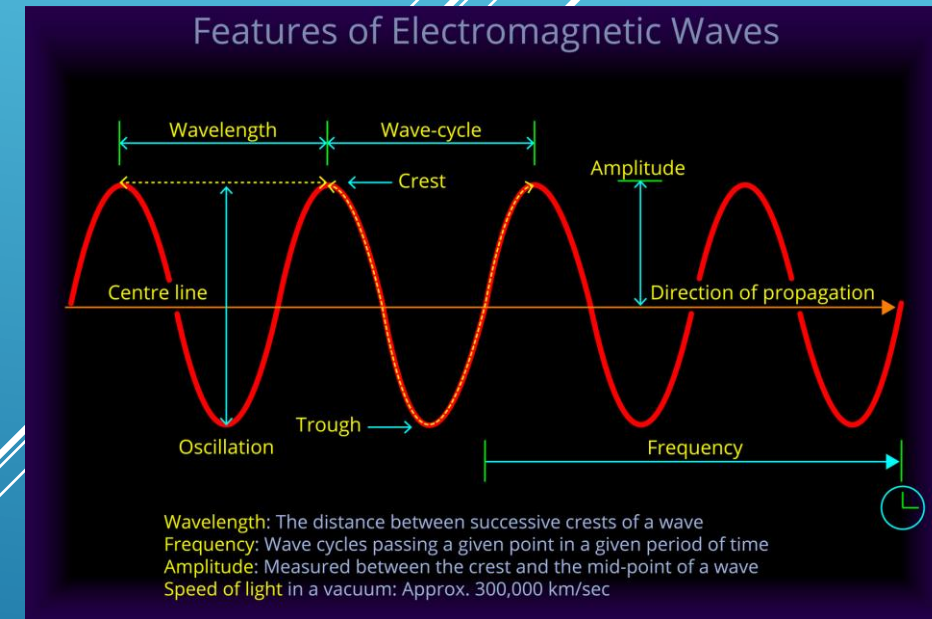
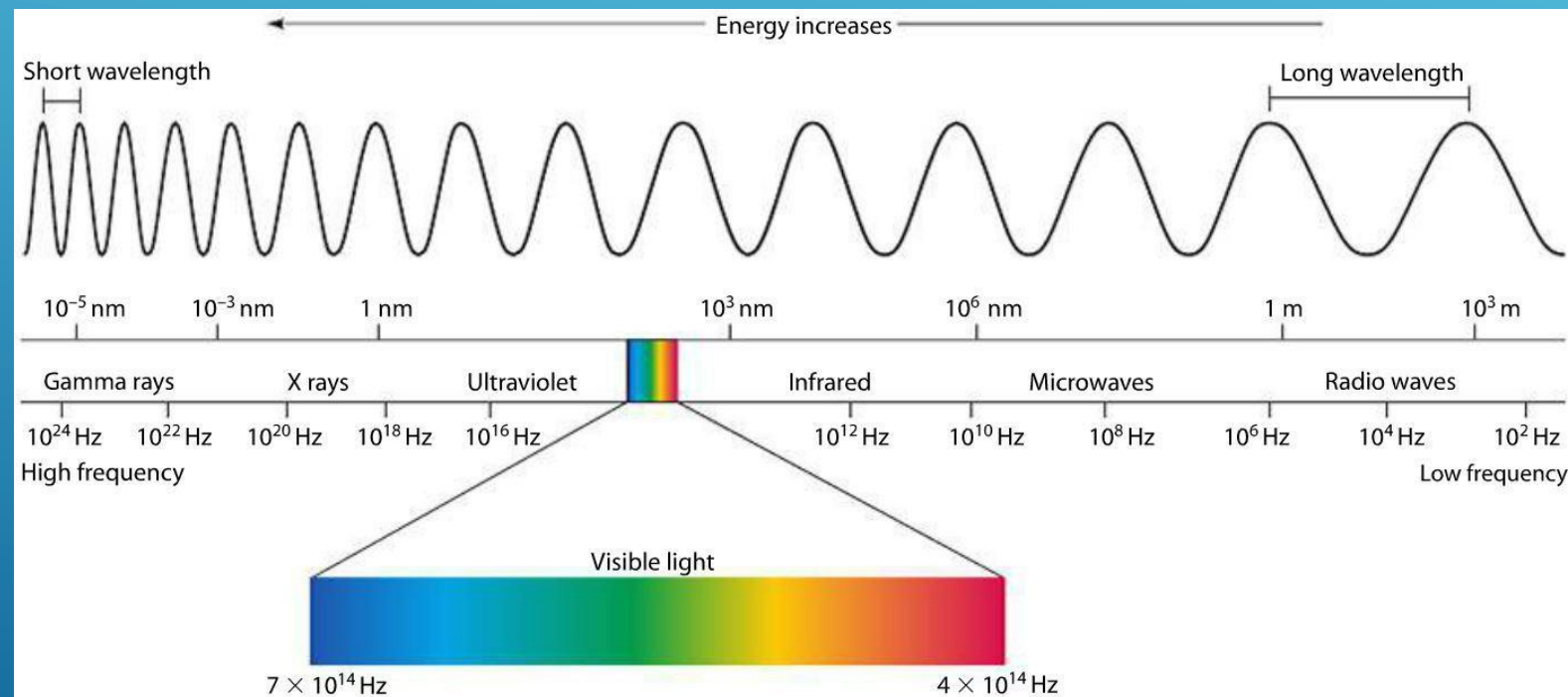
