

# ADAMAS 2019

Erich Griesmayer  
CIVIDEC Instrumentation



# Beam Instrumentation



# Anniversary



# Portfolio

- Charged particles
- Neutrons
- Photons

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- Neutrons
- Photons

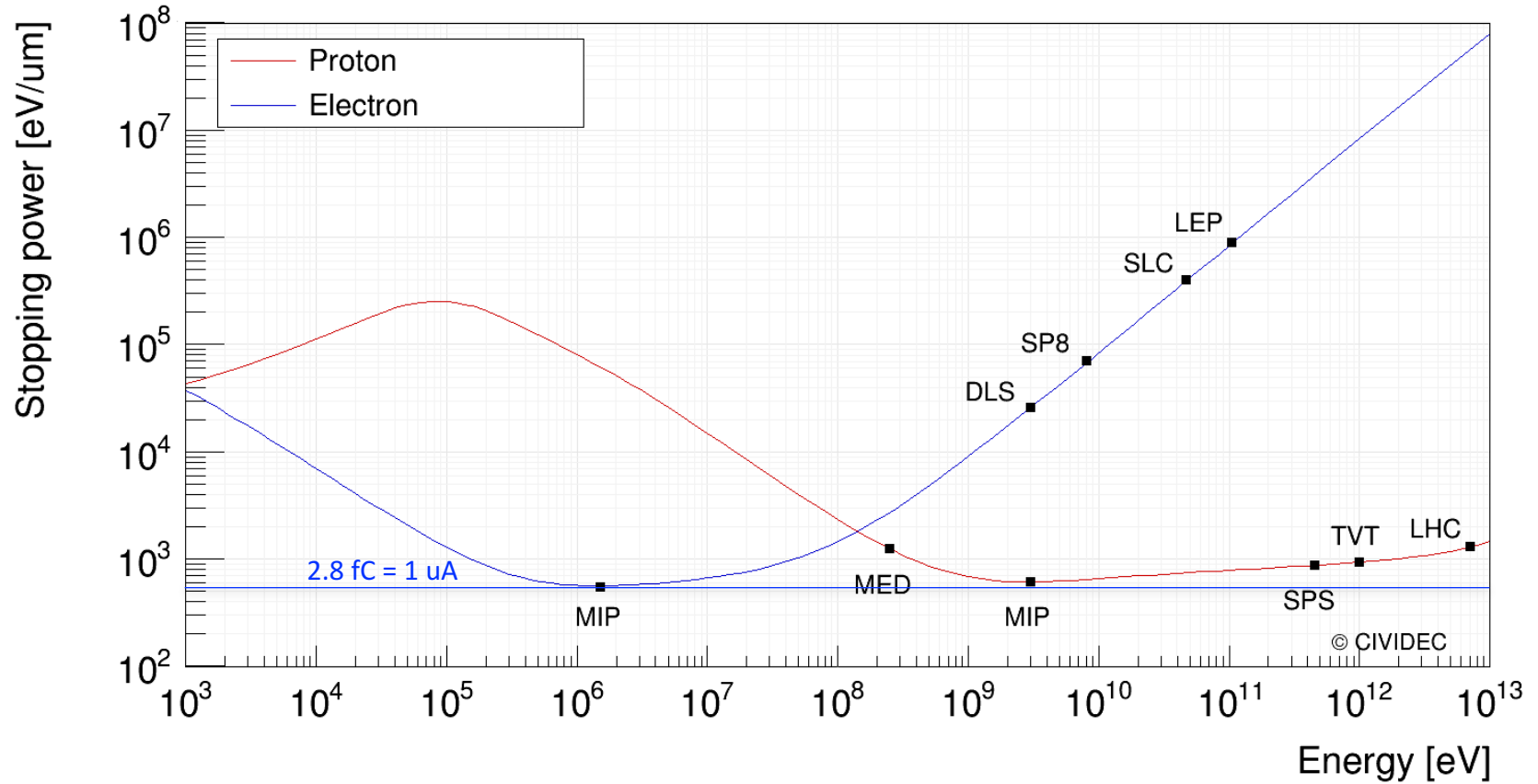
# Portfolio

- Charged particles
  - Beam loss
  - Spectroscopy
  - High-radiation

# Portfolio

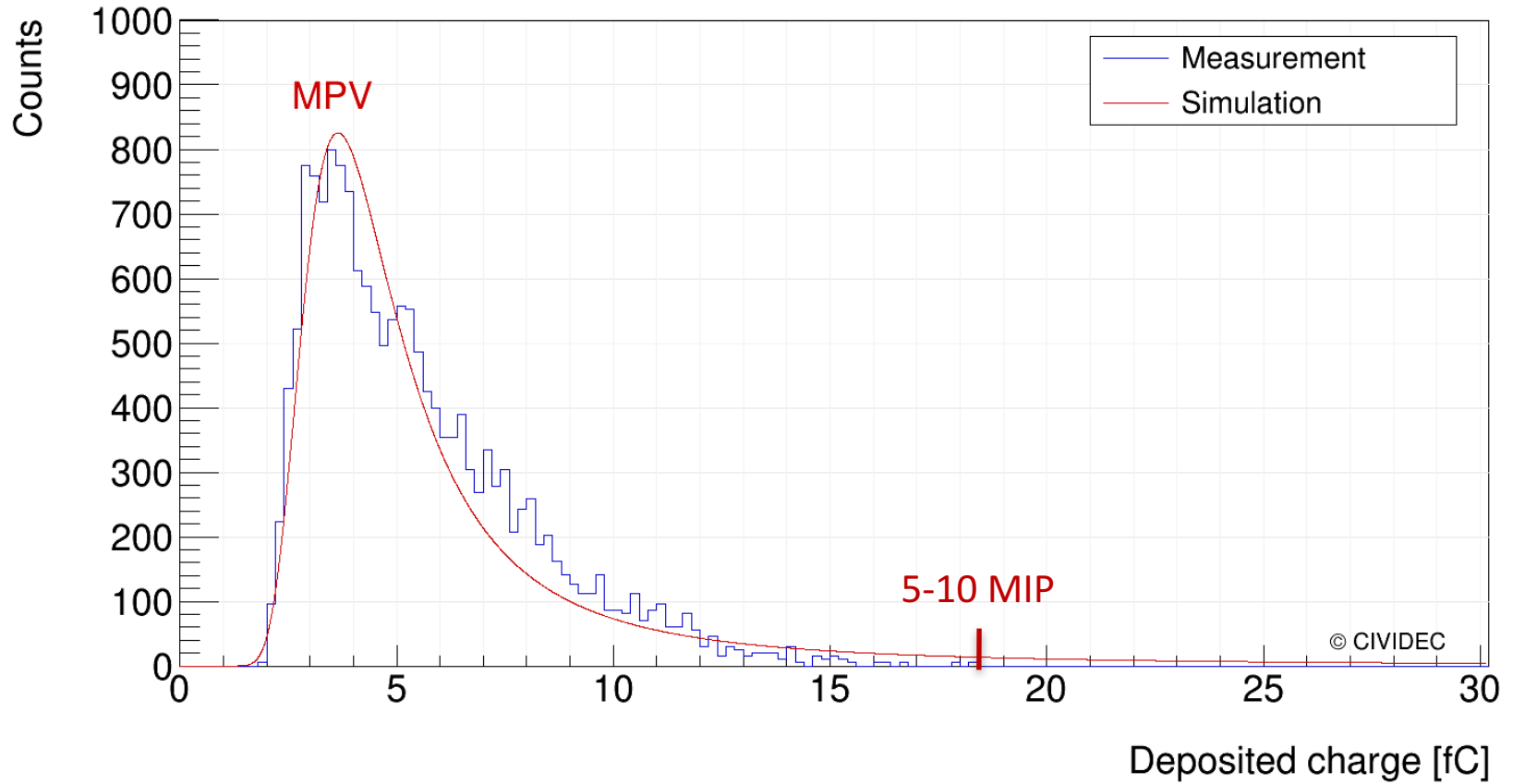
- Charged particles
  - Beam loss
  - Spectroscopy
  - High-radiation

