Western Regional Space Grant Keynote

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•
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Former design and cognizant engineer at NASA’s Jet Propulsion Lab and senior program manager at Applied Materials

September 2019
Big Sky, Montana

Magical Space of Wonders

–Austen Rose von Lossberg, 2nd grade

The Power and Beauty of Crazy Ideas

–Austen's dad, 5th decade grade

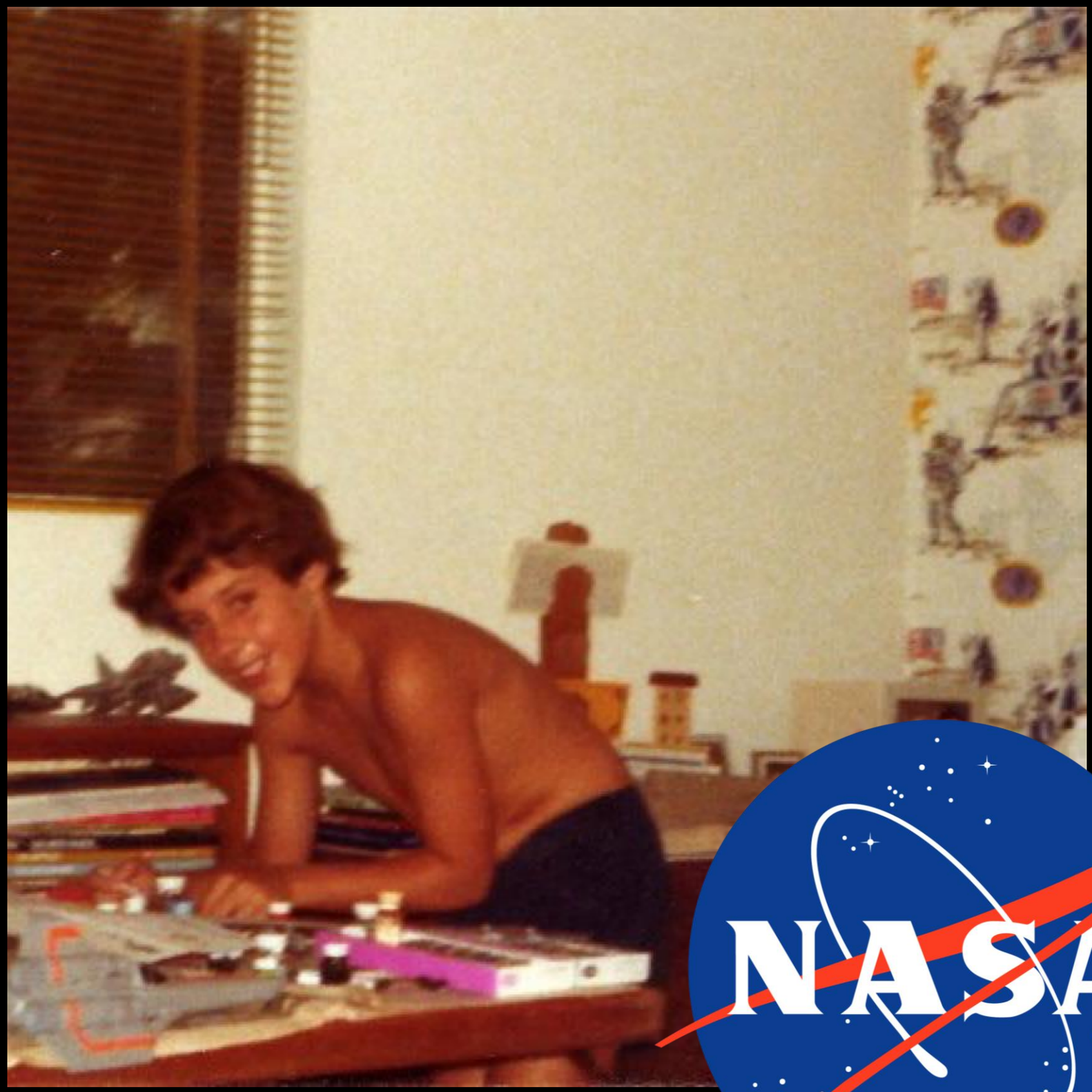
NASA

JPL
Jet Propulsion Laboratory
California Institute of Technology

APPLIED MATERIALS®

ТАНОЕ-БАЙКАЛ
Tahoe-Baikal Institute

THE GARDEN CITY
MISSOULA
HUB OF FIVE VALLEYS



“What they should have sent was poets…”

–Apollo 8 Mission Commander Frank Borman

1989

NASA initiates the National Space Grant College and Fellowship Program, also known as Space Grant.

