TEMPERATURE DEPENDENCE OF GIANT DIPOLE RESONANCE WIDTH

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The quasiparticle-phonon nuclear model extended to finite temperature within the framework of the thermo field dynamics is applied to calculate a temperature dependence of the spreading width $\Gamma^{\downarrow}$ of a giant dipole resonance. Numerical calculations are made for ^{120}Sn and ^{208}Pb nuclei. It is found that the width $\Gamma^{\downarrow}$ increases with T. The reason of this effect is discussed as well as a relation of the present approach to other ones existing in the literature.