ID: Type: **Oral**

3rd ATM Challenge 2019

Tuesday, 25 June 2019 16:30 (15 minutes)

Two ATM challenges were successfully performed in 2015 and 2016. However, they did not address the more practical aspect of estimating radioxenon background at selected IMS stations. This estimation is needed for calibration and performance assessment of the verification system as described in the Treaty. Estimating the radioxenon background is the main goal of the 3rd ATM Challenge. In the frame of multi-model ensemble modelling a training approach will be used to define the optimal set of ensemble members, specific to each station. Xe-133 stack emission data for the time period June - November 2014 from the IRE (Belgium) and CRL (Canada) radiopharmaceutical plants will be used as well as estimates for nuclear power plants and research reactors. The annual emissions from the Mallinckrodt facility (The Netherlands), the NIIAR facility (Russia) and the Karpov Institute (Russia) will also be considered to refine predictions. The ultimate goal of the atmospheric transport modelling exercise is to provide an ensemble analysis of radioxenon background levels at IMS stations frequently impacted by industrial emissions. The presentation will deal with the design and development of the exercise scenario. First results will be shown if already available.

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Session Classification: T4.4 Performance of the Full Verification System

Track Classification: Theme 4. Performance Optimization