R Norman Matheny/Christian Science Monitor

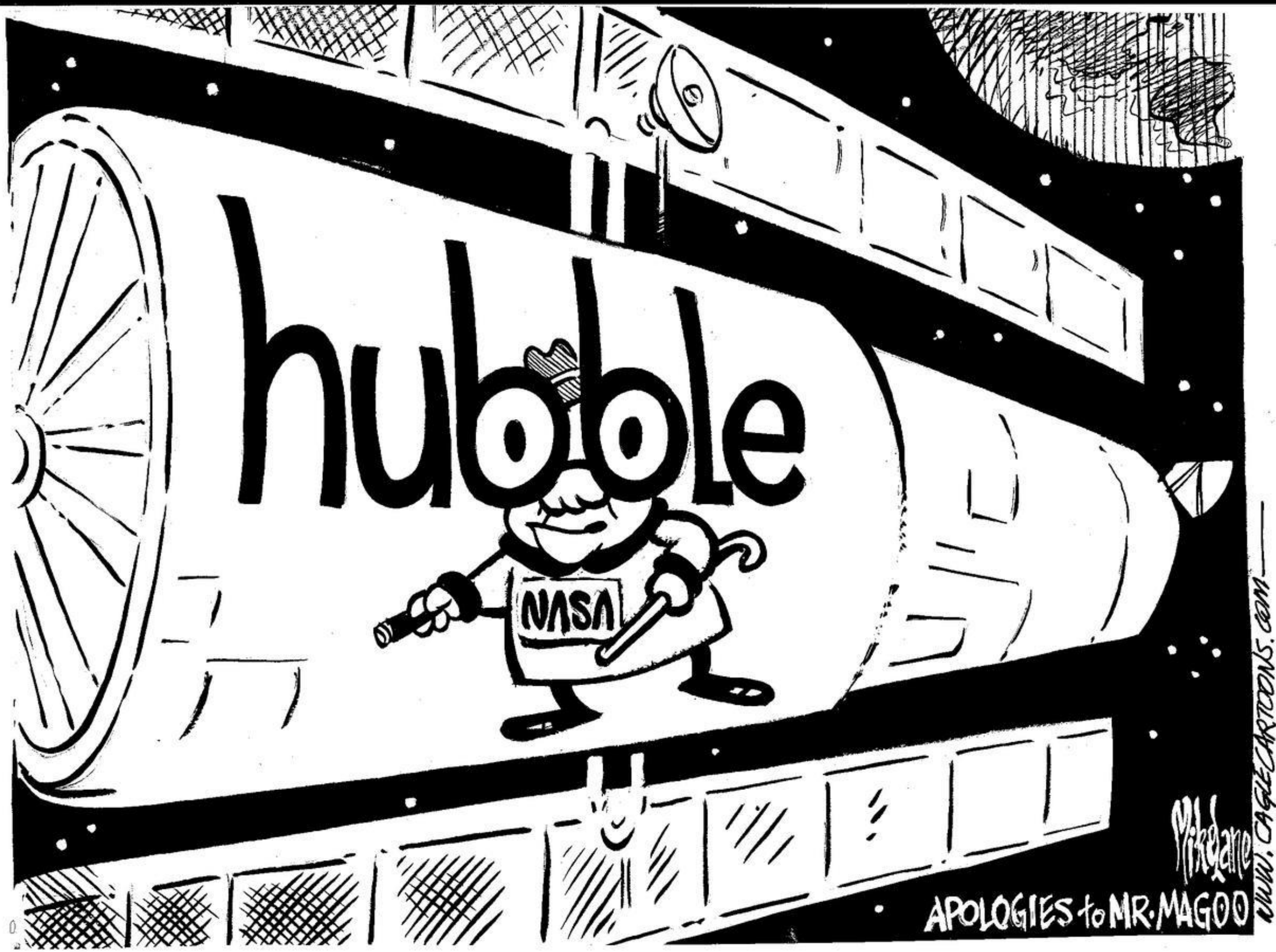
Space Grant

- Space Grant is a national network of colleges and universities. These institutions are working to expand **opportunities for Americans to understand and participate** in NASA's aeronautics and space projects by supporting and **enhancing science and engineering education**, research and **public outreach** efforts.

Magellan

- Launched from Shuttle Atlantis - May 4,1989
- First planetary spacecraft launched from a space shuttle
- Arrived at Venus on August 10, 1990
- Synthetic Aperture Radar (SAR)

