Contribution ID: **68** Type: **Talk**

3LAC counterparts to IceCube neutrinos above 100 TeV

Thursday, 24 January 2019 14:00 (20 minutes)

High-fluence outbursts in coincidence with IceCube neutrino events have been found for the blazars PKS 1424-418 and TXS 0506+056. Here, we study all 179 3LAC blazars consistent with HESE IceCube neutrinos above 100 TeV and below 1 PeV. Adopting the IceCube neutrino spectral index, we compute the expected neutrino event numbers. We emphasize that the calorimetric photon energy fluxes obtained by integrating over the spectral energy distribution differ by a large margin from the Fermi-LAT fluxes alone.
The resulting neutrino event numbers exceed the IceCube measurements. Therefore we find that if only 3% of the observed electromagnetic high-energy flux is of hadronic origin, blazars can explain all of the HESE events. We also note that the non-detection of many gamma-ray bright blazars is still in agreement with the hadronic blazar model.

Primary author: Dr KRAUSS, Felicia (GRAPPA/API, University of Amsterdam)

Co-authors: Prof. WILMS, Joern (Remeis Observatory/ECAP, University of Erlangen-Nürnberg); Prof. MANNHEIM, Karl (University Würzburg); Mr DEOSKAR, Kunal (Oskar Klein Centre, Stockholm University); Prof. KADLER, Matthias (University Würzburg); Mr KRETER, Michael (Centre for Space Research, North-West University South Africa)

Presenter: Dr KRAUSS, Felicia (GRAPPA/API, University of Amsterdam)

Session Classification: Connection to neutrinos

Track Classification: Main track