

This paper describes objective technical results and analysis. Any subjective views or opinions that might be expressed in the paper do not necessarily represent the views of the U.S. Department of Energy or the United States Government.

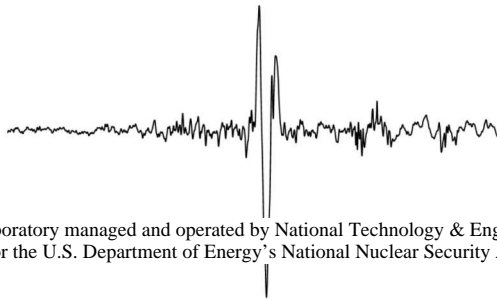
Balloon Flight

SAND2020-1798C

Daniel C. Bowman* Jonathan M. Lees** Oliver Lamb**
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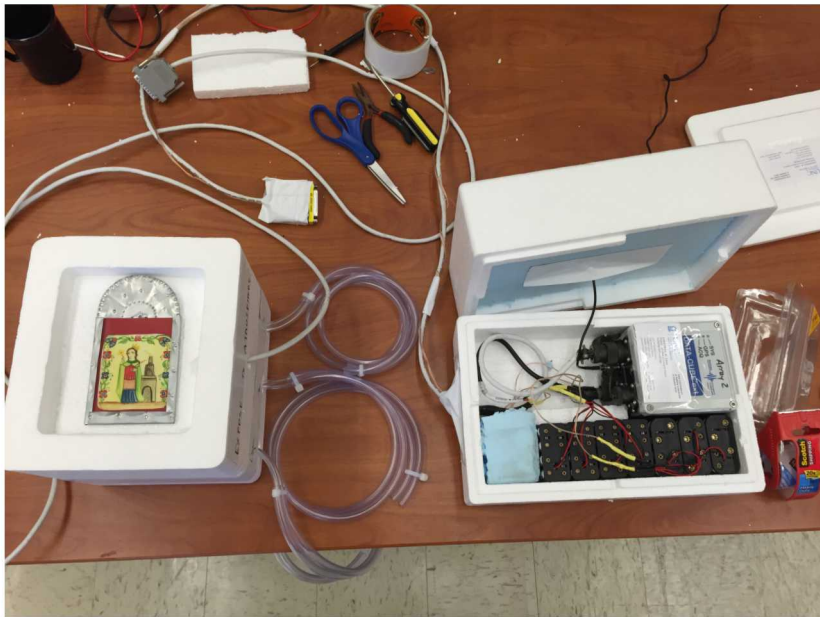
*Sandia National Laboratories, ** UNC Chapel Hill † ISAE

January 28, 2020

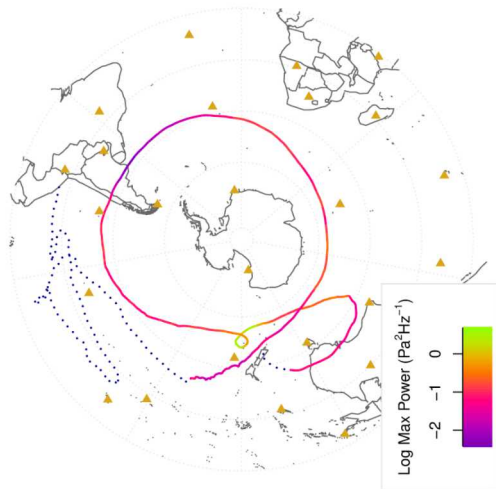


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The Carolina Infrasound Payload on ULDB 2016

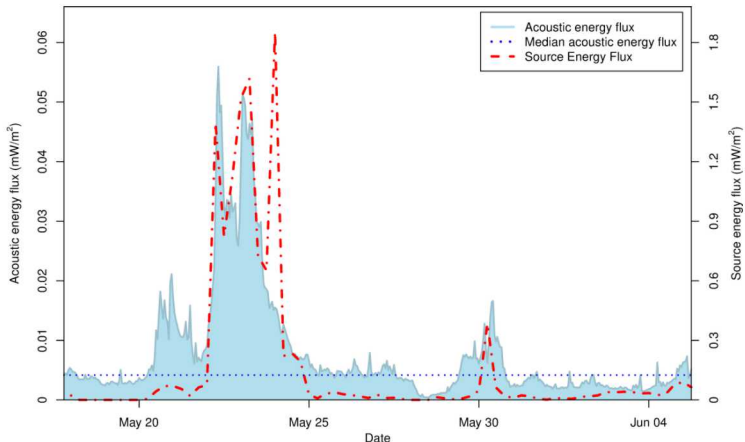


Flight Path



The payload stayed powered for 19.5 out of 44 days

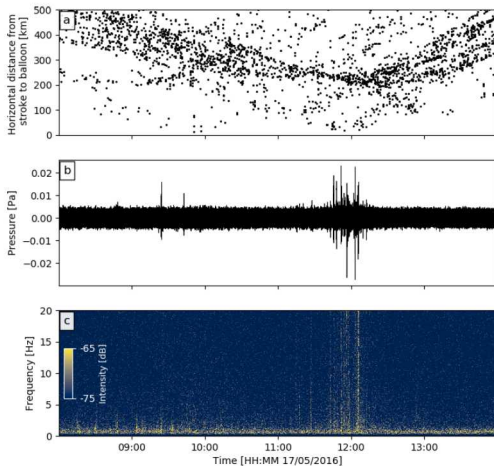
Microbarom overflight



The first direct measurement of upward energy flux from the ocean microbarom.

Bowman, D. C. and Lees, J. M. (2018) Upper atmosphere heating from acoustic wave energy. *Geophysical Research Letters* **45**, 5144–5150.

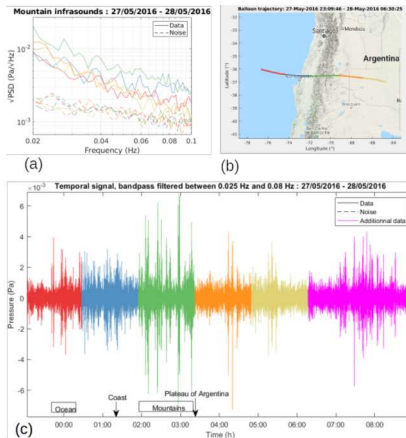
Thunder detection



The first detection of thunder from the stratosphere.

Lamb, O., Lees, J. M. and Bowman, D. C. (2018) Detecting lightning infrasound using a high-altitude balloon. *Geophysical Research Letters* **45**, 7176-7183.

Wind/mountain infrasound



Potential infrasound radiation from the Andes.

Poler, G., García, R. F, Bowman, D. C. and Martire, L. (*under review*) Infrasound and gravity waves over the Andes observed by a pressure sensor on board a stratospheric balloon. *Journal of Geophysical Research: Atmospheres*

Acknowledgments

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