1
00:00:01,110 --> 00:00:05,500
"Here's some of the stories trending This
Week at NASA!"

2
00:00:05,500 --> 00:00:10,879
Data from NASA's Aquarius instrument has helped
researchers create worldwide maps of soil

3
00:00:10,879 --> 00:00:16,789
moisture, showing how the wetness of the land
fluctuates with the seasons and weather phenomena.

4
00:00:16,789 --> 00:00:21,370
Soil moisture, the water contained within
soil particles, is an important player in

5
00:00:21,370 --> 00:00:23,300
Earth's water cycle.

6
00:00:23,300 --> 00:00:27,970
When it launched in June 2011, the primary
science objective of the Aquarius mission

7
00:00:27,970 --> 00:00:31,590
was to study the salt content of ocean surface
waters.

8
00:00:31,590 --> 00:00:36,860
But investigators have since developed a method
to retrieve soil moisture data from the instrument's

9
00:00:36,860 --> 00:00:40,050
microwave radiometer.

10
00:00:40,050 --> 00:00:45,440
The core stage for NASA's Space Launch System
or SLS has passed its Critical Design Review

11
00:00:45,440 --> 00:00:47,540

at Marshall Space Flight Center.

12
00:00:47,540 --> 00:00:52,739
The CDR is a major milestone that proves the
design for the rocket is mature enough for

13
00:00:52,739 --> 00:00:53,880
production.

14
00:00:53,880 --> 00:00:58,930
It is also a sign of progress toward NASA's
next giant leap to send humans farther into

15
00:00:58,930 --> 00:01:04,500
the solar system than ever before, including
to an asteroid and eventually Mars.

16
00:01:04,500 --> 00:01:09,790
Representatives from NASA and The Boeing Company,
the prime contractor for the core stage, participated

17
00:01:09,790 --> 00:01:13,220
on the Critical Design Review board.

18
00:01:13,220 --> 00:01:17,700
The James Webb Space Telescope has reached
another development milestone with the completion

19
00:01:17,700 --> 00:01:23,231
of static load testing of its primary mirror
backplane support structure, moving the telescope

20
00:01:23,231 --> 00:01:26,020
a step closer to its targeted launch in 2018.

21
00:01:26,020 --> 00:01:31,840
The backplane support structure holds the
telescope's science instruments and the 21-foot-diameter

22

00:01:31,840 --> 00:01:37,220
primary mirror nearly motionless, while the telescope peers into deep space.

23
00:01:37,220 --> 00:01:42,310
The primary mirror, made up of 18 beryllium mirror-segments, is the largest mirror in

24
00:01:42,310 --> 00:01:46,930
the telescope and the one starlight will hit first.

25
00:01:46,930 --> 00:01:51,680
Repeated high-resolution observations by NASA's Mars Reconnaissance Orbiter indicate that

26
00:01:51,680 --> 00:01:57,600
seasonal carbon-dioxide frost, not liquid water, is the main driver in forming gullies

27
00:01:57,600 --> 00:01:58,920
on Mars today.

28
00:01:58,920 --> 00:02:04,909
In 2000, the first reported gullies on Mars generated excitement because of the possibility

29
00:02:04,909 --> 00:02:09,160
the gullies were formed by liquid water -- a necessity for all known life.

30
00:02:09,160 --> 00:02:15,370
But, while Mars has plenty of water ice and water vapor -- liquid water has not been confirmed

31
00:02:15,370 --> 00:02:17,830
on modern Mars.

32
00:02:17,830 --> 00:02:19,430
And that's what's up this week @NASA ...