



1
00:00:11,430 --> 00:00:07,590

[Music]

2
00:00:16,550 --> 00:00:13,749

the core stage of nasa's space launch

3
00:00:18,470 --> 00:00:16,560

system america's newest flagship rocket

4
00:00:20,230 --> 00:00:18,480

has successfully completed a major

5
00:00:22,470 --> 00:00:20,240

technical review at the marshall space

6
00:00:25,349 --> 00:00:22,480

flight center the preliminary design

7
00:00:27,910 --> 00:00:25,359

review ensured the sls design met system

8
00:00:29,509 --> 00:00:27,920

requirements with an acceptable risk and

9
00:00:30,870 --> 00:00:29,519

fell within schedule and budget

10
00:00:32,790 --> 00:00:30,880

constraints

11
00:00:34,709 --> 00:00:32,800

also the review proved that the core

12
00:00:37,350 --> 00:00:34,719

stage which will be built at the michoud

13
00:00:39,270 --> 00:00:37,360

assembly facility would integrate safely

14

00:00:41,510 --> 00:00:39,280

with other elements of the rocket's main

15

00:00:44,150 --> 00:00:41,520

engines and solid rocket boosters the

16

00:00:45,910 --> 00:00:44,160

orion crew capsule and launch facilities

17

00:00:48,229 --> 00:00:45,920

at the kennedy space center

18

00:00:50,630 --> 00:00:48,239

the first flight test of the sls

19

00:00:56,069 --> 00:00:50,640

propelling an uncrewed orion spacecraft

20

00:01:00,389 --> 00:00:58,310

powering the upper stage of the sls will

21

00:01:02,069 --> 00:01:00,399

be the j2x engine

22

00:01:04,549 --> 00:01:02,079

engineers at the stennis space center

23

00:01:07,429 --> 00:01:04,559

have wrapped up their 13 test series of

24

00:01:08,870 --> 00:01:07,439

an important j2x component its power

25

00:01:11,429 --> 00:01:08,880

pack assembly

26

00:01:13,510 --> 00:01:11,439

last year's hot fire test saw the power

27

00:01:15,910 --> 00:01:13,520

pack assembly use millions of pounds of

28

00:01:17,190 --> 00:01:15,920

propellants during the 90 minutes of

29

00:01:19,109 --> 00:01:17,200

burn time

30

00:01:21,350 --> 00:01:19,119

nasa engineers at stennis will next

31

00:01:24,070 --> 00:01:21,360

focus on testing the fully integrated

32

00:01:29,270 --> 00:01:26,550

nasa has completed a set of flight tests

33

00:01:31,670 --> 00:01:29,280

for a technology that can autonomously

34

00:01:34,069 --> 00:01:31,680

take a spacecraft safely to the moon

35

00:01:35,990 --> 00:01:34,079

mars or even an asteroid

36

00:01:38,390 --> 00:01:36,000

it's called the autonomous landing

37

00:01:39,749 --> 00:01:38,400

hazard avoidance technology better known

38

00:01:41,590 --> 00:01:39,759

as all hat

39

00:01:43,190 --> 00:01:41,600

led by the johnson space center and

40

00:01:45,109 --> 00:01:43,200

supported by the jet propulsion

41

00:01:48,069 --> 00:01:45,119

laboratory and the langley research

42

00:01:50,550 --> 00:01:48,079

center all hat is designed to enable a

43

00:01:53,429 --> 00:01:50,560

planetary lander to touch down safely

44

00:01:57,030 --> 00:01:53,439

and precisely by detecting and avoiding

45

00:01:58,950 --> 00:01:57,040

obstacles like holes rocks and slopes

46

00:02:01,270 --> 00:01:58,960

instrumentation has been verified in

47

00:02:03,190 --> 00:02:01,280

flight tests aboard a nasa huey

48

00:02:04,550 --> 00:02:03,200

helicopter at langley and the kennedy

49

00:02:06,469 --> 00:02:04,560

space center

50

00:02:08,630 --> 00:02:06,479

future evaluations are planned on a

51
00:02:10,790 --> 00:02:08,640
vertical test bed that will have all hat

52
00:02:13,670 --> 00:02:10,800
put down autonomously on a lunar-like

53
00:02:18,790 --> 00:02:15,990
nasa's newest tracking and data relay

54
00:02:20,949 --> 00:02:18,800
satellite tdrs-k has been delivered to

55
00:02:22,470 --> 00:02:20,959
the kennedy space center by an air force

56
00:02:24,470 --> 00:02:22,480
c-17

57
00:02:27,910 --> 00:02:24,480
the satellite is set to be launched into

58
00:02:29,990 --> 00:02:27,920
geostationary orbit on january 29th

59
00:02:32,309 --> 00:02:30,000
tdrs-k is the first of three next

60
00:02:35,270 --> 00:02:32,319
generation satellites nasa's space

61
00:02:38,070 --> 00:02:35,280
communications and navigation program or

62
00:02:40,309 --> 00:02:38,080
scan is adding to its fleet to ensure

63
00:02:42,550 --> 00:02:40,319

its operational continuity

64

00:02:45,190 --> 00:02:42,560

each teacher's satellite will have more

65

00:02:47,509 --> 00:02:45,200

spacecraft power to service more scanned

66

00:02:54,710 --> 00:02:47,519

