developed "wet" and/or H_2O-deficient partial melting, which may or may not have been induced by the intrusion of mantle-derived melts. Consequently, peraluminous associations of crustal melts were associated and mixed with high-K mafic magmas.

Lower to middle Carboniferous high-K calc-alkaline suites indicate a postcollisional stage with uplift and erosion in a short-lived transpressional and/or trantensional regime. They were followed by *late Carboniferous* near-alkaline suites, yielding both alkaline and calc-alkaline characteristics.

During *late Carboniferous to early Permian* times, scarce subduction-related calc-alkaline suites resemble closely the circum-Pacific Cordilleran batholiths. They may indicate a renewed ocean-continent plate margin convergence at the southern flank of the Variscan belt.

Mid-Permian post-orogenic and *late Permian to Triassic* non-orogenic alkaline complexes were accompenied by large thermal imprints recorded in the basement by mineral isotopic clocks. The alkaline magmetic activity is related both to consolidation of continental plates and to precursory stages in the formation of the Meso-Tethys oceanic basin.

ORDOVICIAN AND PERMIAN PLUTONISM IN THE SOUTHALPINE CRUST (NW ITALY AND TICINO-CH): A COMPARISON

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Granites and their mafic precursors contributed a great deal to the growth of the Southalpine crust in the Ordovician in an active continental margin, and in the Permian in a post-orogenic extensional regime.

The Ordovician plutonic rocks of Series dei Laghi (W Southern Alps) range from diorite to leucogranite with a maximum in the granodiorite interval. They intruded non-metamorphic terrigenous rocks. Some of the coarsest host rocks were impregnated by pegmatitic residual melts. Intrusives and country rocks underwent an Hercynian lower amphibolite facies regional metamorphism, but their original features and relationships can still be identified. Minerals record the Hercynian metamorphism (Rb-Sr ages: biotite 234-310 Ma, muscovite 311-325); whole rocks behaved as closed system for Sr as is demonstrated by the whole rock isochron at 468±9Ma.

Trace elements (included REE), as well as Sr isotopic data, indicate a lower crust heterogeneous source or a mantle source with crustal contribution. The Pb isotopic systematics on the whole rocks, shows a displacement in some samples, that suggests some fluid circulation. The initial Pb isotopic composition of the unaffected samples is

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tipically lower crustal, with 206/204 ratios of 17.446-17.990, 207/204 ratios of 15.547-15.627, and 208/204 ratios of 37.716-38.843. Their calcalkaline character, also suggested by zircon typology, and the presence of ophiolitic materials and of eclogite in the host rocks may suggest a subduction environment (Boriani et al, 1990, Tectonophysics).

At the end of the Hercynian metamorphism the Southalpine crust underwent conspicuous thinning and large scale strike slip faulting. Emplacement of a large body of mafic magma at the base of the crust induced granulite facies metamorphism (Ivrea-Verbano Zone) with partial melting and complex interactions between mafic magma and host rocks. Tapping of evolving magma chamber at different stages caused intrusion of mafic stocks and dykes in the upper crust along the main tectonic lineament (CMB Line) and the emplacement of granites (Graniti dei Laghi).

Most of the basic and intermediate rocks are cumulitic. Trace elements, REE (Boriani et al., 1992, Acta Volcan. in press), and Sr (Pinarelli et al., 1988, Rend. Soc. Ital. Mineral. Petrol.) and Pb (Pinarelli et al. 1992, Lithos, in press) isotopic data suggest that they mostly resulted from FC and AFC of a mantle derived melt contaminated by crustal material mostly in the lower crust. Granites derive from the same parental magma but more contaminated and evolved.

THE RHODOPE QUESTION VIEWED FROM EASTERN GREECE

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New field data gathered in western Thracia provide an opportunity to review age and character of the Rhodope massif. Until their collision both, gneiss basement and the overthrusted Circum Rhodope Belthad mutually independent evolutions. The Circum Rhodope Belt consists of a lower? Permo-Triassic greenschist facies Makri Unit and an upper low - to nonmetamorphic Jurassic-Lower Cretaceous Melia Unit, the two units separated by thrust but transported in common towards N or NW onto the basement. That latter, containing pre-metamorphic ophiolite elements, has been transformed in an amphibolite and a greenschist facies under SSW directed stress. For this opposition of stress vectors, the age of the Circum Rhodope Belt cannot be taken as a means for estimating a minimum age of the basement. However, transgressive Late Cretaceous? or Early Tertiary autochthonous deposits confirm the termination of regional metamorphism and anatexis well before the Upper Cretaceous. Latest since the collision, ductile deformation was replaced by brittle fracturing. Tertiary rifting allowed the ascent of effusive and intrusive intermediate to acid magmas. Clarification

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