



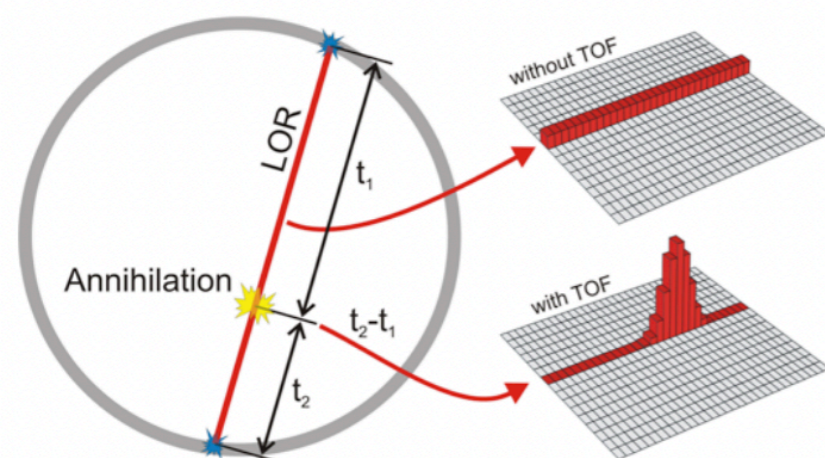
Fast Timing MPGD for ToF-PET



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PET is an effective functional imaging technique especially for cancer diagnosis. Its performance is strictly connected to the ability to detect and reconstruct photons emitted by the positron - electron annihilation. Its sensitivity is enhanced when time information are included (ToF-PET). The measure of the detection time difference between the two photons leads to a higher contrast image and more accurate diagnoses.

Studies for a possible development of a ToF-PET based on MPGD will be shown. MPDG has a very good spatial and time resolution and very low price, making it suitable for a full-body scanner.

Further improvement in the time precision (suitable goal is to achieve values of the order of 100 ps) could be reached thanks to the FTM design, where multiple layers of MPGD compete in better measuring time information.

