

February 2023 Professional Lecture

HEXAGON

The History of Film-Based Intelligence Satellites



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SPEAKER, AUTHOR, HISTOPHILE



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AIAA GHS hosted a talk on the HEXAGON program on February 7th. During the Cold War, the US evolved reconnaissance technology, resulting in today's real-time video capabilities. Initially, film was used in satellites to monitor treaty compliance and intelligence gathering of the Soviet Union and other "denied areas." The vehicle, HEXAGON, was 60 feet long and took pictures from 100 miles up. The program was urgent and required cooperation between the CIA and the Air Force, guided by the National Reconnaissance Office. This unclassified briefing by someone "who was there," gave a first-person historical look at how high-resolution images were not only taken, but returned via parachute to be caught in mid-air. This program was a critical Cold War asset.

About the speakers:

Ricky Deutsch: Ricky holds a BS in Aerospace Engineering from the University of Maryland, an MS degree from USC, and an MBA from Santa Clara University. He began his career as a B-52 maintenance officer, which included a tour in Thailand. In the 1970s as a Captain, he was Operations Director for a now declassified top-secret reconnaissance satellite program called HEXAGON. From the Satellite Control Facility (aka the "Blue Cube") in Sunnyvale, CA, his team generated mission critical commands to be sent to the satellite. He was awarded a Commendation Medal for support of this program. Following his Air Force vocation, he worked in Silicon Valley's computer industry. Firms included Ford Aerospace & Communications Corporation, Intel Corporation and Sun Microsystems, Inc. He was a marketing manager for federal, state & local and international government clients. His article, "Controlling Hexagon" has been published in QUEST – The Space Journal.

Phil Pressel: While at the Perkin-Elmer Corporation in Danbury, Connecticut, Phil was in charge of designing the stereo cameras (known as the optical bars) for the Hexagon spy satellite program. Since the Hexagon KH-9

program was declassified in September 2011, he has lectured on the Hexagon program at many national technical organizations, universities, and museums, including the Wright-Patterson Air Force Base Museum in Dayton, Ohio, the Smithsonian Air & Space Museum, the International Spy Museum in Washington, D.C., the Air Force Academy, Royal Air Force in London, the British Interplanetary Society, and the International Institute for Strategic Studies. He also is an accomplished public speaker and has been interviewed by numerous media outlets including the Associated Press, National Public Radio, a CBS-TV affiliate in San Diego, various newspapers, and online at Space.com. He was seen on CNN on in a one-hour documentary entitled "Declassified" about the Hexagon program. His book *Meeting the Challenge, the Hexagon KH-9 Reconnaissance Satellite* was published by the American Institute of Aeronautics and Astronautics (AIAA) in 2013.

We want to thank Ricky and Phil for speaking to our section.