
JAXA

1
00:00:00,829 --> 00:00:11,100
This
Week at NASA…

2
00:00:11,100 --> 00:00:17,690
The biggest storm on the sun in years erupted
on January 22 with a huge solar flare,

3
00:00:17,690 --> 00:00:24,230
an Earth-directed coronal mass ejection, or
CME, and a burst of fast moving, highly

4
00:00:24,230 --> 00:00:26,369
energetic protons.

5
00:00:26,369 --> 00:00:29,960
According to NOAA’s Space Weather Prediction
Center, these “solar

6
00:00:29,960 --> 00:00:36,150
energetic particles” caused the strongest
solar radiation storm since September 2005.

7
00:00:36,150 --> 00:00:43,000
“We’re expecting to reach the solar maximum
in terms of activity, sometime around next

8
00:00:43,000 --> 00:00:44,000
year.

9
00:00:44,000 --> 00:00:50,619
So we’re expecting to have more of these
kinds of solar eruptions in the coming

10
00:00:50,619 --> 00:00:52,140
two or three years.”

11
00:00:52,140 --> 00:00:57,080
Closely monitored by NASA scientists, the

storm caused no major disruptions to

12
00:00:57,080 --> 00:01:01,620
operating technological systems in space or
on the ground, such as satellite

13
00:01:01,620 --> 00:01:07,690
communications or high voltage power transmission.

14
00:01:07,690 --> 00:01:10,750
The warming of the Earth’s surface continues.

15
00:01:10,750 --> 00:01:15,820
That, according to scientists at NASA's
Goddard Institute for Space Studies in New

16
00:01:15,820 --> 00:01:21,920
York, who say the average global surface
temperature in 20-11 was the ninth warmest

17
00:01:21,920 --> 00:01:23,820
since 1880.

18
00:01:23,820 --> 00:01:28,170
The finding continues a trend
in which nine of the ten warmest years in

19
00:01:28,170 --> 00:01:32,680
the modern meteorological record have
occurred since 2000.

20
00:01:32,680 --> 00:01:36,810
GISS monitors global surface temperatures
on an ongoing basis,

21
00:01:36,810 --> 00:01:42,280
and has found that the average temperature
around the globe in 20-11 was 0.92

22

00:01:42,280 --> 00:01:46,340
degrees Fahrenheit warmer than it was around
19-50.

23
00:01:46,340 --> 00:01:50,921
“To say that this is a problem that we don’t
need to concern ourselves with until a few

24
00:01:50,921 --> 00:01:53,300
years from now is a mistake.

25
00:01:53,300 --> 00:01:58,409
We need to concern ourselves with it now so
that the

26
00:01:58,409 --> 00:02:06,630
outcome a few years from now is something
that we’re well positioned to deal with.”

27
00:02:06,630 --> 00:02:11,550
Former astronaut Scott Altman addressed Mississippi
State legislators during NASA

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00:02:11,550 --> 00:02:14,170
Day at the Capitol in Jackson.

29
00:02:14,170 --> 00:02:16,580
The event included exhibits highlighting the
Stennis

30
00:02:16,580 --> 00:02:22,530
Space Center’s role in the past, present
and future of America’s space program, as

31
00:02:22,530 --> 00:02:30,020
well as the center’s contributions to Mississippi’s
economy and quality of life.

32
00:02:30,020 --> 00:02:36,020
There’s nothing new about satellites in

space.

33
00:02:36,020 --> 00:02:39,840
But flying them inside the International
Space Station?

34
00:02:39,840 --> 00:02:43,420
That’s what teams of high school students
from the U.S. and abroad

35
00:02:43,420 --> 00:02:48,570
did in the Zero Robotics SPHERES Challenge
2011 Finals.

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00:02:48,570 --> 00:02:53,390
Televised live on NASA
TV, the event featured these bowling ball-sized

37
00:02:53,390 --> 00:02:59,599
devices, called Synchronized Position
Hold, Engage, Reorient, Experimental Satellites,

38
00:02:59,599 --> 00:03:05,709
being flown on the station using
software programs developed by the students.

39
00:03:05,709 --> 00:03:09,740
Operated and maintained by the Ames Research
Center, the SPHERES National

40
00:03:09,740 --> 00:03:15,270
Laboratory Facility onboard the ISS is exploring
whether these mini-satellites can

41
00:03:15,270 --> 00:03:20,380
affordably test spacecraft navigation in a
microgravity environment.

42
00:03:20,380 --> 00:03:24,730
The SPHERES competition is a collaboration

of NASA, the Massachusetts Institute of

43
00:03:24,730 --> 00:03:32,490
Technology and the Defense Advanced Research
Projects Agency, or DARPA.

44
00:03:32,490 --> 00:03:37,849
About 350 students celebrated the 19th annual
Young Astronaut Day at the Glenn

45
00:03:37,849 --> 00:03:38,850
Research Center.

46
00:03:38,850 --> 00:03:43,210
A variety of activities appealed to their
interest in aeronautics, space

47
00:03:43,210 --> 00:03:45,270
science and engineering.

48
00:03:45,270 --> 00:03:47,960
The younger children enjoyed challenges like
balancing

49
00:03:47,960 --> 00:03:52,629
marbles on a plate in a vacuum chamber, while
the older members of our next

50
00:03:52,629 --> 00:03:58,379
generation of explorers investigated the building
of robotic vehicles able to travel

51
00:03:58,379 --> 00:04:01,590
across a simulated planetary surface.

52
00:04:01,590 --> 00:04:06,841
Selected as a NASA astronaut after seven rejections,
Cleveland-area native, Mike

53

00:04:06,841 --> 00:04:11,310
Foreman, spoke of how persistence can help
realize your dreams.

