station this is Houston are you ready

for the event

jewson this is station we're ready for

the event Bloomberg TV this is Mission

Control in Houston police call station

for a voice check station this is ryan

chilka with Bloomberg TV how do you hear

me Bloomberg TV international space

station we've got you loud and clear

fantastic what an honor and a pleasure

welcome to Ryan's Russia I understand I

have all six of you on board up there

right now Ryan you almost 20 legs busy

flying the space station he's still hard
at work but we've got five of six

someone has to fly the space station but

that's very excusable how does it work

up there I want to ask you there's six

of you it's a big station right to you

do you work in separate areas are some

areas segregated Russians only some

areas Americans only how does that work

now absolutely not but it's a great

question right we've got we do often

talk about there being two segments

they're being the u.s. operational

segments the Russian segment when in

fact this is one space station one crew
and we're supported and in the space

station is largely operated by control

centers all around the world but from

the perspective of the people that live

and in work aboard Space Station this is

one big team was that a mosquito he was

just knocking down there what maybe I

shouldn't ask what what that was so in

terms of the size no no mosquitoes up

here sector in terms of the size of the

station do you find yourselves bumping

into one another how big is it and how

often do you interact well we bump into

each other every day all day long and

00:01:17,950 --> 00:01:23,950

00:01:21,909 --> 00:01:25,990

00:01:23,950 --> 00:01:27,460

00:01:25,989 --> 00:01:30,069

00:01:27,459 --> 00:01:33,788

00:01:30,069 --> 00:01:37,269

00:01:33,789 --> 00:01:40,239

00:01:37,269 --> 00:01:42,819

00:01:40,239 --> 00:01:46,718

00:01:42,819 --> 00:01:49,449

00:01:46,718 --> 00:01:52,419

00:01:49,450 --> 00:01:59,320

00:01:52,420 --> 00:02:03,118

00:01:59,319 --> 00:02:06,279

00:02:03,118 --> 00:02:09,069
station is big but it is amazing how

often will all be working in like one

cubic meter out of the thousand cubic

meters that are up here and it's just

it's just one of the facts that happens

that you'll have

rack and there'll be a set of experiment

and and at least three of us will be

working all around this one rack and how

do you divvy up the resources and I know

sort of six grown men two bathrooms

right one on the American side one on

the Russian side to do you share

bathrooms what happens we have one

breaks timely question that that often
does happen here and we've got i guess i
would consider we have almost two full
baths or fully functional ones we've got
two smaller ones that are in the the
Soyuz vehicles that brought us up here
and we'll bring each of us crews of
three back to the planet Earth we do
spend a surprising amount of time
keeping that Hardware working and
functioning and but it's important to us
and when there's an issue with with the
one that's in no three for example then
all of us use the one in the service
module and if there's an issue with that
one then we all use the one up here but

no there's no no restrictions one way or

the other and you have like a

maintenance schedule of some kind I mean

kids can use so themselves presumably

the commander can pull rank and say I'm

not going to clean you don't want to run

the risk of a mutiny no actually there's

not there's not per se you know so much

a dedicated maintenance schedule is a

lot of the work that we do is on

condition so if if everything is working

and humming along well and we don't have

to change out a component for example
for every you know every three months or

whatever the the duty cycle would happen

to be on it then things are fine

occasionally we'll have a light an

indicator light that will come on that

tell us that there's an issue with one

of the components and we'll roll up our

sleeves and we'll go to work and square

it away if you don't mind if I could ask

one of the cosmonauts a question I want

to ask about how you eat on board is

that something that you do separately do

you invite the Russians over they invite

you over I mean is it sort of
freeze-dried borscht on Wednesdays

thank you for good question we live here like one family and we try to help to every one of us if we have a time of course we have maybe not a lot of time but we have a time for to be together maybe during the supper or during the weekends we have fam guinea together with speaking about our problems about our family of course on the earth and we can see interesting program or movie together hotels why don't you celebrated your 48 blank say up where did you have a big party yes we had to the same parties of birthday parties me and
Anatoly here on board it was a beautiful time because we were on altitude 400 kilometers over the earth it's like maybe record in the world I think and we had a beautiful party with beautiful songs of our commander Danielle he played guitar beautiful songs and we hate them nice food it's like strong coffee beautiful tea and something snacks it was a great time I gotta ask you give me a and I give me one thing that you think Russia does better when it comes to space flight and one thing that you think the United States does.
better

