

Ancient space rock may have helped life

Geological evidence from South Africa's Barberton Greenstone Belt suggests the impact of a huge meteorite boiled the oceans, but also helped early lifeforms to thrive on Earth

About 3.26 billion years ago: Meteorite called S2 collides with Earth at speed of 20km per second

Impact: Extreme energy released by S2 drives 10.8 magnitude earthquakes and tsunami that flushes debris from land to coastal areas

Heat from impact: Causes top layer of ocean to boil off

Thick cloud of dust blankets globe, shutting down any photosynthetic activity

Elemental iron is likely stirred up from deep ocean into shallow waters. Phosphorus is delivered to Earth by meteorite itself

Atmosphere

Bacterial life: Unicellular organisms feed off iron and phosphorus

Ocean

Iron-rich sediment

