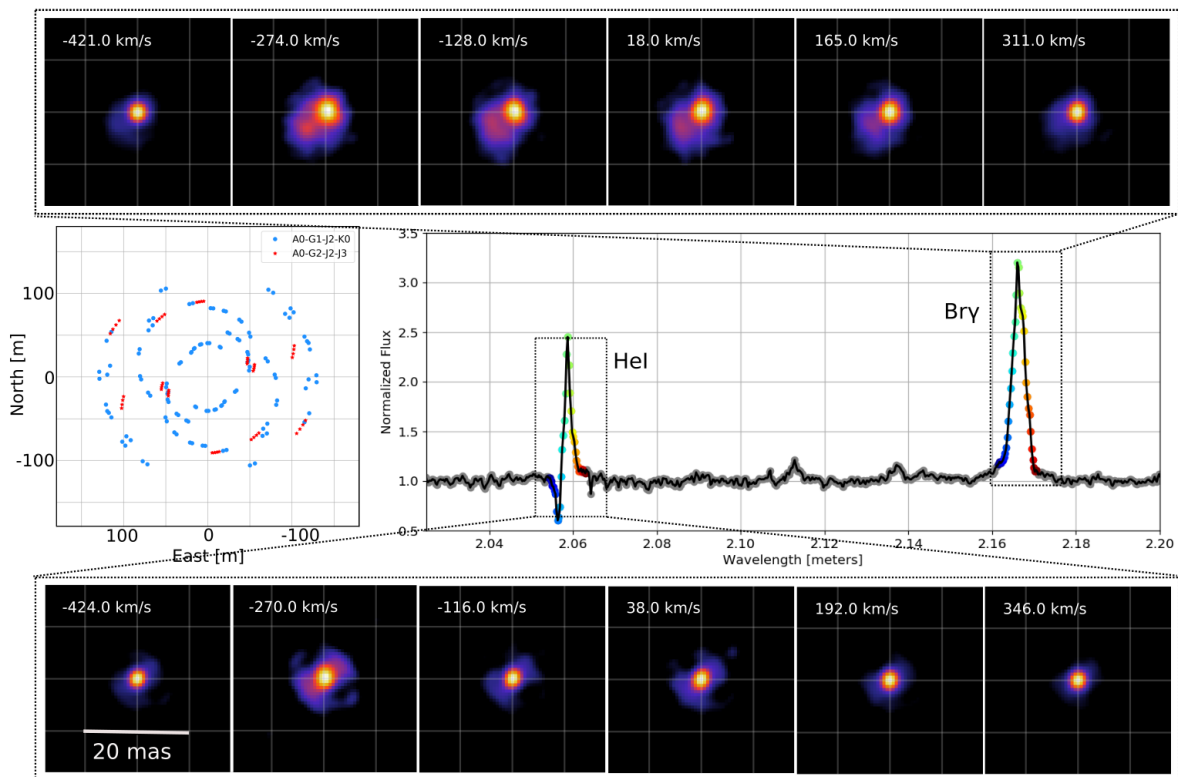


# Seminario

Viernes 06 de Abril, 2018, 11:30 hrs (PST), Auditorio IA-Ensenada

## VLTI - GRAVITY chromatic imaging of Eta Car's core



**Dr. Joel Sanchez (ESO)**

Eta Car is one of the most massive, and intriguing, Luminous Blue Variables known. In its core resides a binary with a 5.54 years orbital period. Visible, infrared, and X-ray observations suggest that the primary star exhibits a very dense wind with a terminal velocity of about 400 km/s, while the secondary shows a much faster and less dense wind with a terminal velocity of 3000 km/s. The wind-wind collision zone at the core of Eta Car is thus a complex region that deserves a detailed study to understand the effect of the binary interaction in the evolution of the system. In this talk we will perform a review of the basic principles of the optical/near-infrared interferometry, together with our unique imaging campaign with VLTI - GRAVITY of the Eta Car's core. The superb quality of our interferometric data, together with state-of-the-art image reconstruction techniques, allowed us to obtain, with milliarcsecond resolution, continuum and chromatic images across the Br $\gamma$  and HeI lines in the Eta Car K-band spectrum ( $R \sim 4000$ ). These new data together with models of the primary wind of Eta Car has letting us to characterize the spatial distribution of the dust and gas in the inner 40 AU wind-wind collision zone of the target.