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An Optical Spectropolarimetric Survey of TeV-emitting Blazars

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Blazars are among the most luminous and variable sources in the universe, producing emission up to TeV energies. The lower-energy component of the emission is dominated by non-thermal leptonic synchrotron radiation from the jet. However, the high energy component is not yet fully understood, as it can be reproduced by both leptonic and hadronic models. Polarization measurements at optical and X-ray energies provide important clues as to how the emission is produced and can be used as a tool to distinguish between the different models proposed for the high-energy emission. Optical polarization measurements, combined with multi-wavelength observations, provide a good foundation upon which the high-energy signatures of blazar emission can be interpreted. To this end, we have launched a long-term monitoring programme of selected TeV emitting blazars, using the Southern African Large Telescope (SALT). Here we present results from the first two years of SALT optical spectropolarimetry observations, which form part of a larger, coordinated multi-wavelength campaign. Special focus will be placed on the nature and frequency dependence of the polarization along with trends in the observed emission features.

Author: BARNARD, Joleen

Co-authors: Dr MARTIN-CARRILLO, Antonio (Space Science Group, School of Physics, University College Dublin); VAN SOELEN, Brian; BUCKLEY, David; SCHUTTE, Hester; VAN DER WESTHUIZEN, Izak; BÖTTCHER,

Markus (Centre for Space Research, North-West University); ZACHARIAS, Michael

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