

**PRESSURE-TEMPERATURE ESTIMATES
ON THE TJELIKEN ECLOGITE
FROM NORTHERN JÄMTLAND,
SWEDISH CALEDONIDES**

**Barbro ANDERSSON, Jaroslaw MAJKA,
Iwona KLONOWSKA & Åke ROSÉN**

*Uppsala University, Department of Earth Sciences;
Villavägen 16, 752 36 Uppsala, Sweden*

Eclogites are important in order to understand orogenic processes, since their presence indicates high-pressure metamorphism. In northern Jämtland, Swedish Caledonides, eclogites have been found at several places in the Seve Nappe Complex (SNC). The mountain Tjeliken in the Lower Seve Nappe is one of them. Dating relates the high-pressure metamorphism to the Late Ordovician subduction of the Baltoscandian margin during the closure of the Iapetus Ocean. In this study new P-T conditions are presented for the Tjeliken eclogite. These are based on petrological studies of an eclogite sampled on the top of the Tjeliken Mt. in summer 2010. Mineral peak assemblage consists of garnet + omphacite + phengite + quartz. Peak conditions are calculated to ca. 2.7 GPa and 700°C. These P-T conditions fall into the upper part of the quartz stability field, close to the quartz-coesite transition line. The new P-T estimates indicate a deep subduction of the Baltoscandian margin already in the Late Ordovician.