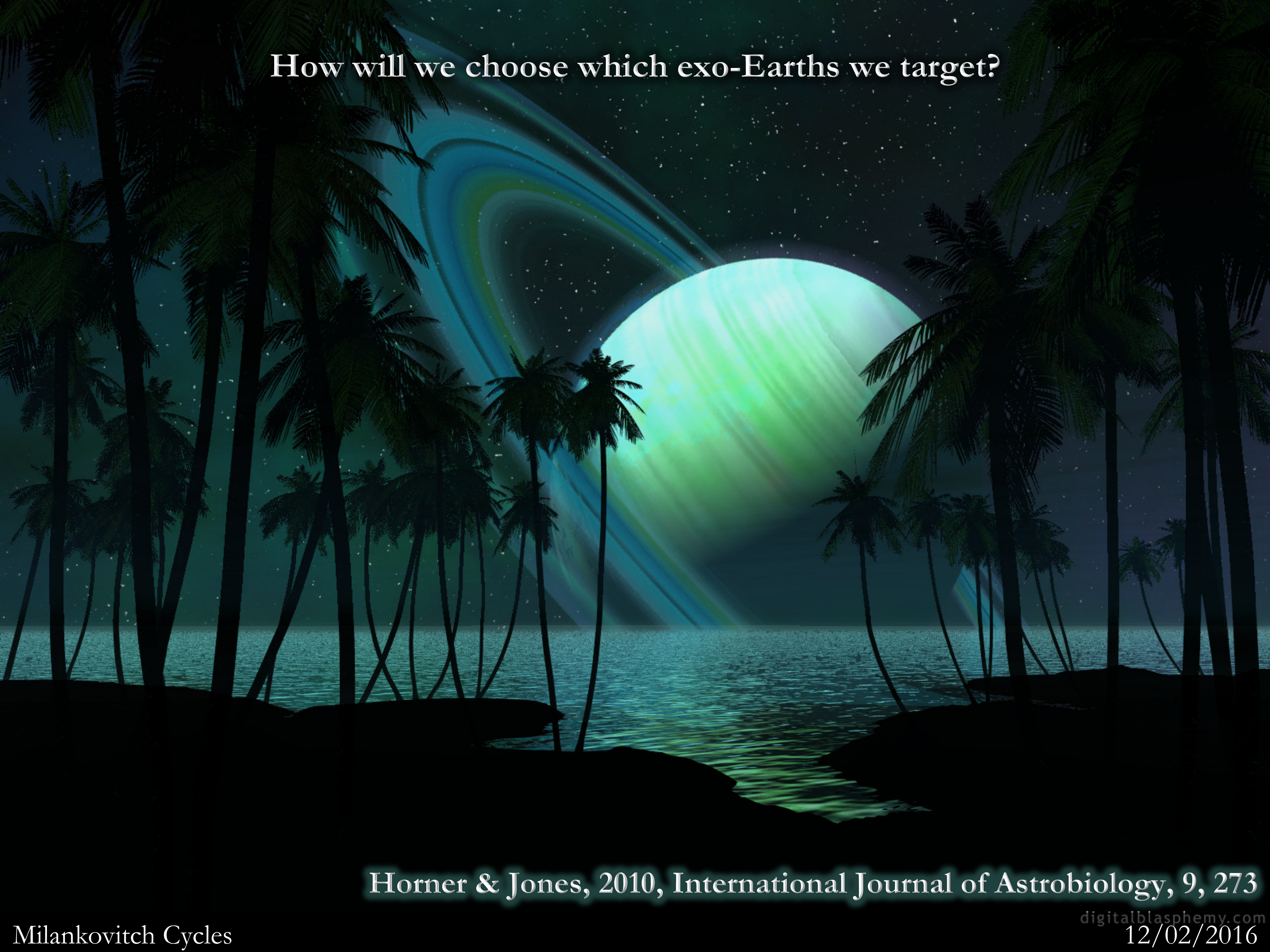
A basic law of Astronomy:
Where we discover one object, we soon find hundreds, thousands…

