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Acoustical study of the Nigerian slit log gong. JACOB SKUBAL, ZACH HACKETT, THOMAS MOORE, Department of Physics, Rollins College, Winter Park, FL 32789 — The acoustically important resonances of a Nigerian slit gong consist of two significant mechanical resonances and a Helmholtz acoustical resonance. Beating in the acoustical signal from the struck gong suggests that energy is cyclically transferred between the acoustical and mechanical resonators, as is known to happen in similar idiophones. However, we have determined that in the slit log gong there is no significant two-way exchange of energy. Rather, the beating occurs as a result of interference between the frequencies associated with the mechanical and acoustic resonances. The relationship between these resonances has an impact on the tuning and sound quality of the gong.

Jacob Skubal
Department of Physics, Rollins College, Winter Park, FL 32789

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