# Bethe-Bloch





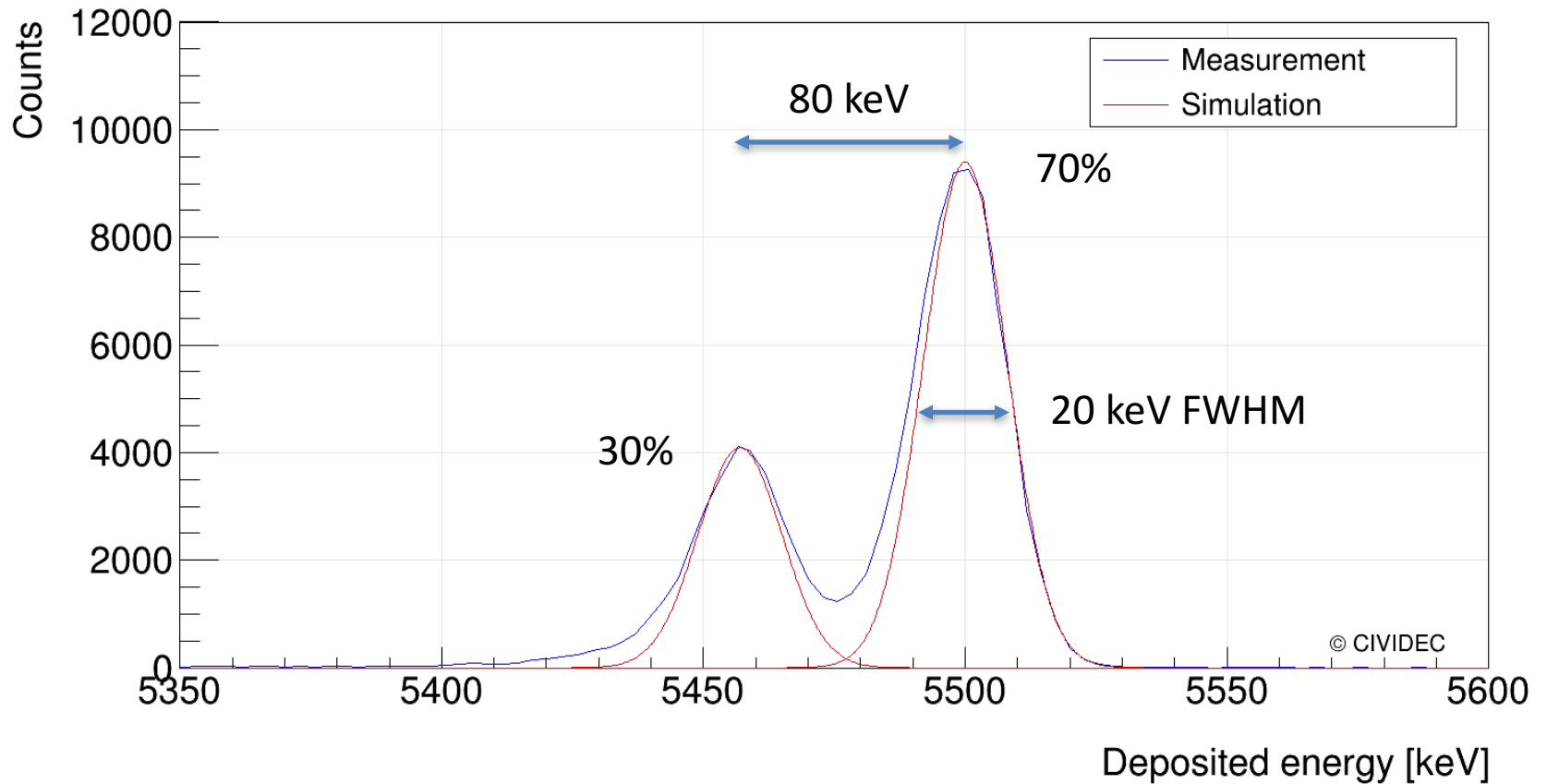
# Landau



# Portfolio

- Charged particles
  - Beam loss
  - Spectroscopy
  - High-radiation

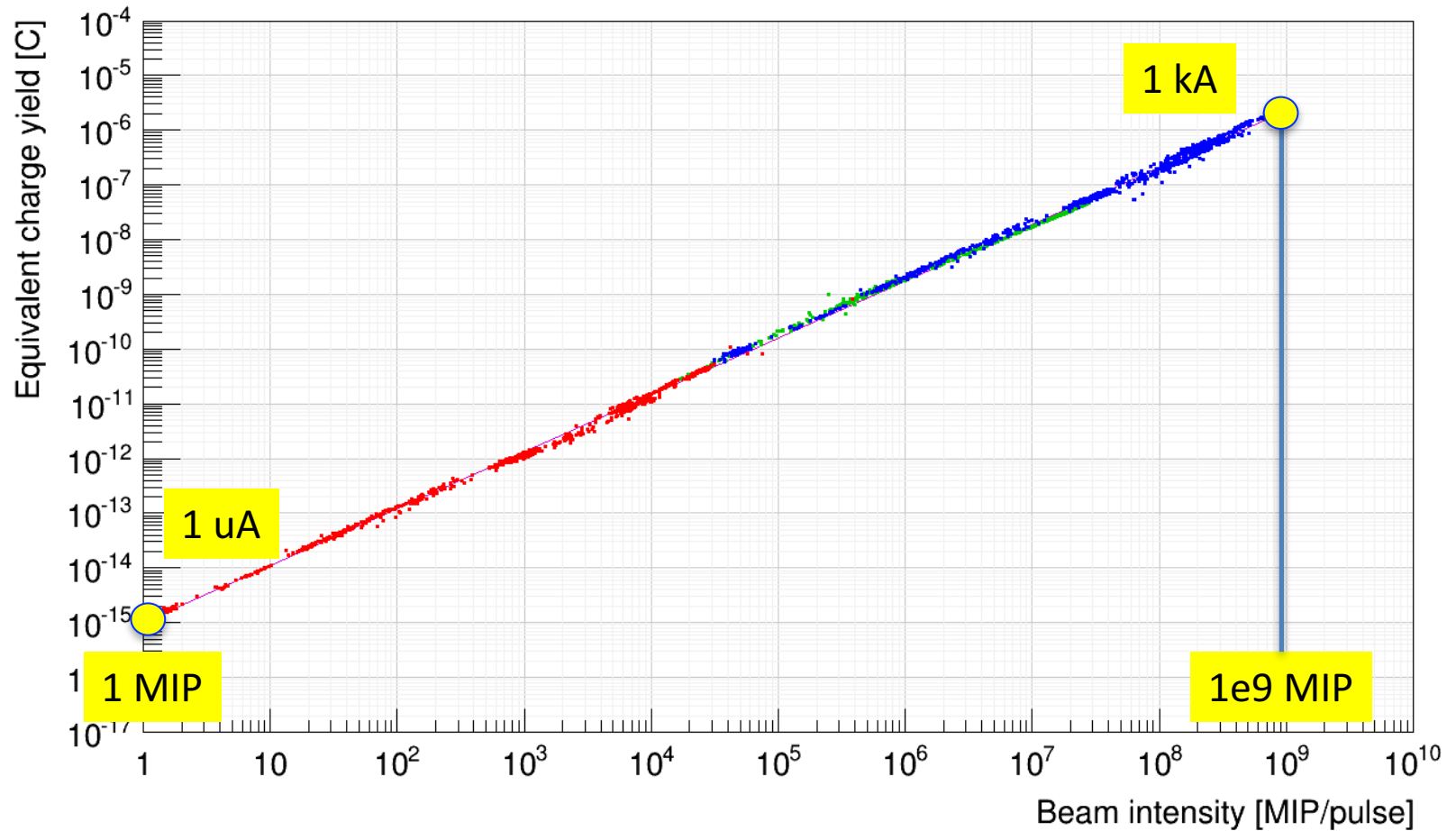
# $\alpha$ - Spectrum



# Portfolio

- Charged particles
