

# Big, bright star faces supernova explosion

## Eruptions, dimming hint at likely event

BY PAUL RECER

SEATTLE — One of the brightest and biggest stars in the heavens is going through a series of eruptions and dimming that may lead eventually to a supernova explosion, astronomers say.

The star, Rho Cassiopeia, is a hypergiant with 20 to 40 times the mass of the sun. It puts out a half-million times more light than the sun and can easily be seen from Earth even though it is 10,000 light years away.

But Rho Cas, as it is called, is a seething, unstable ball of gas that expands and contracts over time and occasionally erupts with a violence that sends immense amounts of matter streaming through space.

Astronomers at the Harvard-Smithsonian Centre for Astrophysics captured images of such an explosion in 2000 and reported their observations yesterday

the brightest stars in the universe, and then it dimmed, dropping in brightness by two magnitudes, a measure of a star's brightness.

"An atmospheric shell was shredded by the blast wave and sent into space at Mach 4 (four times the speed of sound)," said Alex J.R. Lobel, also of Harvard-Smithsonian.

The astronomers estimated that Rho Cas blasted mass equal to 10,000 Earths into space.

"This is a higher rate of loss than has been seen on any other star," said Mr. Lobel.

Based on a spectral analysis of the light, which can determine temperature, Mr. Lobel said the star cooled by more than 1,650 degrees C within a short period of time.

All of this activity suggests that Rho Cas is nearing the end.

"These stars live only a few million years and it is in the late stages of its evolution," said Mr. Lobel. This is in contrast to main sequence stars, such as the sun, that will burn for more than 10 billion years.

# Bri seize arres Suspecte

BY BRUCE W

LONDON — British police seized small deadly poison ricin netted six suspected

An unknown suspect along with suspicious apartment occupier German men taken in a police sweep earlier in laboratories stanc as ricin, and that an cause dea

The men, who teens to 30s, charged. A woman rais was later re

Police would n lined to any ter

J.S. media re the CIA and th