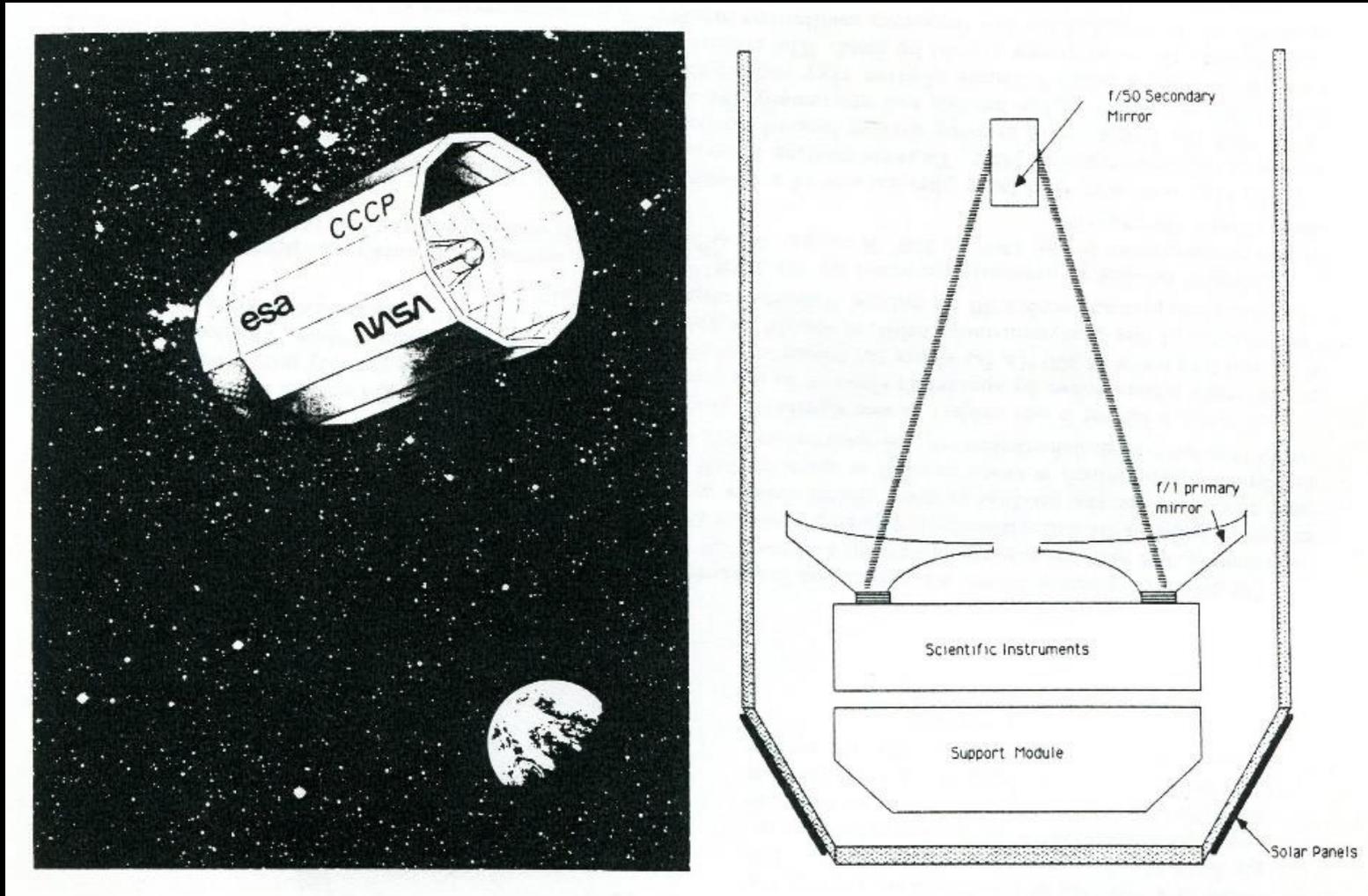


The Next Generation Space Telescope – NGST 1985-1992

The Birth of JWST

Conceptualizing what comes beyond Hubble, before Hubble!

