$\mu_0 := 0.012277471 \qquad \mu_1 := 1 - \mu_0$

$$D(t, y) := \begin{vmatrix} r1 := \left(y_1 + \mu_0\right)^2 + \left(y_2\right)^2 \\ r1 := r1 \cdot \sqrt{r1} \\ r2 := \left(y_1 - \mu_1\right)^2 + \left(y_2\right)^2 \\ r2 := r2 \cdot \sqrt{r2} \\ y3 := y_1 + 2 \cdot y_4 - \frac{\mu_1}{r1} \cdot \left(y_1 + \mu_0\right) - \frac{\mu_0}{r2} \cdot \left(y_1 - \mu_1\right) \\ y4 := y_2 \cdot \left(1 - \frac{\mu_1}{r1} - \frac{\mu_0}{r2}\right) - 2 \cdot y_3 \\ \text{stack}\left(y_3, y_4, y3, y4\right) \end{vmatrix}$$

$t_{min} := 0 \qquad t_{max} := 17.1 \qquad N := 100$

$AbsTol := 10^{-4} \qquad RelTol := 10^{-4}$

$x := \text{stack}(0.994, 0, 0, -2.00158510637908252240537862224)$

$res := \text{lsoda}\left(x, t_{min}, t_{max}, N - 1, D\right)$

$p1 := res_{[1..N]\begin{bmatrix}1\\2\end{bmatrix}} \qquad p2 := res_{[1..N]\begin{bmatrix}1\\3\end{bmatrix}} \qquad p3 := res_{[1..N]\begin{bmatrix}2\\3\end{bmatrix}}$