

# NARCON 2016





# ROAD TRIP!





NARCON PUT ON BY:

**WRIGHT STUFF  
ROCKETEERS**



Experience the safe,  
educational and fun hobby of model rocketry

[www.wsr703.org](http://www.wsr703.org)





DINNER SPEAKER,  
RANDY BOADWAY

# VENDORS

- ARA press — more books coming (not much specific).
- • Note from John Boren (Estes) — also not too specific but:
  - Success with Mercury Redstone and Little Joe II: there will be more scale models (beyond ones in catalog) later this year.
- There will be no B14 in your lifetime.
- See later for New Way, Dynasoar, Aerotech/Quest, eRockets/Semroc.
- Invitation to a model rocket demo on Oct 6, 1957 (!)
- 1958 Model Missiles Assoc. — soon became NAR
- Thought was to ship kits for making BP motors!
- 1966 Stine suggestions for Centuri rockets includes “Cineroc”
- Photos of Stine prepping his first Mark II

- Midwest Propulsion Group (<https://www.facebook.com/MidwestPropulsionGroup>)
- Restoring a 1960s LR-101 thruster
- Static fire test in March
- 23' cardboard rocket to 30,000'
- • Decal, vinyl, and other media (e.g. metallic) available
- (e.g. [texascraft.com](http://texascraft.com))
- Print with consumer ink jet or laser printers
  
- Software
  
- Printing
  
- Application
  
- Frank Burke, Dynasoar Rocketry — 24 mm foam RC gliders (no new

products)

- • Gary Rosenfield, Aerotech/Quest
  - H130, K180 38 mm mailable
- 75 mm Ceseroni compatible reload
- Screw on retainers included in AT kits
- Single use up to O
- New AT kits coming
- • Gary Rosenfield, Aerotech/Quest (cont'd)
  - Quest high costs for Chinese motors — starting cert process for domestic A–C motors
- Can't get Q2G2s without also ordering motors. Will get more but can't guarantee they will be available forever
- No new Quest kits planned, might reissue old kits

