

$^{40}\text{Ar}/^{39}\text{Ar}$ DATES IN THE CENTRAL CORDILLERA OF COLOMBIA: EVIDENCE FOR AN IMPORTANT REGIONAL TECTONOMAGMATIC EVENT IN THE UPPER TRIASSIC

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$^{40}\text{Ar}/^{39}\text{Ar}$ step-heating ages obtained for five medium-grade metamorphic rocks and three intrusive granitoids from the northern part of the Cordillera Central of Colombia indicate the existence of an important Upper Triassic tectonomagmatic event.

Most of the dates are plateau ages in micas and amphiboles, ranging from 230 to 210 Ma. Age values around 230 Ma are reported for two amphibolites occurring SE of Medellin and a biotite from the Abejorral gneiss, they are considered as resulting from a regional medium-grade metamorphism. A similar interpretation can be given for two amphiboles from the Pueblito basic alkaline rocks, traditionally associated to the Cauca ophiolitic complex. However, they yielded somewhat older ages, that could alternatively be interpreted as due to the crystallization process of the magmatic rocks.

Two $^{40}\text{Ar}/^{39}\text{Ar}$ dates were obtained on micas from the La Honda and El Buey stocks. Since their age values resulted close to 220 Ma, they may be considered as later magmatic activities. Two additional ages were obtained on deformed muscovites from the Horizontes monzodiorite, and their somewhat younger ages, close to 210 Ma, can be interpreted as related to the crystallization of this intrusion in the final stages of the same tectonomagmatic event.

In conclusion, the already available results, although in a preliminary way, seem to define an important tectonomagmatic event that affected the Central Cordillera of Colombia. It may be regionally correlated with events of similar age reported in some of the metamorphic belts of the Cordillera Real of Ecuador and northern Peru.