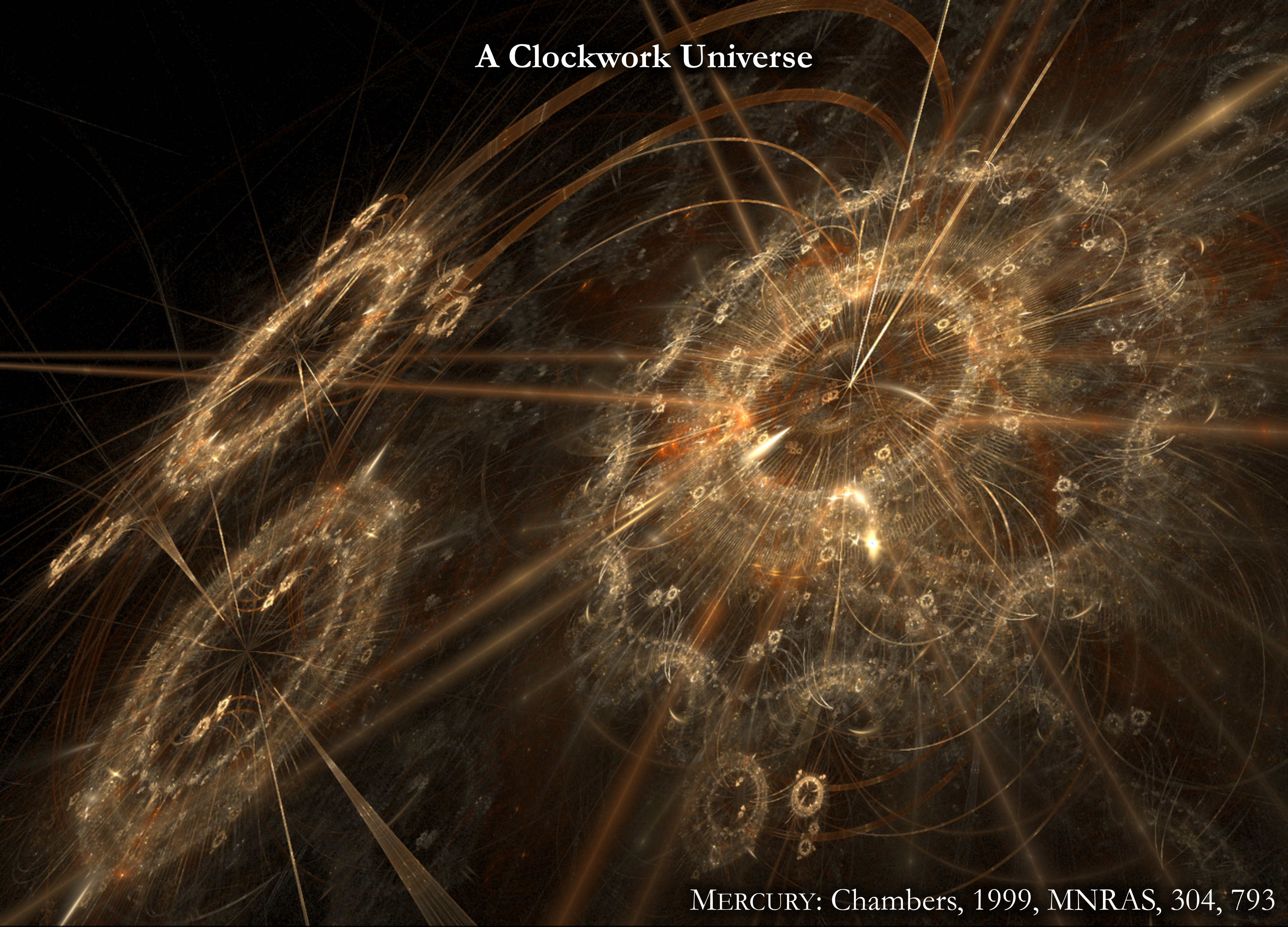


How will we choose which exo-Earths we target?



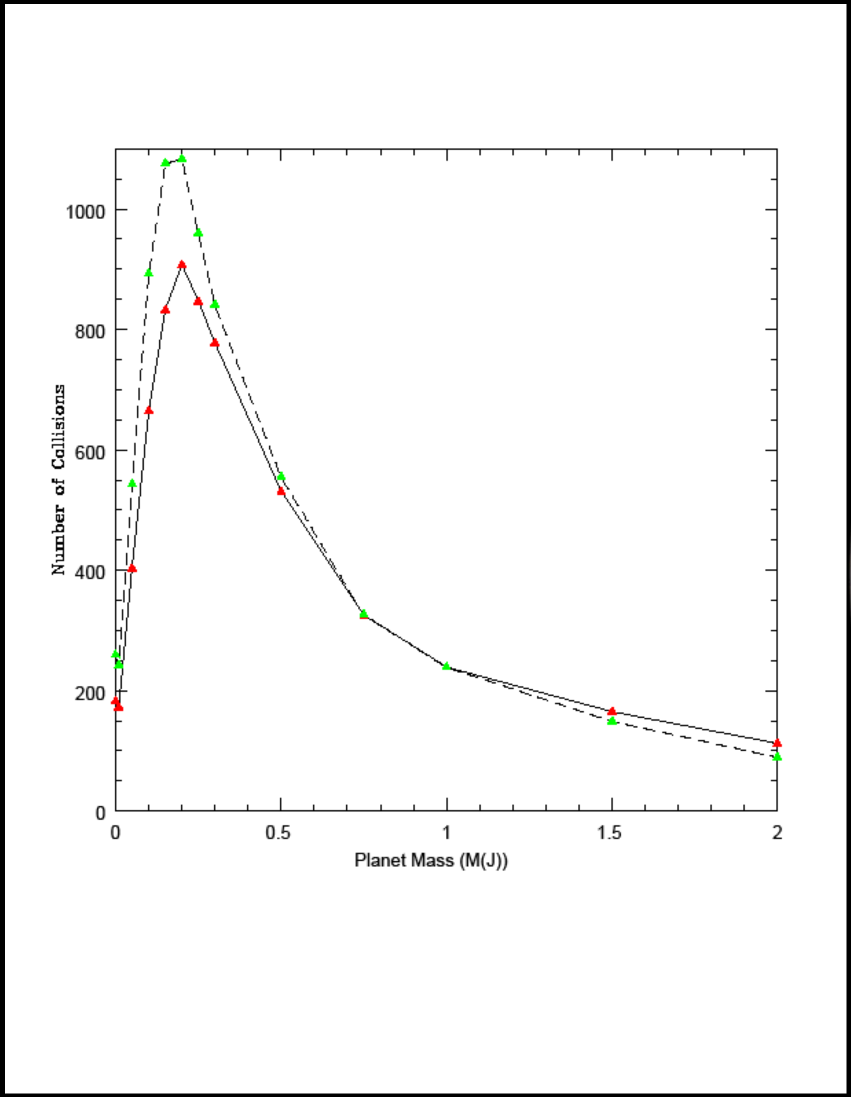
Horner & Jones, 2010, International Journal of Astrobiology, 9, 273

