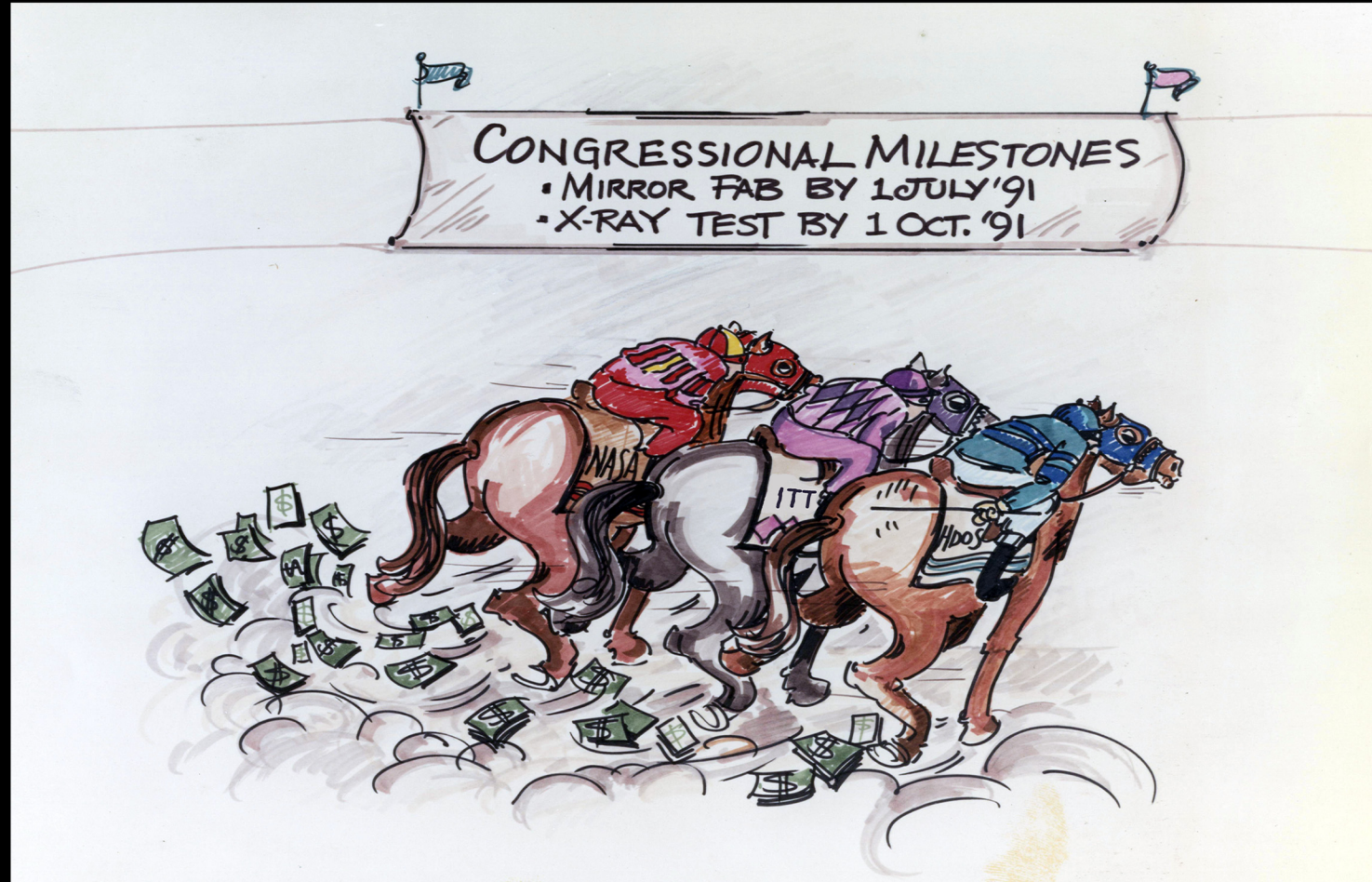


Verification Engineering Test Article (VETA) - I: The Challenge of the Congressional Mandate for a Comprehensive Test of the P1/H1 Mirror Elements

