

# ***Zircon fission-track analysis on modern sands shed from the Alps: notes on separation procedures and state of the art***

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Detrital zircon fission-track analysis on modern sands is a valuable approach to constrain the pattern of erosional exhumation in orogenic source areas (e.g. Bernet et al., 2004).

In order to constrain the short-term and long-term erosion pattern in the Alps-Appennines orogenic couple, we have collected samples of modern sands in selected sites of the Po River Delta, as well as along the Po River main trunk and in most of its tributaries. Zircon concentrates were separated according to a specific quantitative procedure coupled with sedimentological analyses, which allows an evaluation of zircon content in source rocks, of hydraulic sorting effects, and related intersample/intrasample zircon variability (Garzanti et al. 2008, 2009). Such analyses are the key point to perform sediment budgets and erosion-rate calculations starting from the identification of specific age population within grain-age distributions, and to constrain the short-term evolution of the belt thanks to the information stored in modern sediments.

## References:

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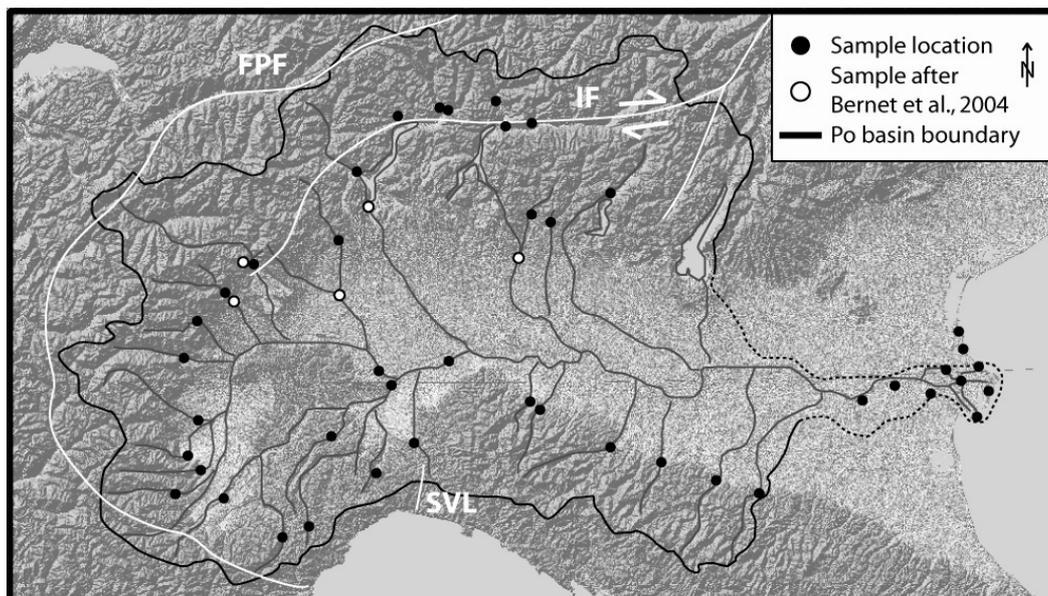


Figure 1: location of modern sands samples in the Po basin processed for fission track analysis (work in progress) and already subject of high-resolution petrography and heavy-mineral analyses. Selected samples from the northern side of the Alps were analyzed for comparison. FPF, Frontal Pennine Fault; IF, Insubric Fault; SVL, Sestri-Voltaggio Line.