1
00:00:07,009 --> 00:00:11,299
This Week at NASA…

2
00:00:11,299 --> 00:00:15,969
International Space Station Commander, Suni
Williams is beginning to prepare for her upcoming

3
00:00:15,969 --> 00:00:17,240
return home.

4
00:00:17,240 --> 00:00:24,250
The NASA astronaut and two of her Expedition
33 colleagues, Aki Hoshide of the Japan Aerospace

5
00:00:24,250 --> 00:00:29,710
Exploration Agency, and Russian cosmonaut,
Yuri Malenchenko, are scheduled to make their

6
00:00:29,710 --> 00:00:35,430
way back to Earth with a parachute-assisted
landing by their Soyuz capsule in rural Kazakhstan

7
00:00:35,430 --> 00:00:38,079
on November 19, local time.

8
00:00:38,079 --> 00:00:41,790
The trio has been on the orbiting laboratory
since July.

9
00:00:41,790 --> 00:00:48,010
Staying on station for Expedition 34 is NASA
astronaut Kevin Ford, and Russian cosmonauts

10
00:00:48,010 --> 00:00:54,289
Evgeny Tarelkin and Oleg Novitsky, all of
whom came aboard just last month.

11
00:00:54,289 --> 00:01:00,590
Hi, I'm Pan Conrad, deputy principal investigator

of the SAM instrument suite on the Mars Science

12
00:01:00,590 --> 00:01:05,489
Laboratory and this is your Curiosity rover
update.

13
00:01:05,489 --> 00:01:11,500
While our robotic explorer has been busy characterizing
the surface of Mars, the SAM team has also

14
00:01:11,500 --> 00:01:15,830
been busy, but we've been looking at something
invisible, the Martian atmosphere.

15
00:01:15,830 --> 00:01:22,800
SAM, or Sample Analysis at Mars, is not one
instrument, but three, all of which are designed

16
00:01:22,800 --> 00:01:26,710
to work together to chemically characterize
Mars.

17
00:01:26,710 --> 00:01:32,390
SAM measures chemical elements and molecules
and we do this by looking at.

18
00:01:32,390 --> 00:01:37,750
We can bake solid samples until they give
up their volatile components or their gases

19
00:01:37,750 --> 00:01:43,420
or we can directly inhale the Martian atmosphere
through our inlet ports.

20
00:01:43,420 --> 00:01:48,640
The tunable laser spectrometer has a special
role for SAM in that it can very sensitively

21
00:01:48,640 --> 00:01:55,400
detect the organic molecule, methane, which

has been observed from the Earth telescopically

22
00:01:55,400 --> 00:02:01,560
and also by the Mars Express orbiter at very,
very low limits in the Martian atmosphere.

23
00:02:01,560 --> 00:02:06,080
We're trying to discover whether or not
we can see this molecule from the Martian

24
00:02:06,080 --> 00:02:10,289
surface and if it has any variation from season
to season.

25
00:02:10,289 --> 00:02:15,510
So we've already begun prospecting for methane
and to date we don't have a definitive detection.

26
00:02:15,510 --> 00:02:19,290
We'll continue looking during the course
of the mission.

27
00:02:19,290 --> 00:02:25,459
In the coming months, wherever Curiosity goes
SAM will continue to sniff the Martian atmosphere

28
00:02:25,459 --> 00:02:31,019
periodically looking for changes on a seasonal
or maybe even diurnal basis and that will

29
00:02:31,019 --> 00:02:36,780
tell us something about the dynamics the exchange
between the surface and the atmosphere.

30
00:02:36,780 --> 00:02:39,400
This has been your Curiosity rover update.

31
00:02:39,400 --> 00:02:41,849
Check back for more.

32
00:02:41,849 --> 00:02:47,680
NASA’s Radiation Belt Space Probes mission,
RBSP, has been renamed …

33
00:02:47,680 --> 00:02:48,680
(SOT: John Grunsfeld, Associate Administrator,
NASA’s Science Mission Directorate)

34
00:02:48,680 --> 00:02:53,870
“The National Aeronautics and Space Adminstration
is pleased to announce the decision to rename

35
00:02:53,870 --> 00:03:00,510
the Radiation Belts Storm Probes Mission – the
Van Allen Probes.”

36
00:03:00,510 --> 00:03:04,939
The new name, announced during an event at
the John Hopkins Applied Physics Laboratory,

37
00:03:04,939 --> 00:03:09,459
is for James Van Allen, the scientist who
discovered the radiation belts surrounding

38
00:03:09,459 --> 00:03:11,799
the Earth.

