

# Future Usage of HST

Eric P. Smith  
Hubble Program Scientist  
NASA Headquarters

# Assignment



- Should Hubble change its proprietary period policy?
- Is there a better way to operate Hubble in the coming years to maintain or increase its science return per dollar?
- What Hubble instrument(s) or capabilities constitute a minimum operational set?
- How do we, the scientific community, help the public “let go” of Hubble some day?

# Assumptions



- Hubble has been NASA's & ESA's most successful astronomy mission
- Current productivity is better than anytime in observatory history
- Expected productivity should be the same for the next ~4 years
- Hubble will undergo Senior Review in 2012 and beyond

# AstronomerCam

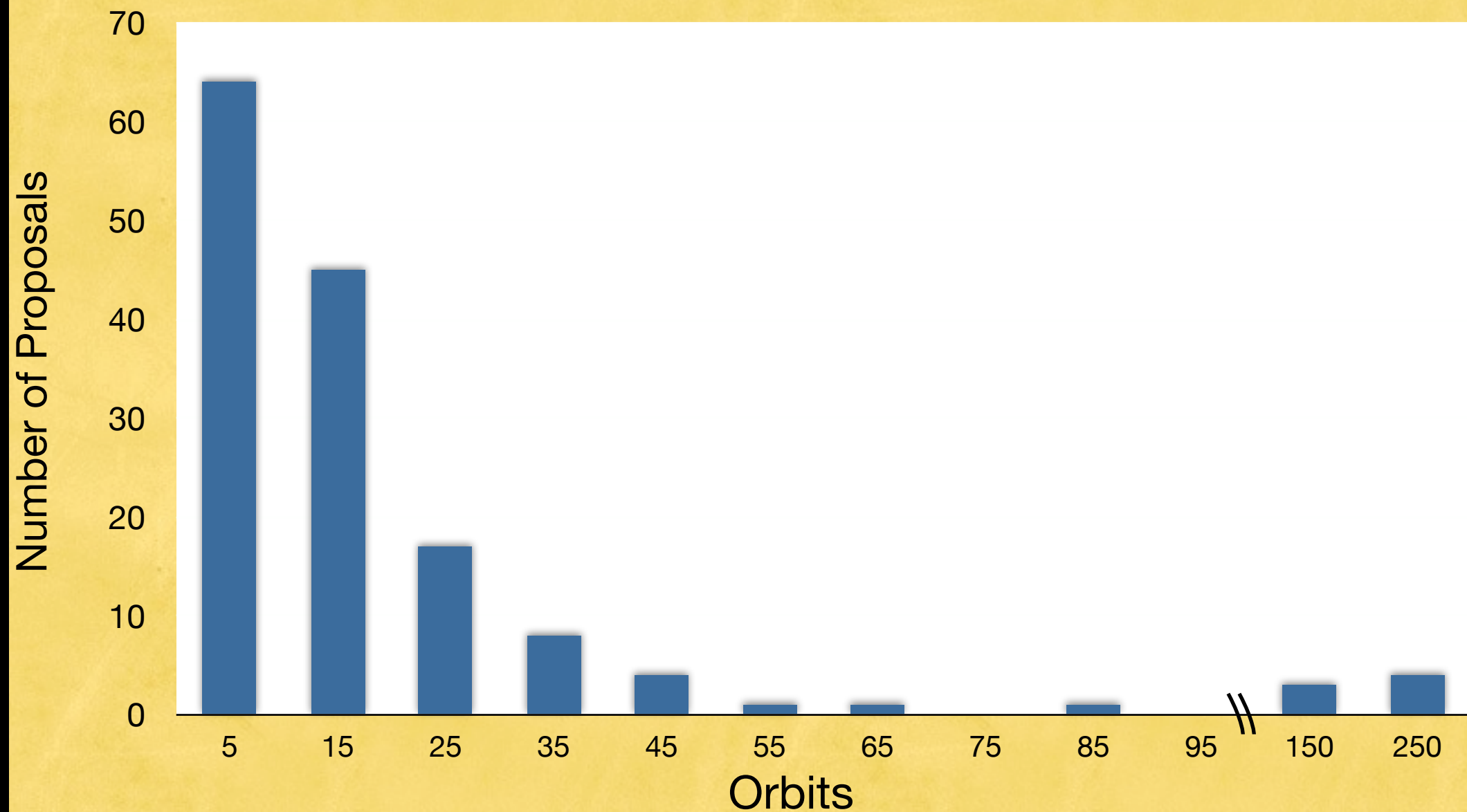


WFC3 ERS  
Data Go Public

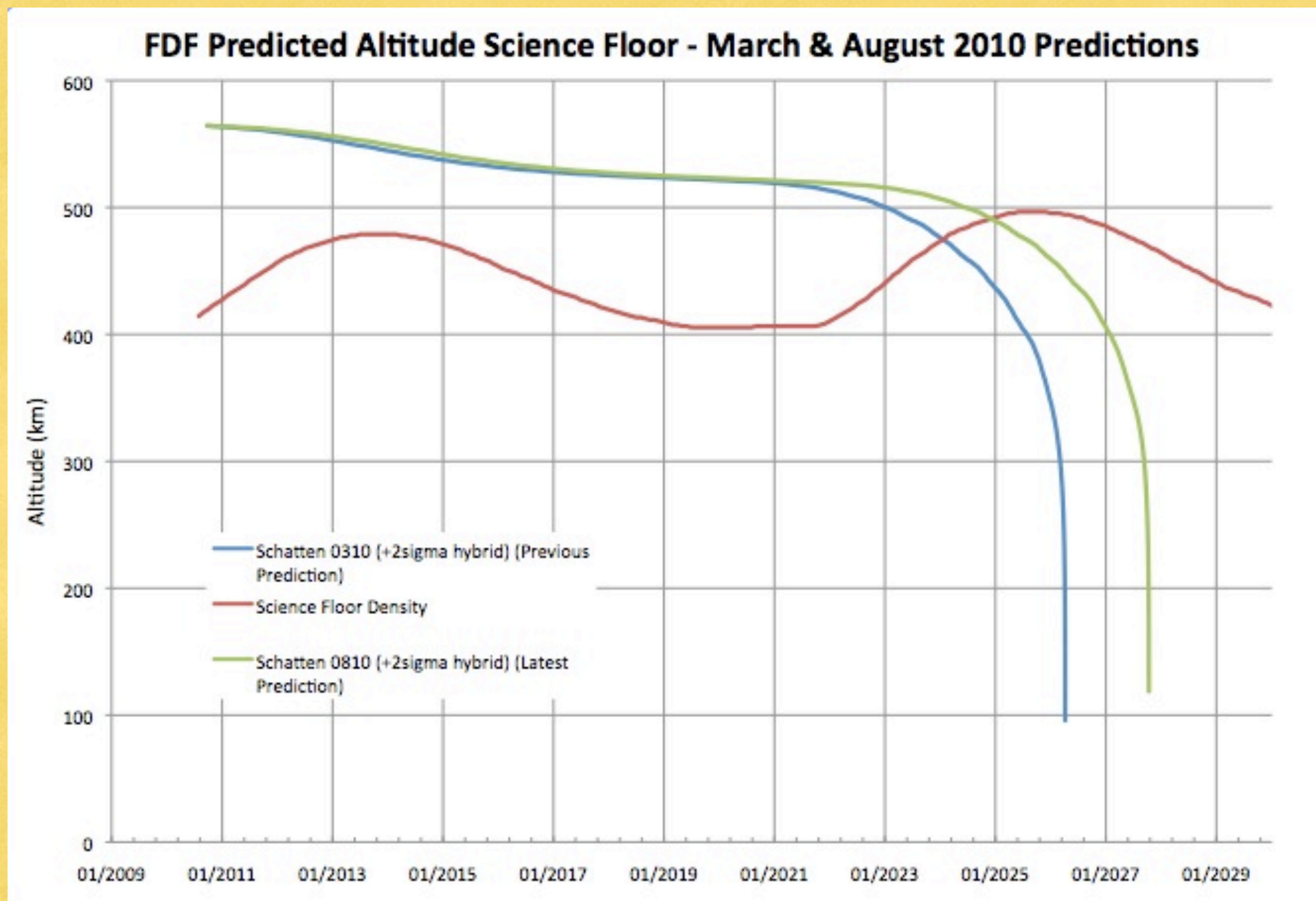
# Small Is Beautiful



**Cycle 18 Orbits/Proposal**



# HST Lifetime





# Predicted Lifetime



- HST project tracks somewhere between 150-175 separate (depending on the subsystem level counted) elements and predicts their Mean Time To Failure, most likely to fail prior to 2016;
  - Any Science Instrument
  - Fine Guidance Sensor and Electronics
  - Solid State Recorder
  - Telemetry Formatter, Science Data Formatter

# Senior Review



- Peer Review of Operating Missions
- “Performance factors are to include scientific productivity, technical status, data dissemination, future plans and expectations, and budget.”
- Opportunity to get community input for new methods of operation



# How Not To Do It



## How to Help Hubble

by Richard Tresch Fienberg

JANUARY 28, 2004



Astronauts aboard the shuttle *Columbia* released the Hubble Space Telescope back into free flight after completing a series of repairs and upgrades on the last servicing mission in March 2002.