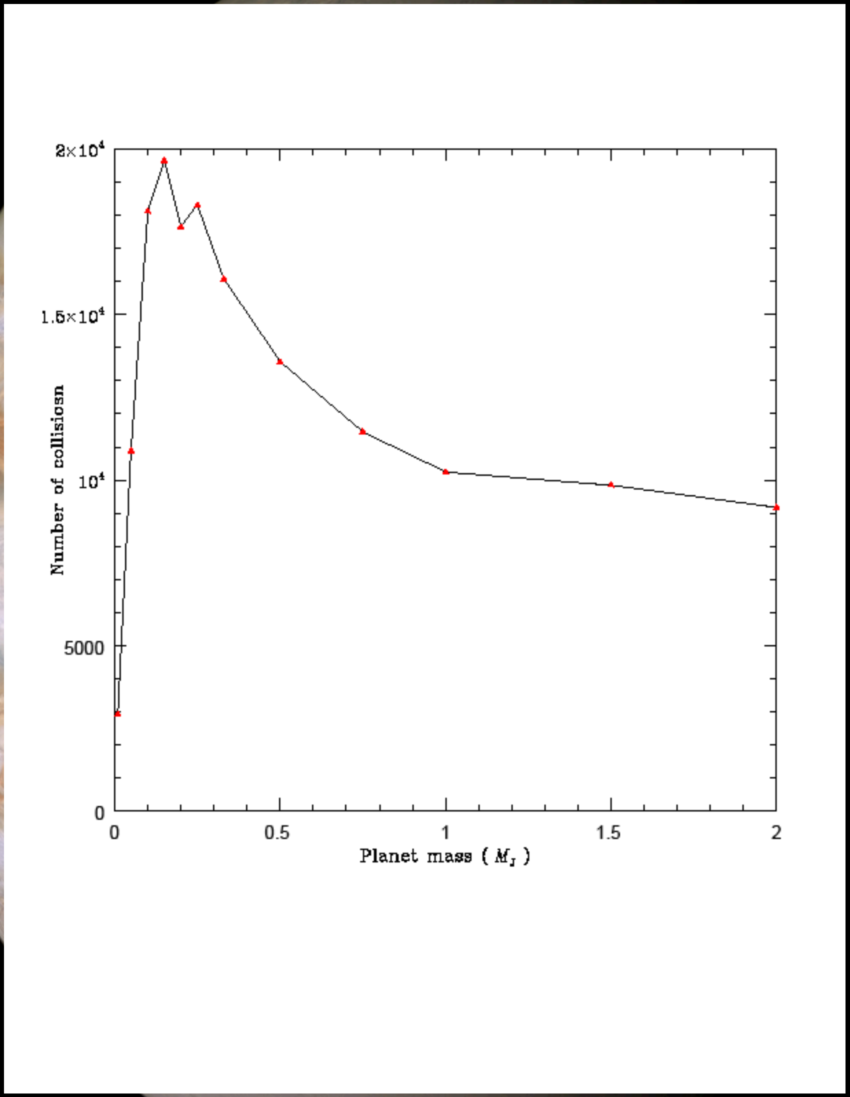
A Clockwork Universe



MERCURY: Chambers, 1999, MNRAS, 304, 793

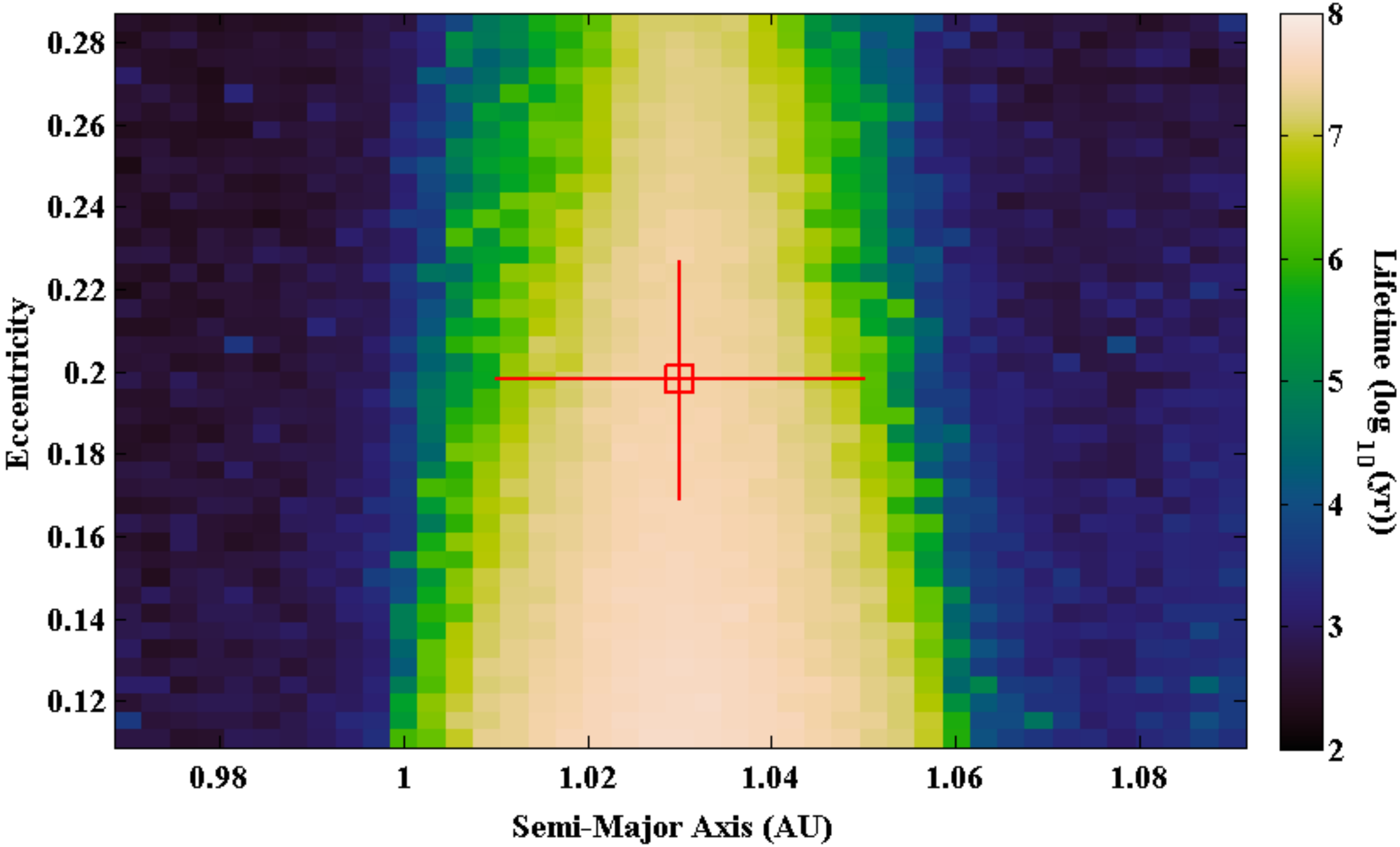
Jupiter – no friend of mine…





