Chapter 10 -- *f-k* Migration

In the following equations, replace $c_r^2\, c_i$ with $c_r\, c_i^2$

$$\mathcal{R}_{ri}\,(\boldsymbol{k}_m,\, \sigma) \;=\; \frac{2\, i\, k_{gz}\, k_{sz}\, \rho_0\, c_r\, c_i^2}{\omega \cos \gamma_r}\, D_{ri}\left(\tilde{\boldsymbol{k}}_m,\, \tilde{\boldsymbol{k}}_h;\, \omega\right), \tag{10.1}$$

or, from (9.15), for components of the scattering potential $\mathbb{V}_{ri}$,

$$\left(\frac{\mathcal{R}_{ri}}{z}\right)\left(\tilde{\boldsymbol{k}}_m,\, k_{mz}{}^{ZO},\, 0\right) = \frac{4\,\pi\, \rho_0\, c_r\, c_i^2}{\underline{c}}\, D^{(3\,DZO)}{}_{ri}\left(\tilde{\boldsymbol{k}}_m;\, \omega\right), \tag{10.9}$$

$$\left(\frac{\mathcal{R}_{ri}}{\sqrt{z}}\right)\left(\tilde{\boldsymbol{k}}_m,\, k_{mz}{}^{ZA},\; \sigma^{ZA}\right) = \sqrt{-2\,\pi\, i\, k_{mz}{}^{ZA}\, k_{gz0}\, k_{sz0}}\; \frac{4\, \rho_0\, c_r\, c_i^2}{\omega \cos\; \gamma_r{}^{ZA}}\, D^{(ZA)}{}_{ri}\left(\tilde{\boldsymbol{k}}_m,\, k_{hx};\, \omega\right) \tag{10.15}$$

$$\left(\frac{\mathcal{R}_{ri}}{\sqrt{z}}\right)(k_{m\,x},\, k_{mz0},\, \sigma_0) = \frac{4\, \rho_0\, c_r\, c_i^2\, \sqrt{-2\,\pi\, i\, k_{mz0}\, k_{gz0}\, k_{sz0}}}{\omega\;\; \cos \gamma_{r0}}\, D^{(2.5\,D)}{}_{ri}\,(k_{mx},\, k_{hx};\, \omega). \tag{10.23}$$

$$\left(\frac{\mathcal{R}_{ri}}{z}\right)(k_{m\,x},\, k_{m\,z},\, \sigma = 0) \simeq 4\,\pi\, \rho_0\, \frac{c_r\, c_i^2}{\underline{c}}\, D^{(2.5\,DZO)}{}_{ri}\,(k_{mx};\, \omega). \tag{10.27}$$

$$\mathcal{A}_{ZOM}\, \mathcal{A}_{MZO} = \frac{4\, \rho_0\, c_r\, c_i^2\, \sqrt{-2\,\pi\, i\, k_{mz0}\, k_{gz0}\, k_{sz0}}}{\omega\;\; \cos \gamma_{r0}}. \tag{10.32}$$

$$\mathcal{A}_{Mig} = 4\,\pi\, \rho_0\, c_r\, c_i^2 \big/ \underline{c}. \tag{10.36}$$

$$\left(\frac{\mathcal{R}_{ri}}{\tau}\right)(k_{mx},\ \omega_{Mig},\ \sigma_0 = 0) = 4\,\pi\,\rho_0\, c_r\, c_i^2\, D_{ri}\,(k_{mx},\ x_h = 0;\ \omega), \tag{10.50}$$

equations (10.52) and (10.54) also replace $c_{iA}\, c_{rA}^2$ with $c_{iA}^2\, c_{rA}$,

$$\left(\frac{\mathcal{R}_{A}}{\tau}\right)(k_{x},\ \omega_{A},\ \sigma_0 = 0) = 4\,\pi\,\rho_0\, c_{iA}^2\, c_{rA}\, D_{ri}\,(k_{mx},\ x_h = 0;\ \omega), \tag{10.52}$$

$$\left(\frac{\mathcal{R}_{ri}}{\tau}\right)(k_{x},\ \omega_{Mig},\ \sigma_0 = 0) = \frac{c_r\, c_i^2}{c_{rA}\, c_{iA}^2}\left(\frac{\mathcal{R}_{A}}{\tau}\right)(k_{x},\ \omega_{A},\ \sigma_0 = 0). \tag{10.54}$$