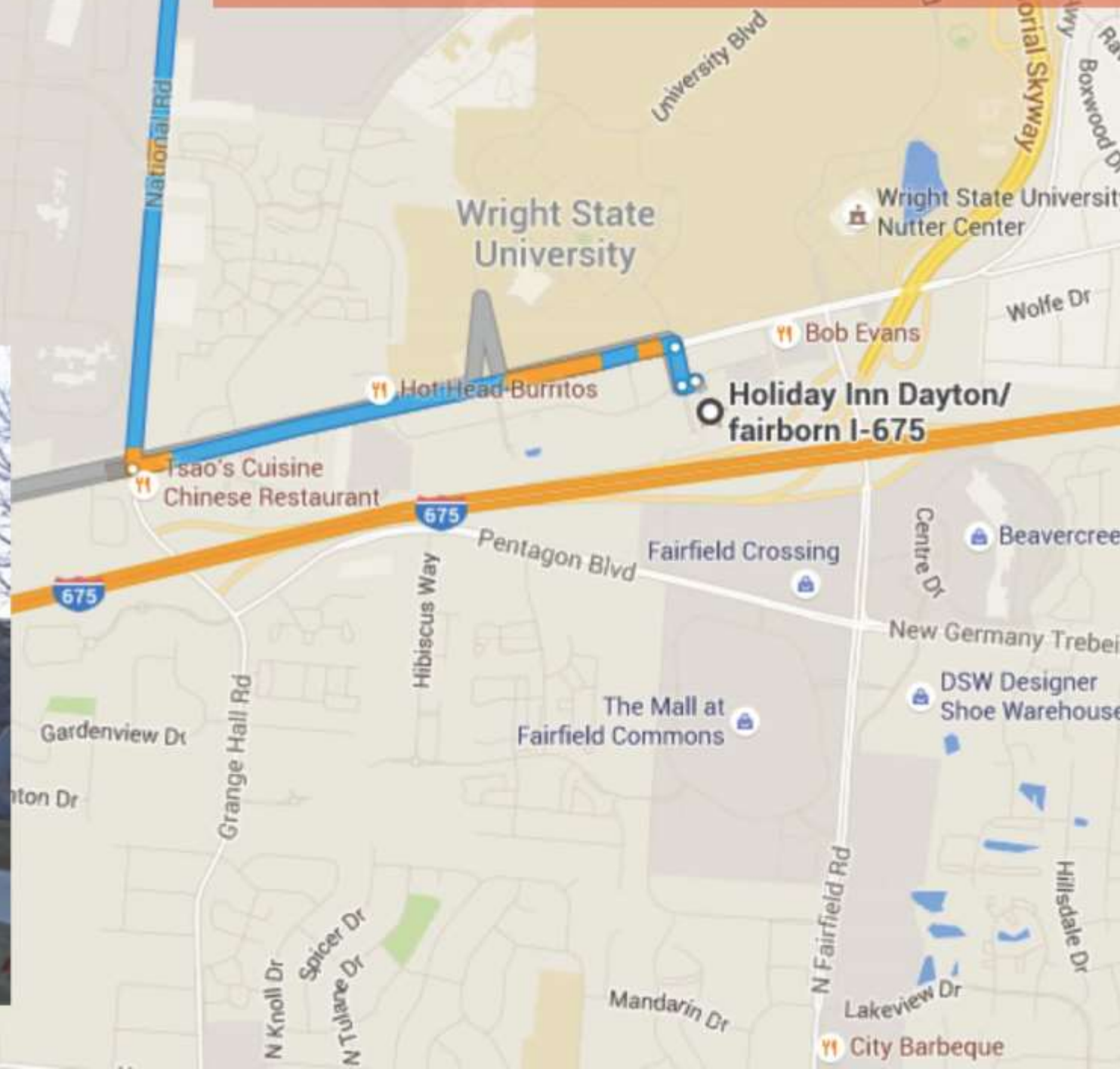
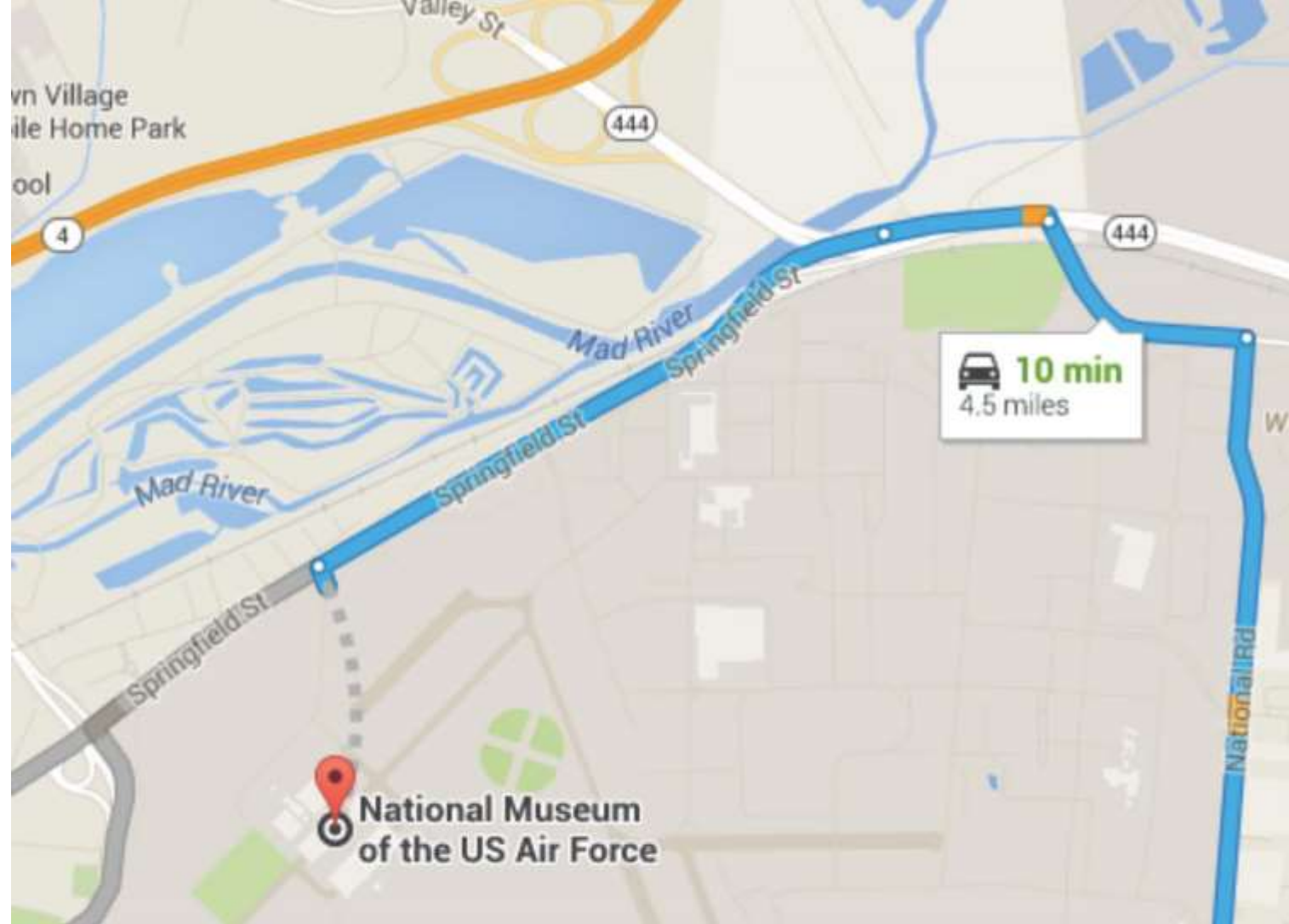
- • Randy Boadway, eRockets/SEMROC
- • 42 more SEMROC kits to go. X Kits will not be reissued.
- Safety minute
- Membership all time high (6419; 171 Sections)
- 789 TARC teams
- All R&D reports now online; NAR magazine past editions being added
- Coming: NAR section renewal online
- Much more budgeted for grants than is being request



(“can’t recall ever turning a request down”)

- Looking into getting subsidized pricing on e.g. fire extinguishers, PA systems, etc.
- Contest rocketry is flat to declining; subcommittee report on alternatives coming
  - Primary concern: Rockets that should *not* be flown too often *do* get flown
    - Too many near misses
  - Major incident under NAR would significantly impact financial health
  - Keep rockets from over people or cars
  - Keep cars from under rockets (Note \$1000 personal deductible!)
- Leverage partnerships with 4H and CAP