54
00:04:11,310 --> 00:04:15,940
“If you fail at a goal the first time, the
second time, maybe event the third time, I

55
00:04:15,940 --> 00:04:18,939
would
hope that you guyts would get back up and

56
00:04:18,939 --> 00:04:21,150
keep trying, you know to reach the goal.

57
00:04:21,150 --> 00:04:23,559
It
might be just to make the soccer team.”

58
00:04:23,559 --> 00:04:29,309
The crowning activity of the day: the use
of some two thousand cans of food to build

59
00:04:29,309 --> 00:04:32,680
a
mini-space shuttle, later donated to a Cleveland

60
00:04:32,680 --> 00:04:34,389
food bank.

61
00:04:34,389 --> 00:04:40,339
An engaging new NASA program brings the excitement
of space exploration to

62
00:04:40,339 --> 00:04:44,610
children while teaching them to live a healthy
lifestyle.

63
00:04:44,610 --> 00:04:47,960
Inspired by First Lady Michelle

64
00:04:47,960 --> 00:04:51,939
initiative, NASA's Train Like an Astronaut
program aims to

65
00:04:51,939 --> 00:04:57,610
increase opportunities for kids to become
more physically and mentally active.

66
00:04:57,610 --> 00:05:04,099
The program uses activities similar to those
astronauts perform before, during and after

67
00:05:04,099 --> 00:05:09,039
spaceflights to help 8-to-12 year olds develop
good fitness and nutrition habits.

68
00:05:09,039 --> 00:05:15,490
“But it could also be for us older kids,
because we always need the adults to team

69
00:05:15,490 --> 00:05:18,770
in and
work with our children to improve their physical

70
00:05:18,770 --> 00:05:25,360
fitness as well as help them learn about
how to live a healthier lifestyle and good

71
00:05:25,360 --> 00:05:26,360
nutrition.”

72
00:05:26,360 --> 00:05:30,789
The activities in Train Like an Astronaut
align with national education standards and

73
00:05:30,789 --> 00:05:35,560
were developed in cooperation with NASA scientists
and fitness professionals who

74
00:05:35,560 --> 00:05:41,210
work directly with our astronauts.

75
00:05:41,210 --> 00:05:45,530
Actress and spaceflight activist Nichelle
Nichols, who portrayed Lt. Uhura in the

76
00:05:45,530 --> 00:05:51,000
original Star Trek TV series, found many friendly
fans during a recent warp-speed visit

77
00:05:51,000 --> 00:05:55,490
to NASA Dryden Flight Research Center's facilities
in Southern California.

78
00:05:55,490 --> 00:05:58,240
Nichols
related her experiences, both as a member

79
00:05:58,240 --> 00:06:03,439
of the Star Trek cast, and as an advocate
for human exploration of space, to an appreciative

80
00:06:03,439 --> 00:06:04,930
audience of Dryden employees.

81
00:06:04,930 --> 00:06:14,509
“That's what our tax dollars are doing…gaining
us the future, gaining us beyond our

82
00:06:14,509 --> 00:06:16,189
wildest dreams.

83
00:06:16,189 --> 00:06:23,729
What humankind can dream of, humankind can
do…and much more.”

84
00:06:23,729 --> 00:06:27,930

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

85
00:06:27,930 --> 00:06:32,569
the first women and persons of minority ethnicity
to become NASA astronaut

86
00:06:32,569 --> 00:06:37,750
candidates, including Mae Jemison and current
NASA administrator Charlie Bolden.

87
00:06:37,750 --> 00:06:42,439
She stressed that Americans not only have
the opportunity, but the duty to ensure that

88
00:06:42,439 --> 00:06:47,419
NASA's space exploration program remains viable,
as it seeks to go where no man or

89
00:06:47,419 --> 00:06:49,009
woman has gone before.

90
00:06:49,009 --> 00:06:55,419
“I was always talking to Star Trek fans,
about "Why space?"…

91
00:06:55,419 --> 00:06:56,889
why it's important.

92
00:06:56,889 --> 00:07:00,409
It's our
space, but do you understand that that's not

93
00:07:00,409 --> 00:07:04,059
them doing that, that's ours…it belongs
to

94
00:07:04,059 --> 00:07:16,430
us…NASA belongs to me … say it, everybody
– NASA belongs to me!”

95
00:07:16,430 --> 00:07:23,819
Forty-one years ago, on January 31, 1971,
the Apollo 14 mission began with its launch

96
00:07:23,819 --> 00:07:26,919
from the Kennedy Space Center in Florida.

97
00:07:26,919 --> 00:07:32,289
Astronauts Alan Shepard, Stuart Roosa,
and Edgar Mitchell manned NASA's third mission

98
00:07:32,289 --> 00:07:40,159
to land on the moon.

99
00:07:40,159 --> 00:07:43,919
Shepard and
Mitchell spent nearly 33 hours in the Fra

100
00:07:43,919 --> 00:07:49,539
Mauro highlands, the same area to have
been explored by the aborted Apollo 13 mission.

101
00:07:49,539 --> 00:07:54,879
They conducted two lunar EVAs and
collected more material and scientific data

102
00:07:54,879 --> 00:07:57,949
than Apollo 11 and 12 combined.

103
00:07:57,949 --> 00:08:00,979
And
famously, Commander Shepard swung the first

104
00:08:00,979 --> 00:08:06,020
golf club in space, sending two balls
across the lunar frontier.

105
00:08:06,020 --> 00:08:10,779

“Miles, miles and miles.”

106
00:08:10,779 --> 00:08:16,009
Apollo 14 touched down safely in the Pacific Ocean on February 9, 1971.

107
00:08:16,009 --> 00:08:19,610
And that’s This Week @ NASA!

108
00:08:19,610 --> 00:08:23,879
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