1985



Credit: Pierre Bely 1985

The key NGST people at STScI in 1987

Riccardo Giacconi
Director and Future
Nobel Prize Winner

Garth Illingworth
Deputy Director

Peter Stockman
Division Head



Credit: STScI



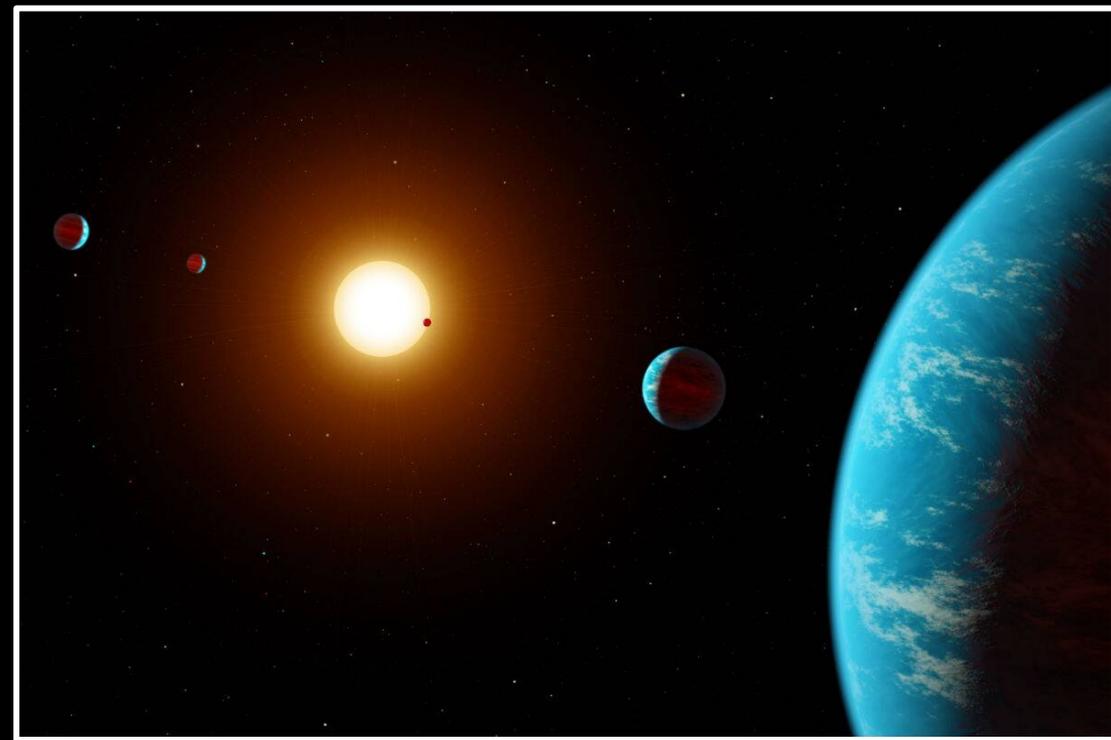
Pierre Bely
Chief
Engineer

Credit: Pierre Bely

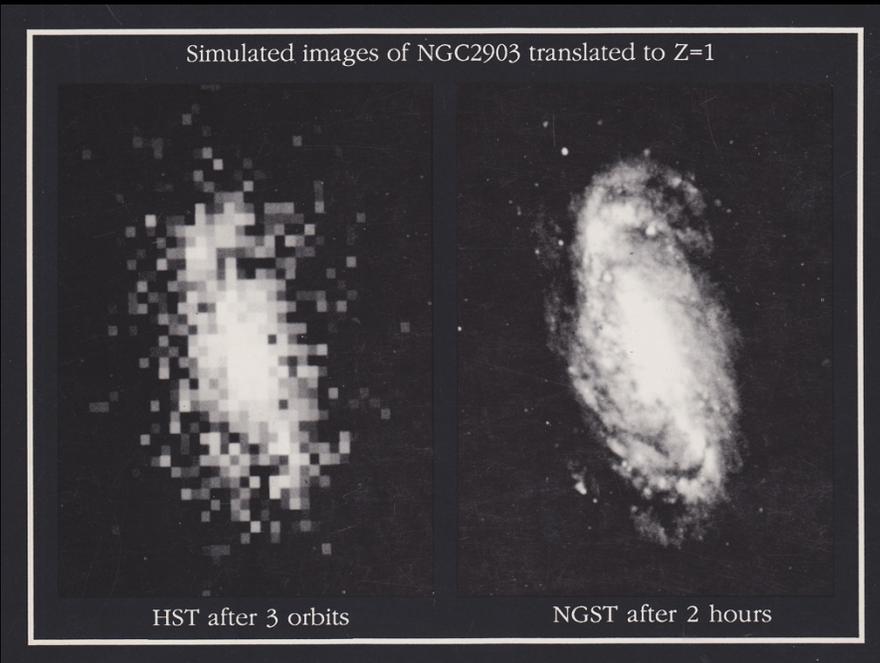
1985-1989: NGST Science beyond Hubble before Hubble was launched!

