

CASSIOPEIA A

WHO: Cassiopeia A (Cas A) is a relatively young supernova remnant in the Milky Way galaxy.

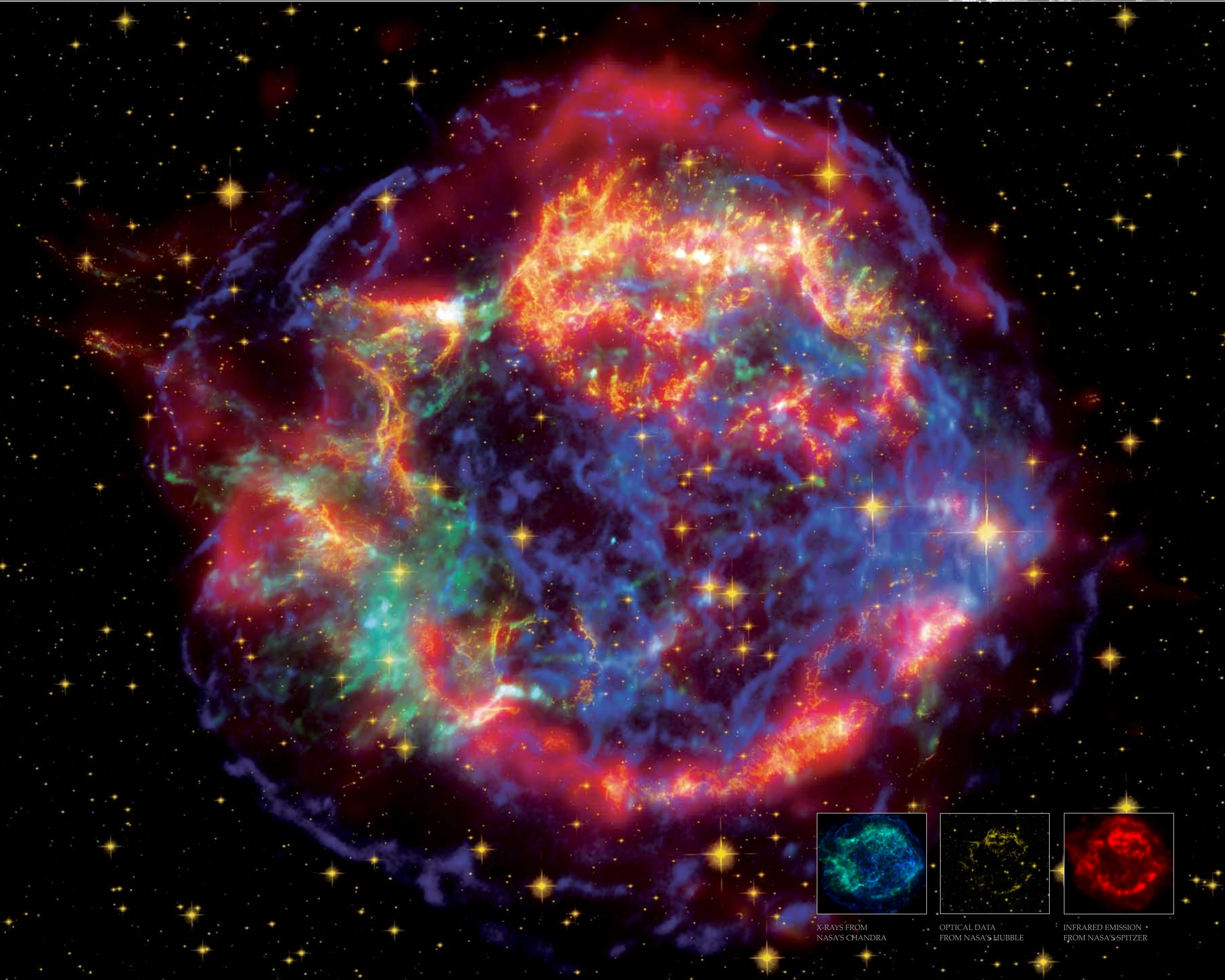
