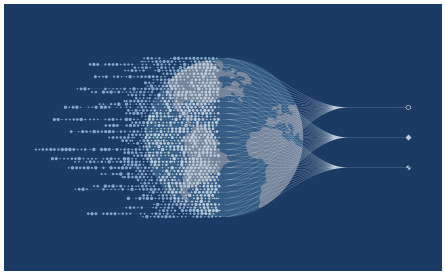

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’s new in the German Radioxenon network

Bundesamt für Strahlenschutz (BfS) has been operating a network with weekly sample collection at 6-8 locations in Germany with sampling starting in 1977. Since 2024, this network is complemented by the automatic Xenon system Sauna Qb with a sampling period of 12h followed by automatic radioxenon analysis. The shorter sampling periods of the Sauna Qb promise a much better ability to characterize known emitters, evaluate ATM performance and localize unknown emitters. Here, we present data from the operation of a Sauna Qb at two different locations in Bavaria. We compare the measured data with modelled radioxenon activity concentrations expected at the sites from forward and backward ATM. In order to localize unknown emitters detects and non-detects at several stations within reasonable proximity can be combined. The Qb is thus an ideal supplement of the existing networks, both nationally and internationally. We therefore carefully consider the location for a second Sauna Qb in Germany. We take into account locations of existing IMS noble gas stations and Sauna Qbs that are in operation around Europe and suggest to establish a common data sharing structure among Qb users.

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