

$$\begin{aligned}
\phi_{2, x, R} = & \frac{\left( \frac{112 \text{Deltax}^2 \Sigma_t^2}{15} + 1328 \right) jh_{3, out, x, R}}{7 \text{Deltax}^2 \Sigma_t^2} + \frac{1482 \phi_{2, x, R}}{7 \text{Deltax}^2 \Sigma_t^2} + \frac{498 \phi_{2, x, L}}{7 \text{Deltax}^2 \Sigma_t^2} + \frac{16 jh_{3, out, x, L}}{7 \text{Deltax}^2 \Sigma_t^2} \\
& + \frac{\left( \frac{112 \text{Deltax}^2 \Sigma_t^2}{15} + 1328 \right) jh_{3, inc, x, R}}{7 \text{Deltax}^2 \Sigma_t^2} + \frac{16 jh_{3, inc, x, L}}{7 \text{Deltax}^2 \Sigma_t^2} \\
& + \frac{\left( -\frac{112 \text{Deltax}^2 \Sigma_t^2}{15} + 1328 \right) j_{1, out, x, R}}{7 \text{Deltax}^2 \Sigma_t^2} + \frac{16 j_{1, out, x, L}}{7 \text{Deltax}^2 \Sigma_t^2} \\
& + \frac{\left( -\frac{112 \text{Deltax}^2 \Sigma_t^2}{15} + 1328 \right) j_{1, inc, x, R}}{7 \text{Deltax}^2 \Sigma_t^2} + \frac{16 j_{1, inc, x, L}}{7 \text{Deltax}^2 \Sigma_t^2} - \frac{972 \bar{\phi}_2}{7 \text{Deltax}^2 \Sigma_t^2} - \frac{1296 \bar{\phi}_{2, x, 2}}{\text{Deltax}^2 \Sigma_t^2} \\
& - \frac{1944 \bar{\phi}_{2, x, 1}}{7 \text{Deltax}^2 \Sigma_t^2} - \frac{72 \bar{\Phi}_0}{\text{Deltax}^2 \Sigma_t^2} - \frac{672 \bar{\Phi}_{0, x, 2}}{\text{Deltax}^2 \Sigma_t^2} - \frac{144 \bar{\Phi}_{0, x, 1}}{\text{Deltax}^2 \Sigma_t^2} \\
\phi_{2, x, L} = & \frac{498 \phi_{2, x, R}}{7 \text{Deltax}^2 \Sigma_t^2} + \frac{1482 \phi_{2, x, L}}{7 \text{Deltax}^2 \Sigma_t^2} + \frac{16 jh_{3, out, x, R}}{7 \text{Deltax}^2 \Sigma_t^2} + \frac{\left( \frac{112 \text{Deltax}^2 \Sigma_t^2}{15} + 1328 \right) jh_{3, out, x, L}}{7 \text{Deltax}^2 \Sigma_t^2} \\
& + \frac{\left( \frac{112 \text{Deltax}^2 \Sigma_t^2}{15} + 1328 \right) jh_{3, inc, x, L}}{7 \text{Deltax}^2 \Sigma_t^2} + \frac{16 j_{1, out, x, R}}{7 \text{Deltax}^2 \Sigma_t^2} \\
& + \frac{\left( -\frac{112 \text{Deltax}^2 \Sigma_t^2}{15} + 1328 \right) j_{1, out, x, L}}{7 \text{Deltax}^2 \Sigma_t^2} + \frac{16 j_{1, inc, x, R}}{7 \text{Deltax}^2 \Sigma_t^2} \\
& + \frac{\left( -\frac{112 \text{Deltax}^2 \Sigma_t^2}{15} + 1328 \right) j_{1, inc, x, L}}{7 \text{Deltax}^2 \Sigma_t^2} - \frac{972 \bar{\phi}_2}{7 \text{Deltax}^2 \Sigma_t^2} - \frac{1296 \bar{\phi}_{2, x, 2}}{\text{Deltax}^2 \Sigma_t^2} + \frac{1944 \bar{\phi}_{2, x, 1}}{7 \text{Deltax}^2 \Sigma_t^2} \\
& - \frac{72 \bar{\Phi}_0}{\text{Deltax}^2 \Sigma_t^2} - \frac{672 \bar{\Phi}_{0, x, 2}}{\text{Deltax}^2 \Sigma_t^2} + \frac{144 \bar{\Phi}_{0, x, 1}}{\text{Deltax}^2 \Sigma_t^2} + \frac{16 jh_{3, inc, x, R}}{7 \text{Deltax}^2 \Sigma_t^2} \\
jh_{3, out, x, R} - jh_{3, inc, x, R} = & \\
- \frac{9 \left( -4410 \text{Deltax}^2 \Sigma_t^2 + 93400 \right) \phi_{2, x, R}}{4900 \text{Deltax}^3 \Sigma_t^3} - \frac{9 \left( 210 \text{Deltax}^2 \Sigma_t^2 + 60600 \right) \phi_{2, x, L}}{4900 \text{Deltax}^3 \Sigma_t^3}
\end{aligned}$$

$$\begin{aligned}
& - \frac{9 \left( -2800 \text{Deltax}^2 \Sigma_t^2 + \frac{222400}{3} \right) jh_{3, \text{out}, x, R}}{4900 \text{Deltax}^3 \Sigma_t^3} - \frac{9 \left( 2800 \text{Deltax}^2 \Sigma_t^2 + 30400 \right) jh_{3, \text{out}, x, L}}{4900 \text{Deltax}^3 \Sigma_t^3} \\
