

A 3D visualization of Earth's Van Allen radiation belts. The Earth is shown in the center, surrounded by two primary radiation belts. The inner belt is a smaller, more concentrated region closer to the surface, while the outer belt is a larger, more diffuse region extending further into space. Both belts are depicted with a color gradient from dark blue (low intensity) to bright yellow and red (high intensity), showing their toroidal shape around the planet. The background is a dark space filled with stars.

of the Van Allen radiation belts,
that encircle Earth.

1

00:00:00,210 --> 00:00:04,560

Super Blue Blood Moon ... a rare triple treat
up in the sky ...

2

00:00:04,560 --> 00:00:07,660

Celebrating America's first explorer in
space ...

3

00:00:07,660 --> 00:00:13,360

And, smoke and fire – another Space Launch
System engine test ... a few of the stories

4

00:00:13,360 --> 00:00:16,480

to tell you about – This Week at NASA!

5

00:00:16,480 --> 00:00:21,269

The Moon provided a rare celestial triple
treat during a total lunar eclipse this week

6

00:00:21,269 --> 00:00:25,449

– and we were there to bring you the views
on NASA TV and online.

7

00:00:25,449 --> 00:00:31,139

For starters, as the Moon passed through Earth's
shadow during the eclipse, it took on a reddish

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00:00:31,139 --> 00:00:34,800

tint – a phenomenon, known by some as a
blood moon.

9

00:00:34,800 --> 00:00:39,691

It was also the second full moon of the month
– commonly known as a blue moon, and it

10

00:00:39,691 --> 00:00:47,249

was the third in a series of supermoons, which
made it appear closer and brighter than usual.

11

00:00:47,249 --> 00:00:52,210

NASA and the U.S. Air Force commemorated the launch, 60 years ago of Explorer 1, during

12

00:00:52,210 --> 00:00:55,289

a Florida ceremony at the historic launch site.

13

00:00:55,289 --> 00:01:02,079

“On January 31, 1958, the attention of the American people was focused on Cape Canaveral,

14

00:01:02,079 --> 00:01:06,780

Florida as a giant rocket was catapulted toward outer space.”

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00:01:06,780 --> 00:01:10,531

The orbital satellite was America’s first foray into space exploration.

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00:01:10,531 --> 00:01:16,590

Explorer 1’s primary science instrument led to the discovery of, what we now call

17

00:01:16,590 --> 00:01:23,770

the Van Allen radiation belts that encircle Earth.

18

00:01:23,770 --> 00:01:29,659

On Feb. 1 – another test firing of an RS-25 engine flight controller at our Stennis Space

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00:01:29,659 --> 00:01:32,640

Center in Mississippi.

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00:01:32,640 --> 00:01:38,009

It was the second such test in just over two weeks, and also was the third test of a 3D-printed

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00:01:38,009 --> 00:01:39,860

part for the engine.

22
00:01:39,860 --> 00:01:44,790
Four RS-25s will help our Space Launch System (SLS) rocket launch astronauts aboard our

23
00:01:44,790 --> 00:01:47,830
Orion spacecraft beyond Earth orbit.

24
00:01:47,830 --> 00:01:54,549
Our DC-8 "Flying Laboratory" teamed with a German Aerospace Center aircraft recently,

25
00:01:54,549 --> 00:02:00,030
to study how different fuels affect a jet engine's performance, emissions, and contrail

26
00:02:00,030 --> 00:02:01,210
formation.

27
00:02:01,210 --> 00:02:04,729
The data could help us learn more about alternative fuels.

28
00:02:04,729 --> 00:02:08,860
That's what's up this week @NASA ...