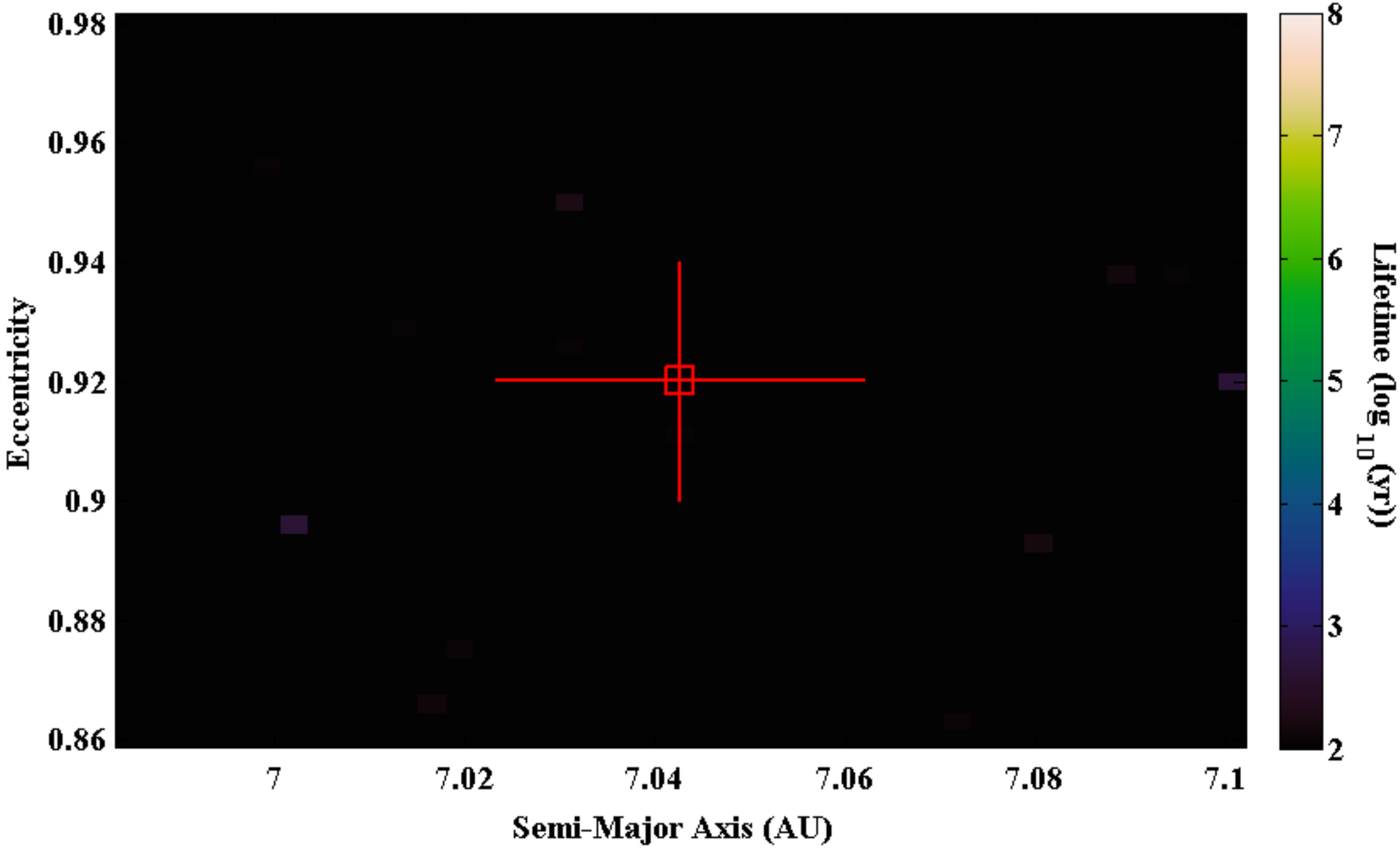
Horner & Jones, 2008, IJA, 7, 251; Horner & Jones, 2009, IJA, 8, 75
Horner, Jones & Chambers, 2010, IJA, 9, 1; Horner & Jones, 2012, IJA, 11, 147

Dynamics as a 'sanity check'