# SATURDAY: AIR FORCE MUSEUM

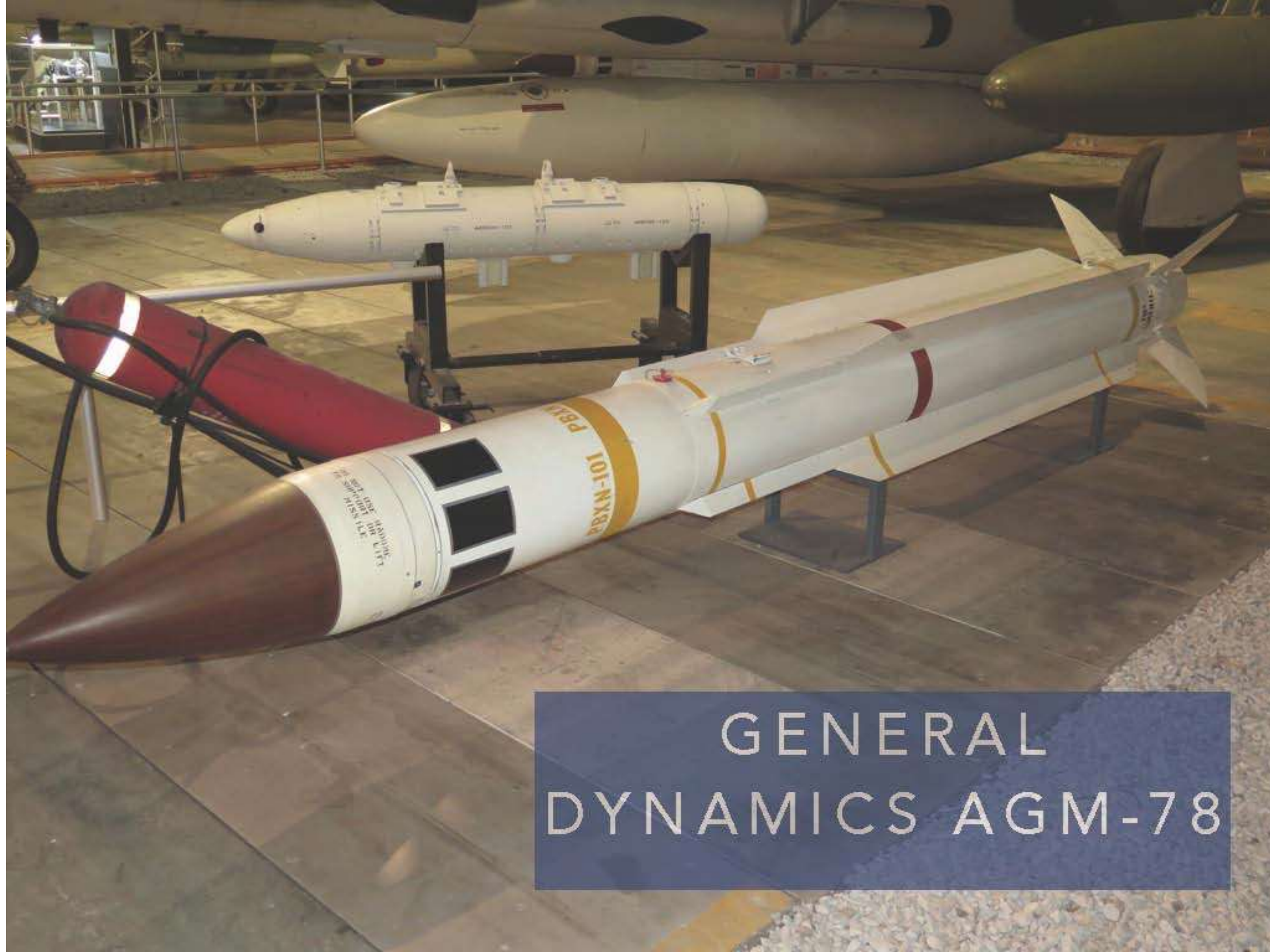






V-2





GENERAL  
DYNAMICS AGM-78

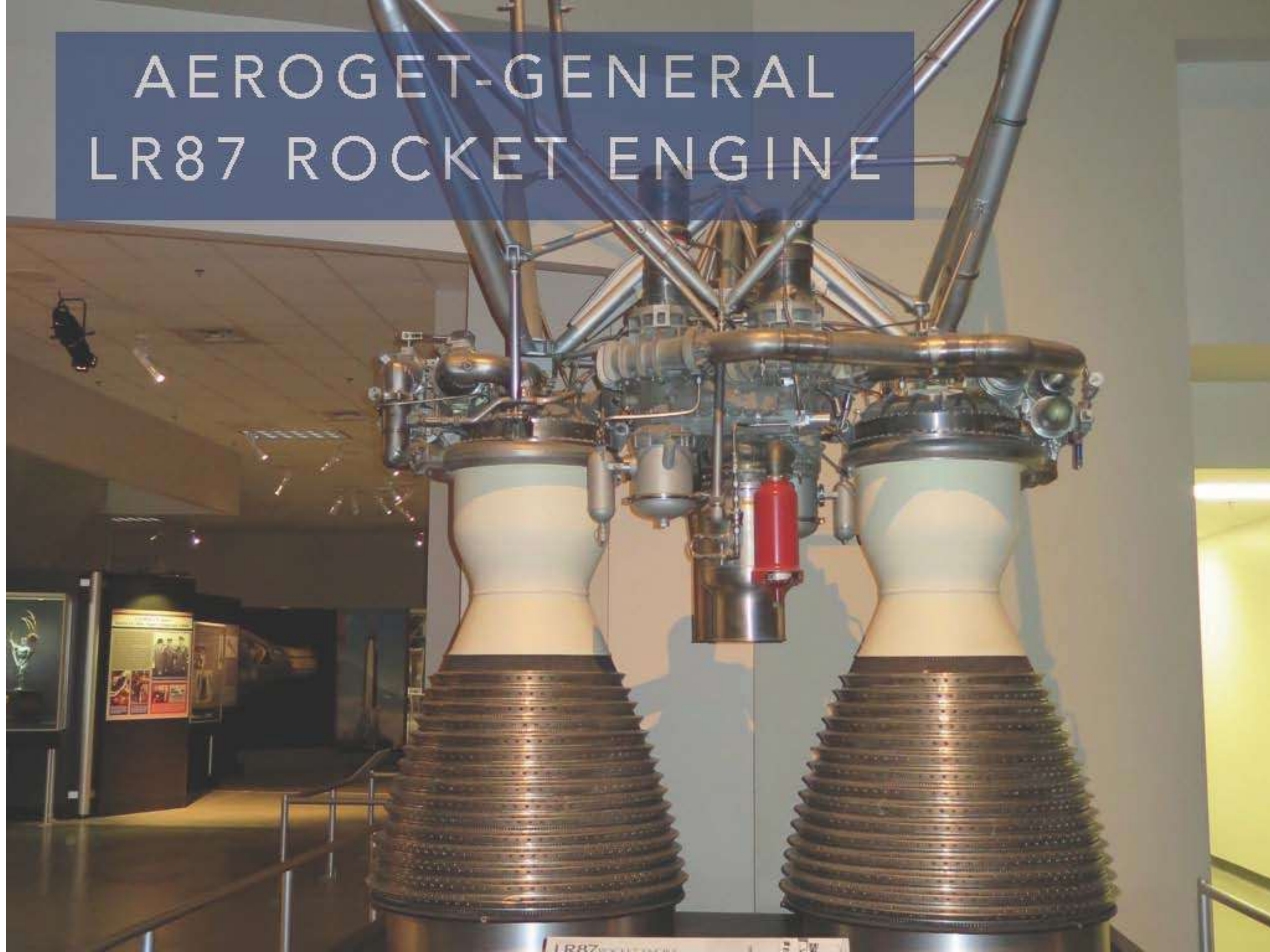


# SA-2 SOVIET SURFACE-TO-AIR MISSILE





# AEROGET-GENERAL LR87 ROCKET