

CENTER FOR LUNAR SCIENCE AND EXPLORATION

vitality impacting the future – today

The CLSE team has extensive experience with lunar & asteroid lithologies and the geologic processes that shape both types of bodies



Dr. David A. Kring (USRA - <http://www.lpi.usra.edu/science/kring/>)

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CLSE Principal Investigator Dr. David A. Kring and his students have been studying Near-Earth Objects (NEOs) for over two decades. Those studies have sculpted stories about the formation of our solar system and the collisional impacts of asteroids and comets with planets like the Earth, Moon, and Mars. Kring has also studied the effects of NEO impacts on Earth, including the famous [Meteor Crater](#) in Arizona a few thousand years ago and the immense [Chicxulub Crater](#) in Mexico that he and his colleagues linked to the extinction of dinosaurs and most life on Earth 65 million years ago. Kring has often wondered what it will be like to study an NEO before it hits Earth. As we move beyond low-Earth orbit, that will be one of the available exploration targets. In that type of mission, astronauts will float above the low-gravity asteroid and then reach out to touch its surface, leaving a handprint. That handprint is likely to be as iconic as the footprints astronauts left on the lunar surface. Artist Pat Rawlings kindly captured that future event for Kring in this rendering of the imprint of a spacesuit glove in the regolith of an NEO. That image is schematically linked to a NASA mosaic of the first near-Earth asteroid discovered, Eros, in the preceding panel. Another interesting target might be the asteroid named in honor of [Kring](#) which is similar in size to the dinosaur-killing asteroid that produced the Chicxulub impact crater.

Links for key words above:

Meteor Crater –

http://www.lpi.usra.edu/publications/books/barringer_crater_guidebook/

Chicxulub –

http://www.lpi.usra.edu/science/kring/epo_web/impact_cratering/Chicxulub/Chicx_title.html

Kring (asteroid) –

<http://www.lpi.usra.edu/science/kring/asteroidKring/>