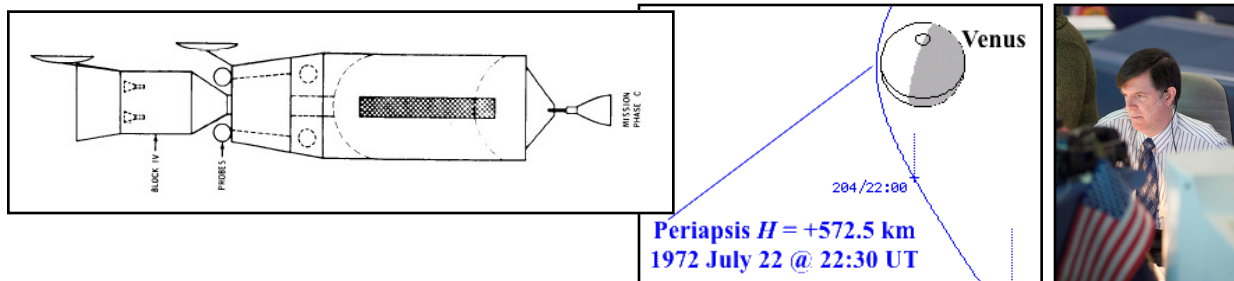


## Lunch & Learn

### Reproducing an Apollo Applications Program Single-Launch Human Venus Flyby Trajectory

by Daniel R. Adamo, Astrodynamics Consultant

An event of  
AIAA Houston Section History technical committee  
Chair: Douglas Yazell; Members: Ted Kenny, Chester Vaughan  
and  
AIAA Houston Section Astrodynamics technical committee  
Char: Dr. Albert Allen Jackson IV; Members: Douglas Yazell, Dr. Tim Crain



**As proposed to the Apollo Applications Program by NASA's Manned Spacecraft Center in 1967, a single Saturn 5 launch of Apollo-derived hardware could send a crew of three on a Venus flyby mission with free return to Earth one year later. Three 30-day Earth departure seasons between 1972 and 1975 were identified. The season-open trajectory for Earth departure on 4 April 1972 is developed in detail for this presentation.**

*Mr. Adamo is an astrodynamics consultant focused on space mission trajectory design, operations, and architecture. He works with clients primarily at NASA and in academia.*

*Until retirement in 2008, Mr. Adamo was employed by United Space Alliance as a trajectory expert, serving as a "front room" flight controller for 60 Space Shuttle missions. Along with console duties during simulations and missions, this job entailed development of trajectory designs, software tools, flight rules, console procedures, and operations concepts. Mr. Adamo began his career at the Perkin-Elmer Corporation where he developed and operated proof-of-concept software for computer-controlled polishing of optical elements. He has degrees in Physical Sciences and Optical Engineering from the University of Houston and the University of Rochester, respectively.*

*Mr. Adamo is an AIAA Senior Member and Distinguished Lecturer. He has authored many publications and received numerous awards, including 14 NASA Group Achievement Awards.*

- **Date: Friday, January 27, 2017**
- **Time: 11:30 AM to 1:00 PM**
- **Place: NASA/JSC Gilruth Center Lone Star room (second floor, end of the hall)**
- Cost: Free for presentation only. Membership not required. Advance registration appreciated. Walk-ins welcome.
- Meal option prices (order by Wednesday, Jan. 25, 2017, 2:00 PM): Members \$12, Non-members \$15
- Meal: Red River BBQ; brisket, spicy links, cole slaw, beans, iced tea. Vegetarian options available.
- Please register (walk-ins welcome) using either of these websites:
  - EventBrite [link](#)
  - The [event page](#) on the AIAA Houston Section website