39
00:03:11,799 --> 00:03:19,169
Launched on August 30 and managed by APL,
the newly-renamed twin probes continue to

40
00:03:19,169 --> 00:03:22,709
follow each other in the same orbit around
the planet.

41
00:03:22,709 --> 00:03:27,859
The data they return about how the Van Allen
Belts behave during solar storms will help

42

00:03:27,859 --> 00:03:34,099
scientists and engineers design more robust
satellites and safer spacecraft, as well as

43
00:03:34,099 --> 00:03:40,139
stronger safeguards for communications systems
and other critical technologies here on Earth.

44
00:03:40,139 --> 00:03:45,529
The Van Allen Probes also will improve our
understanding of fundamental particle physics

45
00:03:45,529 --> 00:03:53,040
and acceleration and, thereby, expand our
knowledge of the universe.

46
00:03:53,040 --> 00:03:57,799
The Marshall Space Flight Center is collaborating
with four other NASA facilities to plan a

47
00:03:57,799 --> 00:04:01,129
large-scale fire in space.

48
00:04:01,129 --> 00:04:06,019
Setting the fire on a future test flight should
help mission planners determine how astronauts

49
00:04:06,019 --> 00:04:09,319
can best fight flames while traveling in deep
space.

50
00:04:09,319 --> 00:04:15,549
Right now, the role of Marshall engineers
in the NASA Advanced Exploration Systems project

51
00:04:15,549 --> 00:04:21,260
is to pick which material will provide the
most useful data when set on fire.

52
00:04:21,260 --> 00:04:26,540

By placing samples in a test chamber mimicking spacecraft conditions, they've narrowed

53
00:04:26,540 --> 00:04:29,980
their choices from hundreds to just seven.

54
00:04:29,980 --> 00:04:36,530
Glenn, Johnson, JPL and the White Sands Test Facility are also participating in the three-year,

55
00:04:36,530 --> 00:04:39,480
ground-based design project.

56
00:04:39,480 --> 00:04:45,670
NASA's Associate Administrator for Education and former astronaut Leland Melvin shared

57
00:04:45,670 --> 00:04:50,530
his enthusiasm for the agency's scientific goals and accomplishments before hundreds

58
00:04:50,530 --> 00:04:55,120
of students and teachers following opening of the new space shuttle Endeavour exhibit

59
00:04:55,120 --> 00:04:58,250
at the California Science Center in Los Angeles.

60
00:04:58,250 --> 00:05:04,280
Melvin challenged his listeners to live their dreams, to pursue studies in science, technology,

61
00:05:04,280 --> 00:05:08,710
engineering and mathematics, and to never give up when faced with adversity.

62
00:05:08,710 --> 00:05:14,660
Melvin later encouraged more than 800 teachers to avail themselves of the many NASA education

63
00:05:14,660 --> 00:05:20,630
programs and curricula to help prepare, inspire
and nurture the young minds of today to pursue

64
00:05:20,630 --> 00:05:25,190
excellence in the STEM disciplines, so they
can be the engineers, scientists and technical

65
00:05:25,190 --> 00:05:27,260
leaders of tomorrow.

66
00:05:27,260 --> 00:05:31,140
He noted that teachers not only impact the
lives of the children in their classrooms,

67
00:05:31,140 --> 00:05:32,840
but the entire community:

68
00:05:32,840 --> 00:05:39,370
"How can you inspire the next generation of
explorers unless you are inspired yourself?

69
00:05:39,370 --> 00:05:45,220
To figure out what you need to do to get your
batteries recharged, so that when you go in

70
00:05:45,220 --> 00:05:52,390
the classroom, you can do it with pep in your
step, and it's assured that next generation

71
00:05:52,390 --> 00:06:01,850
of explorers will find their way to another
planet one day."

72
00:06:01,850 --> 00:06:06,980
Thanks to the enterprising efforts of a Bay
Area high-school student, she and 50 of her

73
00:06:06,980 --> 00:06:12,450

fellow students at their all girls school
heard from experts about STEM-field careers

74
00:06:12,450 --> 00:06:15,140
women can pursue at NASA.

75
00:06:15,140 --> 00:06:20,180
Deepika Bodapati, a high school senior at
Presentation High School in San Jose, had

76
00:06:20,180 --> 00:06:24,670
written the White House about the disparity
of opportunities for girls interested in pursuing

77
00:06:24,670 --> 00:06:28,780
careers in science, technology, engineering
and math.

