

JWST & NIRSpec Status





JWST Status (Short Version)

- Since Mission-level Critical Design Review held in 2010, JWST has been in political crisis in the US
- Essentially a US cash-flow problem (ICRP):
 - Mission harder and more expensive than anticipated
 - Has also been underfunded from the beginning
 - Needs infusion of funds that are not readily available in present political and economic climate
- NASA now committed to latest 'Replan'
 - Launch in late 2018
 - 8.7G\$ total US price tag
- Replan presently being considered by Congress

Attn: Dr. John P. Holdren
Director - Office of Science and Technology Policy
The White House
1600 Pennsylvania Ave. NW
Washington, DC 20500

RE: The James Webb Space Telescope

Dear Dr. Holdren,

The James Webb Space Telescope (JWST) is in danger of ceasing to exist as members of the astronomical community to express our support for JWST science.

JWST is planned as the next major space observatory because it is fundamental astrophysics. Fifteen years after its selection, the science is stronger. No other facility, existing, planned, or in construction, will have its capabilities. It will have 7 times the light grasp of Hubble, and 30 times the sensitivity of the Spitzer infrared space telescope. With sky background as dark as any terrestrial observatory, JWST will outperform even future 30-m



ISTITUTO NAZIONALE DI ASTROFISICA
NATIONAL INSTITUTE FOR ASTROPHYSICS



OSSERVATORIO ASTRONOMICCO DI BOLOGNA

Dr. John P. Holdren
Director - Office of Science and Technology Policy
The White House
1600 Pennsylvania Ave. NW
Washington, DC 20500, USA

RE: The James Webb Space Telescope

Dear Dr. Holdren,

We are members of the European astronomical community and we are greatly concerned with the fate of the James Webb Space Telescope (JWST). We understand that JWST is in danger of cancellation and we are writing to express, like many other colleagues all over the world, our strongest support for its science.

... contributed to the development of JWST with the construction of the ... MIRSPEC and a 50% share of the camera/spectrometer MIRI and will ... launch facilities and rocket. We expect our joint efforts to be rewarded by the ... and power of JWST observations.

... as the next major space observatory and will ...

UNIVERSITY OF CALIFORNIA, SANTA CRUZ



BRIDGEMAN • DAVIS • HENNING • LEE • JENSEN • JENSEN • JENSEN • JENSEN • JENSEN • JENSEN • JENSEN • JENSEN

DAVIS • HENNING • LEE • JENSEN • JENSEN • JENSEN • JENSEN • JENSEN • JENSEN • JENSEN • JENSEN • JENSEN

UNIVERSITY OF CALIFORNIA OBSERVATORIES/LICK OBSERVATORY
DEPARTMENT OF ASTRONOMY AND ASTROPHYSICS

SANTA CRUZ, CALIFORNIA 95064

January 21, 2011

Dr. John P. Holdren
Director, Office of Science and Technology Policy
Executive Office of the President of the United States

Re: Statement of support for the James Webb Space Telescope, JWST

Dear Dr. Holdren:

The James Webb Space Telescope is a project of astonishing scientific capability that is the natural successor to the iconic Hubble Space Telescope. With 100X the power of Hubble, yet a comparable cost to launch, it reflects the huge technological steps that the US, and our international partners (Europe and Canada), have made in the last two-three decades since Hubble was designed and built. JWST will maintain US leadership in the ... and technology.

letters from the
community signed
by 2,500+

& support from
conferences

Keep the Webb Telescope, 32 Nobel Laureates Say

TO THE EDITOR:

Re "Way Above the Shuttle Flight" (editorial, July 19) and letters about the future of NASA and space exploration ("America's Future in Space," Sunday Dialogue, July 31):

The James Webb Space Telescope is the natural successor to the iconic Hubble Space Telescope, reaching well beyond Hubble's limits, revealing secrets even Hubble cannot.

From seeing the first galaxies in the universe, to studying extrasolar planets with liquid water, the Webb telescope will provide humanity with new insights on the origin of the cosmos and on our place within it.

The discoveries of the Webb will be the source of awe and inspiration for the next generation. Cancellation of the Webb, as a Congressional subcommit-

tee has voted to do, would deal a fatal blow to large and ambitious space science missions for the foreseeable future, and would deny the public access to new and exciting images of the type that have captured the imagination of people of all ages.

We support careful oversight over the future plans and budgets of the Webb telescope's mission, and we believe that every possible effort should be made to launch the Webb as early as possible.