you

so that's an interesting question Ryan

there's a lot of aspects to it if you look at just the day-to-day and the kind of things we interact with stuff that would seem trivial sometimes maybe on planet earth there are certain ways that we packaged food on the food that comes up via the US assets there's different kinds of food that come up so food is one thing there's a lot of difference we
actually share quite a bit across across

the hatches so to speak I think if I

were to look at it more globally though

the thing that that Russia brings to

space exploration that a lot of us are

newcomers to is just the experience of

long-duration spaceflight how do you

live and work how does a human being

stay up here and operate for six months

at a time how do you keep the hardware

working for for those kind of you know

durations and on the US side we have

that were relatively new to this the

European Space Agency astronauts many of


whom have already been flying and have a
lot of experience on the mirror for long
duration as well it probably already
have a lot of that background I think we
tend to make things on the u.s. segment
ended things tend to be very very
intricate very very sophisticated
sometimes maybe at the expense of easy
maintainability I guess i would say
sometimes we're learning a lot of great
lessons here on the modules that are
forward of PMA one let me ask you about
the sci use because that's the way up to
the station now I wanted to ask you you
know I guess this is you you all
came up now on the sci us it must be very different than the shuttle

okay obviously the thing that's that's most evident to all but the most casual observer is the Soyuz for any capsule a bit smaller than the Space Shuttle is so from the perspective of riding aboard the space shuttle has a lot of room and it was a very different ride on the on the Soyuz it was much smaller now with that said capsules are very elegant and in straightforward way to get to low-earth orbit and also to return to
Earth for me it was great to have had the experience to fly in both types of vehicles so use it affords us the opportunity to have a vehicle the act as a lifeboat for the entire duration that we're up here for all of the six months if there's happens to be a serious emergency on board space station in a matter of minutes each of us all of us will get to our respective Soyuz and those vehicles be ready to return earth in real short order so that's a that's kind of a dual purpose aspect to those and in a very important one for
long-duration flyers