  - Beam loss
  - Spectroscopy
  - High-radiation

# High-radiation



# Portfolio

- Charged particles
- **Neutrons**
- Photons

# Portfolio

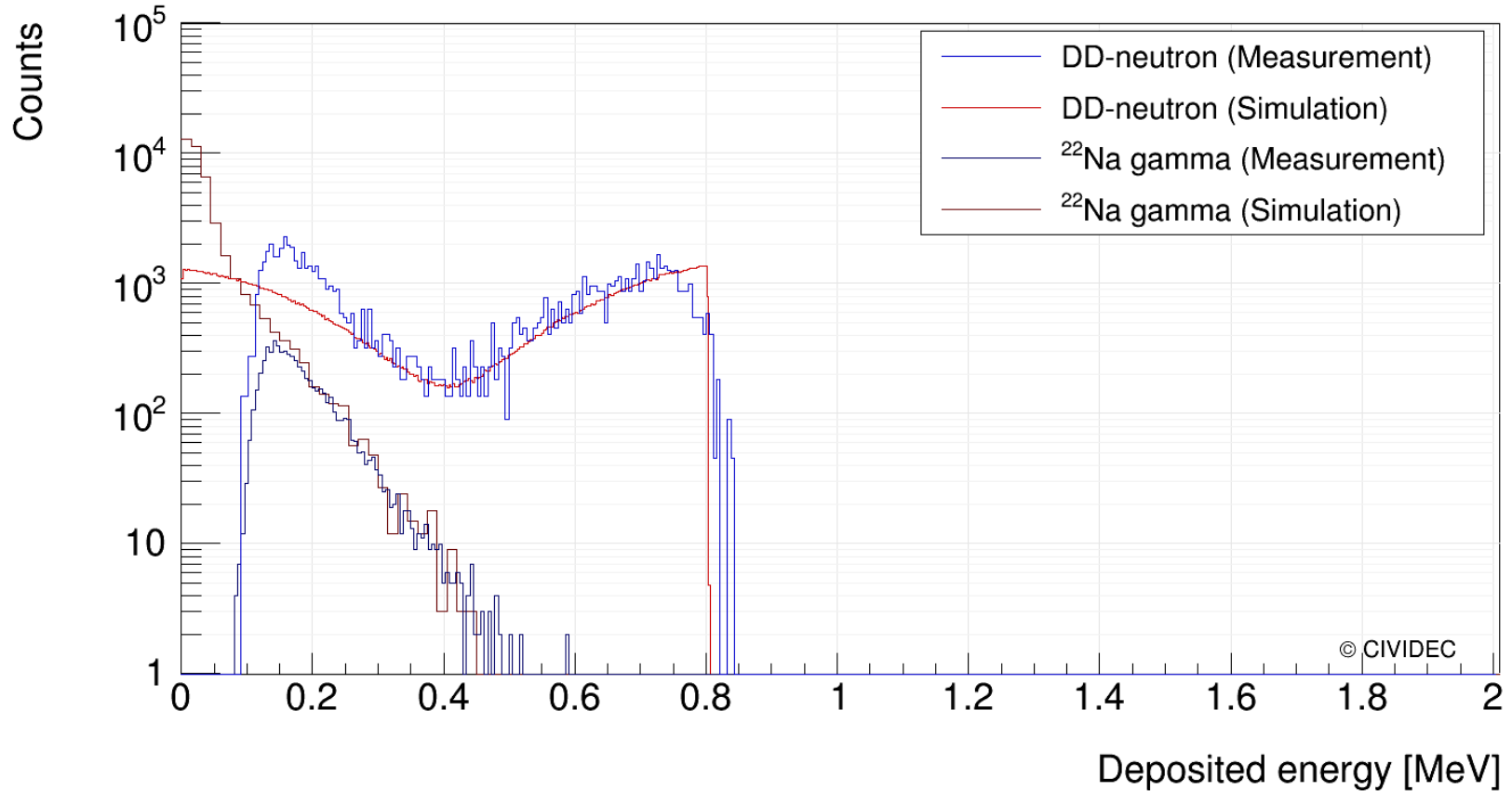
- Neutrons
  - DD-process, 2.45 MeV
  - DT-process, 14.3 MeV
  - Thermal neutrons

