

Glossary

Symbol	Definition
s	Source coordinate.
g	Geophone (or receiver) coordinate.
y	Midpoint coordinate. $y = \frac{g+s}{2}$.
h	Half-offset. $h = \frac{g-s}{2}$.
z	Depth coordinate.
v	Constant velocity.
$v(z)$	Depth variable velocity.
$v(x, z)$	Depth and laterally variable velocity.
t	Time coordinate.
t_h	Source-receiver travelttime.
t_n	Travelttime after NMO.
t_d	Travelttime after DMO before NMO.
t_0	Zero-offset travelttime.
$p(t, s, g)$	Prestack wavefield in shot-geophone coordinates.
$p(t, y, h)$	Prestack wavefield in midpoint-offset coordinates.
k_g	Geophone (receiver) wavenumber.
k_s	Source wavenumber.
k_y	Midpoint wavenumber. $k_y = k_g + k_s$.
k_h	Half-offset wavenumber. $k_h = k_g - k_s$.
ω	Frequency.
ω_0	Frequency corresponding to the zero-offset travelttime.
S	Normalized shot wavenumber. $S = \frac{vk_s}{\omega}$.
G	Normalized geophone wavenumber. $G = \frac{vk_g}{\omega}$.
Y	Normalized midpoint wavenumber. $Y = \frac{vk_y}{2\omega}$.
H	Normalized offset wavenumber. $H = \frac{vk_h}{2\omega}$.
v_h	Velocity-offset wavenumber. $v_h = \frac{vk_h}{2}$.
v_y	Velocity-midpoint wavenumber. $v_y = \frac{vk_y}{2}$.