

Radon for geosciences and interdisciplinary research

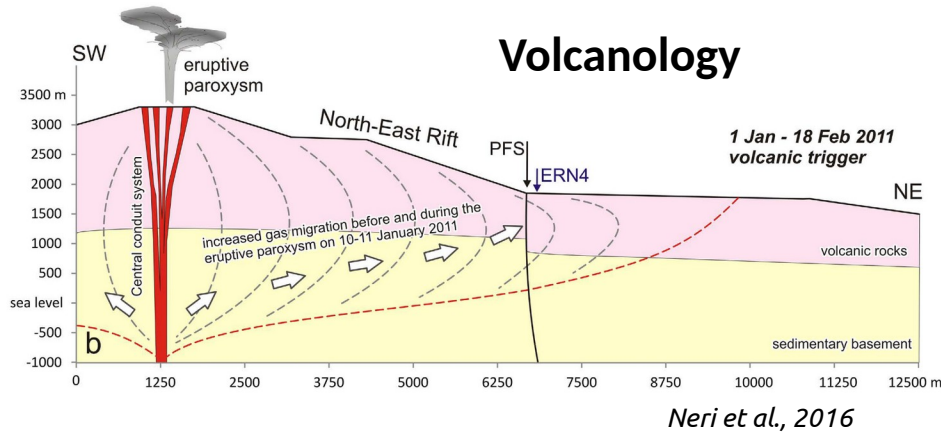
Round Table Radon
21/06/2023

Plenary GDR DUPhy meeting
Aussois

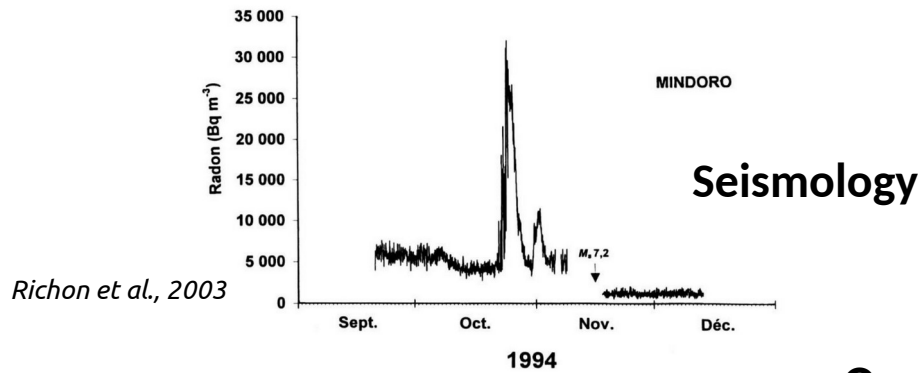
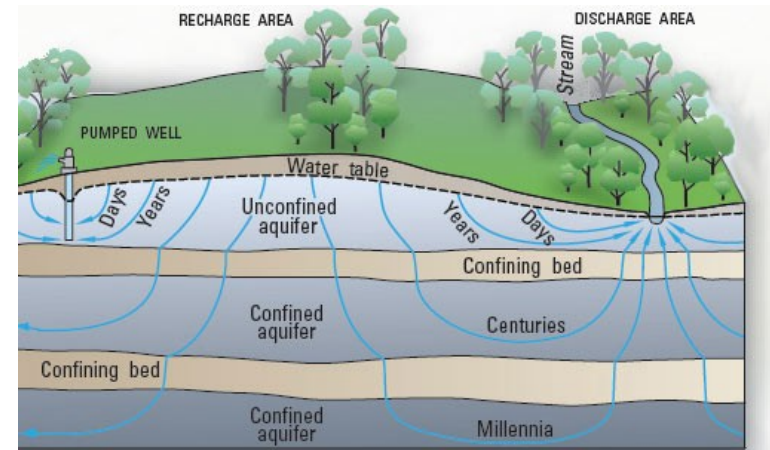
Low-radioactivity techniques session

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Radon, a polyvalent tracer of geologic processes

