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Revealing supernova remnant G106.3+2.7 as a PeVatron

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We analyze the data of Chandra and XMM-Newton in the region of SNR G106.3+2.7 and find the spectrum is dominated by non-thermal X-ray radiation of electrons. The X-ray surface brightness profile of the SNR indicates that the X-ray-emitting electrons in the tail region of the SNR is accelerated by the SNR shock, implying the SNR is an efficient particle accelerator. Based on the multiwavelength data of the SNR, we suggest that the tail region of the SNR is likely a proton PeVatron.

Keywords

SNR, Cosmic ray, Non-thermal radiation

Collaboration

other Collaboration

Subcategory

Experimental Results

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