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Arnold D Kim* (adkim@ucmerced.edu), School of Natural Sciences, 5200 North Lake Road,
Merced, CA 95340. *Modeling polarization-resolved measurements of light scattered by tissues.*

We study partially polarized light propagation in tissues governed by the vector radiative transport equation. In particular, we derive an asymptotic solution in the strong scattering and weak absorption limit. This asymptotic solution provides an accurate model for boundary measurements. We evaluate the effectiveness of this asymptotic solution through comparison with the numerical solution of the full problem. (Received August 15, 2011)