Courtesy NASA.

Readers of *Sky & Telescope* magazine and visitors to our Web site have been asking what they can do to help save the Hubble Space Telescope. This follows NASA administrator Sean O'Keefe's January 16th announcement that there will be no more shuttle missions to maintain and upgrade the orbiting observatory (see the articles linked at the bottom of this page). O'Keefe handed down his decision as a fait accompli, so it seemed pointless to object to it. But the astropolitical landscape has been shifting almost daily, and it now seems that an outcry by astronomers, the US Congress, and the public could force O'Keefe to reconsider — and maybe even reverse — his

decision.



Home > 60 Minutes

March 14, 2004

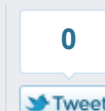
### Hubble Future In Jeopardy

Scientists Call It One Of the Most Important Instruments Made By Man

By Rebecca Leung

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(CBS) With all due respect to the achievements of the NASA robots roaming around Mars, when it comes to star power and scientific significance, nothing captures the public's imagination more than Hubble -- the multi-billion dollar telescope that NASA sent into space 14 years ago.

Scientists call it one of the most important scientific instruments ever made by man, taking pictures of the universe that look back in time and show us how it looked billions of years ago.

So in January, many people were stunned when NASA Administrator Sean O'Keefe came to a conclusion that, in effect, condemned Hubble to a premature death. Correspondent Ed Bradley reports.



VIDEO

Policy Battle For Hubble

The once ailing Hubble Space Telescope offers

Policy Battle For Hubble

VIDEO



# Discussion



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