

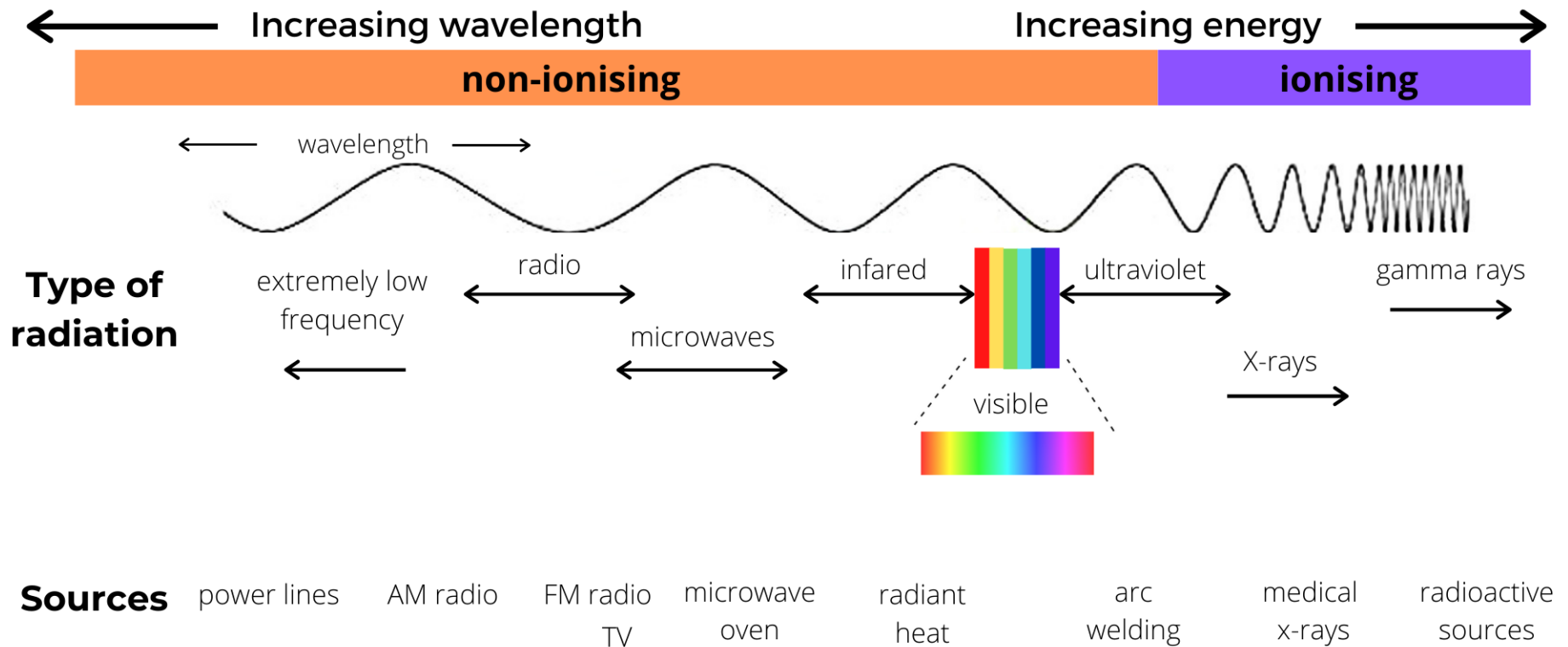


Public Health
England

Introducing X-radiation

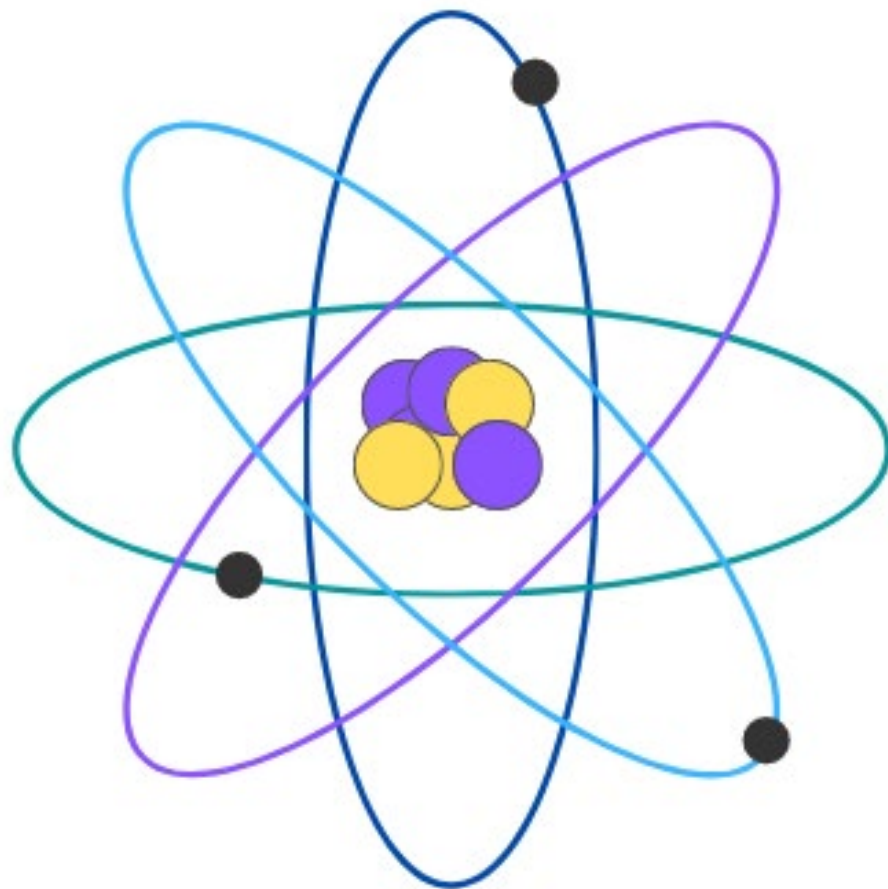
