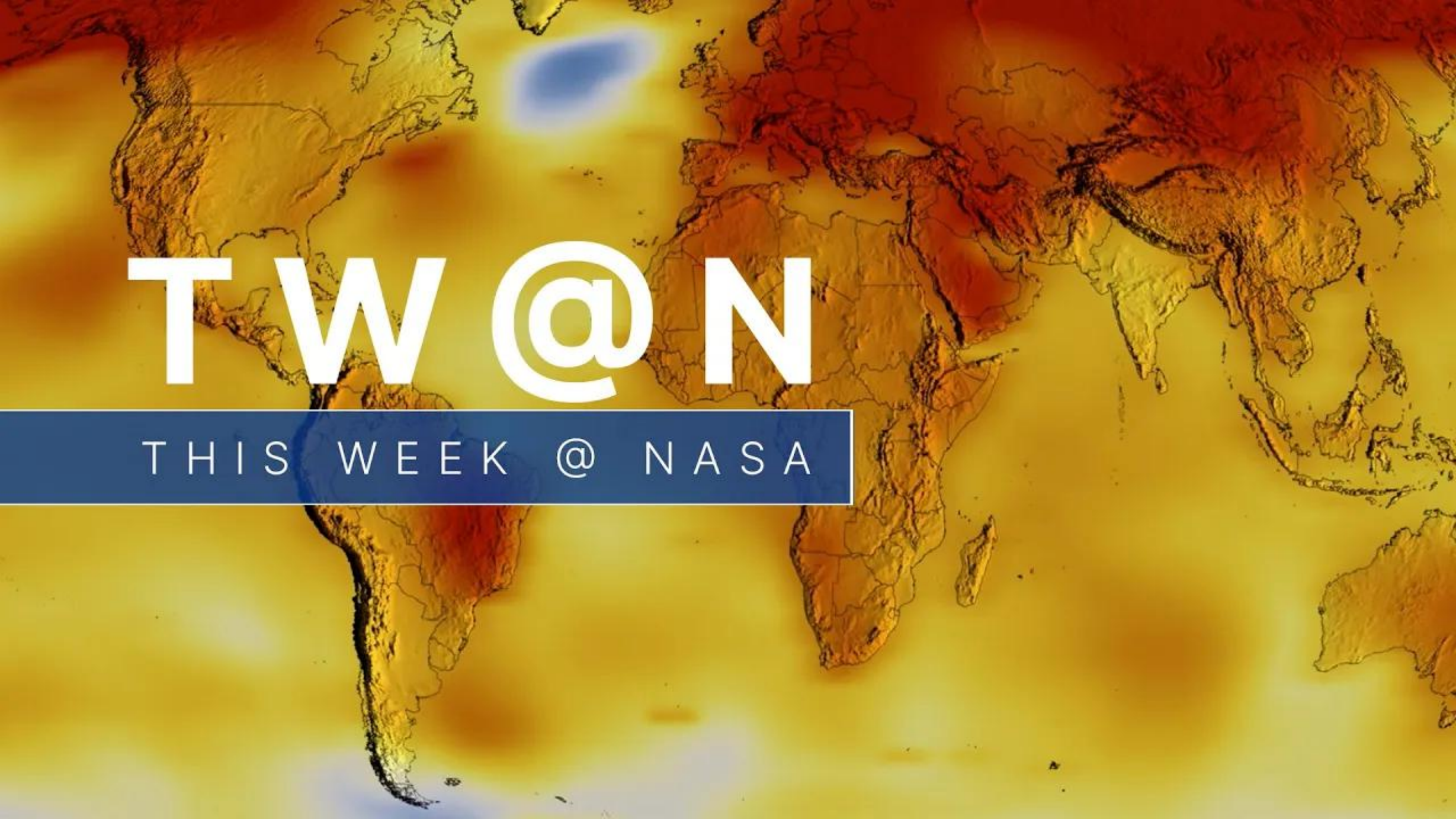
TW@N
THIS WEEK @ NASA

1
00:00:00,690 --> 00:00:03,070
The annual assessment of global temperatures
…

2
00:00:03,070 --> 00:00:05,860
A first-of-its-kind undocking from the space
station …

3
00:00:05,860 --> 00:00:10,420
And a look at what goes into the Green Run
hot fire test … a few of the stories to

4
00:00:10,420 --> 00:00:14,209
tell you about – This Week at NASA!

5
00:00:14,209 --> 00:00:18,410
A NASA analysis found that our planet's
global average surface temperature last year

6
00:00:18,410 --> 00:00:22,110
tied 2016 as the warmest year on record.

7
00:00:22,110 --> 00:00:26,450
This continues a long-term global warming
trend during which the last seven years have

8
00:00:26,450 --> 00:00:28,640
been the warmest seven years on record.