ENGINE



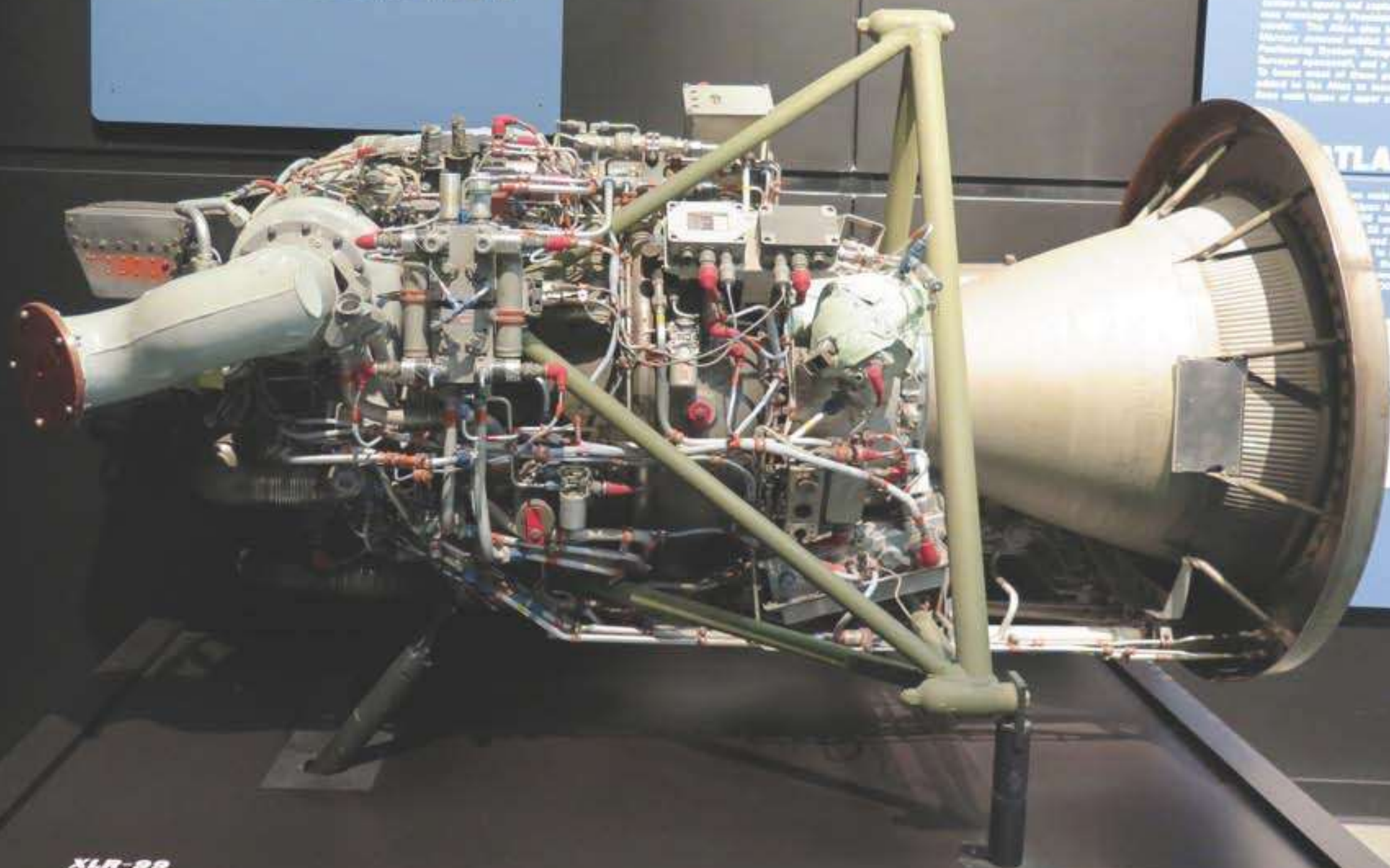


## THE REACTION MOTORS XLR99 ROCKET ENGINE



The XLR-99, which used an XLR-99  
rocket engine, being received to  
the 9-12 motor ship at Edwards  
AFB, California in November 1955.

