



A SUPERNOVA IS A **STELLAR EXPLOSION**. SUPERNOVAE ARE EXTREMELY LUMINOUS AND CAUSE A BURST OF RADIATION THAT OFTEN BRIEFLY OUTSHINES AN ENTIRE GALAXY OVER SEVERAL WEEKS OR MONTHS. DURING THIS INTERVAL, A SUPERNOVA CAN **RADIATE** AS MUCH ENERGY AS THE SUN OVER ITS ENTIRE LIFE SPAN. THE EXPLOSION EXPELS MUCH OR ALL OF A STAR'S MATERIAL AT UP TO A 1/10 THE SPEED OF LIGHT, DRIVING A SHOCK WAVE INTO THE SURROUNDING INTERSTELLAR MEDIUM.

A NEAR-EARTH SUPERNOVA, OCCURRING FEWER THAN 100 LIGHT-YEARS FROM EARTH, CAN HAVE NOTICEABLE EFFECTS ON OUR BIOSPHERE. THIS HAS BEEN PROPOSED AS THE CAUSE OF THE **END ORDOVICIAN EXTINCTION**, WHICH RESULTED IN THE DEATH OF NEARLY 60% OF THE OCEANIC LIFE ON EARTH 450 MILLION YEARS AGO. THE WHALES, SADLY, WERE NOT SAVED.