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ON THE VARISCAN, EOALPINE AND LATE ALPINE EVOLUTION IN THE EASTERN ALPS: ⁴⁰Ar/³⁹Ar DATA FROM THE CENTRAL SOUTHERN TAUERN WINDOW

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17 mineral concentrates (12 white micas and 5 amphiboles) from a profile covering the main tectonic units of the central southern Tauern Window, i.e. the polymetamorphic basement, the Eclogite Zone and the Upper Schieferhülle, have been analysed by the ⁴⁰Ar - ³⁹Ar stepwise heating technique. Each sample represents a distinct textural position in the petrologically deduced PT - evolution of these units.

The results can be grouped as follows:

1. The age spectra of amphiboles from different units and textural settings are disturbed due to excess argon, and do not yield geologically meaningful age informations;
2. Nearly all analyzed white micas, mostly phengitic in composition have plateau ages in the range of 33 to 36 Ma, regardless of their tectonic and textural origin, i.e. this age represents the cooling of the whole area below the closure temperature of white mica.
3. Phengite from a high pressure vein (phengite-omphacite-rutile) in basement metabasics has a slightly disturbed spectrum with a "disturbed plateau" at about 65 Ma, possibly near the crystallisation of this high pressure assemblage (above 10 kbar and at 450 to 500 °C) in the basement.
4. Big white mica books have plateau ages of about 285 Ma without any evidence for argon loss during the alpine thermal overprint.