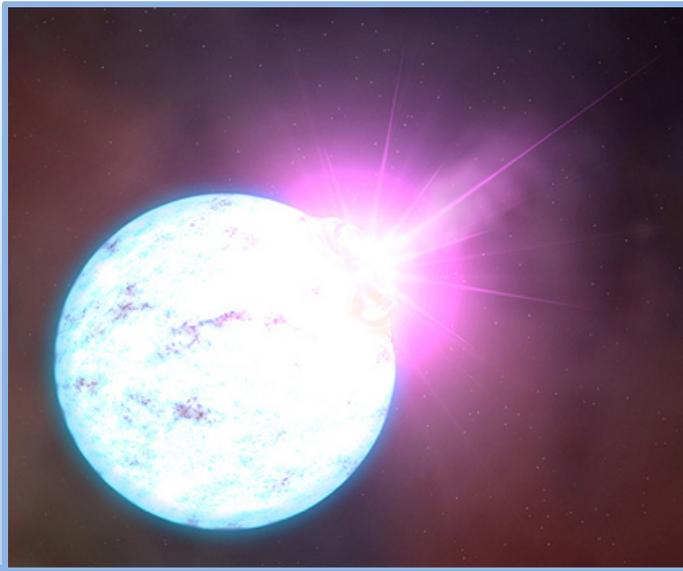
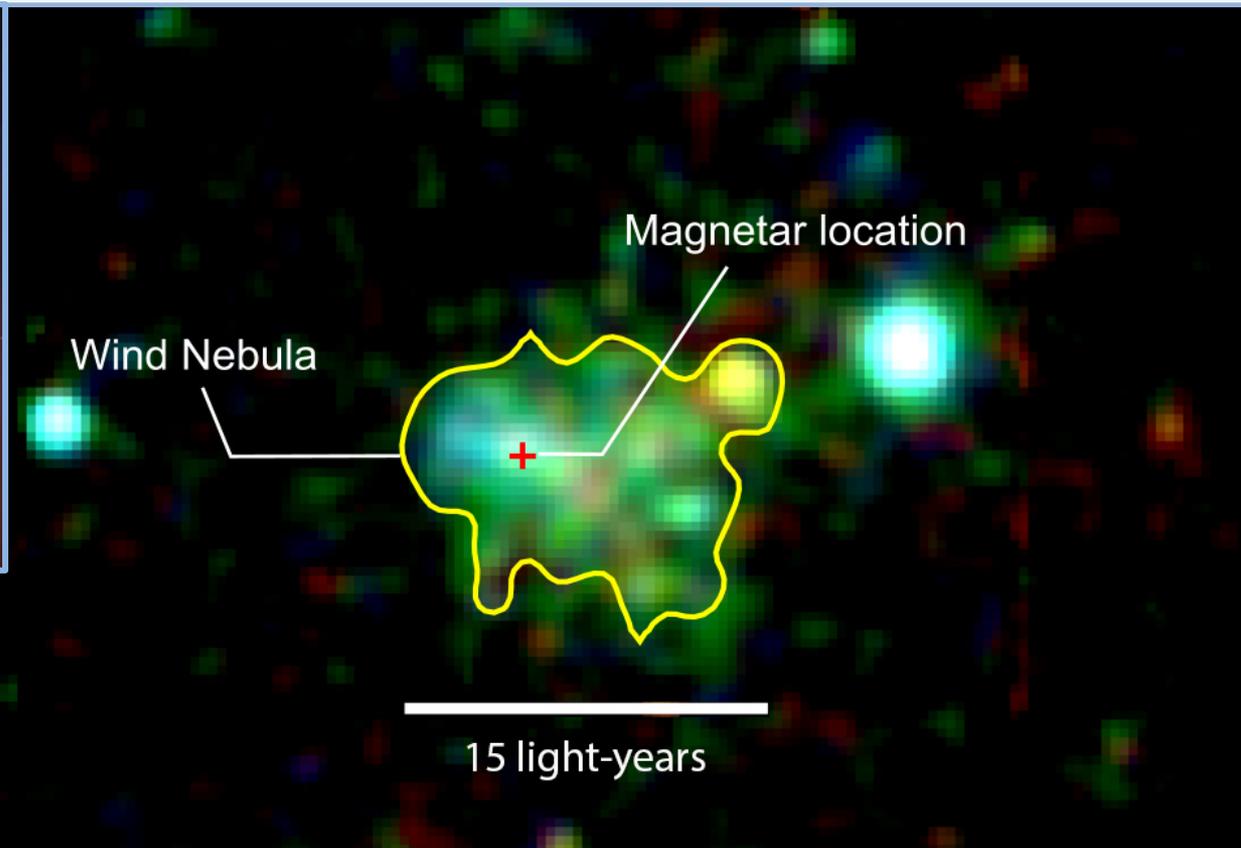


First Pulsar Wind Nebula Around Magnetar



Swift JJ1834.9–0846 is one of 29 known magnetars & the first magnetar surrounded by a pulsar wind nebula.

Neutron stars lose rotational energy through a relativistic outflow of particles and magnetic fields -- a “pulsar wind.” Crab Nebula is the best known example.



Why is Swift J1834.9-0846 the only magnetar with a pulsar wind nebula? Why do some supernovae make magnetars while others make ordinary pulsars?

XMM-Newton

