

THE GEOLOGICAL SOCIETY OF AMERICA (GSA)



2016-17 JAMES B. THOMPSON, JR.
DISTINGUISHED
INTERNATIONAL LECTURE



Terry A. Plank, Professor

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Volatiles and Volcanic Vigor

Monday, 10th April, 2017, 3:00 p.m. (15:00h)
Sala Cocchiara, Area della Ricerca CNR-INGV, Palermo

What causes some eruptions to be more explosive than others? Is it the total driving gas fuel, or how fast the gas escapes? This talk examines both the volatile content and the speed of magma ascent immediately prior to eruption. Chemical zonation preserved inside glass pockets and crystals provides some of the fastest clocks in geology. These timescales of chemical diffusion operate over minutes to hours in the run up to eruption.

Terry Plank is a geochemist who studies magmas associated with the plate tectonic cycle. She is known particularly for her studies of subduction zones: the inputs on the ocean floor, the temperatures attained beneath volcanoes, the melting process in the mantle, and the water contents of magmas before they erupt. Field studies have been focused around the Pacific rim, from Tonga to the Marianas island, the Aleutians and Costa Rica. Terry Plank received an A.B. (1985) from Dartmouth College and a Ph.D. (1993) from Columbia University. Since 2008, she has been a professor in the Department of Earth and environmental Sciences and the Lamont-Doherty Earth Observatory at Columbia University. Plank received the Houtermans Medal from the European Association for Geochemistry and the Donath Medal from the Geological Society of America. In 2012 she was named a MacArthur Foundation Fellow, and in 2013 elected to the US National Academy of Sciences.

