



April 2008

Los Angeles Basin Geological Society Newsletter

April 24, 2008 Meeting: Dr. Joann Stock of CalTech

Will speak on . . .

“Plate Tectonics and related Boundaries”

Speaker Synopsis / Abstract

The Miocene to recent motion between the Pacific and North America plates, and the influence of the Farallon plate earlier in the Cenozoic, produced the complicated tectonic patterns we see in southern California and NW Mexico today. This talk will look at the global plate motion constraints on how the Pacific plate, and the pieces of the Farallon plate, moved relative to North America. We will compare these motions with their geological effects, particularly strike-slip motion, rotations about vertical axes, and opening of the basins in the northern Gulf of California. Offsets of geological markers on the conjugate rifted margins of the Upper Delfin Basin (N Gulf of California) agree very well with the total amount of plate separation since 6.1 Ma. This indicates that hundreds of km of extension occurred in this setting, producing long-lived sedimentary basins with many km of sediment accumulation, but without making new oceanic crust.

Dr. Joann Stock is a Professor of Geology and Geophysics at the California Institute of Technology in Pasadena. She studied at the Massachusetts Institute of Technology (BS and MS in geophysics, 1981; PhD in Structural Geology and Tectonics, 1988). She worked for the US Geological Survey doing borehole geophysics and hydraulic fracturing stress measurements, in between her MS and PhD studies. Her major research interests lie in plate tectonics and plate boundary deformation (including field investigations of volcanism and deformation related to the opening of the Gulf of California) and marine geophysics (including detailed surveys of fossil and active rifts). She has done geological and geophysical work in Mexico for two decades and has been chief scientist or co-chief scientist on more than 11 geophysical research cruises. She is an adjunct investigator at CICESE (Centro de Investigación Científica y Educación Superior de Ensenada, Baja California, Mexico).

**A GREAT TALK TO FIND OUT
ABOUT SOCAL PLATE
MOVEMENTS, AND MORE !!!**

Meeting Time, Place, Cost and Reservations

Time:

Thursday, April 24, 2008

Typical Meeting Agenda

Lunch Served: 11:30 AM to 12:00PM

Announcements: 11:50 AM to 12:15 PM

Guest Speaker: 12:15 PM to 12:45 PM

Place:

The Grand at Willow Street Conference Center located at 4101 East Willow Street, Long Beach, CA. (562-426-0555). Take Lakewood Boulevard south from the San Diego Freeway (405), turn west onto Willow Street and turn right onto Grand Avenue at the sign for the Center. Park free in the garage structure.

Cost:

Lunch and Speaker: \$20.00 with reservations

\$25.00 without reservations

Student:

FREE (Lunch and Speaker)

Meeting Reservations:

Make your reservations using our web site at www.labgs.org, by calling Marieke at (562) 624-3364., or emailing Marieke_Gaudet@Oxy.com.

Reservations must be made prior to Tuesday before the meeting, but walk-ons are always welcome.