



1  
00:00:07,020 --> 00:00:11,090  
This Week at NASA...

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00:00:11,090 --> 00:00:17,860  
Each year, NASA honors the Apollo 1, Challenger  
and Columbia crews, as well as other members

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00:00:17,860 --> 00:00:23,370  
of the our family whose lives were lost in  
the support of the agency's mission of exploration

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00:00:23,370 --> 00:00:24,630  
and discovery.

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00:00:24,630 --> 00:00:31,030  
This year's Day of Remembrance, Feb. 1, the  
10th anniversary of the loss of Columbia,

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00:00:31,030 --> 00:00:33,800  
saw tributes held around the agency.

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00:00:33,800 --> 00:00:34,800  
Among them...

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00:00:34,800 --> 00:00:40,660  
A wreath-laying at Arlington National Cemetery's  
astronaut memorial by NASA Administrator Charles

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00:00:40,660 --> 00:00:43,100  
Bolden and other senior officials.

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00:00:43,100 --> 00:00:48,830  
A memorial at the Marshall Space Flight Center's  
Morris Auditorium with guest speaker, astronaut

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00:00:48,830 --> 00:00:51,950  
and former Marshall engineer, Jan Davis.

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00:00:51,950 --> 00:00:56,920

The event included a moment of silence and a candle lighting ceremony.

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00:00:56,920 --> 00:01:02,440

And a wreath-laying ceremony hosted by the Astronauts Memorial Foundation televised live

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00:01:02,440 --> 00:01:07,899

on NASA television from the Space Mirror Memorial at the Kennedy Space Center Visitor Complex.

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00:01:07,899 --> 00:01:14,770

“For many of us gathered here in Florida today, this commemoration is not only historic,

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00:01:14,770 --> 00:01:17,659

it’s also very personal.

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00:01:17,659 --> 00:01:24,700

We remember the Columbia crew as colleagues, as friends, as parents and as spouses.”

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00:01:24,700 --> 00:01:31,899

“Often times when lacking sufficient data we make poor decisions and that results in

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00:01:31,899 --> 00:01:35,289

events like Apollo 1, Challenger and Columbia.

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00:01:35,289 --> 00:01:40,719

It’s important that we pause to remember and reflect.

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00:01:40,719 --> 00:01:46,439

We must do our very best to prevent something like that from ever happening again.”

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00:01:46,439 --> 00:01:51,509

A special memorial tribute was featured on

nasa.gov.

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00:01:51,509 --> 00:01:57,470

NASA thanks these Fallen Heroes and the families they left behind for their sacrifices in the

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00:01:57,470 --> 00:02:04,479

service of our nation and America's space program.

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00:02:04,479 --> 00:02:06,340

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Media touring the Kennedy Space Center's

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00:02:06,340 --> 00:02:12,470

"Swamp Works" research laboratories also got a photo op with the Orion spacecraft inside

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00:02:12,470 --> 00:02:17,230

KSC's Operations and Checkout building where it's being prepped for Exploration Flight

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00:02:17,230 --> 00:02:20,330

Test-1 scheduled for 2014.

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00:02:20,330 --> 00:02:22,970

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Kennedy Director Bob Cabana updated attendees

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00:02:22,970 --> 00:02:28,190

on the center's continuing transformation to a multiuse government and commercial space

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00:02:28,190 --> 00:02:29,220

launch complex.

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00:02:29,220 --> 00:02:31,910

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"We have a plan and we are executing that

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00:02:31,910 --> 00:02:34,040  
plan and we have made tremendous progress.

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00:02:34,040 --> 00:02:37,170  
We have a very positive path forward.”

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00:02:37,170 --> 00:02:40,140  
\h  
Orion, designed to take U.S. astronauts farther

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00:02:40,140 --> 00:02:46,110  
into space than ever before, will be propelled  
by NASA's new heavy-lift Space Launch System.

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00:02:46,110 --> 00:02:52,440  
The SLS is designed to be flexible for launching  
crew and cargo spacecraft from KSC and will

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00:02:52,440 --> 00:03:00,980  
enable new human missions of exploration beyond  
low-Earth orbit and across the solar system.

