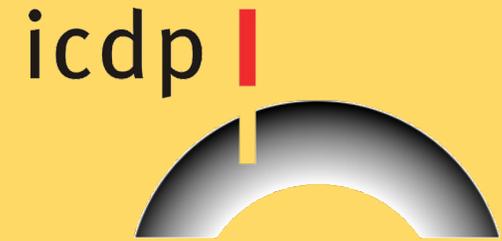


Afar Dallol Drilling

1st online ICDP Workshop - 29-30 June 2021



Since the early days of the continental drift theory, the Afar triangle has been an ideal field laboratory where the onset of oceanic rifting can be studied on land. The Danakil Depression is where the Red Sea rift first propagates into northern Afar, and is characterized by active faulting and Recent volcanism.

The ADD-ON project (Afar Dallol Drilling: ONset of sedimentary processes in an active rift basin) aims to explore drilling targets in the Danakil Depression (Afar, Ethiopia). The overarching scientific goal is to get insights into the detailed sedimentary facies evolution in an active rift setting paced by global environmental fluctuations and their interplay with volcano-tectonic events. Seismo-stratigraphic interpretations based on available industrial seismic sections, core and borehole data evidence the presence of Pleistocene evaporite units until the depth of about 900 m below the Dallol salt pan (central Danakil Depression, northern Afar). However, to date no sub-salt sedimentary core records are available from the central part of the rift basin filled with more than 1.5 km of sediments.

Having future access to targeted drilling sites in the Danakil basin will give new insights into:

- (1) the tectonic, sedimentological, and stratigraphic understanding of intermittent and incipient basin dynamics during nascent passive margin development,

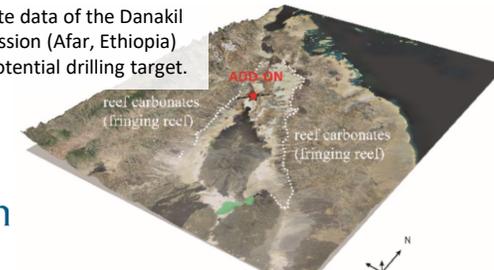
- (2) East African climatic changes and Hominin evolution,
- (3) the limits of the deep biosphere in extreme hypersaline and high-temperature environments below the salt deposits,
- (4) natural fluid flow in an active geothermal system,
- (5) monitoring of active faults, earthquakes and volcanic events in remote areas.

The 1st ICDP ADD-ON Workshop will be held as an online event from 29th to 30th of June 2021 with the aim to develop a full ICDP Afar Dallol Drilling proposal. The 2nd ICDP ADD-ON Workshop will be organized from 10th to 14th of January 2022 in Addis Ababa (Ethiopia).

We invite junior and senior scientists, industry partners and stakeholders interested in participating in the workshop to contact us at afardalldrilling@unifr.ch



Satellite data of the Danakil Depression (Afar, Ethiopia) and potential drilling target.



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