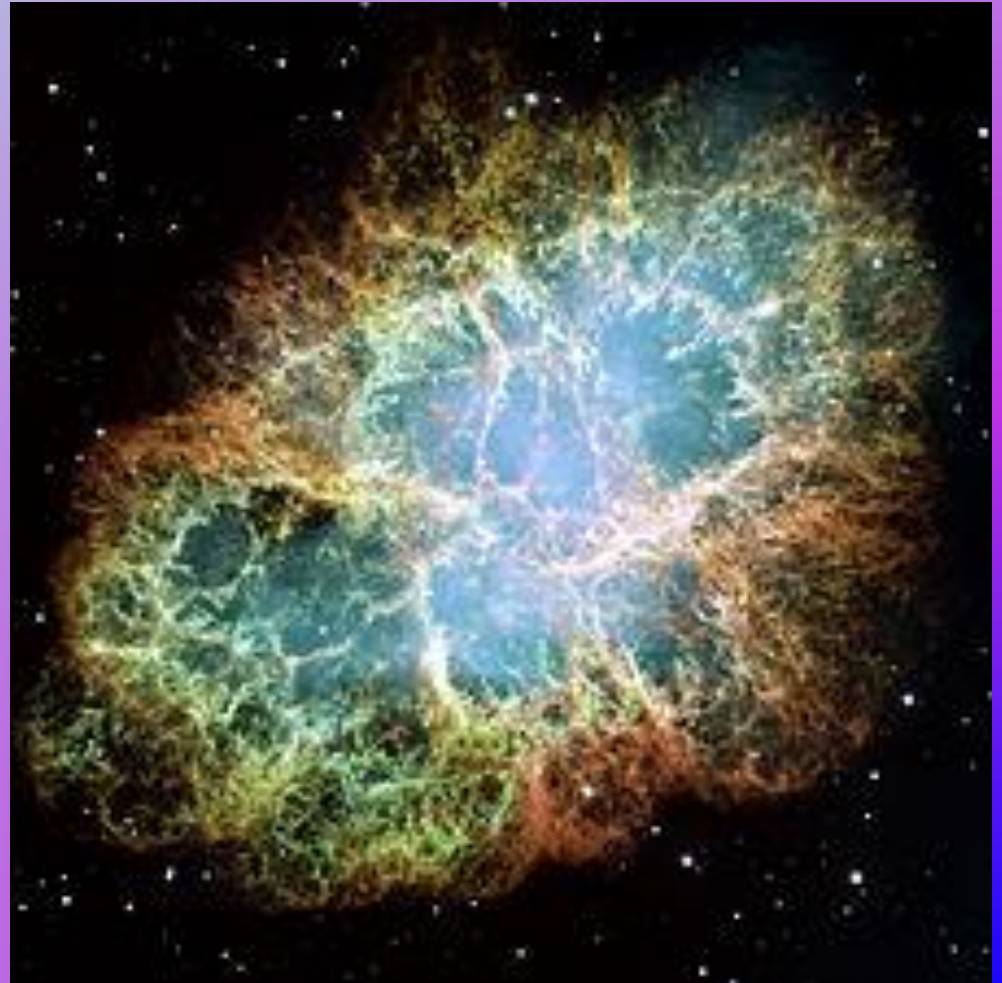
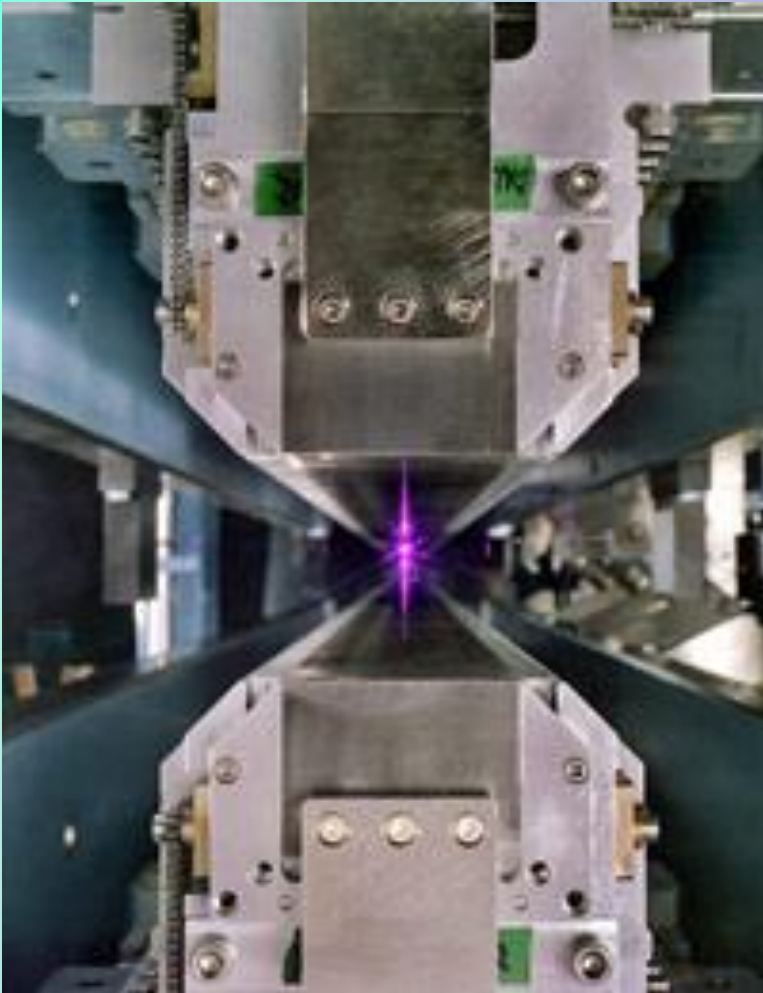
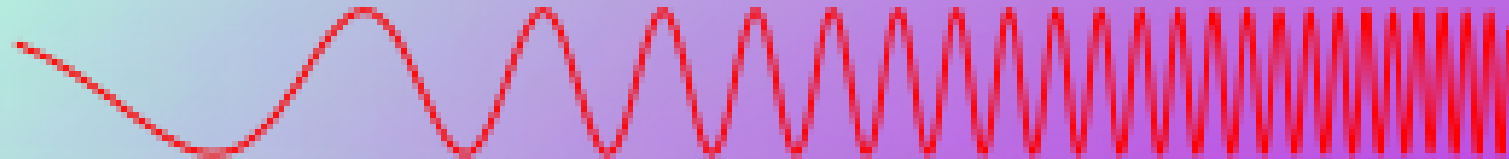