9
00:00:28,640 --> 00:00:33,160
In a separate, independent analysis using
a different baseline period and methodology,

10
00:00:33,160 --> 00:00:39,559
the National Oceanic and Atmospheric Administration
found that 2020 was the second-warmest year

11
00:00:39,559 --> 00:00:42,070
on record, behind 2016.

12
00:00:42,070 --> 00:00:46,180
Tracking global temperature trends provides
a critical indicator of the impact of human

13
00:00:46,180 --> 00:00:50,679
activities on the climate and quality of life
on Earth.

14
00:00:50,679 --> 00:00:56,359
On Jan. 12, an upgraded SpaceX cargo Dragon
spacecraft performed the first undocking of

15
00:00:56,359 --> 00:01:02,429
a U.S. commercial cargo craft from the International
Space Station, and then headed back to Earth.

16
00:01:02,429 --> 00:01:07,460
Previous cargo Dragon spacecraft were attached
to and removed from the space station using

17
00:01:07,460 --> 00:01:10,150
the station’s robotic Canadarm2.

18
00:01:10,150 --> 00:01:14,480
This upgraded Dragon also gets some science
back into the hands of researchers sooner

19
00:01:14,480 --> 00:01:19,580
than previous Dragon spacecraft by splashing
down off the coast of Florida instead of in

20
00:01:19,580 --> 00:01:21,330
the Pacific Ocean.

21
00:01:21,330 --> 00:01:26,850
The Green Run test series with our Space Launch
System or SLS rocket’s core stage ends with

22

00:01:26,850 --> 00:01:31,050
the hot fire test, currently targeted for
Jan. 16.

23
00:01:31,050 --> 00:01:36,120
While the highlight of the test is the full-blast
firing of all four of the rocket's engines,

24
00:01:36,120 --> 00:01:42,060
an online video available at nasa.gov/greenrun
explains just how much more really goes into

25
00:01:42,060 --> 00:01:43,100
the test.

26
00:01:43,100 --> 00:01:48,110
The test series is a comprehensive assessment
of the rocket's core stage prior to SLS

27
00:01:48,110 --> 00:01:50,950
launching Artemis missions to the Moon.

28
00:01:50,950 --> 00:01:56,060
NASA highlights during the Jan. 10-15 virtual
meeting of the American Astronomical Society

29
00:01:56,060 --> 00:02:01,870
included news that data from our Transiting
Exoplanet Survey Satellite, or TESS and ground-based

30
00:02:01,870 --> 00:02:06,700
telescopes helped confirm the presence of
an exoplanet in a multiple-star system that

31
00:02:06,700 --> 00:02:11,700
was initially identified as a planet candidate
in 2009 by our Kepler mission.

32
00:02:11,700 --> 00:02:16,730
Meanwhile, astronomers are considering the

scientific potential of a possible “ultra-deep

33
00:02:16,730 --> 00:02:21,590
field” image of the cosmos from our upcoming
Nancy Grace Roman Space Telescope, which can

34
00:02:21,590 --> 00:02:26,710
image an area of the sky at least 100 times
larger than the Hubble Space Telescope.

35
00:02:26,710 --> 00:02:29,830
Such an observation could teach us even more
about the universe.

36
00:02:29,830 --> 00:02:36,250
And new findings from the SOFIA flying observatory
about the physics of the Cigar galaxy indicate

37
00:02:36,250 --> 00:02:41,500
that, in addition to powerful forces created
by the birth of stars, magnetic fields also

38
00:02:41,500 --> 00:02:47,630
help eject enriched, life-supporting gas,
dust and other cosmic material from galaxies

39
00:02:47,630 --> 00:02:49,590
into intergalactic space.

40
00:02:49,590 --> 00:02:53,970
The findings offer clues about how galaxies
form and how cosmic matter is distributed

41
00:02:53,970 --> 00:02:55,940
in space.

42
00:02:55,940 --> 00:03:00,890
On Jan. 11, our Armstrong Flight Research
Center in southern California provided landing

43
00:03:00,890 --> 00:03:07,470
assistance and ground support for a specially-configured
DC-8 cargo jet flown in by aid organization

44
00:03:07,470 --> 00:03:13,040
Samaritan’s Purse, loaded with supplies
to help care for COVID-19 patients at an area

45
00:03:13,040 --> 00:03:14,849
field hospital.

46
00:03:14,849 --> 00:03:20,030
NASA also operates a highly-modified DC-8
at Armstrong that is used as a flying science

47
00:03:20,030 --> 00:03:21,030
laboratory.

48
00:03:21,030 --> 00:03:25,710
There are only a few operational DC-8s left
in the world – so having both of these on

49
00:03:25,710 --> 00:03:28,780
the same flight line presented a rare photo
opportunity.

50
00:03:28,780 --> 00:03:31,900
That’s what’s up this week @NASA …