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00:03:00,980 --> 00:03:06,790  
The successful launch of NASA's new TDRS-K  
communications satellite on Jan. 30 was also

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00:03:06,790 --> 00:03:11,950  
occasion for the Kennedy Space Center to host  
a two-day get-together for ardent users of

41  
00:03:11,950 --> 00:03:13,470  
social media.

42  
00:03:13,470 --> 00:03:18,620  
The select group of Tweeps and other tech-savvy  
space aficionados heard from special guest

43  
00:03:18,620 --> 00:03:23,150  
speakers about NASA's continuing mission

of exploration and discovery.

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00:03:23,150 --> 00:03:29,130

Among them, Badri Younes, the head of NASA's Space Communication and Navigation, or SCan

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00:03:29,130 --> 00:03:34,840

program, who outlined the role and advanced capabilities of the next-generation comm satellite.

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00:03:34,840 --> 00:03:38,560

"We support all of the launches that take place here in the United States.

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00:03:38,560 --> 00:03:42,841

We are preparing the stage for the future as I said, to make sure that the future of

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00:03:42,841 --> 00:03:49,290

human exploration will be carried forward as contemplated, as planned."

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00:03:49,290 --> 00:03:53,750

The International Space Station will be getting a new instrument in 2014 that'll measure

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00:03:53,750 --> 00:03:56,780

ocean-surface wind speed and direction.

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00:03:56,780 --> 00:04:03,100

The ISS-RapidScat instrument will help improve weather forecasts, including hurricane monitoring,

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00:04:03,100 --> 00:04:08,400

and understanding of how ocean-atmosphere interactions influence Earth's climate.

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00:04:08,400 --> 00:04:14,150

Rapid-Scat is a clever re-purposing of hardware originally built to test parts of NASA's QuikScat

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00:04:14,150 --> 00:04:23,580  
satellite that, until 2009, spent ten years  
successfully collecting ocean and wind data.

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00:04:23,580 --> 00:04:29,449  
NASA wants your ideas on how the International  
Space Station can be better used to test new

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00:04:29,449 --> 00:04:30,449  
technologies!

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00:04:30,449 --> 00:04:35,629  
The agency's National Lab and Technology  
Demonstration offices are taking proposals

58  
00:04:35,629 --> 00:04:41,539  
to develop advanced or improved exploration  
technologies aboard the world's only laboratory

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00:04:41,539 --> 00:04:42,620  
in microgravity!

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00:04:42,620 --> 00:04:48,039  
They'll also welcome your suggestions for  
improving the unique laboratory environment

61  
00:04:48,039 --> 00:04:49,949  
of the orbiting outpost.

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00:04:49,949 --> 00:05:05,479  
For details, go to <http://go.nasa.gov/Uqkccz>  
. You've got 'til Sept. 30 to "weigh

63  
00:05:05,479 --> 00:05:07,569  
in."

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00:05:07,569 --> 00:05:12,919  
NASA chief technologist Mason Peck was briefed

at the Dryden Flight Research Center on projects

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00:05:12,919 --> 00:05:17,949

to develop technologies for next-generation aircraft and spacecraft.

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00:05:17,949 --> 00:05:23,680

Peck says the transfer of such technologies will help fuel industry's future in space.

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00:05:23,680 --> 00:05:27,870

"I think we're actually seeing for the first time the level of private investment in commercial

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00:05:27,870 --> 00:05:31,830

space that we really haven't seen before, and that actually could indicate the start

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00:05:31,830 --> 00:05:33,460

of a commercial space age.

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00:05:33,460 --> 00:05:35,069

But NASA is right at the center of that."

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00:05:35,069 --> 00:05:42,400

Peck also visited several NASA partners at the Mojave Air and Space Port, including Firestar

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00:05:42,400 --> 00:05:46,919

Technologies, XCOR Aerospace and Masten Flight Systems.