esa


hubble
NASA
Mikeane
APOLOGIES to MR. MAGOO
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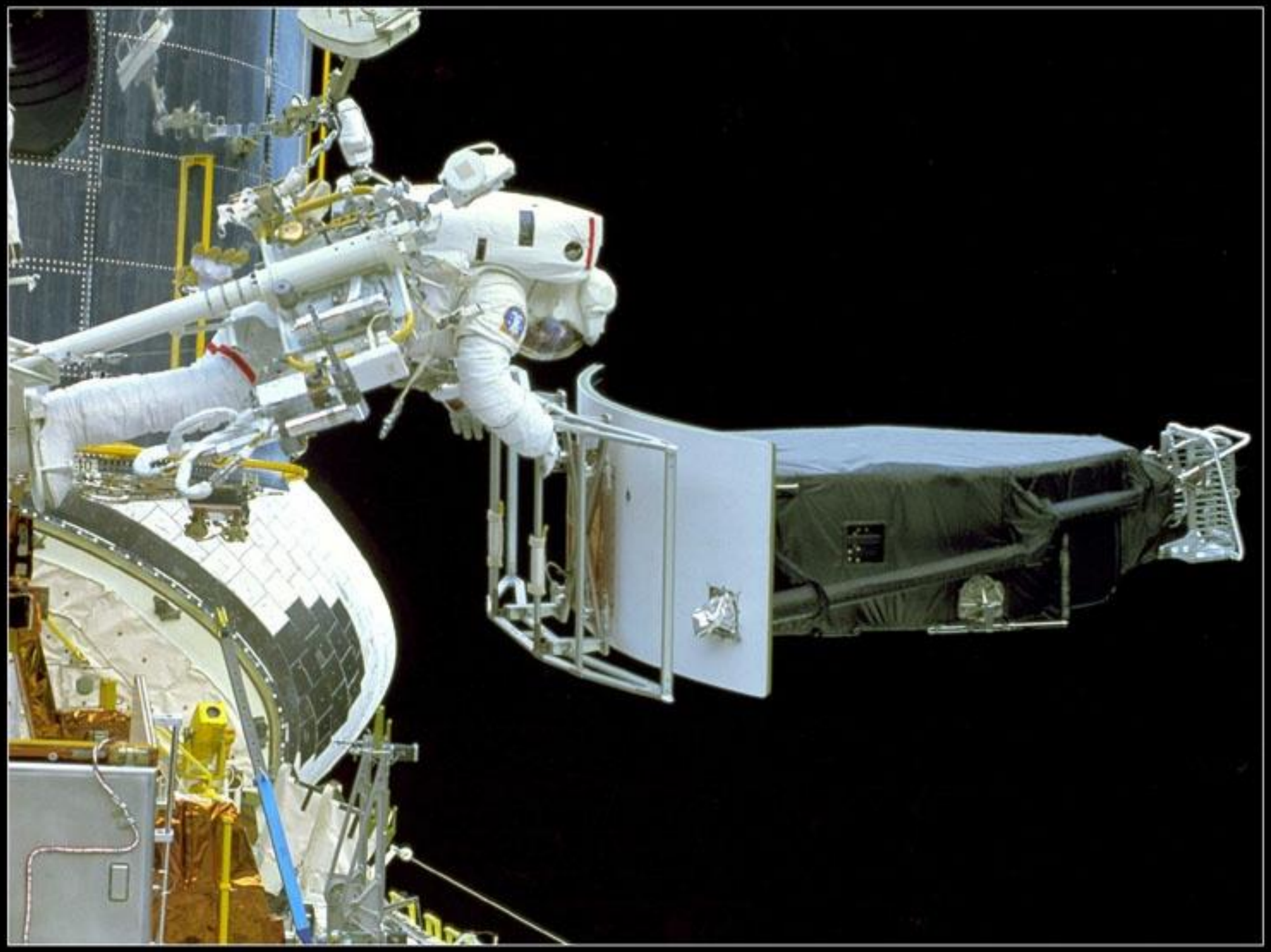
Wide Field and Planetary Camera 2 (WFPC2)

