A Multiwavelength View of Fast Rotating Neutron Stars

Since their detection in 1967, neutron stars have been studied extensively at radio wavelengths and higher energies. Some neutron stars are known to spin rapidly and to retain and compress the magnetic field of the progenitor star, reaching very large flux densities at their surface. Such fast rotating neutron stars are referred to as pulsars. They form a co-rotating magnetosphere and generate emission over large parts of the electromagnetic spectrum through processes that are not yet understood in detail.

In this talk, I will give an overview of the multiwavelength characteristics of the Crab pulsar, a pulsar which has puzzled scientists with its unusual emission properties for more than 40 years.