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00:05:46,919 --> 00:05:53,629

NASA's Flight Opportunities Program has contracted with Masten and XCOR to fly promising technologies

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00:05:53,629 --> 00:05:59,909

on sub-orbital space-access vehicles, while Firestar has developed several technical innovations

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00:05:59,909 --> 00:06:05,699  
to benefit NASA via the agency's Small Business  
Innovative Research and Technology Transfer

76  
00:06:05,699 --> 00:06:09,279  
programs.

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00:06:09,279 --> 00:06:15,520  
The first Nanosatellite Launch Adapter System,  
or NLAS has been shipped for integration for

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00:06:15,520 --> 00:06:18,740  
a launch expected in late 2013.

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00:06:18,740 --> 00:06:23,919  
Right now, nanosatellites can be deployed  
only in small numbers by rocket or from the

80  
00:06:23,919 --> 00:06:25,550  
International Space Station.

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00:06:25,550 --> 00:06:32,620  
But NLAS, developed by the Ames Research Center,  
can hold up to 24 cube satellites, opening

82  
00:06:32,620 --> 00:06:37,009  
up opportunities for smaller research projects  
to access space.

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00:06:37,009 --> 00:06:46,219  
NLAS is expected to be used by NASA, other  
government agencies, and commercial entities.

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00:06:46,219 --> 00:06:50,830  
Representatives from the Glenn Research Center  
joined media and the Cleveland Regional Transit

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00:06:50,830 --> 00:06:56,729  
Authority in braving single-digit temperatures

to show off the system's new hydrogen-powered

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00:06:56,729 --> 00:07:03,710

bus – and Ohio's first operational electrolysis-based refueling station.

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00:07:03,710 --> 00:07:08,550

Refueling at the bus's depot station eliminates the vehicle's need to lug large hydrogen-filled

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00:07:08,550 --> 00:07:10,069

supply tanks.

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00:07:10,069 --> 00:07:14,719

Glenn coordinated the technical effort that included contracting with the Sierra Lobo

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00:07:14,719 --> 00:07:17,650

Corporation to install the refueling station.

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00:07:17,650 --> 00:07:25,749

The project is sponsored by NASA's Space Technology Game-Changing Development Program.

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00:07:25,749 --> 00:07:31,449

Marshall Space Flight Center and nearby Redstone Arsenal have both been awarded the designation

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00:07:31,449 --> 00:07:35,229

of Storm-Ready Community by the National Weather Service.

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00:07:35,229 --> 00:07:39,930

The designation recognizes the work of both facilities to document their notification

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00:07:39,930 --> 00:07:43,749

systems and severe weather preparedness.

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00:07:43,749 --> 00:07:47,930

Weather service officials were at the arsenal to present Marshall and Redstone with their

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00:07:47,930 --> 00:07:51,219

Storm-Ready Community signs for their Welcome Centers.

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00:07:51,219 --> 00:07:54,129

“The purpose of Storm Ready is just what it says.

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00:07:54,129 --> 00:08:01,149

It’s weather preparedness, safety and awareness and making sure that the communities are very

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00:08:01,149 --> 00:08:04,819

much prepared for significant weather events that impact the area.”

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00:08:04,819 --> 00:08:09,580

“This is a great way to recognize all the hard work that has gone into this – to our

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00:08:09,580 --> 00:08:13,689

facility to be able to make sure that we have the best possible protection available for

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00:08:13,689 --> 00:08:14,689

our employees.”

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00:08:14,689 --> 00:08:38,510

Marshall is only the second federal location in Alabama to receive this Storm-Ready designation.

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00:08:38,510 --> 00:08:39,580

My name is Sorita Wherry.

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00:08:39,580 --> 00:08:44,020

I’m the lead systems engineer for the robotic

lunar lander development project.

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00:08:44,020 --> 00:08:48,490

I'm supporting the Warm Gas test article now known as the Mighty Eagle.

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00:08:48,490 --> 00:08:55,220

My duties as a lead systems engineer includes making sure that I understand the system and

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00:08:55,220 --> 00:09:04,130

functions of the Mighty Eagle as well as the most important thing is making sure that the

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00:09:04,130 --> 00:09:07,930

vehicle is safe at all times.

