



SAN DIEGO STATE
UNIVERSITY

The SDSU Department of Aerospace Engineering and
the American Institute of Aeronautics and Astronautics SDSU Student Branch
jointly presents

Lecture Series on Hexagon KH-9 Spy Satellite Design

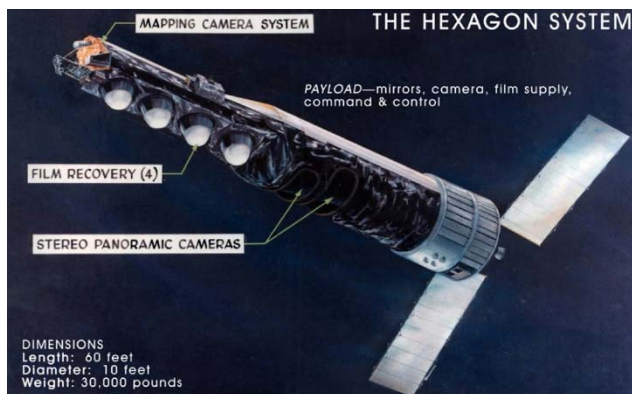
by

Guest Lecturer: Philip Pressel

Location: The Gold Auditorium in the BioScience Center

Dates: September 1, 8 and 15, 2017

Time: 11:00 am – noon



Lecture 1: The Hexagon KH-9 Spy Satellite (9/1/2017): The lecture covers the development and design of the Hexagon KH-9 spy satellite, the most complicated satellite ever put in orbit carrying reconnaissance camera that used film for photography. A total of 19 satellites were launched between 1971 until 1986. The top secret program was declassified in 2011.

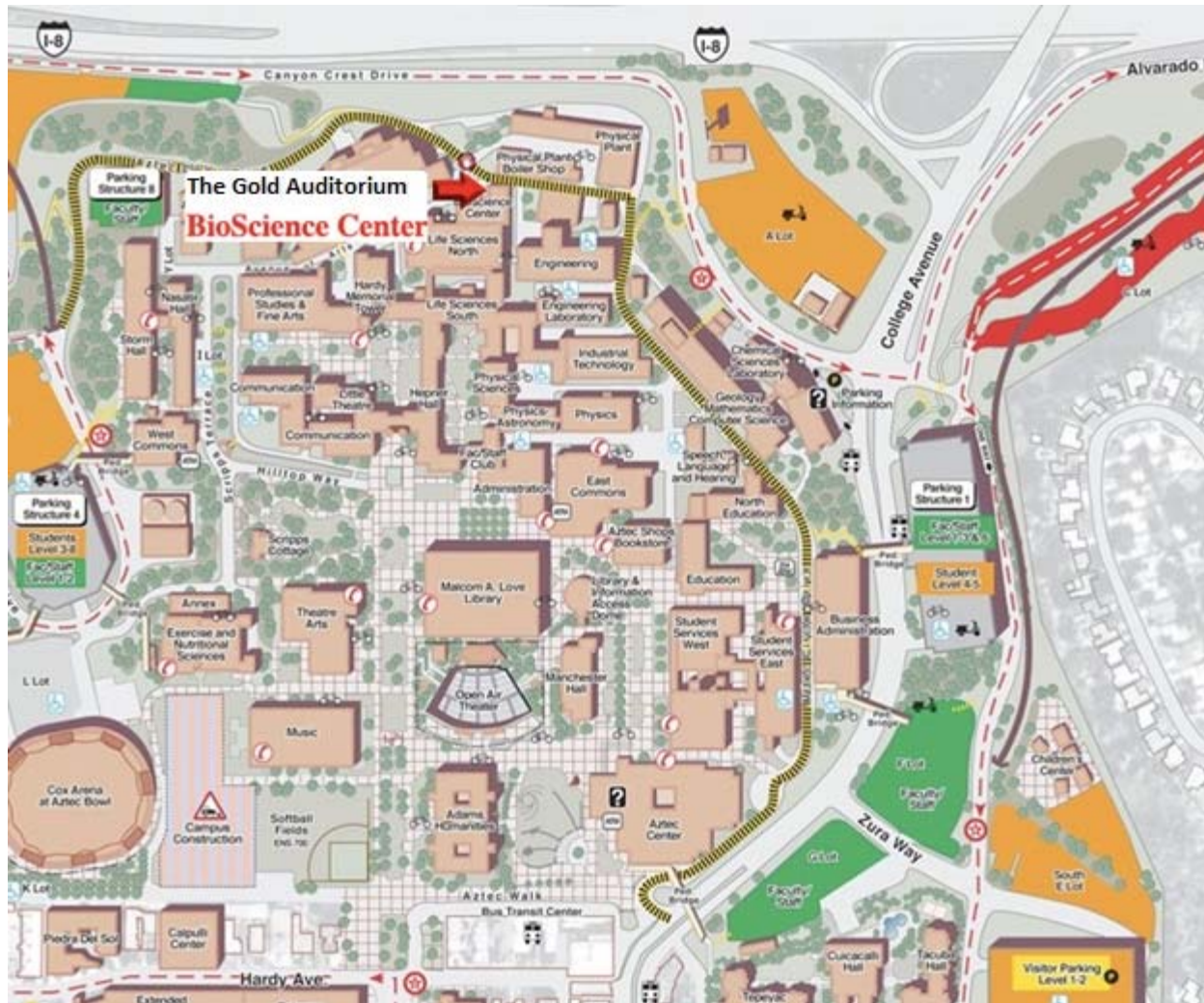
Lecture 2: Important Considerations when Designing for Space Applications (9/8/2017): Space is not a hospitable environment with zero gravity, vacuum, extreme temperatures and radiation. Special considerations and measures need to be taken in spacecraft design. Topics covered in this lecture include outgassing, lubrication, coatings, galling, bonding, bearings, preloading to react g loads, bolt torques, venting and thermal management, etc.

Lecture 3: Designing Optical Instruments for Use in Space, Airborne or on the Ground (9/15/2017): Topics covered in this lecture include three point mounting, flexures, mirrors and lenses mounting, glass properties and precautions, invar, venting, index of refraction, preloading, stress and dynamic analyses, minimum resonant frequency, etc.

[Bio of the speaker] Mr. Philip Pressel is a mechanical engineer and has over 50 years of experience in the design of sophisticated ground and space based systems including telescopes, cameras, gimbals and other instruments. His specialty is in the design of optical instruments. He has been a manager and director of engineering for two aerospace companies in Connecticut. About 90% of his work was highly classified as the Perkin-Elmer Corporation in Danbury, CT was contracted to the CIA for many years.



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Location of the BioScience Center on the SDSU campus map.



The Gold Auditorium is inside the Donald P Shiley BioScience Center, SDSU.