Table 1: UWT Parameters for 1D and 2D/3D Solvers

Parameter	1D Value	2D/3D Value
L (domain size, m)	1.0	1.0 (r, z, x, y, z)
A (cross-sectional area, m^2)	0.1	0.1
nx, nr, nz (grid points)	100	64, 64 (2D); 32, 32, 32 (3D)
nt (time steps)	1000	1000
dt (s)	1e-12	1e-12
k (wave number)	0.0047	0.0047
ϕ_1 (phase)	0.0	0.0
ϕ_2 (phase)	$\pi/2$	$\pi/2$
g_{wave}	5e-8	5e-8
$k_{coupling}$	1e-6	1e-6
k_U	2e8	2e8
ρ (kg/m^3)	1000	1000
κ	5e5	5e5
α	1.5	1.5
k_{damp}	0.001	0.001
θ (rad)	π	π
v	0.226 / 6.242e18	0.226 / 6.242e18