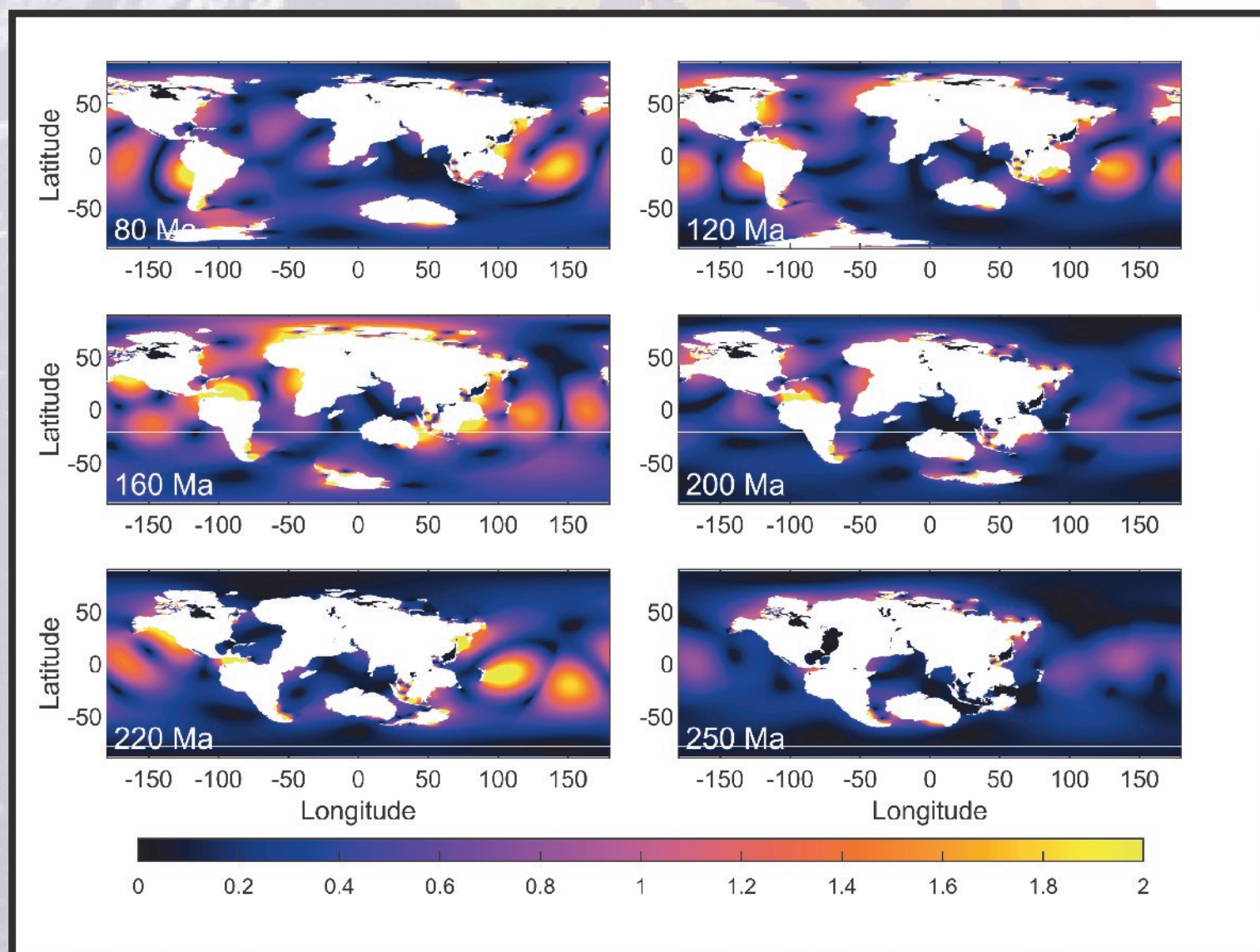


# SOLID EARTH SEMINARS

## THE SUPER-TIDAL CYCLE



### WHAT'S THIS ABOUT?

In recent work (Davies et al., 2018; Green et al., 2017) we explored how the next supercontinent will form, and we showed that there is a link between the supercontinent cycle and the intensity of tides. A good example of this "Super-tidal cycle" is found in the Atlantic Ocean, which has only recently (2 Ma) had large tides. This is because the Atlantic is almost resonant with the tide. As the Atlantic continues to open, we expect global and local tides to weaken. Of the four scenarios modelled, all confirm that the Atlantic lose its resonance in the next 20 Ma, and the basins will take turns to become resonant. As the next supercontinent gathers the tides decrease globally in all scenarios, showing that Earth's tides are always weak during a supercontinent. This shows that there is a fundamental link between tectonics and tides, with profound implications for the Earth system.

**HANNAH  
DAVIES**

📍 **FCUL 6.2.46**

**APRIL 3**

**WEDNESDAY - 1H PM**