Every 50 years or so, a star in our Galaxy blows itself apart in a supernova explosion and produces a spectacular light show. Supernovas are rare events in our Milky Way galaxy, and they are best studied by combining historical observations with astronomical information from today. This cosmic forensic work ... research by historians and astronomers, providing valuable clues about supernovas in our Galaxy in the recent past.

Historical observations were made using visible light, but today the material from the destroyed star can be studied using telescopes in other parts of the electromagnetic spectrum. Chandra X-ray Observatory and other telescopes show the remnants of historic supernovas that occurred in our Galaxy.

Although telescopes had yet to be invented, Tycho Brahe, a Danish astronomer, used an array of instruments to make ... doctrine of the incorruptibility of the stars, and set the stage for the work of Kepler, Galileo, Newton and others.

Other relatively secure identifications include supernovas observed in 1006 and 1054 A.D. Supernova 1006 was the brightest supernova ever seen on Earth, outshining Venus. It was visible to observers in China, Japan, and Europe. Early Europeans interpreted the explosion ... a sign of divine intervention. It might have been the explosion that produced Cas A, but this identification is controversial.

Why go to all of this trouble? Supernovas are extremely important for understanding the history of the Universe and the evolution of stars. By studying the remnants of supernovae, scientists can learn more about the conditions under which stars form, how stars evolve, and how elements are synthesized and dispersed back into the interstellar medium. This ... to formation of rocky planets and the emergence of life. By understanding supernovas, we help to understand ourselves.

www.nasa.gov  
http://chandra.si.edu  
National Aeronautics and Space Administration

Blasts from the Past!  
HISTORIC SUPERNOVAS

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Observers</th>
<th>Likelihood</th>
<th>Distance Estimate</th>
<th>Type</th>
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<tr>
<td>A.D. 1006</td>
<td>SN 1006</td>
<td>Chinese, Japanese, Arabic, European</td>
<td>Definite</td>
<td>7,000 light years</td>
<td>Thermonuclear explosion of white dwarf</td>
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<td>Pa30</td>
<td>Chinese, Japanese</td>
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<td>Tycho's SNR</td>
<td>European, Chinese, Korean</td>
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<td>Kepler's SNR</td>
<td>European, Chinese, Korean</td>
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<td>Definite</td>
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