# Portfolio

- Neutrons
  - DD-process, 2.45 MeV
  - DT-process, 14.3 MeV
  - Thermal neutrons



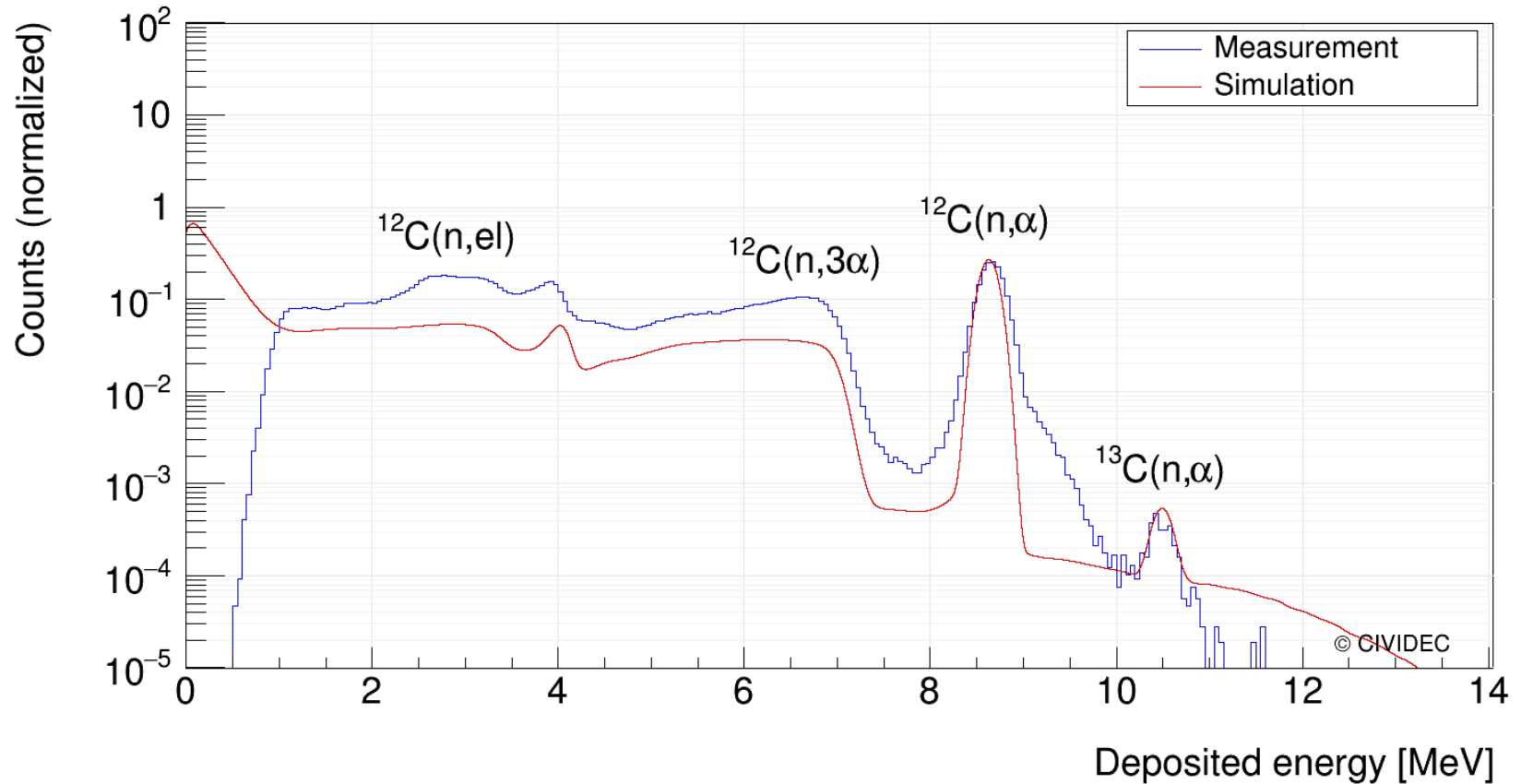
# 2.45 MeV neutrons



# Portfolio

- Neutrons
  - DD-process, 2.45 MeV
  - DT-process, 14.3 MeV
  - Thermal neutrons

