

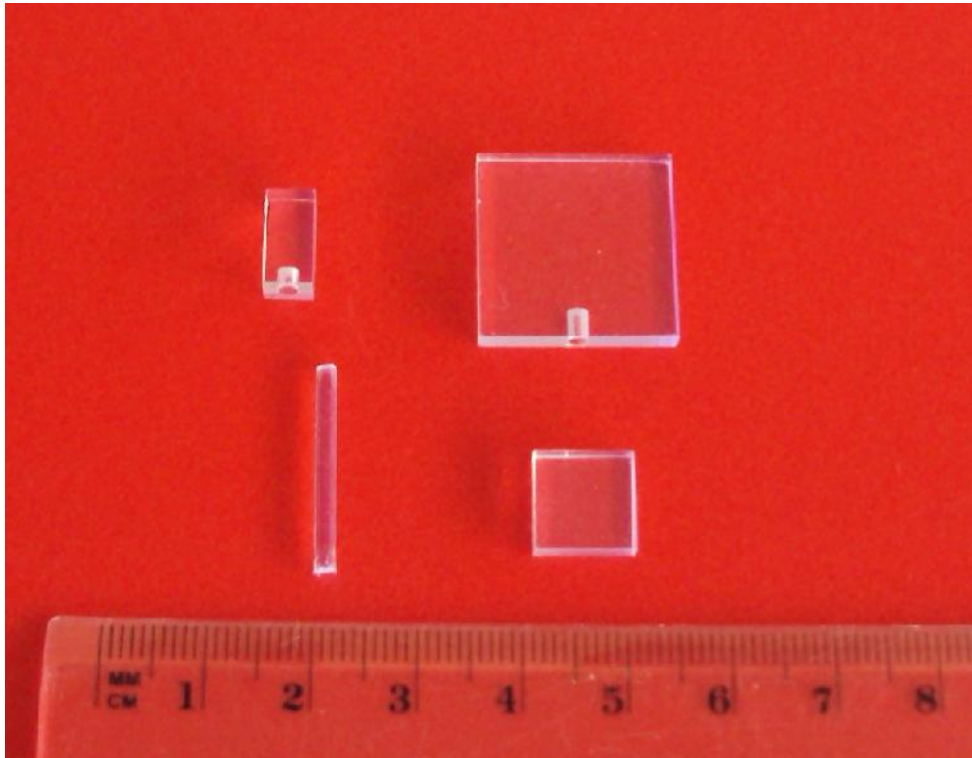
# **Dosímetros de Cintilação Para Radiologia**

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Luis Montinho (UA)  
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# Desenvolvimento de um dosímetro de cintilação para radiologia

- Estudo de diversos materiais de cintilação a utilizar ( pmma, pvt, poliestireno)
- Construção de dosímetros usando cintiladores plásticos.
- Leitura do sinal com fibras ópticas e fotodiodo.
- Calibração dos dosímetros para aplicações em radiologia
- Realização de testes em meio clinico.

