**Supplement 1**

**Radiocarbon datings from the Bol’shoe Zavetnoe 4 site (Juoksemajärvi Westend)**

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| **Laboratory no.** | **14C age yrBP** | **95.4% cal age ranges (from) (to)** | **Dated material and context** |
| Le-6556 | 7750±180 | 7074–6241 BC | Charcoal, cultural layer (context 7) outside the dwelling |
| Le-6641 | 4550±180 | 3704–2780 BC | Charcoal, cultural layer (context 7) outside the dwelling |
| Le-6512 | 4150±50 | 2881–2581 BC | Charcoal, cultural layer (context 7) outside the dwelling |
| Le-6601 | 3740±90 | 2458–1936 BC | Charcoal, cultural layer (context 7) outside the dwelling |
| Le-6557 | 3700±320 | 3015–1305 BC | Charcoal, cultural layer (context 7) outside the dwelling |
| Le-6602 | 3660±30 | 2136–1950 BC | Charcoal, charcoal concentration (context 5) inside the dwelling |
| Le-6642 | 3450±100 | 2024–1521 BC | Charcoal, cultural layer (context 3) outside the dwelling |
| Le-6600 | 3370±30 | 1745–1566 BC | Charcoal, charcoal concentration (context 5) inside the dwelling |
| Le-6643 | 2620±70 | 927–540 BC | Charcoal, cultural layer (context 5) inside the dwelling |
| Le-6640 | 1400±50 | 550–761 AD | Charcoal, cultural layer (context 7) outside the dwelling |
| Le-6558 | σ - 10±2% | modern | Charcoal, cultural layer (context 7) outside the dwelling |

OxCal 4.3.2 (Bronk Ramsey 2009), IntCal13 atmospheric curve (Reimer et al. 2013).

All dated samples are wood charcoal collected from the cultural layer; due to the requirements of the conventional method, a large amount of material has been combined for each sample. The results do not provide a solid framework for dating the pithouse and are hard to interpret, as datings from the same contexts gave very different results. The reasons for this may be that the dated contexts contain charcoals of various ages (mixing/contamination), some of the datings are connected to natural processes, or the datings reflect human activity that has left no archaeologically recognizable evidence in the excavated area. In addition, some datings are of very poor quality, i.e. with large measuring errors and wide calibrated intervals. Data after Gerasimov, Kul’kova 2003; Halinen et al. 2008; Seitsonen et al. 2012 (discrepancies concerning dates Le-6641, Le-6512, Le-6557, and Le-6556 in these sources corrected).