DESY

Particle and Astroparticle Physics Colloquium

TeV neutrinos from a galaxy halfway across the universe.

Tuesday, 4 September 2018, DESY Auditorium,16:45 h

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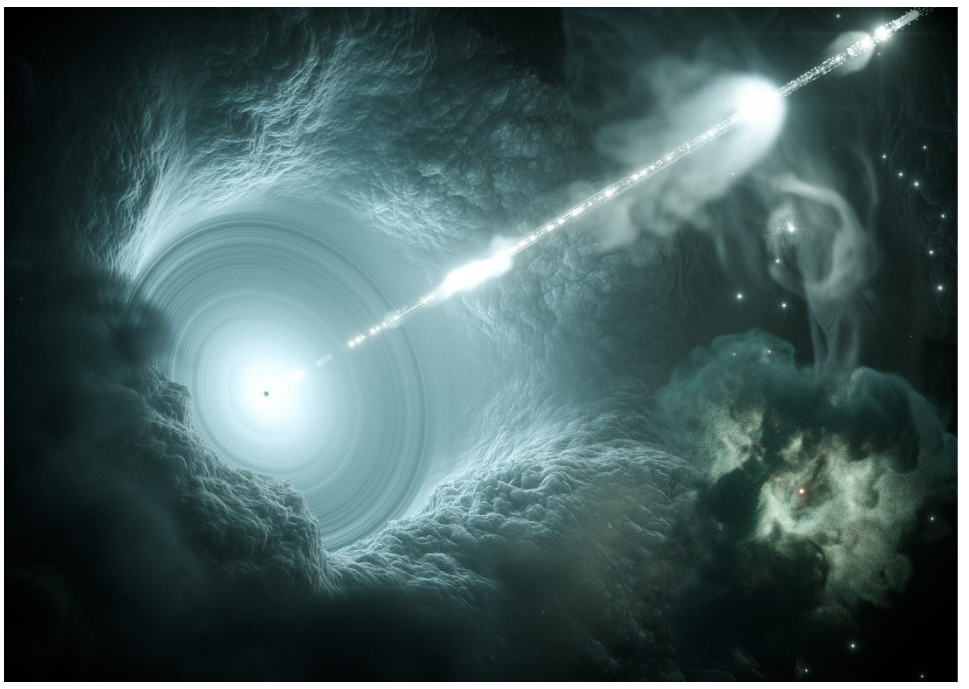

For the very first time, the likely origin of an high-energy cosmic neutrino was located through a joint observation campaign of IceCube, the gamma-ray telescopes Fermi LAT, MAGIC, HESS, VERITAS, as well as multiple observatories covering the electromagnetic spectrum from radio to x-rays. In this campaign strong evidence was found that the source of the neutrino is the bright gamma-ray blazar TXS 0506+056, about 4 billion light years away from Earth. Blazars are galaxies where matter accreting around a massive central black hole produces powerful relativistic outflows pointed towards the Earth. In this talk the results of the observational campaign will be shown, as well as the implications for our understanding of cosmic-ray acceleration and neutrino production in this source.

- **Coffee, tea and cookies will be served at 16:30h**
- **After the colloquium there is a chance for private discussions with the speaker over drinks and pretzels**