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00:09:07,930 --> 00:09:15,800

Diversity is important at NASA because it gives us a variety of backgrounds and cultures

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00:09:15,800 --> 00:09:22,740

so that we can see the experiences, the values, the ideas and opinions of other people who

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00:09:22,740 --> 00:09:25,630

may be different within the organization.

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00:09:25,630 --> 00:09:27,840

I look at my career.

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00:09:27,840 --> 00:09:32,680

And I look at all the things that I've accomplished, the different projects that I've worked

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00:09:32,680 --> 00:09:41,020

on, and what better way to culminate my career is being on the project that I'm on now

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00:09:41,020 --> 00:09:45,560

– the Robotic Lunar Lander Development Project  
and supporting the Mighty Eagle.

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00:09:45,560 --> 00:09:49,540

I've worked at NASA for 27 years.

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00:09:49,540 --> 00:09:56,130

It's a project where it feels good when  
you can see things that happen.

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00:09:56,130 --> 00:09:57,960

To see something that flies.

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00:09:57,960 --> 00:10:05,810

To work with a team of people who are very  
smart, very intelligent, and can actually

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00:10:05,810 --> 00:10:08,900

develop something that flies.

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00:10:08,900 --> 00:10:10,200

I love what I do.

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00:10:10,200 --> 00:10:13,930

It's new to me, but it's an awesome experience.

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00:10:13,930 --> 00:10:20,260

And this journey that I've had at Marshall  
Space Flight Center has been a great journey.

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00:10:20,260 --> 00:10:27,850

Thirty-nine years ago, on February 5, 1974,  
a flyby of Venus by Mariner 10 enabled the

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00:10:27,850 --> 00:10:32,830

spacecraft to conduct atmospheric studies  
and collect photographs of the planet's

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00:10:32,830 --> 00:10:35,000

extensive cloud cover.

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00:10:35,000 --> 00:10:40,930

While Venus' clouds are nearly featureless in visible light, Mariner 10's ultraviolet

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00:10:40,930 --> 00:10:45,520

camera filters captured them in never-before-seen detail.

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00:10:45,520 --> 00:10:51,530

"We have main engine start ... zero and liftoff of Stardust."

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00:10:51,530 --> 00:10:59,620

And, on February 7, 1999, the Stardust probe launched atop a Delta II rocket from Florida's

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00:10:59,620 --> 00:11:05,570

Cape Canaveral Air Station for a rendezvous with Comet Wild2.

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00:11:05,570 --> 00:11:10,570

Stardust became the first U.S. mission to a comet and the first-ever spacecraft to bring

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00:11:10,570 --> 00:11:19,670

back a comet sample when it successfully returned to Earth on January 15, 2006.

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00:11:19,670 --> 00:11:26,030

And, employees of the Marshall Space Flight Center commemorated this year's 40th anniversary

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00:11:26,030 --> 00:11:32,660

of Skylab by hosting five astronauts who flew on America's first space station, Joe Kerwin,

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00:11:32,660 --> 00:11:38,920

Paul Weitz, Ed Gibson, Gerald Carr and Jack Lousma shared their stories and highlights

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00:11:38,920 --> 00:11:40,990

from their missions aboard Skylab.

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00:11:40,990 --> 00:11:49,130

From May 1973 to February 1974, three crews occupied Skylab, a Saturn V rocket modified

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00:11:49,130 --> 00:11:50,570

at Marshall.

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00:11:50,570 --> 00:11:56,690

Its nine astronaut residents conducted human-adaptation and materials experiments, as well as scientific

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00:11:56,690 --> 00:12:00,540

studies of the Earth, sun, and stars.

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00:12:00,540 --> 00:12:05,380

The research they performed on Skylab then enabled the ground-breaking science being

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00:12:05,380 --> 00:12:11,700

studied now aboard the International Space Station for the benefit of humankind.

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00:12:11,700 --> 00:12:13,930

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And that's This Week @NASA.