

Greenland's Ancient Impact

A circular region more than 100 km in diameter on the southwest coast of Greenland bears the footprint of a massive impact that occurred about 3 billion years ago.

Adam Garde of the Geological Survey of Denmark and Greenland in Copenhagen and his colleagues analysed evidence of intense crushing and heating in a formation

whose features would have been buried about 25 km below Earth's surface at the time of impact. In a central area 35-50 km in diameter, all pre-existing rock structures were destroyed and partly melted. The authors also found evidence of fracturing, deformation and some melting within a diameter of 100-140 km.

Large impacts were common early in Earth's history, but much of the evidence has been eroded by climate and tectonics. The authors suggest that the Manitsog structure, which they named after the nearest town, is the oldest and largest impact structure on record. – *EPSL*: [dx.doi.org/10.1016/j.epsl.2012.04.026](https://doi.org/10.1016/j.epsl.2012.04.026) (2012)