



TW@N

THIS WEEK @ NASA

1
00:00:00,290 --> 00:00:03,670
The world's first-ever planetary defense
test is a big hit ...

2
00:00:03,670 --> 00:00:07,430
A major hurricane spotted from space ...

3
00:00:07,430 --> 00:00:12,480
And moving our mega Moon rocket back inside
ahead of that storm ... a few of the stories

4
00:00:12,480 --> 00:00:17,840
to tell you about – This Week at NASA!

5
00:00:17,840 --> 00:00:24,300
On Sept. 26, NASA's Double Asteroid Redirection
Test, or DART spacecraft successfully impacted

6
00:00:24,300 --> 00:00:29,410
Dimorphos – the asteroid the spacecraft
had been on a collision course with for about

7
00:00:29,410 --> 00:00:31,140
10 months.

8
00:00:31,140 --> 00:00:36,350
"Waiting ... (applause) ... and we have
impact!"

9
00:00:36,350 --> 00:00:42,350
DART's intentional crash into Dimorphos,
a moonlet of a larger asteroid called Didymos,

10
00:00:42,350 --> 00:00:47,710
was an attempt to alter the course of an asteroid
in space as part of the world's first planetary

11
00:00:47,710 --> 00:00:50,230
defense technology demonstration.

12
00:00:50,230 --> 00:00:55,620
The DART team will observe Dimorphos with ground-based telescopes to confirm that the

13
00:00:55,620 --> 00:01:01,649
technique, known as kinetic impact, did indeed alter the moonlet's orbit around Didymos.

14
00:01:01,649 --> 00:01:06,970
The cosmic collision was actually captured by our Hubble and Webb space telescopes, marking

15
00:01:06,970 --> 00:01:12,830
the first time that Webb and Hubble observed the same celestial target at the same time.

16
00:01:12,830 --> 00:01:16,820
Neither of these asteroids is a threat to Earth, but this technique could prove to be

17
00:01:16,820 --> 00:01:22,410
a reliable way to alter the course of an asteroid that is on a collision course with Earth in

18
00:01:22,410 --> 00:01:23,420
the future.

19
00:01:23,420 --> 00:01:29,450
On Sept. 26, external cameras aboard the International Space Station captured views of Hurricane

20
00:01:29,450 --> 00:01:35,060
Ian just south of Cuba as the storm moved toward the north-northwest.

21
00:01:35,060 --> 00:01:39,710
As expected, Ian intensified as it approached Florida.

22
00:01:39,710 --> 00:01:45,850
Space station cameras caught the storm again
on Sept. 28 as it was making landfall in southwest

23
00:01:45,850 --> 00:01:53,680
Florida as a Category 4 storm with winds upward
of 155 mph and a potentially catastrophic

24
00:01:53,680 --> 00:01:55,340
storm surge.

25
00:01:55,340 --> 00:02:00,990
On the night of Sept. 26, the team at our
Kennedy Space Center began moving our Artemis

26
00:02:00,990 --> 00:02:07,200
I Moon rocket from launch pad 39B back to
the Vehicle Assembly Building, or VAB.

27
00:02:07,200 --> 00:02:13,360
The Space Launch System rocket and Orion spacecraft
were secured inside the VAB the next morning.

28
00:02:13,360 --> 00:02:18,000
Managers decided on the "roll back" due
to weather predictions related to Hurricane

29
00:02:18,000 --> 00:02:19,180
Ian.

30
00:02:19,180 --> 00:02:24,260
In addition to protecting the integrated rocket
and spacecraft, they also wanted to give employees

31
00:02:24,260 --> 00:02:28,370
time to address the needs of their families
ahead of the storm.

32
00:02:28,370 --> 00:02:34,709

The spacecraft for our Juno mission at Jupiter made a close flyby of the planet's ice-covered

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00:02:34,709 --> 00:02:37,780
moon, Europa on Sept. 29.

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00:02:37,780 --> 00:02:43,620
This image from the pass, some 220 miles above Europa's surface, is the first to come of

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00:02:43,620 --> 00:02:48,480
some of the highest-resolution images ever taken of portions of the moon.

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00:02:48,480 --> 00:02:54,439
Valuable data are also expected from the flyby that, once processed, could benefit and inform

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00:02:54,439 --> 00:02:59,540
future missions, like the agency's Europa Clipper mission, which is targeted to launch

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00:02:59,540 --> 00:03:03,029
in 2024 to study the icy moon.

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00:03:03,029 --> 00:03:08,469
More information is available at: nasa.gov/juno.

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00:03:08,469 --> 00:03:13,299
Believe it or not, these inflatable habitats are being blown up to help make them safe

41

00:03:13,299 --> 00:03:15,269
for humans.

42

00:03:15,269 --> 00:03:20,180
Habitats like these could be used to house astronauts on future long-term surface exploration

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00:03:20,180 --> 00:03:23,559

missions to the Moon and, eventually Mars.

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00:03:23,559 --> 00:03:29,349

But before then, NASA and commercial partners are conducting burst pressure tests to determine

45

00:03:29,349 --> 00:03:34,780

the maximum internal pressure these habitats can safely withstand before they fail.