Communications in Partial Differential Equations ›
Volume 36, 2011 - Issue 6

Original Articles

Angular Average of Time-Harmonic Transport Solutions

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Pages 1044-1070 | Received 22 Jul 2010, Accepted 20 Oct 2010, Published online: 31 Jan 2011

Cite this article https://doi.org/10.1080/03605302.2010.540608

Abstract

We consider the angular averaging of solutions to time-harmonic transport equations. Such quantities model measurements obtained for instance in optical tomography, a medical imaging technique, with frequency-modulated sources. Frequency modulated sources are useful to separate ballistic photons from photons that undergo scattering with the underlying medium. This paper presents a precise asymptotic description of the angularly averaged transport solutions as the modulation frequency ω tends to ∞. Provided that the ballistic ending to single s a much large this decom coefficients from ava

Keywords

Optimal tomography Stationary phase Time-harmonic regime

2000 Mathematics Subject Classification: 35Q20 35R30

Acknowledgment

This work was supported in part by NSF grant DMS-0804696 and DOE grant DE-FG52-08NA28779.

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