Seeing distant galaxies way better than Hubble or Keck

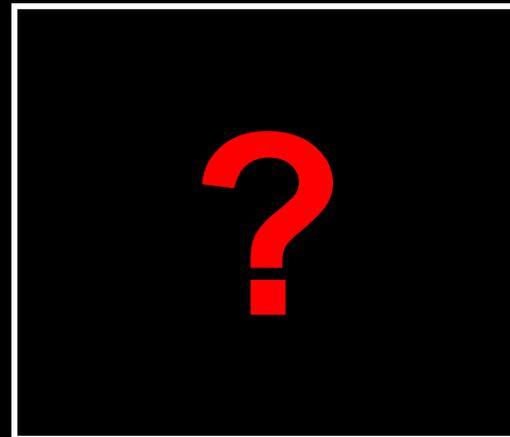
Searching for exo-planets like earth



Credit: NASA



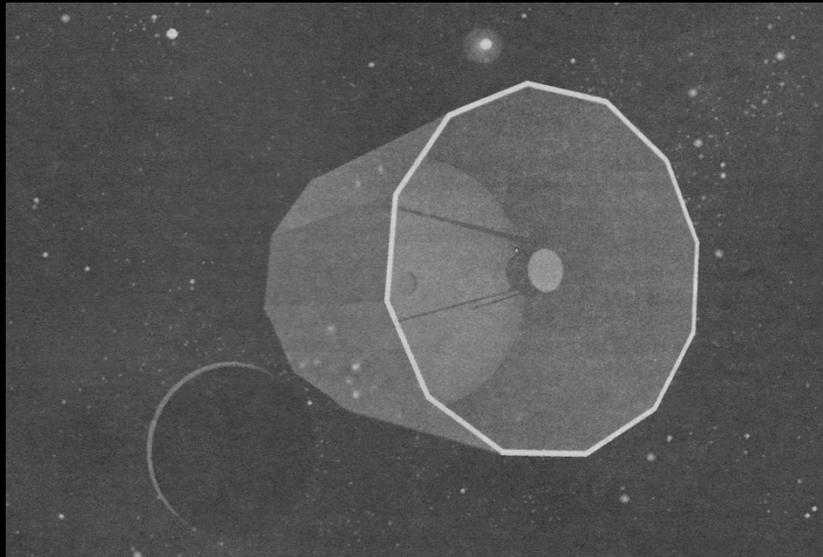
Credit: Jim Gunn



Exploring into the unknown
Revealing the hidden mysteries of our universe

1989: First NASA & STScI conference about NGST

Developing the NGST concept and science



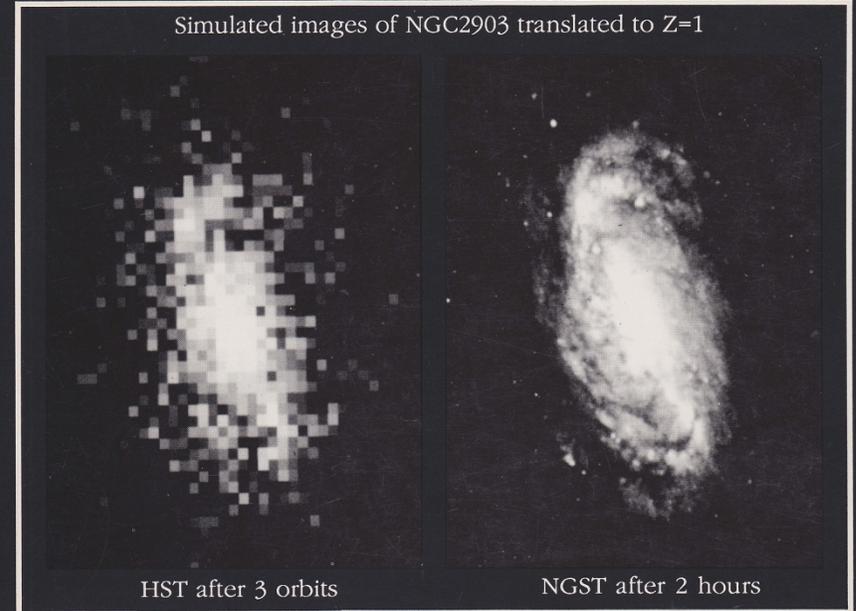
An 8-10 m NGST: 4X the size of Hubble

Or an even bigger NGST on the moon??

