



Contribution ID: 922

Type: **Parallel session talk**

Searching for High-Energy Neutrinos from Ultra-Luminous Infrared Galaxies with IceCube

Tuesday 27 July 2021 11:00 (15 minutes)

Ultra-luminous infrared galaxies (ULIRGs) have total infrared luminosities that exceed 10^{12} solar luminosities, making them the most luminous objects in the infrared sky. They are mainly powered by starbursts with star-formation rates exceeding 100 solar masses per year, with a possible secondary contribution from an active galactic nucleus (AGN). Both starburst regions and AGN are environments in which hadronic acceleration, and hence neutrino production, is plausible. In this work we present the results of a stacking search for high-energy neutrinos from a representative sample of 75 local ULIRGs using 7.5 years of IceCube data. No significant neutrino excess is found. We therefore report upper limits on the neutrino flux originating from these 75 ULIRGs, and extrapolate these to limits on the full ULIRG source population. We also compare these results with model predictions.

First author

Pablo Correa

Email

pabcorcam@gmail.com

Collaboration / Activity

IceCube Collaboration

Primary author: CORREA, Pablo**Presenter:** CORREA, Pablo**Session Classification:** T01: Astroparticle and Gravitational Waves**Track Classification:** Astroparticle and Gravitational Waves