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# Geochemical and geochronological study of the non-granitic pegmatite body "La Panchita", Oaxaca state, Southern Mexico

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The La Panchita pegmatite body intrudes a >10 m thick pyroxenite dike that in turn is cutting the central portion of ∼1Ga Oaxacan Complex rocks, Southern Mexico. The Oaxacan Complex is the largest exposure in Mexico of Neoproterozoic basement rocks metamorphosed up to the granulite facies during the Grenville orogeny. This Complex has multiple intrusions of pegmatite bodies along its extension, some mineralogically simple, some complex. As for the mineralogy, the La Panchita pegmatite is distinct from other pegmatites of the Oaxacan Complex. It contains unusual minerals for a pegmatite, like scapolite and calcite, and it is a non-granitic pegmatite, as suggested before. This work presents preliminary geochemical and geochronological results of this pegmatite body and a discussion about its possible origin.

The geochronological study shows that the time of emplacement of this pegmatite is 981.4 $\pm$ 7.4 Ma and it is post-tectonic with respect to the granulite facies metamorphic event of the Oaxacan Complex. The geochemical study shows that the pegmatite La Panchita formed during the evolution of an anorogenic magmatic source of carbonatitic-alkaline composition related to a post-Grenvillian rifting event. Medium to low-temperature thermochronometers (K-Ar, fission track and U-Th-He) from this pegmatite are under progress and the results will be given at the meeting.