78
00:06:28,780 --> 00:06:34,900
After her note made its way to the Ames Research
Center, seven scientists, administrators and

79
00:06:34,900 --> 00:06:39,050
managers, all of them women, volunteered to
meet with students at the all-girls school

80
00:06:39,050 --> 00:06:43,920
and share stories about their careers, education
and keys to success.

81
00:06:43,920 --> 00:06:48,160
“It’s just important for girls to understand
that they’re a key part of the future of

82
00:06:48,160 --> 00:06:52,110
what NASA’s going to be doing, both for
the agency as well as for the nation.

83
00:06:52,110 --> 00:06:55,910
Girls definitely need to be comfortable in

understanding they have a place there."

84
00:06:55,910 --> 00:06:59,180
"The array of speakers that they had was
very appropriate.

85
00:06:59,180 --> 00:07:05,500
They kind of had someone in each field and
with different personality types -- that everyone

86
00:07:05,500 --> 00:07:11,070
could relate to at least one person."

87
00:07:11,070 --> 00:07:16,340
NASA Headquarters' 30th Annual Honor Awards
recognized employees who've made significant

88
00:07:16,340 --> 00:07:18,750
contributions to their workplace community.

89
00:07:18,750 --> 00:07:25,110
More than 25 employee teams and individuals
were so honored for their exemplary efforts

90
00:07:25,110 --> 00:07:26,200
over the past year.

91
00:07:26,200 --> 00:07:31,450
"They are the heart and soul of NASA.Tthey
help us do all of the hard things that our

92
00:07:31,450 --> 00:07:35,990
agency is called on to do with enthusiasm
and professionalism.

93
00:07:35,990 --> 00:07:42,180
I congratulate everyone who's being recognized
today."

94

00:07:42,180 --> 00:07:47,900
While October was Disability Awareness Month,
it’s not too late to recognize the contributions

95
00:07:47,900 --> 00:07:52,740
of NASA employees like Kelly Gilkey at the
Glenn Research Center.

96
00:07:52,740 --> 00:07:57,550
Gilkey’s profound hearing loss doesn’t
get in her way of studying and countering

97
00:07:57,550 --> 00:08:00,800
the effects of long-duration spaceflight on
the human body.

98
00:08:00,800 --> 00:08:06,860
“I have a sensorineural profound hearing
loss, and I got my first hearing aids when

99
00:08:06,860 --> 00:08:08,980
I was 18 months old.

100
00:08:08,980 --> 00:08:13,550
I also recently just got a cochlear implant
in my left ear.

101
00:08:13,550 --> 00:08:17,090
So all of those have really enabled me to
do my job well.

102
00:08:17,090 --> 00:08:25,330
I feel really blessed to be living in an age
when technology is so readily available for

103
00:08:25,330 --> 00:08:27,510
people with hearing loss.”

104
00:08:27,510 --> 00:08:39,950
My name is William Dean Badboy I am facility

engineer technician number III here at the

105
00:08:39,950 --> 00:08:40,950
Jet Propulsion Laboratory.

106
00:08:40,950 --> 00:08:44,080
What I do is I maintain the Mircrodevices
Laboratory.

107
00:08:44,080 --> 00:08:51,360
I work on the life safety systems, the water
plant, all the air handling units, new installations,

108
00:08:51,360 --> 00:08:53,440
decommissioning of tools.

109
00:08:53,440 --> 00:08:59,050
I'm Ojibway from the White Earth Reservation
in Northern Minnesota, reservation where my

110
00:08:59,050 --> 00:09:00,580
daughter is from.

111
00:09:00,580 --> 00:09:05,390
I want her to have the best education she
can possibly get.

112
00:09:05,390 --> 00:09:07,340
I want a lot of culture in that as well.

113
00:09:07,340 --> 00:09:13,220
I went to college to be an electrician and
they offered me a 10 week internship.

114
00:09:13,220 --> 00:09:19,070
The work they had me doing I really enjoyed,
they then offered me a job.

115
00:09:19,070 --> 00:09:24,850

They take my ideas and let me run with them
to help out anywhere possible.

116
00:09:24,850 --> 00:09:28,290
I really enjoy my job.

117
00:09:28,290 --> 00:09:33,940
Seventy-six years ago, a group of Caltech
students and experimenters huddled behind

118
00:09:33,940 --> 00:09:41,120
sandbags in nearby Arroyo Seco in the L.A.
Basin canyon as a rudimentary rocket engine

119
00:09:41,120 --> 00:09:43,380
burned for about three seconds.

