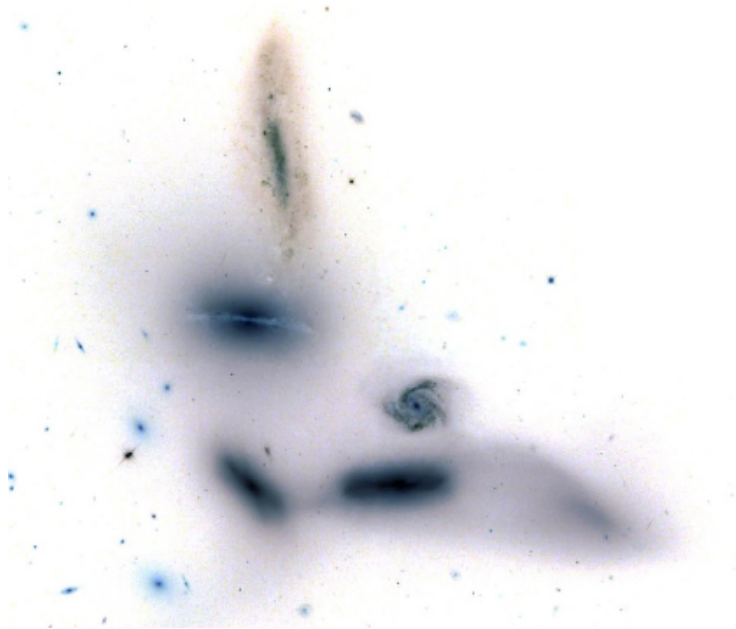


Seminario

Lunes 7 de mayo, 2018, 11 hrs (PST), Auditorio IA-Ensenada

Infall in the Seyfert's Sextet: A Plausible Solution to the Short Crossing Time Problem.



Dr. Omar López Cruz (INAOE)

We combined CALIFA DR3 and multiwavelength data to revisit Seyfert's Sextet (SS, HCG 79). We found that the galaxies H79a, H79b (NGC 6027), H79c, and H79f have low star-formation rates. Synthesis population modeling has allowed us to reconstruct the radial star formation histories (SFH) for each galaxy. We found two episodes of strong star formation common to the four galaxies. We propose that a simple timing argument can be formed, using the episodes of star formation as markers of group crossings. We therefore, suggest that SS has collapsed at least twice in a Hubble time. After the first turn-around the originally gas-rich SS galaxies crossed, tidally induced starbursts or active galactic nuclei (AGN) consumed most of their gas. In addition, the resulting shocks and turbulence forced some gas and dust out of the galaxies. On the second turn-around most mergers would likely be mixed or dry, except for gas-rich galaxies intruding for the first time. This scenario provides a solution for the short crossing time problem in compact groups. That is, compact groups are neither collapsing for the first time nor chance projections.