1
00:00:00,179 --> 00:00:03,600
Working with industry to develop new lunar landers …

2
00:00:03,600 --> 00:00:06,730
Testing resumes with our Space Launch System rocket engine …

3
00:00:06,730 --> 00:00:12,760
And, after a job well done – the end of the line for one of our Mars rovers … a

4
00:00:12,760 --> 00:00:17,070
few of the stories to tell you about – This Week at NASA!

5
00:00:17,070 --> 00:00:21,610
We hosted an industry forum at our headquarters in Washington, to talk to American companies

6
00:00:21,610 --> 00:00:26,860
about developing reusable lunar landers and supporting systems for future human missions

7
00:00:26,860 --> 00:00:27,860
to the Moon.

8
00:00:27,860 --> 00:00:33,690
"And this is all part of the President's Space Policy Directive-1, that we here at NASA are

9
00:00:33,690 --> 00:00:36,090
charged with moving out on."

10
00:00:36,090 --> 00:00:41,430
Space Policy Directive-1 calls for NASA to work with industry to study and refine the

11
00:00:41,430 --> 00:00:44,190

agency’s approach to landing on the Moon.

12
00:00:44,190 --> 00:00:49,410
A key aspect of this proposed approach is
the use of our Gateway – an outpost in lunar

13
00:00:49,410 --> 00:00:52,920
orbit – to support journeys to and from
the lunar surface.

14
00:00:52,920 --> 00:00:56,570
"This is really sustainable -- we're going
to need the best and brightest from you in

15
00:00:56,570 --> 00:01:00,230
industry, we're going to need the best and
brightest from the international partner community

16
00:01:00,230 --> 00:01:03,940
to pull all this off."

17
00:01:03,940 --> 00:01:08,970
Our Stennis Space Center in Mississippi conducted
this year’s first hot fire test of an RS-25

18
00:01:08,970 --> 00:01:14,540
engine controller for use on a future flight
of our new Space Launch System rocket, or

19
00:01:14,540 --> 00:01:15,540
SLS.

20
00:01:15,540 --> 00:01:20,270
The SLS will use four of the engines to launch
astronauts aboard our Orion spacecraft on

21
00:01:20,270 --> 00:01:23,220
missions to the Moon.

22

00:01:23,220 --> 00:01:27,500
Our Mars Exploration Rover Opportunity’s
mission is complete.

23
00:01:27,500 --> 00:01:33,100
Opportunity last communicated with Earth on
June 10, 2018, during a global dust storm

24
00:01:33,100 --> 00:01:36,740
on Mars that blanketed the solar-powered rover's
location.

25
00:01:36,740 --> 00:01:43,130
Opportunity, which landed on Mars in January
2004, was supposed to operate for only 90

26
00:01:43,130 --> 00:01:46,920
Martian days and travel just 1,100 yards.

27
00:01:46,920 --> 00:01:53,579
But it far surpassed those marks – traveling
over 28 miles in its almost 15 years exploring

28
00:01:53,579 --> 00:01:54,579
the Red Planet.

29
00:01:54,579 --> 00:02:00,139
“Everything we do and think about in our
planetary neighborhood – with Mars and elsewhere

30
00:02:00,139 --> 00:02:03,869
– relates to the research that came from
that.”

31
00:02:03,869 --> 00:02:08,119
We announced the selection of a new mission
that will help astronomers understand both

32
00:02:08,119 --> 00:02:13,450
how our universe evolved and how common are

the ingredients for life in our galaxy's

33
00:02:13,450 --> 00:02:15,359
planetary systems.

34
00:02:15,359 --> 00:02:20,719
The Spectro-Photometer for the History of
the Universe, Epoch of Reionization and Ices

35
00:02:20,719 --> 00:02:27,010
Explorer mission, or SPHEREx is a two-year
mission targeted to launch in 2023, that will

36
00:02:27,010 --> 00:02:33,559
survey the sky in optical as well as near-infrared
light to gather data on more than 300 million

37
00:02:33,559 --> 00:02:40,489
galaxies, as well as more than 100 million
stars in our own Milky Way.

38
00:02:40,489 --> 00:02:45,480
Our atmosphere-sniffing MAVEN spacecraft is
lowering its orbit around Mars – a move

39
00:02:45,480 --> 00:02:51,329
that will enable it to act as a data-relay
satellite for our Mars 2020 rover, which launches

40
00:02:51,329 --> 00:02:52,809
next year.

41
00:02:52,809 --> 00:02:57,079
The change in orbit will bring the spacecraft
about a thousand miles closer to the surface

42
00:02:57,079 --> 00:02:58,370
of the planet.

43

00:02:58,370 --> 00:03:02,669
This will slightly increase the number of
daily orbits – which will allow MAVEN to

44
00:03:02,669 --> 00:03:06,370
communicate more often with rovers on the
Martian surface.

45
00:03:06,370 --> 00:03:10,930
When not conducting relay communications,
MAVEN will continue to study the structure

46
00:03:10,930 --> 00:03:15,650
and composition of the upper atmosphere of
Mars.

47
00:03:15,650 --> 00:03:20,829
Our Van Allen Probes mission is in its final
phase, after one of the twin probes began

48
00:03:20,829 --> 00:03:26,010
a series of maneuvers to bring its lowest
point of orbit closer to Earth.

49
00:03:26,010 --> 00:03:31,839
Over the past six-and-a-half years, the probes
have confirmed scientific theories and revealed

50
00:03:31,839 --> 00:03:37,069
new structures and processes at work in the
harsh region of space known as the Van Allen

51
00:03:37,069 --> 00:03:38,670
radiation belts.

52
00:03:38,670 --> 00:03:41,659
That’s what’s up this week @NASA …