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The ANITA Experiment After Four Flights

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The ANtarctic Impulsive Transient Antenna (ANITA) is a long-duration balloon experiment with an interferometric radio payload. ANITA scans Antarctic ice for Askaryan radio emission from interactions of extremely-high-energy (>1 EeV) cosmogenic neutrinos. ANITA is also sensitive to geomagnetic radio emission from extensive air showers (EAS) initiated by both ultra-high-energy cosmic rays and tau leptons generated by Earth-skimming tau neutrinos. The fourth flight of ANITA recently was successfully completed in December 2016.

After an overview of the instrument and analysis methods, this talk will highlight key results and ongoing analyses from the four flights of ANITA. Improvements for future flights will also be briefly discussed.

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