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Isotopenphysik

I N V I T A T I O N

for a

V E R A - S E M I N A R

with

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^{32}Si – towards a new half-life measurement

^{32}Si is a cosmogenic, long-lived radionuclide with potentially interesting applications for dating the recent past. However, its half-life of about 150 years is still not known with sufficient precision despite several independent measurements over the past four decades. The determination of the half-life of long-lived radionuclides requires two absolute measurements, the specific activity and the number of atoms of the radionuclide, respectively, both having their own challenges and can result in (often unknown) systematic errors. The SNSF (Swiss National Science Foundation)-funded project SINCHRON, a collaboration with partners from PSI (Paul Scherrer Institute Villingen), CHUV (Lausanne University Hospital), PTB (National Metrology Institute Braunschweig), ANU (Australian National University Canberra) and ETH (Zurich), aims at a comprehensive redetermination of the half-life of ^{32}Si with various techniques for both activity and number-of-atoms measurements. In this presentation, I will give an overview of the project and will concentrate on the challenges of the absolute measurement of ^{32}Si with AMS.

Tuesday, 22. March 2022, 16:30 o'clock

1090 Wien, Währinger Str. 17, "Kavalierstrakt",
1. Stock, Victor-Franz-Hess Hörsaal

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