# Cintiladores a estudar

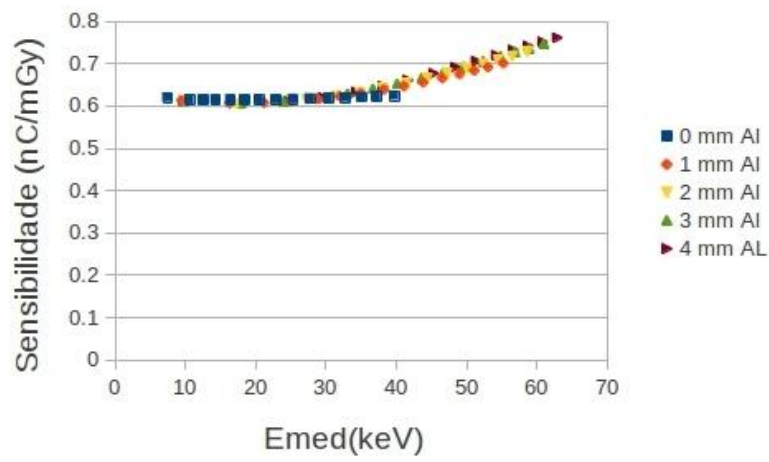


## Cintiladores plásticos:

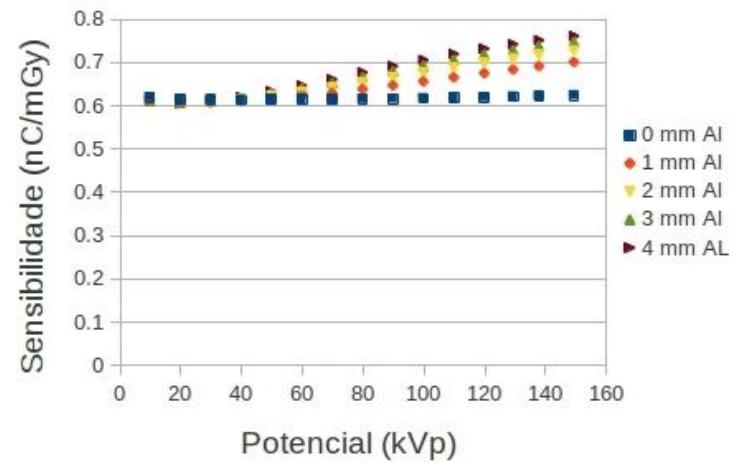
- **PVT**
- **PMMA**
- **Poliestireno**

# Simulação da resposta dosimetrica do material cintilador

