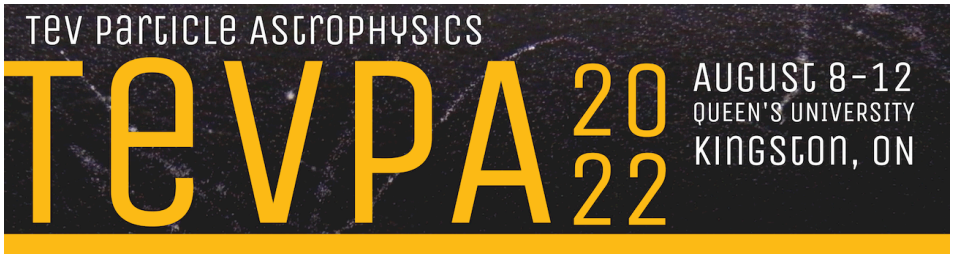

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Hadronic origin of gamma-ray emission from nova RS Oph revealed by the MAGIC telescopes

Thursday, August 11, 2022 4:30 PM (20 minutes)

RS Ophiuchi (RS Oph) is a recurrent symbiotic nova. Its latest outburst, on 8th of August 2021, brought to the first detection of this class of sources in very-high-energy (above 100GeV) gamma rays. We present the MAGIC observations of RS Oph during this event, triggered by the Fermi-LAT detection of high energy gamma rays from this source. We characterize the emission from one day after the optical detection. We perform modeling of the gamma-ray spectrum with both leptonic and hadronic models, supported by simultaneous optical observations. We find strong evidence for the hadronic origin of the emission and discuss its implications for the contribution to the Galactic Cosmic Rays.

Collaboration name

MAGIC

Authors: SITAREK, Julian; FALLAH RAMAZANI, Vandad (University of Turku); GREEN, David; LEONE, Francesco; LOPEZ-COTO, Ruben (IAA); LOPEZ-ORAMAS, Alicia

Presenter: SITAREK, Julian

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