

INSTITUT FÜR ISOTOPENFORSCHUNG UND KERNPHYSIK
DER UNIVERSITÄT WIEN

E I N L A D U N G

zum

I N S T I T U T S S E M I N A R

von

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**AMS of ^{99}Tc : Measuring ocean circulation
in the North Atlantic**

The long-lived anthropogenic radioisotope ^{99}Tc ($t_{1/2} = 2.1 \times 10^5$ y), released into the sea from the nuclear fuel reprocessing plants in Sellafield (UK) and La Hague (F), was used to investigate oceanic circulations in the North Atlantic.

Sample preparation for ^{99}Tc have been refined to improve the sensitivity to permit measurements on as little as 0.2 litres of seawater. On the AMS side, a gas-filled ionization detector has been developed, which makes eight measurements of the energy loss along the ion track. A new algorithm for maximizing the separation of ^{99}Tc and ^{99}Ru from the resulting multiparameter data has been applied.

A set of 50 samples collected at the Norwegian coast over a time period of 4 years was measured for ^{99}Tc . The course of the measured concentrations reflects the course of the amounts released from Sellafield with a time shift of about 4 years.

Mittwoch, 19. Mai 2004, 16:30 Uhr

**1090 Wien, Währingerstr. 17, "Kavalierstrakt",
1. Stock, Seminarraum von VERA**

P. Hille

W. Kutschera