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# Observations of the Askaryan Effect using the ANITA balloon instrument

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## Abstract content

Most ultra-high energy neutrino experiments using ice as a target medium rely on the Askaryan effect (coherent impulsive radio Cherenkov radiation from the charge asymmetry in an electromagnetic shower). This effect was measured with the Antarctic Impulsive Transient Antenna (ANITA) experiment at the Stanford Linear Accelerator Center (SLAC) in June 2006. The showers were produced by 28.5 GeV electron bunches with typically number density of 10<sup>9</sup> per bunch impacting a 7.5 metric ton ice target (roughly 12.5 radiation lengths). In this paper we present the measured angular and frequency dependence of the radiation and compare the results with the predicted response.

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

ANITA

#### 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. 5 (HE part 2), pages 1573-1576

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