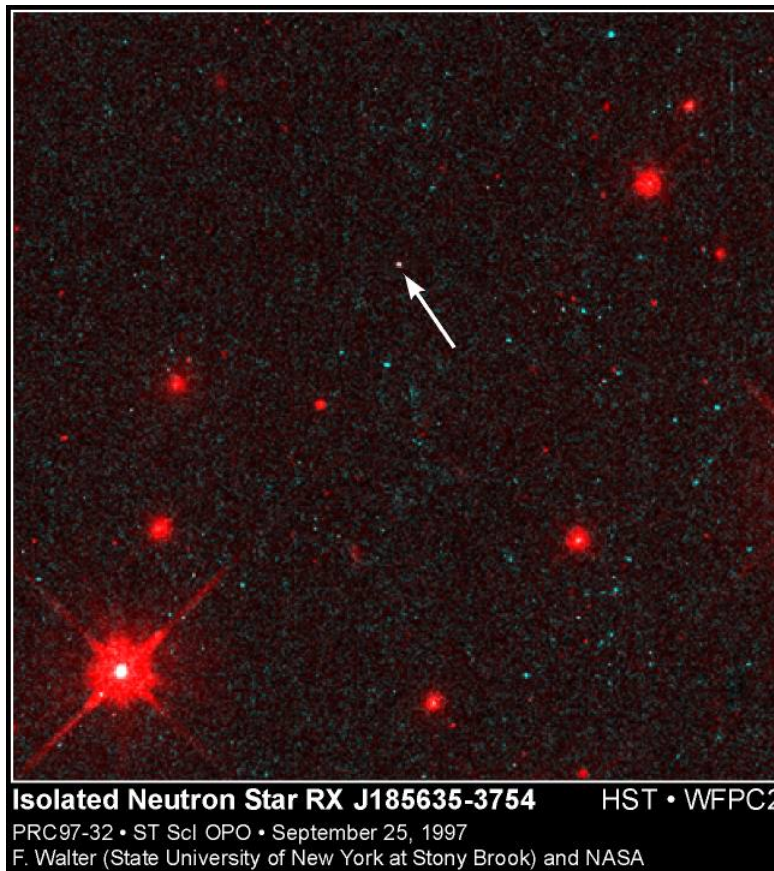


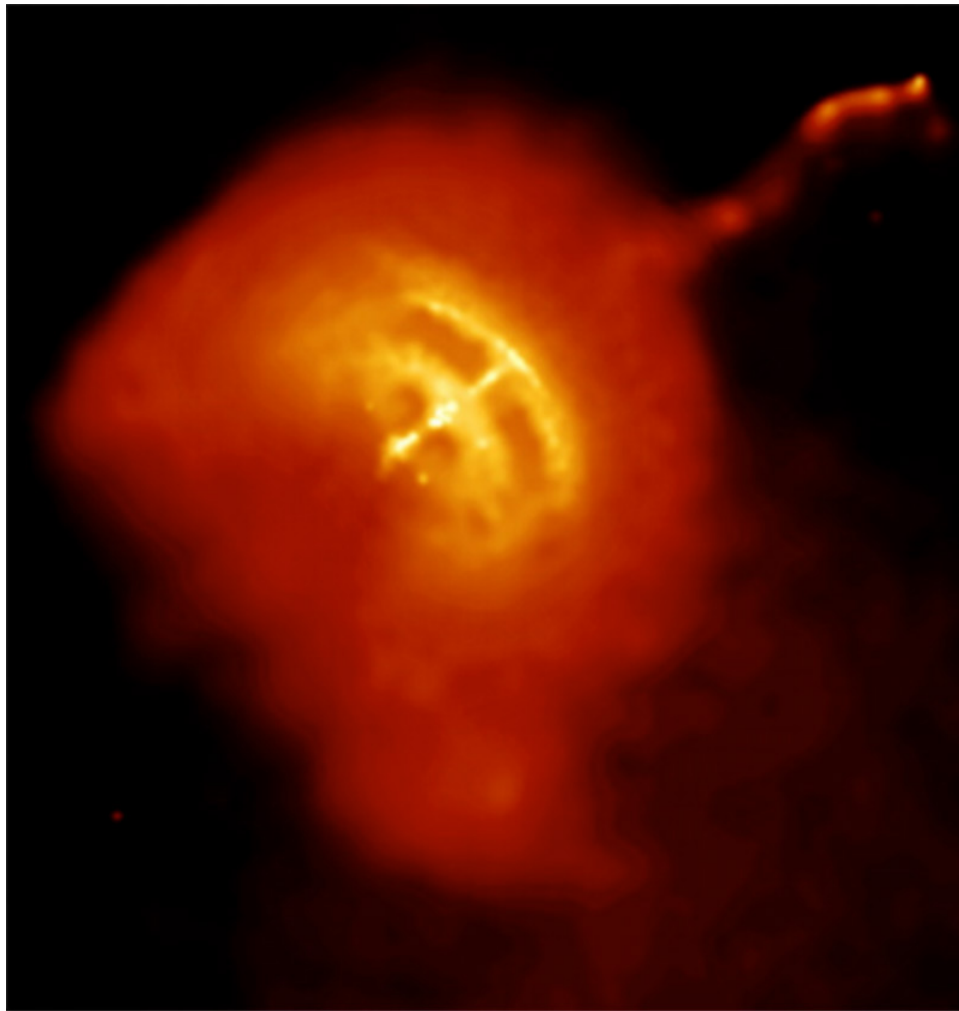
12.12: Neutron stars

Neutron stars are the spheres of neutrons created by the collapse of the iron core in a massive star supernova; roughly **10 miles** in diameter. The concept of a neutron star was first proposed in 1934 by Walter Baade and Fritz Zwicky, a year after the announcement of the discovery of neutrons. Neutron stars are composed completely of neutrons, and neutron stars are dim and intensely hot, and held together due to the gravitational attraction.

There are objects related to neutron stars. **Binary Neutron Stars** are two neutron stars orbiting each other. It is estimated that about 5% of all neutron stars are a part of a binary system. Pulsars – short for pulsating radio star – are rapidly rotating radio source and a type of neutron star. **Pulsars** were discovered in 1967 by Jocelyn Bell and initially called LGM – **Little Green Men** – due to the regular electromagnetic radiation released from the pulsar. A small fraction of pulsars only emit gamma rays.



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