# Synchrotron Light



# The Electromagnetic Spectrum

Penetrates Earth's Atmosphere?



Radiation Type  
Wavelength (m)

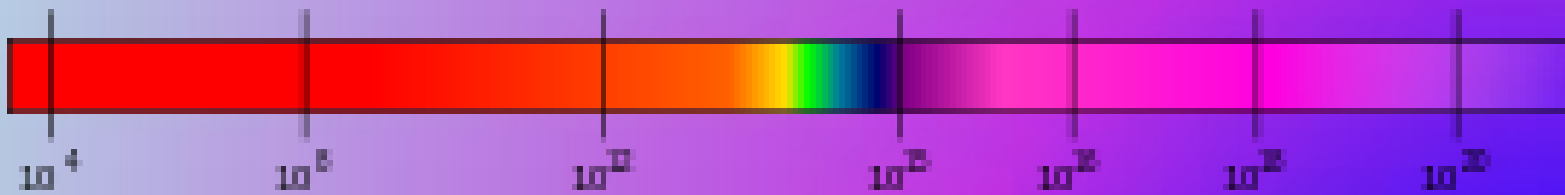


Approximate Scale of Wavelength

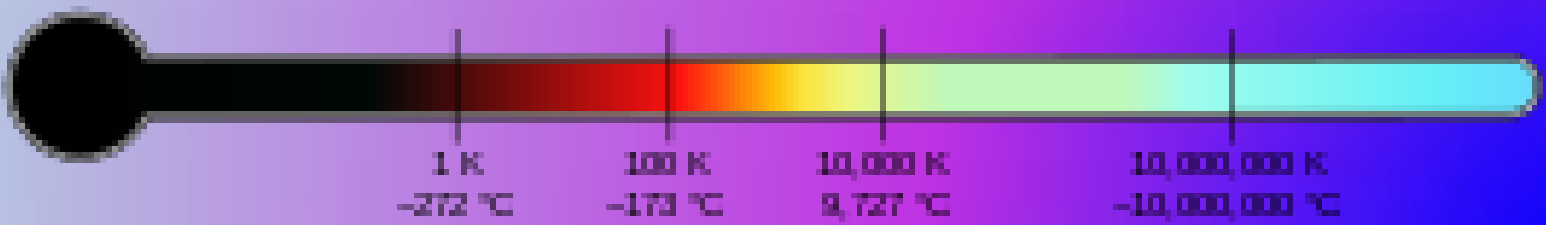


Buildings    Humans    Butterflies    Needle Point    Protons    Molecules    Atoms    Atomic Nuclei

