

Linking TeV and THz astronomy (gamma-ray and radio astrophysics connections)

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Astrophysical gamma-ray sources are sites of extreme particle acceleration. For gamma-ray sources in our galaxy, a key ingredient in understanding the nature of the underlying particles (leptons and/or hadrons) is knowledge of the interstellar gas (neutral and ionised), often traced by high frequency radio telescopes. For example, this gas can act as a target for cosmic ray collisions. In this talk, I will review what we have learned so far by comparing the gamma-ray emission and interstellar gas for a number of gamma-ray sources (e.g. supernova remnants and pulsar-wind nebulae). I will also look at the latest interstellar gas surveys and how they will impact the gamma-ray science to come from the next generation observatories, like the Cherenkov Telescope Array.

Author: Dr ROWELL, Gavin (University of Adelaide)

Presenter: Dr ROWELL, Gavin (University of Adelaide)

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