

# A Spitzer Farewell to Supernova 1987A



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## What is the science question?

- What happens to a star's surrounding environment *after* the star explodes in a supernova?

## What are the findings?

- Infrared light (observed by Spitzer) comes from a pre-existing ring of material around the star, *not* the debris from the exploded star itself
- The infrared light rose and then fell during the 16 years of Spitzer mission.
- The collective observations can be processed to show much more detail than can be seen in a single image.

## What was the impact?

- When compared with optical and X-ray observations, we can see how dust is heated and destroyed and how the material between stars — which will build future generations of stars and planets — becomes enriched with elements like oxygen and silicon.

## Why does it matter to non-scientists?

- SN 1987A was the nearest and brightest supernova astronomers observed with modern telescopes and has provided a long-term and detailed look at the effects of this kind of explosion on its surroundings.
- Spitzer monitored this supernova during all its years operating in space.