Gary Matthews (ITT), Keith Havey (ITT), Jeff Wynn (ITT Retired), John LesVeaux (ITT Retired),
Greg Young (NGAS), Tom Casey (ATK), Scott Texter (NGAS), Jon Arenberg (NGAS)

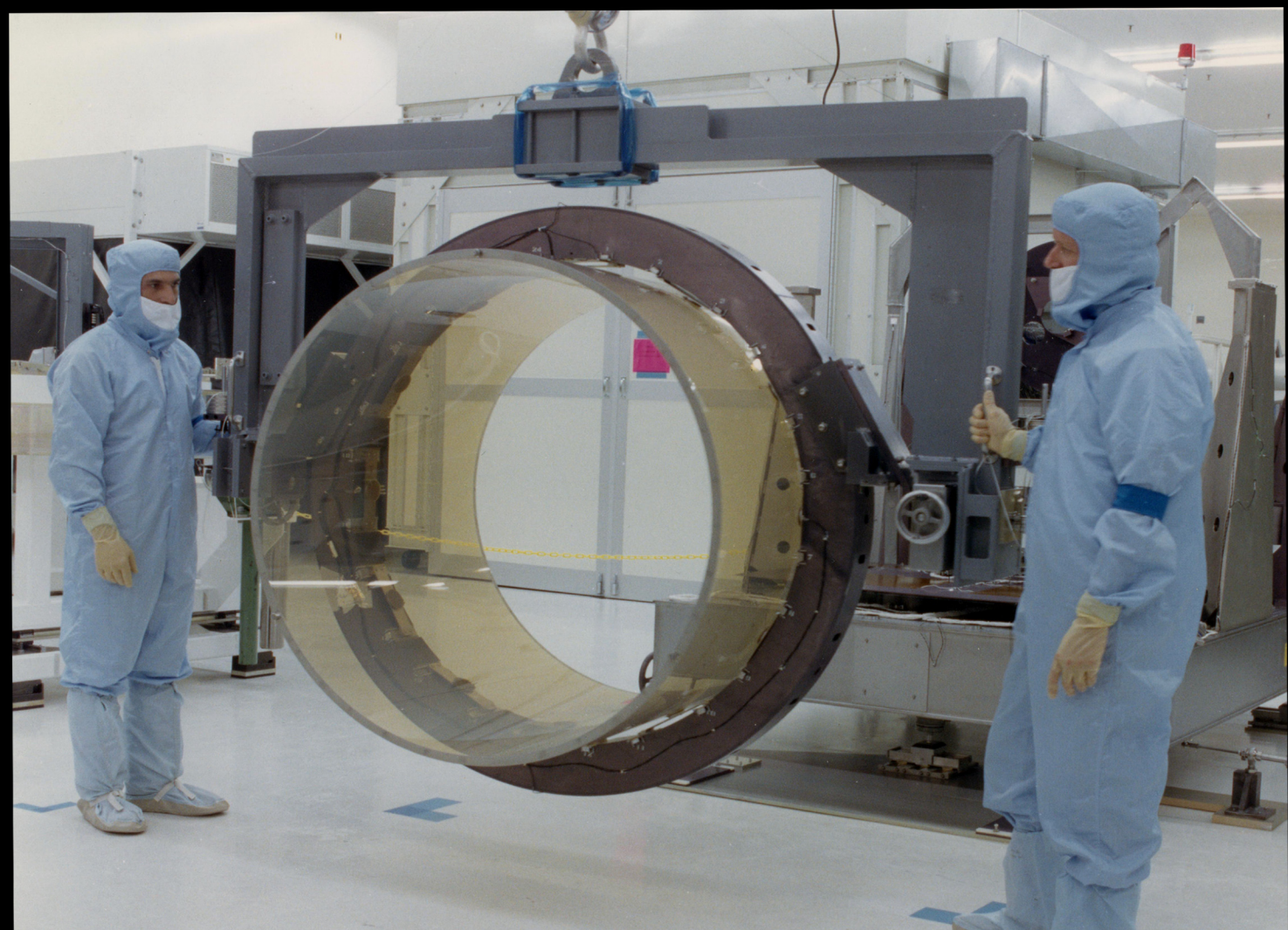
Original cartoons from 1991
by John Spina, Program Manager, ITT



