

LABORATORY STUDY OF METHANE PRODUCTION IN SOIL SAMPLES FROM PERMAFROST TUNDRA ZONE

V. I. Privalov, A. V. Zinchenko, V. M. Ivakhov

Main Geophysical Observatory

7, Karbisheva St., St. Petersburg, 194021, Russia

E-mail: aresh-08@mail.ru

It is assumed that the currently observed Arctic warming will increase the permafrost degradation, followed by an increase in emission of greenhouse gases. However, long-term impact of melting permafrost on greenhouse gas emission is not studied enough. To study the phenomenon the soil samples from the upper soil layers have been taken in the vicinity of Tiksi weather observatory (71°35' N, 128°55' E). CH₄ production has been studied for a month in anaerobic incubators at 5°C and 22°C. During the experiment $3,1 \cdot 10^{-3}$ mg CH₄ gdw⁻¹ at 5°C and $2,6 \cdot 10^{-3}$ mg CH₄ gdw⁻¹ at 22°C has been produced.

Key words: tundra, permafrost, greenhouse gases, laboratory experiment.