Type: Talk

## MAGIC observations of VHE gamma rays from the flaring blazar TXS 0506+056 coincident with high-energy neutrino IceCube-170922A and implications

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On 22<sup>nd</sup> September 2017, a high energy neutrino was detected by the IceCube observatory in spatial coincidence with the blazar TXS 0506+056, which was observed to be flaring in the GeV band by the Fermi-LAT telescope. This coincidence triggered a series of multi-wavelength observations by several telescopes on ground and in space.

On 24<sup>th</sup> September 2017, the MAGIC telescopes started follow-up observations of this source and shortly afterwards reported the detection of VHE gamma rays from its sky position.

Here we describe the observational results obtained with the MAGIC telescopes and multi-wavelength data collected during the flaring event.

These results constitute the first detection of VHE gamma rays from a potential astrophysical source of highenergy neutrinos, and offer important new constraints on the mechanisms of particle acceleration and radiation in blazars. They may also provide fresh insight into high-energy cosmic ray acceleration in AGN jets.

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