June 15, 1991
Delievery of the mirrors with 15 days to spare



P1 Mirror installed in the Mount Ring



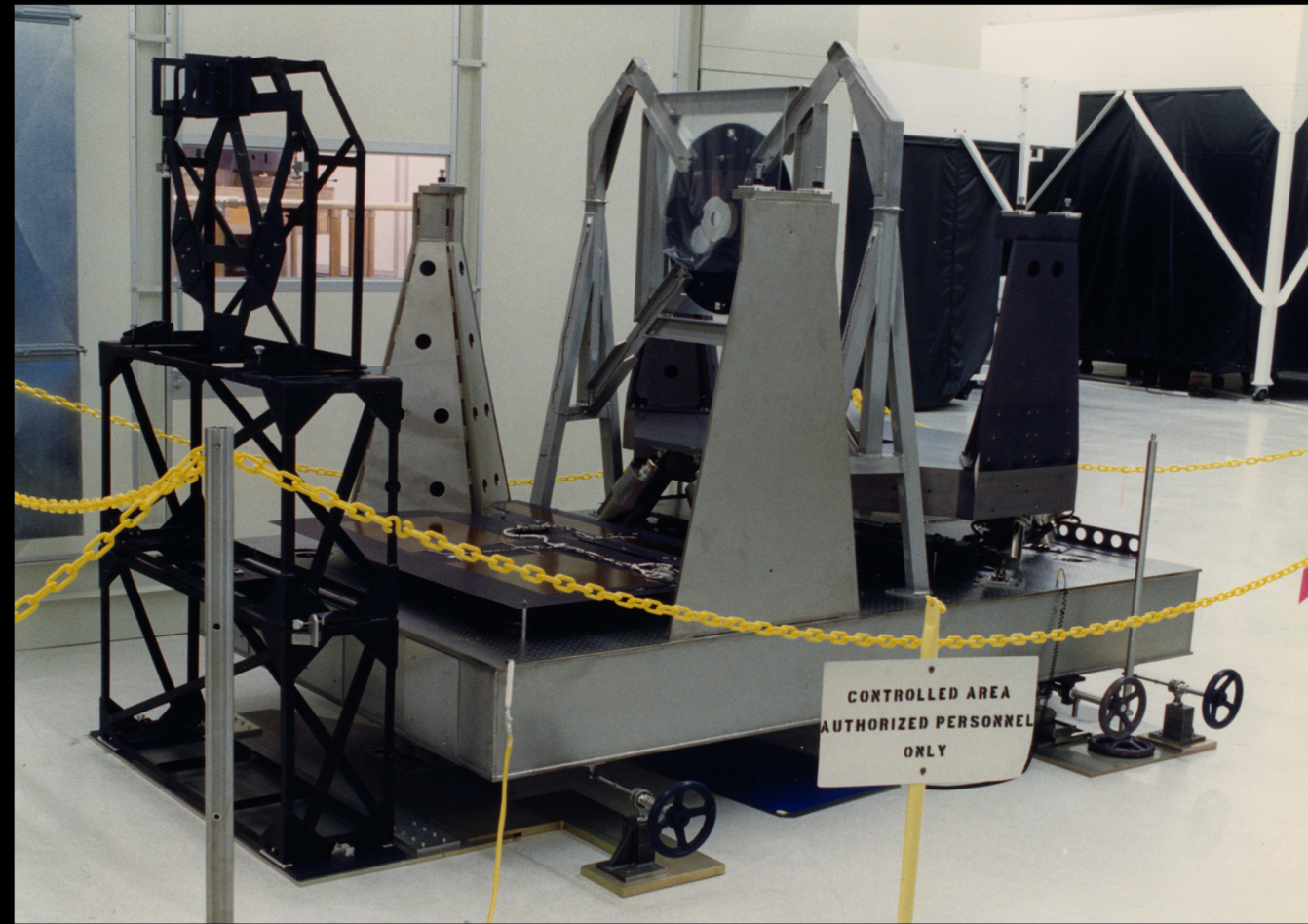