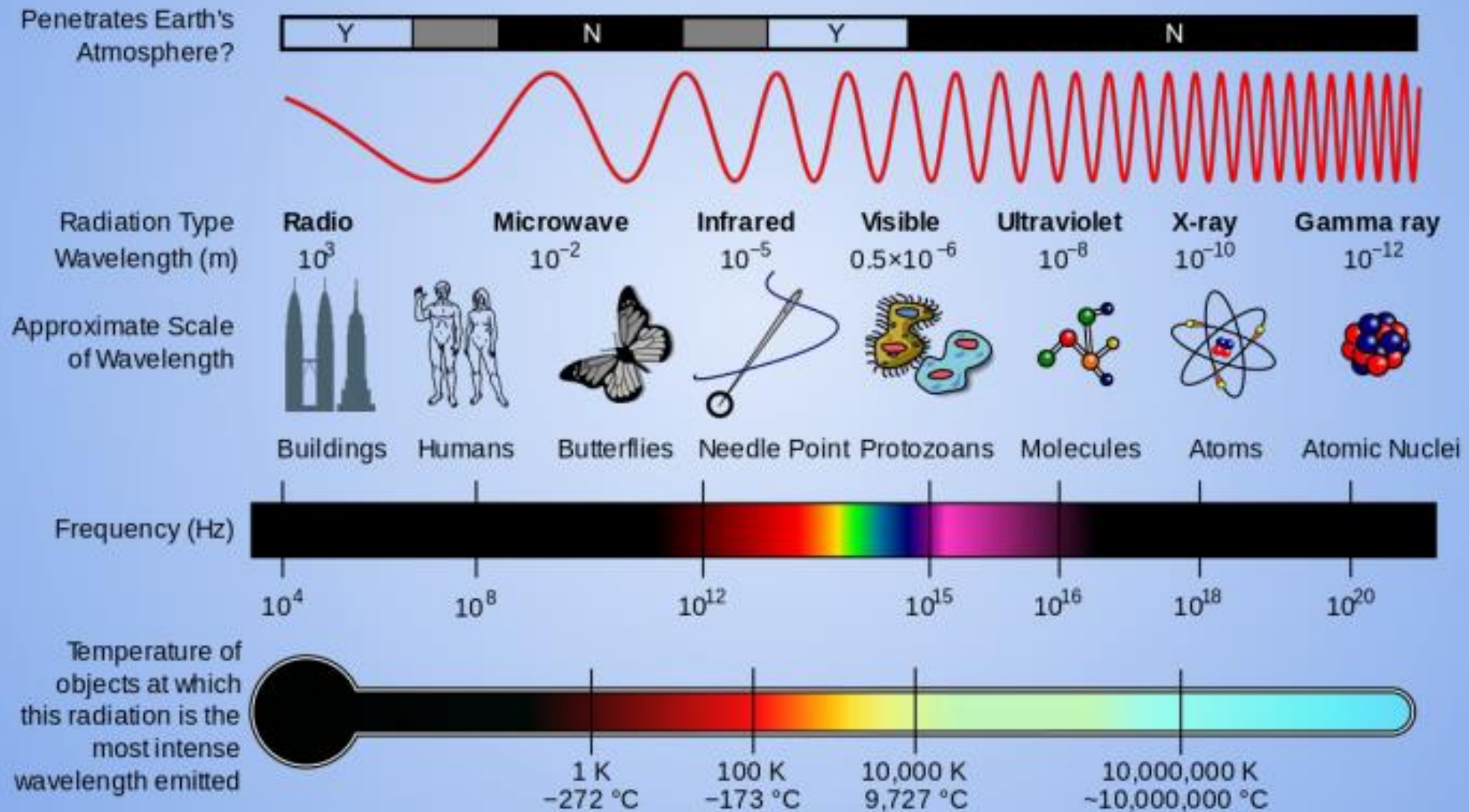


