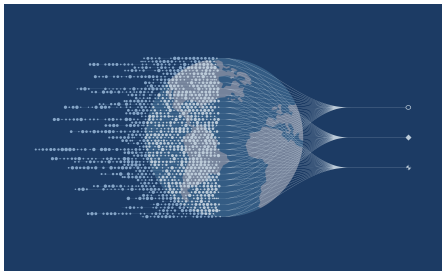

ID: **Ke03** Type: **Keynote**

in support of radionuclide monitoring: an overview of operational capacities

Atmospheric Transport Modelling (ATM) is a key component of National Data Centres (NDCs) verification capacities. ATM links the detections of radionuclides to their sources, i.e. releases of radionuclides into the atmosphere, be they particles or noble gases. As such, NDCs rely on the knowledge of atmospheric dispersion primarily to provide the best possible estimate of the release scenario – location, release rates and dates – explaining the origins of the radioactivity detected by the International Monitoring System. In doing so, NDCs are faced in particular with the challenge of radioxenon background, which is extremely variable in space and time. To this end, ATM can provide an additional method to support the NDCs in discriminating detections due to existing background from those of a potential nuclear explosion.
This presentation will provide an overview of current atmospheric transport modelling applications that support the verification capacities of NDCs. It will focus on the progress that has been made over the last ten years, and will highlight, with real-case examples, some of the topics that not so long ago were the subject of studies presented at SnT Conferences and that are today integrated into the operational capacities of NDCs, as well as presenting some of the challenges ahead.

E-mail

In-person or online preference

Presenter: Ms GENEROSO, Sylvia (Commissariat à l'énergie atomique et aux énergies alternatives (CEA))

Session Classification: Keynote on ATM in support of radionuclide detection