customers with different and evolving

67

00:02:58,790 --> 00:02:57,110

unique devices built by teams of middle

68

00:03:01,190 --> 00:02:58,800

and high school students from southern

69

00:03:03,589 --> 00:03:01,200

california were put to the test during

70

00:03:06,229 --> 00:03:03,599

the 15th annual invention challenge

71

00:03:08,070 --> 00:03:06,239

hosted by the jet propulsion laboratory

72

00:03:11,030 --> 00:03:08,080

the challenge of the streaming tissue

73

00:03:13,030 --> 00:03:11,040

toss contest was to build a device that

74

00:03:15,270 --> 00:03:13,040

could propel an officially supplied roll

75

00:03:17,509 --> 00:03:15,280

of toilet tissue into the air and

76
00:03:18,630 --> 00:03:17,519
produce the longest unbroken stream of

77
00:03:20,550 --> 00:03:18,640
tissue

78
00:03:23,190 --> 00:03:20,560
the competition gave students a chance

79
00:03:24,869 --> 00:03:23,200
to be creative and have fun with science

80
00:03:27,030 --> 00:03:24,879
engineering and math

81
00:03:29,750 --> 00:03:27,040
the 20 teams at the event were invited

82
00:03:32,470 --> 00:03:29,760
to jpo based on performances in two

83
00:03:34,949 --> 00:03:32,480
regional contests nine teams of jpl

84
00:03:37,990 --> 00:03:34,959
engineers and scientists also competed

85
00:03:42,949 --> 00:03:39,589
with the passing of jessico von

86
00:03:44,789 --> 00:03:42,959
putcommer on december 28th nasa lost a

87
00:03:46,789 --> 00:03:44,799
family member of 50 years who

88
00:03:48,630 --> 00:03:46,799

contributed to one of the agency's

89

00:03:51,110 --> 00:03:48,640

greatest achievements

90

00:03:52,949 --> 00:03:51,120

von podcamer came from germany to nasa

91

00:03:55,750 --> 00:03:52,959

in 1962

92

00:03:58,229 --> 00:03:55,760

when as a newly graduated engineer he

93

00:04:00,710 --> 00:03:58,239

was invited by verna von braun to join

94

00:04:03,030 --> 00:04:00,720

his fellow countrymen saturn v rocket

95

00:04:05,830 --> 00:04:03,040

team at the marshall space flight center

96

00:04:08,149 --> 00:04:05,840

and work on apollo i corresponded and he

97

00:04:10,869 --> 00:04:08,159

always gave me good advice

98

00:04:11,830 --> 00:04:10,879

what subjects to concentrate on and so

99

00:04:13,110 --> 00:04:11,840

on

100

00:04:15,350 --> 00:04:13,120

and

101
00:04:17,430 --> 00:04:15,360
so i asked him one day well i want to

102
00:04:19,509 --> 00:04:17,440
come to america

103
00:04:21,349 --> 00:04:19,519
but since i'm a greenhorn

104
00:04:23,590 --> 00:04:21,359
i probably should get some experience

105
00:04:26,310 --> 00:04:23,600
first learn the ropes

106
00:04:28,150 --> 00:04:26,320
and go to industry first so i i

107
00:04:30,550 --> 00:04:28,160
immediately got a telegram from him and

108
00:04:33,030 --> 00:04:30,560
then a letter don't go to industry come

109
00:04:35,749 --> 00:04:33,040
to huntsville we are flying to the moon

110
00:04:38,070 --> 00:04:35,759
von putcommer transferred in 1974 to

111
00:04:39,270 --> 00:04:38,080
nasa headquarters in washington where he

112
00:04:41,749 --> 00:04:39,280
most recently worked with the

113
00:04:43,909 --> 00:04:41,759

international space station program

114

00:04:46,550 --> 00:04:43,919

among the numerous awards received by

115

00:04:49,830 --> 00:04:46,560

von put commerce was nasa's prestigious

116

00:04:52,150 --> 00:04:49,840

exceptional service medal in 2004.

117

00:04:55,080 --> 00:04:52,160

jessica von putcommer died after a brief

118

00:05:01,430 --> 00:04:55,090

illness at age 79.

119

00:05:07,830 --> 00:05:05,590

on january 7 1968 surveyor 7 was

120

00:05:09,749 --> 00:05:07,840

launched from the kennedy space center

121

00:05:12,150 --> 00:05:09,759

the fifth and final spacecraft of the

122

00:05:15,110 --> 00:05:12,160

surveyor series to land softly on the

123

00:05:17,590 --> 00:05:15,120

moon surveyor 7 helped nasa's coming

124

00:05:19,909 --> 00:05:17,600

apollo missions by testing landing

125

00:05:21,990 --> 00:05:19,919

technology providing data about the

126

00:05:24,390 --> 00:05:22,000

compatibility of the apollo design with

127

00:05:27,510 --> 00:05:24,400

conditions on the lunar surface and

128

00:05:29,749 --> 00:05:27,520

gathering science about the moon itself

129

00:05:31,670 --> 00:05:29,759

and that's this week at nasa

130

00:05:33,749 --> 00:05:31,680

for more on these and other stories or

131

00:05:37,189 --> 00:05:33,759

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