

Review on Galactic cosmic rays

Tuesday 29 October 2024 09:00 (40 minutes)

I will try to provide a brief and critical review of the standard paradigm for the origin of Galactic cosmic rays. Recent measurements of local and far-away cosmic rays reveal unexpected behaviours, which challenge the commonly accepted scenario. These recent findings will be discussed, together with long-standing open issues. Despite the progress made thanks to ever-improving observational techniques and theoretical investigations, at present our understanding of the origin and of the behaviour of cosmic rays remains incomplete. It is still unclear whether a modification of the standard paradigm, or rather a radical change of the paradigm itself is needed in order to interpret all the available data on cosmic rays within a self-consistent scenario.

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Session Classification: Particle acceleration and propagation