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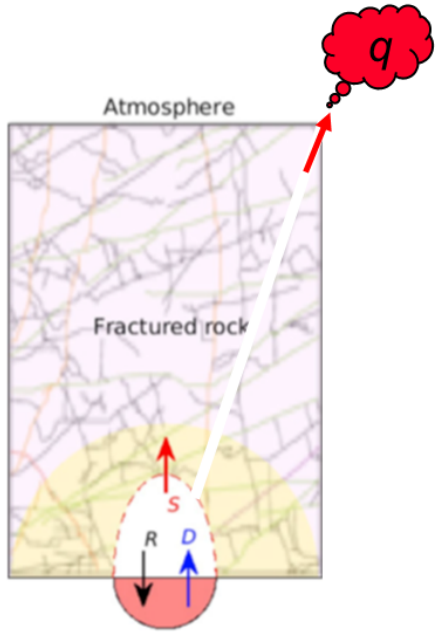
Radioxenon isotopic composition of release scenarios based on realistic models of underground nuclear explosion cavity evolution and subsurface gas transport

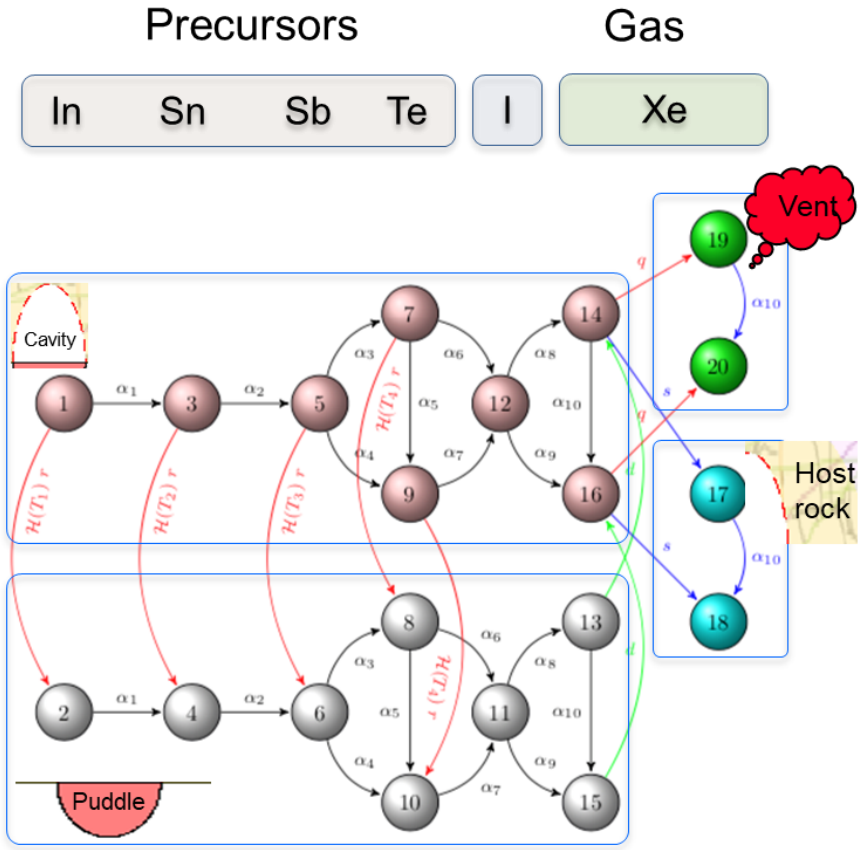
Yunwei Sun[1], Charles Carrigan[2], Boxue Liu[3], Martin Kalinowski[3], Yining Qin[1], Joshua Kunkle[3], Tarabay Antoun[1]
[1]LLNL, [2]M.H. Chew & Assoc./LLNL, [3]CTBTO/IDC

lightning Talks
P2.1-678

In this study, a realistic model about post-detonation cavity processes was developed. A closed-form solution representing time-dependent source-term activities is extended by considering the cavity partitioning process, slow seepage, and/or prompt release of gases from the cavity and applied to realistic systems, influencing the evolution of isotopic ratios over the course of UNE histories.

An example of UNE source activities (series 131)





If you want to learn more about this, come see my e-poster during session 2.1 on Wednesday 21st or access it online on the SnT2023 Conference platform!