

Search for an association between neutrinos and radio-selected blazars with ANTARES

Julien Aublin^{a,*} and Alexander Plavin^b on behalf of the ANTARES Collaboration
(a complete list of authors can be found at the end of the proceedings)

^a*Université de Paris, Laboratoire Astroparticules et Cosmologie, Paris, France*

^b*Lebedev Physical Institute, Moscow, Russia*

E-mail: julien.aublin@apc.in2p3.fr, alexander@plav.in

Executive Summary:

- A positional correlation analysis using VLBI radio-selected blazars and neutrinos from the ANTARES 13yr point source sample is presented.
- A 3σ association with IceCube neutrinos using this VLBI catalog has been recently reported (Plavin et al. 2020, 2021). A complementary search with ANTARES data is therefore an interesting test.
- A simple counting method and a more refined likelihood analysis are performed.
- For the full blazar sample, a 2.3σ excess is found with the counting method, while the likelihood estimation is $p \in [1.6 - 2.0]\sigma$
- Three bright sources with neutrinos in spatial and temporal coincidence with radio emission are investigated in more details.

37th International Cosmic Ray Conference (ICRC 2021)
July 12th – 23rd, 2021
Online – Berlin, Germany

*Presenter