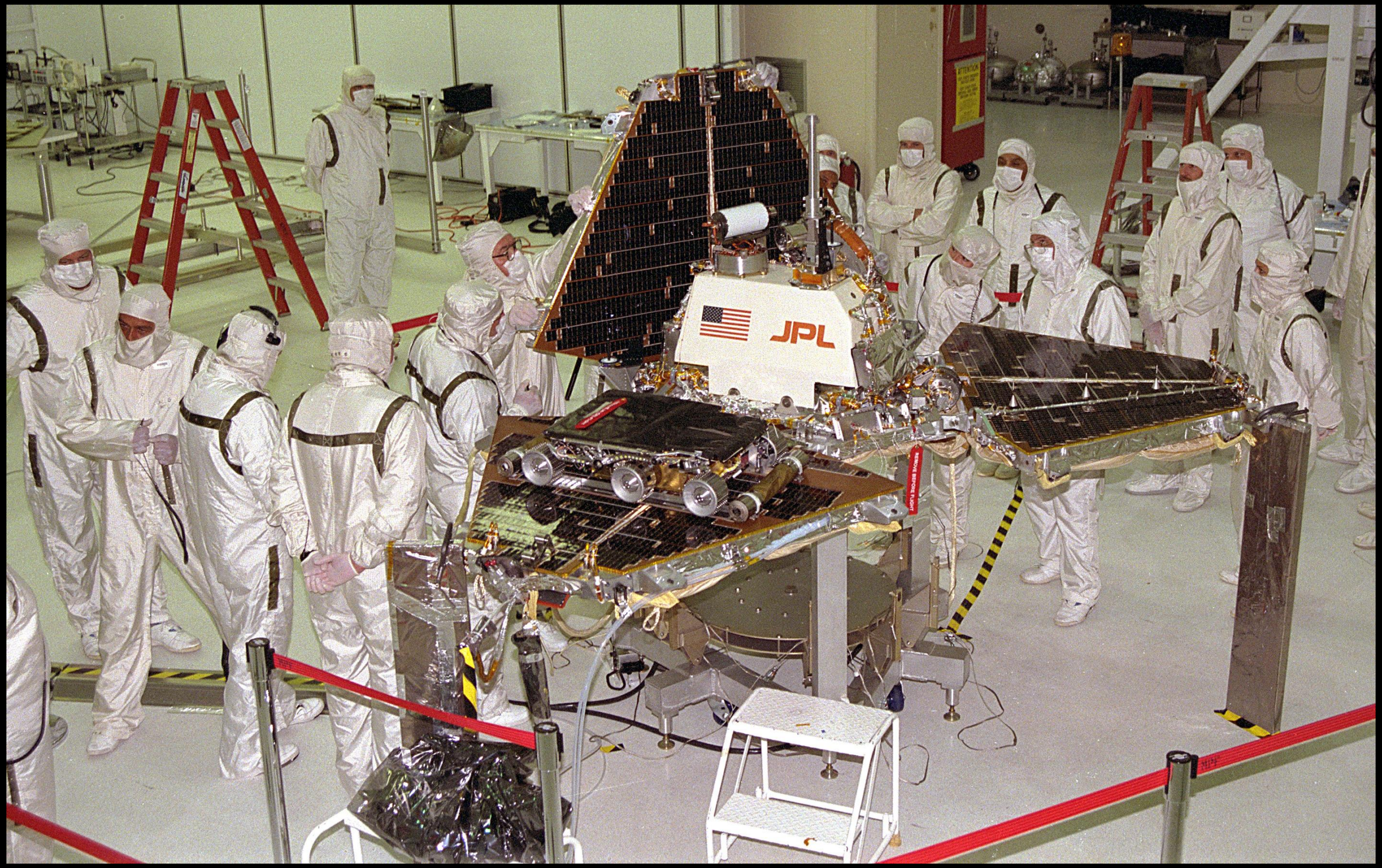


A Second Look: Replacing the Wide Field and Planetary Camera

Image Credit: NASA, 1993

Wide Field Planetary Camera 1

Wide Field Planetary Camera 2



Mars Pathfinder at JPL in Pasadena, CA

Testing of the Airbags:
A Giant Upside Down Slingshot

Mars Pathfinder • Carl Sagan Memorial Station

"BRILLIANT . . . A CELEBRATION OF HUMAN INGENUITY [AND] THE PUREST EXAMPLE OF REAL-SCIENCE SCI-FI FOR MANY YEARS . . . UTTERLY COMPELLING." —*WALL STREET JOURNAL*

