



ISAAC

Integrated Structural Assembly
of Advanced Composites

NASA Langley Research Center
Hampton, Virginia



1
00:00:01,100 --> 00:00:05,260

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

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00:00:05,260 --> 00:00:10,290

During a Jan. 26 media briefing at the Johnson
Space Center, Administrator Charlie Bolden,

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00:00:10,290 --> 00:00:15,740

other NASA officials and representatives from
Boeing and SpaceX discussed key development

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00:00:15,740 --> 00:00:21,289

activities, test plans and objectives for
developing safe, reliable and cost-effective

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00:00:21,289 --> 00:00:26,150

spacecraft and systems that will launch astronauts
to the International Space Station from the

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00:00:26,150 --> 00:00:27,890

United States.

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00:00:27,890 --> 00:00:31,960

Under Commercial Crew Transportation Capability
(CCtCap) contracts for NASA’s Launch America

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00:00:31,960 --> 00:00:37,749

initiative, the companies will conduct spacecraft
systems testing followed by increasingly complex

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00:00:37,749 --> 00:00:42,949

flight tests – before ultimately flying
astronauts on orbital flights and eventually

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00:00:42,949 --> 00:00:47,469

on operational missions to the station in
the next few years.

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00:00:47,469 --> 00:00:53,559

NASA's Soil Moisture Active Passive spacecraft is the first U.S. Earth-observing satellite

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00:00:53,559 --> 00:00:58,190

designed to collect global observations of surface soil moisture.

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00:00:58,190 --> 00:01:03,350

Its high resolution space-based measurements will give scientists a new capability to better

14

00:01:03,350 --> 00:01:08,869

predict natural hazards of extreme weather, climate change, floods and droughts and improve

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00:01:08,869 --> 00:01:13,290

our understanding of Earth's water, energy and carbon cycles.

16

00:01:13,290 --> 00:01:19,860

Launch from California's Vandenberg Air Force Base is no earlier than Jan. 31.

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00:01:19,860 --> 00:01:25,270

A new seven-ton, two-story tall composite materials robot, named ISAAC, was unveiled

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00:01:25,270 --> 00:01:29,590

Jan. 26 during a ceremony at Langley Research Center.

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00:01:29,590 --> 00:01:35,479

ISAAC, which stands for Integrated Structural Assembly of Advanced Composites uses epoxy

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00:01:35,479 --> 00:01:41,310

and carbon fibers to transform 3-D computer drawings into strong, but lighter weight parts

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00:01:41,310 --> 00:01:45,950
for aircraft and spacecraft – which will
allow planes, rockets and other vehicles to

22
00:01:45,950 --> 00:01:50,350
use less fuel and carry more weight.

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00:01:50,350 --> 00:01:55,289
These animated radar images captured with
NASA's Deep Space Network antenna at Goldstone,

24
00:01:55,289 --> 00:02:02,909
California, show asteroid 2004 BL86 during
its close flyby of Earth on Jan. 26.

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00:02:02,909 --> 00:02:07,689
The images also show the asteroid, which is
about 1,100 feet across, has a small moon

26
00:02:07,689 --> 00:02:10,360
that is about 230 feet across.

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00:02:10,360 --> 00:02:16,860
The flyby – about 745,000 miles from us,
is the closest a known asteroid this size

28
00:02:16,860 --> 00:02:20,890
will come to Earth until 2027.

29
00:02:20,890 --> 00:02:26,030
The images captured of Ceres by NASA's Dawn
spacecraft get better and better as the probe

30
00:02:26,030 --> 00:02:28,640
continues to close in on the dwarf planet.

31
00:02:28,640 --> 00:02:34,050
This animation, made with images taken on
Jan. 25, represents the highest-resolution

32

00:02:34,050 --> 00:02:36,430

views to date of Ceres.

33

00:02:36,430 --> 00:02:40,800

The images were taken at a distance of about 147,000 miles.

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00:02:40,800 --> 00:02:45,540

Dawn is scheduled to become the first probe to visit a dwarf planet when it enters into

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00:02:45,540 --> 00:02:49,750

orbit around Ceres on March 6.

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00:02:49,750 --> 00:02:54,700

Administrator Bolden and other senior NASA officials held a wreath laying ceremony at

37

00:02:54,700 --> 00:03:01,680

Arlington National Cemetery on Jan. 28 – to mark NASA's annual Day of Remembrance.

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00:03:01,680 --> 00:03:08,040

This was one of several such observances around the agency to honor the Apollo 1, Challenger

39

00:03:08,040 --> 00:03:14,450

and Columbia crews, as well as other members of the NASA family who lost their lives supporting

40

00:03:14,450 --> 00:03:19,430

NASA's mission of exploration and discovery.

41

00:03:19,430 --> 00:03:21,540

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