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- Our poster is about the statistical analysis of nuclear power plant outages as sources of elevated radioxenon releases.
- I am going to tell you why understanding these emissions matters for CTBT verification — because reactor outages often drive xenon releases that can be detected by the IMS noble gas network.
- And what we did about it was to statistically analyse outage frequency and duration across reactor types and causes, and infer the expected xenon release profiles associated with these outages.
- The most important result of our work is that refueling combined with maintenance — what we call Cause C — leads to the longest and most frequent outages, which in turn are associated with xenon emissions often lasting for weeks. In contrast, shorter outages, such as those due to maintenance alone, are associated only with brief xenon spikes.
- If you want to find out more, come over for a chat in front of our poster — I'll be happy to discuss our results and how they can help CTBT experts reduce false positives.