#1 NEW YORK TIMES BESTSELLER

THE MARTIAN

ANDY WEIR

NOW A MAJOR MOTION PICTURE FROM TWENTIETH CENTURY FOX

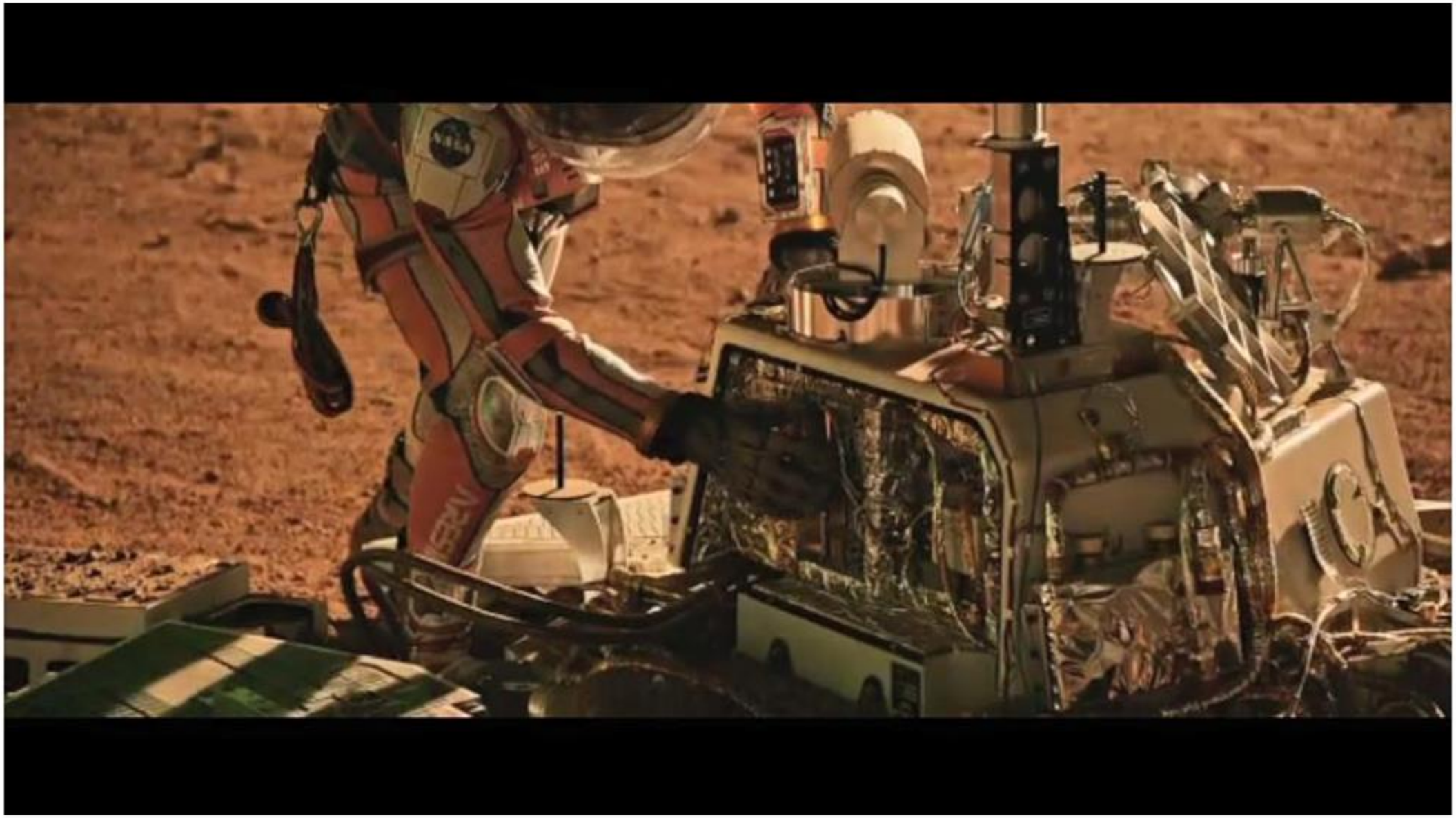
EXTRA LIBRIS

A NOVEL

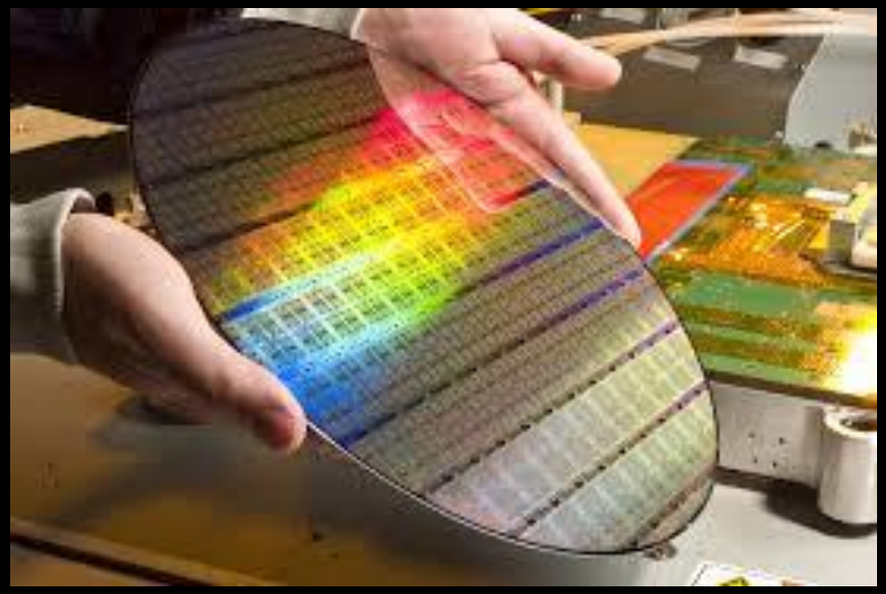
Bryan von Lossberg with Genevieve Jessop Marsh in Missoula, Montana.

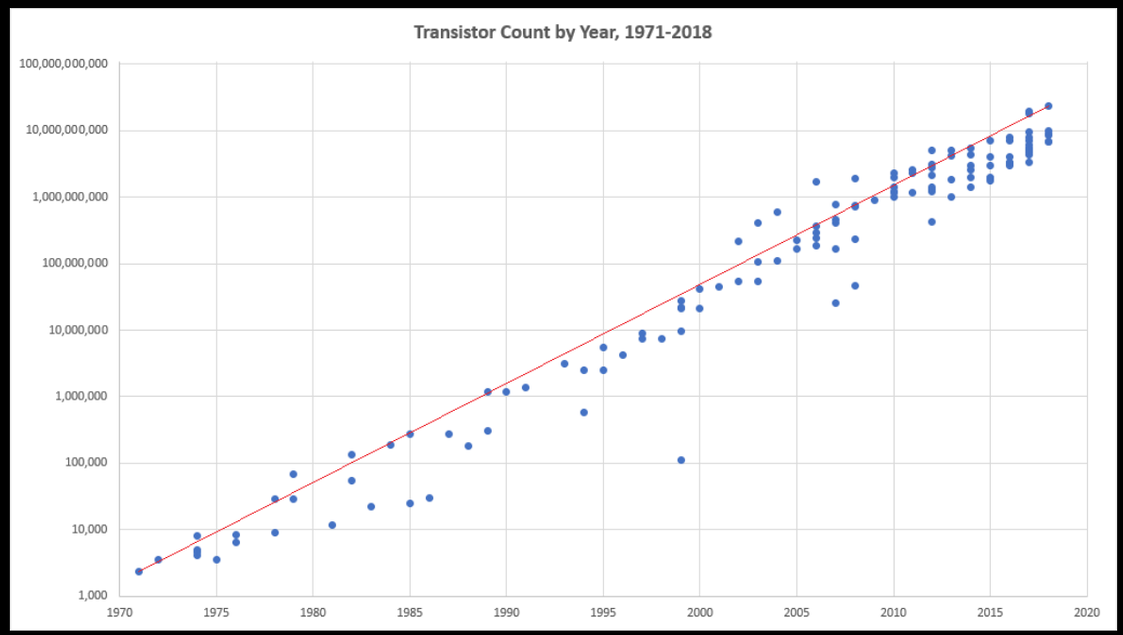
October 2, 2015 ·

That thing that Mark Watney (Matt Damon) is touching in The Martian... I know that thing... Hello Pathfinder... Hello Insulated Structural Assembly... It's been quite some time... But you look freakin' GREAT!

