

## 236-Uranium records from coral cores

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236-Uranium from global stratospheric fallout of nuclear weapon-testing and other sources is an emerging anthropogenic ocean tracer with an increasing number of individual studies. The recent boom in studies is owed to the advancements in Accelerator Mass Spectrometry, the most reliable method to detect 236-Uranium at environmental levels. Previous and ongoing studies encompass both seawater and coral samples.<sup>[1-3]</sup>

Using yearly or better resolved coral cores we can study the time evolution of 236-Uranium over time for a certain location. This is an important complement to contemporary seawater studies for two reasons, firstly no comprehensive study could be done until the recent advances in analytical technology for this isotope in seawater samples; secondly, that the locality and total amount of input is still fraught with uncertainties that require resolution.

In this paper we will present results from Pacific sediment cores and will discuss the improvement of the knowledge about overall 236-Uranium input into the world's oceans.

We are currently aiming at expanding our studies to the Indian Ocean to look at additional signatures from local fall-out in the Pacific arriving at the African continental margin.

We will discuss our past, present and future work – including the expansion and inclusion of multi-isotope studies – and its impacts on environmental studies.

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[2] S.R. Winkler, P. Steier, J. Carilli. *Earth and Planetary Science Letters*, 359-360 (2012) 124-130.

[3] M. Christl, J. Lachner, C. Vockenhuber, O. Lechtenfeld, I. Stimac, M.R. van der Loeff, H.-A. Synal. *Geochimica Et Cosmochimica Acta*, 77 (2012) 98-107.