

Monday, 27 January 2025Lecture Hall N24/H13, at 16:15
Coffee and cookies will be served in front of the lecture hall from 16:00**The Enigma of Optical Momentum****Prof. Stephen Barnett**
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Over 100 years ago, Abraham and Minkowski proposed rival forms for the momentum of light in a medium. Abraham states that the momentum in the medium is the free-space momentum *divided* by the refractive index, but Minkowski would have it that the momentum is the free-space value *multiplied* by the refractive index. There are very simple physical arguments in favour of both of these and the issue has been hotly debated ever since, with numerous theoretical and experimental studies supporting one momentum or the other. I shall present evidence supporting both momenta and explain the resolution of this: *both* momenta are correct!

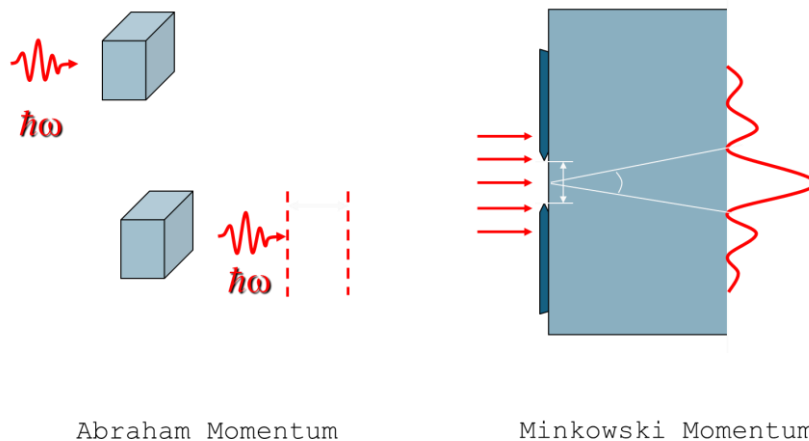


Figure 1: A physical justification for each momentum.