

## AGE OF THE MURMANO PLUTON AND ITS RELATIONSHIP WITH THE OPHIOLITES

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ABSTRACT.— The composite Murmano pluton (a few km NNW of the town of Divriği, province of Sivas, Eastern Central Anatolia), ranging from quartz-syenitic to dioritic in composition, is intrusive into serpentinites belonging to the Divriği ophiolite complex. The pluton gives a  $110 \pm 5$  Ma (IV) Rb-Sr whole rock isochron date which is interpreted to represent the age of the intrusion. A series of 7 samples, one micro quartz syenite, 5 monzonites and one hydrothermal scapolite rich dyke rock, together representing a c. 100 by 200 m large area at the southern margin of the pluton, defines a  $112 \pm 8$  Ma(IV) Rb-Sr whole rock isochron with an initial  $^{87}\text{Sr}/^{86}\text{Sr}$  ratio of 0.7068. Another series of 7 samples representing ac.200 by 500 m large area at the southwestern margin of the pluton gives a 5 point  $109 \pm 5$  Ma (IV) isochron with an initial  $^{87}\text{Sr}/^{86}\text{Sr}$  ratio of 0.7058. The two concordant dates are interpreted as the age of intrusion which is thus given as  $110 \pm 5$  Ma (IV). The two sample series represent two separate magma batches which may have originated by anatexis of different source rock complexes with different Rb-Sr isotopic ratios. The predominantly silicic character of the pluton combined with its considerable size c.25 km excludes an origin in the oceanic realm. The magma was intruded subsequent to the obduction of the ophiolite complex which is thus suggested to have taken place more than  $110 \pm 5$  Ma ago.