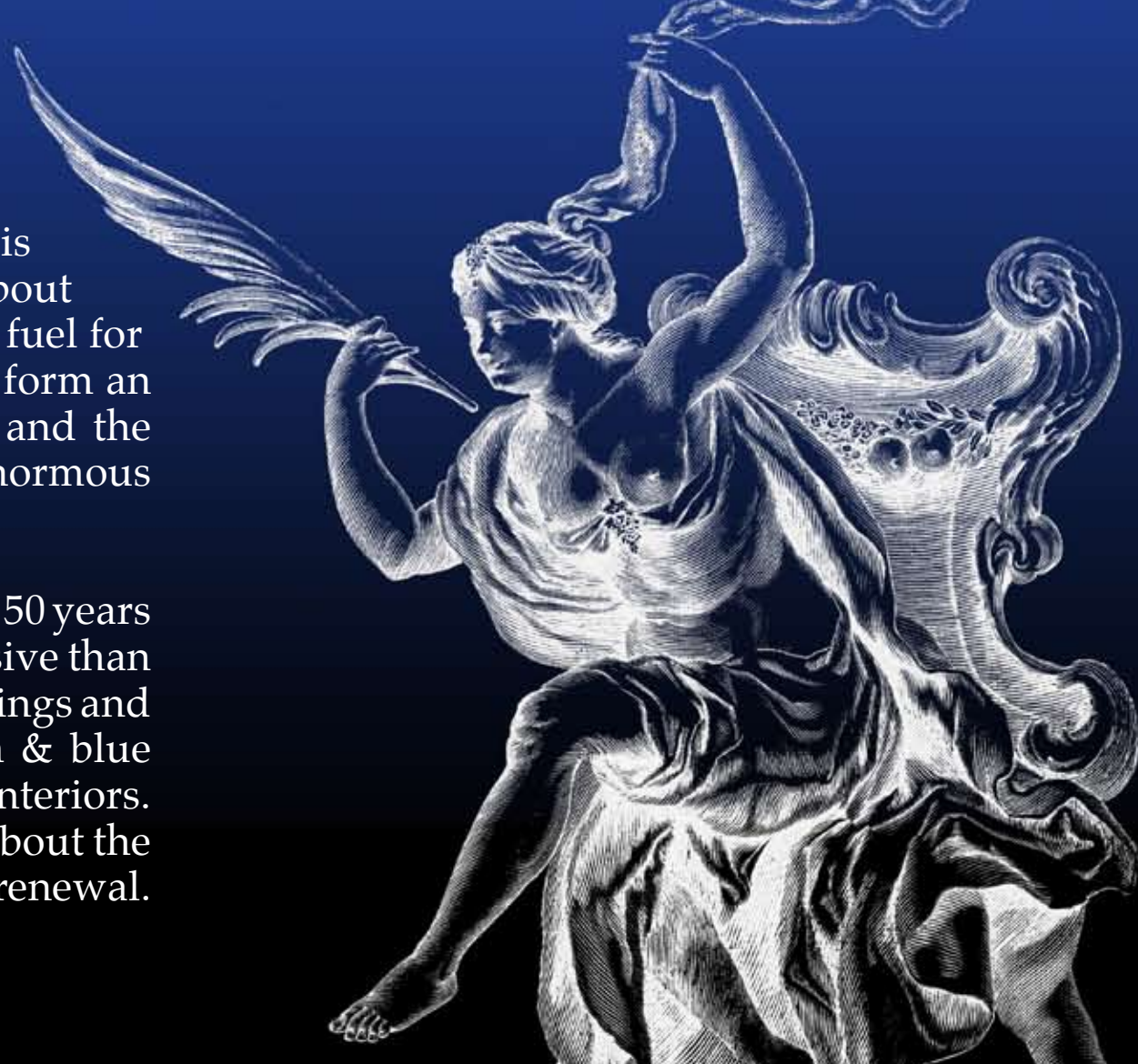
WHAT: A supernova remnant is the expanding debris field of hot gas and energetic particles created when a massive star explodes.

