

# THz Generation Using Fluxon Dynamics in High Temperature Superconductors

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**Abstract**—We consider THz emission due to fluxon dynamics in a stack of inductively coupled long Josephson junctions connected electrically to a resonant cavity. By comparing to experiments on Josephson junction parametric amplifiers we consider the role of a negative resistance in connection with THz emission experiments. We suggest that indeed the negative resistance has a big influence on the experimental results.

**Index Terms**—THz oscillator, negative resistance, BSCCO

Manuscript received August 17, 2008.

Stimulating discussions with K. Kadowaki, U. Welp, X. Huand Zhiseng Lin are greatly acknowledged.

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