



EINLADUNG

zum

VERA - SEMINAR

von

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Successful extension of the ^{14}C age limit: sample treatment and isotope enrichment by ultra-centrifuge

Most AMS ^{14}C laboratories do not report sample ages older than 45.000 or 50.000 years max. This corresponds to a ^{14}C abundance of $\approx 2 \times 10^{-15}$, or 0.2% of the modern material abundance. This limit is not caused by the accelerator itself, but rather by a chain of contamination sources (and variability therein!) along the way from original sample until the graphite in the AMS.

In an effort to substantially reduce this contamination, we have concentrated on several aspects of sample treatment, and as the most innovative step, we have successfully demonstrated ^{14}C isotope enrichment using the ultracentrifuge technique (URENCO Almelo, the Netherlands). The latter effectively increased the ^{14}C abundance by a factor of around 2.5, thereby leading to an extension of the age limit by around 7000 years.

Donnerstag, 05. Juni 2014, 16:30 Uhr

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