

GALACTIC COSMIC RAYS FROM SUPERNOVA REMNANTS: MYTH OR REALITY?

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Arguments in favour and against a supernova remnant origin of the bulk of Galactic cosmic rays are reviewed and discussed. We analyse the current observational status (direct evidence and astronomical context) as well as the theoretical status (particle acceleration and transport) of this standard model, and argue that some of its long-standing problems do not appear to be solvable in the current state of knowledge. Some observational tests are proposed, and the possibility of alternative ideas is investigated.