Tectonic evolution of the Southern Domain of the Ungava orogen

The Ungava orogen (Nunavik, Quebec) has been interpreted as the result of a Paleoproterozoic arc-continent collision, but its magmatic and tectono-metamorphic evolution, as well as its detailed stratigraphy, remain loosely constrained. This project is focused on the Southern Domain of the Ungava orogen, characterized by a parauthochtonous to allochthonous sequence of metasedimentary and metavolcanic rocks of the Povungnituk and Chukotat Groups.

The project is based on the structural analyses of the exposed units and the U-Pb geochronological dating of detrital zircon grains from different metasedimentary horizons. These geochronological data will help to constrain the maximum depositional age of the different units and to identify the main sources of sediments and, possibly, their variation during time.

The results of this project will be used together with those of another project (Simon Tournier) focused on the detailed characterization of the metavolcanic sequence, and they will provide a better constrained detailed stratigraphy and structural setting of the Southern Domain of the Ungava orogen.