MONITORING OF THE RADIOACTIVITY OF THE AEROZOLS ON BEO ”MUSALA”

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BULGARIA

1.INTRODUCTION

- Participants at the moment:
- The main goals

2.EXISTING STATE

- Air filtering devices
- Spectrometers
- Analysis and results

3.IMPROVEMENTS IN THE FRAMES OF BEOBAL

- New air filtering system
- Unifying the methods of the measurements

1.INTRODUCTION

- Participants at the moment:
  - INRNE, BAS
  - University of Shumen
  - New collaborations
- The main goals
  - natural radioactivity
  - human produced radioactivity
  - heavy metals

2.EXISTING STATE

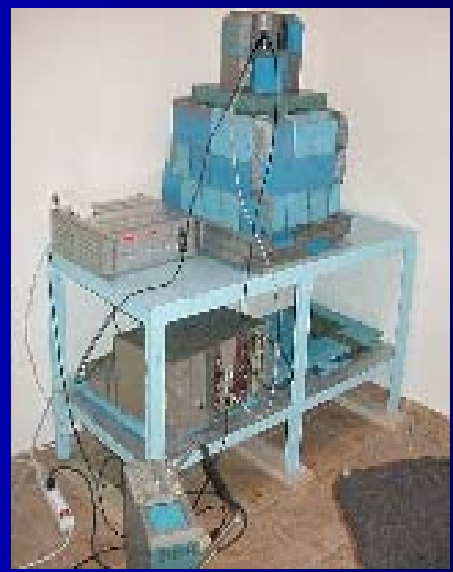
- Air filtering devices:
  - at BEO-Musala ~ 80m^3/h

- in Shumen University ~ 1500 m^3/h

- Spectrometers:

  - at BEO Musala - Na(I), 2L,

    eff. 27 % from 4π, energy res. 10 – 15%



- in INRNE – H.P.G.

rel. eff. 35%, energy res. 2kev Co^{60}

➢ in Shumen University

Ge(Li) , rel. eff. ~ 10%, energy res. 3.5kev Co^{60}

H.P.Ge, for low energy, energy res. 650ev at 59.4kev

- Analysis and results

  - Monitoring and determination of radioactivity of aerosols

  - High sensitivity for human produced radioactivity

3.IMPROVEMENTS IN THE FRAMES OF BEOBAL

- New air filtering system
  - 1300-1500m^3/h, possibility for 24h work, recording of volume, temperature and pressure
  - **CTBT** requirements

- Unifying the methods of the measurements
  - air volume
  - air filter, efficiency
  - detector efficiency
  - presentation of the data
- New partnership

Thank you for attention!!!