Electromagnetic radiation

THE ELECTROMAGNETIC SPECTRUM





Atoms



= Proton

Positively charged &
part of the nucleus



= Electron

Negatively charged &
surround the nucleus



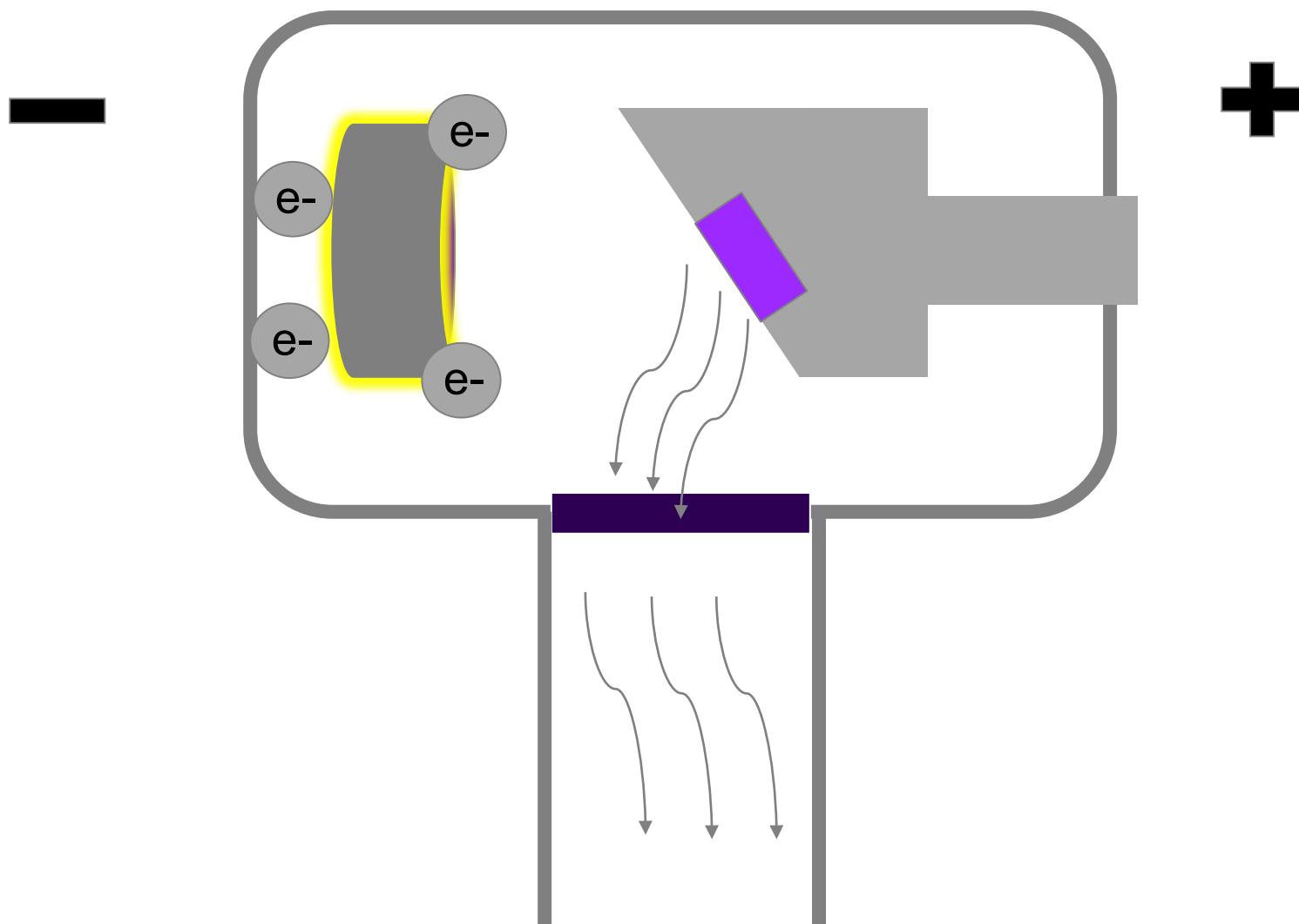
= Neutron

