

## Understanding the Gamma Ray Emission around Westerlund 1

Young massive stellar clusters (YMCs) have come increasingly into the focus of discussions about the origin of PeV cosmic rays. Recently, HESS observed high-energy gamma ray emission around the YMC Westerlund 1, characterised by an energy independent, ring-like shape slightly off-set from the cluster position. We investigate the origin of this emission by modelling hadronic and leptonic emission processes with the open GAMERA library, discussing particle acceleration sites and propagation effects. Our findings support a predominately leptonic origin of the emission and highlight how the cluster's radiative and mechanical feedback facilitates particle acceleration.

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