

PET-Instrumentation 101
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Who Will Benefit?

This presentation is a tutorial geared to people who are interested in understanding how the basic technique of PET (positron emission tomography) works, concentrating on the instrumentation. It assumes no knowledge of radiation detectors or PET technology.

Issues Addressed:

- Interaction of radiation with matter
- Scintillators
- Photodetectors
- Detector module design and performance evaluation
- PET camera design and performance evaluation
- Attenuation and scatter
- Other sources of background
- Future directions

Goal:

The goal of this presentation is to teach the audience members the basics of how a PET camera operates, its performance limitations, and what the underlying physical factors are that limit performance are.