

# NASA's BARREL returns successful from Antarctica

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Release of a BARREL balloon. The launch crew can be seen on the right holding the payload as the top of the balloon moves overhead where they can release it.  
Credit: NASA/BARREL

Three months, 20 balloons, and one very successful campaign: The team for NASA's BARREL – short for Balloon Array for Radiation belt Relativistic Electron Losses—mission returned from Antarctica in March 2014. In a new NASA Flickr gallery, the team shared their images from weeks of work in the constant sun of the South Pole

summer.

BARREL's job is to improve our understanding of the mysterious Van Allen belts, two gigantic doughnuts of radiation that surround Earth, which can shrink and swell in response to incoming energy and particles from the sun and sometimes expose satellites to harsh radiation.

While in Antarctica, the team launched 20 balloons carrying instruments that sense charged particles that are scattered into the atmosphere from the belts, spiraling down the magnetic fields near the South Pole. Each balloon traveled around the pole for up to three weeks.

The team will coordinate the BARREL data with observations from NASA's two Van Allen Probes to better understand how occurrences in the belts relate to bursts of [particles](#) funneling down toward Earth.

Provided by NASA

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