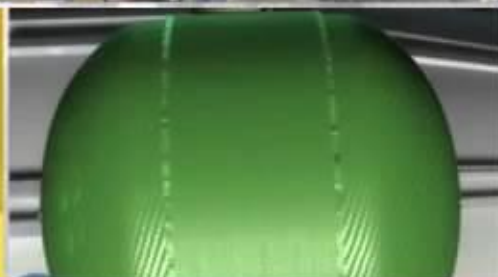
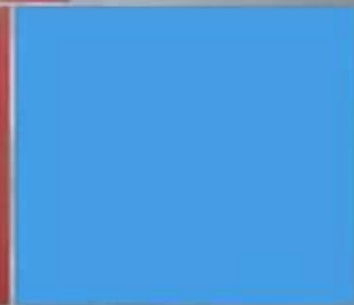


Composite
fuel tank
tests



1

00:00:00,950 --> 00:00:04,970

“Here’s some of the stories trending This Week at NASA!”

2

00:00:10,530 --> 00:00:16,510

rocket. The completion of a rigorous review known as Key Decision Point C, or KDP-C, means

3

00:00:16,510 --> 00:00:21,490

NASA can transition from formulation to development of the rocket that will send humans beyond

4

00:00:21,490 --> 00:00:27,900

Earth orbit and to Mars. KDP-C outlines a conservative development cost baseline and

5

00:00:27,900 --> 00:00:33,890

a launch readiness schedule based on an initial SLS flight no later than November 2018. This

6

00:00:33,890 --> 00:00:38,710

marks the country’s first commitment to building an exploration class launch vehicle since

7

00:00:38,710 --> 00:00:41,740

the Space Shuttle Program.

8

00:00:41,740 --> 00:00:46,410

Marshall Space Flight Center manages development of the SLS. Among the recent activities by

9

00:00:46,410 --> 00:00:51,829

engineers there was a hot-fire test of a 3-D printed rocket engine injector—a highly

10

00:00:51,829 --> 00:00:57,860

complex part that sends propellant into the engine. Using the efficient 3-D printing process,

11

00:00:57,860 --> 00:01:03,420

the injector was made from just two parts
– compared to about 163 parts for one made

12

00:01:03,420 --> 00:01:08,649

with traditional manufacturing. The injector's
design is similar to those used for large

13

00:01:08,649 --> 00:01:14,139

engines, such as the RS-25, that will power
the Space Launch System rocket.

14

00:01:14,139 --> 00:01:19,740

An August 28 test firing at Marshall of a
five percent scale model of the Space Launch

15

00:01:19,740 --> 00:01:25,749

System rocket, was conducted to provide important
data on how low and high-frequency sound waves

16

00:01:25,749 --> 00:01:30,670

generated by the rocket's engines and boosters
affect the rocket and the crew, especially

17

00:01:30,670 --> 00:01:36,200

during liftoff. The data will be used by engineers
at Kennedy Space Center to verify the design

18

00:01:36,200 --> 00:01:39,859

of the rocket's sound suppression system.

19

00:01:39,859 --> 00:01:43,909

The Boeing-built composite cryogenic fuel
tank at Marshall -- one of the largest ever

20

00:01:43,909 --> 00:01:48,999

manufactured, recently completed a complex
series of structural, temperature and pressure

21

00:01:48,999 --> 00:01:54,659

tests -- bringing the aerospace industry a step closer to designing, building, and using

22
00:01:54,659 --> 00:01:59,999
lightweight, composite tanks on rockets. This game-changing technology being evaluated by

23
00:01:59,999 --> 00:02:04,779
NASA's Space Technology Mission Directorate could reduce the weight of rockets by about

24
00:02:04,779 --> 00:02:09,840
30 percent and cut costs by at least 25 percent.

25
00:02:09,840 --> 00:02:16,489
NASA's New Horizons spacecraft traversed the orbit of Neptune on August 25. It is the

26
00:02:16,489 --> 00:02:21,290
spacecraft's last major crossing en route to becoming the first probe to make a close

27
00:02:21,290 --> 00:02:27,930
flyby of Pluto in July 2015. The milestone happened on the 25th anniversary of the historic

28
00:02:27,930 --> 00:02:33,939
encounter of NASA's Voyager 2 spacecraft with Neptune in 1989.

29
00:02:33,939 --> 00:02:38,329
The New Horizons and Voyager missions were the subjects of a two-part science panel discussion

30
00:02:38,329 --> 00:02:44,629
also on August 25 at NASA headquarters. During the first panel, NASA scientists and officials

31
00:02:44,629 --> 00:02:49,510
discussed the scientific goals and expectations

of the New Horizons mission, and the second

32

00:02:49,510 --> 00:02:54,150

event featured New Horizons science team members sharing memories of their work during the

33

00:02:54,150 --> 00:03:01,150

1989 Voyager-Neptune encounter and discussing their new assignments on the Pluto mission.

34

00:03:01,540 --> 00:03:06,700

NASA's Spitzer Space Telescope has spotted an eruption of dust around a young star about

35

00:03:06,700 --> 00:03:12,239

12-hundred light-years away, which could be the result of a smashup between large asteroids.

36

00:03:12,239 --> 00:03:17,010

This type of collision can eventually lead to the formation of planets. Scientists who

37

00:03:17,010 --> 00:03:22,129

had been regularly tracking the star noticed a huge amount of fresh dust between August

38

00:03:22,129 --> 00:03:27,480

2012 and January 2013. While the suspected aftermaths of asteroid collisions have been

39

00:03:27,480 --> 00:03:32,969

observed by Spitzer before, this is the first time data has been collected before and after

40

00:03:32,969 --> 00:03:34,640

a planetary system smashup.

41

00:03:34,640 --> 00:03:37,219

And that's what's up this week @NASA ...