Frequency (Hz)



Temperature of objects at which this radiation is the most intense wavelength emitted

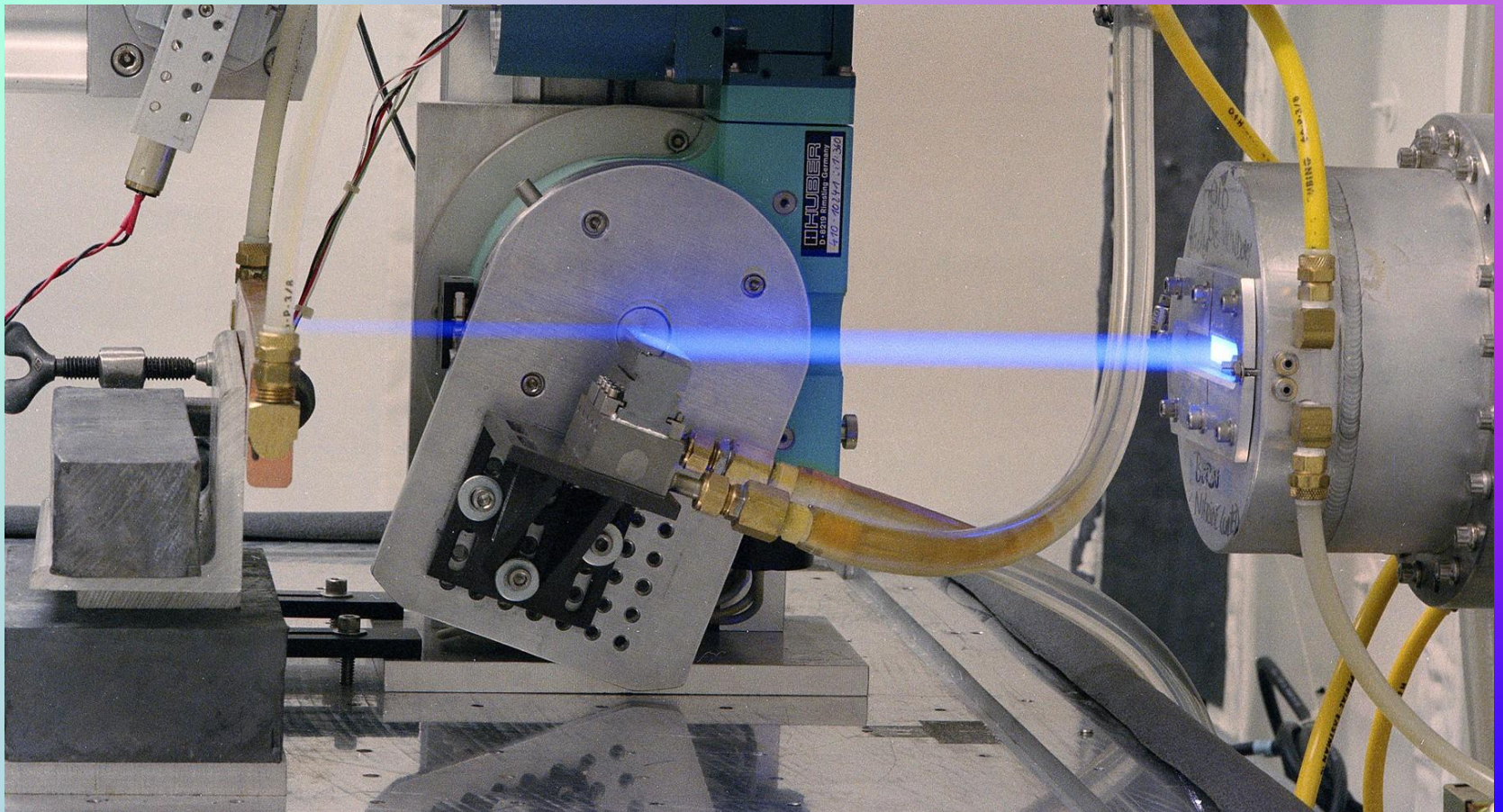


# Xrays

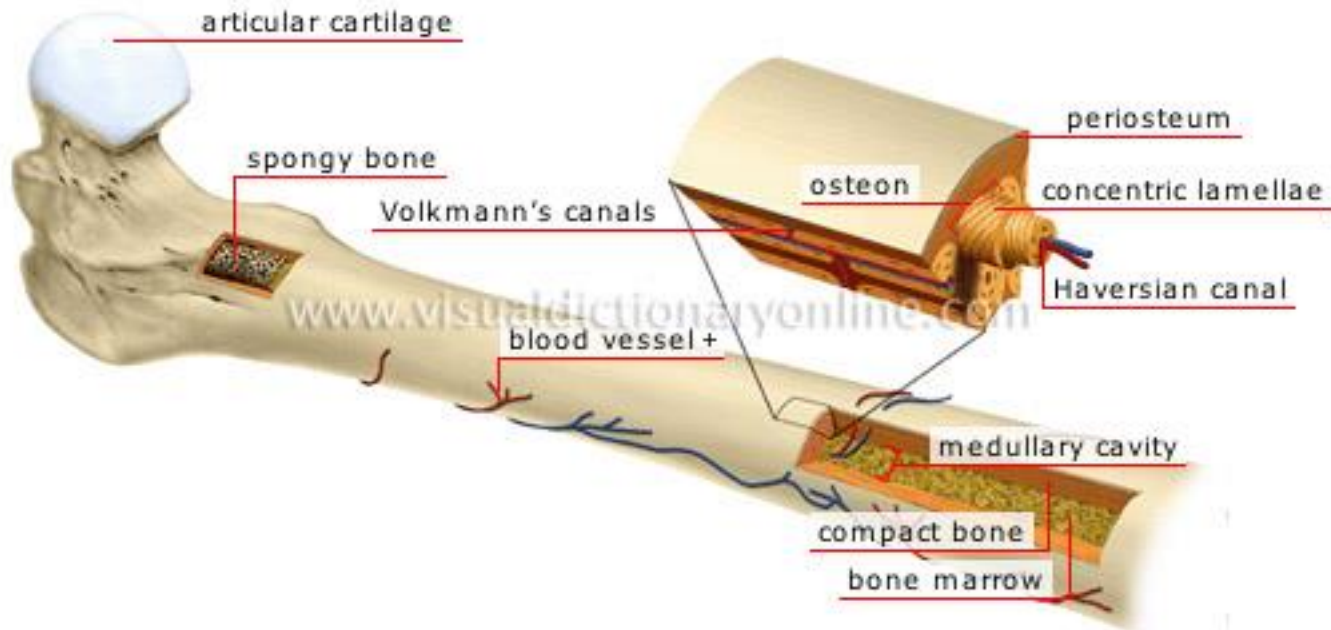




“Synchrotron light is the brightest artificial source of X-rays.”



# Powerful Light, Diverse Research







SESAME

# Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME)

