

Monday, March 18, 2013

[M151]

**PLENARY SESSION:
MASURSKY LECTURE AND DWORNIK AWARD PRESENTATIONS
1:30 p.m. Waterway Ballroom 4**

Chair: Stephen Mackwell, Eileen Stansbery, and David Draper

Presentation of the 2012 GSA Stephen E. Dworknik Award Winners —

Best Graduate Oral Presentation:

D. Hemingway, University of California, Santa Cruz, “*Insights into Lunar Swirl Morphology and Magnetic Source Geometry: Models for the Reiner Gamma and Airy Anomalies*”

Honorable Mention, Graduate Oral Presentation

S. M. Tikoo, Massachusetts Institute of Technology, “*Decline of the Ancient Lunar Core Dynamo*”

Best Graduate Poster Presentation

I. B. Smith, University of Texas, “*The Northern Spiral Troughs of Mars as Cyclic Steps: A Theoretical Framework for Calculating Average Migration and Accumulation Rates*”

Honorable Mention, Graduate Poster Presentation

A. J. Ryan, Arizona State University, “*Lava Coils and Drifting Patterned Ground in Cerberus Palus, Mars*”

Best Undergraduate Poster Presentation

R. T. Daly, Brigham Young University, “*Steps Toward an Innovative Electrospray-Based Particle Source for Dust Accelerators*”

Honorable Mention, Undergraduate Poster Presentation

K. T. Crane, University of Tennessee, Knoxville, “*Shape and Thermal Modeling of a Selection of M-Type Asteroids*”

Honorable Mention, Undergraduate Poster Presentation

H. M. Meyer, College of Charleston, “*Using a New Crustal Thickness Model to Test Previous Candidate Lunar Basins and to Search for New Candidates*”

Presentation of the LPI Career Development Award Winners —

Winners to be announced

Masursky Lecture —

Elkins-Tanton L. T. *

[On Building an Earth-Like Planet](#) [#1408]

Magma ocean processes on planetesimals and planets control the earliest compositional differentiation and volatile content of the terrestrial planets.



*Lindy Elkins-Tanton is the director of the Department of Terrestrial Magnetism at the Carnegie Institution for Science. Her research is on the evolution of terrestrial planets and the relationships between Earth and life on Earth. One of her research efforts addresses the chemistry and physics of the formation of terrestrial planets, with projects focusing on planetesimals, the Moon, Mercury, Earth, rocky exoplanets, and processes such as degassing the earliest atmospheres. A second major research effort concerns the relationships between large volcanic provinces and global extinction events, focusing on the Siberian flood basalts and the end-Permian extinction. She has lead four field seasons in Siberia, as well as participated in fieldwork in the Sierra Nevada, the Cascades, the Faroe Islands, and a fifth Siberian expedition. Elkins-Tanton received her B.S. and M.S. from MIT in 1987, and then spent eight years working in business, with five years spent writing business plans for young high-tech ventures. She then returned to MIT, where she earned her Ph.D. Elkins-Tanton spent five years as a researcher at Brown University, followed by five years on the MIT faculty, culminating as Associate Professor of Geology, before accepting her current position at Carnegie. Elkins-Tanton is a two-time National Academy of Sciences Kavli Frontiers of Science Fellow and served on the National Academy of Sciences Decadal Survey Mars panel. Other awards include a National Science Foundation CAREER award, Outstanding MIT Faculty Undergraduate Research Mentor, and the Explorers Club Lowell Thomas prize. The second edition of her six-book series, *The Solar System*, was published in 2010.*