# XLR-99 ROCKET ENGINE



XLR-99  
ROCKET  
ENGINE

## ATLAS DYE AS LAUNCH VEHICLE

The Atlas Dye  
AS  
LAUNCH VEHICLE  
was developed by the  
Air Force Research  
Laboratory at  
Wallops Island, VA.  
The engine was  
designed to launch  
the Atlas Dye AS  
LAUNCH VEHICLE  
into orbit.

The XLR-99, which was used to launch the  
Atlas Dye AS LAUNCH VEHICLE, was  
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## ATLAS ENGINE

The Atlas engine was  
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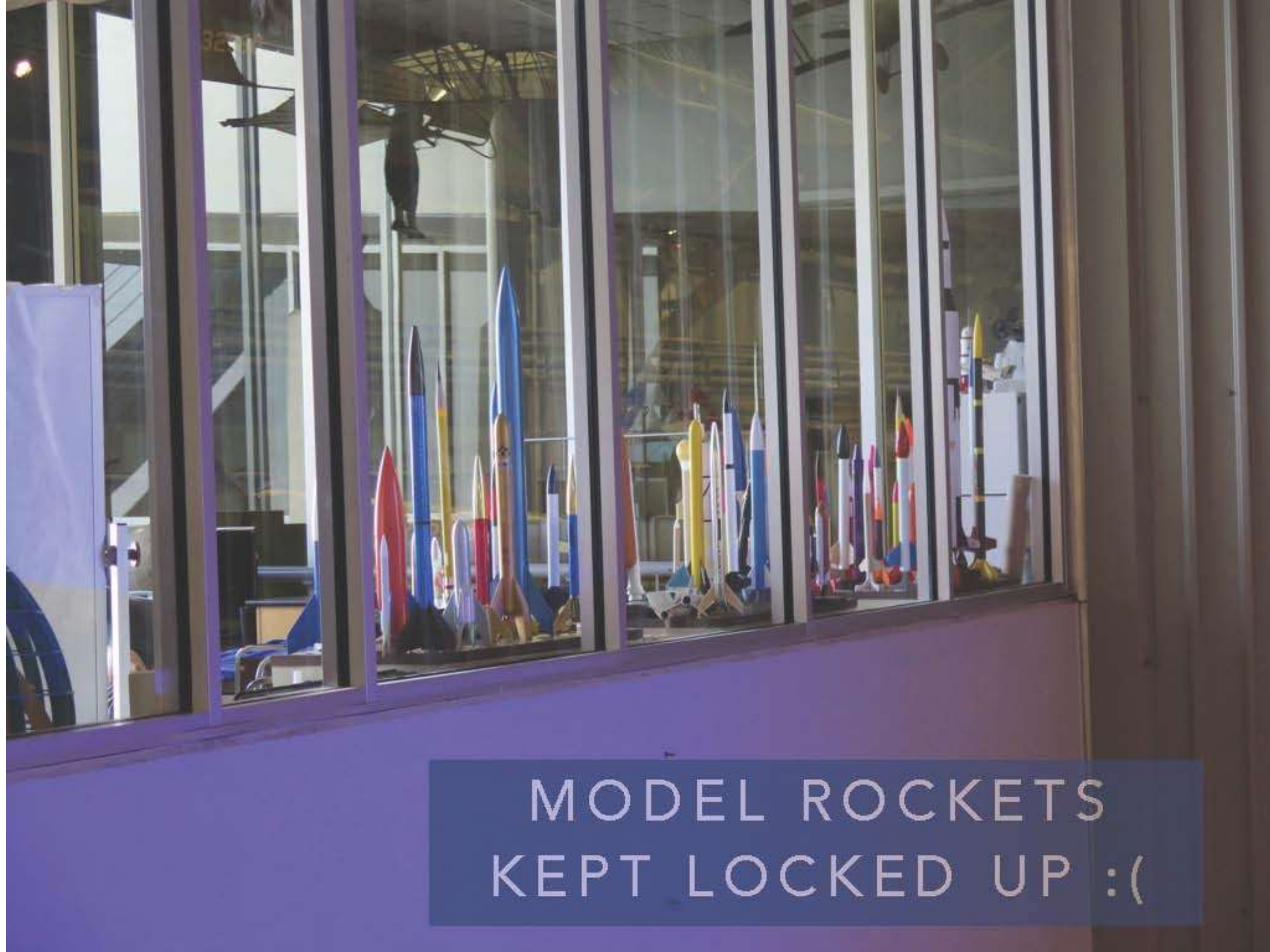
A low-angle photograph of two large rocket boosters, a Titan II and a Thor, displayed in a museum. The Titan II booster is on the left, showing its silver, ribbed surface and a black and white striped band near the top. The Thor booster is on the right, appearing as a smooth, white cylinder. The background is dark with several bright spotlights illuminating the scene. A blue rectangular box with white text is overlaid on the lower left portion of the image.