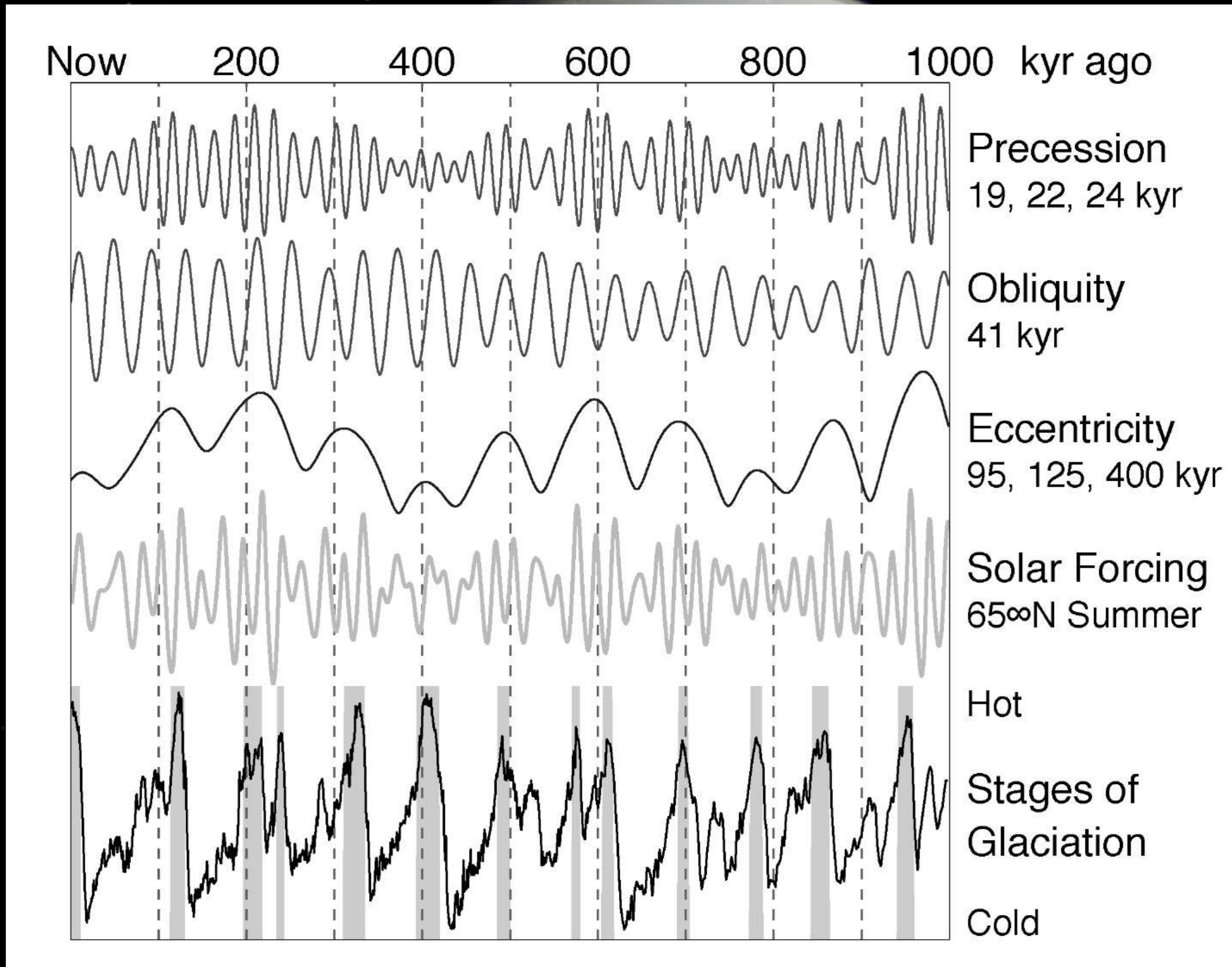
HD73526: Wittenmyer et al., 2014, ApJ, 780, 140

