



Fig. Yamal “extreme” tree rings (*Larix sibirica*): a) replication for (b); b) 21 narrowest rings (ring-width indices according RCS version of chronology); c) replication for (d)-(f); d) missing rings (in % of all rings); e) light rings (in % of all rings); f) frost rings (in % of all rings), bold part of columns – frost rings in latewood, thin part – in earlywood.

Narrow rings: 46 BC, 42 BC, AD 49, 143, **623**, 637, 639, **640**, 814, **816**, 1300, 1330, **1342**, 1347, **1453**, 1529, **1560**, 1576, **1816**, **1818**, **1820**

Missing rings: 42 BC, AD 49, 134, 143, 623, 637, 639, 640, 814, 816, 903, 912, 1170, 1347, *1453*, 1456, 1529, 1576, 1642, 1644, **1816**, **1818**, **1820**

Light rings (highest 21): BC 42, AD 143, 627, 738, 801, 903, 972, 1051, 1172, 1201, 1259, 1312, 1342, 1383, 1453, 1466, 1481, 1548, 1560, 1634, 1679

Frost rings (highest 22): 42 BC, AD 110, **143**, 194, 404, 536, **543**, **627**, **738**, 754, **801**, 1077, 1209, 1312, 1453, **1466**, 1548, **1601**, 1783, 1831, 1862, 1912