Table GFL -1. Dimensionless eigenvalues for large cotime Green's functions.

Number	Eigenvalue, $\$_m$	Eigencondition
X11	mB, $m = 1,2,...$	
X12	$(m\text{-}1/2)B$, $m = 1,2,..$	
X13		$\$_m \cot(\$_m) = -Bi_{XL} = -h_{\mathrm{xL}}L/k$
X21	$(m\text{-}1/2)B$, $m = 1,2,..$	
X22	$\$_0 = 0$ $\$_m = mB$, $m = 1,2,..$	
X23		$\$_m \tan(\$_m) = Bi_{XL} = h_{xL}L/k$
X31		$\$_m \cot(\$_m) = -Bi_{X0} = -h_{x0}L/k$
X32		$\$_m \tan(\$_m) = Bi_{X0} = h_{x0}L/k$
X33		$\tan(\$_m L)$=M

$$\Phi = \frac{\beta_m (Bi_{X0} + Bi_{XL})}{\beta_m^2 - Bi_{X0} Bi_{XL}}$$

Table GFL -2A. Eigenfunctions for subroutine EIGFUN. Dimensionless x^+ and eigenvalues. Large time Green's functions.

Number	Eigenfunction
X11	$E_{X11}(x^+,\beta_m) = \sin(\beta_m x^+)$
X12	$E_{X12}(x^+,\beta_m) = \sin(\beta_m x^+)$
X13	$E_{X13}(x^+,\beta_m) = \sin(\beta_m x^+)$
X21	$E_{X21}(x^+,\beta_m) = \cos(\beta_m x^+)$
X22	$E_{X22}(x^+,\beta_m) = 1$ for $m = 0$
	$E_{X22}(x^+,\beta_m) = \cos(\beta_m x^+)$, $m = 1, 2, \ldots$
X23	$E_{X23}(x^+,\beta_m) = \cos(\beta_m x^+)$
X31	$E_{X31}(x^+,\beta_m) = \sin[\beta_m(1-x^+)]$
X32	$E_{X32}(x^+,\beta_m) = \cos[\beta_m(1-x^+)]$
X33	$E_{X33}(x^+,\beta_m) =[\beta_m\cos(\beta_m x^+) + Bi_{X0} \sin(\beta_m x^+)]/[\beta_m^2 + Bi_{X0}^2]^{1/2}$

All these eigenfunctions have values between positive and negative one.

Table GFL -2B. Derivatives for eigenfunctions for subroutine EIGFUN. Dimensionless x^+ and eigenvalues. Large time Green's functions, x^+.

Number	Derivative of eigenfunction
X11	$\partial E_{X11}(x^+,\beta_m)/\partial x = \cos(\beta_m x^+)\beta_m/L$
X12	$\partial E_{X12}(x^+,\beta_m)/\partial x = \cos(\beta_m x^+)\beta_m/L$
X13	$\partial E_{X13}(x^+,\beta_m)/\partial x = \cos(\beta_m x^+)\beta_m/L$
X21	$\partial E_{X21}(x^+,\beta_m)/\partial x = -\sin(\beta_m x^+)\beta_m/L$
X22	$\partial E_{X22}(x^+,\beta_m)/\partial x = 0$ for $m = 0$
	$\partial E_{X22}(x^+,\beta_m)/\partial x = -\sin(\beta_m x^+)\beta_m/L$, $m = 1, 2, \ldots$
X23	$\partial E_{X23}(x^+,\beta_m)/\partial x = -\sin(\beta_m x^+)\beta_m/L$
X31	$\partial E_{X31}(x^+,\beta_m)/\partial x = -\cos[\beta_m(1-x^+)]\beta_m/L$
X32	$\partial E_{X32}(x^+,\beta_m)/\partial x = \sin[\beta_m(1-x^+)]\beta_m/L$
X33	$\partial E_{X33}(x^+,\beta_m)/\partial x = [-\beta_m\sin(\beta_m x^+) + Bi_{X0} \cos(\beta_m x^+)](\beta_m/L)/[\beta_m^2 + Bi_{X0}^2]^{1/2}$

Table GFL - 3. Large cotime eigenfunctions evaluated at a boundary. Dimensionless *x* and eigenvalues. For boundary conditions of the first kind at the evaluated boundary, $-\text{M}E/\text{M}n\text{N}$ is evaluated at the boundary.