JOHN C. MATHER

Hyattsville, Md., Aug. 22, 2011

The writer, a Nobel laureate in physics in 2006, is the senior project scientist for the James Webb Space Telescope at NASA. The letter was also signed by 31 other Nobel laureates in physics, chemistry, economics, and physiology or medicine.

THE WALL STREET JOURNAL.

The James Webb Space Telescope is vital for science and should not face the budget axe.

EDITORIALS

Scope it out

The U.S. should not scrap the Hubble telescope's successor.

THE LAST SHUTTLE has landed. Soon, without space shuttles to perform repairs, the Hubble Space Telescope will break down and plummet into the ocean.

We have long advocated a rethinking of NASA's role. Manned spaceflight is costly even in times of surplus, and for a fraction of the cost it is possible to do a great deal of fascinating science. Now, with the last shuttle retiring, NASA has an opportunity to shift its priorities to do more for less.

This is why it is so disheartening that a House Appropriations subcommittee has moved to kill the James Webb Space Telescope — Hubble's successor.

On the surface, it seems an obvious cut. The Webb telescope, named after a NASA administrator who served in the agency's 1960s heyday, "is billions of dollars over budget and plagued by poor management," the committee noted.

What it failed to remark is that the telescope's hardware is 70 percent complete, much of it has already undergone testing and a special commission established to look into the telescope in 2010 found that the work on technology was "commendable and often excellent." Billions of dollars would not be wasted by continuing the project. They would be wasted by canceling it.

Hubble, too, was plagued by poor management. Yet when it launched, it served as a powerful testimony to the power of our unmanned space program, transmitting breathtaking images and performing fascinating research. It is still possible to complete the Webb telescope and launch it this decade for less than it cost (in current dollars) to launch Hubble. The biggest difference is the Webb telescope's much greater capacity — it is hundreds of times more sensitive than Hubble and can glimpse some of the oldest, most distant objects in the universe.

Yes, the project has been plagued by inefficiencies, but in large part this is because we are asking so much of it. As currently planned, the telescope will monitor everything from dust-shrouded Milky Way objects to the oldest galaxies and will include countless highly sensitive moving parts. Nearly every plan for U.S. astronomy for the next decade is contingent on the Webb telescope, even though it will be launched, at the earliest, in 2014. Had less of NASA's funding been focused on manned spaceflight and more of it devoted to hard science projects like this, all of U.S. astronomy's hopes might not reside in this one telescope. But as it is, the future of U.S. astronomy is seriously threatened by the prospect of its cancellation.

It is always difficult to put a price on the future. But this small cost saving would have a much larger cost in terms of the United States' role in astrophysics. We should remain open to ways to make the telescope better — perhaps asking less of it so we can launch it sooner. But to jettison it now, when so much depends on it and we have nothing to take its place, would be shortsighted — as shortsighted as we will be without it.

facebook

Sign Up Facebook helps you connect and share



'LIKE' the fan page
CONTACT your congressional representatives
SIGN the petition
SPREAD the word!

savejwst.com

- Wall
- Info
- Photos
- Questions

About
We are a group whose mission is to Save the James Webb Space Telescope and...

4,595

Like this

Save the James Webb

Community



Wall

Save the James Webb
"It is true JWST has its challenges, how to build telescopes, but reduce compared to a ground so it could be launched miles from Earth, and

"Complicated, but as to Leadership" | SpaceRef -

DO NOT cancel funding for the James Webb Space Telescope

SIGN THIS PETITION
First Name
Last Name
Email
Address
City
State
Zip Code
Why are you signing? Add a reason (optional)
SIGN



SIGNATURES
4,884

PETITIONING
The U.S. House of Representatives
+ 12 others

STARTED BY
Kyle Sullivan
Birmingham, AL

Save the James Webb Space Telescope
The central source for information regarding the fight to Save JWST
US-Senate Subcommittee is set to Vote Sep 14, 2021
Sign the Petition

