

# ENERGY FLUX PREDICTIONS FOR THE SONAR PERFORMANCE ASSESSMENT PROBLEM T

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David Weston made substantial contributions to our understanding of acoustic propagation in the ocean through development of energy flux techniques. His work permitted deeper insight into fundamental relationships, for example, the ray invariant, that can be applied to understanding spatial and temporal behavior of propagation and reverberation. An energy flux model based on Weston's pioneering work will be used to address the target sphere problem (Problem T). The modeling will explore the role (turns out to be minor for this problem) of the beam displacement of the seabed reflected component. Situations in which the beam displacement would be expected to be important, will be briefly explored. Initial predictions for reverberation and target echo will be presented at the Symposium, for comparison with the results from other participants.