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Supernova remnants and Pulsar Wind Nebulae in the CTA era

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The Cherenkov Telescope Array (CTA) project, currently under its Preparatory Phase, is an initiative to build the next generation of ground-based very high energy gamma-ray instruments. It will serve as an open observatory to a wide astrophysics community and will provide a deep insight into the non-thermal high-energy universe. It foresees a factor of ~ 10 improvement in sensitivity above 100 GeV, with a better angular resolution in comparison with currently operational IACTs.

The CTA consortium is investigating the different physics cases for different proposed array configurations and subsets. Pulsar Wind Nebulae (PWNe), the most numerous VHE Galactic sources, and Supernova Remnants (SNRs), believed to be the acceleration sites of the bulk of cosmic rays, will certainly be two of the main observation targets for CTA. We will discuss the main scientific goals to be achieved concerning PWNe and SNRs and discuss quantitative examples of the capability of CTA to achieve these objectives based on Monte Carlo simulations.

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Classification de Session: Cosmic ray sources: Multiwavelength observations