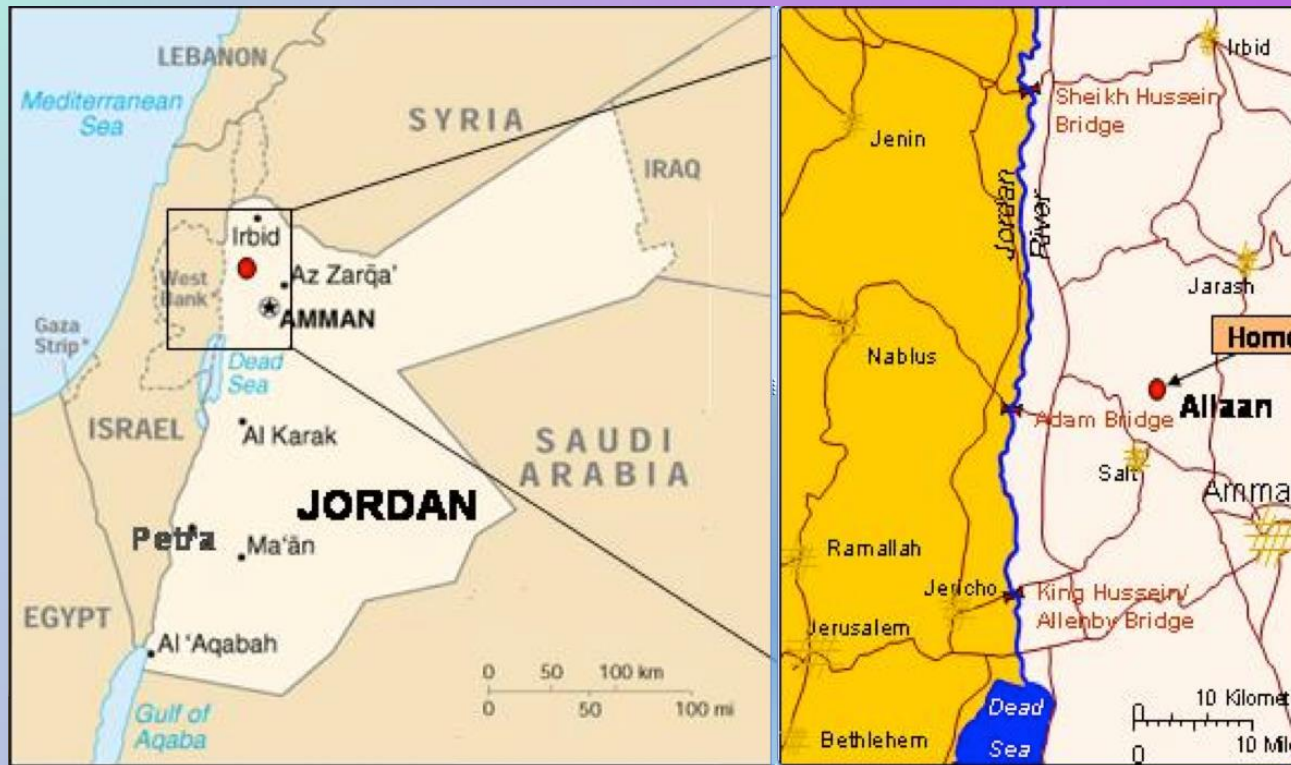




# WORKING GROUP “SESAME”

Synchrotron Light for **Experimental Science** and **Applications** in the **Middle East**

A “CERN” in the Middle East



<http://www.sesame.org.jo/sesame/>



# SESAME



International research centre in construction in Jordan  
developed under the auspices of UNESCO **and modelled on CERN**  
to enable world-class research by scientists from across the Middle East

- *biology & medical sciences*
- *materials & environmental science & physics*
- *archaeology*

build bridges between diverse societies

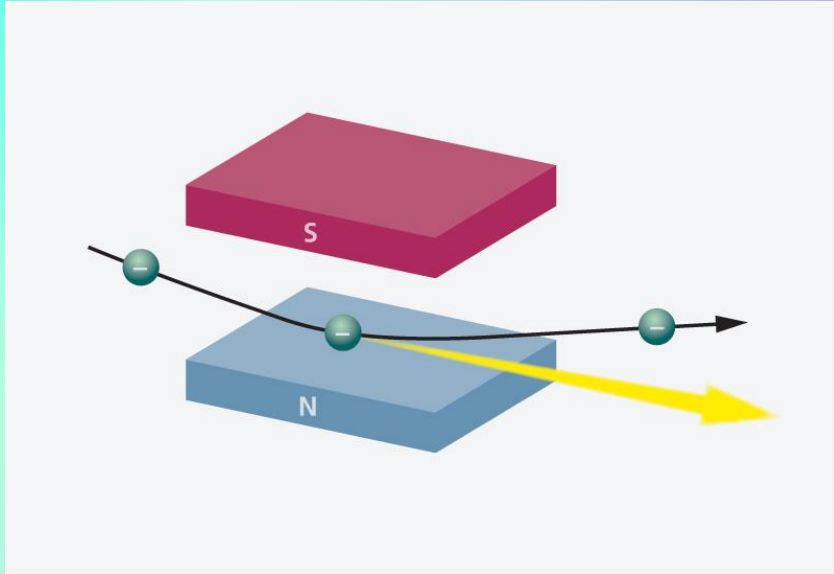
contribute to a culture of peace through international cooperation in science.