VETA-I with both mirrors installed



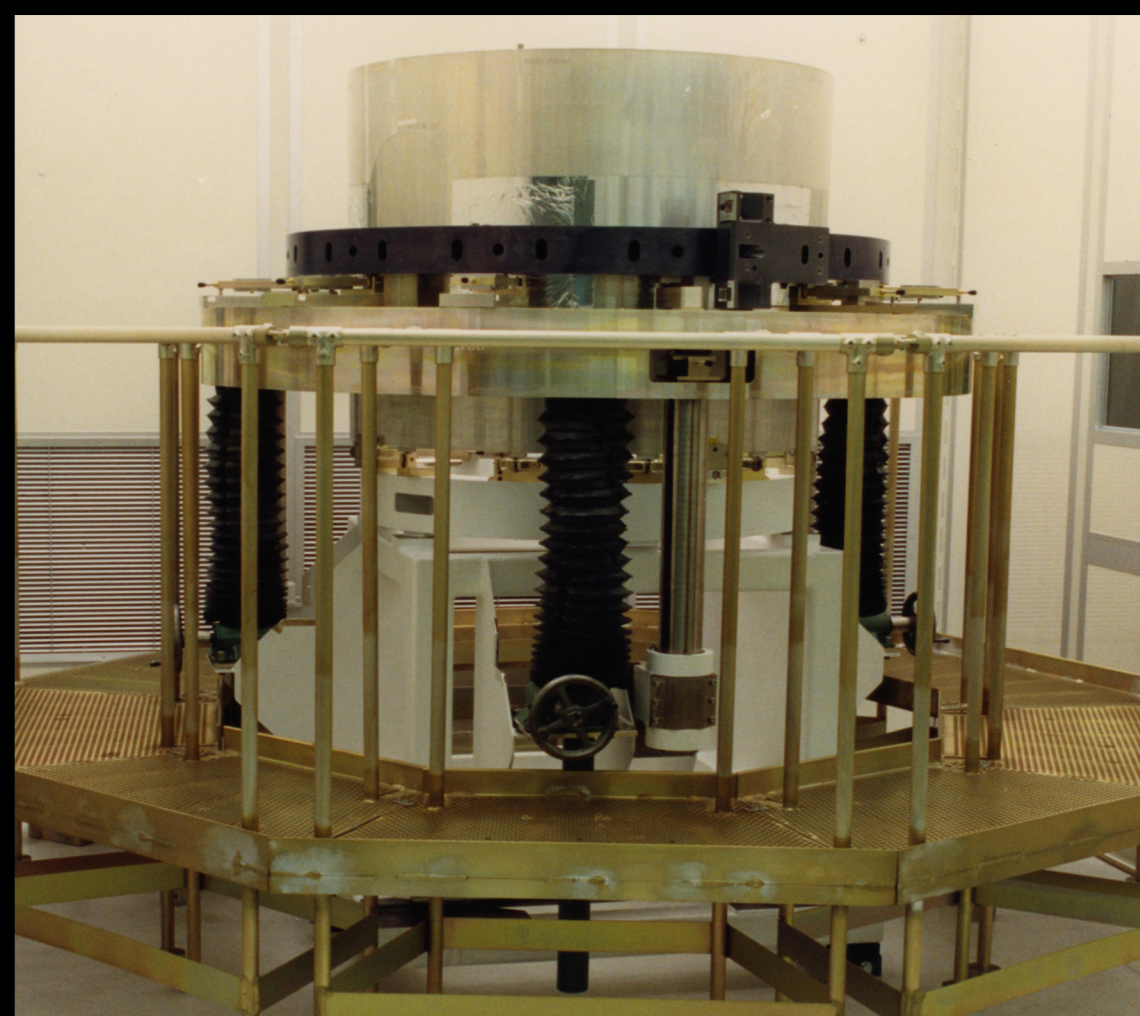
Final images taken on
September 17, 1991
showed a performance of 0.22 zrcsec.

