



1
00:00:00,979 --> 00:00:05,040

“Here’s some of the stories trending This
Week at NASA!”

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00:00:05,040 --> 00:00:09,679

NASA Administrator Charlie Bolden joined other
leaders of the world’s space agencies to

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00:00:09,679 --> 00:00:15,240

discuss the latest technological breakthroughs
and developments in space exploration at the

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00:00:15,240 --> 00:00:22,130

67th International Astronautical Congress,
Sept. 26-30th in Guadalajara, Mexico.

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00:00:22,130 --> 00:00:27,599

At the event, NASA discussed new elements
to its multi-phase Journey to Mars to extend

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00:00:27,599 --> 00:00:30,699

the human footprint all the way to the Red
Planet.

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00:00:30,699 --> 00:00:36,050

NASA will continue operations aboard the International
Space Station through 2024.

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00:00:36,050 --> 00:00:40,480

Work currently underway aboard the station
to encourage commercial development of low-Earth

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00:00:40,480 --> 00:00:46,180

orbit, develop deep space systems, life support
and human health is part of the Earth Reliant

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00:00:46,180 --> 00:00:47,579

phase of the Journey to Mars.

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00:00:47,579 --> 00:00:53,410

In the 2020s, during the Proving Ground phase when NASA steps out farther, the agency now

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00:00:53,410 --> 00:00:58,280

plans to send an astronaut crew on a yearlong mission to a deep space destination near the

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00:00:58,280 --> 00:00:59,280

moon.

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00:00:59,280 --> 00:01:04,360

They will conduct activities to verify habitation and test our readiness for Mars.

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00:01:04,360 --> 00:01:10,500

A round-trip robotic Mars sample return mission is being targeted for the 2020s, as part of

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00:01:10,500 --> 00:01:15,750

the Earth Independent phase before finally sending humans on a mission to orbit Mars

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00:01:15,750 --> 00:01:16,750

in the early 2030s.

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00:01:16,750 --> 00:01:25,140

On Sept. 27, NASA Administrator Bolden named Thomas Zurbuchen as the agency's new associate

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00:01:25,140 --> 00:01:28,030

administrator for the Science Mission Directorate.

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00:01:28,030 --> 00:01:32,530

Zurbuchen is a professor of space science and aerospace engineering at the University

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00:01:32,530 --> 00:01:34,820

of Michigan in Ann Arbor.

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00:01:34,820 --> 00:01:40,350
His experience includes research in solar and heliospheric physics, experimental space

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00:01:40,350 --> 00:01:44,120
research, space systems, and innovation and entrepreneurship.

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00:01:44,120 --> 00:01:49,020
Zurbuchen's new role at NASA officially begins on Oct. 3.

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00:01:49,020 --> 00:01:54,500
Astronomer's using NASA's Hubble Space Telescope have imaged what may be high-altitude

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00:01:54,500 --> 00:01:59,260
water vapor plumes erupting off the surface of Jupiter's moon Europa.

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00:01:59,260 --> 00:02:04,990
The plumes are estimated to rise about 125 miles before presumably raining material back

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00:02:04,990 --> 00:02:07,110
down onto the surface.

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00:02:07,110 --> 00:02:11,870
This finding bolsters other Hubble observations suggesting the existence of the water vapor

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00:02:11,870 --> 00:02:13,080
plumes.

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00:02:13,080 --> 00:02:17,980
It also might provide opportunities to gather samples originating from the moon's sub-surface

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00:02:17,980 --> 00:02:23,760

ocean without having to land a spacecraft or drill through Europa's icy surface.

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00:02:23,760 --> 00:02:28,739
Following its launch in 2018, NASA may also use the infrared vision of the James Webb

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00:02:28,739 --> 00:02:33,650
Space Telescope to confirm venting or plume activity on Europa.

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00:02:33,650 --> 00:02:38,220
The agency also is formulating a mission to Europa with a payload that could confirm the

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00:02:38,220 --> 00:02:44,760
presence of the plumes and study them from close range during multiple flybys.

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00:02:44,760 --> 00:02:49,969
On Sept. 30, the European Space Agency's Rosetta mission concluded with a planned,

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00:02:49,969 --> 00:02:56,620
controlled decent of the spacecraft from its orbit around comet 67P/Churyumov-Gerasimenko,

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00:02:56,620 --> 00:02:58,440
onto the comet's surface.

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00:02:58,440 --> 00:03:04,129
The mission, which launched in 2004 and included several NASA science instruments, is the first

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00:03:04,129 --> 00:03:09,010
in history to rendezvous with a comet and escort it as it orbits the sun.

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00:03:09,010 --> 00:03:15,240
In Nov. 2014, Philae, a small lander deployed

from the Rosetta spacecraft, obtained the

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00:03:15,240 --> 00:03:20,840

first images taken from a comet's surface
and sent back valuable scientific data to

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00:03:20,840 --> 00:03:22,090

Earth.

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00:03:22,090 --> 00:03:27,799

NASA's Armstrong Flight Research Center,
in Edwards, California, is celebrating 70

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00:03:27,799 --> 00:03:31,739

years of atmospheric flight research operations
for the agency.

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00:03:31,739 --> 00:03:38,379

Armstrong, which began its storied history
in September 1946, initially focused on experimental

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00:03:38,379 --> 00:03:39,879

aircraft called X-planes.

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00:03:39,879 --> 00:03:45,421

In the decades that have followed, the center's
mission expanded to include roles in the Space

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00:03:45,421 --> 00:03:51,430

Shuttle Program, aviation safety, and airborne
science and technology advancement.

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00:03:51,430 --> 00:03:56,700

Armstrong is returning to the age of X-planes
with NASA's first electric propulsion aircraft,

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00:03:56,700 --> 00:03:57,700

named the X-57.

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00:03:57,700 --> 00:04:06,319

The aircraft could lead to advances in fuel efficiency and reductions in noise and emissions.

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00:04:06,319 --> 00:04:08,389

And that's what's up this week @NASA ...

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