Computation of sound waves emitted by bubble collapse using Kirchhoff method

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1 Test case

An air bubble of radius $R = 10$ mm is placed at the center of a cuboidal domain of size $[-50, 50]\times[-50, 50]\times[-50, 50]$ mm containing water. The thermodynamic properties of the system is give below.

Thermodynamic properties	Water	Air
Density, ρ (kgm^{-3})	1000	1.0
Pressure, P (kPa)	101.325	10.1325
Specific heat ratio, γ	4.4	1.4
Speed of sound, c (ms^{-1})	1500	-

Table 1: Properties of water and air bubble