



EINLADUNG

zum

VERA - SEMINAR

von

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## **Oceanography with Uranium-236**

Bomb fall-out  $^{236}\text{U}$  is a new oceanic tracer with great merits: Uranium-236 behaves conservatively in the ocean with a strong correlation to salinity, while the long half-life of 23.5 million years makes it an essentially stable isotope on the time-scales of ocean transport phenomena. A challenge is constraining the overall input from atmospheric bomb testing. Of great help is the possibility to track the  $^{236}\text{U}$  evolution back before the times where measurements of this isotope at the lowest levels were possible, by employing coral cores as geological archives [1]. Coverage of  $^{236}\text{U}$  measurements in ocean water is still scarce. At VERA two depth profiles and a surface transect from the South Atlantic (GEOTRACES cruise GA10/JC068) have recently been measured for  $^{236}\text{U}$ , putting the first ever southern hemisphere data on the map. The specific sampling locations allowed characterizing the major South Atlantic and Southern Ocean water masses for this isotope.

- [1] S.R. Winkler, P. Steier, and J. Carilli, *Bomb fall-out  $^{236}\text{U}$  as a global oceanic tracer using an annually resolved coral core*. Earth and Planetary Science Letters 359-360 (2012) 124-130, <http://dx.doi.org/10.1016/j.epsl.2012.10.004>

**Donnerstag, 06. Juni 2013, 16:30 Uhr**

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