

Sonic Boom

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Sonic Boom Latest News

Researchers have used seismometers to detect the sonic booms created by debris from orbit falling back to the earth.

About Sonic Boom

- A sonic boom is a **thunderous noise** caused by an **object, like an aircraft, moving faster than the speed of sound.**
- **How is it Formed?**
 - As the **object zooms through the sky**, the **air molecules** around it are **pushed aside** with tremendous force, **generating shock waves** along its flight path.
 - The **release of pressure**, following the shock waves' buildup, is **heard as the sonic boom.**
 - Sonic booms **create huge amounts of sound energy.**
- The **intensity** of the sonic boom is **determined** not only by the **distance between the craft and the ground** but also by the **size and shape of the aircraft**, the **types of maneuvers** that it makes, and the

atmospheric pressure, temperature, and winds.

- A **larger and heavier aircraft** must displace more air and create more lift to sustain flight, compared with small, light aircraft.
- Therefore, they will create **sonic booms stronger and louder** than those of smaller, lighter aircraft.
- The **larger and heavier the aircraft**, the **stronger the shock waves** will be.
- Generally, the **higher the aircraft**, the greater the distance the shock wave must travel, **reducing the intensity of the sonic boom**.
- **If the aircraft is especially long**, **double sonic booms** might be detected, **one emanating from the leading edge** of the plane and **one from the trailing edge**.
- **Visible Effects:**
 - Sometimes, you can see a **cloud or a cone shape around an aircraft** making a sonic boom. This isn't the sound itself.
 - **It's water vapor** in the air that **suddenly cools down due to the pressure changes** from the shock wave. This makes a **temporary cloud**.
- Sonic booms **can shatter glass**, but there is **generally little risk for people** on the ground.

Source: TH

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