

By: Stephen 09/12/08 Science Editor

## [Further Evidence of an American Armageddon 12,900 Years Ago. When's the Next?](#)

### *The black mat*

Only a skilled space driller like Bruce Willis could have saved the mammoths and Ice Age Americans about 12,900 years ago. Scientists tried to explain the mammoths' disappearance by human overhunting, climate change and disease, but there is an increasingly plausible hypothesis stating that a comet or low-density meteorite exploded in the planet's upper atmosphere, causing a devastating wave of destruction that killed most of the large animals (megafauna), their habitat and human populations. This is enhanced by a new American-Dutch-Hungarian research. "The detonation either fried them or compressed them because of the shock wave. It was a mini nuclear winter." said co-author Ted Bunch, Northern Arizona University adjunct professor of geology and former NASA researcher specialized in impact craters. A giant crater has not been found, but recently, proofs have been discovered of a comet, 2.5 -3 mi (4-5 km) wide, that exploded 30 to 60 mi above the earth and determining a massive shockwave, firestorms and a cooling effect across most of North America and northern Europe. "The comet may have broken up into smaller pieces as it neared the Earth and then these pieces detonated in various places above two continents," said Bunch. The multiple detonations are revealed by a four-inch (10 cm)-thick "black mat" of carbon-rich material encountered from Canada, Greenland and Europe to as far south as the Channel Islands (off California), South Carolina and Arizona (at Murray Springs and Lehner Ranch, both close to Sierra Vista). Beneath the black mat, there are fossils and clues pointing to the existence of megafauna and Clovis populations, which are totally within or above it. "Some animals may have survived in protected niches." said Bunch. The black mat appeared by ponding of water and algal blooms and is made of carbon, soot and glassy carbon (burned materials), some of extraterrestrial origin, like fullerenes, carbon spheres like a soccer ball, produced in shock events outside the Earth's atmosphere. Fullerenes have a helium 3 concentration many times higher than that in the Earth's atmosphere. The black mat also have nanodiamonds, which appear in the interstellar medium out of the solar system, as a result of powerful blasts. "Either these things came in with the impactor or they were made during impact detonation. We have no other explanation for their presence. A hydrogen bomb is the equivalent of about 100 to 1,000 megatons. The detonations we're talking about would be about 10 million megatons. That's larger than the simultaneous detonation of all the world's nuclear bombs past and present.", Bunch said. The team believes that the detonations destroyed the huge Laurentide Ice Sheet, that at the time covered most of Canada and the northern US. The released heat and firestorms could have melted much of the ice sheet, expelling water vapor into the atmosphere. The rapid melt a large portion of the Laurentide ice sheet poured suddenly a high volume of freshwater into the north Atlantic and Arctic Oceans, causing a major disruption of the ocean's circulation, leading to a cooler atmosphere and the Younger Dryas (Dryas is a cold climate tundra herb) period, a time of sudden cooling of about 1,000 years at the beginning of the current warm interglacial period, when the Ice Age approaching its ending. "The result was rapid cooling of about eight degrees over the next 100 years," Bunch said. The massive melting and subsequent climate change could explain the watery nature of the black mat. Armageddons are frequent in Earth's history. A much larger asteroid could have wiped out dinosaurs and 85 % of the Earth's species 65 million years ago. In 1908, the Tunguska meteorite exploded with a power of 10-15-megatons, destroying tens of millions of trees over 800 square miles (2,000 square km) in the Siberian forest. "Impact airbursts may be more common than previously thought with possibly two or three such events having occurred over the last 100,000 years. And more are sure to follow." said Bunch. Other studies came with proofs offered by marine sediments and ice cores. In over 12 archaeological sites in North America, scientists discovered high levels of iridium, a rare element on Earth, almost exclusively associated with space bodies like comets and meteorites, but also metallic microspherules typical to comet fragments.