

## Advances in Stratigraphy and Geochronology

### *Virtual Seminar Series of the Stratigraphy and Chronology Commission (SACCOM) of INQUA*

Thursdays at 9 am USA EST, 2 pm London, 3 pm Paris, and 10 pm Beijing time.

The seventh talk of the weekly series is on **June 3**,  
given by:

**Dr. Quentin Simon (CEREGE, France)**

**“Atmospheric Be-10, a versatile cosmogenic nuclide for relative and radiometric dating”**



Dr. Quentin Simon is research associate at CEREGE (Aix-en-Provence, France). His main research interests concerned geomagnetic field intensity changes during rapid transitions (polarity inversions and excursions) and over long time periods. He uses an original approach, coupling atmospheric cosmogenic nuclide ( $^{10}\text{Be}$ ) and paleomagnetic (remanent magnetization) measurements on sedimentary sequences. Integration of these independent and complementary advanced approaches with sedimentology allows accurate reconstruction of geomagnetic variations, while contributing to the beneficial development of both methods. It also provides strong chronostratigraphic markers and a versatile radiometric dating tool.

**Abstract:** In this lecture, I present authigenic  $^{10}\text{Be}/^9\text{Be}$  ratio (proxy of atmospheric beryllium- $^{10}\text{Be}$  production) records obtained from several Plio-Quaternary sedimentary sequences and discuss how using  $^{10}\text{Be}$  can help improving magnetic and oxygen isotope stratigraphies as well as reconstructing accurate dynamics of geomagnetic excursions and reversals. I show examples where  $^{10}\text{Be}/^9\text{Be}$  ratio helped establishing radiometric chronologies in very different settings (marine and lacustrine sediments, nodule) and provide a reliable stratigraphic marker for the Global Boundary Stratotype Section and Point (GSSP) of the Middle Pleistocene Subseries, notably.

For more details of the full seminar series please go to the SACCOM webpage at: <https://www.inqua.org/commissions/saccom/ifg>. Please see the Zoom link below.

### **ZOOM LINK:**

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Overseen by Lewis Owen on behalf of SACCOM