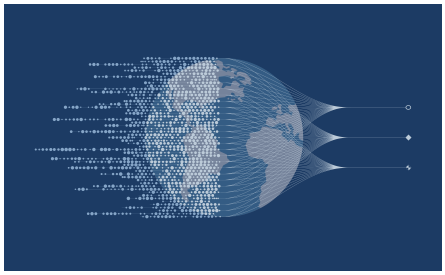

ID: **P3.2-237** Type: **E-poster**

# in the SAUNA measurements - calibration revisited

The calibration procedure used for SAUNA-type noble gas systems has been revisited. Input data to the calibration procedure was resampled using a bootstrapping method, this showed that uncertainties in detection efficiencies and interference correction ratios estimated by earlier procedures were too large. For this reason, the curve fitting method and its uncertainty evaluation was revised. Improvements to the procedures, in terms of more robust curve fitting and enhanced uncertainty estimates, are presented. Calibration parameters, e.g. detection efficiencies, resulting from the updated procedure are compared to earlier data. In addition, the calibration procedure leads to covariance between the resulting calibration parameters. The impact of these covariances on the uncertainties on Xe-isotopic ratios were studied.

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**Session Classification:** P3.2 Radionuclide Technologies and Applications

**Track Classification:** Theme 3. Monitoring and On-Site Inspection Technologies and Techniques: T3.2 Radionuclide Technologies and Applications