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Was the Valaisan Ocean floored by oceanic crust? Evidence of intra-plate magmatism in the Versoyen Unit (Valaisan Domain, NW Alps

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U-Pb dating has been performed on zircon from a meta-leucogabbro and a metagranite from the Versoyen Unit, in the Western Alps. Previous studies have always considered the Versoyen Unit and its mafic rocks to represent remnants of the oceanic crust that supposedly floored the Valaisan basin during the Cretaceous. However, magmatic zircon cores yield Permian crystallization ages of 267$\pm$1 and 272$\pm$2 Ma. These ages correlate with extensive Permian intra-plate magmatism related to lithospheric stretching prior to the break-up of Pangea. Therefore, the Versoyen Unit is the most external Alpine terrane that displays traces of this Permian basic magmatism. Older inherited crystals and rare Cretaceous zircon rims ($\sim$100-110 Ma) are also present. The younger rims are characterized by very high U content, suggesting interaction with crustal fluids. We conclude that the magmatic activity in the Versoyen Unit was limited to the Permian and that the Cretaceous ages are related to a thermal/fluid event possibly induced by the opening of the Valaisan basin. Since no traces of Cretaceous oceanic crust have yet been found in the Valaisan domain of the Western Alps, the oceanic nature of the Valaisan basin may need to be reconsidered.