**On the Thermoelastic Model of the Pulsed Photoacoustic Effect and the Lambert-Beer Absorption**

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Based on the solution of the photoacoustic wave equation proposed by Diebold et al. [1-3], for the 1 D and 3D problems we present an analysis of his solution when the energy density per unit time is proportional to an exponentially decaying absorption function (the Beer's Law) bounded by the sample's thickness, which is modeled by a rect function. We studied the impulse response founded that in is not necessary make approximation in order to obtain the finite pulse approach. Also is shown that en both case, there exit a function that works as the propagator of the photoacoustic signal, while the exponentially decaying function permit us to obtain the optical response of the sample. This is a scheme that so far has not yet been taken into account in this solution. These results were contrasted experimentally for a plane source.

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[2] G. J. Diebold and T. Sun, **80,** Acustica 339 (1994).
[3] G. J. Diebold. "*Photoacoustic Monopole Radiation: Waves from Objects with Symmetry in One, Two, and Three Dimensions*". Vol. 144, of Optical Sciences and Engineering, pp. 3-17 (2010). Boca Raton, FL. CRC Press (Taylor & Francis Group). Edited by Lihong V. Wang.