No charge &
part of the nucleus



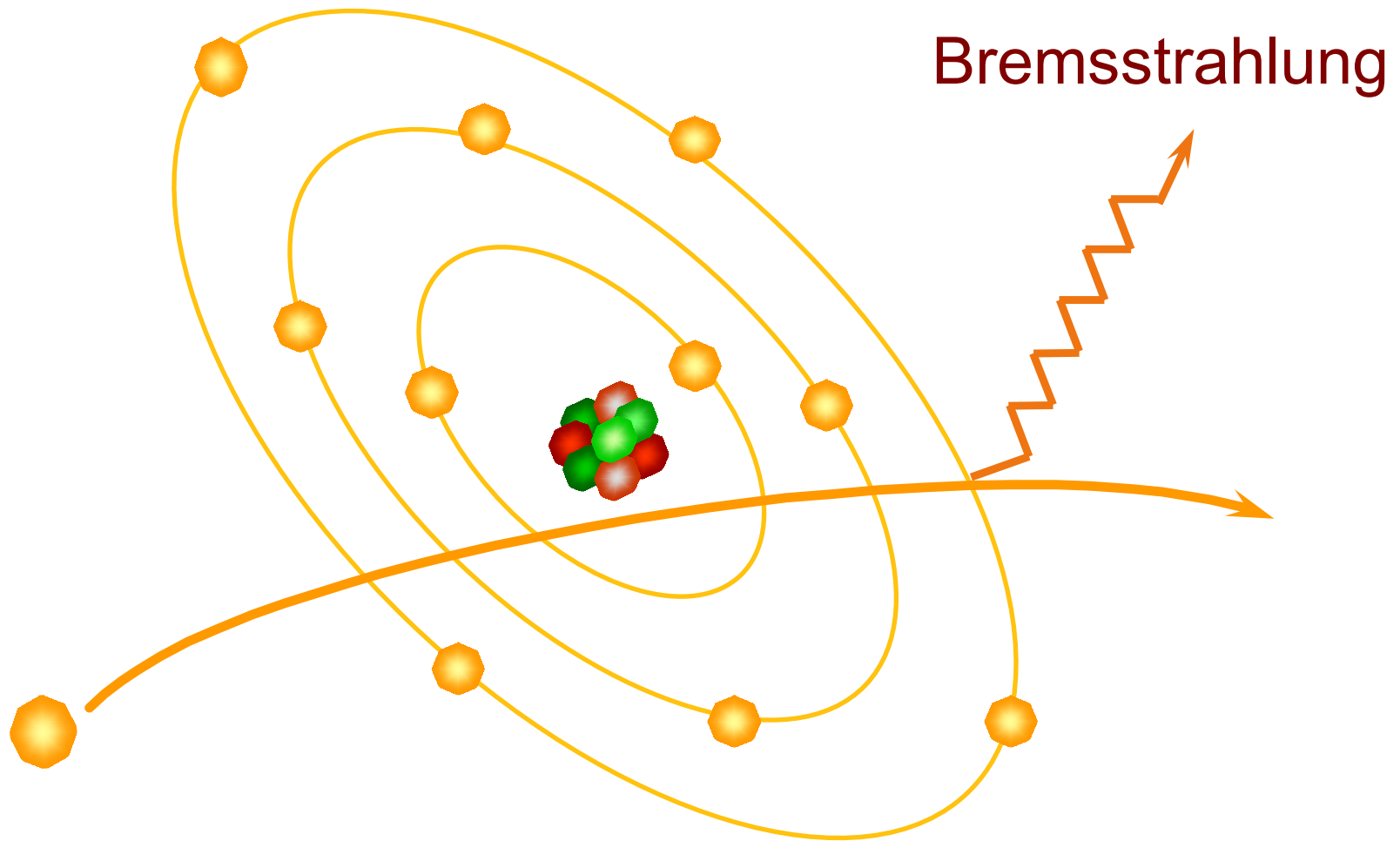
An X-ray tube





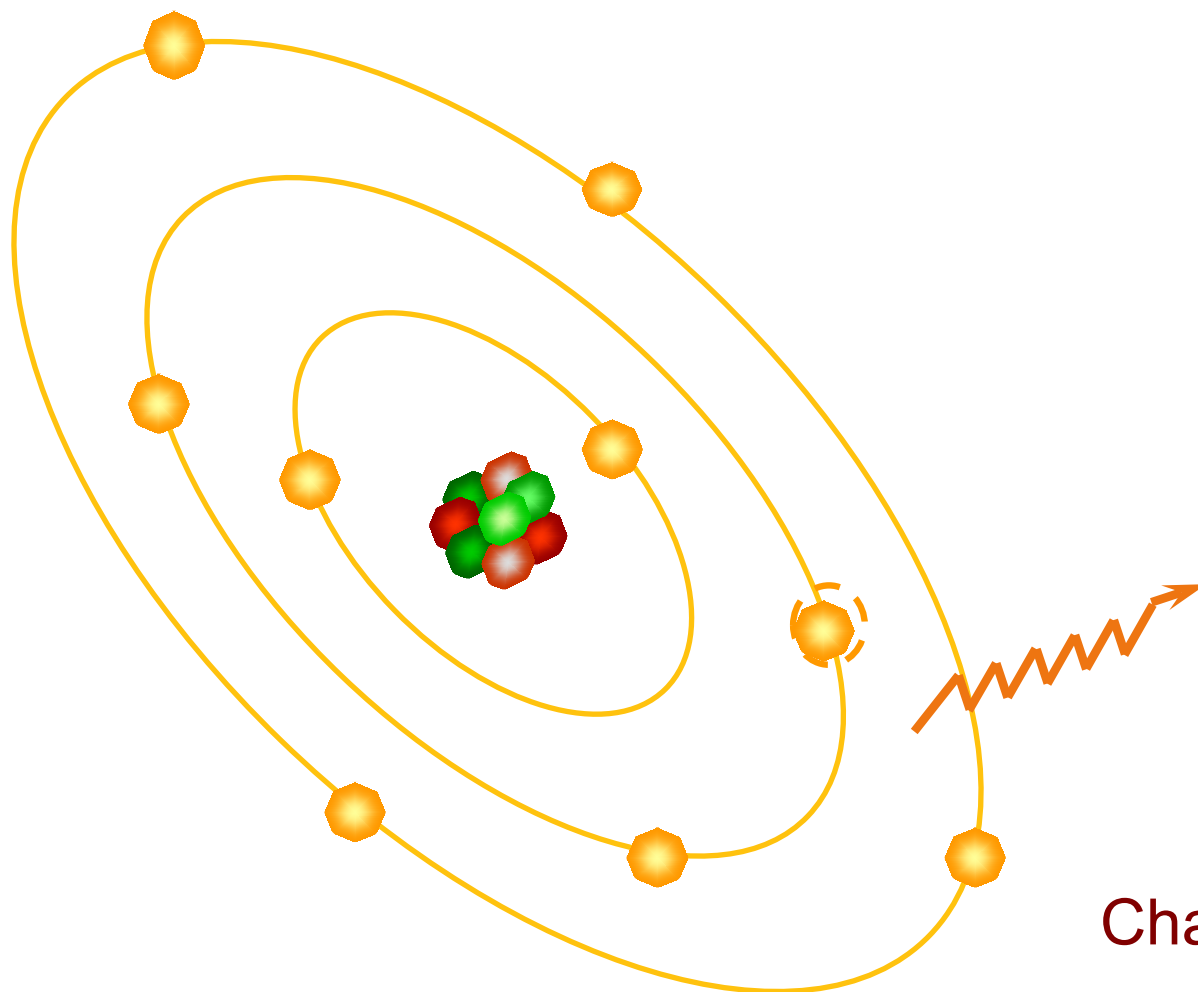