~2X better than Spec
13 days Before Congressional Mandate Deadline

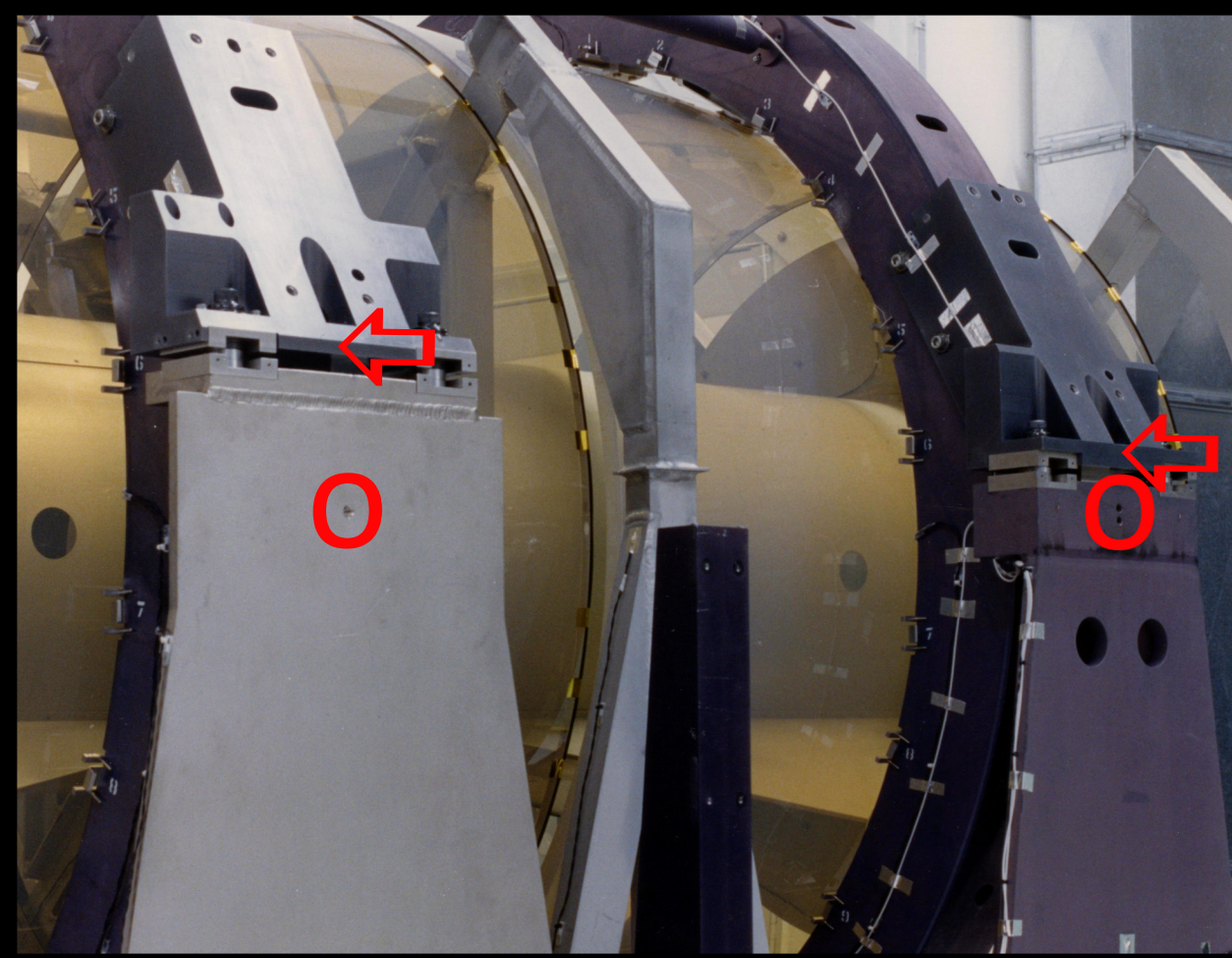
VETA-I Internal Structure
with actuators installed