& - \frac{9 \left( -2800 \text{Deltax}^2 \Sigma_t^2 + \frac{222400}{3} \right) jh_{3, \text{inc}, x, R}}{4900 \text{Deltax}^3 \Sigma_t^3} - \frac{9 \left( 2800 \text{Deltax}^2 \Sigma_t^2 + 30400 \right) jh_{3, \text{inc}, x, L}}{4900 \text{Deltax}^3 \Sigma_t^3} \\
& - \frac{9 \left( 2800 \text{Deltax}^2 \Sigma_t^2 + 30400 \right) j_{1, \text{out}, x, L}}{4900 \text{Deltax}^3 \Sigma_t^3} + \left( - \frac{9 \left( -2800 \text{Deltax}^2 \Sigma_t^2 + \frac{222400}{3} \right)}{4900 \text{Deltax}^3 \Sigma_t^3} \right. \\
& \left. - \frac{2}{5 \Sigma_t} \right) j_{1, \text{out}, x, R} + \left( - \frac{9 \left( -2800 \text{Deltax}^2 \Sigma_t^2 + \frac{222400}{3} \right)}{4900 \text{Deltax}^3 \Sigma_t^3} + \frac{2}{5 \Sigma_t} \right) j_{1, \text{inc}, x, R} \\
& - \frac{9 \left( 2800 \text{Deltax}^2 \Sigma_t^2 + 30400 \right) j_{1, \text{inc}, x, L}}{4900 \text{Deltax}^3 \Sigma_t^3} - \frac{9 \left( 4200 \text{Deltax}^2 \Sigma_t^2 - 75600 \right) \bar{\phi}_2}{4900 \text{Deltax}^3 \Sigma_t^3} \\
& - \frac{9 \left( 29400 \text{Deltax}^2 \Sigma_t^2 - 756000 \right) \bar{\phi}_{2, x, 2}}{4900 \text{Deltax}^3 \Sigma_t^3} - \frac{9 \left( 12600 \text{Deltax}^2 \Sigma_t^2 - 64800 \right) \bar{\phi}_{2, x, 1}}{4900 \text{Deltax}^3 \Sigma_t^3} \\
& + \frac{72 \bar{\Phi}_0}{\text{Deltax}^3 \Sigma_t^3} + \frac{720 \bar{\Phi}_{0, x, 2}}{\text{Deltax}^3 \Sigma_t^3} + \frac{432 \bar{\Phi}_{0, x, 1}}{7 \text{Deltax}^3 \Sigma_t^3} \\
& jh_{3, \text{out}, x, L} - jh_{3, \text{inc}, x, L} = - \frac{9 \left( -210 \text{Deltax}^2 \Sigma_t^2 - 60600 \right) \phi_{2, x, R}}{4900 \text{Deltax}^3 \Sigma_t^3} \\
& - \frac{9 \left( 4410 \text{Deltax}^2 \Sigma_t^2 - 93400 \right) \phi_{2, x, L}}{4900 \text{Deltax}^3 \Sigma_t^3} - \frac{9 \left( -2800 \text{Deltax}^2 \Sigma_t^2 - 30400 \right) jh_{3, \text{out}, x, R}}{4900 \text{Deltax}^3 \Sigma_t^3} \\
& - \frac{9 \left( 2800 \text{Deltax}^2 \Sigma_t^2 - \frac{222400}{3} \right) jh_{3, \text{out}, x, L}}{4900 \text{Deltax}^3 \Sigma_t^3} - \frac{9 \left( -2800 \text{Deltax}^2 \Sigma_t^2 - 30400 \right) jh_{3, \text{inc}, x, R}}{4900 \text{Deltax}^3 \Sigma_t^3} \\
& - \frac{9 \left( 2800 \text{Deltax}^2 \Sigma_t^2 - \frac{222400}{3} \right) jh_{3, \text{inc}, x, L}}{4900 \text{Deltax}^3 \Sigma_t^3} - \frac{9 \left( -2800 \text{Deltax}^2 \Sigma_t^2 - 30400 \right) j_{1, \text{out}, x, R}}{4900 \text{Deltax}^3 \Sigma_t^3} + \left( \right. \\
& \left. - \frac{9 \left( 2800 \text{Deltax}^2 \Sigma_t^2 - \frac{222400}{3} \right)}{4900 \text{Deltax}^3 \Sigma_t^3} - \frac{2}{5 \Sigma_t} \right) j_{1, \text{out}, x, L} \\
& - \frac{9 \left( -2800 \text{Deltax}^2 \Sigma_t^2 - 30400 \right) j_{1, \text{inc}, x, R}}{4900 \text{Deltax}^3 \Sigma_t^3} + \left( - \frac{9 \left( 2800 \text{Deltax}^2 \Sigma_t^2 - \frac{222400}{3} \right)}{4900 \text{Deltax}^3 \Sigma_t^3} \right)
\end{aligned}$$

$$\begin{aligned}
& + \frac{2}{5 \Sigma_t} \left) j_{1, inc, x, L} - \frac{9 \left( -4200 \text{Deltax}^2 \Sigma_t^2 + 75600 \right) \bar{\Phi}_2}{4900 \text{Deltax}^3 \Sigma_t^3} \right. \\
