Contribution ID: **15** Type: **not specified**

ERAWAST - Exotic Radionuclides from Accelerator Waste for Science and Technology

Wednesday, 8 February 2006 11:45 (20 minutes)

Exotic radionuclides such as for instance 44-Ti, 60-Fe, 26-Al, 10-Be and many others are of great interest in several research domains like astrophysics, nuclear medicine, geophysics, fundamental nuclear physics or radioactive beam facilities. The production of all these nuclides in sufficient amounts is very time consuming and extremely expensive. Conventional techniques in commercial radioisotope production - restricted mainly on reactor-based or accelerator-driven production routes –are approaching their limitations. Consequently, alternative production possibilities and ways of cooperation in large basic-physics facilities are discussed. One of these possibilities is the exploitation of accelerator waste.
At the moment, the spallation neutron source SINQ, located at the PSI, is one of the most powerful facilities of its kind in Europe. Several long-time proton-irradiated materials like a copper beam dump and graphite targets from th myon-production facility are available at the moment.
The talk is aimed to give an overview on the possibilites of separating long-lived isotopes from these materials and the search for potential collaboration partners/users.

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Session Classification: Technical Developments II