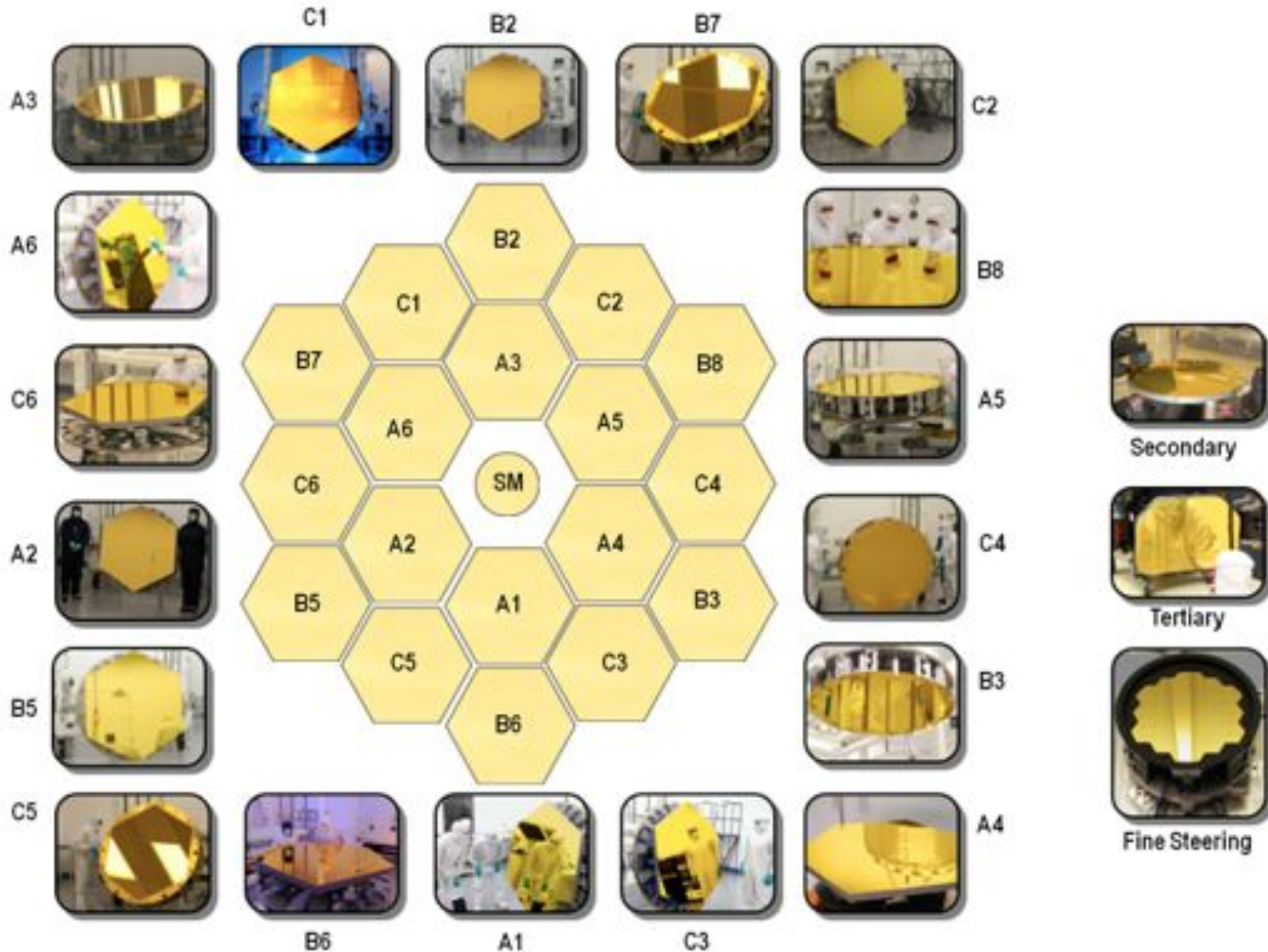
James Webb Space Telescope (JWST)
The greatest investment in American space leadership and innovation
1 BARRAGE OF PRESS
WIN SUPPORT
REASSURE CONGRESS
TAKE YOUR OWN HEAD

