

## **Abstract**

A sonic boom is a sound phenomenon that occurs when an object is traveling faster than the speed of sound. This literature study explains the causation in the emerge of a sonic boom, recites the course of the event as well as acknowledges its characteristics. By carefully selected material it is possible to present the background that lays the foundation for several interrelationships that describes the qualities of sound and aerodynamics. The characteristics of a sonic boom are visualized in a calculation of a hypothetical example focused on aircraft traveling at supersonic speed, more precisely how different conditions affect the intensity and spherical spread of the sound. This calculation also acknowledges an unknown constant  $k$ , which appears in the formula describing wave drag. The results show that intensity and spread vary with altitude, temperature, wave drag, and much more and that the unknown aerodynamic constant  $k$  can be calculated to  $5,8 \cdot 10^5$ . The Sonic boom should be further carefully studied to minimize the damage of shock waves but mainly to explore how to utilize the potential areas of usage for supersonic traveling.