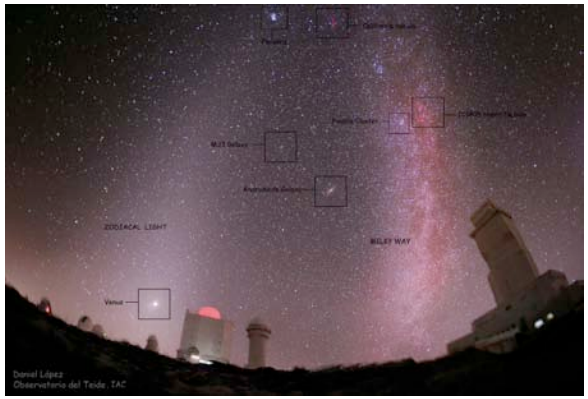
Thursday, February 12, 2009

First sky watch extra credit due Tuesday, February 17

Astronomy in the News?

National Science Foundation gets an extra $3B in Stimulus Bill.

Pic of the Day - Zodaical light, scattering from dust in solar system plane, and Milky Way, stars in the disk of our Galaxy



# Sky Watch Extra Credit

Due Tuesday, in Class

Must be typed on regular 8-1/2x11 paper

See web site for more details, or ask!

See web site for star charts to help guide you where and when to look.

Part of the exercise is to learn how to orient yourself and recognize objects and patterns in the sky.

Observe each object only once, but it is never too late to add a missed object to later reports.

You do not have to know about Right Ascension and Declination, but you do need to report what time you see an object or constellation and how far it is above the horizon in what direction (which is the same thing, only less formal).

# Sky Watch

***Objects mentioned so far:***

Cat's Eye Nebula, planetary nebula in constellation Draco

Sirius - massive blue main sequence star with white dwarf companion

Algol - eclipsing binary system in Perseus

***Other suggestions:***

Castor, Rigel - massive blue main sequence stars

Capella, Procyon - on their way to becoming red giants

Betelgeuse, Aldebaran - red giants

Other examples of these sorts of objects…

Sky Watch

Dwarf Novae:

SS Cygni - brightest dwarf novae in the sky, but a bit too dim for naked eye. In constellation Cygnus, tough this time of year.

U Geminorum - in the constellation Gemini

Sky Watch

Classical Novae:

