

# I. WAVES

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# **I. WAVES**

## **I.1. Introduction**

## **I.2. General properties of Waves**

## **I.3. Different type of ocean waves**

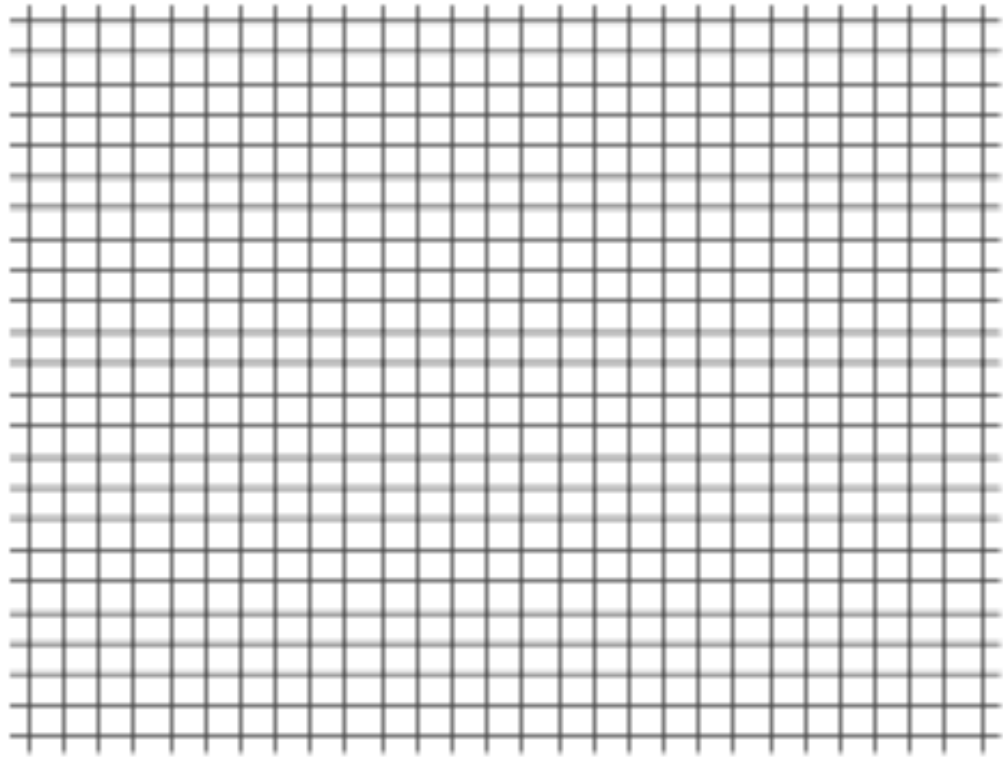
### **I.3.1 Surface Gravity Waves**

### **I.3.2 Internal Waves**

### **I.3.3 Acoustic Waves**

## **I.4. Ray Theory**

### **Longitudinal waves:**



# I.3.3 Acoustic Waves

## Sonic Boom



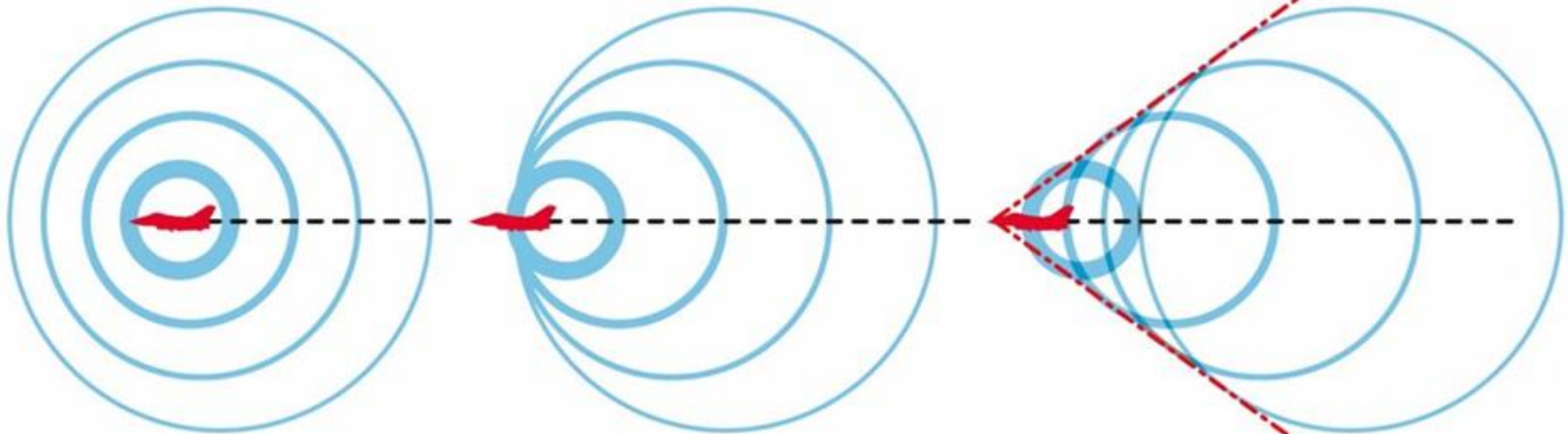
# I.3.3 Acoustic Waves

## Sonic Boom

An aircraft in flight creates a series of pressure waves that radiate in all directions

These waves are compressed the faster the aircraft moves

Eventually the waves merge into a single shock wave that travels at the speed of sound



**below Mach 1**

**Mach 1**

**Mach 1 plus**

The speed of sound (**Mach 1**) is approximately **761mph** at 20C at sea level

A person on the ground hears a boom when the shock wave crosses their location

## I.3.3 Acoustic Waves

### **Sonic Boom**