Dynamical insanity – QS Virginis



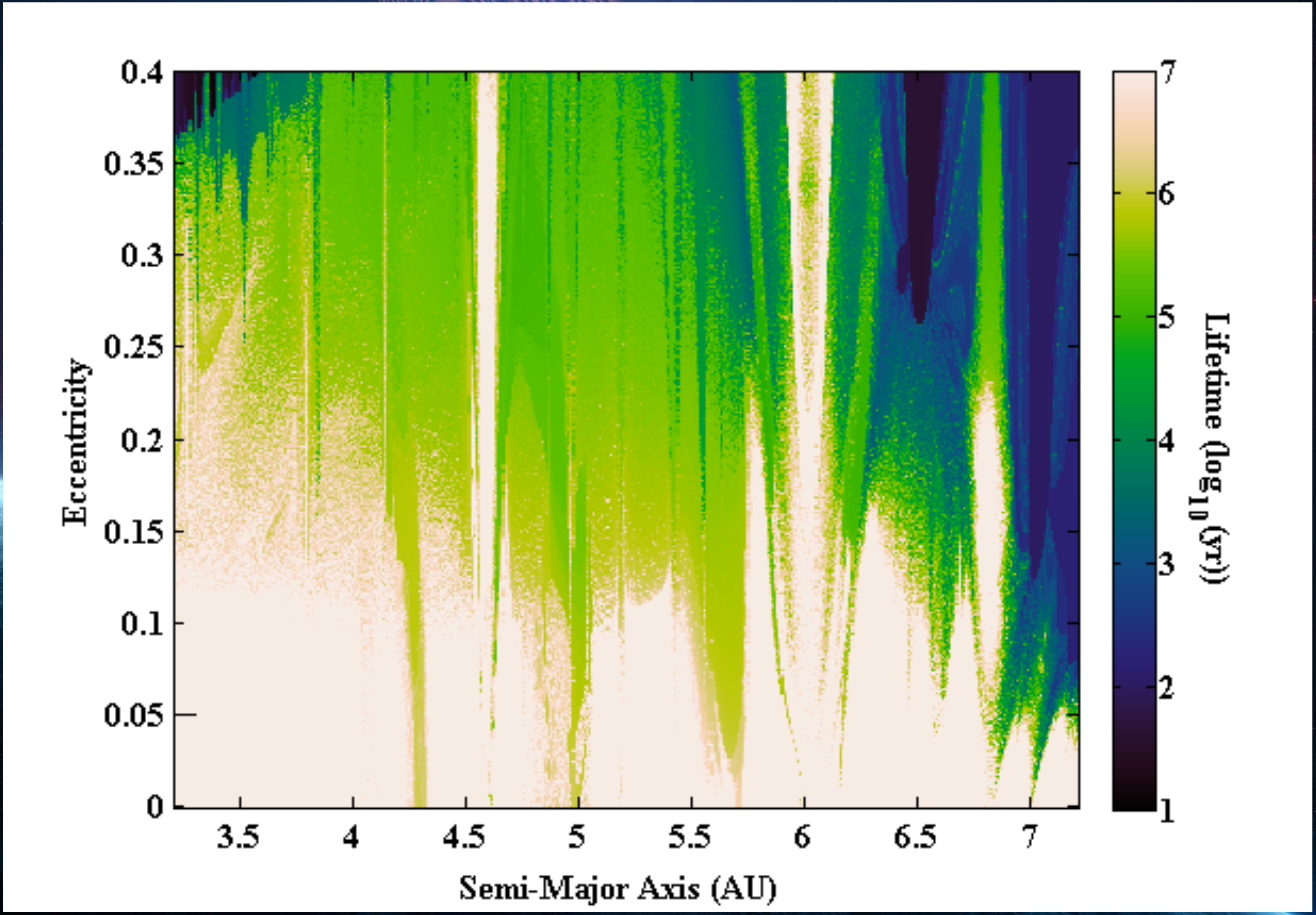
Horner et al., 2013, MNRAS, 435, 2033

The Milankovitch Cycles

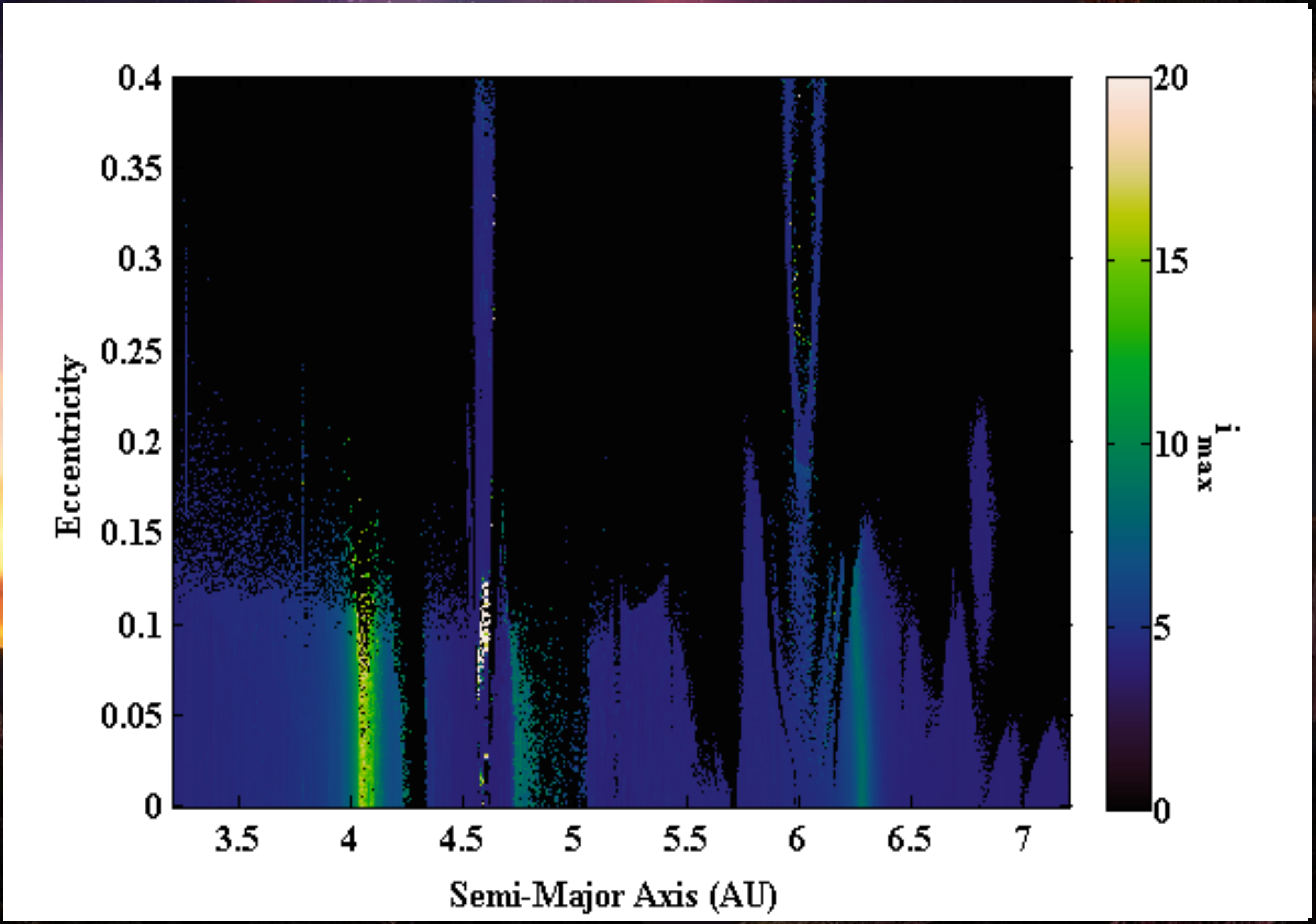


What if…?

