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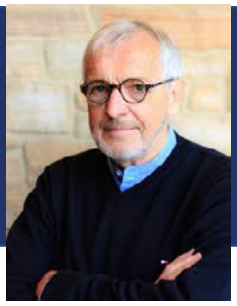

Professor Francis Halzen

(Wisconsin IceCube Particle Astrophysics Center and the Department of Physics, University of Wisconsin-Madison)

IceCube: Opening a New Window on the Universe from the South Pole

The IceCube project transformed a cubic kilometer of natural Antarctic ice into a neutrino detector that detected more than 100,000 neutrinos per year in the GeV to 10 PeV energy range. Among those, we have isolated a flux of high-energy neutrinos of cosmic origin, with an energy density similar to that of high-energy photons and cosmic rays in the extreme universe. We recently identified their first source: on September 22, 2017, several astronomical telescopes pinpointed a flaring galaxy, powered by an active supermassive black hole, as the source of a cosmic neutrino with an energy of 290 TeV. Archival IceCube data subsequently revealed a flare in 2014-15 of more than a dozen neutrinos from the same direction.

Tuesday 5 May 2020 at 4:00 P.M.

COFFEE AND TEA WILL BE SERVED AT 3:45 P.M. IN FRONT OF THE SOLVAY ROOM

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