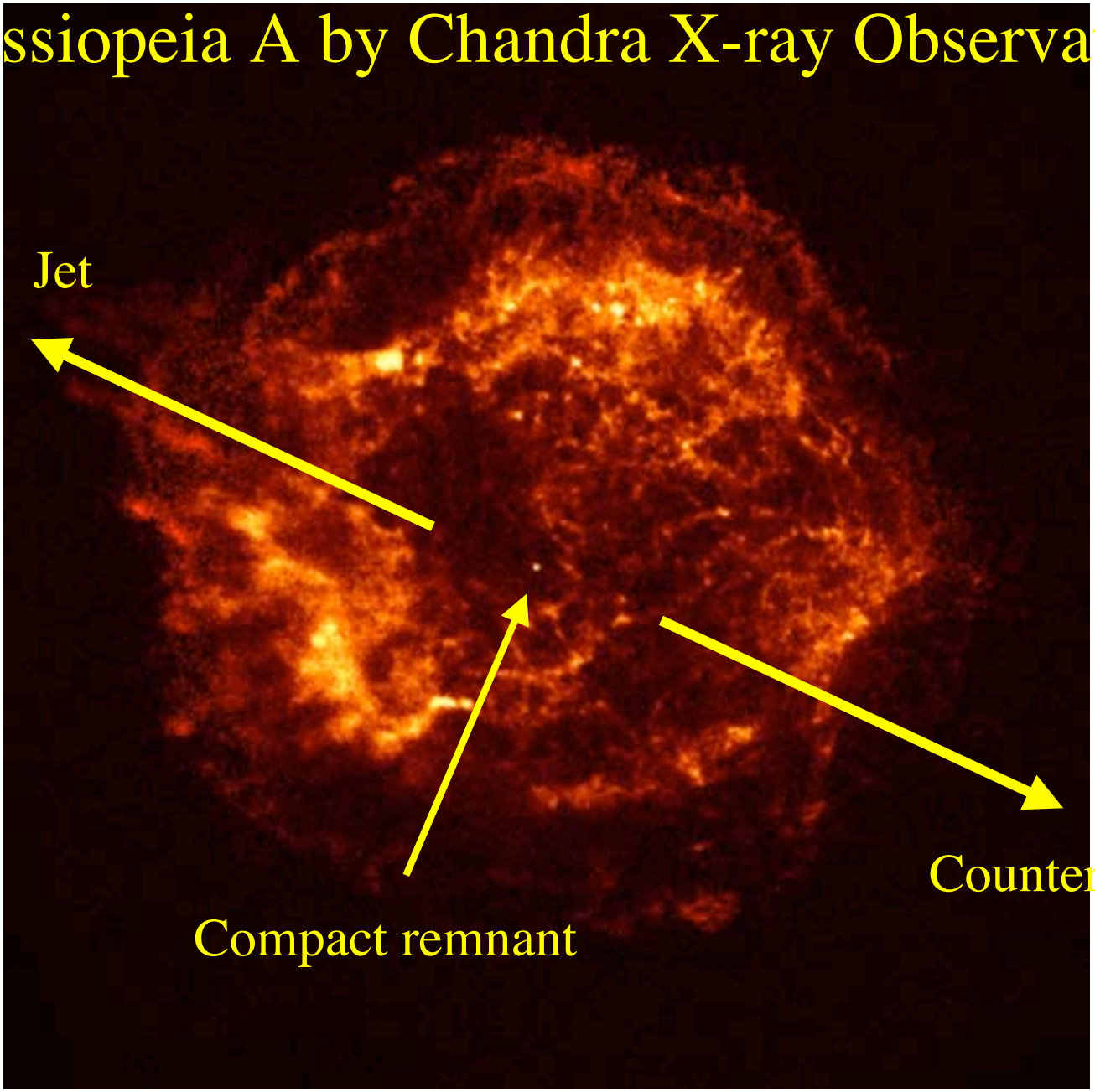
CP Pup, toward constellation Puppis in 1942

Pup 91, another toward Puppis in 1991 (not same place in our Galaxy, just accidently off in the same approximate direction)

