

Press Release



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Discovery of a large hot vent site in the Gulf of California Fascinating results of cruise SO241 with Germany's new research vessel SONNE

22 July 2015/Kiel. Germany's new deep-sea research vessel SONNE is currently sailing in the Gulf of California in the search for carbon release related to volcanic systems. Now the scientists lead by Professor Christian Berndt from the GEOMAR Helmholtz Centre for Ocean Research Kiel discovered a previously unknown vent field with several black smokers. The field consists of at least four up to 70 meter high mounds. research team from Germany, cruise on the German vessel SONNE, the Guaymas Basin hypothesis. The Guaymas Basin is the end of the Paleocene.

While investigating the seafloor smokers of unusual size at an our views on how carbon is consequences for the assessment explains Christian Berndt geophysics and chief scientist of cruise SO2

During the opening of a new ocean unloaded the hot mantle of the into the remaining sediments with carbon that was buried along with migrate to the surface under its

As such systems were wide spread has been proposed that they were PETM. So far it was unclear compounds they have emitted. To to these questions as if present already occurred.

Based on regional seismic data expulsion. These sites were the Already on its first dive a new vent fluids that immediately precipitate are rich in methane that is injected long and consists of at least four

high mounds.

“This phenomenon was previously known from black smokers at mid ocean ridges. A field of this size aside the spreading axis is very unusual”, says Professor Berndt. The size and activity of the system is supporting the idea that hydrothermal venting may indeed be of relevance for global climate when it occurs on larger scale during the opening of big ocean basins.

Christian Hensen, a geochemist with GEOMAR, points out that the fluids carry a mixed signal of magmatic systems and sedimentary systems which is precisely what is expected from hydrothermal activity caused by sill intrusions. The magmatic origin is also indicated by high helium concentrations in the water column