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Ballooning for Cosmic Rays: A Noble History, Exciting New Data and a Bright Future

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Abstract content

High altitude balloon-borne experiments have been a part of Cosmic Ray Research almost from the inception of the field. Major advances have been, and continue to be, made with balloon missions, due both to improvements in instrumentation and to advances in balloon technology and operational techniques. Today we can fly nearly two ton cosmic ray payloads for periods up to 4-6 weeks at altitudes of 35-40 km. A brief review of the milestones leading up to today's capabilities, including the fortuitous merger of ballooning and the nuclear emulsion technique, is presented and used to highlight the advances. Examples of current cosmic ray experiments are discussed, and from these emerge the new capabilities that are under development for future balloon systems. Moreover, balloon experimentation is a truly international endeavor with contributions and advances coming from many researchers around the globe.

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

Summary

Reference

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