Credit: NASA, STScI, Garth Illingworth, Pierre Bely, Peter Stockman, Chris Burrows

THE NEXT GENERATION SPACE TELESCOPE

Simulated images of NGC2903 translated to $Z=1$



HST after 3 orbits

NGST after 2 hours

Proceedings of a Workshop held at the
Space Telescope Science Institute
Baltimore, Maryland,
13-15 September 1989



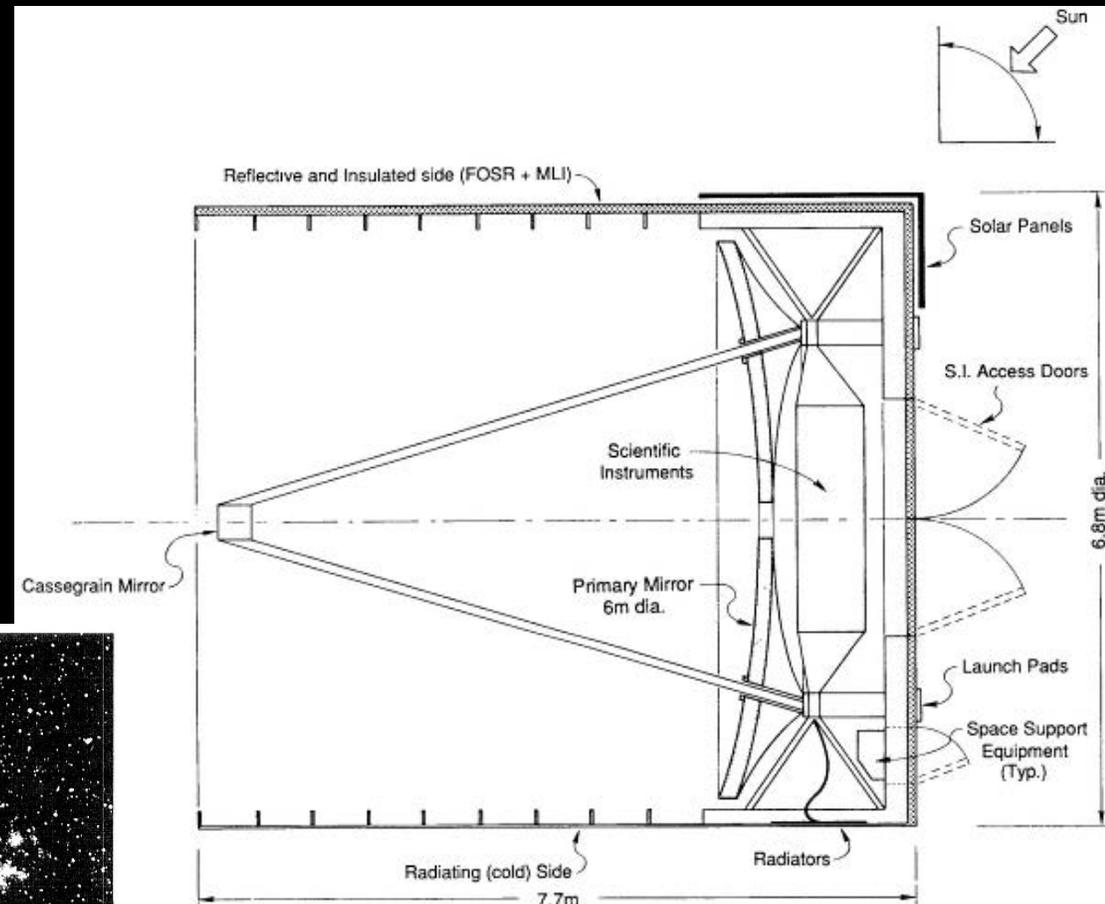
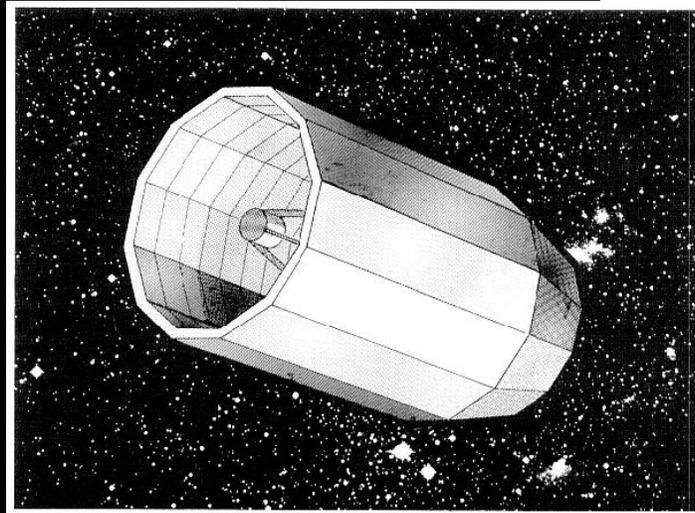
1990 Astronomy Decadal Survey Panel vision of a cold infrared telescope with a large 6 m (20 ft) mirror

