



## **Northwestern extension of the TransEurasian Megatransect – a compilation of BABEL and FIRE deep seismic reflection profiles**

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The BABEL profiles together with FIRE4 form a nearly continuous 1750 km long reflection profile in the northeastern part of the Eurasian continent, the Fennoscandian (Baltic) Shield. The BABEL and FIRE profiles image the Paleoproterozoic formation of the Fennoscandian Shield -the ancient core of the Europe. The BABEL profiles display the crustal structures related to the juvenile accretionary Svecofennian Orogeny (1.8-1.9 Ga) and subsequent Subjotnian rift stage (1.4-1.6 Ga). The FIRE 4-4A profiles display the collision of Archean Karelian and Kola Provinces in the Paleoproterozoic Lapland-Kola Orogeny (1.9 Ga) and the reworking of Karelian terranes in the Svecofennian Orogeny.

The BABEL profiles (1200 km) transect the Baltic Sea and the Gulf of Bothnia and the recently acquired FIRE 4-4A (550 km) profiles transect Northern Finland and Lapland. FIRE4A terminates at the Finnish-Russian boarder, roughly 100 km west of the starting point of EU1 and the suggested NW starting point of the TransEurasian Megatransect. The reflection profiles are also accompanied by refraction profiles POLAR and BABEL3&4, 1, 7, C, B, A. We suggest that the TransEurasian Megatransect is extended southwestwards another 1750 km along FIRE4 and BABEL 3&4, 1, 7, C, B, A.