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8 SEPTEMBER ONLINE DAY
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Atmospheric transport modelling analyzing source regions for recurring peak detections of radioxenon at RN38 and the Pacific

LIGHTNING TALK

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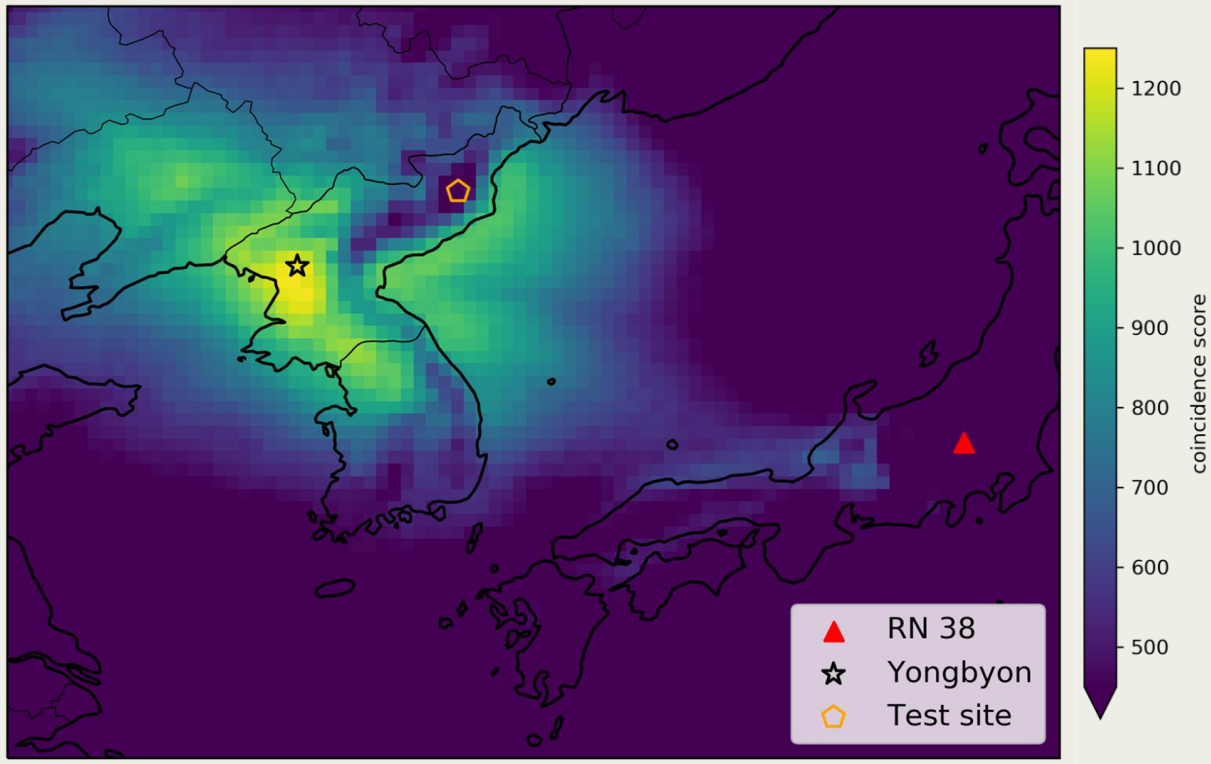
- **RN38** in Takasaki has played an important role in the detection of **radioxenon following North Korean nuclear tests**, particularly in 2013 and 2016
- At RN38 from Jan 2024 to Aug 2025 about 115 samples contained >8 mBq/m³ ^{133}Xe activity concentration.
- **Backward atmospheric transport modelling** (ATM) was performed for those samples using **HYSPLIT with 0.25° Global Forecast System (GFS) meteorological data.** Only the sampling times were considered, regardless of the absolute activity concentration values.
- Counting the number of sensitivity time steps that coincide spatially in the range of 10^{-17} to 10^{-14} per m³ **indicates the area around Yongbyon as common sensitivity spot**. However, a **contribution of local sources cannot be excluded.**



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