

Mont Blanc and Aiguilles Rouges; Geology of their polymetamorphic basement (External massifs, Western Alps, France-Switzerland)

Von Raumer J.F. & Bussy F.

The Aiguilles Rouges and Mont Blanc external massifs belong to the pre-Mesozoic basement areas of the external domain of the Alps. Before their involvement into the Alpine building (basement nappes), they recorded a multiple geological evolution comprising the deposition of Neoproterozoic to Cambrian sediments and emplacement of granitoid and metabasic to ultramafic magmatic rocks of Early Palaeozoic age at the Gondwanan border. After rifting and drifting (formation of Palaeotethys), all rocks underwent polyphase metamorphic and structural transformations during the Variscan orogeny, and were intruded by late Variscan granitoids. The resulting polymetamorphic basement was eroded during formation of Upper Carboniferous sedimentary troughs. New geological maps are presented in this volume, together with structural, petrological and geochemical characteristics of all lithologies. The geochemical data are presented in annexes.