The 7th Natural Radiation Environment Symposium:
Report on Topics Related to Radon

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The NREVII Symposium

- Organized jointly by the National Technical University of Athens, University College Dublin, & University of Salzburg in Rhodos, Greece, 20-24 May 2002.
- Attended by 263 participants from 41 countries, presenting more than 200 contributions
- 181 manuscripts are currently under review for publication in the Symposium Proceedings.
Radon & Thoron
Radon and Thoron Metrology
Radon Prevention and Remediation
Radon Surveys and Mapping
Radon Modelling
Retrospective Techniques
Radon Risk Assessment
Radon, Thoron and the Environment
E.R van der Graaf and R.J. de Meijer: 
Non-destructive evaluation of concrete condition using radon exhalation monitoring: a feasibility study
L. Roelofs, R. Wiegers, K. Puch, G. Keller:
*EU Concerted Action for a Survey on Radon Exhalation Rate Measurements For Building Materials And Soils*

- **Findings:**
  - Lack of standardization – Incompatibility of results.
  - Lack of “well established” method.
  - Importance of sample preparation.
  - Need for intercomparison.
Radon & Thoron Metrology

D.J. Karangelos, N. P. Petropoulos, E.P. Hinis and S.E. Simopoulos:

*Radon-in-Water Secondary Standard Preparation*
Radon Prevention and Remediation

T. Iida and T. Kato:

*A new method for supplying low radon air by using a hollow fiber module*
Radon Surveys and Mapping

N. H. Harley, P. Chittaporn, M. Heikkinen, R. Merrill, R. Medora:

*Outdoor Radon and Thoron in the U.S., Canada, Finland and Thailand*

- Applied a track detector developed to simultaneously measure radon and thoron.
- Thoron was often found to be a significant fraction.
- The authors believe thoron might be a source of bias in measurements that do not differentiate between the two isotopes.
B. Roos and C. Samuelsson:

*The Behaviour of Rn-222 Decay Products at the Air-Glass Interface and its Implication for Retrospective Radon Exposure Estimates*
D.J. Crawford-Brown and W. Hofmann:  
*Stochastic state-vector model of radiation carcinogenesis applied to radon-induced lung cancer risk*

- Stochastic model describing the progression of lung cells through several steps until the development of cancer.
- Good agreement with in vitro data.
- Predicts non-linear dose-response relationship.
D. Bleile and J. Wiegand:

*Checking the “10 Point System” for an Evaluation of the Soil Radon Potential*

\[ f(x) = 1.5 + 1.95 \times \exp(0.52 \times x) \]
\[ R^2 = 0.99 \]