X-ray Production





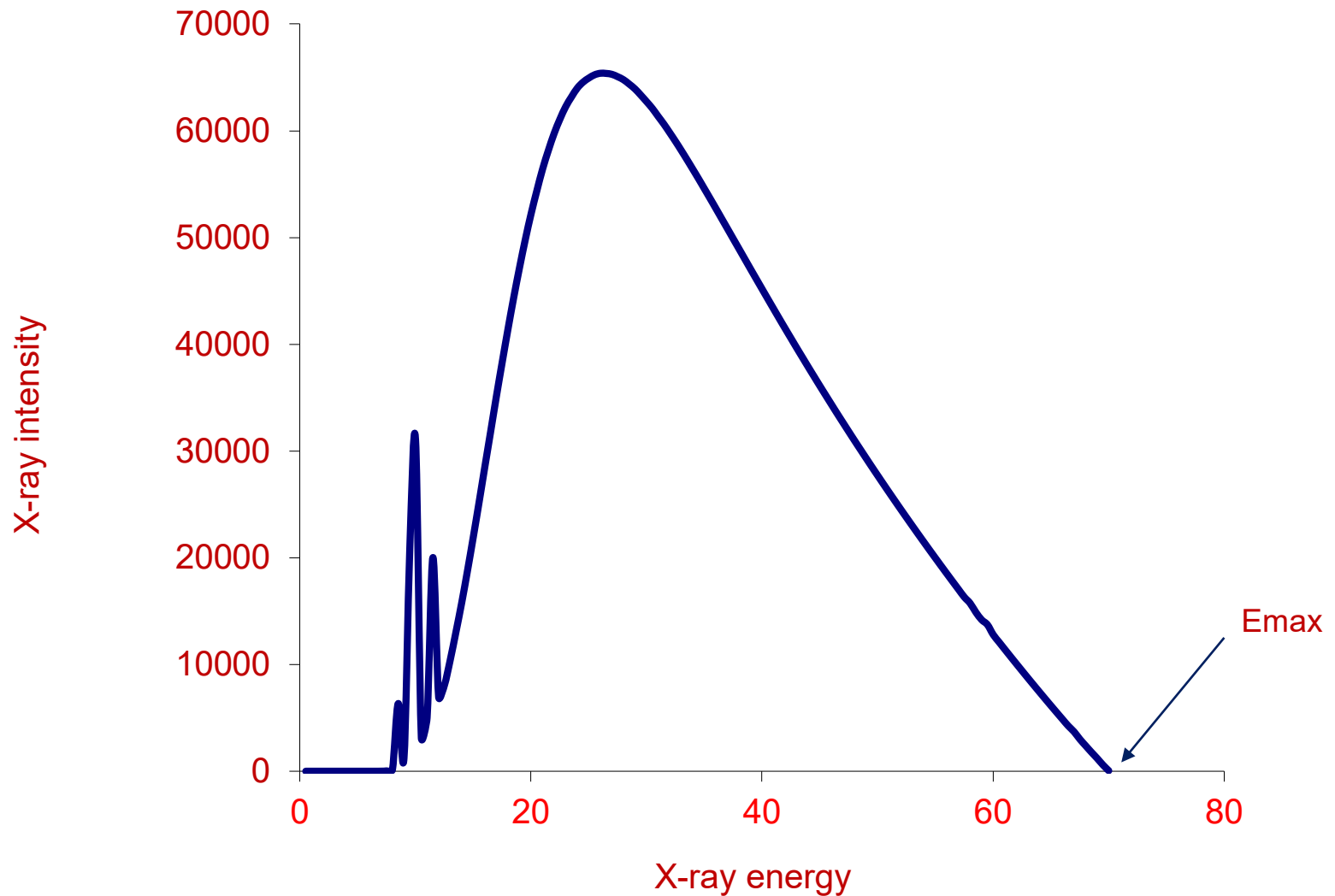
X-ray Production



Characteristic



