



Global warming stops in Altai and Northern Mongolia in 2010-2015.

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We studied the cores of bottom sediments of Lake Teletskoe (Mountain Altai) [1] and Lake Telmen (Northern Mongolia) [2].

The method of constructing the forecast includes the following steps:

1) Geochemical analysis of lakes bottom sediment cores with spatial resolution 0.1 mm using synchrotron radiation [3]. It corresponds to the time resolution $\sim 0.2\text{-}0.3$ year (sedimentation rates are equal 0.51 mm/year for Teletskoe Lake and 0.64 mm/year for Telmen Lake).

2) Creating a time series of geochemical indicators of climate change. We used the following geochemical proxies: Ti, Br, Rb, Sr, Mo contents and X-ray density.

3) Calibration transfer functions on the regional meteodata during the last 80-120 years. Regression equation such as: annual $T = \text{function (proxy)}$ were calculated.

4) Reconstruction of climatic parameters on the depth of the core. Annual temperature change for the Altai region (0 - 3000 years ago) and Northern Mongolia region (0 - 2000 years ago) have been reconstructed with time resolution $\sim 0.2\text{-}0.3$ year.

5) A Fourier analysis showed the same frequency of climate change for both regions. Have been identified as the main periods (frequency): 2750, 1500, 1015, 825, 615, 500, 375, 325, 290, 230, 215, 203, 190, 157, 135, 109, 88, 65, 48, 37, 24 and 10 years. The sum of 22 sinusoid correlates with the reconstruction of annual temperature with the coefficient +0.87 (for more than 3000 points).

6) Based on the discovered periodicities forecast the environment change for the period 2010-2050 was calculated. According to our estimates at this time is expected sharp fall of annual regional temperature.

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