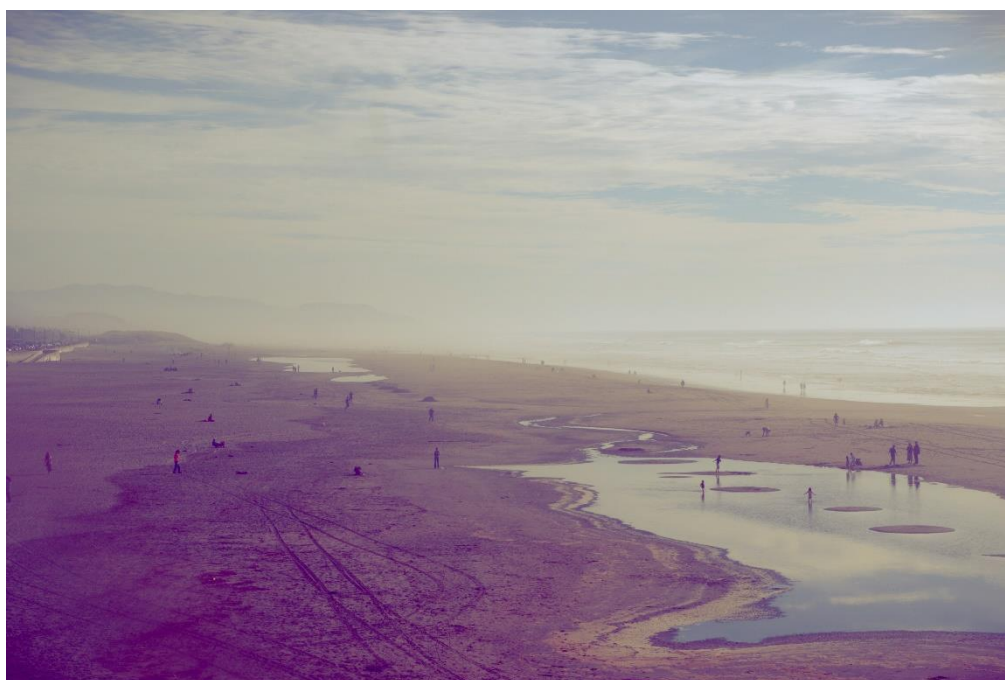


Encontros do IDL

Tidal evolution over 252 Million Years

Tuesday 7th June 13:00 - IDL Library, room 1.1.36

Mattias Green - School of Ocean Sciences, Bangor University, UK



The currently measured rate of recession implies that the age of the Lunar orbit is 1500 My old, but the Moon is known to be 4500 My old. Here, for the first time, numerical tidal model simulations linked to climate model output are conducted for a range of paleogeographic configurations over the last 252 My, and we find that the total dissipation rates for most of the past 252 My were far below present levels. This confirms the old-age Moon theory, and the lower dissipation allow refinement of orbitally-derived age models by shifting ages by an entire precession cycle.



Mattias Green primary research is on modelling changes in the global and regional tides in the past, present, and future oceans. This includes looking at how the tidal energy is lost and how the subsequent mixing generated by the tides is distributed in the ocean. As an application, he investigates how changes of the global tides affect the climate controlling overturning circulation under different scenarios, and how changes in the shelf-sea tides can affect the open ocean tides.

Organização: Instituto Dom Luiz (IDL)