Number	At $x^{+}\text{N} = 0$	At $x^{+}\text{N} = 1$
X11	$-\text{M}E_{\text{X11}}(0,\$_m)/\text{M}n^{+}\text{N}= mB$	$-\text{M}E_{\text{X11}}(L,\$_m)/\text{M}n^{+}\text{N} = mB(-1)^{m+1}$
X12	$-\text{M}E_{\text{X12}}(0,\$_m)/\text{M}n^{+}\text{N}= (2m-1)B/2$	$E_{\text{X12}}(L,\$_m) = (-1)^{m+1}$
X13	$-\text{M}E_{\text{X13}}(0,\$_m)/\text{M}n^{+}\text{N}= \$_m$	$E_{\text{X13}}(L,\$_m) = \sin(\$_m)$
X21	$E_{\text{X21}}(0,\$_m) = 1$	$-\text{M}E_{\text{X21}}(L,\$_m)/\text{M}n^{+}\text{N} = \$_m\ (-1)^{m+1}$
X22	$E_{\text{X22}}(0,\$_m) = 1$ for $m = 0$	$E_{\text{X22}}(L,\$_m) = 1$ for $m = 0$
	$E_{\text{X22}}(0,\$_m) = 1$ for $m = 1, 2, ..$	$E_{\text{X22}}(L,\$_m) = (-1)^{m}$ for $m = 1, 2, ..$
X23	$E_{\text{X23}}(0,\$_m) = 1$	$E_{\text{X23}}(L,\$_m) = \cos(\$_m)$
X31	$E_{\text{X31}}(0,\$_m) = \sin(\$_m)$	$-\text{M}E_{\text{X31}}(L,\$_m)/\text{M}n^{+}\text{N} = \$_m$
X32	$E_{\text{X32}}(0,\$_m) = \cos(\$_m)$	$E_{\text{X32}}(L,\$_m) = 1$
X33	$E_{\text{X33}}(0,\$_m) = \$_m /[\$_m^{2} + Bi_{X0}^{2}]^{1/2}$	$E_{\text{X33}}(L,\$_m) = [\$_m\cos(\$_m)+Bi_{X0}\sin(\$_m)]/ [\$_m^{2} + Bi_{X0}^{2}]^{1/2}$

Table GFL - 4. Dimensionless norms for large cotime Green's functions.

Number	Norm, N_{XIJ}
X11	$N_{X11} = 1/2$
X12	$N_{X12} = 1/2$
X13	$N_{X13} = \varphi_{XL}/2$

$$\varphi_{XL} = 1 + \frac{Bi_{XL}}{\beta_m^2 + Bi_{XL}^2}$$

Number	Norm, N_{XIJ}
X21	$N_{X21} = 1/2$
X22	$N_{X22} = 1$ for $m = 0$
	$N_{X22} = 1/2$ for $m = 1,2,..$
X23	$N_{X23} = \varphi_{XL}/2$
X31	$N_{X31} = \varphi_{X0}/2$

$$\varphi_{XL} = 1 + \frac{Bi_{X0}}{\beta_m^2 + Bi_{X0}^2}$$

Number	Norm, N_{XIJ}
X32	$N_{X32} = \varphi_{X0}/2$
X33	$N_{X33} = \varphi_{X0L}/2$

$$\varphi_{X0L} = 1 + \frac{Bi_{X0}}{\beta_m^2 + Bi_{X0}^2} + \frac{Bi_{XL}}{\beta_m^2 + Bi_{XL}^2}$$

Each of these dimensionless norms is equal to or greater than 1/2. As m goes to infinity, each dimensionless norm goes to 1/2.