A FEW CHARACTERISTICS AND USES OF SOME ELECTROMAGNETIC WAVES



Introduction : What are electromagnetic waves ?



GAMMA RAYS: USES

medicine

radiotherapy

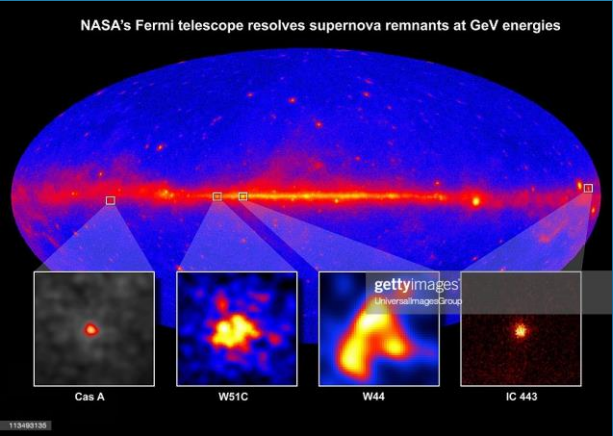
nuclear field

Astronomy

Learn information about the structure of the universe

Industry

to sterilize parts



Radiography

rapid inspection

γ rays

Discovery

The γ rays were discovered in 1900 by Paul Villar a french chemist and physicist while researching radiation emitted by radium.

But it's Henri Becquerel who named them as gamma rays, because he has already found two other types of radiation alpha and beta rays.