& - \frac{9 \left( -29400 \text{Deltax}^2 \Sigma_t^2 + 756000 \right) \bar{\Phi}_{2, x, 2}}{4900 \text{Deltax}^3 \Sigma_t^3} - \frac{9 \left( 12600 \text{Deltax}^2 \Sigma_t^2 - 64800 \right) \bar{\Phi}_{2, x, 1}}{4900 \text{Deltax}^3 \Sigma_t^3} \\
& - \frac{72 \bar{\Phi}_0}{\text{Deltax}^3 \Sigma_t^3} - \frac{720 \bar{\Phi}_{0, x, 2}}{\text{Deltax}^3 \Sigma_t^3} + \frac{432 \bar{\Phi}_{0, x, 1}}{7 \text{Deltax}^3 \Sigma_t^3} \\
j_{1, out, x, R} - j_{1, inc, x, R} = & - \frac{128 D_0 j_{1, out, x, R}}{3 \text{Deltax}} - \frac{128 D_0 j_{1, inc, x, R}}{3 \text{Deltax}} - \frac{128 D_0 j h_{3, out, x, R}}{3 \text{Deltax}} \\
& - \frac{128 D_0 j h_{3, inc, x, R}}{3 \text{Deltax}} - \frac{32 D_0 \phi_{2, x, R}}{\text{Deltax}} - \frac{32 D_0 j_{1, out, x, L}}{3 \text{Deltax}} - \frac{32 D_0 j_{1, inc, x, L}}{3 \text{Deltax}} - \frac{32 D_0 j h_{3, out, x, L}}{3 \text{Deltax}} \\
& - \frac{32 D_0 j h_{3, inc, x, L}}{3 \text{Deltax}} - \frac{8 D_0 \phi_{2, x, L}}{\text{Deltax}} + \frac{20 D_0 \bar{\Phi}_0}{\text{Deltax}} + \frac{60 D_0 \bar{\Phi}_{0, x, 1}}{\text{Deltax}} + \frac{140 D_0 \bar{\Phi}_{0, x, 2}}{\text{Deltax}} \\
j_{1, out, x, L} - j_{1, inc, x, L} = & - \frac{32 D_0 j_{1, out, x, R}}{3 \text{Deltax}} - \frac{32 D_0 j_{1, inc, x, R}}{3 \text{Deltax}} - \frac{32 D_0 j h_{3, out, x, R}}{3 \text{Deltax}} - \frac{32 D_0 j h_{3, inc, x, R}}{3 \text{Deltax}} \\
& - \frac{8 D_0 \phi_{2, x, R}}{\text{Deltax}} - \frac{128 D_0 j_{1, out, x, L}}{3 \text{Deltax}} - \frac{128 D_0 j_{1, inc, x, L}}{3 \text{Deltax}} - \frac{128 D_0 j h_{3, out, x, L}}{3 \text{Deltax}} \\
& - \frac{128 D_0 j h_{3, inc, x, L}}{3 \text{Deltax}} - \frac{32 D_0 \phi_{2, x, L}}{\text{Deltax}} + \frac{20 D_0 \bar{\Phi}_0}{\text{Deltax}} - \frac{60 D_0 \bar{\Phi}_{0, x, 1}}{\text{Deltax}} + \frac{140 D_0 \bar{\Phi}_{0, x, 2}}{\text{Deltax}} \\
J_{3, x, R} = & - \frac{16 D_2 \phi_{2, x, R}}{\text{Deltax}} - \frac{4 D_2 \phi_{2, x, L}}{\text{Deltax}} + \frac{20 D_2 \bar{\Phi}_2}{\text{Deltax}} + \frac{60 D_2 \bar{\Phi}_{2, x, 1}}{\text{Deltax}} + \frac{140 D_2 \bar{\Phi}_{2, x, 2}}{\text{Deltax}} \\
J_{3, x, L} = & - \frac{4 D_2 \phi_{2, x, R}}{\text{Deltax}} - \frac{16 D_2 \phi_{2, x, L}}{\text{Deltax}} + \frac{20 D_2 \bar{\Phi}_2}{\text{Deltax}} - \frac{60 D_2 \bar{\Phi}_{2, x, 1}}{\text{Deltax}} + \frac{140 D_2 \bar{\Phi}_{2, x, 2}}{\text{Deltax}} \\
\bar{\Phi}[2] = & \frac{5 J_{3, x, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltax}} + \frac{5 J_{3, x, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltax}} + \frac{5 J_{3, y, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltay}} \\
& + \frac{5 J_{3, y, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltay}} + \frac{5 J_{3, z, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltaz}} + \frac{5 J_{3, z, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltaz}} \\
& + \frac{2 j_{1, out, x, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltax}} - \frac{2 j_{1, inc, x, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltax}} + \frac{2 j_{1, out, x, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltax}} \\
