

MAP OF PRE-ALPINE AND ALPINE METAMORPHISM IN THE ALPS

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The metamorphic map of the Alps was first published in 1973 as sheet 17 of the metamorphic map of Europe by the sub-commission for the cartography of metamorphic belts in the world (Leiden and UNESCO, Paris). The availability of detailed information about metamorphism in the Alps made it possible to print this map at the scale of 1 : 1,000,000 instead of the usual 1:2,500,000 scale.

Using the »Structural model of Italy« (1987) as a topographic and tectonic base map, two computer-generated maps of the scale of 1,000,000 were prepared: an Alpine metamorphic and a pre-Alpine metamorphic map of the Alps. The following metamorphic facies or zones were distinguished : anchizone, blueschist facies (in part subdivided into lawsonite-albite-chlorite, epidote-glaucophane, and glaucophane-jadeite-lawsonite), eclogite facies, amphibolite facies, and granulite facies.

On the Alpine metamorphic map , metamorphic associations of Cretaceous age are distinguished from associations of Tertiary age using different colours. In addition, for basement sequences the intensity of of pre-Alpine metamorphism is shown with overlay signatures to outline the polymetamorphic character of these terrains. Comparison with structural features reveal the nature of confining faults of Alpine metamorphic terrains, as, e.g., out-of-sequence thrust faults or low angle normal faults.

On the pre-Alpine metamorphic map, three main periods of metamorphism are distinguished: pre-Variscan, Variscan, and late Variscan. In addition, various age groups of granitoids are separated, i.e., >400 Ma, 400–360 Ma, and <320 Ma.