

NASA MSFC
Thrust Vector Control Test Laboratory
Research, Development and Qualification Team
SpaceX's Thrust Vector Control System



1

00:00:00,630 --> 00:00:04,560

"Here's some of the stories trending This Week at NASA!"

2

00:00:04,560 --> 00:00:09,070

NASA Administrator Charlie Bolden visited Marshall Space Flight Center to see work being

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00:00:09,070 --> 00:00:14,490

done on the avionics and flight software for NASA's Space Launch System rocket.

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00:00:14,490 --> 00:00:18,789

Marshall's System Integration Lab conducts flight simulations of the avionics system

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00:00:18,789 --> 00:00:24,279

-- including hardware, software and operating systems -- that will guide the launch vehicle,

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00:00:24,279 --> 00:00:28,899

to see how the SLS will perform during launch.

7

00:00:28,899 --> 00:00:33,300

There also was a media event at Marshall on March 11 to announce the signing of a newly

8

00:00:33,300 --> 00:00:37,980

expanded Space Act Agreement between NASA and Sierra Nevada Corporation.

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00:00:37,980 --> 00:00:42,660

The new agreement calls for Marshall to provide technical expertise to the company as it plans

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00:00:42,660 --> 00:00:46,890

for integration of science payloads on its Dream Chaser spacecraft.

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00:00:46,890 --> 00:00:51,900
Teledyne Brown Engineering, which will work
with SNC under a Teaming Agreement also participated

12
00:00:51,900 --> 00:00:54,060
in the event.

13
00:00:54,060 --> 00:00:58,470
Just hours after leaving the International
Space Station, the Expedition 38 crew made

14
00:00:58,470 --> 00:01:04,420
a safe return to Earth -- touching down in
Kazakhstan on March 10, Eastern Daylight Time.

15
00:01:04,420 --> 00:01:09,890
NASA's Mike Hopkins and Russian cosmonauts
Oleg Kotov and Sergey Ryazanskiy spent 166

16
00:01:09,890 --> 00:01:11,719
days in space.

17
00:01:11,719 --> 00:01:17,869
Meanwhile, the Expedition 39/40 crew continues
preparing for its upcoming trip to the ISS.

18
00:01:17,869 --> 00:01:24,399
NASA astronaut Steve Swanson and Russian cosmonauts
Alexander Skvortsov and Oleg Artemyev traveled

19
00:01:24,399 --> 00:01:29,939
from Star City, Russia to Kazakhstan to complete
training for their launch to the station later

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00:01:29,939 --> 00:01:31,799
this month.

21
00:01:31,799 --> 00:01:36,369
Onboard the International Space Station, NASA's
Rick Mastracchio and new station commander,

22
00:01:36,369 --> 00:01:42,490
Koichi Wakata of the Japan Aerospace Exploration Agency answered questions about life and research

23
00:01:42,490 --> 00:01:48,329
in space during a March 13 In-flight event with Administrator Bolden and about 100 students

24
00:01:48,329 --> 00:01:51,889
participating in the U.S. Senate Youth Program.

25
00:01:51,889 --> 00:01:56,969
Mastracchio, Wakata and Russian cosmonaut Mikhail Tyurin are scheduled to remain onboard

26
00:01:56,969 --> 00:02:00,310
the station until mid-May.

27
00:02:00,310 --> 00:02:04,880
During an 83-second free flight test at Kennedy Space Center, the Morpheus prototype lander

28
00:02:04,880 --> 00:02:11,470
rose to 580-feet -- higher than the Washington Monument and its highest altitude to date.

29
00:02:11,470 --> 00:02:18,730
Morpheus then flew 837 feet downrange at 30 mph -- both farther and faster than any previous

30
00:02:18,730 --> 00:02:23,650
test -- before descending and touching down about a foot from its target.

31
00:02:23,650 --> 00:02:28,280
Seven NASA centers are involved with Project Morpheus, which is testing NASA's automated

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00:02:28,280 --> 00:02:33,610

landing and hazard avoidance technology and an engine that uses "green" propellants.

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00:02:33,610 --> 00:02:40,490

These capabilities could be used to deliver cargo to planetary surfaces on future missions.

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00:02:40,490 --> 00:02:47,810

Citizen scientists who develop improved algorithms for identifying asteroids have a shot at 35-thousand

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00:02:47,810 --> 00:02:53,540

dollars in prize money being offered through NASA's Asteroid Data Hunter series contest.

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00:02:53,540 --> 00:02:59,570

The contest series, being conducted in partnership with Planetary Resources Inc. of Bellevue,

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00:02:59,570 --> 00:03:02,270

Washington, starts on March 17.

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00:03:02,270 --> 00:03:07,770

NASA's asteroid initiative seeks to enhance the agency's ongoing work to identify and

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00:03:07,770 --> 00:03:14,000

characterize near-Earth objects for further scientific investigation.

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00:03:14,000 --> 00:03:19,290

At the South by Southwest Interactive in Austin, Texas, NASA exhibits, panel discussions and

41

00:03:19,290 --> 00:03:25,860

presentations highlighted the agency's efforts to find answers to tough questions, such as:

42

00:03:25,860 --> 00:03:27,720

Is there life on other planets?

43

00:03:27,720 --> 00:03:30,780

And, are we smarter than the dinosaurs?

44

00:03:30,780 --> 00:03:36,250

There was also info about NASA Earth science missions, the soon-to-fly Orion spacecraft,

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00:03:36,250 --> 00:03:41,150

the Space Launch System and the Asteroid Grand Challenge -- as well as a live question and

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00:03:41,150 --> 00:03:45,760

answer session with the crew aboard the International Space Station.

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00:03:45,760 --> 00:03:51,400

A Women's History Month program at headquarters titled, "Involving Everyone in the Conversation."

48

00:03:51,400 --> 00:03:57,180

featured presentations by Administrator Bolden and former NASA astronaut Sandy Magnus -- now

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00:03:57,180 --> 00:04:01,900

executive director at the American Institute of Aeronautics and Astronautics.

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00:04:01,900 --> 00:04:06,350

The program also included panel discussions about the relationships and challenges of

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00:04:06,350 --> 00:04:12,470

workforce diversity and encouraging students to pursue careers in science, technology,

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00:04:12,470 --> 00:04:14,510

engineering and math, or STEM.

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00:04:14,510 --> 00:04:17,090

And that's what's up ... This Week at NASA.