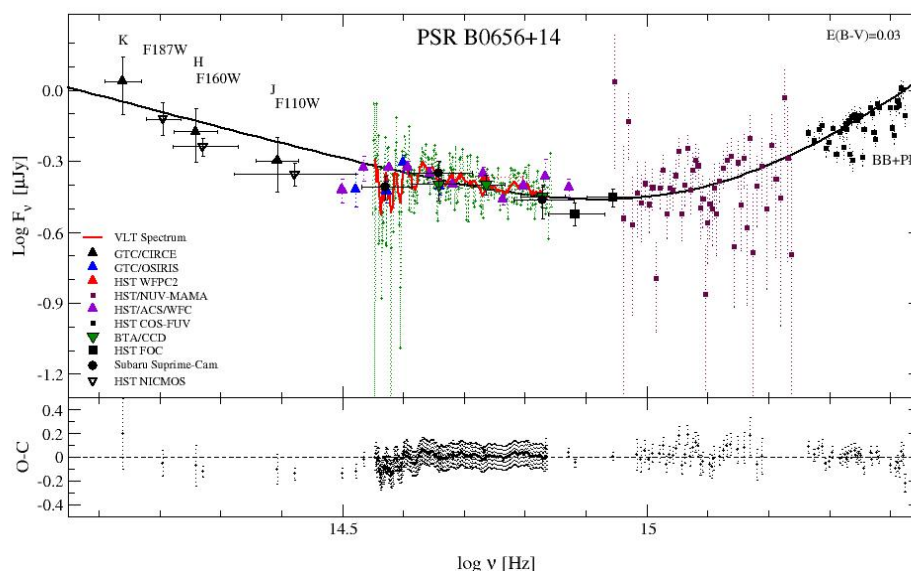


# Seminario

Viernes 16 de Mayo, 2018, 11 hrs (PST), Auditorio IA-Ensenada

## Observations of PSR B0656+14 with the Gran Telescopio Canarias

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Multiwavelength spectra of PSR B0656+14 consist of two main components. The first one is a nonthermal component which is believed to be generated in magnetospheres of the NSs. It dominates the pulsar emission in almost the whole observed range and its spectrum is described by a power law, albeit with different spectral indices in different spectral domains. Multiwavelength properties of this component are important for the study of not yet clearly understood emission mechanisms in magnetospheres of NSs. The second component dominates in soft X-ray and EUV ranges where it is seen as a strong excess over the nonthermal background. It is well described by a blackbody spectrum and this excess is thought to be associated with thermal emission from cooling surfaces of the NSs. The study of this component is of a crucial importance to evaluate the NS surface temperature, to compare it with NS cooling theories and to obtain information on still poorly known properties and the equation of state of super-dense matter in interiors of NSs. The inclusion of an additional high-temperature thermal component assumed to be originated from hot pulsar polar caps appears to improve significantly spectral fits in X-rays. In this report, I will present a general review of the optical study of pulsars and the recent progress of our investigation of the middle age pulsar PSR B0656+14 based on optical and infrared observations obtained using Gran Canarian Telescope.

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