



CICLO DI SEMINARI

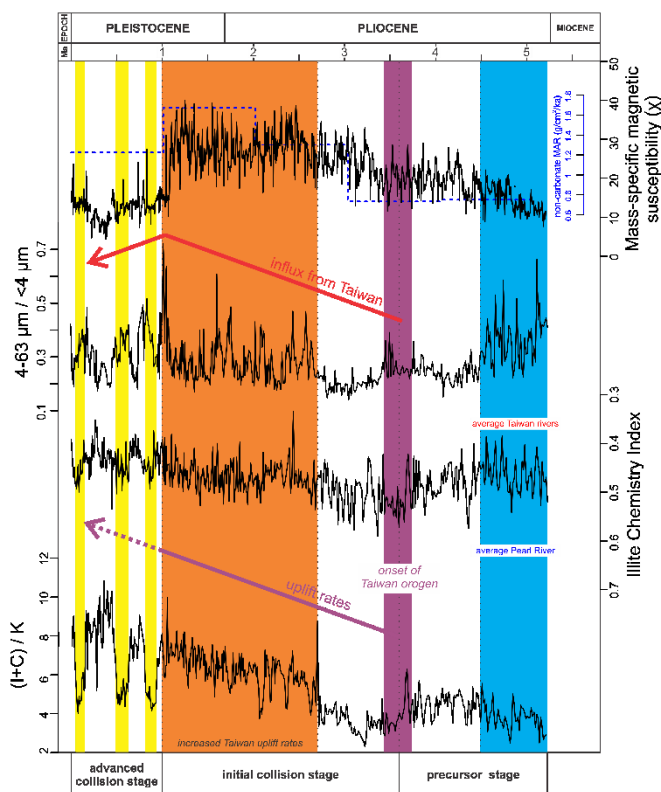
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Tectonic uplift history of Taiwan deduced from sedimentary records in the northern South China Sea

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The tectonic evolution of Taiwan involves uplift that produced the island's high relief and erodibility. However, characterizing these uplift processes in a geologic scale from the nature and history of the orogenic interior is challenging to directly surmise. For this study, the downcore variability of the clay mineral assemblage, illite chemistry indices, illite crystallinity values, and grain size parameters, along with the onboard magnetic susceptibility and mass accumulation rates, from International Ocean Discovery Program (IODP) Expedition 368 Site U1501, are investigated to describe the sedimentary response to the tectonic uplift and other geologic and paleoenvironmental events in relation to the formation of the Taiwan orogeny since the early Pliocene. In this study, the values of non-carbonate mass accumulation rates, (illite + chlorite) / kaolinite ratio, mass specific magnetic susceptibility and (4 – 63 μm) / (<4 μm) ratio are used to describe the terrigenous influx, the geologic processes involved, and consequently, the uplift itself, and are compared with the deformation stages related to the collision of Luzon Arc with the Eurasian Margin.