



1
00:00:06,870 --> 00:00:19,029
This Week at NASA...

2
00:00:19,029 --> 00:00:23,950
After a two day trip that began with its launch from the Baikonur Cosmodrome in Kazakhstan,

3
00:00:23,950 --> 00:00:28,849
an uncrewed Russian Progress cargo ship successfully mated with the International

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00:00:28,849 --> 00:00:33,730
Space Station's Pirs Docking Compartment. The docking occurred as the two spacecraft

5
00:00:33,730 --> 00:00:42,570
were traveling about 240 miles above the northeast coast of Brazil. The supply ship delivers

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00:00:42,570 --> 00:00:49,219
about 2.9 tons of food, fuel and equipment to the six crewmembers onboard the ISS. The

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00:00:49,219 --> 00:00:56,199
Progress spacecraft is scheduled to remain docked to Pirs until late April.

8
00:00:56,199 --> 00:01:03,230
The biggest storm on the sun in years erupted on January 22 with a huge solar flare, an

9
00:01:03,230 --> 00:01:09,820
Earth-directed coronal mass ejection, or CME, and a burst of fast moving, highly energetic

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00:01:09,820 --> 00:01:15,460
protons. According to NOAA's Space Weather Prediction Center, these "solar energetic

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00:01:15,460 --> 00:01:21,240

particles” caused the strongest solar radiation storm since September 2005.

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00:01:21,240 --> 00:01:28,080

“We’re expecting to reach the solar maximum in terms of activity, sometime around next

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00:01:28,080 --> 00:01:35,720

year. So we’re expecting to have more of these kinds of solar eruptions in the coming

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00:01:35,720 --> 00:01:40,110

two or three years.”

Closely monitored by NASA scientists, the

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00:01:40,110 --> 00:01:45,950

storm caused no major disruptions to operating technological systems in space or on the ground,

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00:01:45,950 --> 00:01:52,780

such as satellite communications or high voltage power transmission.

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00:01:52,780 --> 00:01:59,020

The warming of the Earth’s surface continues.

That, according to scientists at NASA's Goddard

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00:01:59,020 --> 00:02:05,070

Institute for Space Studies in New York, who say the average global surface temperature

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00:02:05,070 --> 00:02:11,730

in 20-11 was the ninth warmest since 1880.

The finding continues a trend in which nine

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00:02:11,730 --> 00:02:18,650

of the ten warmest years in the modern meteorological record have occurred since 2000. GISS monitors

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00:02:18,650 --> 00:02:23,890

global surface temperatures on an ongoing basis, and has found that the average temperature

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00:02:23,890 --> 00:02:31,430

around the globe in 20-11 was 0.92 degrees Fahrenheit warmer than it was around 19-50.

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00:02:31,430 --> 00:02:36,031

“To say that this is a problem that we don’t need to concern ourselves with until a few

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00:02:36,031 --> 00:02:44,129

years from now is a mistake. We need to concern ourselves with it now so that the outcome

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00:02:44,129 --> 00:02:51,730

a few years from now is something that we’re well positioned to deal with.”

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00:02:51,730 --> 00:02:57,760

Former astronaut Scott Altman addressed Mississippi State legislators during NASA Day at the Capitol

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00:02:57,760 --> 00:03:03,969

in Jackson. The event included exhibits highlighting the Stennis Space Center’s role in the past,

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00:03:03,969 --> 00:03:09,650

present and future of America’s space program, as well as the center’s contributions to

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00:03:09,650 --> 00:03:15,140

Mississippi’s economy and quality of life.

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00:03:15,140 --> 00:03:23,709

There’s nothing new about satellites in space. But flying them inside the International

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00:03:23,709 --> 00:03:29,139

Space Station? That's what teams of high school students from the U.S. and abroad did

32
00:03:29,139 --> 00:03:36,409
in the Zero Robotics SPHERES Challenge 2011 Finals. Televised live on NASA TV, the event

33
00:03:36,409 --> 00:03:42,370
featured these bowling ball-sized devices, called Synchronized Position Hold, Engage,

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00:03:42,370 --> 00:03:48,700
Reorient, Experimental Satellites, being flown on the station using software programs developed

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00:03:48,700 --> 00:03:50,810
by the students.

36
00:03:50,810 --> 00:03:56,139
Operated and maintained by the Ames Research Center, the SPHERES National Laboratory Facility

37
00:03:56,139 --> 00:04:01,919
onboard the ISS is exploring whether these mini-satellites can affordably test spacecraft

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00:04:01,919 --> 00:04:05,480
navigation in a microgravity environment.

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00:04:05,480 --> 00:04:10,590
The SPHERES competition is a collaboration of NASA, the Massachusetts Institute of Technology

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00:04:10,590 --> 00:04:17,590
and the Defense Advanced Research Projects Agency, or DARPA.

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00:04:17,590 --> 00:04:23,400
About 350 students celebrated the 19th annual Young Astronaut Day at the Glenn Research

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00:04:23,400 --> 00:04:28,900

Center. A variety of activities appealed to their interest in aeronautics, space science

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00:04:28,900 --> 00:04:34,210

and engineering. The younger children enjoyed challenges like balancing marbles on a plate

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00:04:34,210 --> 00:04:40,160

in a vacuum chamber, while the older members of our next generation of explorers investigated

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00:04:40,160 --> 00:04:46,800

the building of robotic vehicles able to travel across a simulated planetary surface.