Paul Villar



Henri Becquerel



INFRARED WAVES: USES

Astronomy



Photography



Heating

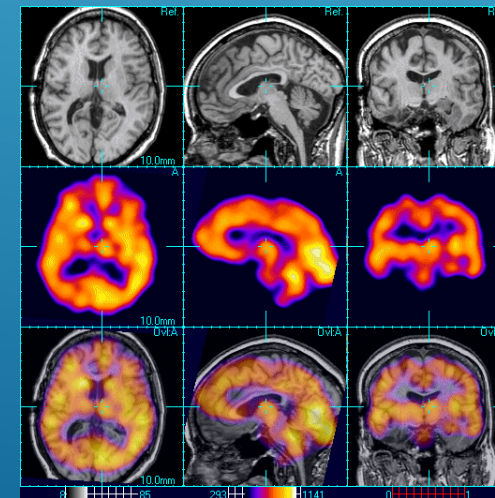


Transmission

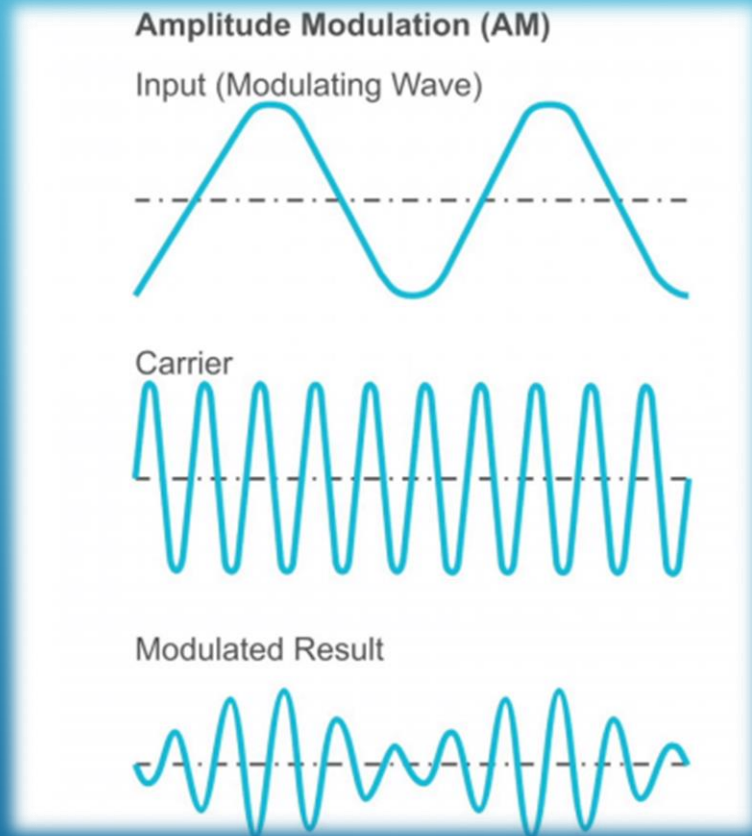


Radio Waves	X-ray
Communication between planes and control tower or between vehicles in general	Medicine in radiography or when a patient has a CT scan
Music radio broadcast by example	Security in airports for example to check suitcases
Geographic positioning system	Radiation therapy to defeat cancer cells
Avalanche victim detector	Densitometers to detect or monitor osteoporosis

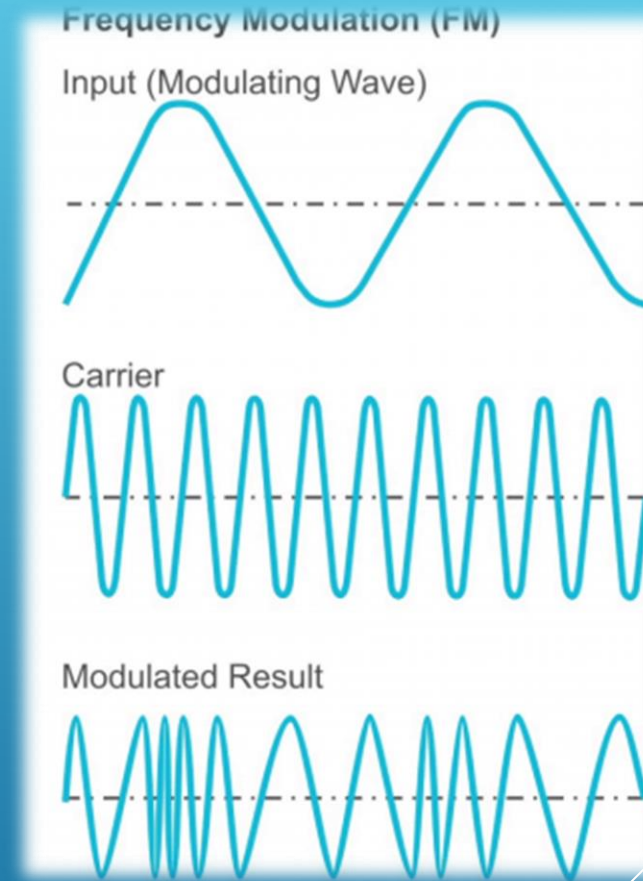
USES



Radio waves modulation



Amplitude modulation



Frequency Modulation

RADIO WAVES

Advantages



- Covers a large part of the population
- Important information or news can be easily broadcast
- The most powerful means of communication

Disadvantages



- Cannot transmit a lot of data simultaneously.
- May be frightening, due to possible impact on people's health (might problems such as leukemia and cancer)

*Un grand merci à Kenza, Alexis, Audran,
Hippolyte, Johan, Jules, et Lucas,
promotion GEII 2021*



GEII

Génie Électrique et Informatique Industrielle

