$x := -1000$

$y := 2000$

$u := 0.8$

$v := 0.5$

$$z := \begin{bmatrix} x \\ y \\ u \\ v \end{bmatrix}$$

$$\Omega := \frac{\pi}{12 \cdot 60 \cdot 60}$$

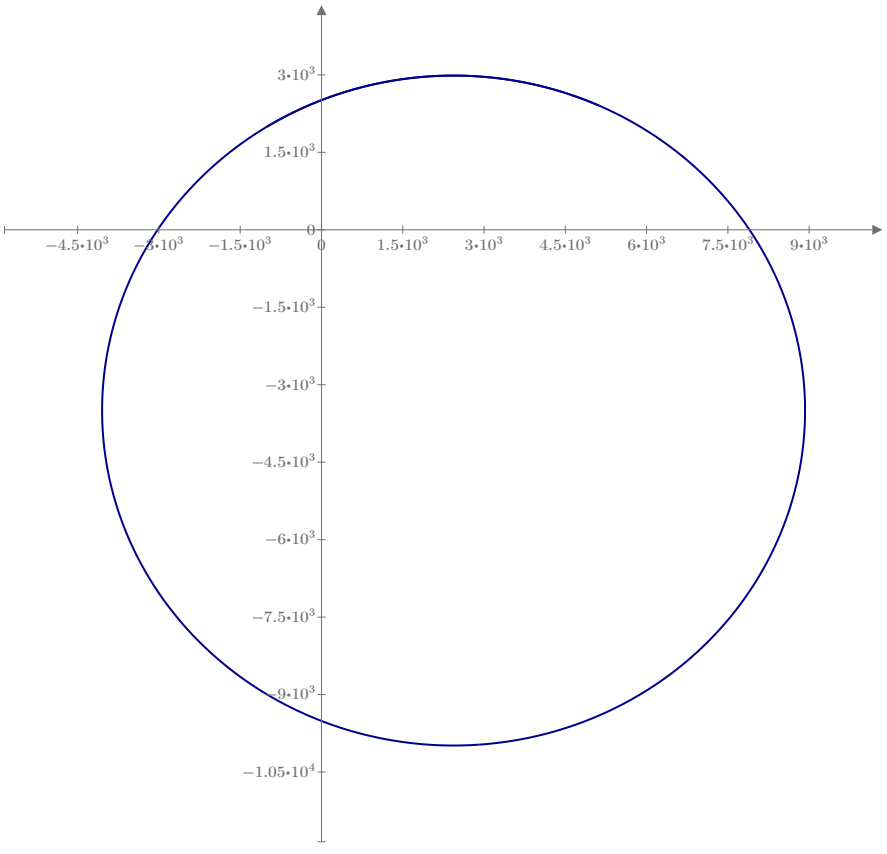
$$d(x, y) := \sqrt{x^2 + y^2}$$

$$D(t, z) := \begin{bmatrix} z_2 \\ z_3 \\ 2 \cdot \Omega \cdot z_3 \\ -2 \cdot \Omega \cdot z_2 \end{bmatrix}$$

$Z := \text{rkfixed}(z, 0, 50000, 1000, D) =$

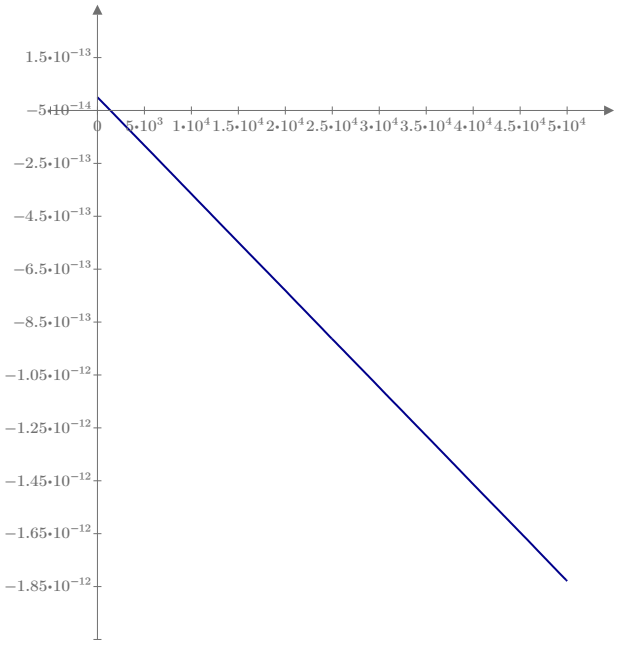
$i := 0 .. \text{rows}(Z) - 1$

$$\begin{bmatrix} 0 & -1 \cdot 10^3 & 2 \cdot 10^3 & 0.8 & 0.5 \\ 50 & -959.909 & 2.025 \cdot 10^3 & 0.804 & 0.494 \\ 100 & -919.639 & 2.049 \cdot 10^3 & 0.807 & 0.488 \\ 150 & -879.191 & 2.074 \cdot 10^3 & 0.811 & 0.482 \\ 200 & -838.568 & 2.098 \cdot 10^3 & 0.814 & 0.477 \\ 250 & -797.772 & 2.121 \cdot 10^3 & 0.818 & 0.471 \\ 300 & -756.804 & 2.145 \cdot 10^3 & 0.821 & 0.465 \\ 350 & -715.668 & 2.168 \cdot 10^3 & 0.824 & 0.459 \\ & & & & \vdots \end{bmatrix}$$



$\left(Z^{\langle 2 \rangle}\right)_i$

$\left(Z^{\langle 1\rangle}\right)_i$



$\left(\left(Z^{\langle 3\rangle}\right)_i\right)^2+\left(\left(Z^{\langle 4\rangle}\right)_i\right)^2-u^2-v^2$

$\left(Z^{\langle 0\rangle}\right)_i$

$$\max\left(\left(\left(Z^{\langle 3\rangle}\right)\right)^2+\left(\left(Z^{\langle 4\rangle}\right)\right)^2\right)-u^2-v^2=0$$

$$\min\left(\left(\left(Z^{\langle 3\rangle}\right)\right)^2+\left(\left(Z^{\langle 4\rangle}\right)\right)^2\right)-u^2-v^2=-1.82909243306995\cdot 10^{-12}$$