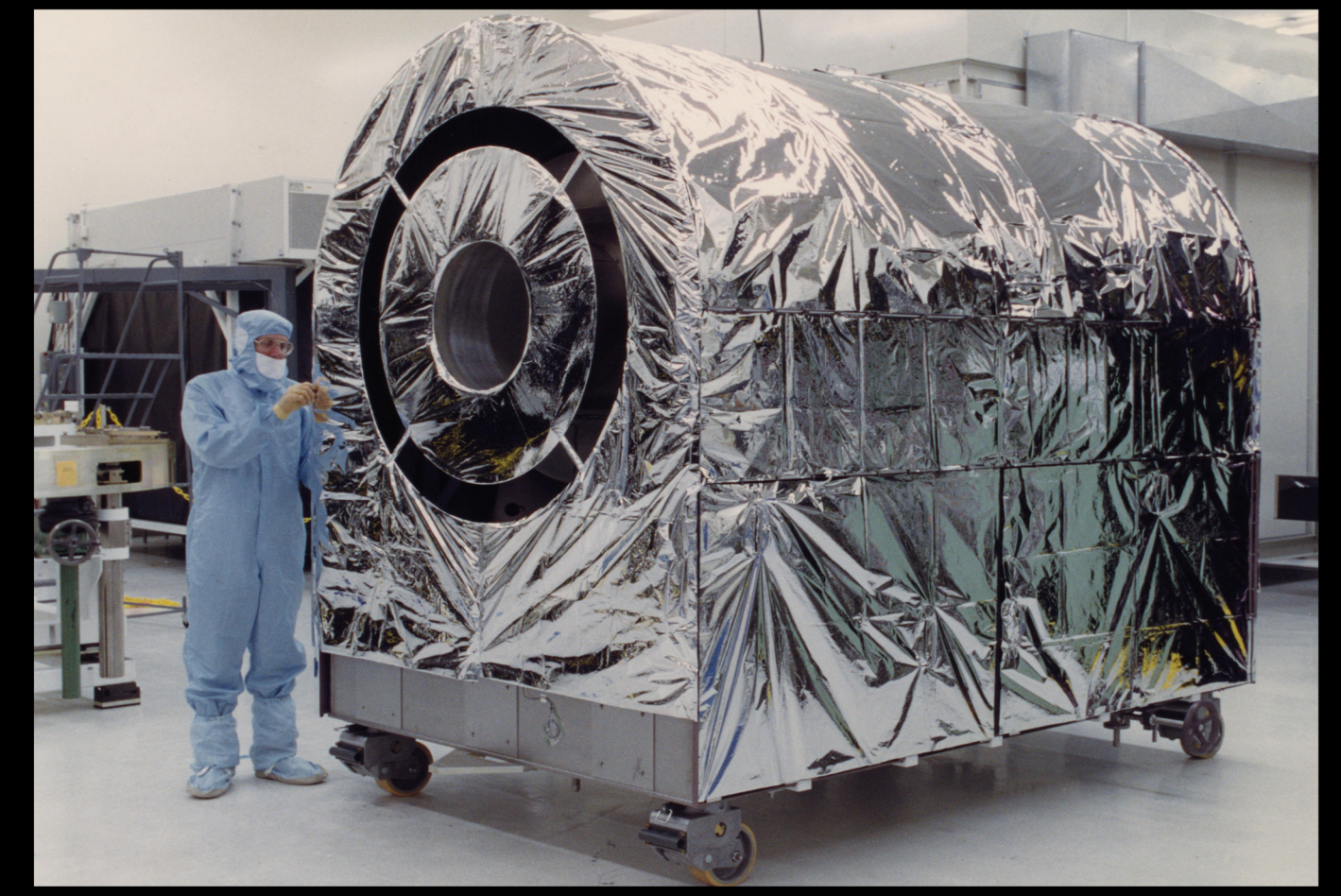
Mirror Integration Station
with Mirror Simulator