# TITAN II AND THOR

# LOCKHEED SR-71A BLACKBIRD





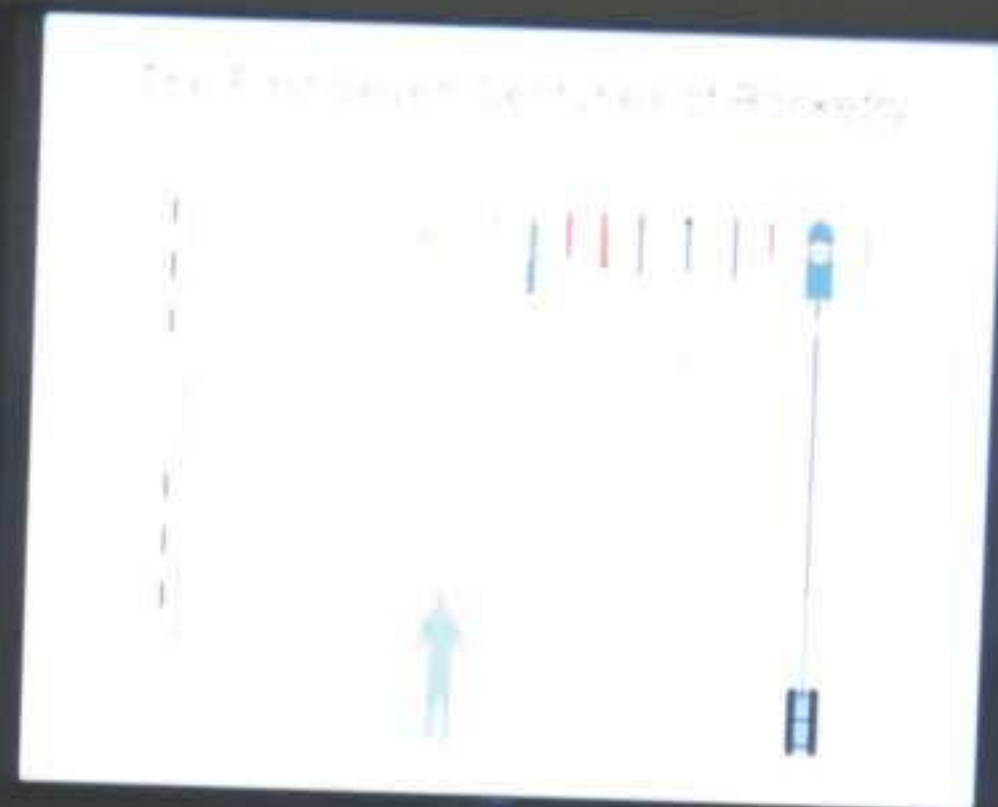


MODEL ROCKETS  
KEPT LOCKED UP :(





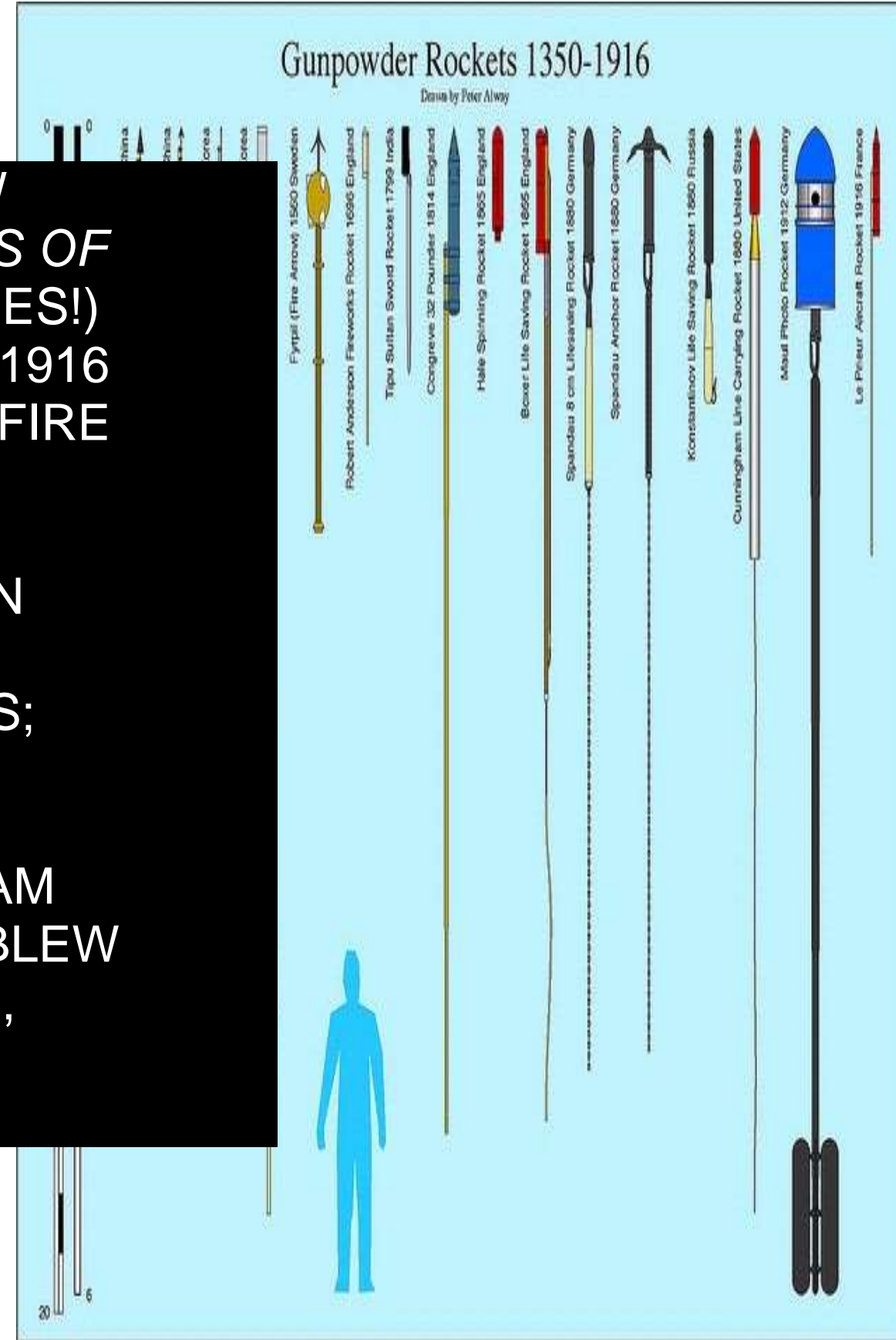
BACK TO THE  
HOTEL...



