

CLIMATOLOGICAL ASSESSMENT OF EXPLOSION AIRBLAST PROPAGATIONS

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Sound waves or explosion airblast waves are refracted by the atmosphere depending upon temperature-dependent sound speeds and winds at various altitudes. In comparison with propagation expected from a spherical explosion overpressure-distance function, long range overpressure (below about 2 kPa) may be attenuated by a strong decrease (gradient) in sound velocity with height, they may be enhanced by an inversion or increasing sound velocity with height, or there may be blast focusing by as much as 3 x 5 from complex sound velocity structures.