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NASA Balloon Program Capabilities in Support of Cosmic Ray Research

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Abstract content

The NASA Balloon program offers a unique, reliable and low cost platform for conducting cutting edge cosmic ray research and scientific investigations. Recently, the balloon program completed new payload support facilities in Antarctica. In addition, during the 2007 Campaign, for the first time, NASA demonstrated the ability to launch three science payloads in the same season. These Antarctic long duration balloon missions are being conducted in coordination with the U. S. National Science Foundation Office of Polar Programs. Most of the Antarctic flights have flown one time around the South Pole in 8 -20 days using conventional (zero differential pressure) balloons. Recently, a record flight went twice around in 31 days and another went three times around in 42 days have been achieved using these conventional balloons. To continue its commitment to provide extended duration flights from around the globe, the National Aeronautics and Space Administration (NASA) have inaugurated a joint agreement with the Swedish Space Corporation/Esrange to enable medium-duration heavy-load scientific balloon flights from Sweden to Canada. The development of advanced support systems for current long duration and future Ultra Long Duration Balloon missions has also been recently demonstrated. This paper will highlight the new capabilities of the balloon program in support of advanced cosmic ray investigations.

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

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 2 (OG part 1), pages 297-300

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