

International Continental Scientific Drilling Program MagellanPlus Workshop Series Programme

A window to the North Caribbean active "sliding doors" Fault System through Scientific Drilling:

The Haiti-DRILL project

Deformation along large-scale strike-slip fault system, is commonly recorded by geological and geophysical data in terms of cumulative deformation (long term) and by GPS measurements at surface, as instantaneous deformation (over several years). These data show that stress varies and strain distribution is segmented and locally disconnected. If well documented in many examples on the world, the spatial partitioning of the deformation is still poorly understood in terms of (vertical) variations with depth.

The main pending questions are: why and how is the stress partitioned laterally and vertically between the mega-shear and the splay faults? How to connect the thermo-mechanical conditions at depth with those measured at the surface? Can we properly characterize the pressure cells organization at depth and their connection with deep-originated fluids and seismicity?

We propose to drill few wells in different tectonic settings: on shear fault (with monitoring), splay fault (with strong hydrodynamics), in the lake settled at the connection of those two major structures, and offshore in related Fault-Basins.

The project may be presented either as two individual ICDP and IODP ones, or as an Amphibious Drilling Project. This will be one of the questions which have to be discussed during the workshop.



Numerous exciting and challenging topics may be addressed in the study area covering the central part of the North Caribbean Plate boundary, which call for multidisciplinary forefront research, such as tectonics, seismology, sedimentology, rock mechanics, geochemistry, fault processes monitoring, but also paleoclimatology, palaeobiology, and deep biosphere.

An extensive set of new field, core-based and seismic data has been already collected and will be acquired, to address the emerging questions on the co-evolution of Earth, risks, climate and life, under particularly active tectonic conditions.

A MagellanPlus Workshop will be held on October 26-28, 2015 at IFP Energies Nouvelles (IFPEN) Rueil-Malmaison (France), to discuss the development of the community efforts on the Active Strike-Slip Fault Characterisation and related Societal Risk Assessment in the Haiti Restraining Bend.

Members of the international scientific community who are interested in contributing to the Workshop and long-term research efforts are invited to submit an expression of interest with their name, institution, contact details and brief summary of their relevant expertise and intended contribution. (Nadine.ellouz@ifpen.fr; Manupub.pubellier@gmail.com).

Researchers will be invited on the basis of their research interest related to the goals of the Workshop. Preference for participation and available travel funds will be given to those from ICDP and ECORD member countries, and the Drilling Host country. The Workshop will be limited to 35 participants.

IFPEN is serviced with good travel links to Paris and other major European cities.

The deadline for application is **September 30, 2015**.