African continent has two prominent structures related to volcanic activity. The East African Rift System stretches from Ethiopia to Zambia in the eastern part of the continent. The volcanic activity is related to the rifts. The active volcanoes which occur in Cameroon at the western coast of the continent an in the adjoining part of the Atlantic Ocean form the Cameroon Volcanic Line. The study of rocks forming the so-called Earth' lithospheric mantle, located at depth 30 – 100 km, is the goal of the project. The pieces of these rocks, termed "xenoliths", are found in the lavas which pour out from the Cameroon volcanoes.

The study will comprise xenoliths from the Oku volcano in Cameroon. The modern methods of rock and mineral analyses will be used to characterise the Earth's mantle rocks from Oku region. These are scanning electron microscopy and electron microprobe analyses, inductively coupled plasma mass spectrometry connected with laser ablation, chemical analyses of strontium and samarium/neodymium isotopes. The complex study of xenoliths will allow to decipher their geological history. This will serve as a basis for discussion about the origin and currently active processes in lithospheric mantle beneath Cameroon volcanoes.

The volcanic activity in Cameroon cannot be explained by standard models of plate tectonics, and are not well understood until now. The study of the deep basement underlying the volcanoes will yield new arguments in the discussion on the driving mechanisms of the Cameroon volcanoes.