Primary wave = p-wave

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Synonym: Primary wave (p-wave) = Compressional wave

A body wave caused by oscillation of a normal stress in a matter and as such resulting in strain oscillations along the direction of p-wave propagation.

In terms of corpuscular structure of the matter the p-wave is characterised by the fact that particles of the matter are moving back and forth along the p-wave travel direction (see **Fig. 1**).

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Fig. 1.1. Plane p-wave	**Fig. 1.2.** Spherical p-wave

P-wave can propagate through gases, liquids or solids and moves faster than other body waves (almost twice faster than s-wave).

When all body waves are excited at the same time the p-wave is the first arrival to the sensor, hence the name "primary".

See also

Physics / Mechanics / Continuum mechanics / Mechanical waves / Body wave

[s-wave]