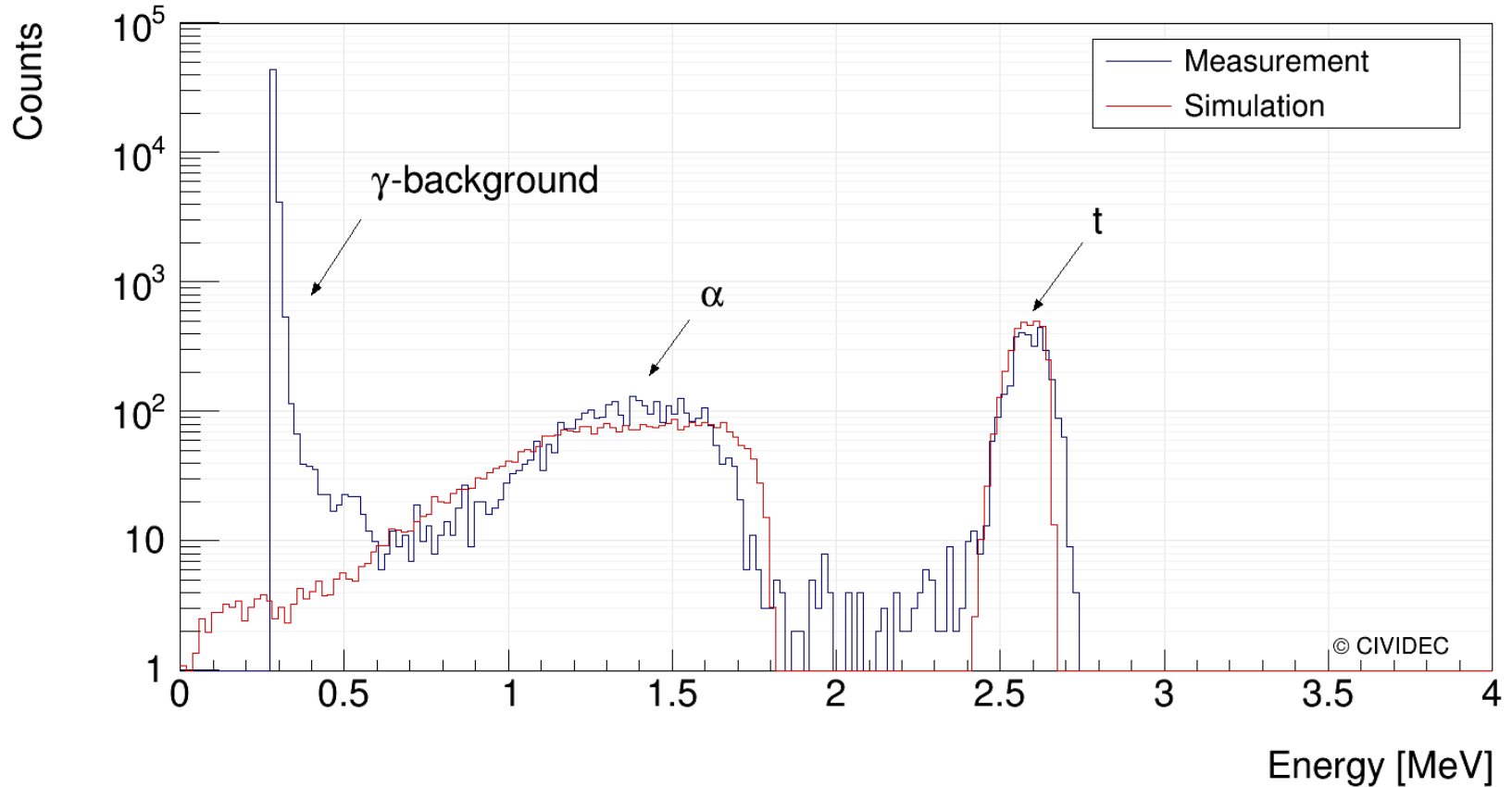
# 14.3 MeV neutrons



# Portfolio

- Neutrons
  - DD-process, 2.45 MeV
  - DT-process, 14.3 MeV
  - Thermal neutrons

