

# National Radiation Protection Institute (SÚRO) in Prague

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# Scheme of the professional part of SÚRO

## Section of monitoring

Spectrometry department ( $\alpha$ ,  $\beta$ ,  $\gamma$ )

Radiochemistry department

Internal contamination department

Main laboratory in  
Prague + 3 branch in  
Czech republic

## Section of medical exposures

Radiotherapy and X-ray laboratory department

Thermoluminescence and film dosimetry department

## Section of natural radioactivity

Indoor radon survey department

Radon expert group department

## Section of emergency preparedness

EWN department

Mobile group department

Analytical expert group department

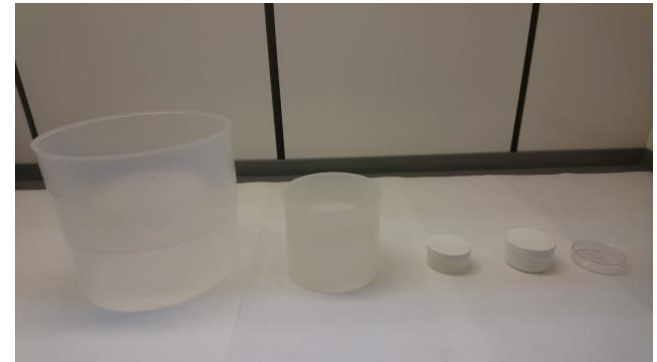
## Environmental and personal dosimetry department

## Technical support organization for nuclear safety

(about 115 employees)

# Gamma spectrometry in SÚRO Prague

- 2 laboratory with 17 HPGe detectors
- Pb/Fe/Cu shielding
- Sample beaker 5 ml – 3,8L
- Energy 50 keV – 3 MeV
- Approx.. 5000 samples/year
- Several detectors with without radon atmosphere



# Automatic sample changer



- 2 x HPGe detectors
- Automatic changing of sample (according to the set criterion: time, limits, ...)
- Automatic spectral evaluation
- In „emergency“ situation 10 min. measurement 250 sample per day
- Storage for 180 samples



# Internal contamination (whole body counter)



2 Shielding WBCs - Gamma spectrometry  
2 HPGe (portable) detectors, 4 LEGe detectors

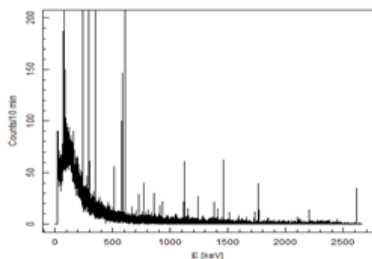
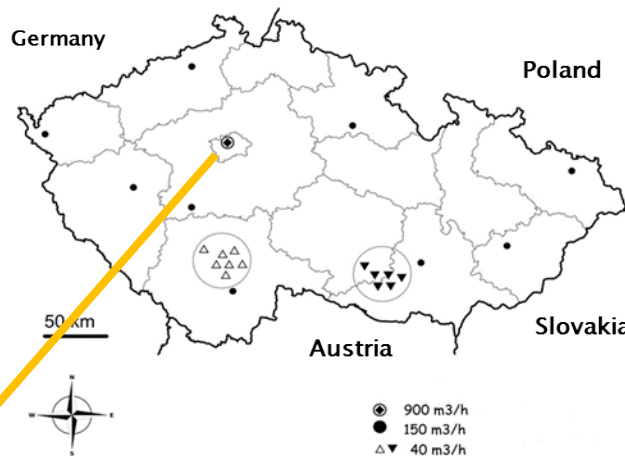


Radioiodine in thyroid  
(scintillation detector)

