



## **Does the amount of shortening correlate with the degree of metamorphism during Alpine collision?**

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The distribution of Cenozoic Barrow-type metamorphism in the Alps mainly occurs in the Tauern Window and in the Lepontine Dome. In contrast, the eastern parts of the Central and the Eastern Alps are not affected by a Barrow-type metamorphism during Cenozoic Alpine history. Cenozoic metamorphism in the internal units of the Western Alps is essentially related to subduction, but, in the external zone of the Western Alps, Cenozoic metamorphism reaches temperatures between 200 and 400 °C, that are related to a geothermal gradient of approximately 20 °C/km. Reassessing the amount of collisional shortening all along the Alpine Chain does show that the presence and the degree of high T metamorphism correlates with the percentage of inferred shortening. Hence along-strike variations of collisional shortening control the along-strike changes of collisional metamorphism along the Alpine Chain.