A 6 m infrared space telescope was recommended by the UV-Optical Panel of the 1990 Decadal Survey for launch in 2009 for \$2B (1990 \$)

WORKING PAPERS

Astronomy
and Astrophysics
Panel Reports

NATIONAL RESEARCH COUNCIL



Credit: NRC, 1990 Decadal Survey, UV-Optical from Space Panel, Garth Illingworth

The Next Generation Space Telescope

1991 – Setting the stage for the future

- Huge infrared space telescope
- Cooled to near absolute zero by the extreme cold of the universe
- 8-meter (26 foot) mirror
- Located far away from Earth

1991 workshop on needed technologies
through Astrotech 21 (NASA HQ/JPL)

https://www.ucolick.org/~gdi/early_jwst/

Credit: NASA, JPL, Garth Illingworth, James Cutts, Dayton Jones

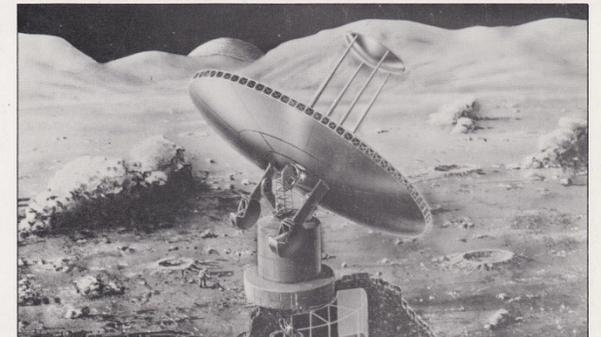
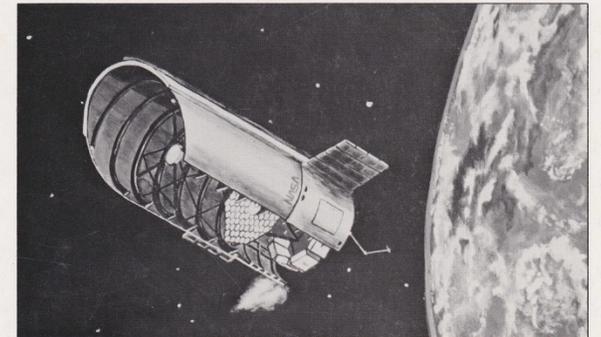
ASTROTECH 21
WORKSHOPS
SERIES II

VOLUME

4

SERIES II MISSION CONCEPTS AND
TECHNOLOGY REQUIREMENTS

Workshop Proceedings: Technologies for Large Filled-Aperture Telescopes in Space



September 15, 1991

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