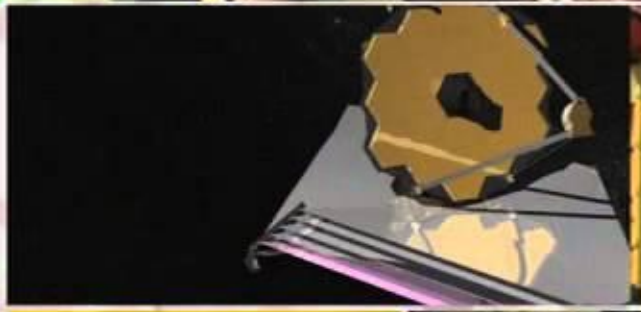
Webb's replica backplane



1
00:00:00,979 --> 00:00:05,190
“Here’s some of the stories trending This
Week at NASA!”

2
00:00:05,190 --> 00:00:09,070
Engineers at Kennedy Space Center have finished
installing the Orion spacecraft’s backshell

3
00:00:09,070 --> 00:00:14,440
– the black protective tiles on the cone-shaped
sides of NASA’s new deep space capsule.

4
00:00:14,440 --> 00:00:18,679
The backshell tiles are the same type that
protected the underside of space shuttles

5
00:00:18,679 --> 00:00:23,580
-- and will not only provide protection from
debris while in space but from extreme temperatures

6
00:00:23,580 --> 00:00:28,749
in that area of the spacecraft as it returns
from space – which could exceed 31-hundred

7
00:00:28,749 --> 00:00:31,189
degrees Fahrenheit.

8
00:00:31,189 --> 00:00:35,070
Anti-geyser testing is underway at Marshall
Space Flight Center to make sure the liquid

9
00:00:35,070 --> 00:00:40,120
oxygen tank feed system of NASA’s Space
Launch System rocket doesn’t spring a leak.

10
00:00:40,120 --> 00:00:44,699
Geysering can happen if gas bubbles displace
the liquid in the system.

11

00:00:44,699 --> 00:00:48,850
Engineers are using a full-scale replica of
the system, set up on one of Marshall's test

12
00:00:48,850 --> 00:00:52,250
stands to test procedures to prevent geysering.

13
00:00:52,250 --> 00:00:53,810
The Space Launch System rocket.

14
00:00:53,810 --> 00:00:58,350
-- will make deep space missions possible,
including to an asteroid and ultimately to

15
00:00:58,350 --> 00:00:59,350
Mars.

16
00:00:59,350 --> 00:01:04,280
A replica of the James Webb Space Telescope's
backplane or "central backbone" arrived

17
00:01:04,280 --> 00:01:09,830
recently at Goddard Space Flight Center, where
engineers and scientists will use it to practice

18
00:01:09,830 --> 00:01:16,010
the delicate procedure of installing the observatory's
mirrors before the actual backplane arrives.

19
00:01:16,010 --> 00:01:22,030
Targeted for launch in 2018, the JWST is the
world's next-generation space observatory

20
00:01:22,030 --> 00:01:25,410
and successor to NASA's Hubble Space Telescope.

21
00:01:25,410 --> 00:01:31,140
A new NASA airborne campaign this summer will
study the effect of sea ice retreat on Arctic

22
00:01:31,140 --> 00:01:32,140
climate.

23
00:01:32,140 --> 00:01:38,350
ARISE, The Arctic Radiation IceBridge Sea
and Ice Experiment is NASA's first airborne

24
00:01:38,350 --> 00:01:44,170
investigation designed to take simultaneous
measurements of ice, clouds and radiation

25
00:01:44,170 --> 00:01:48,570
levels in the Arctic, to help determine the
degree of climate warming.

26
00:01:48,570 --> 00:01:54,220
Flights are scheduled August 28 through October
1 -- the peak of summer sea ice melt.

27
00:01:54,220 --> 00:01:59,770
During an August 20 event at NASA headquarters,
called Ancient Earth, Alien Earths, a panel

28
00:01:59,770 --> 00:02:06,010
of scientists from NASA and other organizations
discussed how vastly different and inhospitable

29
00:02:06,010 --> 00:02:10,250
we all would find ancient Earth, if we could
go back in time.

30
00:02:10,250 --> 00:02:14,950
Despite the conditions, though, it was an
environment in which life began and evolved

31
00:02:14,950 --> 00:02:19,510
– and understanding how that was possible
could help us recognize habitable planets

32

00:02:19,510 --> 00:02:22,400
around other stars.

33
00:02:22,400 --> 00:02:27,319
During a 5- hour, 11-minute spacewalk outside
the International Space Station on August

34
00:02:27,319 --> 00:02:33,120
18, Expedition 40 Flight Engineers Alexander
Skvortsov and Oleg Artemyev of the Russian

35
00:02:33,120 --> 00:02:39,090
Federal Space Agency deployed a nanosatellite
and completed work on other science hardware

36
00:02:39,090 --> 00:02:42,069
and experiments on the Russian segment of
the ISS.

37
00:02:42,069 --> 00:02:49,120
It was the 181st spacewalk in support of space
station assembly and maintenance.

38
00:02:49,120 --> 00:02:51,099
And that’s what’s up this week @NASA …