UCL

Another interesting Presentation
On the virtues of a caffeine addiction

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Outline

Background

Background

Positron-Emission Tomography (PET)

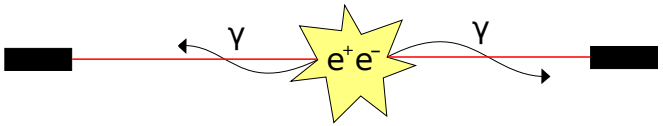

Figure: A true event : Anti-parallel gamma ray photons detected in opposing scintillator detectors

Background

Positron-Emission Tomography (PET)

Interesting Text!

Theory

Single Exponential Example

$$f(t|\Theta,\tau_d) = \begin{cases} \frac{1}{\tau_d}\exp\frac{-t+\Theta}{\tau_d} & \text{if } t \geq \Theta \\ 0 & \text{if } t < \Theta \end{cases}$$

τ_d - Decay time
Θ - Conversion time

σ - The time resolution is defined as the standard deviation of Θ

$$\boxed{\sigma \geq \frac{\tau_d}{\sqrt{\mathrm{N}}}}$$

Theory

Thanks for listening!

With thanks to