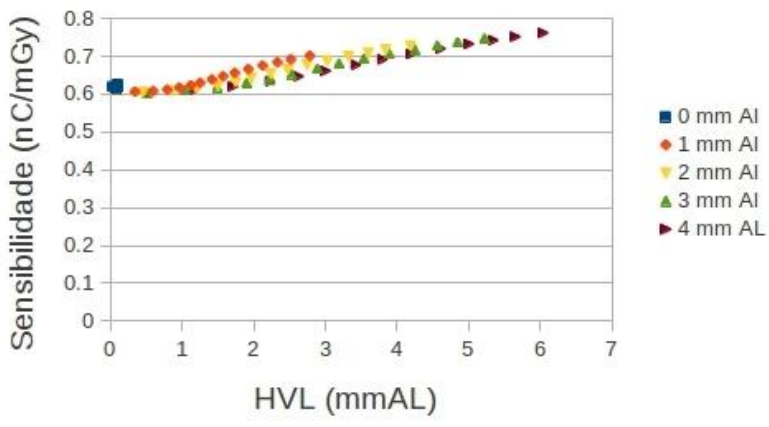
Cintilador de PMMA



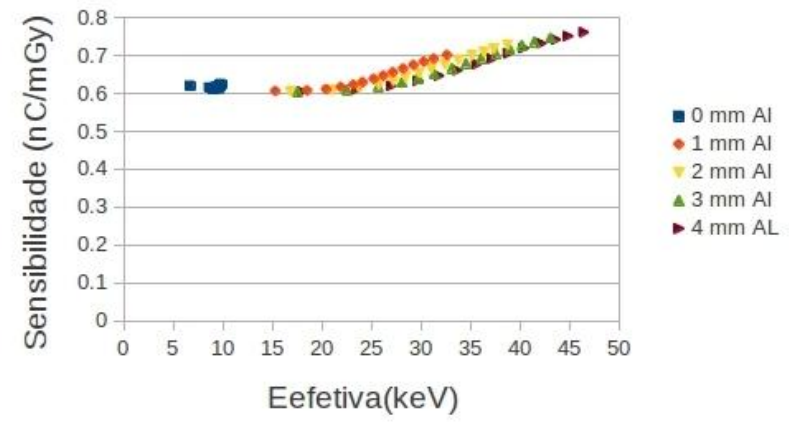
Cintilador de PMMA



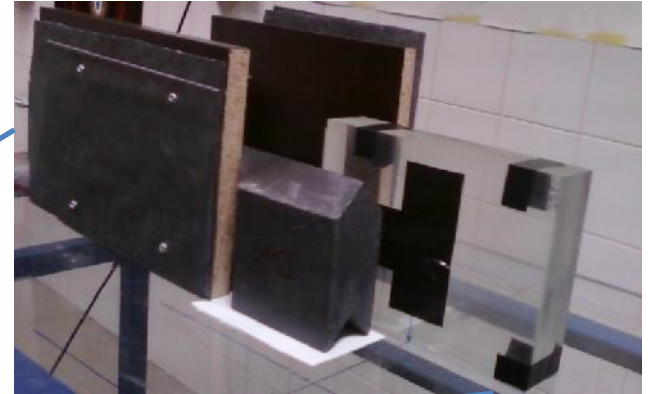
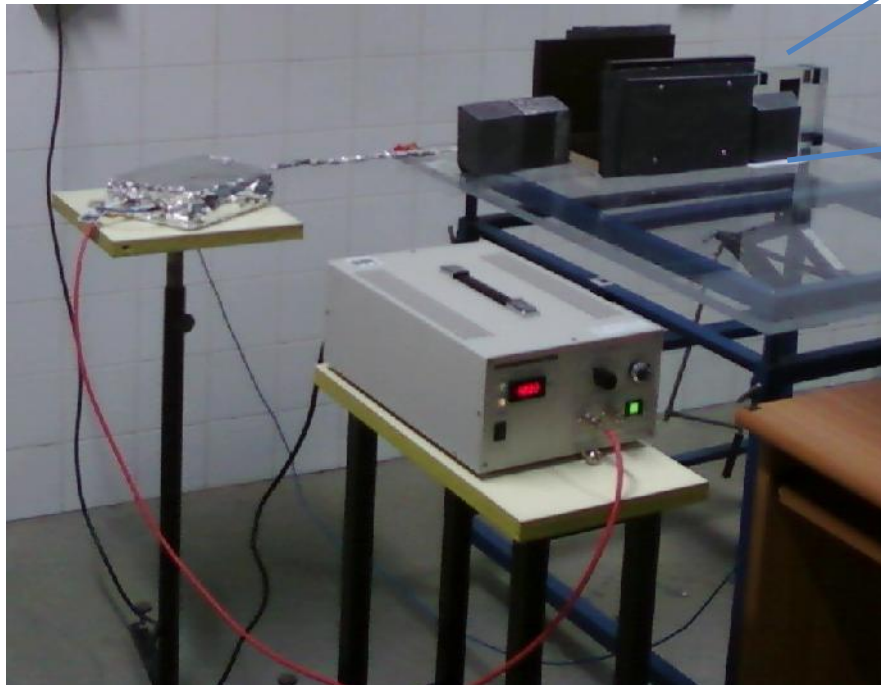
Cintilador de PMMA



