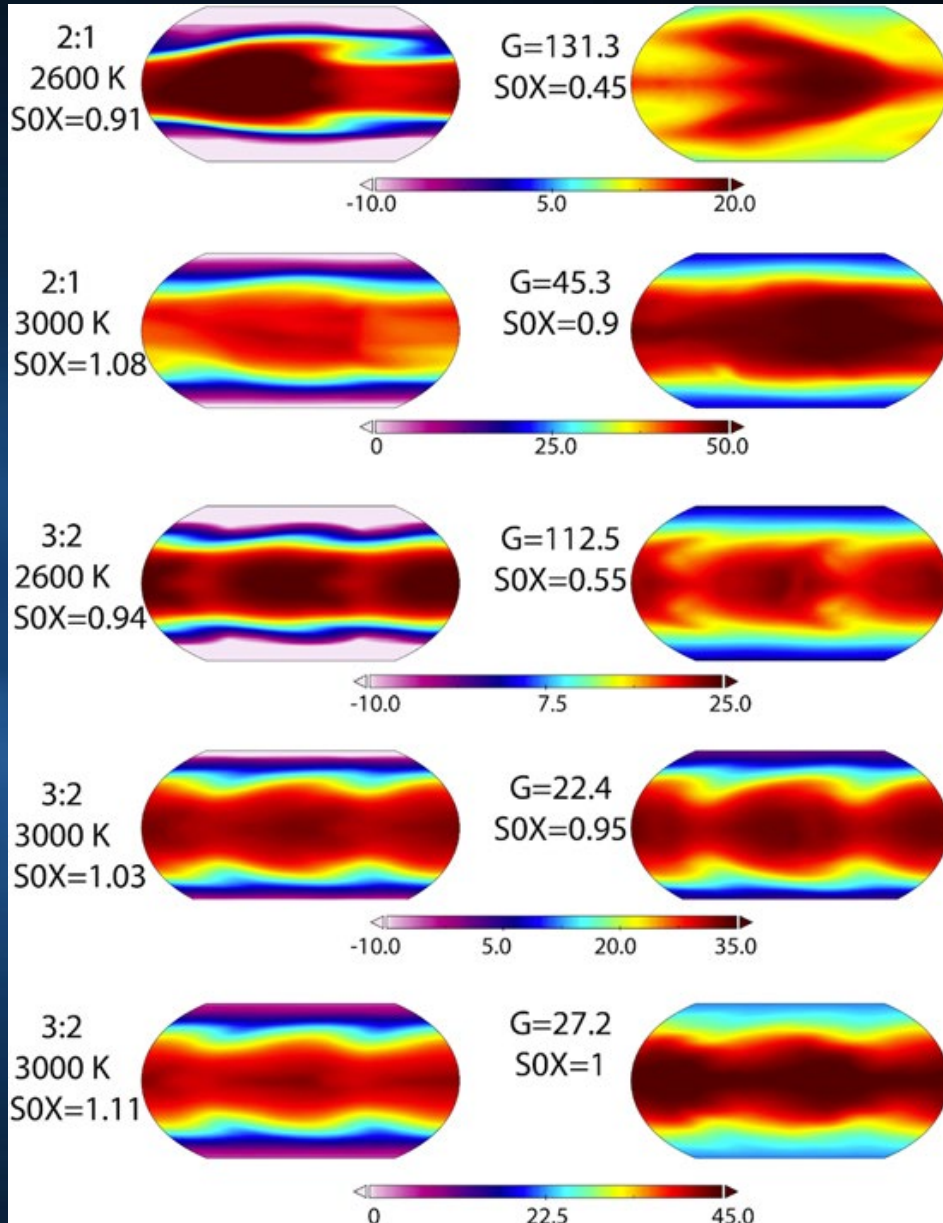


How do you fry a planet?

- How far do exoplanets need to be from their stars to lose their water?
- We looked at planets with a wider variety of rotation states and orbits than previous studies, and around many types of stars. We used VPlanet to calculate tidal heating and ROCKE-3D to run over 150 climate simulations.
- Planets in 2:1 and 3:2 resonant states and on eccentric orbits are far more vulnerable to drying out than synchronous rotation planets.



← Examples of Surface Temperature maps (degrees Celsius) for 10 simulations with planets heated only by stellar radiation (left) and less stellar but added tidal heating (right).