



# Cologne Geosciences Colloquium

Fortnightly on Mondays at 5 pm

Geo-/Bio-Hörsaal

for members and staff of the Department of Geosciences,  
doctoral students, Masters' students and other interested people



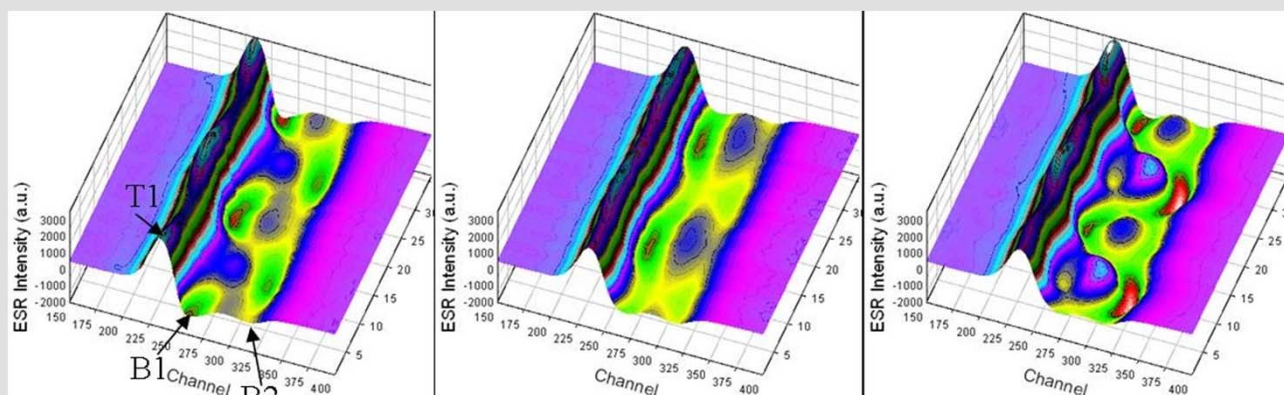
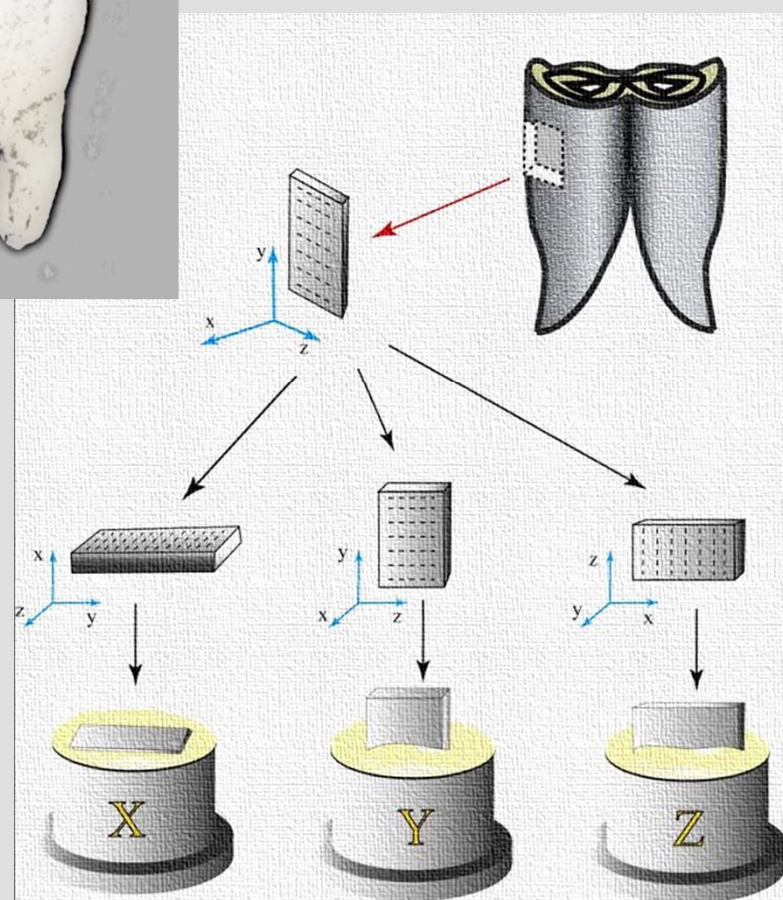
## Monday 10<sup>th</sup> November 2014

# Rainer Grün

Professor

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Research School of Earth Sciences  
Australian National University  
Canberra, Australia

## “Present status of Electron Spin Resonance dating”



**Abstract:** After a lengthy period of stasis, the electron spin resonance (ESR) method for dating fossil teeth has recently undergone a rapid development phase. This advance can be attributed both to our better understanding of the ESR signals involved in the so-called dose response and to the ability to obtain high resolution U-series isotope data from the teeth. As a result, we are close to providing a nearly non-destructive dating method, which is essential for the analysis of valuable human fossils.

Unfortunately, many fossil human bones and teeth have been rendered virtually useless for the ESR dating method by their exposure to substantial X-ray doses from widely available CT scanners. In most of these cases the age of the fossil teeth cannot be reconstructed using ESR dating.

### Upcoming events in winter semester 2014/2015:

**24 Nov:** Dr **Stephan de Roode**, Delft Univ. of Technology, The Netherlands: *What controls the stratocumulus cloud amount?*

**08 Dec:** Dr **Arko Lucieer**, University of Tasmania, Australia: *Rise of the Drones: how Unmanned Aircraft Systems (UAS) create new opportunities for environmental remote sensing and geosciences*

**19 Jan:** Prof **Susan Waldron**, University of Glasgow, UK: *Sensitive processes in the terrestrial-aquatic-atmospheric C continuum*

For questions or suggestions contact Dr Karin Boessenkool (kboessen@uni-koeln.de; phone: 470 5925)

For the latest schedule check: [www.geosciences.uni-koeln.de](http://www.geosciences.uni-koeln.de) and follow the link to “Cologne Geosciences Colloquium”