Deformation Zone (SBDZ), and the c. 1.76 Ga Tving granitoids in the south (Johansson et al. 2006). In this study, we have investigated the mafic intrusions cutting the Tving granitoids.

The new paleomagnetic and AMS examinations of the Tving granitoids in eastern Blekinge show NW-striking foliation parallel to the SBDZ. The studied mafic intrusions carry a stable component with shallow downward NNW direction. The primary remanence is supported by positive contact tests. New isotopic data for olivine gabbro and metabasic rocks using U-Pb baddeleyite and Ar-Ar amphibole geochronology suggested a protolith age of ca 1760 Ma for these rocks. The mean paleopole for these mafic intrusions from Blekinge thus corresponds to the c. 1.76 Ga pole for Fennoscandia.

In the entire Blekinge, AMS lineations mainly dip NW. The NNE upward overprint component is found in the Tving granitoids near the Karlskrona Deformation zone, that is close to that in the 1.45 Ga Karlshamn granites, probably due to regional heating and deformation of the Blekinge block (Čečys & Benn 2007). AMS and structural data indicate that the magnetic fabrics of the mafic intrusions are continuous and the metamorphic fabrics in the country rocks were formed during ENE–WSW compression, and can be referred to the Danopolonian orogeny. The new paleomagnetic pole is close to 1.45 Ga pole for Baltica (Lubnina et al. 2010).

ORAL

Early Paleoproterozoic paleogeography of Karelian and Superior Cratons: new paleomagnetic and AMS data from 2.45-2.1 Ga mafic intrusions of Central Karelian and Kianta terranes

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We present a new paleomagnetic and Anisotropy of magnetic susceptibility (AMS) data from the Early Paleoproterozoic mafic dykes and Archean host rocks within two terranes of the Karelian Craton, eastern Fennoscandian Shield. Three groups of dykes have been collected within Pyaozero area of Central Karelian terrane: NE-trending ca. 2450 Ma gabbronorite and diorite dykes, NW-trending ca. 2310 Ma dolerite dykes, and NNW-trending ca. 2130 Ma continental MORB-type tholeiitic dykes (Stepanova et al. 2014). All these dykes were typified based on the AMS data. Samples from 2130 Ma dolerite dykes within Tulos area of Kianta terrane were also collected.

The paleomagnetic results show that a strong Svecofennian overprinting is pervasive in the area.

All studied mafic dykes carried two stable components. Most typical is component of intermediate down to the NNW, corresponds to the Svecofennian remagnetisation (Mertanen 1995). Component of SE intermediate down direction yielding a paleomagnetic pole 2450 Ma based on a positive baked contact test is interpreted to represent the primary magnetization.

The paleomagnetic results for dolerite dyke within Tulos area show that a strong Svecofennian overprinting is pervasive in the area, based on a negative baked contact test.

The new paleomagnetic data from the Karelia Craton compared to similar-aged paleomagnetic data from the Superior Craton does not support the recently proposed Superia configuration (Bleeker & Ernst 2006), based upon dyke swarm trajectories.

We propose a new Early Paleoproterozoic paleogeography at 2.45-2.1 Ga for the Karelia and Superior craton.

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ORAL

Development of the Paleoproterozoic Svecofennian orogeny, new constraints from Central Finland

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Significant amounts of new field and analytical data (whole-rock geochemistry, age determinations) were gathered by Geological Survey of Finland from a little studied area along the southeast boundary of the Central Finland Granitoid Complex (CFGC). As the area is the culmination point of several major geological units this new data allows revaluation of previous interpretations and correlations. The new data mostly affects the following aspects:

Units belonging to the older Svecofennian magmatic phase (1.93–1.91 Ga) extend 100 km further southeast as tentatively suggested earlier. All of the paragneiss units in the area display similar detrital zircon patterns, defining ~1.92 Ga as the maximum depositional age for most of the samples. The eruptive ultramafic units occurring as interlayers in different paragneiss units display differences in trace element patterns. But otherwise the earlier division of paragneisses mainly reflects differences in deformation and metamorphic history. The arc-type calc-alkaline magmatism in the area is similar in age (1895–1875 Ma) and composition to that of the classical Tampere group 200 km further west. The voluminous granitoid magmatism took place in two stages, at ca. 1895 and 1885–1875 Ma. The latter phase can be divided into separate units on compositional bases, which display distinct field relationships, although the obtained ages overlap within errors. Thus the earlier division into syn- and post-kinematic units should be abandoned. Instead the units represent coeval magmas originating from different levels of the crust. Lower crust melts rose only locally to the present erosion level via favorable structures.

ORAL

Kinematics and deformation regime of the Kynsikangas ductile shear zone, SW-Finland.

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The NW-striking Kynsikangas Shear Zone (KSZ) is one of many prominent Paleoproterozoic ductile shear zones in SW Finland that formed during the Svecofennian orogeny. The Kokemäki segment of the KSZ consists of an approximately 16 km long and 2 km wide core of highly strained metagranitoid and migmatite rocks displaying variable mineral foliation (S) - lineation (L) geometry. Moreover, the core hosts abundant small-scale kinematic indicators, such as C-S fabrics, rotated rigid objects and folded metamorphic layering. Besides unravelling the significance of major shear zones in the Svecofennian orogen, the KSZ allows us also to elucidate to what extent small-scale kinematic indicators are useful for identifying the overall sense-of-shear of ductile deformation zones in general. The central portion of the shear zone is characterized by pronounced sub-horizontal L fabrics, which merge along-strike of the shear zone in both directions into S > L fabric geometry. East of the fault core, the curvature in the strike of foliations, sub-horizontal mineral stretching lineation and C-S fabric geometry point to a strong component of left-lateral displacement. By