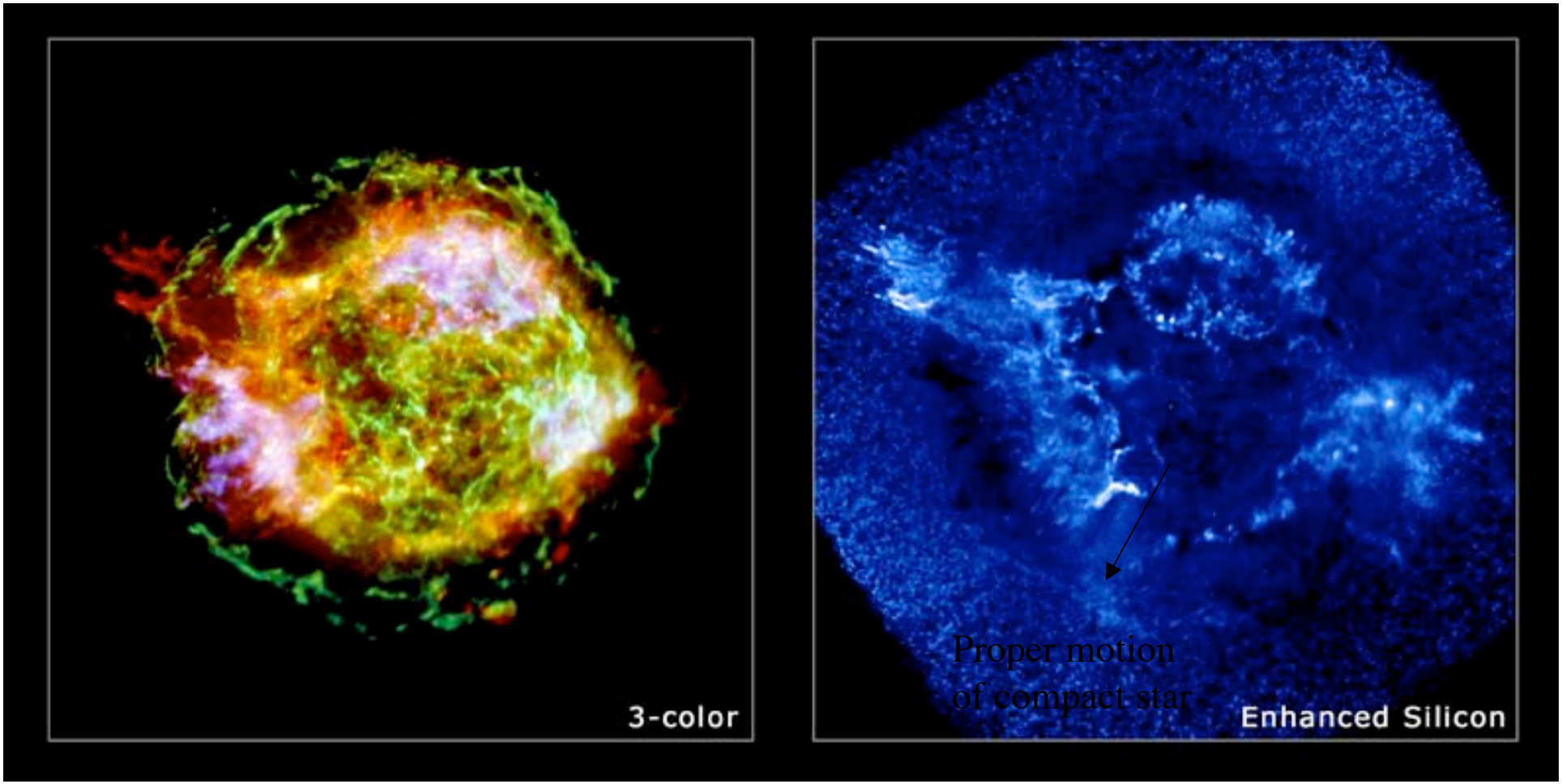
QU Vul, toward constellation Vulpecula, white dwarf composed of Oxygen, Neon, and Magnesium rather than Carbon and Oxygen.