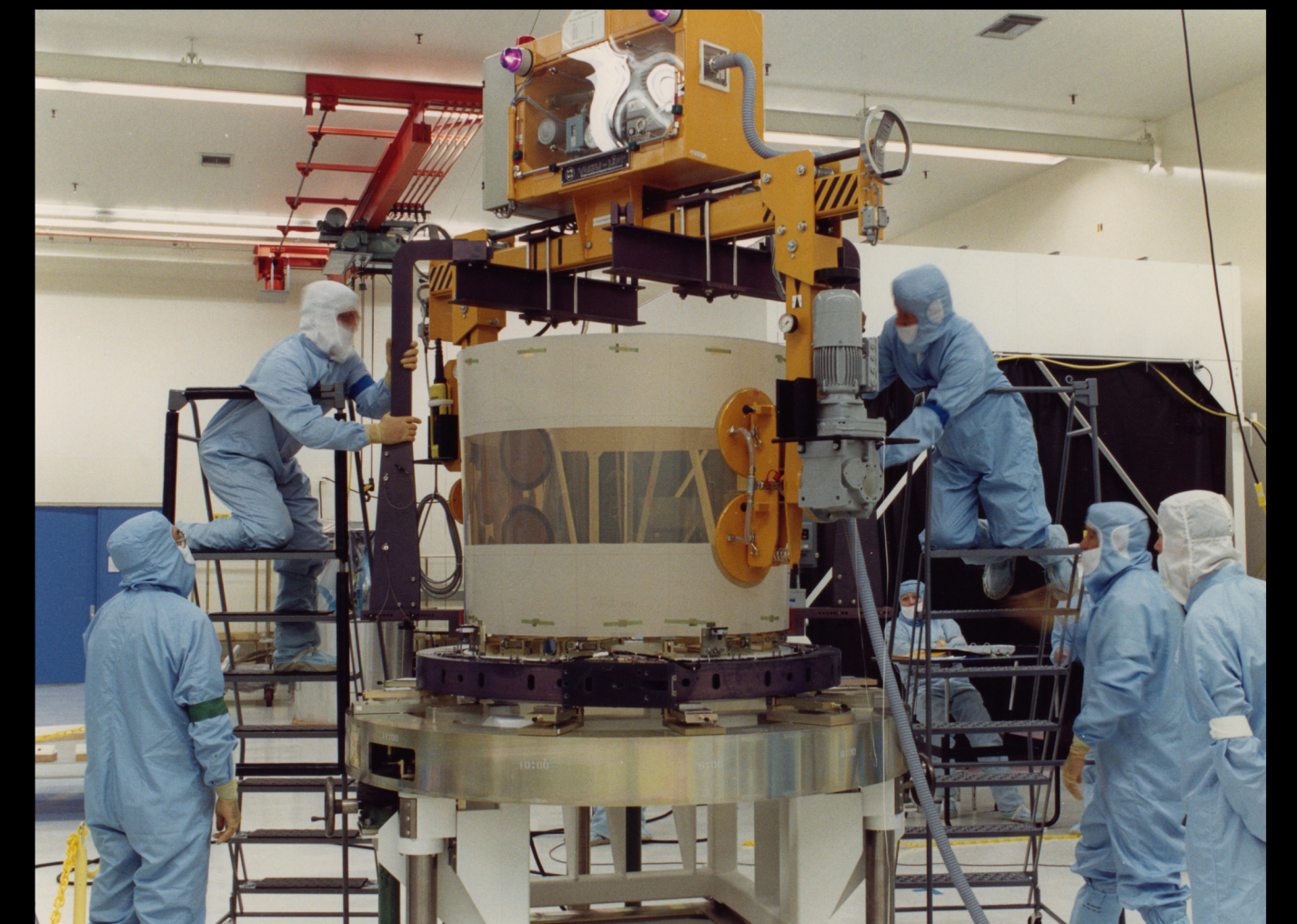
Close-up of "Squeezer" locations
on mirror interfaces