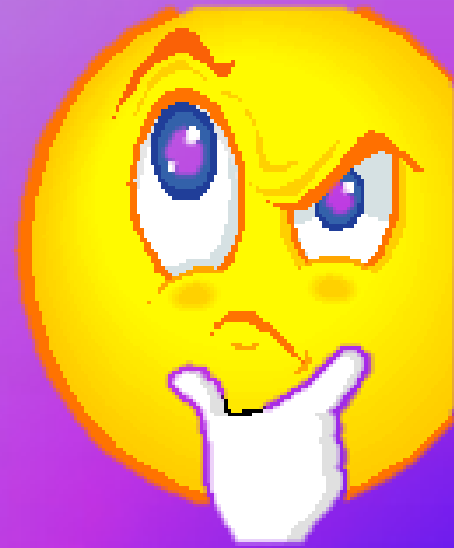




# How a Synchrotron Works



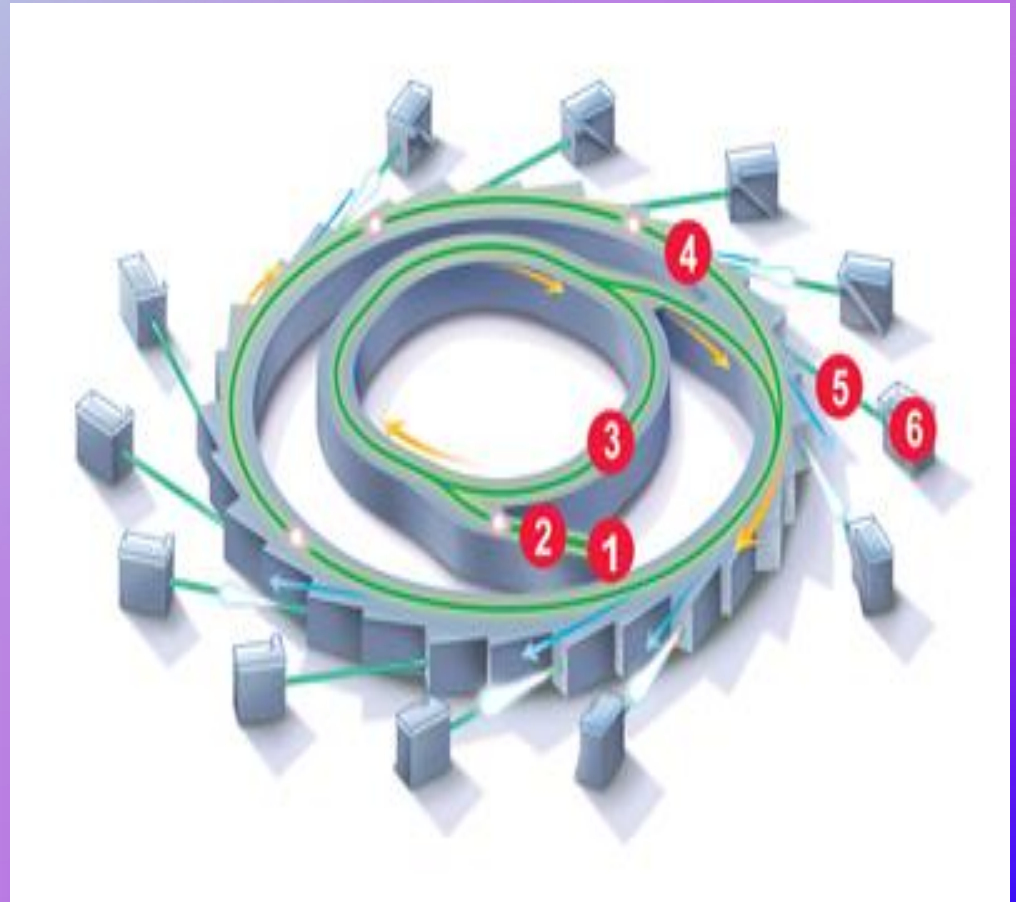
Delivering content to the students



# How a Synchrotron Works

## Parts of Synchrotron

- (1) Electron gun
- (2) LINAC
- (3) Booster ring
- (4) Storage ring
- (5) Beamline
- (6) End station



# IOP Key Facts & Figures