GK Per toward constellation Perseus - has had both a classical nova eruption in 1901 and dwarf nova eruptions.

# Cassiopeia A by Chandra X-ray Observatory



# Recent Chandra Observatory X-ray Image of Cas A

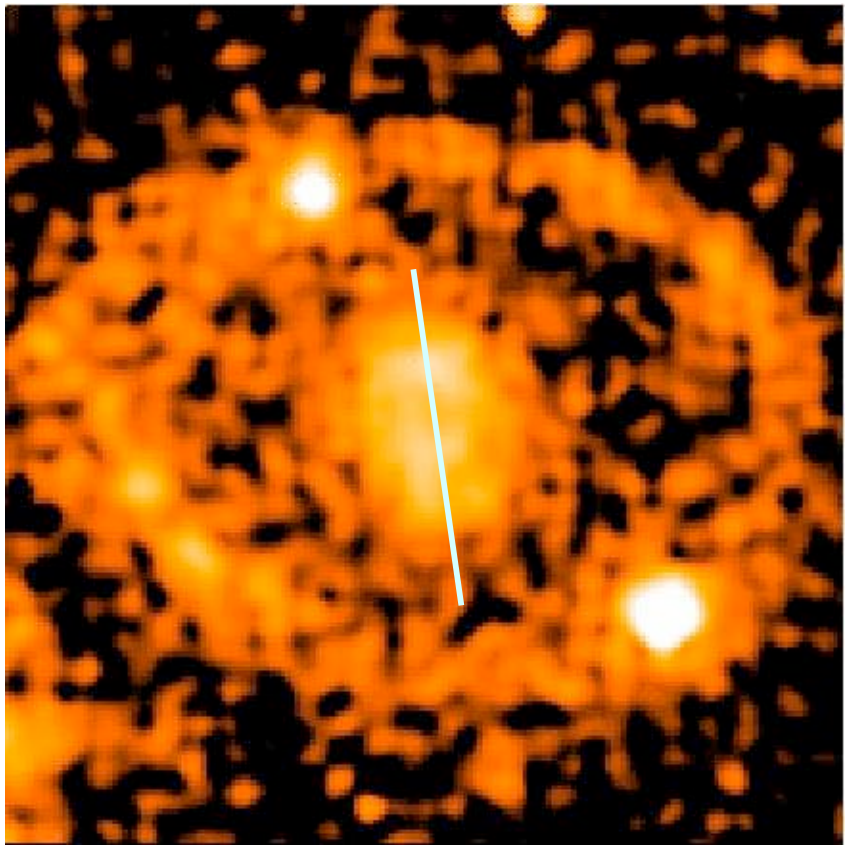


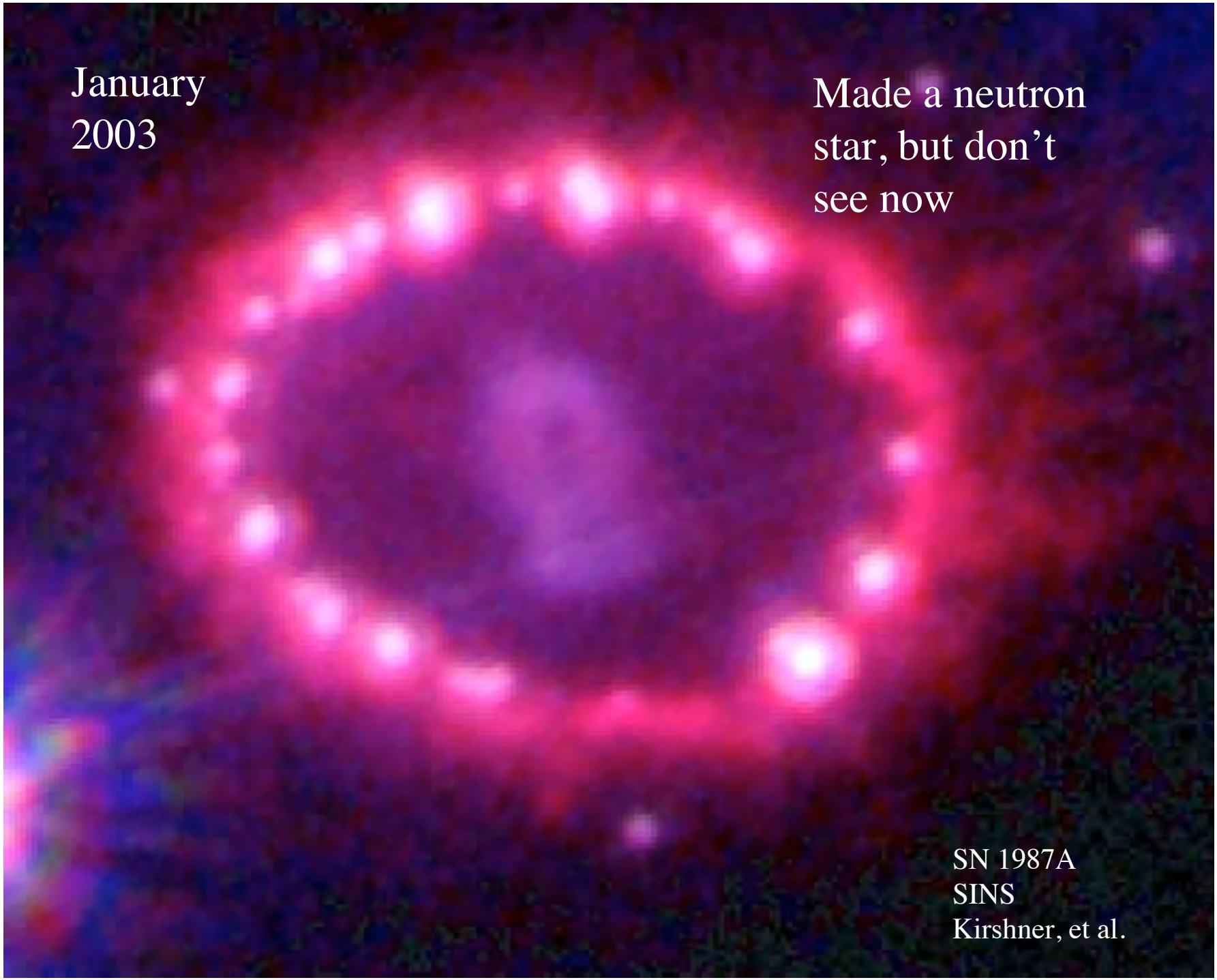