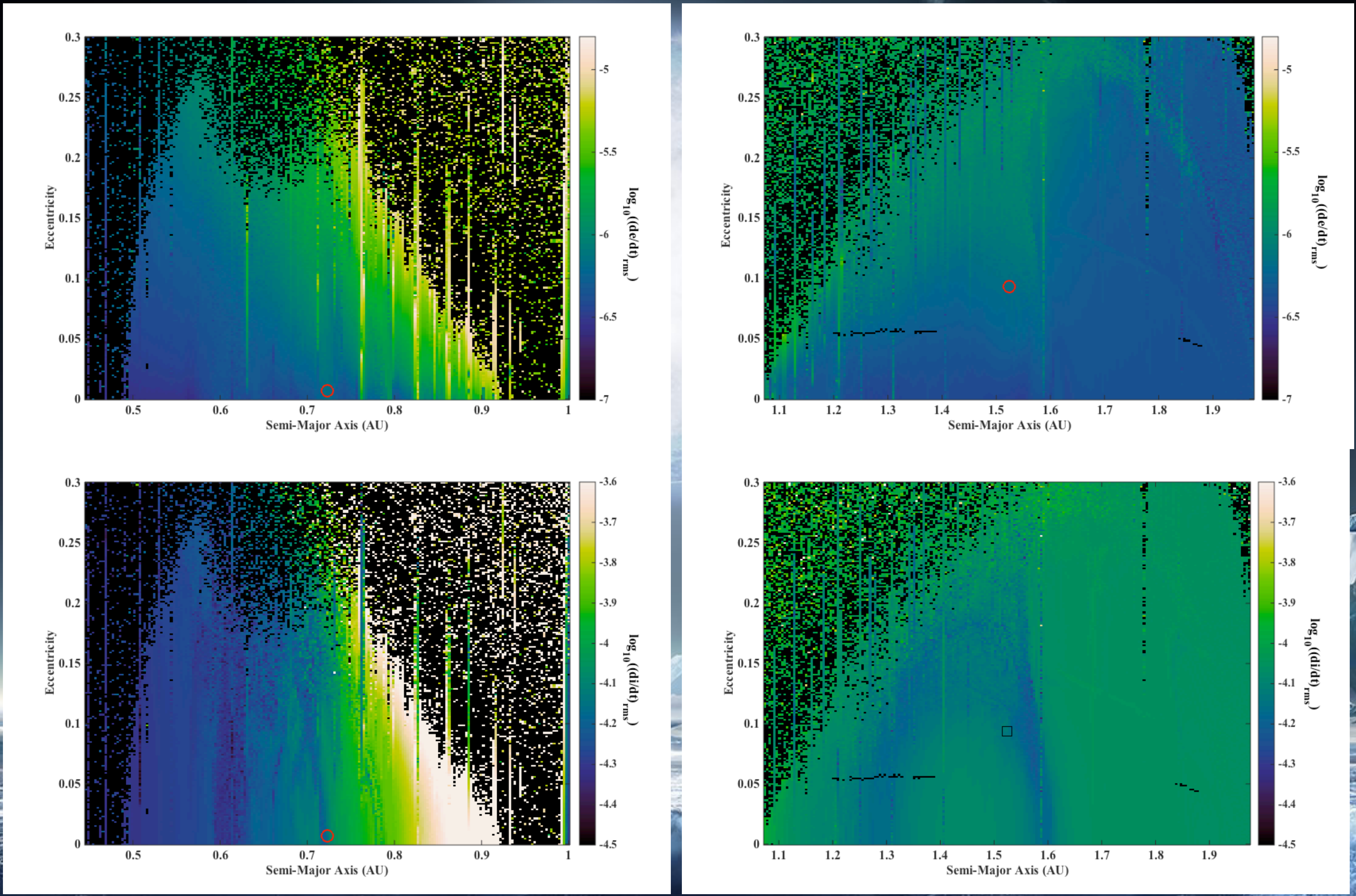
Solar System Stability



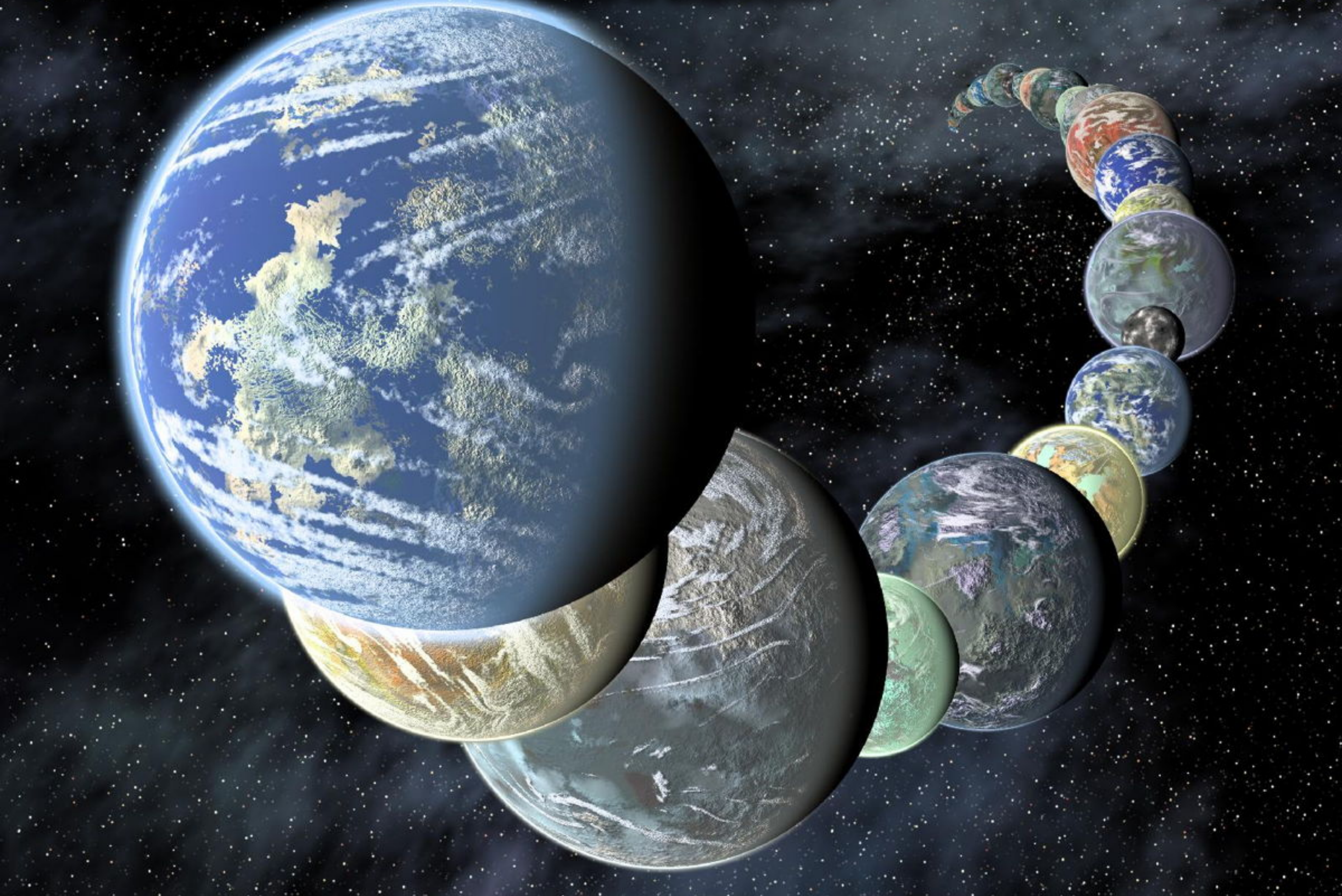
Terrestrial Orbital Variability



What about Mars and Venus?



