

Interactive comment on “Real-time setup to record radon emission during rock deformation: implications for geochemical surveillance” by P. Tuccimei et al.

Anonymous Referee #2

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The authors developed an experimental setup, designed to quantify the role of load and temperature in radon exhalation from a solid material (rock). Their systematic and well performed measurements have clearly shown that initial loading of material produce pore collapse and reduction of exhalation – manifested as negative radon anomaly. As the load continues to increase, microfractures appear and exhalation is enhanced – observed as positive radon anomaly. Further loading causes macrofracture failure – resulting in even higher positive radon anomaly.

This work is one of very rare experiments on laboratory simulation of dependence

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of radon transport on geophysical parameters, specifically on seismic events, during which both positive and negative radon anomalies have been observed. As such, results of the paper are a noteworthy theoretical support in our understanding and interpretation of measured databases.

The paper is well organised, and measured data are carefully evaluated and presented at high scientific level.

Because radon transport in soil and its exhalation from ground is generally the major source for radon in outdoor and indoor air, I believe the paper will attract a broad attention in the entire radon community.

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., 5, 39, 2015.