



## **Weathering controls in the four largest rivers in China**

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Large rivers integrate the products of physical erosion and chemical weathering in different forms (dissolved, fine to coarse particles). The geochemical composition of these products carry important informations on the mechanisms controlling erosion and weathering at the basin scale : sources of the products, vegetation, climate, anthropogenic and tectonic factors, timescale involed. In the framework of a large franco-chinese project, the four largest rivers in China (Changjiang, Huanghe, Zhujiang, Heilongjiang) were sampled : vertical profiles, surface tributaries, bedload sediments and surface monthly time series over a year were collected at different locations along the stream of these rivers. We report major and trace elements concentrations and Nd-Sr isotopes in the suspended particulate matter and bedloads. The four river basins cover a large diversity of climatic, lithologic, tectonic and anthropic settings, that our results put in perspective as controls on erosion-weathering mechanism and its associated timescales.