

## **FISSION-TRACK DATING OF OBSIDIAN AND ARCHAEOOMETRY: PREHISPANIC ARTEFACTS SOURCING IN COLOMBIA AND ECUADOR**

1,2DORIGHEL, O., 1POUPEAU, G., and 1LABRIN, E. 1UMR 5025 of CNRS, Université Joseph Fourier, Grenoble, France; 2Ecole Doctorale d'Archéologie, Université Paris I, Paris, France.

Obsidian artefacts are present in many archaeological sites of Colombia and Ecuador, whatever their localisation, from coastal areas to the inter-cordillera Upper Magdalena valley (Colombia) or the Amazonian piemont of the Royal Cordillera (Ecuador). We analysed the fission tracks (FT) in obsidians from 27 archaeological settlements from coastal to Andean (Cauca valley in Colombia, Interandean depression in Ecuador) sites, ranging from 3,500 B.C. to 1,500 A.D. (Formative to Integration chrono-cultural periods). 58 Plateau-ages were determined on obsidian artefacts using the subtraction method. They range from 0.17 to 6.7 Ma. We also dated obsidians of six from the 13 known Colombian and Ecuadorian sources. Presently, taking into account all published FT data, the ages of all but one are known. They are comprised between 0.17 and 6.7 Ma. The comparison of artefacts and sources FT ages shows that six known sources were used in the period considered, some of them intensively. The distribution of artefact FT ages shows also that at least three unknown sources were also used, one of these largely represented in the La Tolita-Tumaco culture of the Regional Development period. The obsidian sources are all located in sierras: Central Cordillera in Colombia, Royal Cordillera in Ecuador. Our results show that anthropic transportation of obsidians from their parent rocks may have reached at least 370 km.