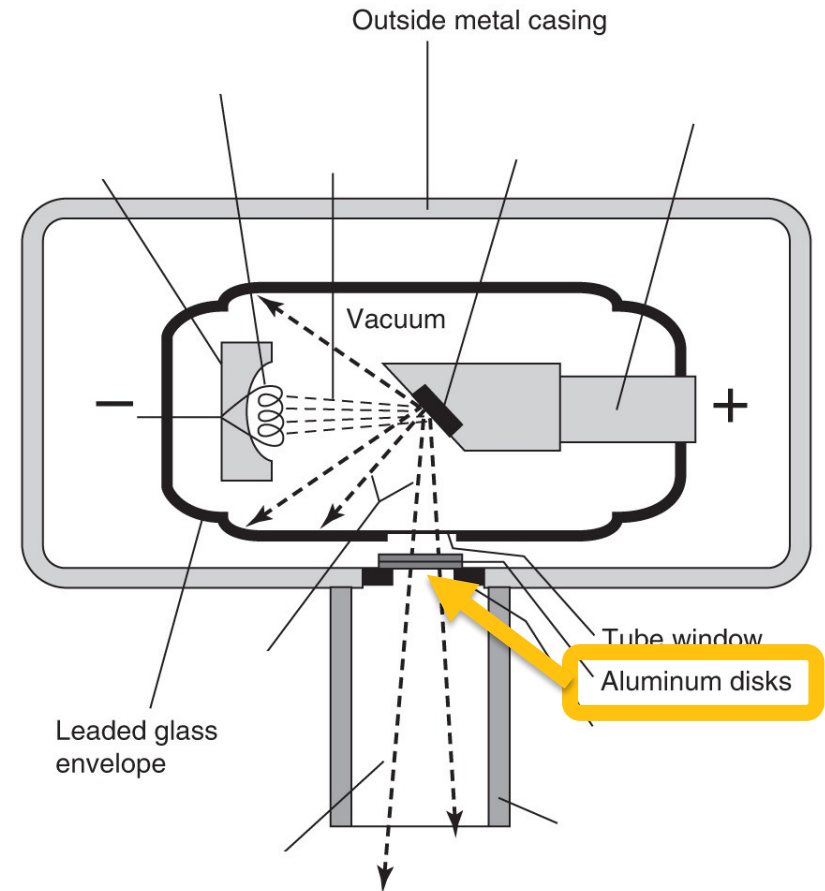
X-ray spectrum





Filtration

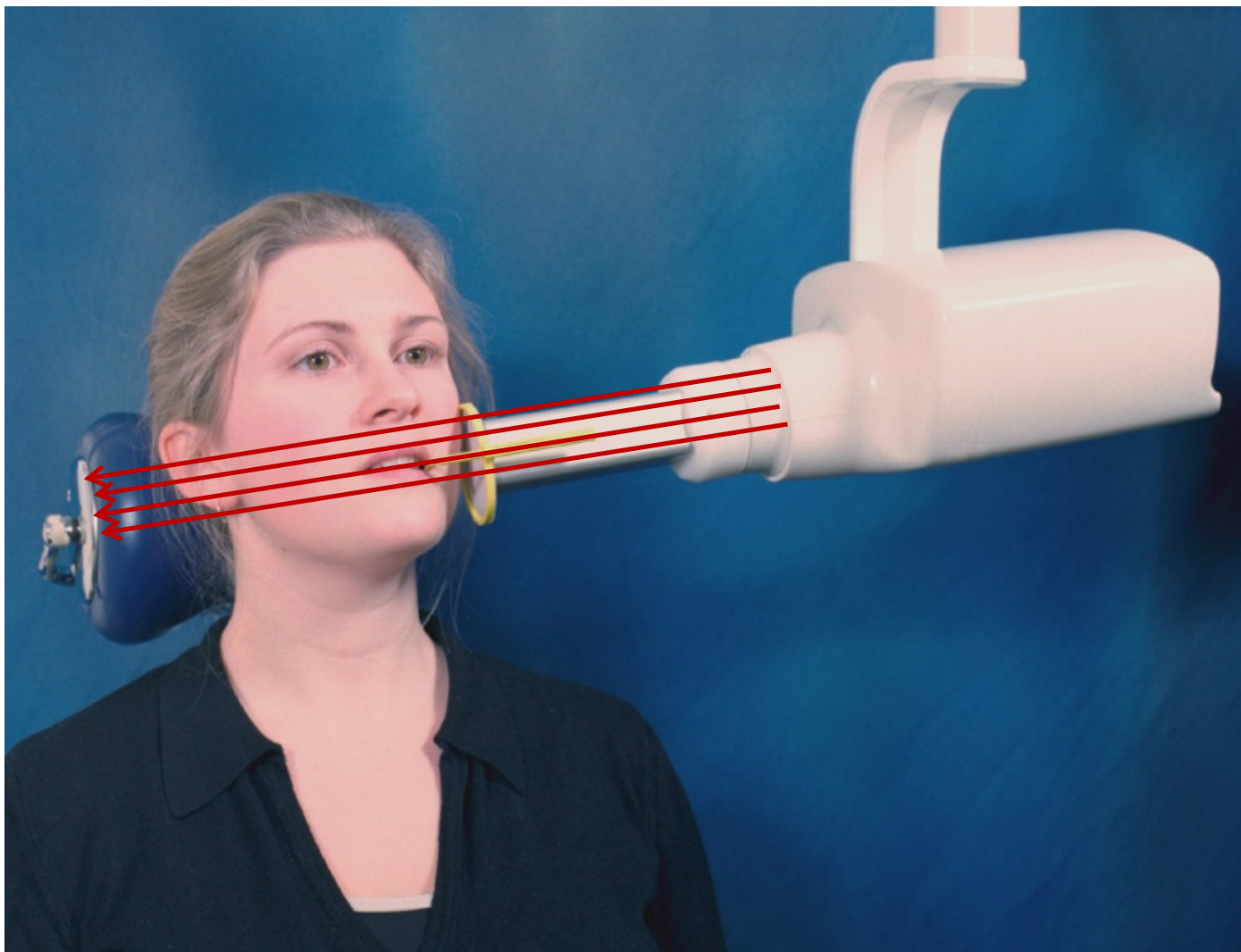
- Filtration of the X-ray beam removes low energy X-rays which contribute to patient skin dose, but do not contribute to the final radiograph