public support



Significant Hardware Progress

All telescope mirrors now completed



James Webb Space Telescope





Significant Hardware Progress

Full sized Sunshield template





Significant Hardware Progress

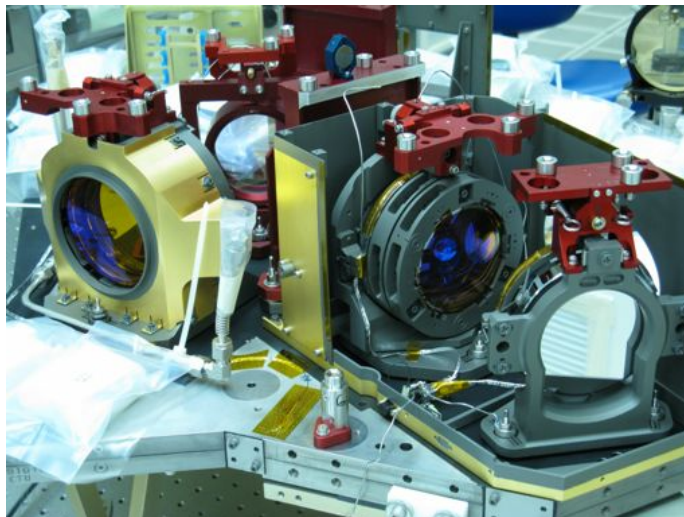
Flight instruments nearing completion



MIRI



NIRSpec



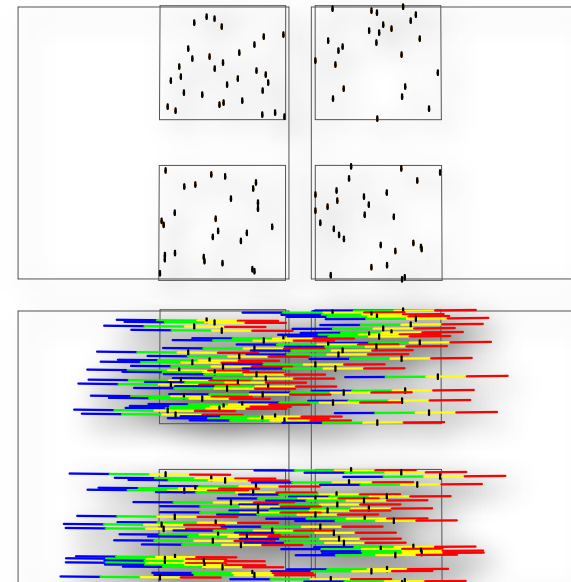
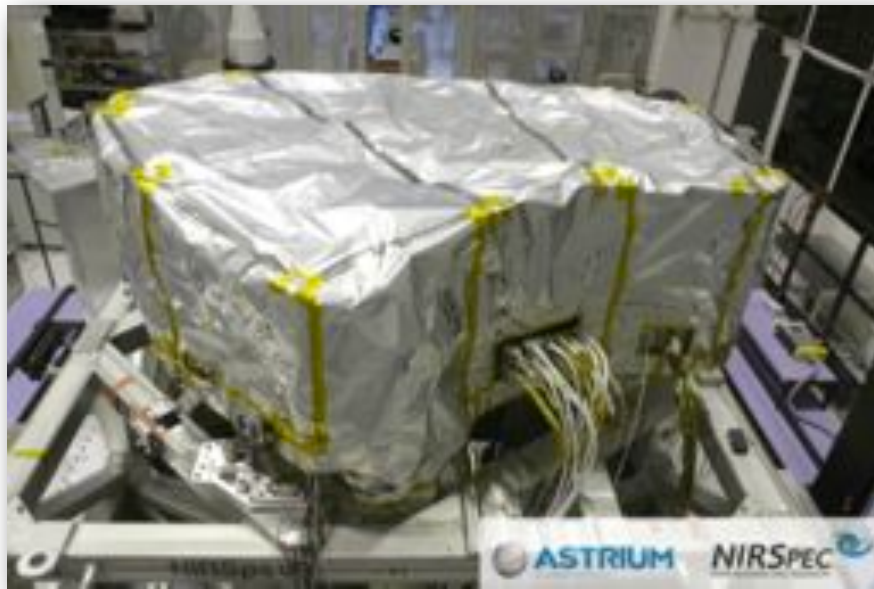
NIRCam



