Firstly, we calculate the total power scattered in specular direction ($\theta_s = \theta_i$). And then we multiply it with the Fresnel reflection coefficient, as we have assumed smooth faced boulder, to get the backscatter field after double bounce through boulder.

The reflected power in specular direction will be given by

$$P_{specular} = (\psi_{s0} + \psi_{s1} + \psi_{s2})(\psi_{s0} + \psi_{s1} + \psi_{s2})^* |_{\theta_s = \theta_i}$$

On simplifying and taking ensemble average, we get

$$\langle P_{specular} \rangle = |\psi_{s0}|^2 + \psi_{s0}\langle \psi_{s2}^* \rangle + \langle |\psi_{s1}|^2 \rangle + \langle \psi_{s2} \rangle \psi_{s0}^* + \langle |\psi_{s2}|^2 \rangle \qquad (4.9)$$

Here, we neglect $\langle |\psi_{s2}|^2 \rangle$, due to complexity of its computation. So, on substituting $\theta_s = \theta_i$ in Eqs. (3.30), (3.35) and using these equations and Eq (3.21) in above equation, we get

$$\langle P_{specular} \rangle = |\chi|^2 + \chi \tilde{\psi}_{s2}^* + 2\frac{k^2 h^2 l}{\sqrt{\pi}} \cos^2 \theta_i \; |\chi|^2 + \chi^* \tilde{\psi}_{s2} \qquad (4.10)$$

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