

STATUS REPORT OF JINR - IAP - CLIC EXPERIMENT ON COPPER CAVITY HEATING

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Future electron-positron linear collider CLIC [1] will operate at the frequency of 30 GHz and average accelerating field of 150 MV/m. Repetitive pulse heating of the accelerating structure can be one of the reasons of copper surface damage. Collaboration of CLIC group (CERN), JINR (Dubna) and IAP RAS (Nizhny Novgorod) is now realizing an experiment oriented on estimation of the lifetime of CLIC accelerating structure [2]. Specially designed copper cavity is heated by the radiation of FEM oscillator with Bragg resonator. The report contains present status of experiment.

1. I.Wilson - The compact linear collider CLIC. – CERN-AB-2004-100, CLIC Note 617.
2. A.V. Elzhov, N.S. Ginzburg, A.K. Kaminsky et al. – Nuclear Instruments and Methods in Physics Research, 2004, v. A528, p. 225–230).