

Seminarium Środowiskowe „Między fizyką a biologią i medycyną”

Zakład Fizyki Medycznej oraz Zakład Doświadczalnej Fizyki Cząstek i jej Zastosowań
Instytut Fizyki im. M. Smoluchowskiego UJ

„From anti-neutrinos to anti-electrons: PET research at the University of Texas at Austin”

Prof. Karol Lang (Department of Physics, University of Texas at Austin)

Abstract

Research in fundamental experimental particle physics requires new experiments and novel detectors. Knowledge and experience gained in these endeavors can generate spinoffs that benefit fields outside of particle physics. In this talk, we will describe our work on building a time-of-flight positron-emission-tomography (PET) scanner for proton therapy at MD Anderson in Houston and some other related ideas towards improving and expanding the use of PET detectors.

Karol Lang is an experimental particle physicist and Jane and Roland Blumberg Professor of Physics at the University of Texas at Austin. He received his MSc. from Warsaw University, Ph.D. from the University of Rochester participating in searching for neutrino oscillations. As a postdoc, Lang worked at SLAC (Stanford) measuring the spin content of the nucleon and on an electron beam dump search for low-mass axions. He then worked at Stanford on a search for $KL \rightarrow \mu e$ decays at BNL and a search for the H dibaryon. Lang joined the faculty at the University of Texas at Austin shortly before the Superconducting Super Collider (SSC) was cancelled in 1993.

He is now involved in long baseline neutrino oscillations experiments and searches for neutrinoless double beta decay.

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