



The Sun does not rotate uniformly  
The apparent rotation can vary  
from 25-33 days.

Observable sunspots vary in an  
11-year cycle:

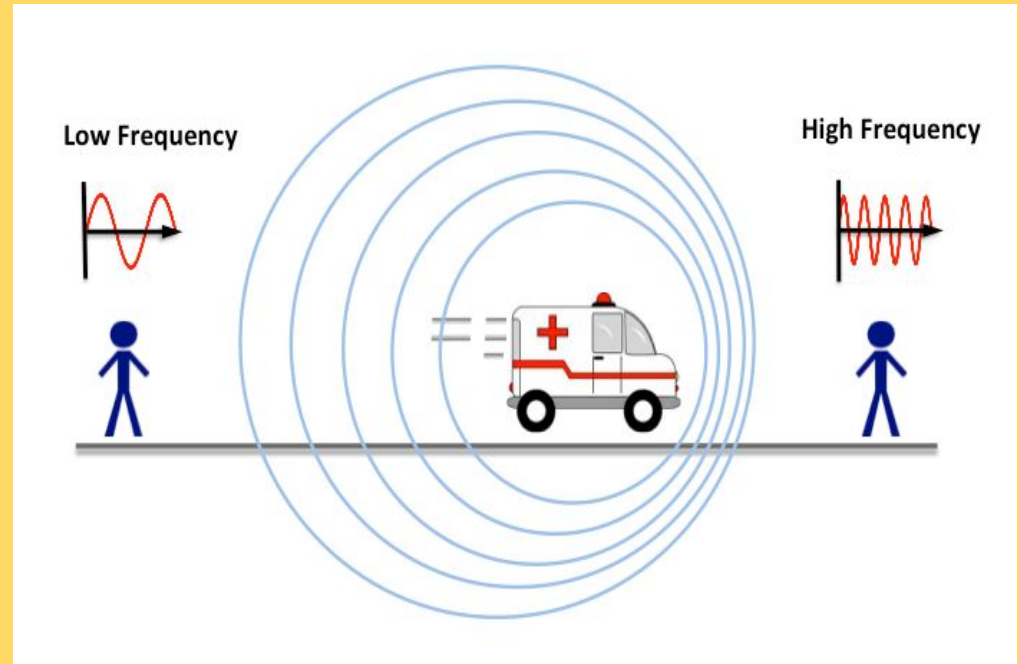
- solar maximum= most sunspots
- Solar minimum= least sunspots

[Solar cycle video](#)

## The Doppler Effect:

the perceived change in wavelength of a wave that is emitted from a source that is moving away or toward an object.