FGS/TFI



James Webb Space Telescope

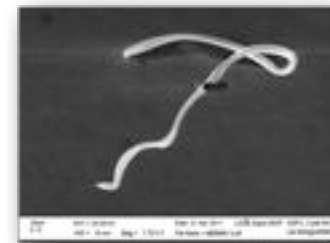


NIRSpec Status



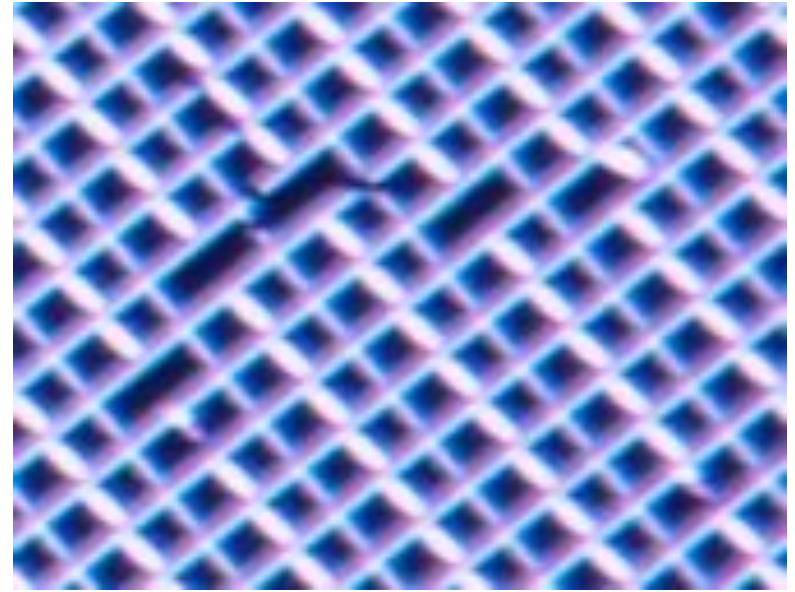
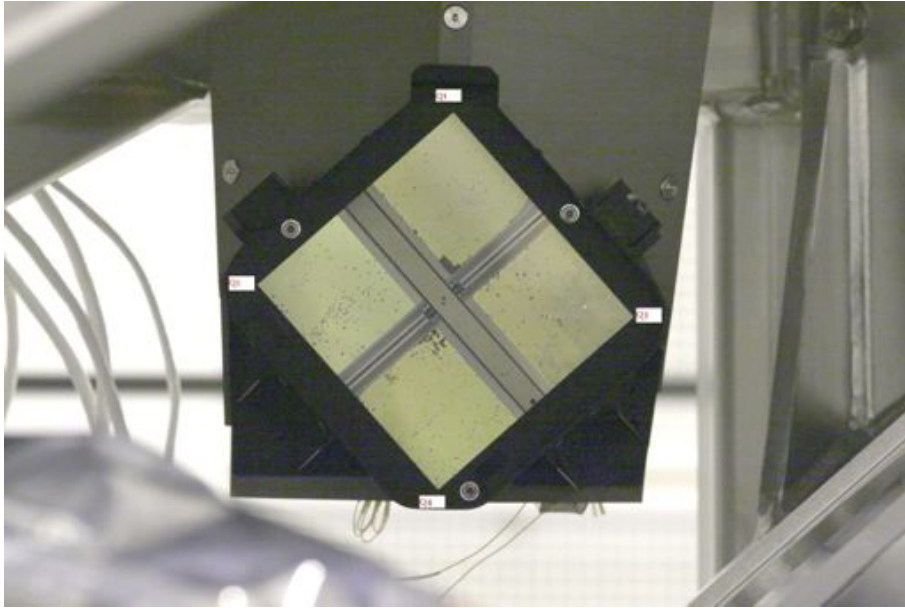
The Story So Far

- October 2011: NIRSpec fully assembled
 - Albeit with non-flightworthy detectors
- January 2011: MSA fiber contamination problem discovered post vibration testing
- February 2011: First cycle of cryo-calibration campaign goes ahead without use of MSA
 - Outstanding optical performance demonstrated
- March 2011: NIRSpec returned to ambient. MSA removed and cleaned (several new plugs)
- May 2011: Further inspection reveals SiC glue spot chipping and blistering cable harness problems
- August 2011: Assembly facility cleaned, glue spots removed, SiC chips ground smooth and harness wrapped with teflon



