Governing EQUATIONS :

① $\Rightarrow (1+c_1) f^{iv} - c_1 g'' - Re_y (f f''' - f' f'') - n_0 (1+c_1) f'' - m_0 f'' = 0$

② $\Rightarrow c_2 g'' + c_1 (f'' - 2g) - c_3 Re_y (f g' - f' g) = 0$

③ $\Rightarrow a'' + D_0 b'' + Ph (f' a - f a') = 0$

④ $\Rightarrow b'' + S a'' + Pm (f' b - f b') = 0$

BOUNDARY CONDITIONS :

* $f = -1$, $f' = 0$, $g = 0$, $a = 1$, $b = 1$ at $\eta = -1$

* $f = 1$, $f' = 0$, $g = 0$, $a = 0$, $b = 0$ at $\eta = +1$

PARAMETERS :

$c_1 = c_2 = c_3 = 0.1$

$Re_y = 5$, $n_0 = 3$, $m_0 = 2$

$D_0 = 0.03$, $S = 2$, $Ph = 0.5$, $Ph = 0.8$