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“Sublithospheric diamonds and their link to supercontinents ”

The supercontinent cycle is driven by plate tectonics, yet the record of this subduction and how mantle convection is affecting the overlying continents is not well-known. Sublithospheric diamonds crystallise from liquids derived from subducting oceanic lithosphere in the deep upper mantle and upper parts of the lower mantle, and are a powerful tool to track deep subduction processes. I will present the journey of such diamonds from deep diamond crystallisation to their transportation through the mantle and final eruption to Earth's surface in kimberlitic magmas. Specifically, I will go into the radiogenic isotope systematics of Fe-sulphide and Ca-silicate inclusions in sublithospheric diamonds from South America and Africa and how their crystallisation ages combined with global plate motions provide new insights into supercontinent growth.