

**AMPERE NMR SCHOOL**  
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**Abstract**

Measurements of surface impedance on optimally doped  $\text{HgBa}_2\text{CuO}_4$  single crystal ( $T_c = 95$  K) were performed using a resonant microwave method. By changing the configurations of the microwave electric and magnetic fields we observed various absorption signals - signatures of anisotropic normal state conductivity  $\sigma_{ab}$  and  $\sigma_c$ . An external DC magnetic field was applied in two orientations:  $H_a||c$  and  $H_a\perp c$ , and the estimate of the upper critical field in them reveals anisotropy of the GL coherence length  $\xi_c \approx 10\xi_{ab}$ . Temperature dependence was measured up to 300 K, and a characteristic temperature  $T^*$  was observed around 180 K indicating a pseudogap opening temperature. Temperature measurements in magnetic field  $H_a||c$  reveal interesting feature of superconducting fluctuations up to 105 K.