

A close-up photograph of an astronaut in a white space suit, floating in space. The astronaut's helmet is open, revealing their face. The background shows the Earth's surface with white clouds and blue oceans, along with large solar panels of a space station. The text "TW@N" is overlaid in large white letters across the center of the image.

TW@N

THIS WEEK @ NASA

1
00:00:01,069 --> 00:00:03,270
The President's funding request for NASA
...

2
00:00:03,270 --> 00:00:06,439
Preparing for first flight on another world
...

3
00:00:06,439 --> 00:00:10,950
And a new crew heads to the space station
... a few of the stories to tell you about

4
00:00:10,950 --> 00:00:14,110
– This Week at NASA!

5
00:00:14,110 --> 00:00:19,570
Acting NASA Administrator Steve Jurczyk discussed
the President's Fiscal Year 2022 discretionary

6
00:00:19,570 --> 00:00:21,590
funding request for NASA.

7
00:00:21,590 --> 00:00:24,330
The \$24.7 billion funding request ...

8
00:00:24,330 --> 00:00:31,679
“Allows NASA to address the climate change
challenge in more significant ways than we

9
00:00:31,679 --> 00:00:32,990
have in the past.

10
00:00:32,990 --> 00:00:39,719
It allows us to understand the Earth as a
system from the oceans to the atmosphere.”

11
00:00:39,719 --> 00:00:44,440
The request includes funding also related
to climate change for programs associated

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00:00:44,440 --> 00:00:46,649

with the first "A" in NASA's name.

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00:00:46,649 --> 00:00:52,670

"Aeronautics has been charged with developing a more environmentally-friendly aviation system.

14

00:00:52,670 --> 00:00:57,510

One of them is the X-57 Maxwell flight demonstrator.

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00:00:57,510 --> 00:01:03,410

It's going to demonstrate electric aircraft technology, including distributive propulsion."

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00:01:03,410 --> 00:01:07,830

Other milestones expected under the new funding request include the launch of the James Webb

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00:01:07,830 --> 00:01:13,090

Space Telescope, which will look back in time to the first galaxies in the early universe.

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00:01:13,090 --> 00:01:18,040

The funding request also is a strong show of support for our Artemis program and Moon

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00:01:18,040 --> 00:01:20,420

to Mars exploration approach.

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00:01:20,420 --> 00:01:25,630

The Space Launch System rocket, the Orion spacecraft, Gateway in lunar orbit, and a

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00:01:25,630 --> 00:01:30,270

commercial human landing system will land the first woman and first person of color

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00:01:30,270 --> 00:01:35,700

on the surface of the Moon, and are the systems we will use to establish sustainable exploration

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00:01:35,700 --> 00:01:41,120

and research in preparation for the first human missions to Mars.

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00:01:41,120 --> 00:01:46,189

During a preflight briefing on April 9, the team for our Ingenuity Mars Helicopter discussed

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00:01:46,189 --> 00:01:51,180

the helicopter's status and what to expect on its first attempt at powered, controlled

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00:01:51,180 --> 00:01:56,360

flight on another planet – currently targeted for no earlier than Sunday, April 11.

27

00:01:56,360 --> 00:02:00,329

“We have carefully designed; we have carefully tested on Earth.

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00:02:00,329 --> 00:02:05,930

We have been checking carefully on Mars up to now, and it's time to attempt the first

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00:02:05,930 --> 00:02:06,930

flight.

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00:02:06,930 --> 00:02:10,810

And we will test, prove, and learn regardless of what the outcome is.”

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00:02:10,810 --> 00:02:16,220

If Ingenuity flies on April 11, as expected, a livestream confirming the historic first

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00:02:16,220 --> 00:02:21,890

flight is targeted to start around 3:30 a.m.

EDT on April 12.

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00:02:21,890 --> 00:02:26,800

Ingenuity, a technology demonstration to test powered flight on another world for the first

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00:02:26,800 --> 00:02:32,880

time, arrived at Mars on Feb. 18, with our Perseverance Mars rover.

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00:02:32,880 --> 00:02:37,480

The International Space Station's newest crew, including our Mark Vande Hei, blasted

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00:02:37,480 --> 00:02:41,510

off on April 9 from the Baikonur Cosmodrome in Kazakhstan.

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00:02:41,510 --> 00:02:47,060

A few hours later, Vande Hei, Oleg Novitskiy, and Pyotr Dubrov, both of the Russian Space

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00:02:47,060 --> 00:02:52,920

Agency, Roscosmos, were welcomed aboard the station by the crew already onboard – including

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00:02:52,920 --> 00:02:58,820

our Kate Rubins, and NASA's SpaceX Crew-1 astronauts, Michael Hopkins, Victor Glover,

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00:02:58,820 --> 00:03:01,830

Shannon Walker, and Soichi Noguchi.

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00:03:01,830 --> 00:03:06,780

April 5 marked a first for commercial spaceflight aboard the International Space Station when

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00:03:06,780 --> 00:03:13,060

the Crew Dragon Resilience spacecraft, carrying NASA's SpaceX Crew-1 astronauts, autonomously

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00:03:13,060 --> 00:03:18,580
undocked from the forward port of the station's
Harmony module and relocated to the space-facing

44
00:03:18,580 --> 00:03:19,580
port.

45
00:03:19,580 --> 00:03:24,390
The move will enable the extraction of new
solar arrays from a SpaceX cargo spacecraft

46
00:03:24,390 --> 00:03:27,920
that will arrive after Crew-1 departs.

47
00:03:27,920 --> 00:03:33,760
On April 6, engineers conducted an RS-25 engine
test on the A-1 Test Stand at our Stennis

48
00:03:33,760 --> 00:03:40,450
Space Center near Bay St. Louis, Mississippi.

49
00:03:40,450 --> 00:03:45,280
The full-duration test is the second in a
scheduled series of seven tests to provide

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00:03:45,280 --> 00:03:49,110
valuable data for development and production
of the engines.

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00:03:49,110 --> 00:03:53,690
Four RS-25s will help power the agency's
Space Launch System (SLS) rocket on future

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00:03:53,690 --> 00:03:59,540
missions to the Moon, including the Artemis
I uncrewed flight test targeted for this year,

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00:03:59,540 --> 00:04:04,020

that will pave the way for future flights
with astronauts to explore the Moon and prepare

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00:04:04,020 --> 00:04:06,020

for missions to Mars.

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00:04:06,020 --> 00:04:12,570

NASA's OSIRIS-REx spacecraft completed a
last flyover of asteroid Bennu on April 7,

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00:04:12,570 --> 00:04:16,870

to document surface changes that resulted
on the asteroid during the mission's sample

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00:04:16,870 --> 00:04:19,440

collection maneuver last October.

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00:04:19,440 --> 00:04:24,240

It will take until at least April 13 to downlink
all of the data from the flyby.

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00:04:24,240 --> 00:04:28,650

A survey of the sample collection site could
teach us more about the nature of the surface

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00:04:28,650 --> 00:04:33,220

and subsurface materials, and the mechanical
properties of the asteroid.

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00:04:33,220 --> 00:04:37,450

OSIRIS-REx is scheduled to return to Earth,
with the sample material it collected from

62

00:04:37,450 --> 00:04:39,840

Bennu, in September 2023.