The sedimentary evolution of the Venetian Plain during the last two climatic cycles

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During the Late Pleistocene the Venetian Plain hosted large megafans produced by outwash of piedmont glaciers. In the southern sector these interacted with the channel activity of major rivers such as Adige and Po. The availability of deep drillings, which contain the record of the last two glacial/interglacial cycles, makes this area key for understanding the climatic and sedimentary evolution of the Alps. The closeness both to the mountain and the sea is marked by the variability of facies through time.

The drainage pattern since the Last Glacial Maximum (LGM) is partially preserved on the surface, whereas the network during the penultimate glaciation (MIS 6), the subsequent interglacial, and the onset of the Late Pleistocene glaciation is poorly known and deserves an improvement of provenance investigations.

The palaeo-environments that preceded the LGM are poorly documented as well. Improvement in pollen and geochemical analysis is needed for characterizing changes in the vegetation, landscape, and climate during a period of time that saw the arrival and settlement of early humans in the region.

The present research would take the chance of the availability of deep cores (Basilica Palladiana, Ca'Borille, Geriatrico, Venice1, Lido1) analyzed for improving the proxy dataset of the southern side of the Alps. The goals are manifold: depicting the evolution of the drainage network in the last two climatic cycles, defining the palaeoenvironmental evolution of the area, refining the palynological, geochemical and sand petrography datasets.

The ideal candidate may have a strong sedimentological, geomorphological, and/or palinological background.

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