Cintilador de PMMA

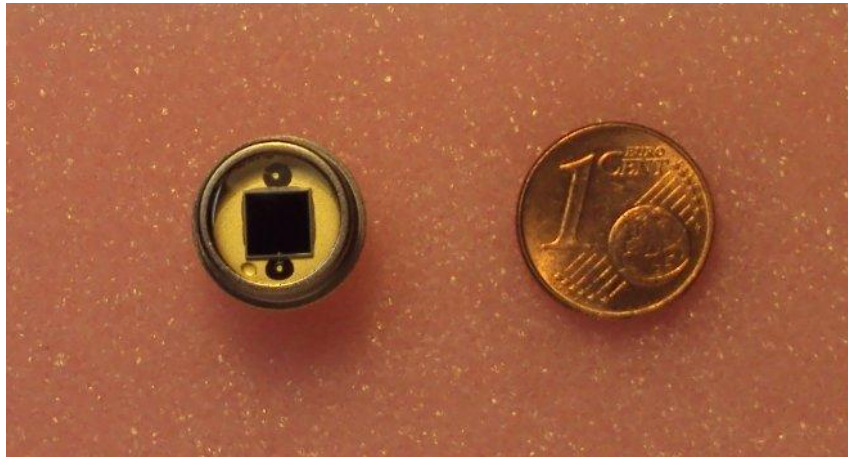


# Testes experimentais



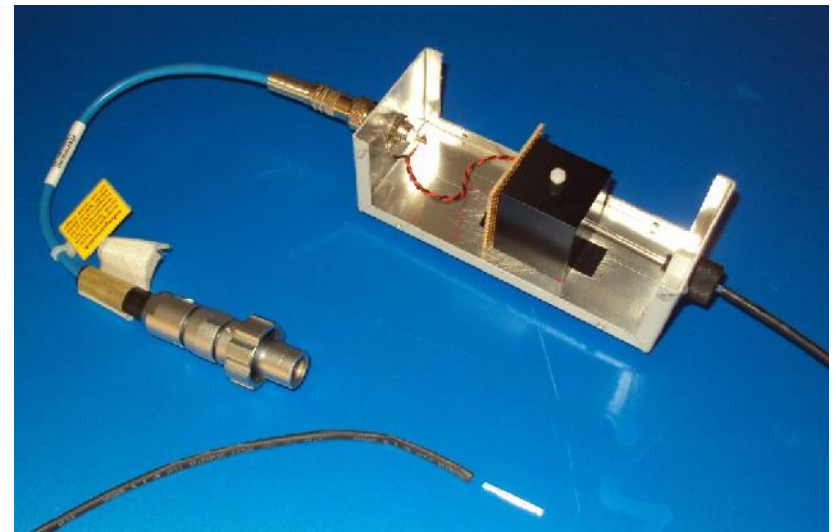


## Fotodiodo

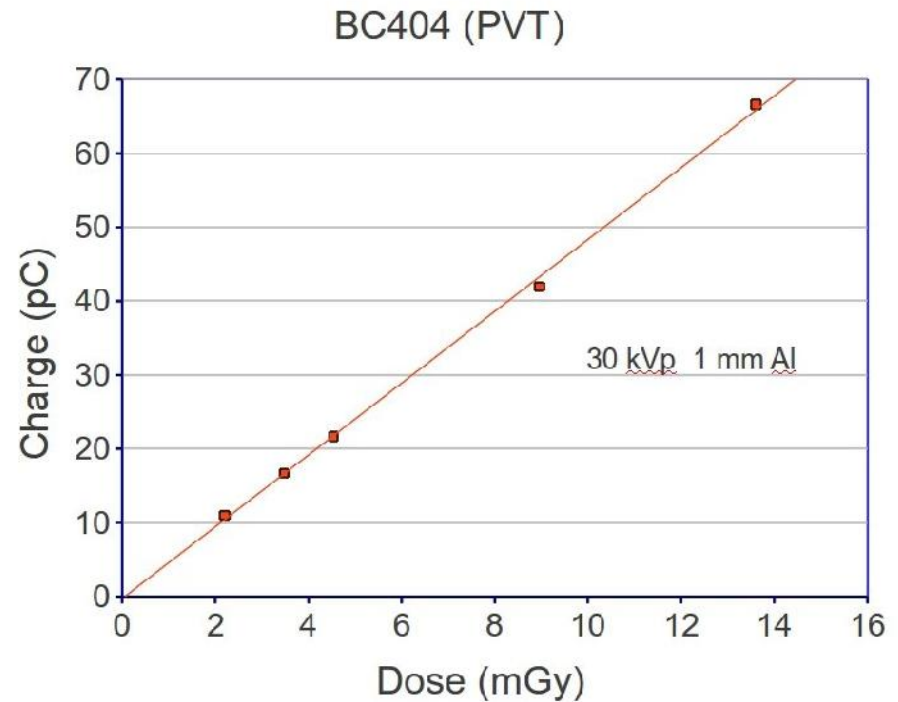
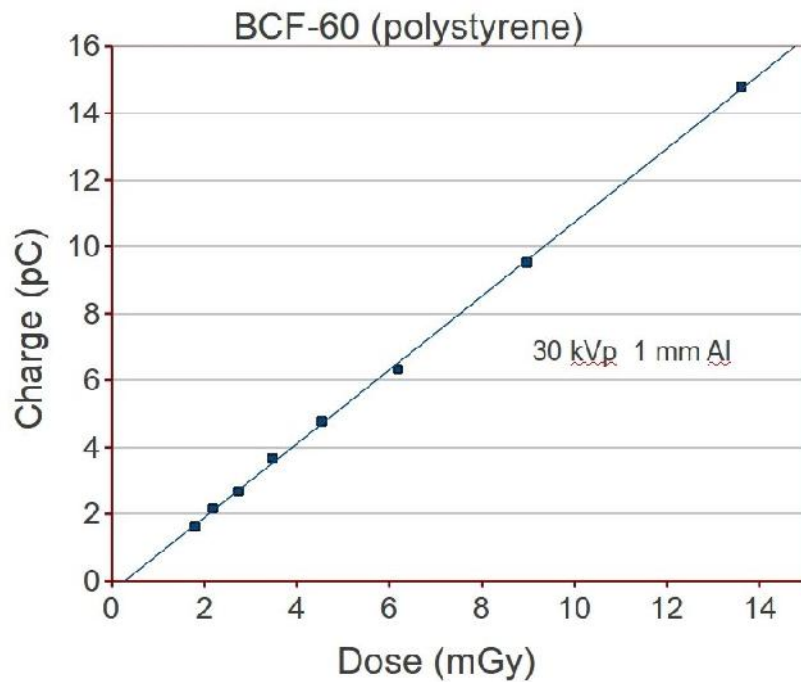