& - \frac{2 j_{1, inc, x, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltax}} + \frac{2 j_{1, out, y, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltay}} - \frac{2 j_{1, inc, y, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltay}} \\
& + \frac{2 j_{1, out, y, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltay}} - \frac{2 j_{1, inc, y, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltay}} + \frac{2 j_{1, out, z, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltaz}} \\
& - \frac{2 j_{1, inc, z, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltaz}} + \frac{2 j_{1, out, z, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltaz}} - \frac{2 j_{1, inc, z, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) \text{Deltaz}}
\end{aligned}$$

$$\begin{aligned}
\bar{\Phi}_0 = & \left( \frac{4}{Deltaz \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} - \frac{1}{Deltaz \Sigma_{rem, 0}} \right) j_{1, out, z, R} + \left( \frac{4}{Deltaz \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} \right. \\
& - \left. \frac{1}{Deltaz \Sigma_{rem, 0}} \right) j_{1, out, z, L} + \left( \frac{4}{Deltay \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} - \frac{1}{Deltay \Sigma_{rem, 0}} \right) j_{1, out, y, R} \\
& + \left( \frac{4}{Deltay \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} - \frac{1}{Deltay \Sigma_{rem, 0}} \right) j_{1, out, y, L} + \left( \frac{4}{Deltax \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} \right. \\
& - \left. \frac{1}{Deltax \Sigma_{rem, 0}} \right) j_{1, out, x, R} + \left( \frac{4}{Deltax \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} - \frac{1}{Deltax \Sigma_{rem, 0}} \right) j_{1, out, x, L} + \left( \right. \\
& - \frac{4}{Deltaz \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} + \frac{1}{Deltaz \Sigma_{rem, 0}} \left. \right) j_{1, inc, z, R} + \left( - \frac{4}{Deltaz \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} \right. \\
& + \left. \frac{1}{Deltaz \Sigma_{rem, 0}} \right) j_{1, inc, z, L} + \left( - \frac{4}{Deltay \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} + \frac{1}{Deltay \Sigma_{rem, 0}} \right) j_{1, inc, y, R} + \left( \right. \\
& - \frac{4}{Deltay \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} + \frac{1}{Deltay \Sigma_{rem, 0}} \left. \right) j_{1, inc, y, L} + \left( - \frac{4}{Deltax \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} \right. \\
& + \left. \frac{1}{Deltax \Sigma_{rem, 0}} \right) j_{1, inc, x, R} + \left( - \frac{4}{Deltax \left( -5 \alpha + 4 \Sigma_{rem, 0} \right)} + \frac{1}{Deltax \Sigma_{rem, 0}} \right) j_{1, inc, x, L} \\
& + \frac{S_0}{\Sigma_{rem, 0}} + \frac{10 J_{3, z, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) Deltaz} + \frac{10 J_{3, z, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) Deltaz} \\
& + \frac{10 J_{3, y, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) Deltay} + \frac{10 J_{3, y, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) Deltay} + \frac{10 J_{3, x, R}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) Deltax} \\
& + \frac{10 J_{3, x, L}}{\left( -5 \alpha + 4 \Sigma_{rem, 0} \right) Deltax}
\end{aligned}$$