



## Second Adventures in Astronomy

### *Supernovae*

#### **David Mitchell:**

Sixty second adventures in astronomy. Number two supernovae.

One of the most mind-blowing events in the universe is the explosion of a star.

In 1054 CE Chinese astronomers spotted one so bright they could see it in daylight.

Today you can still see a cloud of gas and dust from the same explosion - And because a drawing of it looked like a crab, it was called the Crab Nebula.

Much like a supercharged lighthouse, the centre of the star, now a neutron star, spins thirty times a second and sends out a beam of radiation.

Several thousand of these have been discovered, each about twenty kilometres across, but with a mass similar to the Sun.

If we could imagine a cupful of neutron star matter it would weigh a hundred billion tonnes.

But supernovae are more than just impressive bangs. Life forming elements like carbon and oxygen were created inside stars.

And the explosion of the star creates even more elements like gold and platinum, to create generations of stars and planets. And a variety of attractive ornaments.

So in a way, everything is made of stardust. But luckily it's not all quite as dense as a neutron star.