

Description of Additional Supplementary Files

File name: Supplementary Movie 1

Description: Location of carbonate platforms and carbon fluxes over the last 540 million years. Subduction influx refers to the carbon being recycled at trenches (greens–blues) in tonnes of carbon per metre along trenches per year. Atmospheric outflux refers to carbon emitted at MORs, continental rifts, and volcanic arcs (orange colours) in tonnes of carbon per metre along each topological segment per year. Carbonate platforms are indicated by green polygons, where light green indicates active platforms, and dark green light green indicates older inactive platforms.