# Real time monitoring of the atmospheric radioactivity SÚRO – Prague



Electrically cooled HPGe spectrometer



Complex real time analysis of measured spectra

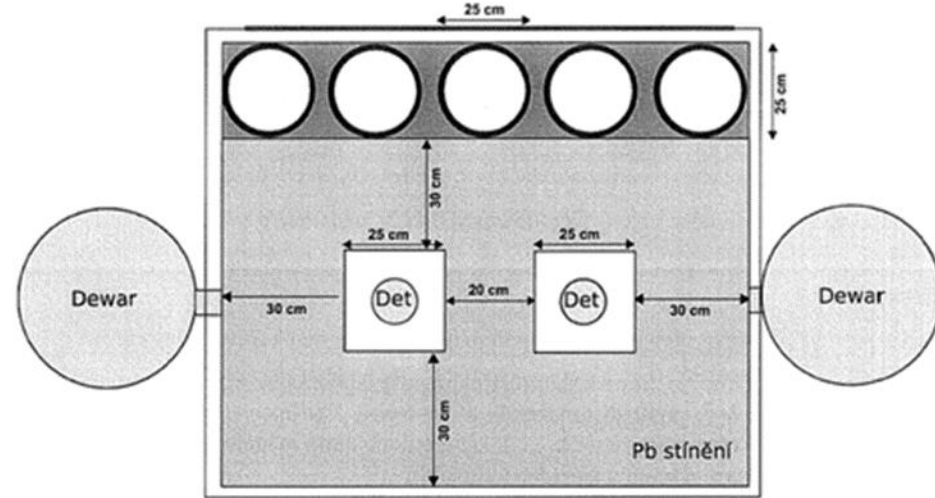
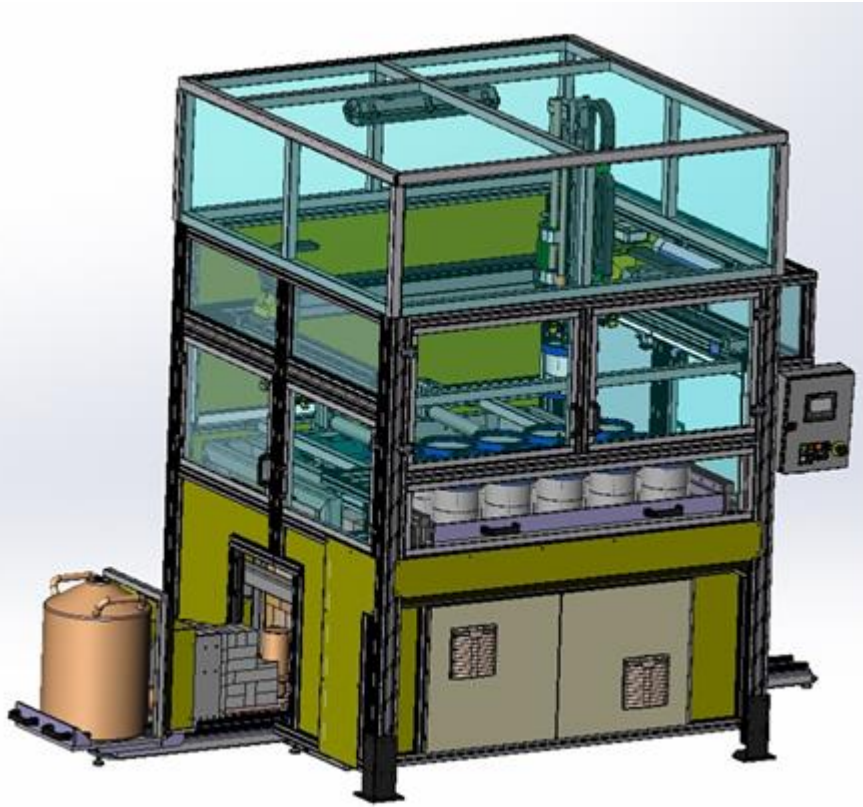


16K channel digital analyzer





# Automatic sample changer for „U“ type of detectors



Base dimensions:  
(l x w x h) = 250 x 150 x 250 cm

Storage for 15 samples (Marinelli 3l)

Max weight of sample 10 kg

# Automatic sample changer for „U“ type of detectors