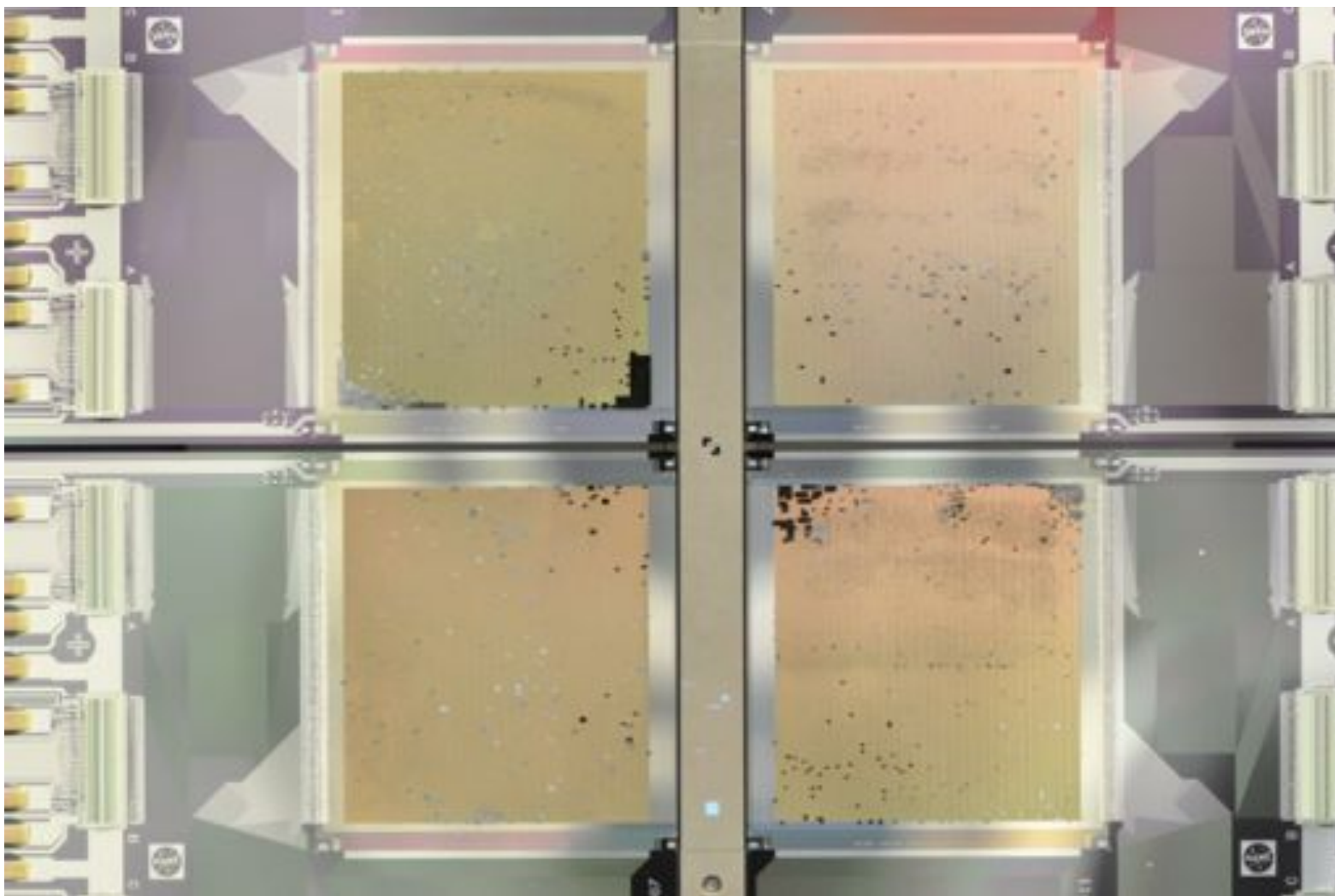


MSA Fibre Contamination



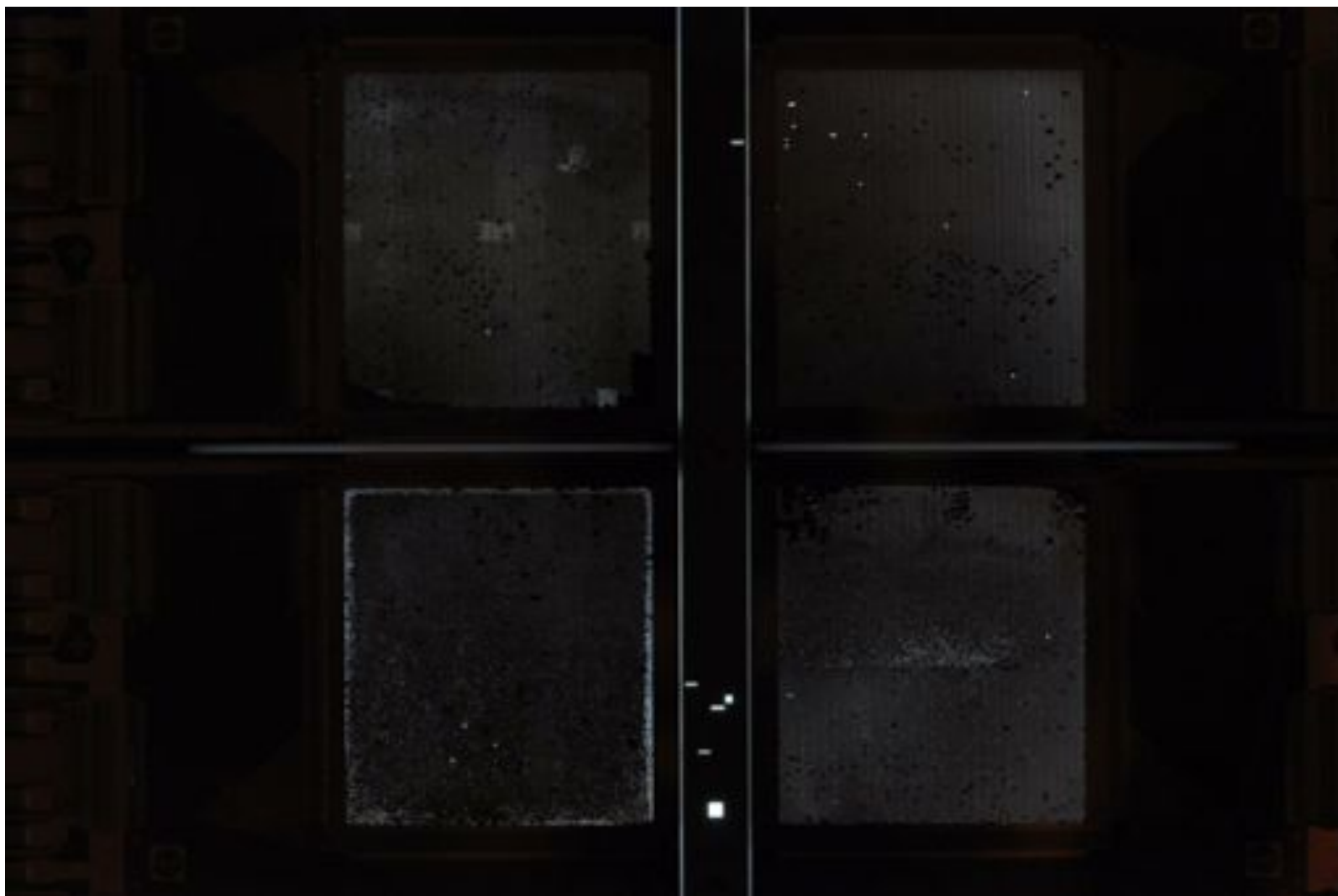


MSA Cleaning and Plugging





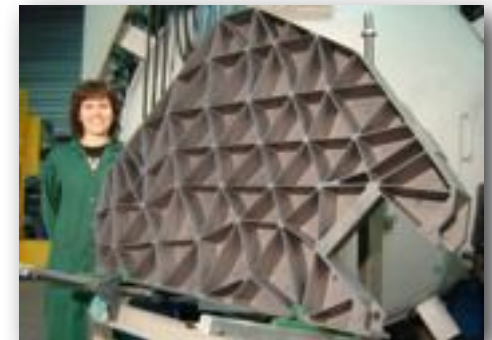
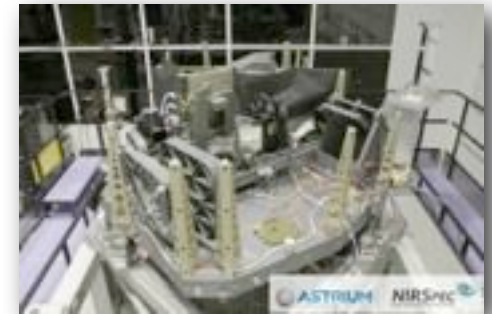
MSA Cleaning and Plugging





The Story So Far

- August 2011: Further inspection reveals three cracks in bolt holes on side of Optical Bench holding two corner posts of the instrument cover
- High level Failure Review Board formed with Astrium
 - Prime suspect: Titanium bolts used to mount corner posts
- Two options being pursued in parallel:
 - Repair in place
 - Replace Flight Optical Bench with spare
- Projected delivery dates:
 - Mid to late 2012?





Summary

JWST: Now at the mercy of present day US politics

Score is Congress 1, Senate 1 with lots of time left on the clock

NIRSpec: Shit happens

No disaster, but recovery will cost time and money.



JWST Launch Date