# Thermal neutrons



# Portfolio

- Charged particles
- Neutrons
- **Photons**

# Portfolio

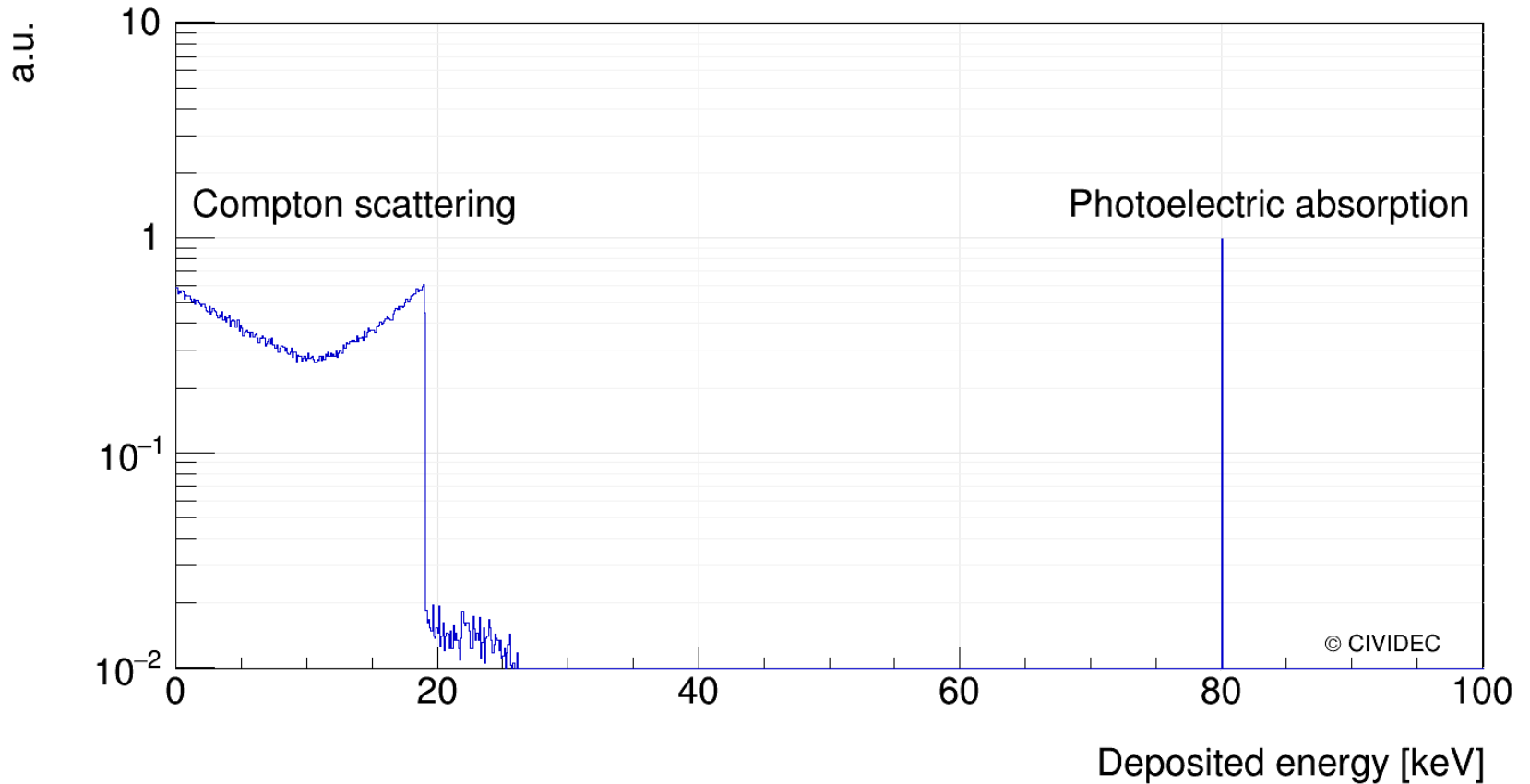
- Photons
  - X-ray
  - Gamma ray

# Portfolio

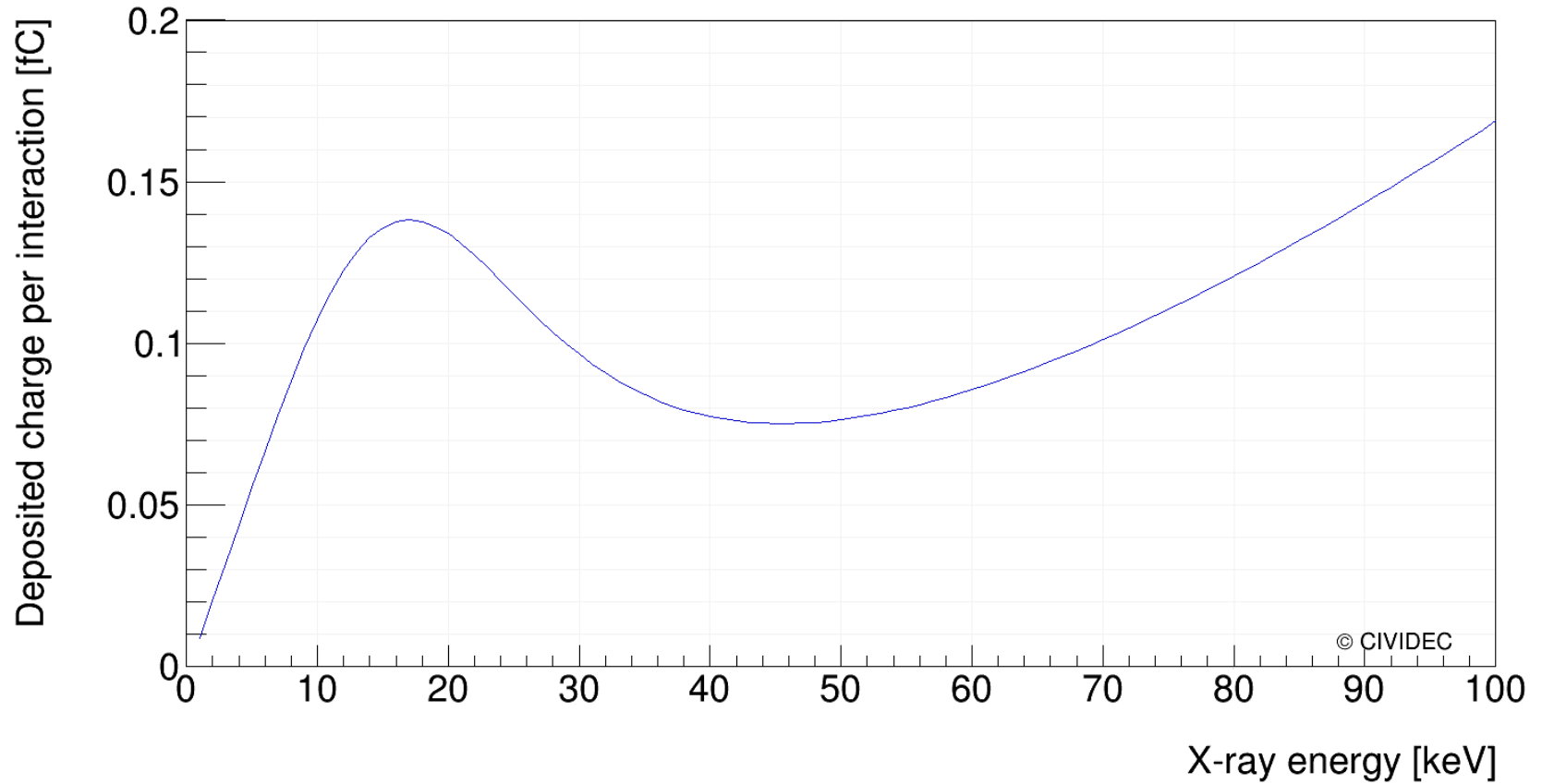
- Photons
  - X-ray
  - Gamma ray



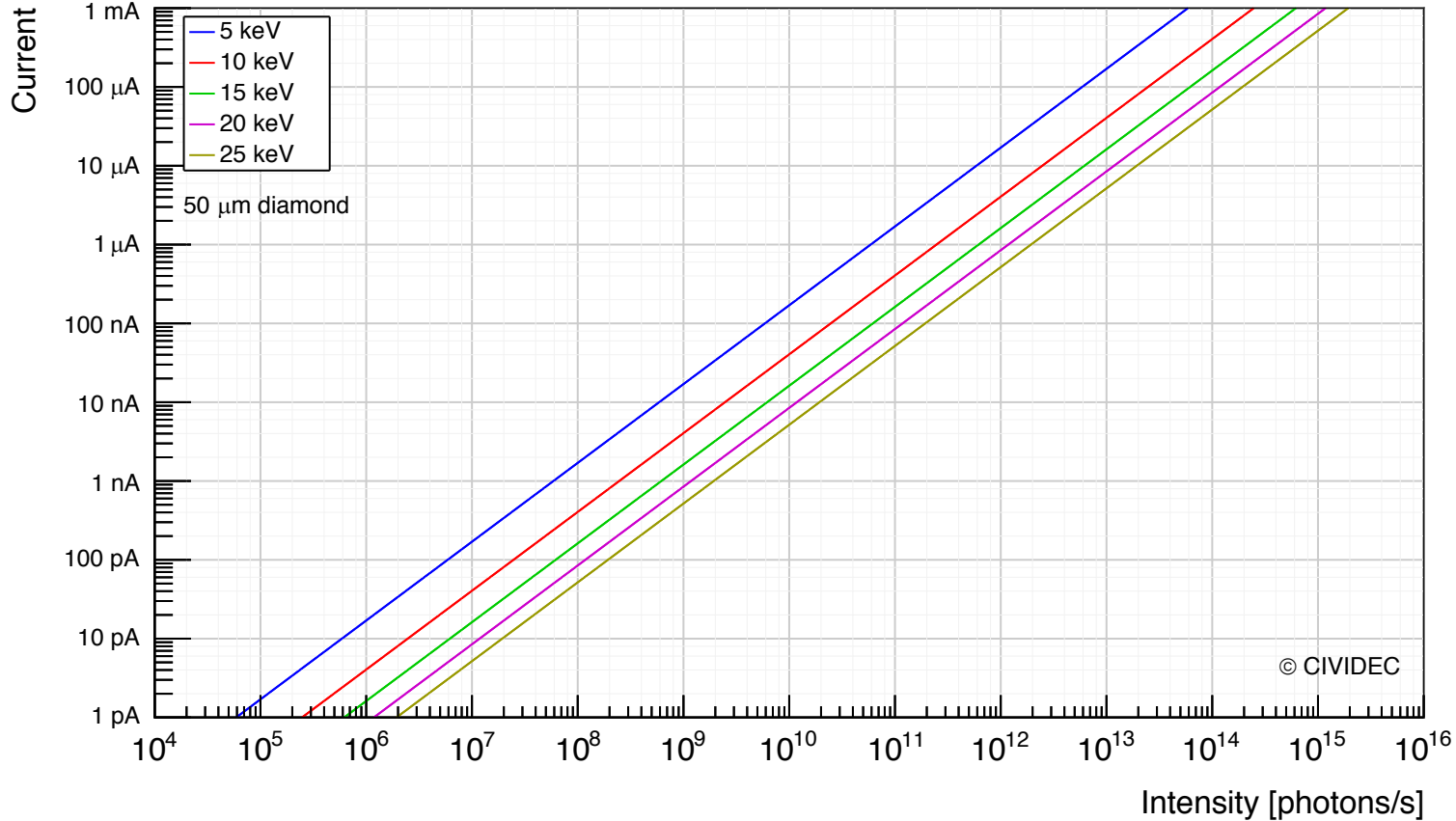
# X-ray interaction



# Charge yield



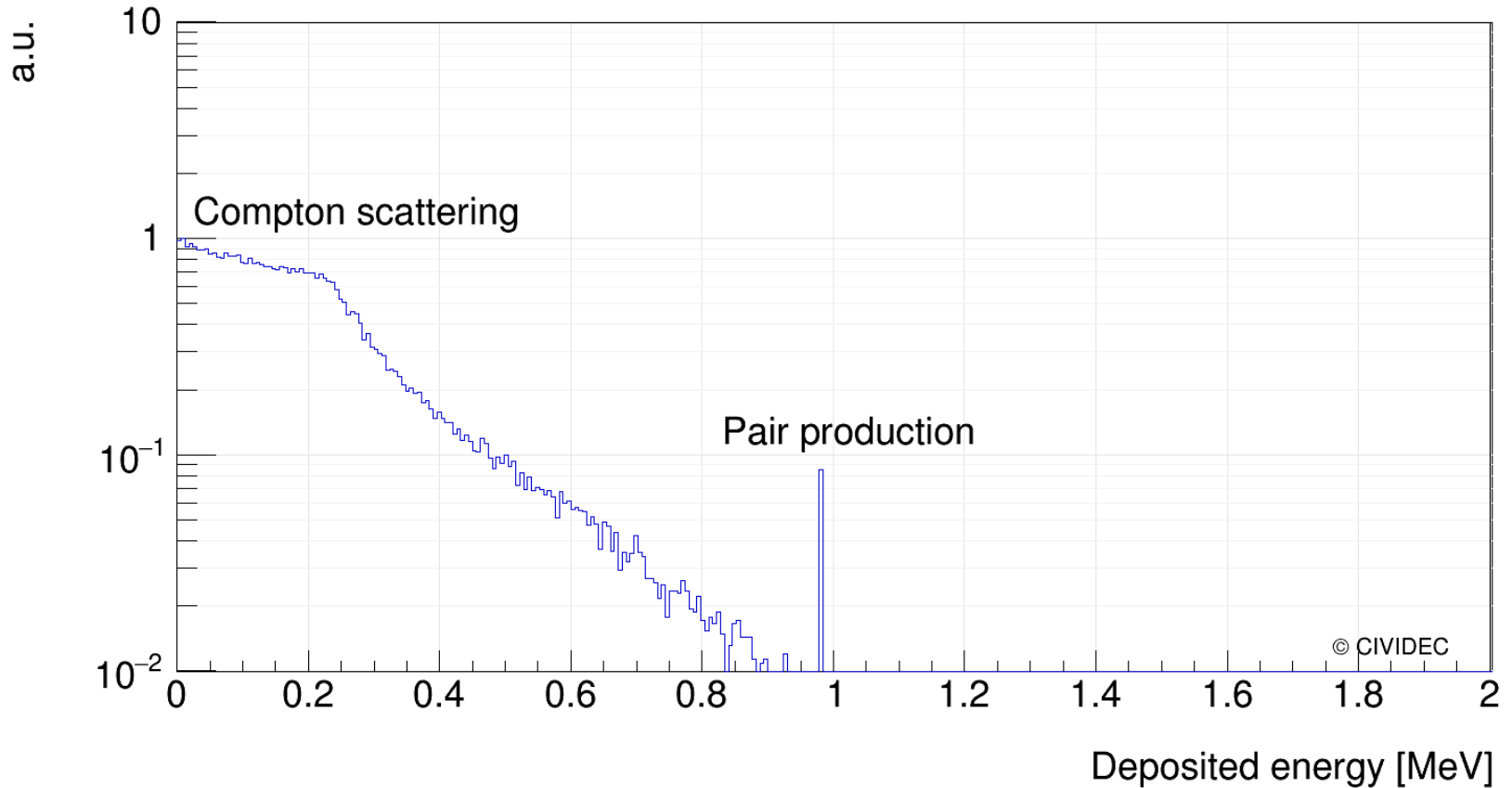
