



1  
00:00:01,426 --> 00:00:01,946

Good morning.

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00:00:01,946 --> 00:00:06,116

Today is Monday, January 23 and this is  
the International Space Station Update

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00:00:06,116 --> 00:00:09,646

from Mission Control Center at the  
Johnson Space Center in Houston.

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00:00:10,016 --> 00:00:15,296

The orbit two team is on duty today and is being  
lead by Flight Director Dina Contella along

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00:00:15,296 --> 00:00:20,046

with veteran astronaut Shannon Lucid  
who is serving as the CAPCOM today.

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00:00:23,446 --> 00:00:30,286

Onboard, the Expedition 30 crew includes  
-- and here is a photograph of the crew.

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00:00:30,286 --> 00:00:34,396

From left to right, we have Anton Shkpalerov;

8  
00:00:35,106 --> 00:00:41,716

and in the center front is Commander Dan  
Burbank; behind him Anatoly Ivanishin,

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00:00:42,386 --> 00:00:46,576

Oleg Kononenko, Andre Kuipers and Don Pettit.

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00:00:47,416 --> 00:00:48,926

That is the Expedition 30 crew.

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00:00:48,926 --> 00:00:50,586

It will be a busy week for the crew.

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00:00:50,586 --> 00:00:56,016

It includes the undocking of the Progress 45 today at 4:10 p.m. Central time.

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00:00:56,566 --> 00:01:01,166

In the open hatchway of the Progress is an 88 pound mini-satellite called the Chibis-M

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00:01:01,166 --> 00:01:05,096

and it will be deployed tomorrow to spend several years collecting data

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00:01:05,126 --> 00:01:08,176

on plasma wave activity in the ionosphere.

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00:01:09,066 --> 00:01:13,636

Chibis-M will be deployed at 5:19 p.m. Central time at a point

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00:01:13,636 --> 00:01:16,276

in which the Progress will be 62 miles above

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00:01:16,276 --> 00:01:19,956

and 7300 miles behind the International Space Station.

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00:01:20,176 --> 00:01:24,066

After the satellite is deployed, Russian flight controllers will send commands

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00:01:24,066 --> 00:01:28,636

to deorbit the Progress 45 so that it can burn up in the atmosphere over the Pacific.

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00:01:30,826 --> 00:01:34,896

On Wednesday, Progress 46 will launch and dock to the station on Friday evening.

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00:01:35,756 --> 00:01:41,516

So today at the Baikonur Cosmodrome in Kazakhstan the new Progress 46 cargo craft is

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00:01:41,516 --> 00:01:44,086

in the final preparations for launch.

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00:01:44,656 --> 00:01:48,936

It will launch on Wednesday U.S. time, early Thursday morning on Baikonur time.

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00:01:49,296 --> 00:01:55,726

Progress 46 is loaded with 2,050 pounds of propellant, 110 pounds of oxygen and air

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00:01:56,226 --> 00:02:03,276

and 926 pounds of water and 2,778 pounds of maintenance and experiment equipment

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00:02:03,276 --> 00:02:06,256

for a total of 2.9 tons of cargo.

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00:02:06,646 --> 00:02:12,136

The new Progress is scheduled again for liftoff on Wednesday at 5:06 p.m. Central time

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00:02:12,136 --> 00:02:18,596

and will automatically dock to the Pirs docking compartment on Friday at 6:08 p.m. Central time.

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00:02:19,336 --> 00:02:25,146

Today, the Expedition 30 crew is conducting the fifth SPHERES Zero-G robotics competition.

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00:02:25,146 --> 00:02:30,126

Thousands of students will be involved in that activity today and many of those via webcast.

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00:02:30,346 --> 00:02:34,746

Plus, several hundred are in attendance at MIT and the Erasmus Center in the Netherlands.

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00:02:34,746 --> 00:02:40,446  
SPHERES stands for Synchronize, Position, Hold,  
Engage, Reorient, Experimental Satellites.

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00:02:40,506 --> 00:02:45,466  
And these satellites are three eight-inch  
diameter miniaturized satellites

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00:02:45,466 --> 00:02:49,246  
so they can operate in a number of environments  
including the International Space Station.

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00:02:49,916 --> 00:02:54,446  
The experiment offers an opportunity for  
high school students to design research

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00:02:54,446 --> 00:02:59,546  
for the International Space Station and as part  
of the competition students write algorithms

38  
00:02:59,546 --> 00:03:03,926  
for the SPHERES satellites to accomplish tasks  
that are relevant to future space missions.

39  
00:03:04,756 --> 00:03:11,236  
Each year the game changes and this year the  
MIT group in an effort to encourage cooperation

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00:03:11,236 --> 00:03:15,496  
with the players...between the players...created  
a fictitious scenario where two satellites need

41  
00:03:15,496 --> 00:03:19,186  
to mine for a new source  
of energy at two asteroids.

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00:03:19,256 --> 00:03:23,226  
Of course, all of this is a virtual experiment.

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00:03:23,526 --> 00:03:28,516

Don Pettit and Andre Kuipers...Kuipers will be assisting with that experiment today

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00:03:28,516 --> 00:03:31,966

and they'll be talking with astronaut Greg Chamitoff who is it

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00:03:31,966 --> 00:03:34,216

at MIT helping to facilitate the event.

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00:03:35,076 --> 00:03:39,766

Also today onboard the station, Dan Burank will be performing in-flight maintenance removing

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00:03:39,766 --> 00:03:44,246

and replacing of the Atmosphere Revitalization Major Constituent Analyzer.

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00:03:44,686 --> 00:03:47,126

And in the afternoon he will be sampling fluid

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00:03:47,126 --> 00:03:50,236

from the Japanese Kibo Internal Thermal Control System.

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00:03:50,626 --> 00:03:53,046

That sample will be returned to the ground.

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00:03:54,206 --> 00:03:57,876

During this morning's Mission Management Team meeting, managers were told the station is

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00:03:57,876 --> 00:04:02,196

in good shape in regards to consumables with enough food, water and propellant to operate.

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00:04:02,686 --> 00:04:06,276

And that the Progress 46 would carry

a new handle to station's ARED,

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00:04:06,616 --> 00:04:07,646

which is one of the pieces

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00:04:07,646 --> 00:04:10,546

of equipment...exercise equipment  
onboard the station.

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00:04:11,116 --> 00:04:14,636

The crew is also today...the managers reported

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00:04:14,636 --> 00:04:18,246

that the crew also today was taking...or  
taking pictures of the end effector

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00:04:18,246 --> 00:04:22,416

or the grappling mechanism on the  
station's robotic arm for examination.

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00:04:23,056 --> 00:04:27,386

And flight controllers are also  
monitoring a piece of satellite debris

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00:04:27,386 --> 00:04:30,506

from the Fengyun Chinese satellite.

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00:04:30,606 --> 00:04:35,336

They began monitoring that earlier  
and are beginning preparations

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00:04:35,336 --> 00:04:39,506

in case the Debris Avoidance Maneuver  
is required and if it is required

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00:04:39,506 --> 00:04:41,036

that will occur on Tuesday morning.