# PETER ALWAY THE FIRST SEVEN CENTURIES OF ROCKETRY



- RESEARCH FOR NEW EDITION OF *ROCKETS OF THE WORLD* (HE HOPES!) COVERING ~1350 TO 1916
- INCLUDES: CHINESE FIRE ARROW; KOREAN MAGICAL MACHINE ARROW; TIPU SULTAN SWORD ROCKET; CONGREVE ROCKETS; BOXER LIFE SAVING ROCKET
- PATRICK CUNNINGHAM ROCKET TORPEDO: BLEW UP GROCERY STORE, SUNK HIS OWN SCHOONER





JAMES DUFFY  
THE EARLY DAYS OF  
ROCKETRY AND THE  
NAR: UNEXPECTED  
HIGHLIGHTS FROM  
NASM STINE ARCHIVES





STANDARD TYPE KA  
**ROCK A CHUTE**  
SAFETY-PROVED ROCKET MOTOR  
I.C.C. TOY PROPELLANT DEVICE

ROCK-A-CHUTE MOTOR MADE BY  
BROWN (PRE-ESTES)

ROCK-A-CHUTE  
MARK II NOSE  
CONE





RICK WILLS  
AMATEUR LIQUID  
PROPULSION ROCKETRY  
AND AMATEUR-TO-  
ORBIT INITIATIVES





RANDY GILBERT  
CREATING ROCKET  
GRAPHICS WITH DECAL  
AND VINYL MEDIUMS



# GARY ROSENFELD (AEROTECH) VENDOR PRESENTATION



SUNDAY  
MORNING...

