

Poster at Splinter Meeting

Splinter A

PROPAGATION OF GALACTIC COSMIC RAYS USING INDIVIDUAL
SUPERNOVA REMNANTS AS SOURCES

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Ever since Baade & Zwicky (1934) suggested that Supernova Remnants (SNRs) are likely candidates for the sources of Galactic cosmic rays (CRs), this scenario has been under investigation and poses one of the most likely explanations for the origin of the CR flux up to the knee. Three individual SNRs, i.e. W44, IC443 and W51C, have been identified as CR accelerators via their distinct π^0 -decay signature in sub-GeV gamma-rays. These sources, however, cannot be representative for the population producing the total cosmic ray flux up to the knee: they have too steep energy spectra. In this contribution, those SNRs that are known as gamma-ray emitters will be used to investigate if the entire population of gamma-ray emitting SNRs can be representative for sources of the detected CR flux, i.e. if the energy budget and spectral behavior can be reproduced.