

## Zircon U/Pb dating of the Late Carboniferous Zervreila Orthogneiss, Adula Nappe.

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The Zervreila Orthogneiss is one of the dominant lithologies of the northern Adula Nappe (Jenny et al. 1923). However, the age of magmatic emplacement of this rock was never determined precisely. This age is important to better understand the lithologies (lithostatigraphy) and the geometry of the Adula Nappe. Geochemical data show that the protolith of the Zervreila Orthogneiss is a Si-rich granite. Zircons from this orthogneiss form a very homogeneous population. Inherited cores and evidences of metamorphic growth are absent. According to Pupin classification (1980), these are mainly P-type zircons similar to zircons found in alkaline granites from extensional tectonic environments. We have dated the zircons from the Zervreila Orthogneiss by LA-ICPMS using an Element XR sector-field instrument interfaced to an UP-193 excimer ablation system. A 5 Hz repetition rate and an on-sample energy density of 2-2.4 J/cm<sup>2</sup> were applied to minimise the laser induced fractionation. A GJ-1 zircon was used as a primary standard. Analyses were performed on oscillatory magmatic growth zones recognisable in cathodoluminescence images. Samples dated come from four localities in the northern Adula Nappe: Val Scaradra, Zervreila, and two closely situated outcrops from Zapport. The U/Pb ages of these samples are largely concordant; the 206/238 age values are 296.10 (+2.90 - 1.80) Ma, 291.20 (+8.10 -3.00) Ma, 288.65 (+3.25 -4.75) and 293.60 (+3.90 - 2.00) Ma, respectively. Within the analytical error, these four ages are interpreted to result from the same magmatic event and to correspond to the intrusion time of a granitic body, probably emplaced within the Adula paragneisses in the late Variscan post-orogenic context.

### REFERENCES

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