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Title: Sequential multi-nuclide emission rate estimation method based on gamma dose rate measurement for nuclear emergency management

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Highlights

- Sequentially reconstruct multi-nuclide emission using gamma dose rate measurements
- Incorporate *a priori* ratio of nuclides into the background error covariance matrix
- Sequentially augment and update the estimation and the background error covariance
- Suppress the generation of negative estimations for the sequential method
- Evaluate the new method with twin experiments based on the JRODOS system

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