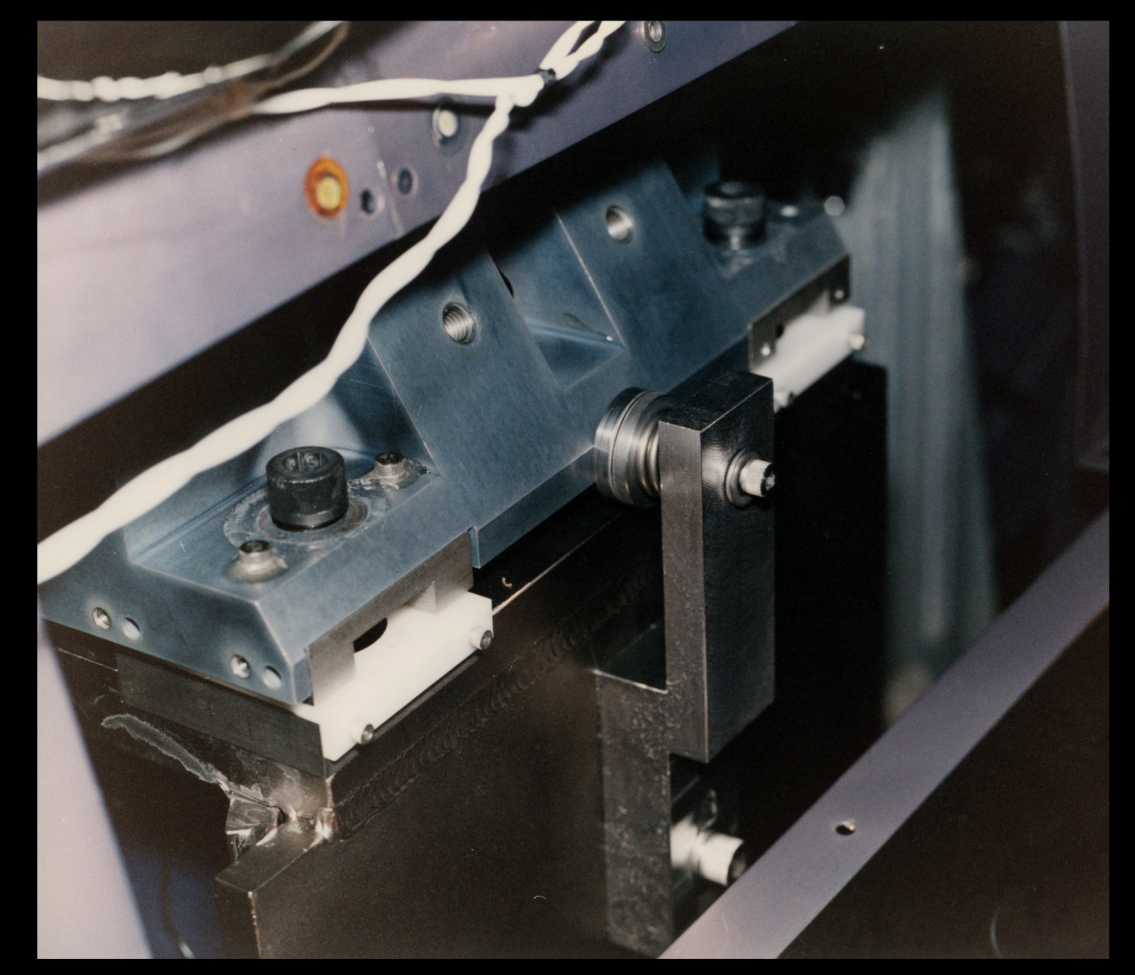
VETA-I with Thermal Shroud (Mailbox)
and blankets installed



H1 Mirror during integration



Mirror "Squeezers" to eliminate
unexpected astigmatism



Before and after mirror "Squeezers"
Note: Finite Conjugate Error Not Removed
(Images courtesy of M. Freeman, et al.)

