**The shear elasticity of ice Ih near the melting point**

N. Sheiko, T. Nikolayenko, Yu. Zabashta

*Taras Shevchenko Kyiv National University, Faculty of physics, 6 Glushkova Av., 030680 Kyiv, Ukraine, E–mail: portis@univ.kiev.ua*

Melting is a fundamental process in which a crystal undergoes a phase transition from a solid to a melt. Despite its common occurrence, understanding this process still a challenge The existing theories of melting are still far from being complete and raise new questions. Hence, the purpose of the present research is to gain a better understanding understanding of the mechanism of melting transition ice-water.

Our study is concerned with internal-friction measurements made at low frequency (torsion pendulum) on specimens of ice Ih. The experimental data of the shear modulus of ice in a temperature interval $213-273K$ at frequencies of $0,3-2$Hz have been obtained. Essential falling of the shear modulus with temperature growth, since $263K$ is revealed. Observable anomaly is contacted with occurrence of a quasiliquid phase. The amount of quasiliquid phase is calculated.