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Primary cosmic ray mass composition seen through gamma rays detected by passive balloon-borne emulsion chambers

Abstract content

The gamma rays detected by passive balloon-borne emulsion chambers in the stratosphere allow indirect testing of the conclusions based on the analysis of the primary particle tracks. Here we show that observed experimental data on gamma rays are in agreement with the atmospheric origin of their production. It can be seen that gamma rays from different passive balloon-borne experiments are consistent with the hypothesis of increase in relative abundance of heavy primaries near the knee region of the cosmic ray spectrum. Nevertheless, quantitative analysis does not show statistically significant evidence in favor of one specific composition model. More statistics are necessary for a conclusive judgment.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

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