**Hamamatsu S9195**

## Dosímetro utilizando um Fotodiodo

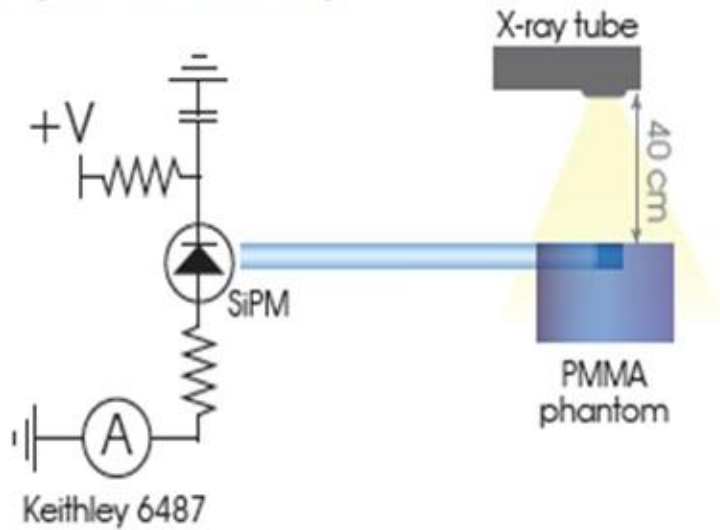


# Linearidade da resposta

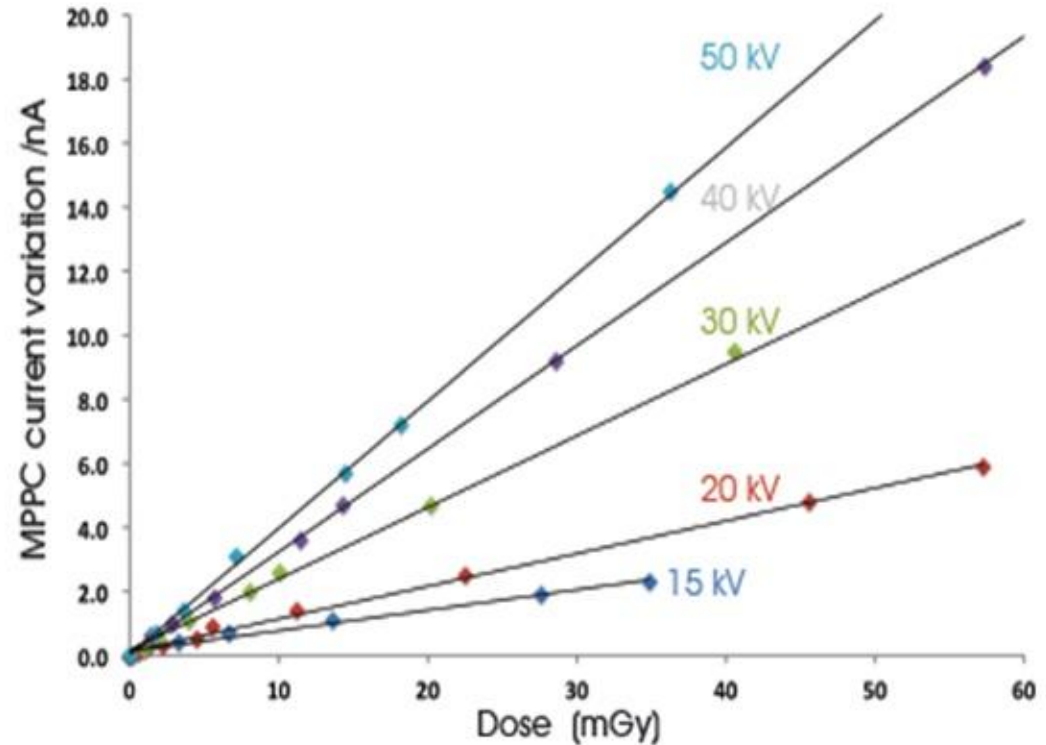


# Dosímetro utilizando um SiPM (Aveiro)

## experimental setup

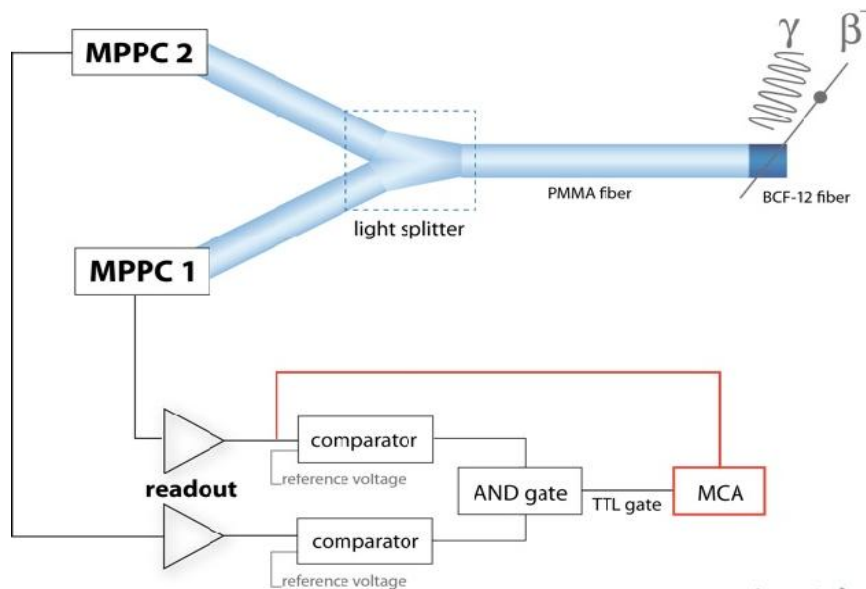


