The Norian/Rhaetian boundary: evidence of a new global event

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This project aims to explore one of the major global climate and environmental changes of Earth history, recorded in the end-Triassic, which was a time characterized by climate oscillations that brought to the biosphere and environment crisis. These oscillations are associated with significant short-lived negative C pulses, plausibly related to the mega eruption of magmatic provinces, i.e. Angayucham and the Central Atlantic Magmatic Province (CAMP), the latter associated to the End-Triassic Extinction (ETE) at the Triassic/Jurassic boundary (TJB). Deep investigations have been focused on the ETE, while few data are known for the Norian/Rhaetian boundary (NRB), which however permit to recognize rapid oscillations in the $\delta^{13}C_{org}$ curve, culminating in a negative peak below the NRB. The NRB interval also documents a series of biotic turnovers, like extinctions (cosmopolitan bivalves), loss of diversity (ammonoids, radiolarians, conodonts), that gradually culminated at the TJB, supporting the hypothesis of a step-like extinction pattern for the ETE. A possible documented Upper Triassic magmatic province is the Angayucham oceanic plateau (Alaska), with an estimated age compatible with the NRB. The PhD will study selected stratigraphic successions belonging to different basins, domains and hemispheres spanning the NRB. These sections are from New Zealand, Canada, Japan, Italy, Turkey and Slovenia. She/he will investigate conodont biostratigraphy, TOC, $\delta^{13}C_{org}$ and the geochemical composition (REE, minor, major) for paleoenvironmental reconstructions.
The project involve a strong network of international collaborations (Japan, Australia, New Zealand, USA, Canada).

Available Financial Resources: PRIN Rigo, DOR Rigo