# Detector signal



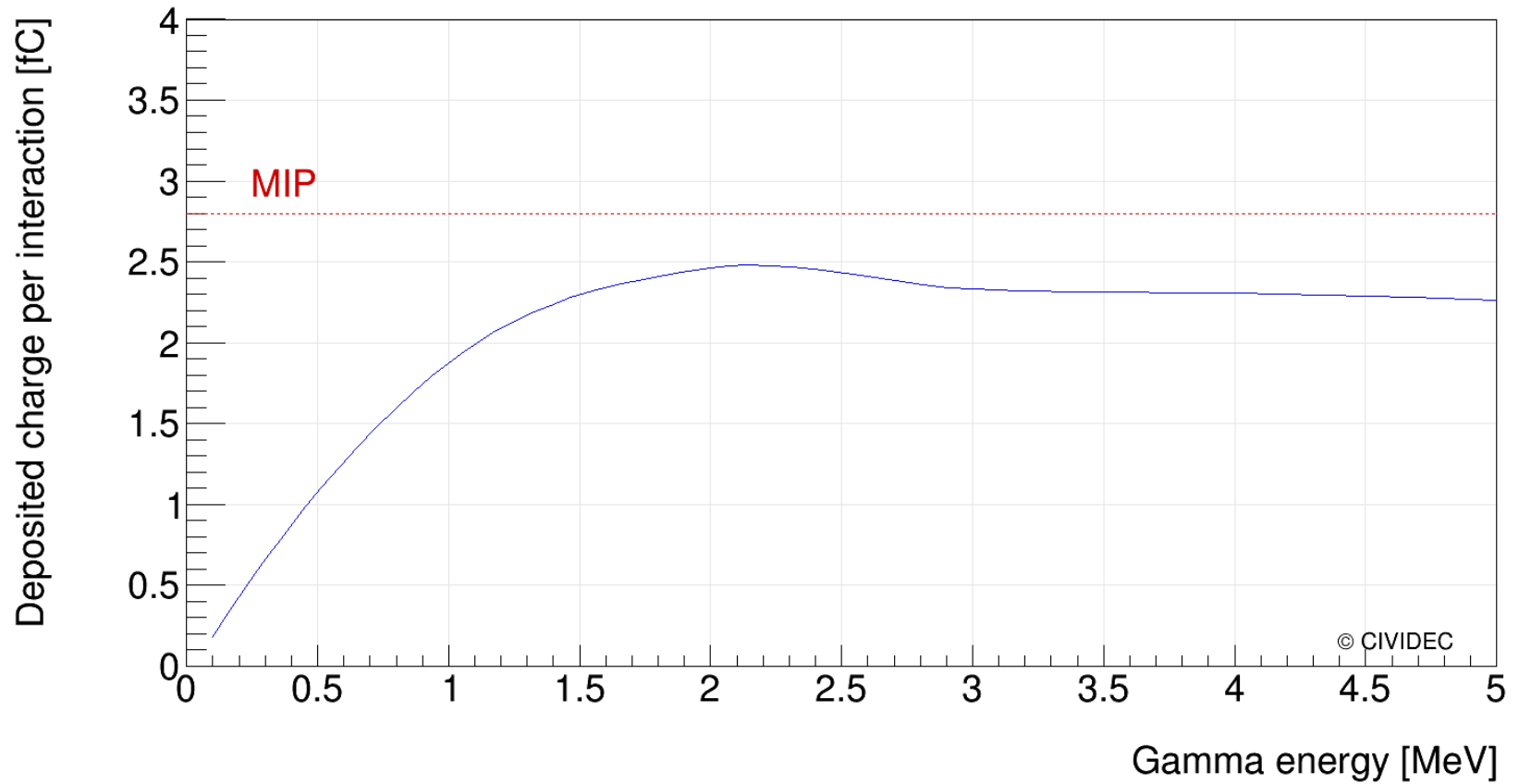
# Portfolio

- Photons
  - X-ray
  - $\gamma$ -ray

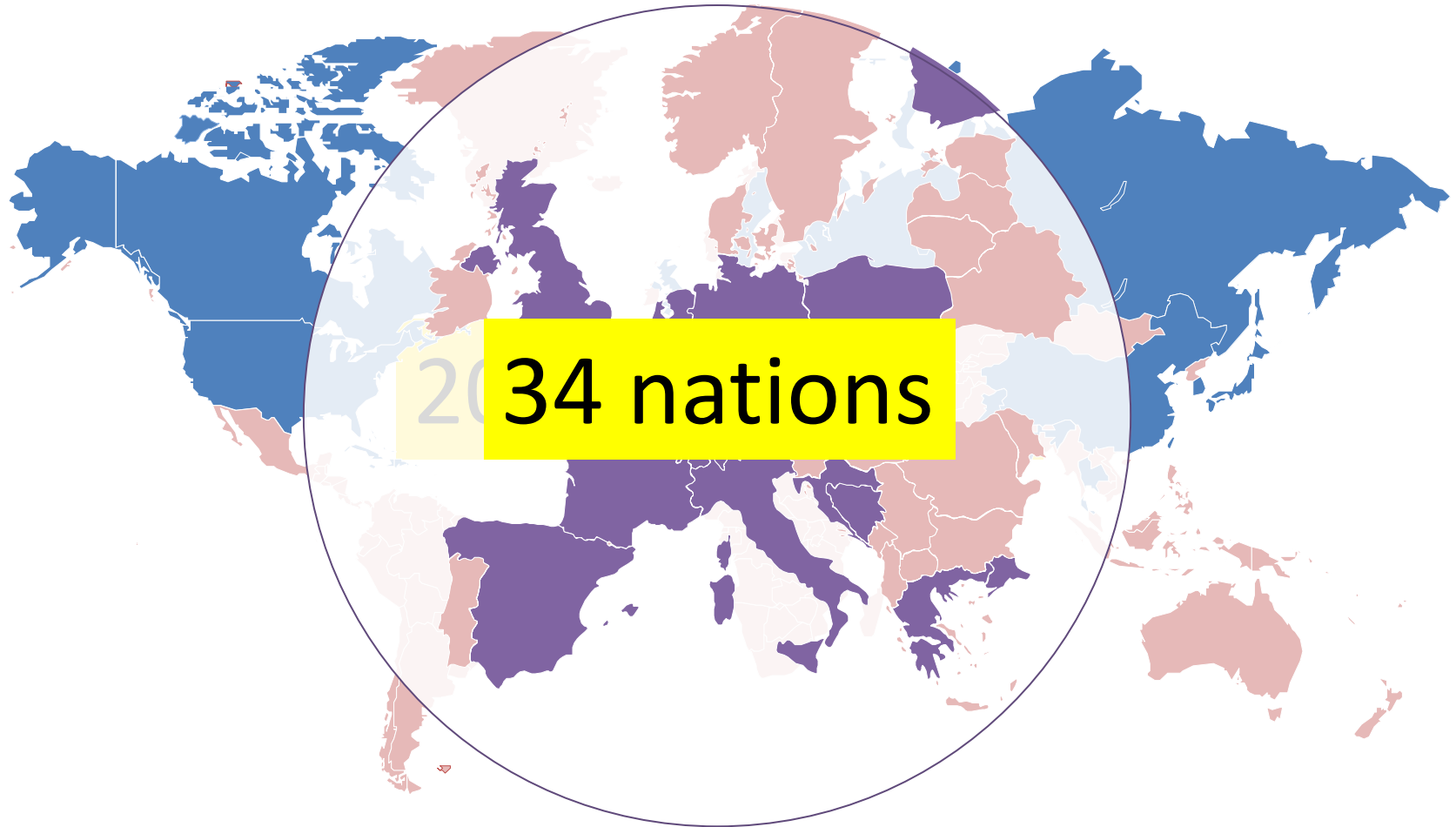
# Interaction mechanism



# Charge yield



# Customers



# In 10 years ...

- 200 customers
- 34 nations
- 30 students
- 74 CVD related publications
- 600 projects



# 2020

- New laboratory
  - Clean room
  - Cross polarizer
  - IV station
  - Landau station
  - Spectroscopy station
- In cooperation
  - Radioactive sources: Atominstitut
  - Neutron sources: Sevilla, Frascati, Athens, Geel
  - Research reactor: Atominstitut
  - High energetic protons: CERN, MedAustron

# Centre of Vienna



# Open position

- Marie Curie Fellowship
- Starting mid 2020
- Possibility for permanent position

# Anniversary



[www.cividec.at](http://www.cividec.at)

