



VADOSE SPATIAL VARIATION OF DOSE RATES IN SOILS AND SEDIMENTS



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Basic dosimetric characterization focussing on inorganic matrix

1. Determine radioactivity and radiation absorption characteristics at different spatial scales (μm - hm) for contrasting soils and sediments.
2. Develop models tailored to each soil/sediment calibrated by the experimental determinations.
3. Assess the accuracy of dose rates predicted from geochemical and radiometric measurements using common methodologies, geometries, and deterministic calculations, to bodies of different sizes within sample media.
4. Produce / refine simple recipes for combination with standard experimental measurements / existing baseline values / maps.



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1. Regolith: granitic, calcareous, schistose, uraniferous schist, dune sand, clay, fluvial.
2. In situ, "in lab' " (100 kg bins), whole sample, grain-size fractions
3. Field & lab' gamma spectrometry, OSLD enclosure dosimetry, neutron activation & tomography, XRD, SEM, granulometry
4. Modelling.

(Well) characterized regolith materials & sites = baseline data... Applications.

β & γ , Al_2O_3 1x5 mm