### The Doppler Effect

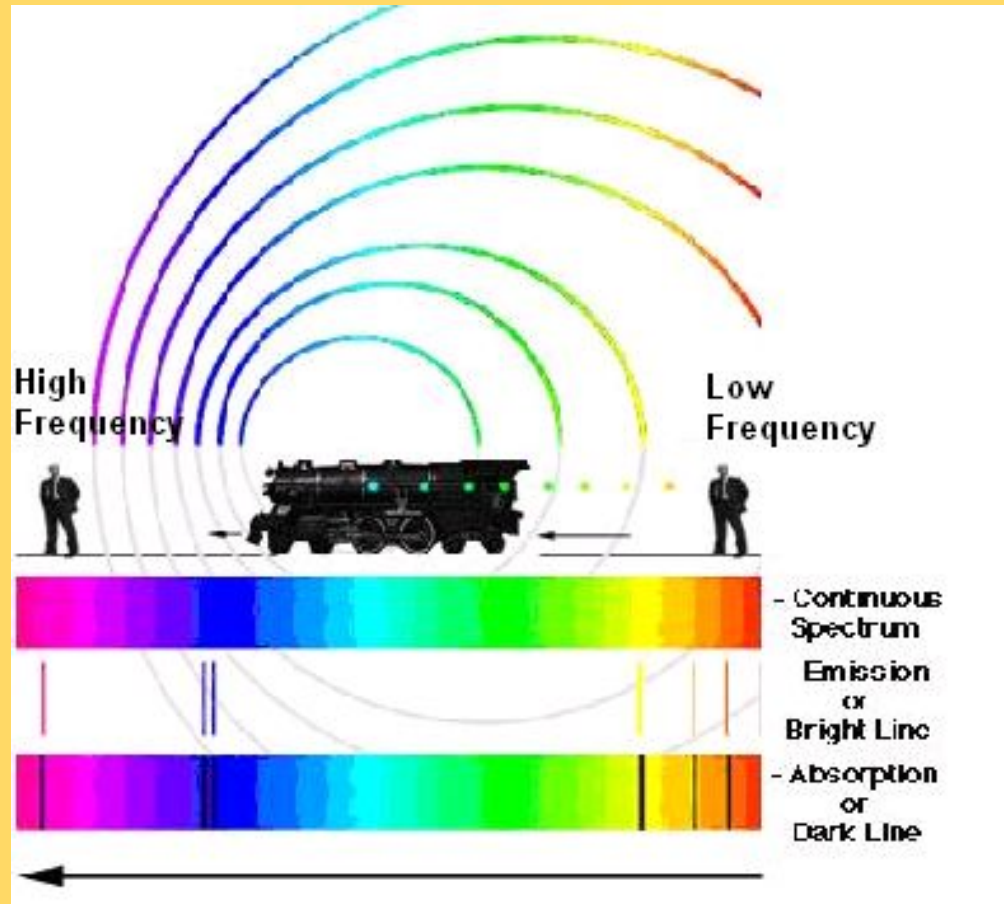


- Longer wavelength when object is moving away from you
- Shorter wavelength when object is moving toward you

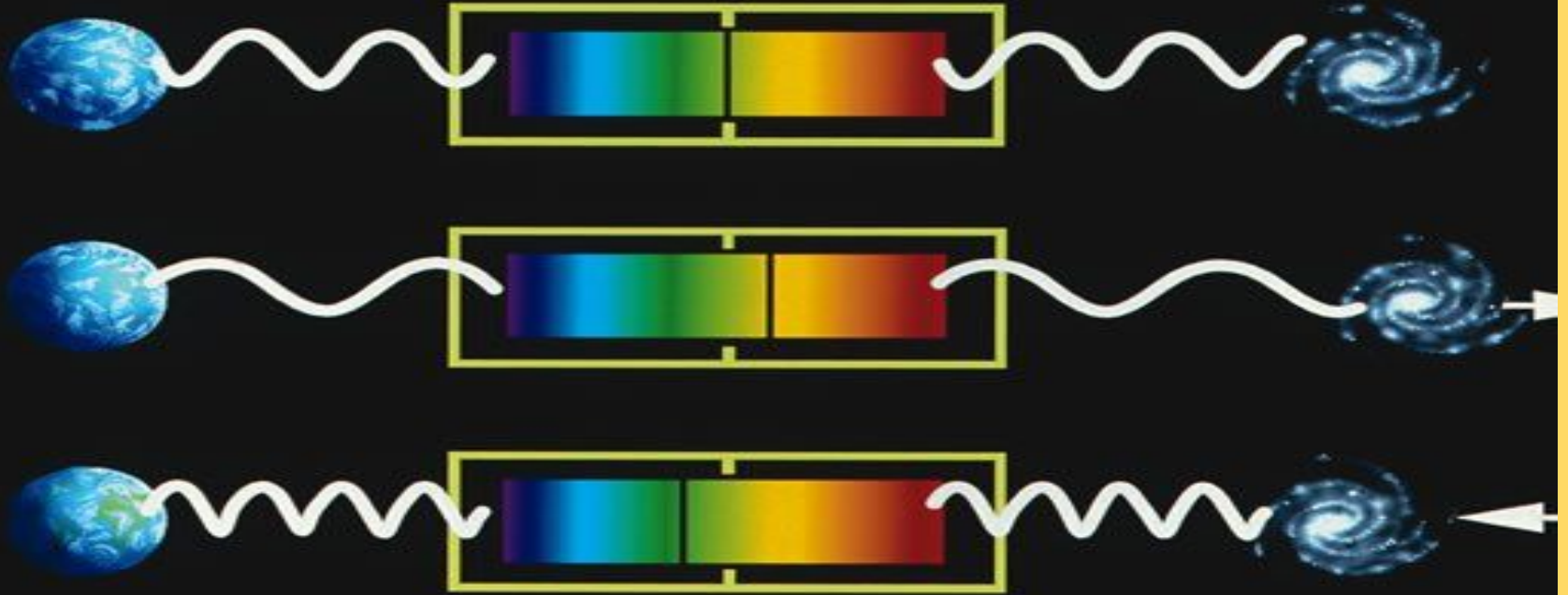
Light waves behave similarly to sound waves in this regard

**Blue shift:** object is moving toward you

**Red shift:** object is moving away from you



In astronomy, The doppler effect is used to determine whether a star or other body in space is moving away from or toward Earth



The Doppler Effect