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00:04:46,800 --> 00:04:52,970

Selected as a NASA astronaut after seven rejections, Cleveland-area native, Mike Foreman, spoke

47

00:04:52,970 --> 00:04:56,419

of how persistence can help realize your dreams.

48

00:04:56,419 --> 00:05:02,070

"If you fail at a goal the first time, the second time, maybe event the third time, I

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00:05:02,070 --> 00:05:06,220

would hope that you guys would get back up and keep trying, you know to reach the goal.

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00:05:06,220 --> 00:05:08,659

It might be just to make the soccer team."

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00:05:08,659 --> 00:05:14,400

The crowning activity of the day: the use of some two thousand cans of food to build

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00:05:14,400 --> 00:05:19,479

a mini-space shuttle, later donated to a Cleveland food bank.

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00:05:19,479 --> 00:05:27,000

An engaging new NASA program brings the excitement of space exploration to children while teaching

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00:05:27,000 --> 00:05:33,050

them to live a healthy lifestyle. Inspired by First Lady Michelle Obama's Let's Move!

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00:05:33,050 --> 00:05:38,349

initiative, NASA's Train Like an Astronaut program aims to increase opportunities for

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00:05:38,349 --> 00:05:42,710

kids to become more physically and mentally active.

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00:05:42,710 --> 00:05:49,199

The program uses activities similar to those astronauts perform before, during and after

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00:05:49,199 --> 00:05:54,130

spaceflights to help 8-to-12 year olds develop good fitness and nutrition habits.

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00:05:54,130 --> 00:05:59,919

“But it could also be for us older kids, because we always need the adults to team

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00:05:59,919 --> 00:06:06,509

in and work with our children to improve their physical fitness as well as help them learn

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00:06:06,509 --> 00:06:10,659

about how to live a healthier lifestyle and good nutrition.”

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00:06:10,659 --> 00:06:15,879

The activities in Train Like an Astronaut align with national education standards and

63

00:06:15,879 --> 00:06:21,729

were developed in cooperation with NASA scientists and fitness professionals who work directly

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00:06:21,729 --> 00:06:28,259

with our astronauts.

Actress and spaceflight activist Nichelle

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00:06:28,259 --> 00:06:34,350

Nichols, who portrayed Lt. Uhura in the original Star Trek TV series, found many friendly fans

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00:06:34,350 --> 00:06:39,030

during a recent warp-speed visit to NASA Dryden Flight Research Center's facilities in Southern

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00:06:39,030 --> 00:06:45,169

California. Nichols related her experiences, both as a member of the Star Trek cast, and

68

00:06:45,169 --> 00:06:50,080

as an advocate for human exploration of space, to an appreciative audience of Dryden employees.

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00:06:50,080 --> 00:07:00,439

"That's what our tax dollars are doing...gaining us the future, gaining us beyond our wildest

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00:07:00,439 --> 00:07:08,840

dreams. What humankind can dream of, humankind can do...and much more."

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00:07:08,840 --> 00:07:13,659

Nichols considers one of her greatest accomplishments was helping open the door for the first women

72

00:07:13,659 --> 00:07:19,620
and persons of minority ethnicity to become
NASA astronaut candidates, including Mae Jemison

73
00:07:19,620 --> 00:07:24,919
and current NASA administrator Charlie Bolden.
She stressed that Americans not only have

74
00:07:24,919 --> 00:07:30,690
the opportunity, but the duty to ensure that
NASA's space exploration program remains viable,

75
00:07:30,690 --> 00:07:34,110
as it seeks to go where no man or woman has
gone before.

76
00:07:34,110 --> 00:07:41,990
"I was always talking to Star Trek fans,
about "Why space?"... why it's important.

77
00:07:41,990 --> 00:07:47,680
It's our space, but do you understand that
that's not them doing that, that's ours...it

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00:07:47,680 --> 00:08:01,520
belongs to us...NASA belongs to me ... say
it, everybody – NASA belongs to me!"

79
00:08:01,520 --> 00:08:08,919
Forty-one years ago, on January 31, 1971,
the Apollo 14 mission began with its launch

80
00:08:08,919 --> 00:08:14,620
from the Kennedy Space Center in Florida.
Astronauts Alan Shepard, Stuart Roosa, and

81
00:08:14,620 --> 00:08:26,189
Edgar Mitchell manned NASA's third mission
to land on the moon. Shepard and Mitchell

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00:08:26,189 --> 00:08:31,990

spent nearly 33 hours in the Fra Mauro highlands,
the same area to have been explored by the

83

00:08:31,990 --> 00:08:38,380

aborted Apollo 13 mission. They conducted
two lunar EVAs and collected more material

84

00:08:38,380 --> 00:08:45,010

and scientific data than Apollo 11 and 12
combined. And famously, Commander Shepard

85

00:08:45,010 --> 00:08:51,110

swung the first golf club in space, sending
two balls across the lunar frontier.

86

00:08:51,110 --> 00:08:58,560

"Miles, miles and miles."

Apollo 14 touched down safely in the Pacific

87

00:08:58,560 --> 00:09:04,700

Ocean on February 9, 1971.

And that's This Week @ NASA!

88

00:09:04,700 --> 00:09:09,540

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