WHERE: Cas A, at a distance of 11,000 light years from Earth, is in the constellation Cassiopeia. This constellation is widely known for its "W" shape that Greek and Roman mythology identified as a queen's throne.

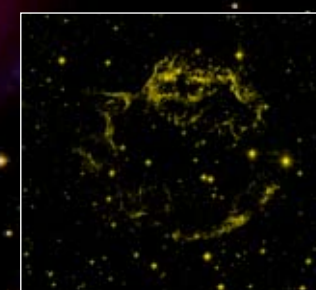
WHEN: Although the exact date is uncertain, this supernova would have appeared in the night sky about 330 years ago.

HOW: The supernova that created Cas A is thought to have occurred when a star about 25 times as massive as the Sun ran out of fuel for nuclear power. Its core then collapsed to form an ultra-dense object called a neutron star, and the outer layers of the star were ejected at enormous speeds (see illustration below).

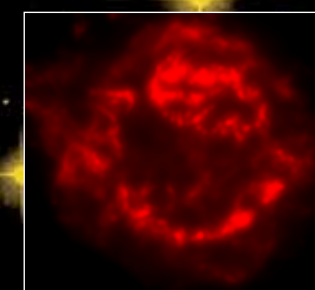
WHY: Supernovas occur about once every 50 years in the Galaxy when stars much more massive than our Sun die. They energize their surroundings and disperse the heavy elements (e.g., green & blue in the image) forged within these stellar interiors. Supernova remnants reveal information about the grand Galactic drama of life, death and renewal. More at: <http://chandra.harvard.edu>



X-RAYS FROM NASA'S CHANDRA



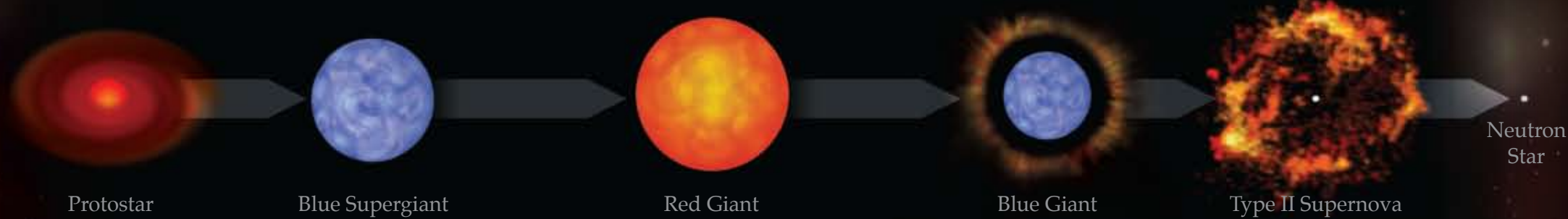
OPTICAL DATA FROM NASA'S HUBBLE



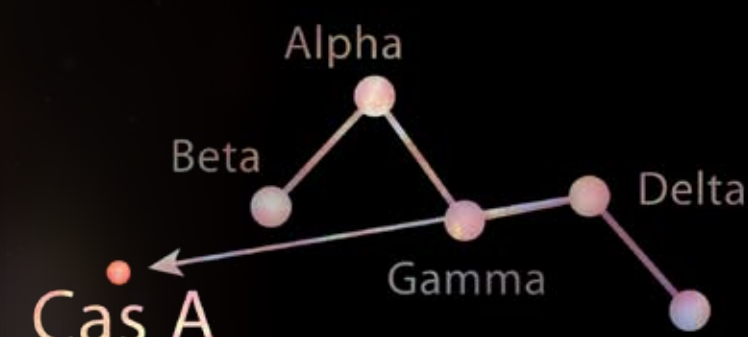
INFRARED EMISSION FROM NASA'S SPITZER

Stellar Nursery

ILLUSTRATION OF STELLAR EVOLUTION PATH



Stellar Nursery



CONSTELLATION CASSIOPEIA