The Galactic population of supernova remnant pevatrons

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Abstract

While a lot of hope has been placed in next–generation instruments operating in the multi–TeV range, it is possible that current gamma–ray instruments, operating in the TeV range, could pinpoint these objects or, most likely, identify a number of promising targets for instruments of next generation. Starting from the assumption that supernova remnants are indeed the sources of Galactic cosmic rays, and therefore must be pevatrons for some fraction of their lifetime, we investigate the ability of current instruments to detect such objects, or to identify the most promising candidates.

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