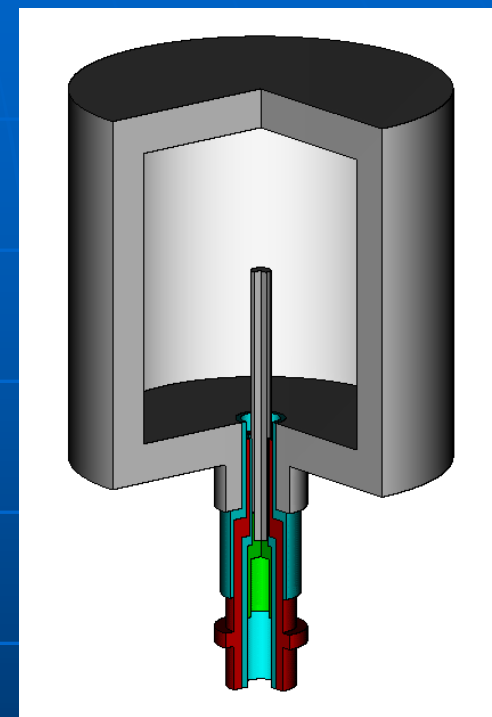




Czech Metrology Institute - Inspectorate for  
Ionising Radiation, Czech Republic, Prague

# Monte Carlo Study of a Graphite Ionization Chamber

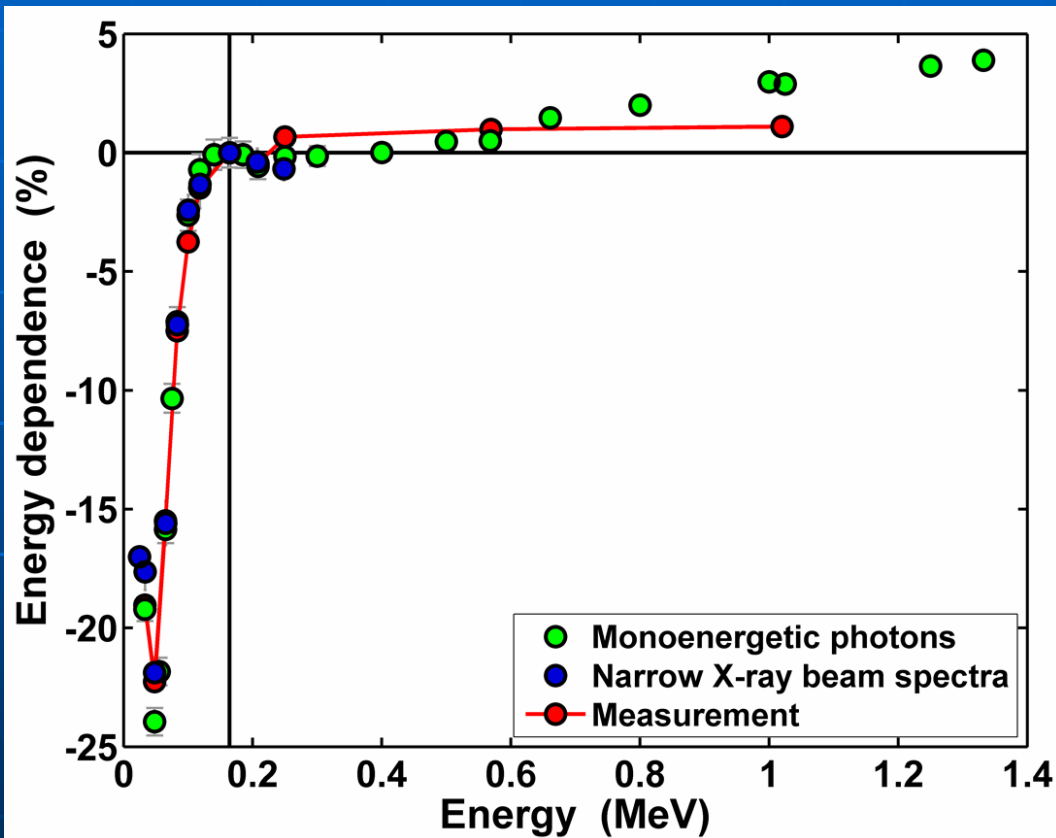
V. Sochor, J. Šolc, J. Šmoldasová



The main purpose of the study:

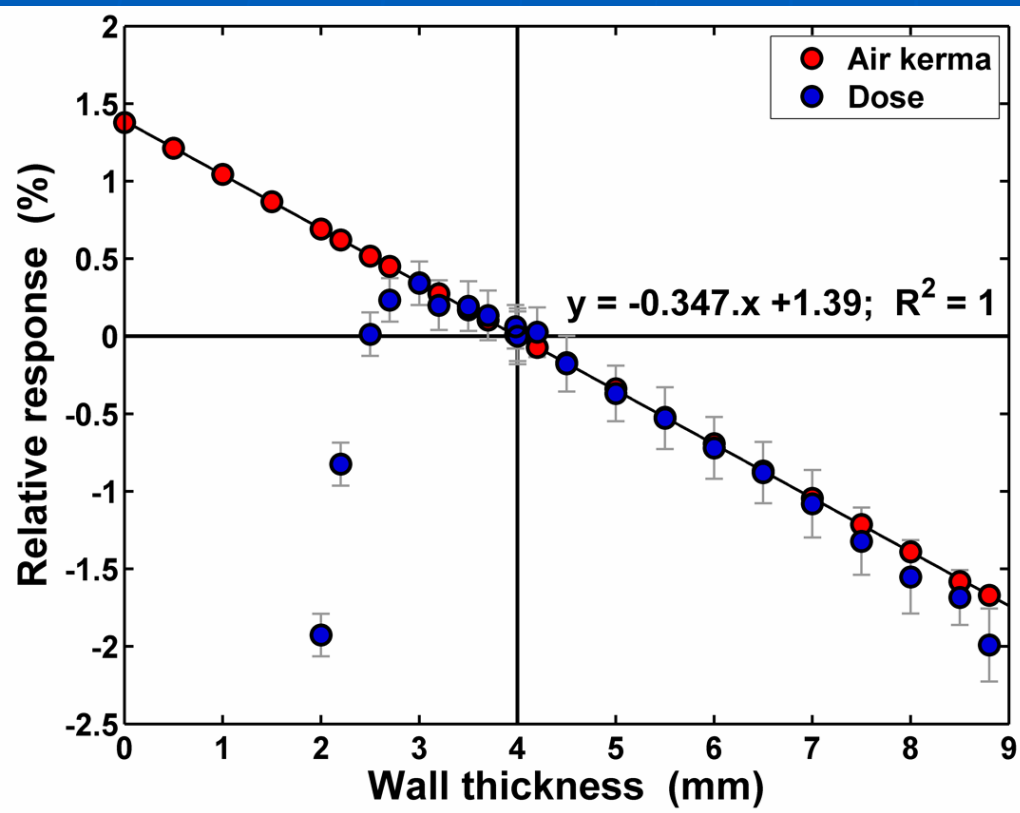
Development of a primary standard of air kerma for  
high energy range of photons ( $^{60}\text{Co}$ ).

# Energy dependence



- The measurement
  - Narrow X-ray beam spectra
  - $^{137}\text{Cs}$  and  $^{60}\text{Co}$
- The simulation
  - Monoenergetic photons 0.033 - 1.332 MeV
  - Narrow X-ray beam spectra
  - $^{137}\text{Cs}$  and  $^{60}\text{Co}$

# Correction factor of the wall attenuation and scatter



Primary photon spectrum	Effective photon energy	$K_{\text{wall}}$
$^{137}\text{Cs}$	0.569 MeV	1.0156
$^{60}\text{Co}$	1.02 MeV	1.0139