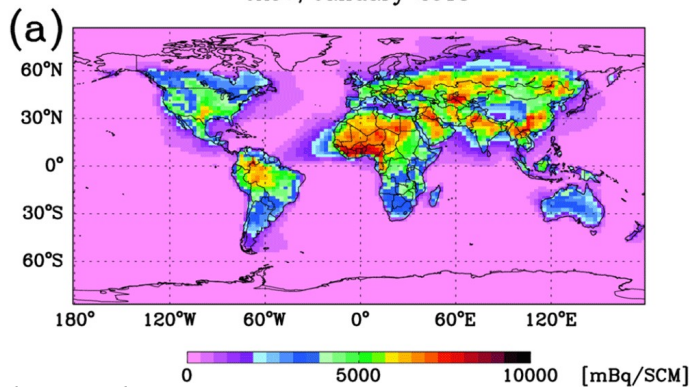


Hydrology

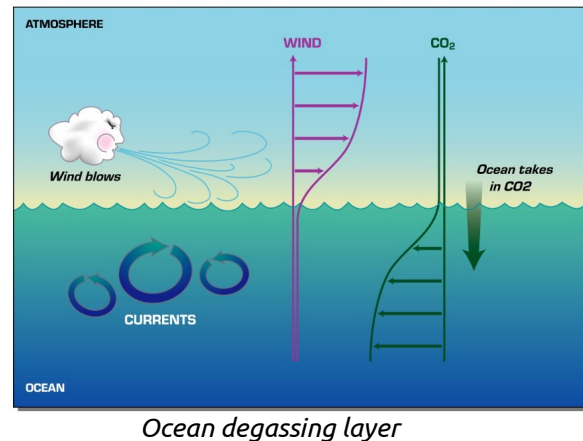


Atmospheric sciences

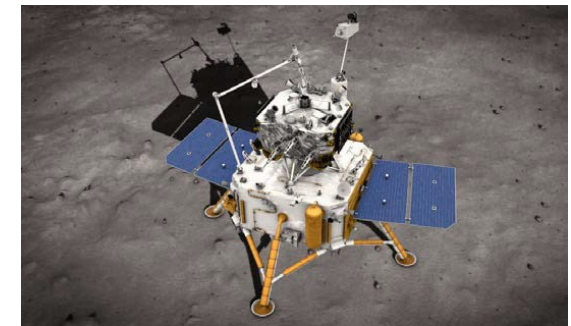
JA97, January 2013



Oceanography



Planetology



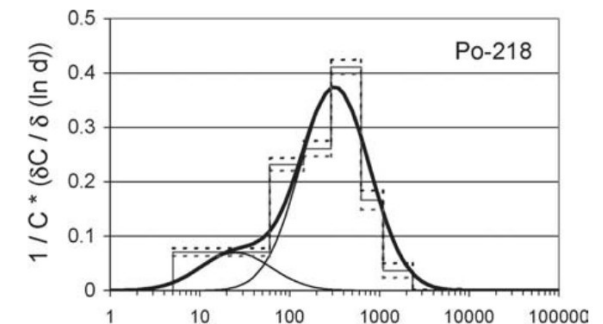
Chang'e 5 mission

Towards a long-term Radon platform @IN2P3 : motivations for environmental applications

- **Radon chamber** for calibration of instruments in various conditions (activity level, humidity, temperature)
- **Diffusion bench** to measure the transport of radon through barriers (instrumentation, natural samples)
- **Low-background emanation set-up** for the measurement of radon emanation from small and/or poorly emanating samples
- **Controlled atmospheres of radon daughters** to study the speciation and attachment/filtration processes of radon progeny
- **Sharing** know-how, knowledge, tools, instruments, documentation



Baccara, IRSN



Porstendorfer & Grundel, 2005

Workshop Radon in 2024 ?

- **Bring together various communities** at the cross-roads of **geosciences** (atmospheric sciences, hydrogeology, volcanology, seismology, karstology, planetology, oceanography, etc...), **fundamental physics** (rare-events physics, DUPhy, astroparticles, etc...) and **radioprotection and metrology institutes** (IRSN, CEA, Uni, etc...)
- **First objective** : have a **panorama of « radon research »** in France
- **Second objective** : identify **invisible intersections** in instrumentation/metrology/modelling activities and trigger collaborations + mutualise tools ?
- **When ? Where ? How ?** → TBD. This is an idea in the making, please contact me if you are interested (luca.terray@uca.fr). A first circular will be sent in september.