Fig. 7 Summary of Atmospheric Models.
Each model was assumed to be omnidirectional, i.e., no lateral shear. The wind models are summarized in Fig. 11 for each of the above categories.

The effect of winds on the overpressures received at the ground was studied by assuming that the wind velocities were aligned parallel and perpendicular to the airplane flight path. In this manner, the influence of headwinds, tailwinds and sidewinds were studied. The overpressures computed by the method of Refs. 6-8 under the flight track

![Fig. 11 Summary of Model Wind Profiles.](image-url)
This relationship also defines the meteorological conditions required for no boom to reach the ground. It has been applied in Fig. 20 to several examples to illustrate the application to the standard and nonstandard atmospheres. The model atmospheres considered are illustrated in Fig. 20 Airplane Mach Number for Complete Cut-Off in Several Model Atmospheres.
Fig. 22 Effect of Wind on Cut-Off Mach Number.

occur on the ground under the flight track, in the presence of wind, is given by Eq. (11) which is developed in the Appendix.

\[ M_{\text{Focus}} = \frac{(a + U)_g - U_a}{a_a} \] if and only if \((a + U)_g = (a + U)_{\text{max}}\). Eq. (11)