

# The Case of the Mylar Mystery

February 26 2010, by Dee Kekesi/Elizabeth M. Jarrell

---



Debbie Thomas cuts the sample to be tested during a visit from PBS's History Detectives. Credit: NASA/Debbie McCallum

(PhysOrg.com) -- There is a mystery afoot at Goddard - the case of the mylar mystery to be exact. On January 11, 2010, "History Detective" Tukufu Zuberi, from the PBS show "The History Detectives," came to Goddard to investigate a mystery. "The History Detectives" show asks viewers to submit unusual objects or clues with a possible historical interest and then selects one as the basis of investigating an historical mystery.

In our case, Zuberi had one clue, a small, unassuming, silver sample of mylar with pink residue on one side. The mystery to be solved was whether or not this bit of mylar was from Goddard's Echo II satelloon project. Satelloons are a combination of satellites and balloons which were constructed out of bright, metallic mylar for increased visibility.

During the early 1960's, Goddard launched the Echo I and Echo II satelloon projects. The Echo projects were instrumental in letting the world see that the U.S. was a major force in the space race not very far behind Russia. Among the many contributions of the Echo programs are the first voice communication via satellite which was made by none other than then President Eisenhower and the first coast-to-coast telephone call using a satellite. In addition, the Echo programs resulted in advances in atmospheric density, solar pressure, gossamer structures, solar sailing, and transmitting videos via satellites.



NASA's first communication satellite, Echo, was a giant mylar balloon, 100 feet in diameter, that could "bounce" a radio signal from one ground station to another. Credit: NASA

History Detective Zuberi turned to retired [NASA](#) engineer and self-professed Echo satelloon historian Ron Muller for help in solving the mylar mystery. He received additional assistance in the form of testing from four members of Goddard's Materials Engineering Branch including Michael Viens, Alejandro Montoya, Debbie Thomas, and Marjorie Sovinski.

So, what did History Detective Zuberi and his Goddard colleagues

determine? Was the silver bit of mylar from our Echo II satelloon project? For the answers to these and other questions regarding the case of the mylar mystery, stay tuned to watch a future episode of "The History Detectives" airing on PBS in the summer of 2010.

Provided by NASA's Goddard Space Flight Center

Citation: The Case of the Mylar Mystery (2010, February 26) retrieved 25 April 2024 from <https://phys.org/news/2010-02-case-mylar-mystery.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.