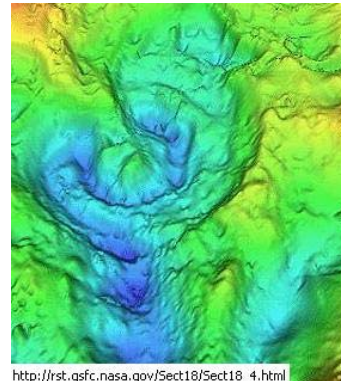


What do we know about the Chicxulub impact?

- Originally proposed by Luis and Walter Alvarez (1979-80) based on Iridium anomalies found in an ash layer in Italy, and subsequently throughout the world.
- Occurred at around 65 mya, possibly in conjunction with a multiple-impact episodes over hundreds of thousands years that essentially brought the Cretaceous period of the dinosaurs to an end.
- These findings led to an extensive search for a large impact crater that is 65 million years old. Seven researchers finally located the impact site on Mexico's Yucatan Peninsula (early 1990's).
- It is a huge buried impact crater that is called Chicxulub, a Maya word that roughly translates as "tail of the devil." The crater is approximately 150-300 km wide, lies buried beneath a kilometer-thick sequence of sediments, and has been imaged using geophysical techniques.
- The asteroid or comet that produced the Chicxulub crater was about 10-20 km in diameter. When an object that size hits Earth's surface, it causes a tremendous shock wave while transferring energy and momentum to the ground.
- The energy of the impact is estimated to be 6 million times more energetic than the 1980 Mount St. Helens volcanic eruption. The shock of the impact produced magnitude-10 earthquakes, greater than the magnitude of any we have ever measured in modern times.
- Geological and geophysical evidence collected over the last few years now suggests that Chicxulub could be the largest impact basin to form on Earth in the last billion years or so. (Eos, Vol. 76, December 26, 1995)

- The trajectory of impact has been estimated to be at about 20-30° with respect to the surface of the Earth and directed from the SE to NW based on atmospheric models of wildfire generation, fern spikes in the paleontology record, and the geometry of the impact crater



Note: The above material is adapted from: Discovering the Impact Site:
http://www.lpl.arizona.edu/SIC/impact_cratering/Chicxulub/Discovering_crater.html