

# The Chinese Space Program



Where are they headed?  
Why are they going?  
How will they get there?  
What does it matter?

James Oberg

# The “Treasure Fleet” of Admiral Zheng He (Cheng Ho)



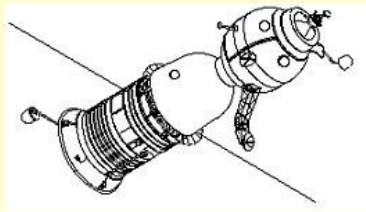
The Chinese decision to terminate these expensive voyages may have been rational in the short term but it led to half a millennium of grief.

# Shenzhou vs. Soyuz A Family Resemblance??



Shenzhou (Chinese) vehicle (top L, R)

NY Times (Jan 3, 2003):  
“The Shenzhou spacecraft are converted Soviet capsules from the 1960s....”



Agence France Presse:  
“Little more than a slightly modified version of the old Soviet workhorse of space, the Soyuz.”

Soyuz (Russian) vehicle (lower left, lower right)



Some systems clearly were 100% Derivative:  
E.G., In-cabin pressure suits

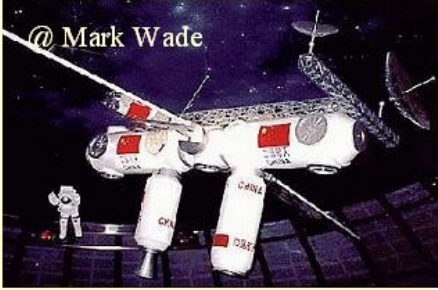


Shenzhou



Soyuz



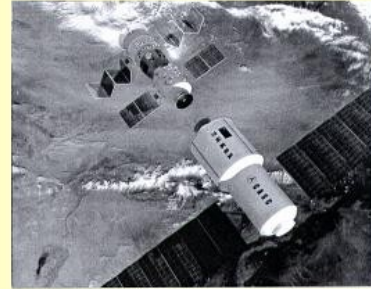


Modular concept displayed at European trade fair, 2000

Official photograph of space station mockup, 2003. Note APAS (left).



## Space Station Plans



Artist concepts of station (below) and Shenzhou docking (above).



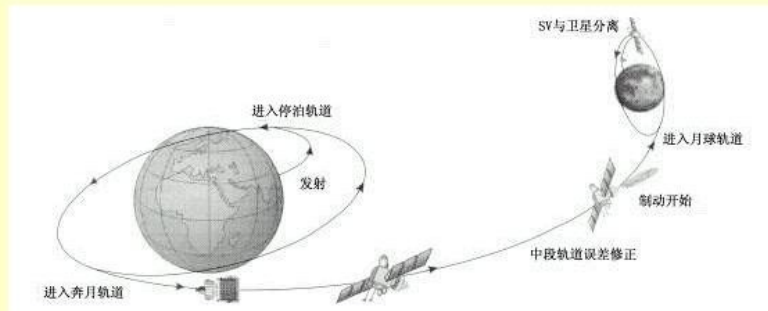
# Cheng-Eh Lunar Probe



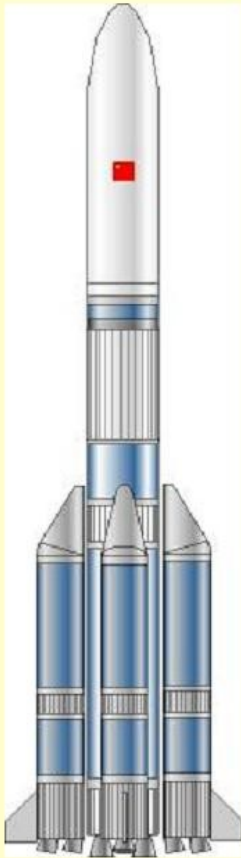
Lunar orbital probe (left) is to be built on basis of DFH-3 communications satellite (lower left)



"Chang'e" is a character who flies to the Moon in the Huai Nan Zi fairy tale, 4<sup>th</sup> C. BC.



Typical trajectory of simple lunar probe shows checkout, transfer, and arrival.



@ Mark Wade

## Plans for the CZ-5 Booster

Officially-described vehicle for heavy commsats and for large manned space station.

Ariane-5-class vehicle is a major quantum-jump in the 'Long March' family and presents very formidable engineering challenges.

Designed for sea transport and launch only from new Hainan Island site (right)