# SN 1987A

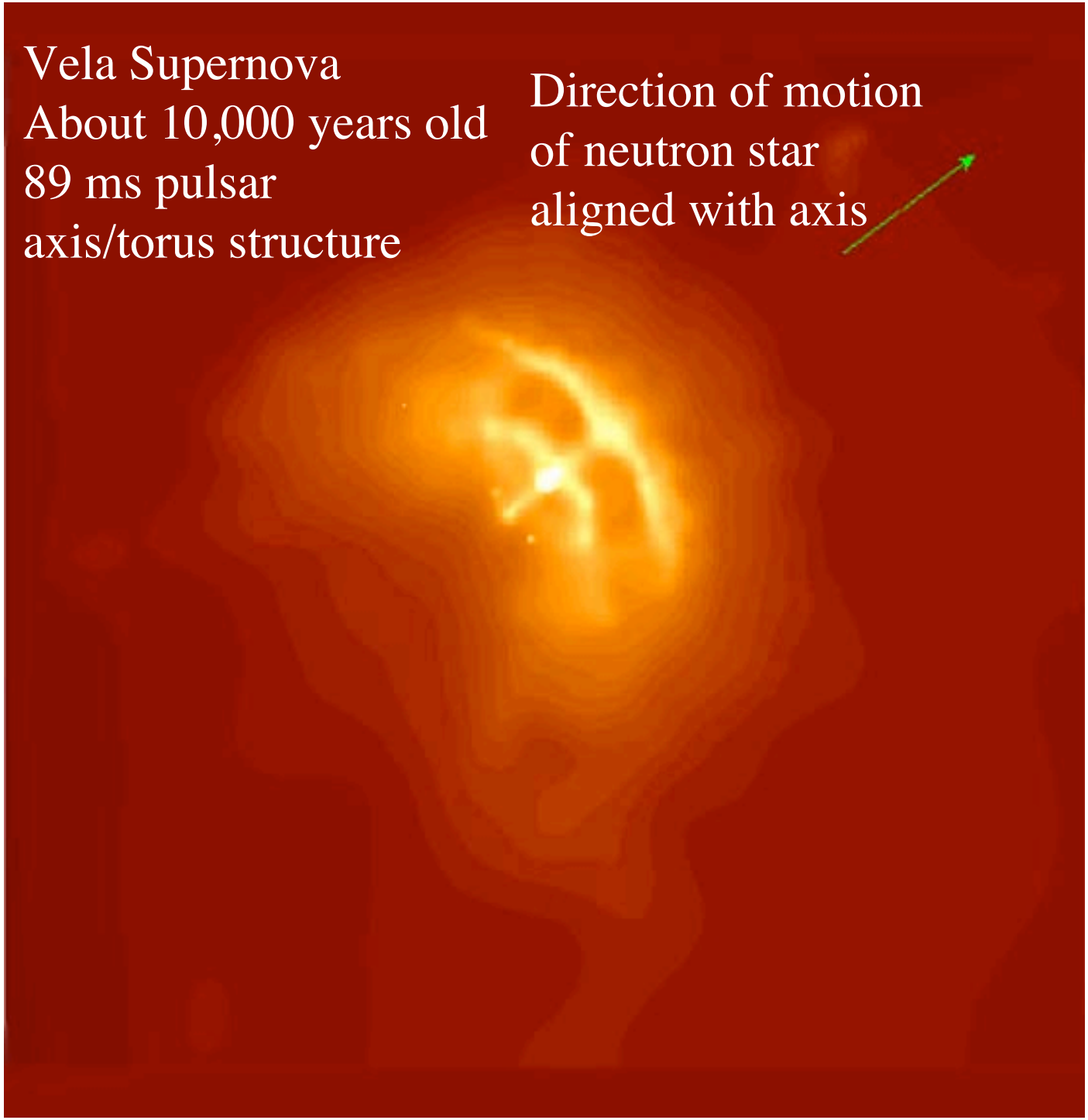
## Exploded in nearby galaxy

Bi-polar symmetry


Elongated debris




January
2003
Made a neutron
star, but don't
see now
SN 1987A
SINS
Kirshner, et al.


Vela Supernova
About 10,000 years old
89 ms pulsar
axis/torus structure
Direction of motion
of neutron star
aligned with axis