Schäbitz, F., Wagner, B., Viehberg, F., Wennrich, V., Rethemeyer, J., Just, J., Klasen, N., Asrat, A., Lamb, H., Förster, V., Trauth, M., Junginger, A., Cohen, A. and the HSPDP science team

1 University of Cologne, Seminar for Geography and Education, Gronewaldstrasse 2, 50931 Cologne, Germany

2 University of Cologne, Institute of Geology and Mineralogy, Zülpicher Str. 49A, 50674 Cologne, Germany

3 University of Cologne, Institute of Geography, Otto-Fischer-Str. 4, 50674 Cologne, Germany

4 Addis Ababa University, Department of Earth Sciences; P. O. Box 1176, Addis Ababa, Ethiopia

5 Aberystwyth University, Institute of Geography and Earth Sciences, Aberystwyth SY23 3DB, U.K

6 University of Potsdam, Institute of Earth and Environmental Science; Germany

7 Eberhard Karls Universität Tübingen, Department of Geosciences, Hölderlinstr. 12, 72074 Tübingen, Germany

8 Department of Geosciences, University of Arizona, Tucson AZ 85721 USA

9 http://hspdp.asu.edu/?q=content/hspdp

**Preliminary results from the deep drilling at Chew Bahir (S-Ethiopia)**

Chew Bahir is one of the five sites drilled during 2013-14 in the framework of the *Hominin Sites and Paleolakes Drilling Project* (HSPDP), in order to understand the climate and environmental history during the evolution of hominins in East Africa. The Chew Bahir record will concentrate on the younger part of that history and is further supported by collaborating projects, including the Cologne Collaborative Research Centre (CRC-806), the German and the British International Continental Drilling Project (ICDP). The site is located in the southern part of the Main Ethiopian Rift (MER) at about 500 m asl and lies close to the famous excavation of anatomically modern humans at Omo Kibish. Following a transect from west to east, 6 short cores (max. depth 11m) already delivered the basic understanding of sedimentation processes from the border to the centre of that former lake, mainly by using XRF scanning data. The age-models for these cores are based on 32 AMS radiocarbon dates, which roughly place the base of the centremost core at about 45ka BP. The K-record is one of the most promising proxies in all these cores allowing a climatic interpretation of wet and dry cycles (dry LGM, wet African Humid Period, dry Younger Dryas, wet early Holocene and dry Holocene since 5 ka BP) mostly triggered by solar radiation as well as changes in the position of the ITCZ and the Congo Air Boundary (CAB). In March 2014, a 41.5m deep core was taken from the centre of that basin. As with the short cores, the K counts measured by XRF scanning show fluctuations, which reflect climate change. 14C and OSL dating as well as paleomagnetic measurements on this core are still in progress, but preliminary results will be available by the time of the meeting. Preliminary stratigraphic indications suggest that this record may reach back to MIS5-MIS6. In Nov-Dec 2014 the HSPDP deep drilling down to 280m took place and these cores very probably allows a paleoenvironmental reconstruction further back in time to nearly the origin of our ancestors.