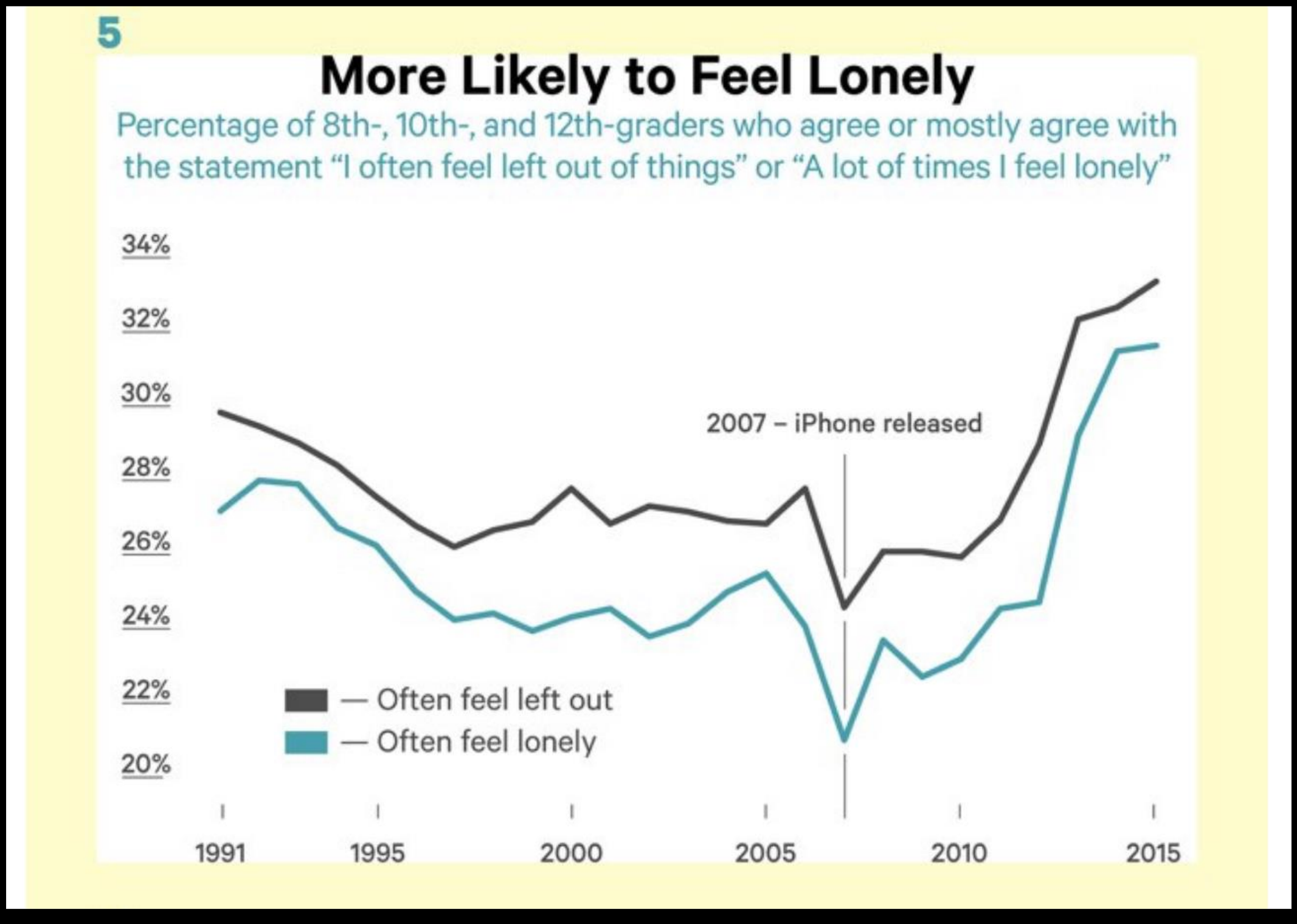


Silicon Valley

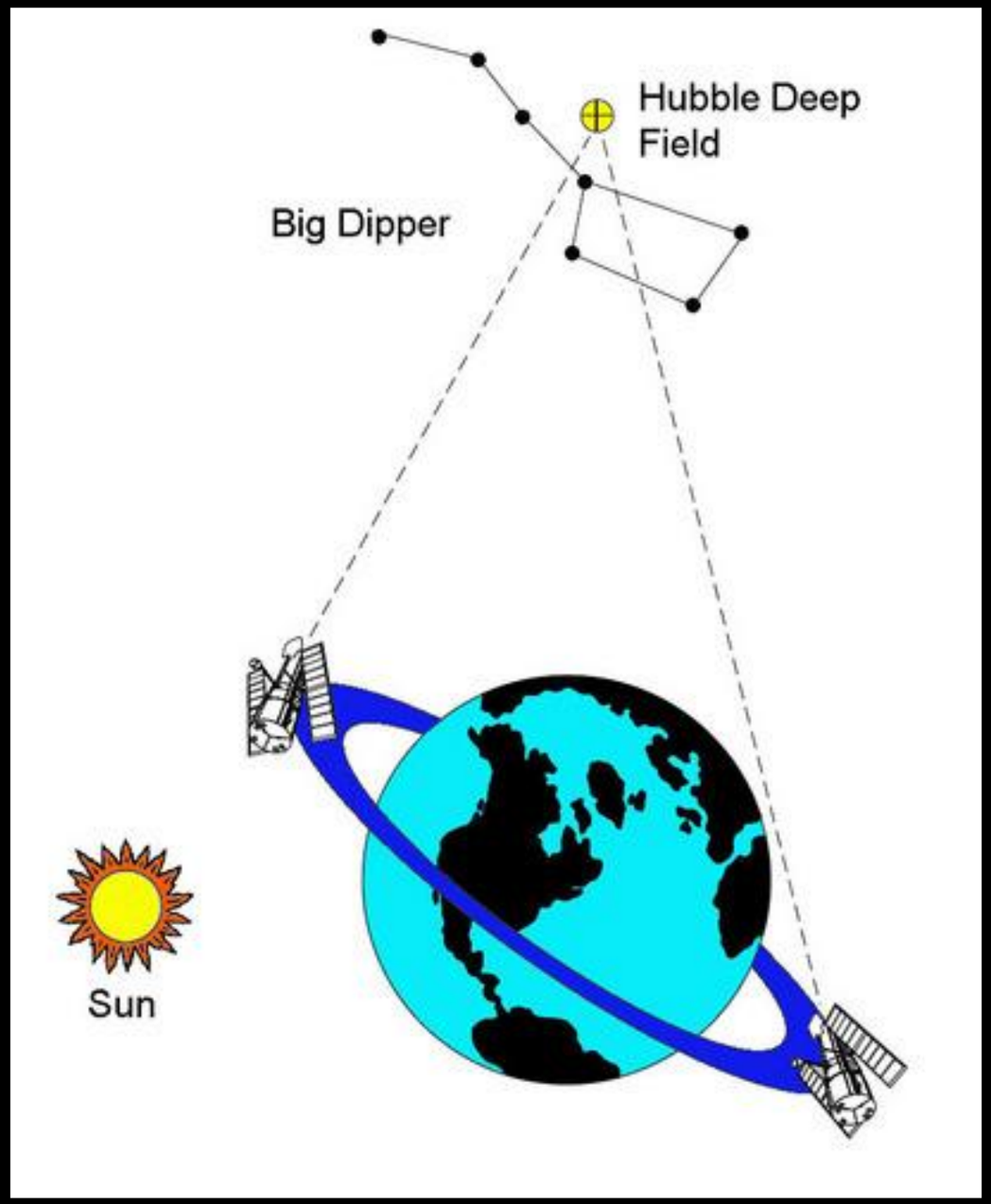


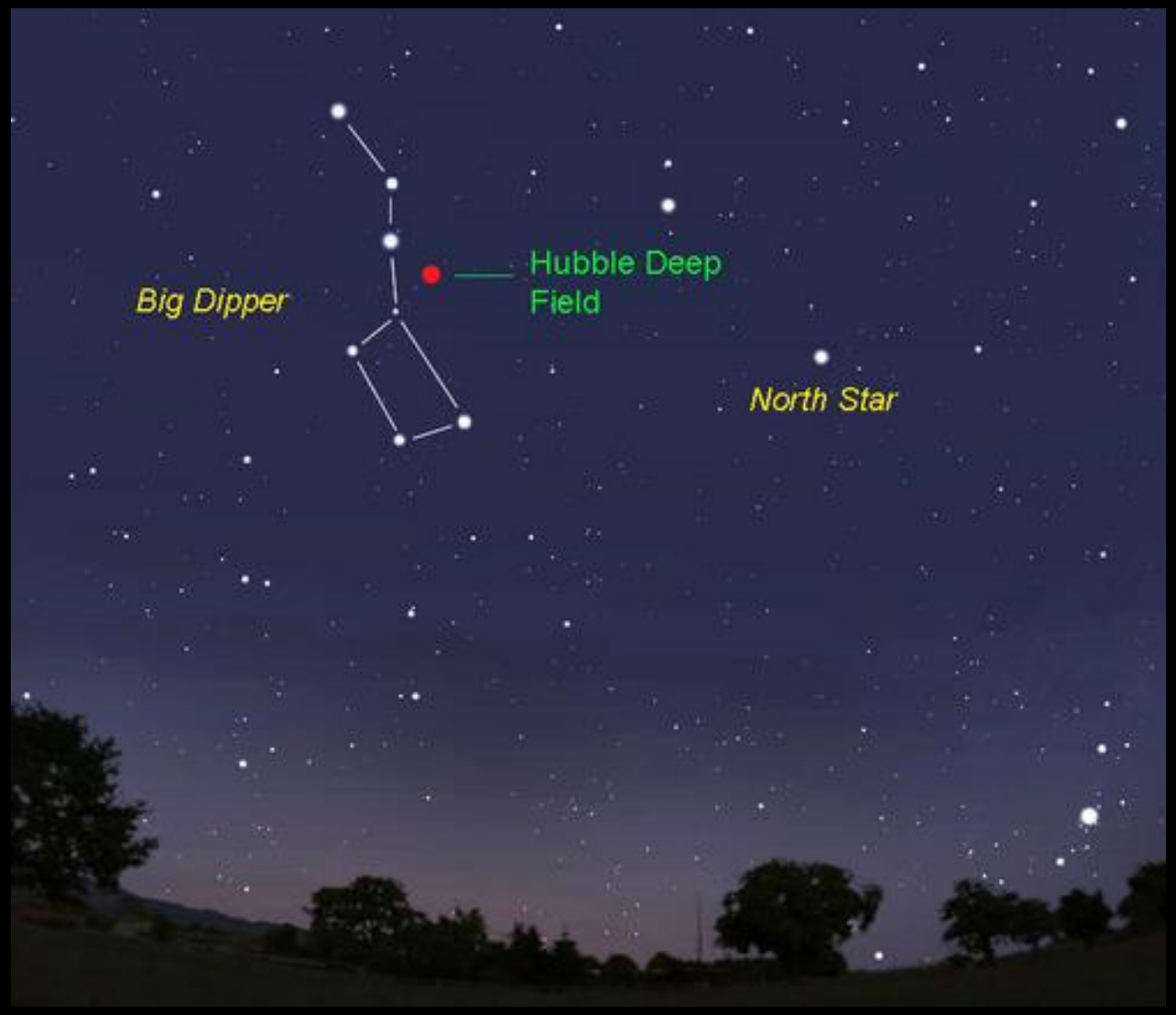


Our Kids


5
More Likely to Feel Lonely
Percentage of 8th-, 10th-, and 12th-graders who agree or mostly agree with the statement "I often