

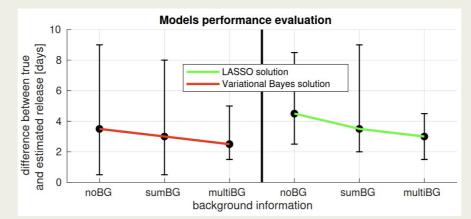


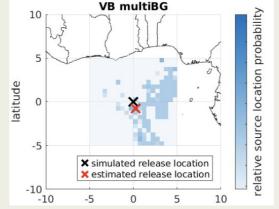
## Estimation of Xe133 release from activity concentration measurements with background signal





- <sup>1</sup>Institute of Information Theory and Automation, Czech Academy of Sciences, Prague, Czechia
- <sup>2</sup> Former CTBTO Preparatory Commission
- <sup>3</sup>CTBTO Preparatory Commission
- Accurate radioxenon source estimation is critical for nuclear explosion monitoring and emergency response.
- Civil radioxenon background is modeled and incorporated into an inversion framework.
- Our Bayesian model incorporates background sources with the release term, distinguishes background-only from mixed signals, and jointly estimates all parameters.
- Improvement of the accuracy of inverse estimates for both release timing and source location using detailed background modeling.







Supported by the Czech Science Foundation (grant no. GA24-10400S). The results presented in this study are based on the work performed under the CTBTO awarded contract for "Provision of Software Engineering Services for the Scientific Development of a Source Term Estimator Tool (STE)" under funding from the European Union Council Decision VIII. The views expressed herein are those of the authors and do not necessarily represent the views of the CTBTO Preparatory Commission

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