The Future…



Questions?

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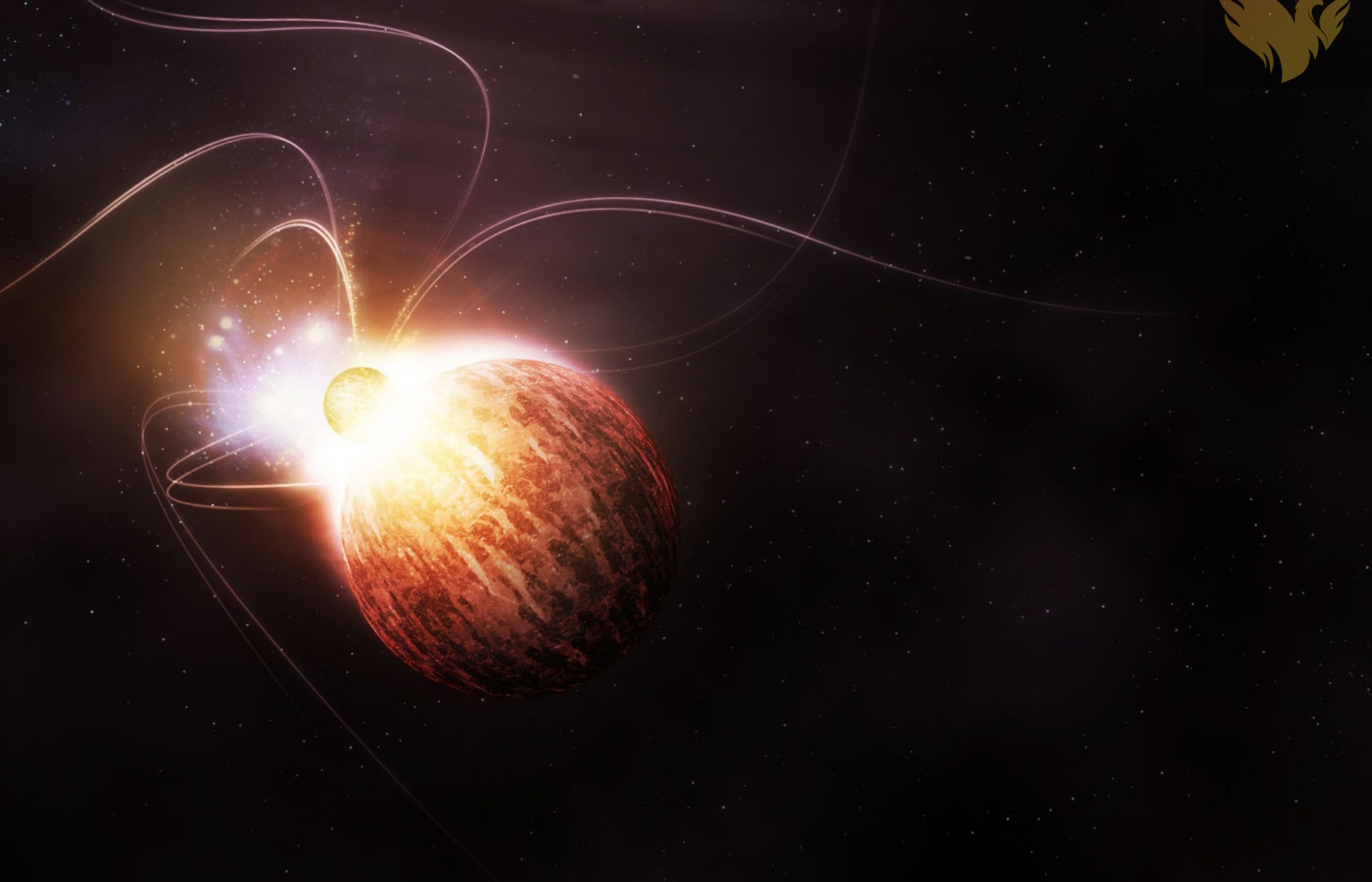

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