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Comparison of two monostatic reverberation models based on ray theory

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Two monostatic reverberation models applicable for range dependent environment are presented. Considering the roughness of both the sea surface and bottom, we calculate the reverberation signal, based on the ray propagation model and scattering model using the composite-roughness theory and/or other empirical formulae. First model computes the reverberation time signal using two-way eigenray searching between source/receiver position along the discrete scattering area(dA). The other model uses one-way eigenray searching along the discrete ray angle($d\theta$) which generates a non-uniform scattering area providing less accurate solution at a reduced computational burden. The time series calculated from both models are shown and compared with the solutions presented in the Reverberation Modeling Workshop (Nov. 2006, Austin, TX).