SiPM bias voltage: 70.0 V  
T=25 °C

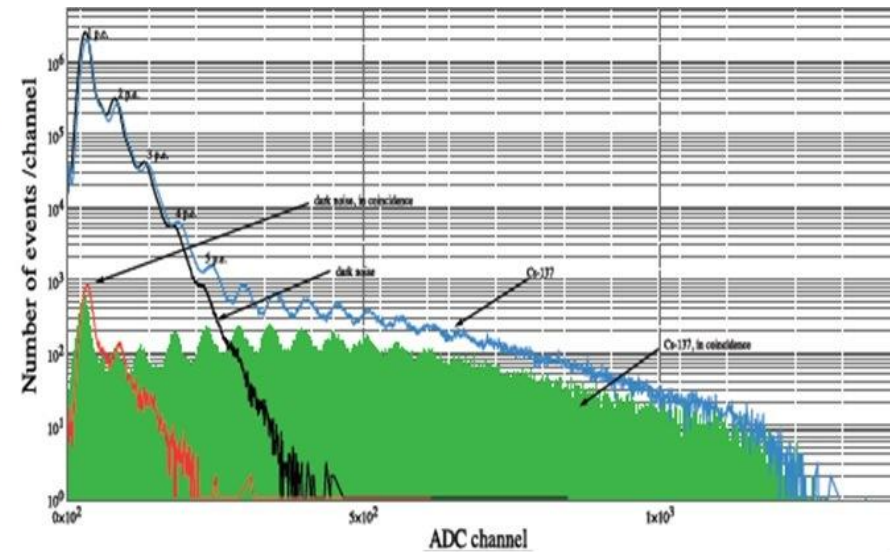
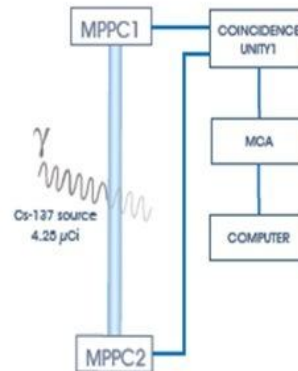




# Redução do Ruído



experimental setup



# Construção de dois protótipos : (em colaboração c/ IBEB)

Ortopantomografia



Tomossintese

