

One form of the solution of the wave equation (9) is the inverse Fourier transform

$$\zeta(\mathbf{r}, t) = e^{-i\sigma t} \iiint \frac{F(\mathbf{k})}{B(\mathbf{k}, \sigma)} e^{i(kx+ly+mz)} dkdl dm,$$

where the dispersion polynomial $B(\mathbf{k}, \sigma)$ follows from Fourier transformation of the wave operator \mathcal{L} . For internal waves, the wave operator is given in (32) and the dispersion polynomial by (33).