

Tree-Ring Analysis of 445 Year Chronology of Scots Pine from Baikal National Park

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The most part of known in present time long tree-ring chronologies were build with use of timber cores from wooden buildings and archeological timber samples, wchich were dated with use cores from living trees by cross-date method. Thus, they consist of dendrochronological information from several organisms. At the same time, the investigation of features of tree-rings forming by one genotype for maximally possible long time interval has the independent value for progress of our knowledge about biological base of radial growth variability and the wood stock forming.

The goal of investigation wath the analisys of radial growth variability in uncial ald-age tree of Scots pine (*Pinus sylvestris* L.) The length of investigated chronology was 445 years. The investigated tree is situated on Baycal island Olchon in forest on sandy soils near Saraysk bay.

Three cores were taken by Pressler borer and was delivered to the laboratory where specially prepared for future research. Rings width were measured and analysed with use of special equipment Lintab and computer program TSAP. By results of measuring of each core was made three individual chronology, and on the base of them was calculated the average chronology.

The correlation between absolutely value of radial growth chronologies and chchronologies calculated by indexation with use of different variants of growth norm; the features of long-term component of the radial growth calculated by method of of 11-year moving average; features of correlation between sunspot activity and long-term and short-term components of radial growth were investigated.

It was established, that for investigation of short-term variability of radial growth and effect of climate changes on radial growth the best variant of indexation is on the base of 5-year average norm of ring width. Also it was established, that impact of solar activity on radial growth has nonstationary function and probably modified by impact of other astrophysical factors.