

2008 Fall Meeting
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AN: **PP11B-1391**TI: [Lake Hazar: a potential high-resolution 150 ka record of climate and tectonic interactions in Anatolia](#)AU: * **Boes, X**EM: xavierb@oma.beAF: *Observatoire Royal de Belgique, Avenue Circulaire 3, Uccle, 1180, Belgium*AU: **Jasper, M**EM: Jasper.Moernaut@UGent.beAF: *University of Ghent, Krijgslaan 281, Ghent, 9000, Belgium*AU: **Avsar, U**EM: avsar@oma.beAF: *Observatoire Royal de Belgique, Avenue Circulaire 3, Uccle, 1180, Belgium*AU: **Namik, C**EM: cagatay@itu.edu.trAF: *Istanbul Technical University, Maslak, Istanbul, 34469, Turkey*AU: **Hubert-Ferrari, A**EM: aurelia.ferrari@oma.beAF: *Observatoire Royal de Belgique, Avenue Circulaire 3, Uccle, 1180, Belgium*

AB: Over the last decade, a tremendous number of researches on climate and tectonic interactions have converged on Turkey, mostly on the NAF (North Anatolian Fault) near Istanbul. For example, the Marmara Sea has been the focus of an increasing number of international drilling projects, as the marine sediments of this region provide long-term climate and tectonic reconstructions. Comparatively, the EAF (East Anatolian Fault) is far from the sea and is few documented in terms of geological records (i.e. Lake Van is away from the NAF trend). However, like for the NAF, the EAF has a relative simple structure (strike-slip faulting) leading to large surface rupturing earthquakes (100 km -Ms > 7). In the south-east region, a remarkable example of land structure is the Sincik/Hazar-Hazar/Palu fault segments interrupted by an exceptional large (20 km) and deep (212 m) sedimentary basin (Lake Hazar). This natural archive provides a unique chronostratigraphic sequence on the south-eastern Anatolian plate boundary. According to Cetin et al. 2003, the lake record could spend the last 150 ka; this interpretation is confirmed by a new seismic survey and by the study of the first sediment cores collected in the lake in 2007. Our results show that the proximal lake basin is characterized by a continuous sedimentary sequence of ~80 m that could be valuably drilled. The first five meters of lake sediments show series of thin distinct seismo-turbidites preserved between climatically induced sediments. A high resolution radiocarbon age modelling (one radiocarbon date every 200 yr) validate the continuity of the record, making this lake a new valuable high-resolution continental record for the south-east Anatolian region. This important new natural record has never been deeply cored by scientific community. As a clue, this lake would be a good candidate for an ICDP deep drilling project aiming to get the most extensive chronologies of climate and tectonic in south east Anatolia.

UR:

<http://www.astro.oma.be/SEISMO/CYCLE/SeismicCycleSite/Introduction.html>

DE: 0458 Limnology (1845, 4239, 4942)

SC: Paleooceanography and Paleoclimatology [PP]

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