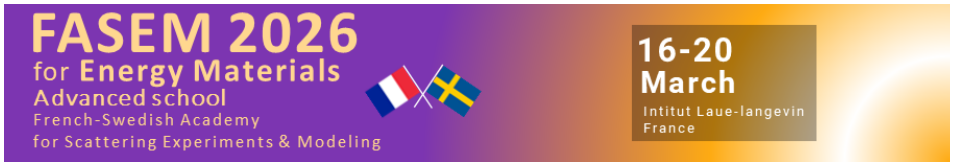

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Adoption of Non-Sealed Radioactive Source Technologies and the Management of Disused Sealed Radioactive Sources (DSRS)

Thursday, 19 March 2026 14:45 (45 minutes)

Sealed Radioactive Sources (SRS) have long served as the standard means of delivering ionizing radiation across applications in medicine, research, public health, and industry. In recent years, however, advances in non-SRS based technologies have expanded the availability of viable alternatives capable of achieving equivalent, and in some cases superior, performance. While radioactive sources may remain the preferred option for certain cases, access to these alternative technologies potentially reduce the safety, security, regulatory, and end-of-life management obligations traditionally associated with sealed radioactive sources.
Although the adoption of alternative technologies can reduce long-term reliance on radioactive materials, the transition from the traditional SRS-based technologies may also generate disused sealed radioactive sources (DSRS). These DSRS, depending on the isotope and activity, can remain dangerous for years to centuries and therefore require safe, secure, sustainable management that ultimately ends in disposal. Drawing on experiences from multiple States that have undertaken such transitions, this presentation highlights both positive outcomes and implementation challenges, emphasizing the need for coordinated planning and technical support mechanisms. The discussion will balance the assessment of technological, regulatory, and strategic considerations relevant to decision makers evaluating future equipment procurement and focus on DSRS management strategies. It also outlines current international eUorts and assistance programs aimed at supporting States in assessing, adopting, and managing alternative technologies responsibly.

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