feel left out of things" or "A lot of times I feel lonely"
34%
32%
30%
28%
26%
24%
22%
20%
2007 – iPhone released
— Often feel left out
— Often feel lonely
1991
1995
2000
2005
2010
2015

Home

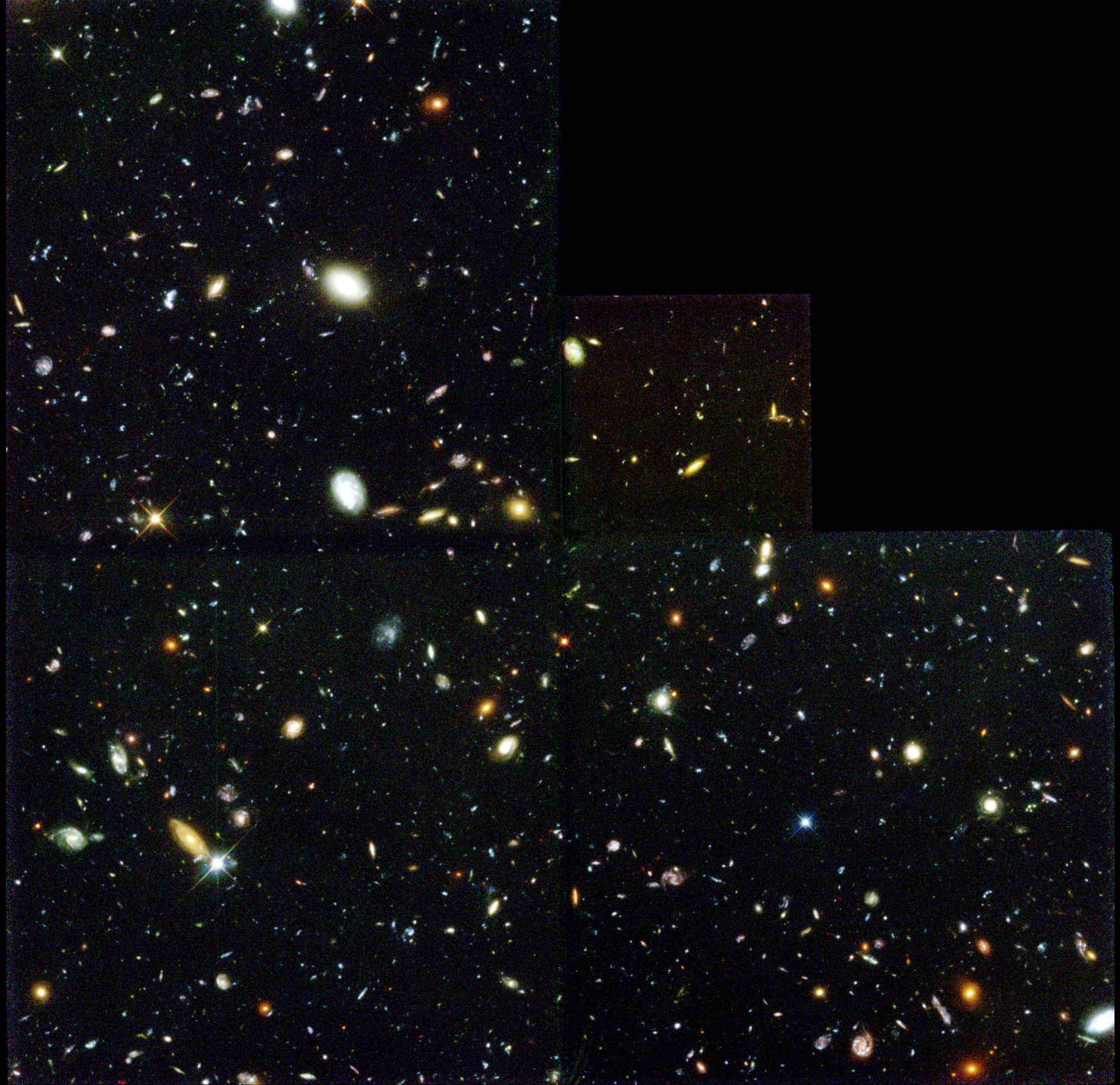




Credit and thanks to Bob King AKA “Astro Bob” in Minnesota

“If you hold a pin at arm’s length up in the air, the head of the pin covers approximately the amount of sky that appears in the Hubble Deep Field.”

–Joss Fong and Dion Lee
“The 1995 Hubble photo that changed astronomy”
Vox, Sept. 21, 2016



Thank you for your time