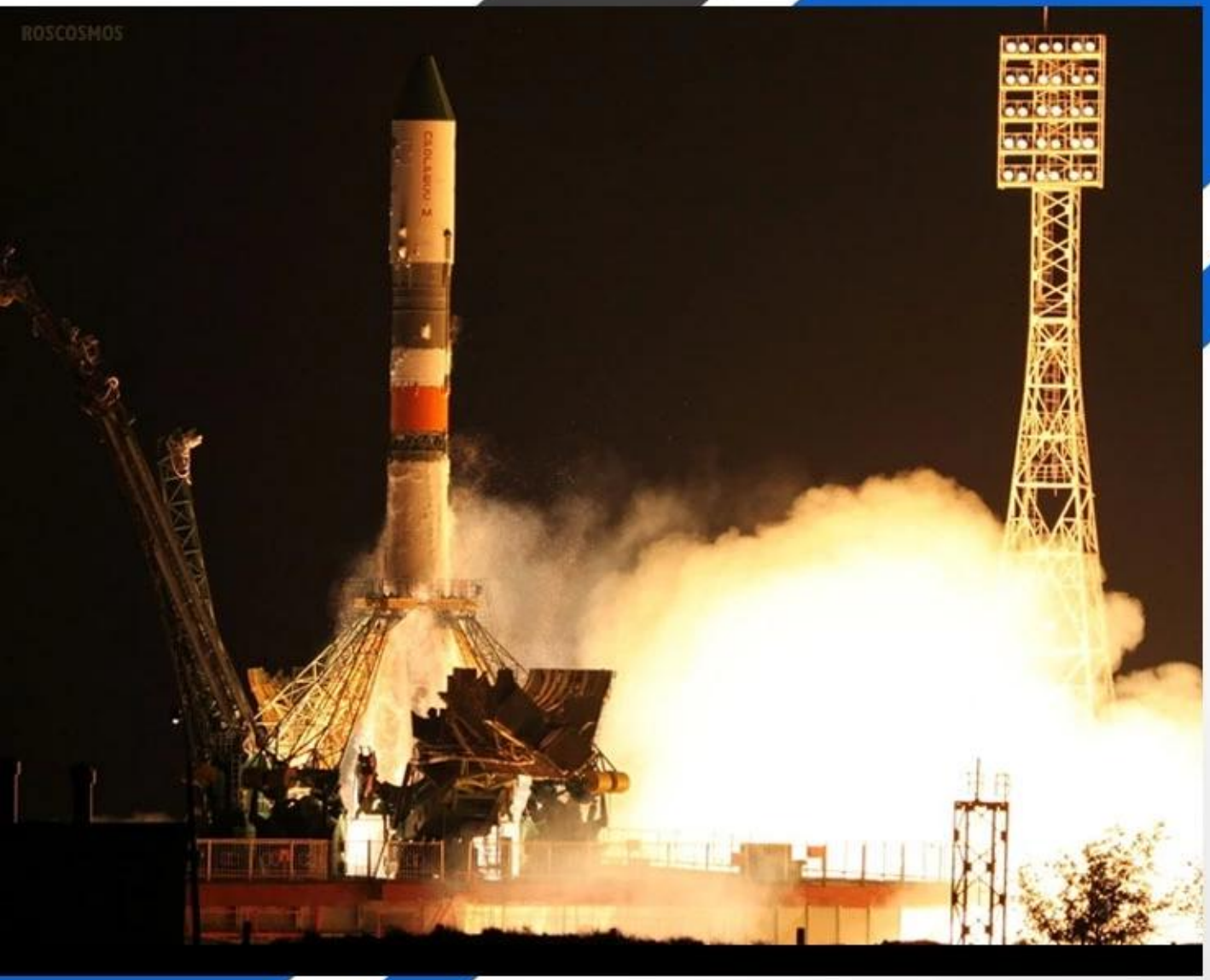

SPACE TO GROUND

1
00:00:00,940 --> 00:00:04,750
Dan:
Welcome to Space To Ground, your weekly look

2
00:00:04,750 --> 00:00:07,370
at what's happening on board the International
Space Station.

3
00:00:07,370 --> 00:00:08,700
I'm Dan Huot.

4
00:00:08,700 --> 00:00:12,839
The crew started off the week by saying farewell
to a Russian cargo vehicle.

5
00:00:12,839 --> 00:00:17,040
Progress 55 undocked Monday evening after
spending more than three months attached to

6
00:00:17,040 --> 00:00:18,260
the station.

7
00:00:18,260 --> 00:00:22,800
Like every Progress, it was loaded up with
trash and disposable items which will be incinerated

8
00:00:22,800 --> 00:00:25,960
when the ship passes back through the Earth's
atmosphere.

9
00:00:25,960 --> 00:00:29,960
And since it's just doesn't feel like the
ISS without a Progress attached, the next

10
00:00:29,960 --> 00:00:32,619
one was ready for launch just two days later.

11
00:00:32,619 --> 00:00:37,390
Lifting off from Baikonur in Kazakhstan, Progress

56 sped its way to the station on Wednesday

12
00:00:37,390 --> 00:00:43,210
night, docking just six hours after launch
and bringing about 5,700 pounds of food, fuel

13
00:00:43,210 --> 00:00:46,149
and supplies to the crew of Expedition 40.

14
00:00:46,149 --> 00:00:49,960
Crew member Alexander Gerst spent some time
preparing the station for guests a little

15
00:00:49,960 --> 00:00:51,719
more accustomed to floating.

16
00:00:51,719 --> 00:00:56,899
He set up the ISS Aquatic Habitat that can
host several different species of fish, which

17
00:00:56,899 --> 00:01:01,149
while in space, behave very similarly to a
human who doesn't exercise.

18
00:01:01,149 --> 00:01:05,400
The small school of zebrafish that will soon
be making a trip up to space will help teach

19
00:01:05,400 --> 00:01:10,710
scientists about the basic mechanisms behind
muscle loss and how that loss can be recovered.

20
00:01:10,710 --> 00:01:16,280
This week's Twitter question comes from Stephen
who asks: "What experiments conducted in microgravity

21
00:01:16,280 --> 00:01:18,450
have led to commercial products on the market?"

22

00:01:18,450 --> 00:01:25,960
Well, one good example comes from a very important
field of medical study in space: bone loss.

23
00:01:25,960 --> 00:01:28,811
Astronauts in microgravity lose bone mass
without proper countermeasures, and similar

24
00:01:28,811 --> 00:01:35,390
bone loss occurs in people on earth with osteoporosis,
a debilitating disease that affects millions.

25
00:01:35,390 --> 00:01:40,500
One investigation back on Expedition 4 provided
researchers with data that was helpful in

26
00:01:40,500 --> 00:01:44,780
finalizing development of a new drug, called
Prolia, that's currently on the market to

27
00:01:44,780 --> 00:01:48,430
help strengthen the bones of women with osteoporosis.

28
00:01:48,430 --> 00:01:55,210
You can read about the hundreds of experiments
that have taken place onboard the ISS at nasa.gov/station