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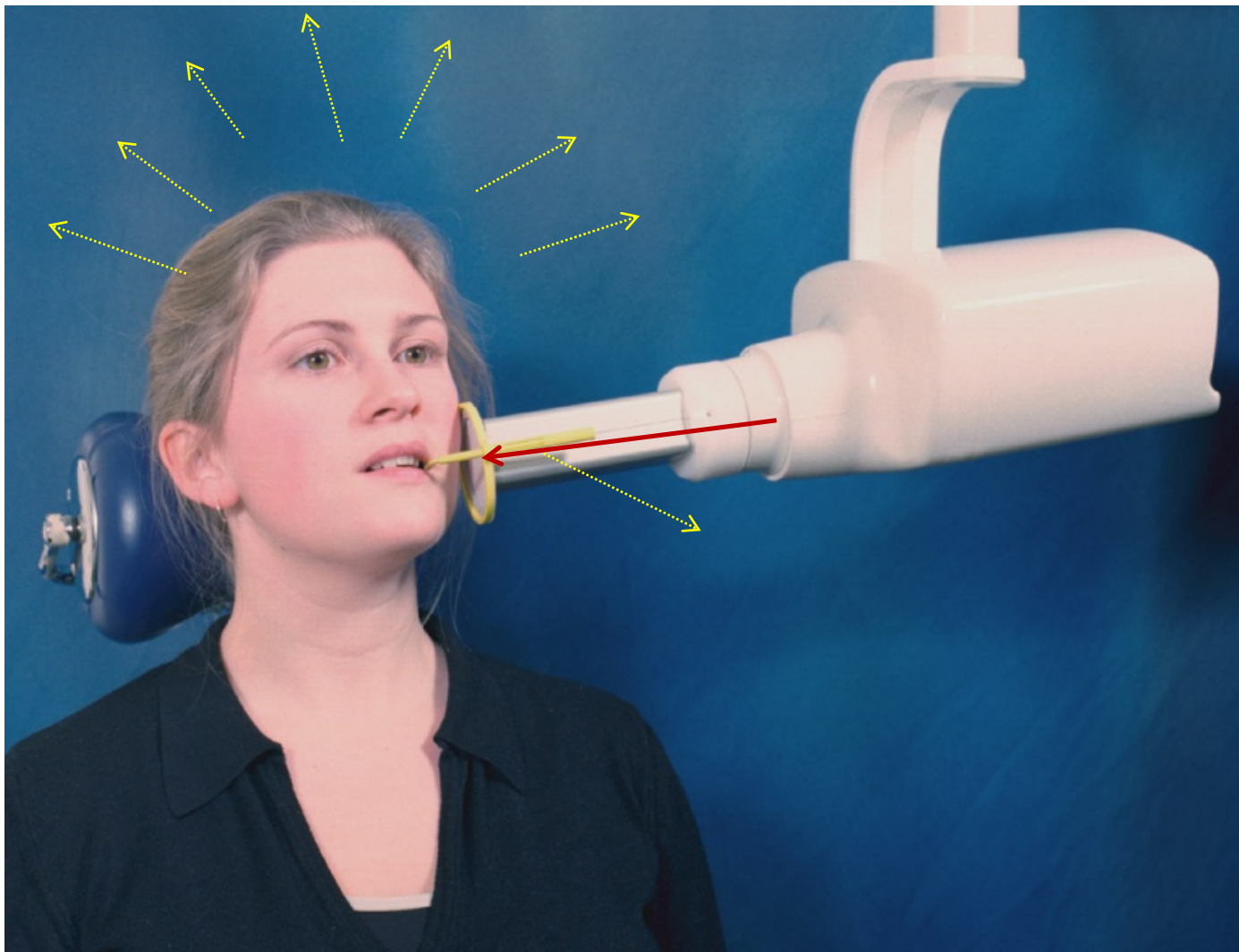


Primary or main X-ray beam





Scattered X-rays





X - rays

cannot induce radioactivity

X-rays

can be switched off