



Contribution ID: 392

Type: Talk

[338] Determination of ^{135}Cs and ^{137}Cs by Accelerator Mass Spectrometry

Wednesday, September 1, 2021 6:45 PM (15 minutes)

The radionuclides ^{135}Cs and ^{137}Cs are present in the environment with an isotopic ratio $^{135,137}\text{Cs}/\text{Cs}$ ranging below 10^{-10} . The isotopic ratio $^{135}\text{Cs}/^{137}\text{Cs}$ can be used for source assessment of anthropogenic cesium input into the environment and finds applications in geology, nuclear forensics and oceanography. The combination of low concentration, low beta-decay energy and long half-life prevents the determination of ^{135}Cs via radiometric methods with the demanded sensitivity. Therefore, we established a measurement procedure for cesium by Accelerator Mass Spectrometry at VERA. First results on isobar suppression, abundance sensitivity and $^{135}\text{Cs}/^{137}\text{Cs}$ ratios of environmental samples will be presented.

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Session Classification: Nuclear, Particle- & Astrophysics

Track Classification: Nuclear, Particle- and Astrophysics (FAKT - TASK)