

MSSC ZOOM PRESENTATION

Friday, November 12, 2021

7:30pm

Traces of Extinction: The search for the Rocks and Minerals of Chicxulub.



Paolo Sanchez, UC Berkeley, Geology & Geophysics '22 – Traces of Extinction: The search for the Rocks and Minerals of Chicxulub

Research summary: In 1980, Luis and Walter Alvarez proposed the theory of a devastating meteor impact event as the cause of a major mass extinction of dinosaurs, ammonites and other paleofauna at the Cretaceous-Paleogene (K-Pg) boundary ~66 million years ago. Since then, the thought of having a meteor killing off the dinosaurs has been largely publicized and further cemented into popular culture with the subsequent discovery of the large, K-Pg-dated Chicxulub impact structure on the coast of Mexico's Yucatan Peninsula. However, despite the widespread knowledge of this geological event, details concerning the nature and influence of the impact to the extinction still remain obscure. In addition, the composition (i.e. lithology) of the dinosaur-killing meteor is still disputed today. Here, I present my current ongoing research examining tektites derived from Chicxulub and what their respective chemistries tell us about the minerals and lithologies associated with the impact event, with the potential of understanding the lithology of the meteor itself.

Bio: Paolo Sanchez, UC Berkeley, Geology & Geophysics '22 –I am currently in my senior year as an undergraduate student in UC Berkeley, double-majoring in geology and geophysics. I have been interested in rocks and minerals early on since kindergarten, and I have been a dedicated member of the Pasadena Lapidary Society since 2011. I have authored multiple CFMS and AFMS award-winning articles on mineralogy in high school, and served as a geoscience research assistant at UC Berkeley, the Berkeley Geochronology Center and California State University, Northridge. Last year I've been awarded the CFMS Diedrick Memorial Scholarship in the Earth Sciences, and last summer I was a recipient of UC Berkeley's Summer Undergraduate Research Fellowship focusing on my current project with the geochemistry of ancient tektites. My future goals are to work my way through a PhD and become a professor of the geosciences in a university.