

Physics Colloquium Series

Digital Radiography with Tissue Sensitivity with an Overview of the History of Energy- Sensitive Gas Detectors and their use in Physics

The canonical digital detector for use in high-speed, high-resolution position-sensitive and simultaneous energy-sensitive particle characterization is the multi-electrode gas detector. Georges Charpak won the 1992 Nobel prize in Physics for its development and use in myriad High Energy and Nuclear Physics experiments from 1968 to 1992. Circa 1992, new versions of these detectors, generically known as *micro-pattern gas detectors*, became fast enough to handle the enormous rates required for medical imaging. The progress that has been made to date in constructing such an imager and the importance of digitizing and storing X-ray photon energies for image reconstruction with enhanced contrast will be discussed.

Eugene F. Barasch, M.D., Ph.D.

Thursday, February 17, 2005

4:00-5:20 PM MND 1015

OPEN & FREE TO ALL STUDENTS & FACULTY