120
00:09:43,380 --> 00:09:50,320
With that modest beginning, the Jet Propulsion
Laboratory was born; today, JPL is sending

121
00:09:50,320 --> 00:09:55,750
spacecraft across the solar system and pushing
the boundaries of science.

122
00:09:55,750 --> 00:10:01,940
To mark the anniversary, JPL hosted a day-long
celebration that included special presentations

123
00:10:01,940 --> 00:10:08,150
and documentary screenings, live music and
the obligatory birthday party offerings of

124
00:10:08,150 --> 00:10:12,200
ice cream and cake!

125
00:10:12,200 --> 00:10:17,690
Nearly 400 people were on hand for the opening
night of the Silicon Valley Jewish Festival

126
00:10:17,690 --> 00:10:20,070
in Palo Alto, California.

127
00:10:20,070 --> 00:10:25,420
The program featured a showing of filmmaker
Dan Cohen's documentary, "An Article of

128
00:10:25,420 --> 00:10:26,420
Hope."

129
00:10:26,420 --> 00:10:31,520
In the film, a tiny Torah recovered from a
World War II concentration camp and brought

130
00:10:31,520 --> 00:10:38,450
on the ill-fated STS-107 mission by Israeli
astronaut Ilan Ramon serves as a symbol of

131
00:10:38,450 --> 00:10:41,960
loss, survival and enduring hope.

132
00:10:41,960 --> 00:10:45,700
After the screening, the Ames Research Center's
Chief Scientist, Jacob Cohen, presented plaques

133
00:10:45,700 --> 00:10:54,450
to the families of Ramon, Mission Specialist
Kalpana Chawla, and Pilot Willie McCool, three

134
00:10:54,450 --> 00:11:05,540
of the seven crew members lost with space
shuttle Columbia in February 2003.

135
00:11:05,540 --> 00:11:14,990
Thirty years ago, on November 11, 1982, Columbia
was launched on her fifth flight – and the

136
00:11:14,990 --> 00:11:17,470
first operational shuttle mission.

137
00:11:17,470 --> 00:11:23,800
Her crew of Commander Vance Brand, Pilot Bob Overmyer, and Mission Specialists Joe Allen

138
00:11:23,800 --> 00:11:28,360
and Bill Lenoir deployed
two commercial communications satellites before

139
00:11:28,360 --> 00:11:36,880
returning safely to Earth five days later.

140
00:11:36,880 --> 00:11:43,960
Forty-five years ago, on November 9, 1967,
the first test flight of the Saturn V rocket

141
00:11:43,960 --> 00:11:46,810
was made, with Apollo 4.

142
00:11:46,810 --> 00:11:50,550
The “all-up” test was the first of the
rocket’s three stages.

143
00:11:50,550 --> 00:11:55,960
The nine-hour flight also featured the first
reentry into Earth’s atmosphere by the Apollo

144
00:11:55,960 --> 00:12:01,550
spacecraft at the same speed and angle as
a return from the moon.

145
00:12:01,550 --> 00:12:07,550
The workhorse of the Apollo program, Saturn V remains the tallest, heaviest, and most

146
00:12:07,550 --> 00:12:13,670
powerful rocket ever launched – and the
only vehicle to transport human beings beyond

147

00:12:13,670 --> 00:12:18,630
low Earth.

148
00:12:18,630 --> 00:12:23,040
NASA Administrator Charlie Bolden and Kennedy Space Center Director Bob Cabana joined present

149
00:12:23,040 --> 00:12:28,290
and past astronauts to celebrate the 40th anniversary of Apollo 17 at a special event

150
00:12:28,290 --> 00:12:31,230
in Cape Canaveral, Florida.

151
00:12:31,230 --> 00:12:36,800
Apollo 17 commander Gene Cernan was joined on stage by Buzz Aldrin, Dave Scott and seven

152
00:12:36,800 --> 00:12:41,430
other Apollo-era astronauts to reminisce about the pride and excitement of setting foot on

153
00:12:41,430 --> 00:12:43,550
the lunar surface.

154
00:12:43,550 --> 00:12:49,330
Launched on December 7, 1972, the twelve-day Apollo 17 mission was NASA’s final Apollo

155
00:12:49,330 --> 00:12:55,230
journey to the moon; Cernan was the 12th and last man to set foot on the lunar surface.

156
00:12:55,230 --> 00:12:59,600
The evening concluded with a silent auction benefiting the Astronaut Scholarship Foundation

157
00:12:59,600 --> 00:13:03,310
created by the Mercury 7 astronauts.

158
00:13:03,310 --> 00:13:05,630
And that’s This Week @NASA.

159
00:13:05,630 --> 00:13:10,420
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