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**Current and Future Cosmic Ray Observatories in Space**

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Balloon-borne and space based instruments configured with particle detectors have been flown to study cosmic-ray origin, acceleration and propagation. They have also been used to search for exotic sources, such as dark matter and antimatter, and to explore a possible limit to particle acceleration in supernova. A challenge of these experiments for high energies is that the detectors must be large enough to collect adequate statistics, yet stay within the weight limit available for space/balloon flight. Innovative approaches now promise high quality measurements over an energy range that was not previously possible, particularly as the International Space Station becomes available for utilization. Recent results will be reviewed, and the outlook for existing and future experiments will be discussed.