## State of the NAR



February 2016  
Ted Cochran  
NAR President

TED COCHRAN  
STATE OF THE NAR



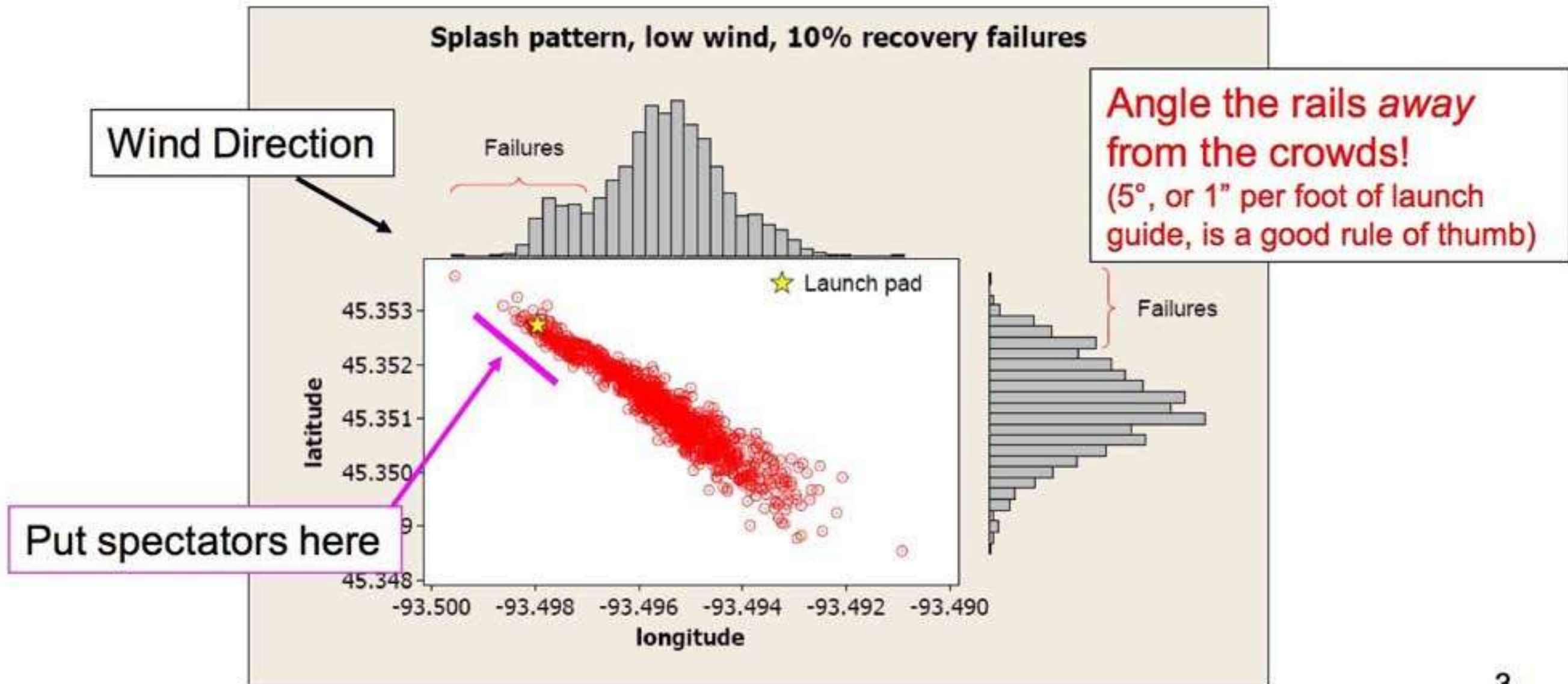




# Safety Minute:

## Keep Spectators Safe

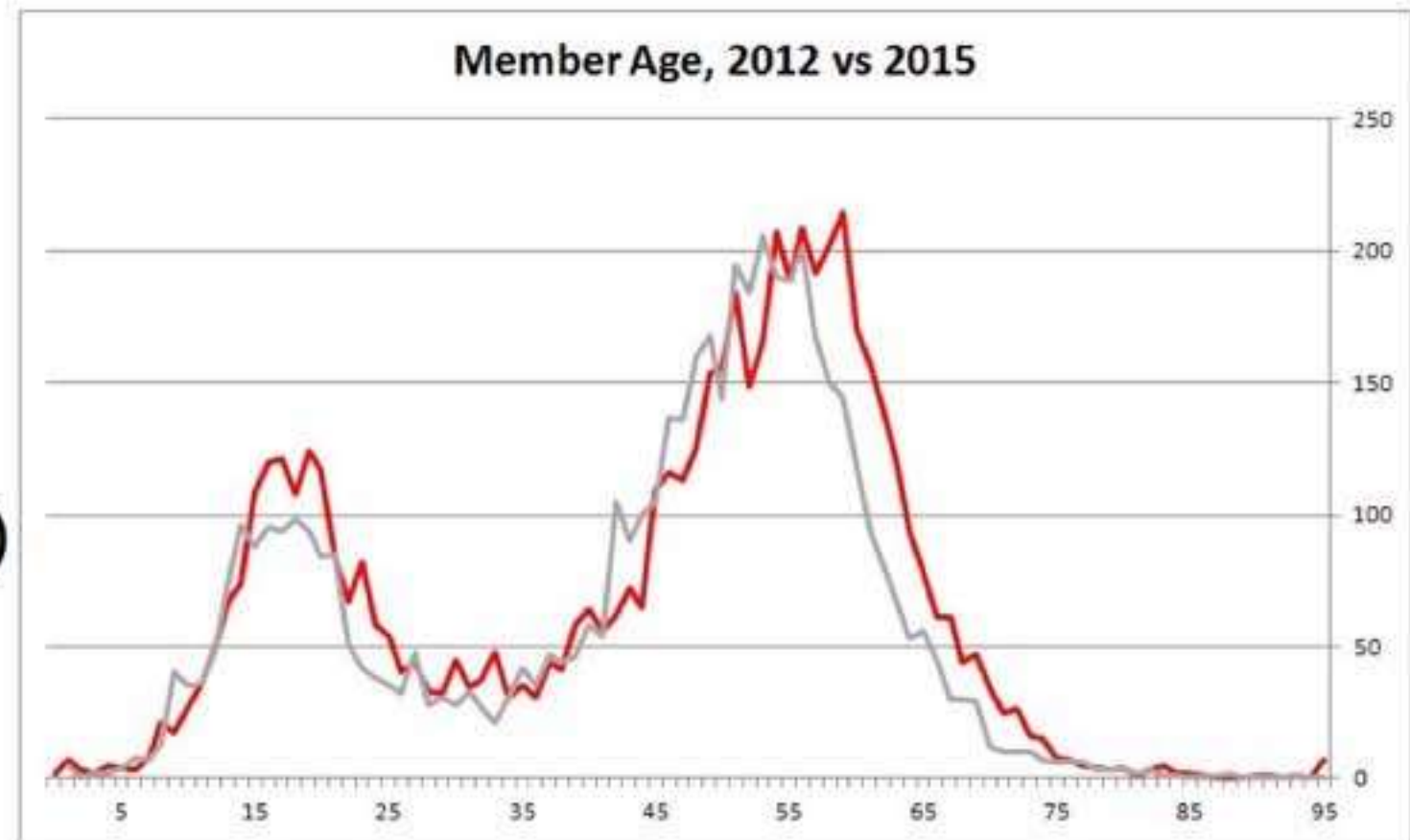
Significant risk reduction can be achieved by positioning people and vehicles crosswind from the launch pads.





# Our Association is Diverse

- Age
- Membership duration (~20% <1 year; ~14% > 20 years)
- ~300 Contest flyers
- 3032 High Power flyers (~60% of eligible members)
  - 157 Jr (+9)
  - 1281 Level 1 (+100)
  - 1226 Level 2 (+20)
  - 468 Level 3 (+25)
- 325 Teachers (+175)
- 170+Sections
- 3391 Section members (56%)





# EROCKETS/SEMROC OPEN HOUSE

2790 Thunderhawk Ct

Stop 8







# ESTES KITS AT EROCKETS



... and

back!



VIDEOS OF THE PRESENTATIONS AND OTHER  
NARCON EVENTS AT:



<http://preview.tinyurl.com/narcon2016>