



## ***Point of View***

The Chandra X-Ray Observatory, launched into orbit around the Earth in 1999, is the largest and most sophisticated X-ray observatory ever constructed. It is the third of NASA's three Great Observatories, along with the Compton Gamma Ray Observatory and the Hubble Space Telescope.

One phenomenon scientists are studying with Chandra are supernovae. Supernova explosions are among the hottest (most energetic) events in our Universe, and thus are intense sources of x-rays. Because x-rays are absorbed by our atmosphere, x-ray information was not available until the development of space-based instruments.

### **Your Task:**

Imagine you are the first astronomers to see these x-ray images. Your task is to use the newly released images from Chandra, along with the older images in the cooler radio, infrared, and visible ranges of the electromagnetic spectrum to study a supernova. How can these different points of view be combined to provide a rich picture of this event?

### **To complete this task, you need to:**

- 1) Examine the 4 images (infrared, radio, x-ray, and visible light) of Cassiopeia A or the Crab Nebula you have been given or accessed through the Internet at: <http://chandra.harvard.edu>.
- 2) Organize your observations into chart(s) or map(s) that will allow you to describe the phenomenon, contrasting as well as combining the information from each image.
- 3) Write conclusions about this supernova event. What do these images, combined, tell you about what is happening? Assume the audience for your remarks consists of a high school science class that you are visiting as a famous guest speaker.