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 AN: **T13D-1580 [Abstracts]**
 TI: **Neoproterozoic Mafic Magmatism in Central Novaya Zemlya, Additional Evidence From Zircon and Titanite U-Pb Ages**
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AB: Novaya Zemlya is a banana-shaped set of islands stretching northward from the Polar Urals and separating the Barents and Kara Seas. The southernmost part of the islands is an integral component of the Timanides, a Neoproterozoic orogenic belt, which broadly follows the Urals along the eastern and northeastern margin of Baltica. The Timanian event at ca. 600-550 Ma created a folded and imbricated Late-Neoproterozoic basement, which was subsequently unconformably covered by a succession of Early Ordovician to Permian sediments. In more northerly parts of Novaya Zemlya the evidence for such an Early Paleozoic unconformity seems to dissipate, the geological picture being dominated by an apparently continuous sedimentary succession spanning most of the Paleozoic. There is, however, local evidence for the presence of a Precambrian basement comprising Late Neoproterozoic magmatic rocks and perhaps also Mesoproterozoic basement (Korago et al. 2004). In our study we have now obtained further evidence for Neoproterozoic plutonic activity in the region. Zircons were analyzed by ID-TIMS in four gabbroic and dioritic dikes from Matotchkin Strait and Mashigin Fjord in central parts of Novaya Zemlya. They yield U-Pb ages ranging from 716 to 704 Ma, which based on the uniform and characteristic morphology of the zircon populations and the similar titanite age from one sample can be interpreted as dating intrusion of the mafic magmas. These ages indicate a period of magmatism that predated Timanian convergence and collision, perhaps supporting the inference that central parts of Novaya Zemlya were not affected by the Timanian orogeny. The timing of these plutonic events at 716-704 Ma corresponds instead to that of arc magmatism on parts of the Siberian margin (e.g. Vernikovsky et al. 2003) pointing to a possible paleogeographic affiliation of these domains. References Korago, E.A., Kovaleva, G.N., Lopation, B.G. & Orgo, V.V. 2004. The Precambrian rocks of Novaya Zemlya. In Gee, D.G. & Pease, V.L. (eds.) The Neoproterozoic Timanide Orogen of Eastern Baltica. Geol. Soc. London Memoirs, 30, 135-143. Vernikovsky, V.A., Vernikovskayaa, A.E., Kotov, A.B., Sal'nikova, E.B., & Kovach, V.P. 2003. Neoproterozoic accretionary and collisional events on western margin of the Siberian craton: new geological and geochronological evidence from the Yenisey Ridge. Tectonophysics 375, 147- 168.

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