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Western Regional Group

evening lecture

Rifting in Africa: Seismological views from Afar

Professor Mike Kendall, University of Bristol

6:30pm - 20 May 2014

The Western Regional Group is pleased to invite you to an evening presentation on rifting in Africa. The rifting of continents and eventual formation of ocean basins is a fundamental component of plate tectonics, yet the mechanism for break-up is poorly understood. Rifting of the continents leading to plate rupture occurs by a combination of mechanical deformation and magma intrusion, but the available driving forces have been estimated to be as much as an order of magnitude smaller than those required to rupture thick continental lithosphere. The East Africa Rift system (EARS) is an ideal place to study this; it captures the initiation of a rift in the south through to incipient oceanic spreading in north-eastern Ethiopia - Afar.

In this talk, Mike will describe how seismological investigations can be used to test models of rifting and how the resulting data have provided unprecedented images of the deep Earth beneath a rifting environment. Mike reviews his latest seismic images of the velocity and discontinuity structure in the region.

Overall, observations support models of magma-assisted rifting, rather than those of simple mechanical stretching. In many ways the scenery in mantle beneath Ethiopia is as spectacular as the scenery that captures the transition from the Ethiopian rift valley lakes to the Danakil depression in Afar.



The event is open to non-fellows, so please feel free to invite your colleagues or friends.

Forthcoming Talks

The WRG is constantly on the lookout for fascinating talks. If you would like to present, know someone who is willing or know of a topic that would be of interest please contact the WRG committee (details below) and we will try our very best to accommodate your requests.

Venue

S.H. Reynolds Lecture Theatre (Room G25), Department of Earth Sciences, University of Bristol, Wills Memorial Building, Queen's Road, Bristol BS8 1RJ. For directions see <http://www.gly.bris.ac.uk/about/directions.html>.

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