I want to ask you guys what should the

what should the next frontier be when it

comes to space exploration not NASA's

you not the Russian space agency's view

but your own personal views maybe a

couple you guys could share I mean is it

Mars is it the moon is it a base on the

moon is it an asteroid is it more of

what you're doing now in low orbit

well I think all three of them are going

to happen I mean everybody looks always

at the this moment and a budgetary

problems of the next half year but in
the long run humans will spread through

00:10:45,669 --> 00:10:50,709
the solar system and I think the

00:10:48,490 --> 00:10:53,620
asteroid is a very interesting topic I'd

00:10:50,710 --> 00:10:55,450
never thought about that before it came

00:10:53,620 --> 00:10:58,060
up i think that's a very very good one

00:10:55,450 --> 00:11:00,310
but for sure we will have based on the

00:10:58,059 --> 00:11:03,209
moon they will be will be mining on the

00:11:00,309 --> 00:11:05,979
moon we will get a great sources of

00:11:03,210 --> 00:11:08,050
energy we will use the solar energy more

00:11:05,980 --> 00:11:10,600
and then we will go to Mars the problem

00:11:08,049 --> 00:11:12,819
is when I always say in 25 years but I

00:11:10,600 --> 00:11:14,470
said that 25 years ago as well that's

00:11:12,820 --> 00:11:16,000
one of the things of spaceflight we have

00:11:14,470 --> 00:11:22,029
to be very patient but it will happen

00:11:16,000 --> 00:11:25,259
for sure if if you look at our state of
Technology there's only about four general places we can go right now in space we could do low Earth orbit we could do something between the Earth and the moon and we call that the earth-moon system on the moon and possibly go to Mars and these are about the four general things that we can do right now or contemplate doing and as far as I'm concerned it doesn't really matter which one you know choose one and the important thing is to choose one and stick with it for a long enough period of time so you can make some progress.
and it takes about ten years to make any progress in these fronts so we have to choose one of these and roll up our sleeves and just work and work and work for about 10 years before we will see real progress on this front.

tell me about some of the traffic you've got coming up there you've got it spit it's being called the cosmic traffic jam you've got an awful lot of spacecraft coming up there over the next several months don't you yeah we sure do and it's actually the lifeblood of space station a lot of the cargo vehicles are
key to keeping the space station operating and functioning it's the method for us to return science something we put the shuttle to good use for in addition to bring a cargo up here and SpaceX the dragon their their vehicle which will launch we hope on April thirtieth of this this month will get Ford the capability of returning hardware from station we also have progress cargo cargo vehicle docked to station right now it will bring trash back it'll actually be incinerated on the way back through Earth's atmosphere
another progress vehicle is lined up to

00:13:17,429 --> 00:13:21,929 come here and most importantly and most

immediate for all of us on board is very

00:13:19,470 --> 00:13:24,090 soon we'll have the European automated

00:13:21,929 --> 00:13:25,469 Transfer Vehicle number three that's

00:13:24,090 --> 00:13:27,629 going to be docking on the app's part of

00:13:25,470 --> 00:13:29,730 space station here in a week you got

00:13:27,629 --> 00:13:31,049 commercial spacecraft you've got

00:13:29,730 --> 00:13:32,759 European spacecraft we've got Japanese

00:13:31,049 --> 00:13:35,729 spacecraft Russian spacecraft the

00:13:32,759 --> 00:13:37,769 commercial from the United States I mean

00:13:35,730 --> 00:13:39,930 it is that an indication that the times

00:13:37,769 --> 00:13:42,569 have changed the old sort of Cold War

00:13:39,929 --> 00:13:45,329 space race is long past because it's not

00:13:42,570 --> 00:13:47,310 just two countries not just two
spacecraft but I mean it's you know you
guys are busier than the star trek up
there with all the spacecraft coming in
yeah I think well we are all ready for a
while in the in this international era

and I think that's a very good thing i
really like it to work one day in the

Japanese module then do something in the
Russian module and european-american and
that's very good and I think we're

getting into another new era and that is
the commercial spaceflight so it's very

interesting that that the dragon
it's coming soon and that's that's the
future like you like with all kind of

transportation we have on earth in the

beginning it's it's it's new and it's

some pioneers and then the companies

take offer and agencies go beyond and do

new things and then continue with

exploration I think it's a natural

process and I'm very pleased that that's

the I'm here now when we start with it

SpaceX says they may have round-trip

flights to Mars for let me make sure I

get this right a half million dollars in

10 years time what do you guys think

about that that changes everything
doesn't it I think if we can greatly reduce the expense of getting things to low Earth orbit it opens up in an unbelievable way space exploration for many more people that have had a privilege to do this so far and I think probably all of us would share the sentiment that says the more the merrier and in as soon as you can have companies are able to do this and be viable and in the private sector then it greatly opens up the possibilities for spaceflight like Andre said I think it's important for the really hard very very
tough things to be done probably by by

329
00:15:42,769 --> 00:15:47,870
nations and by nations space agencies

330
00:15:45,620 --> 00:15:50,450
and and ideally by nations working

331
00:15:47,870 --> 00:15:52,370
together so those are the big steps that

332
00:15:50,450 --> 00:15:55,100
need to be taken you know on a big scale

333
00:15:52,370 --> 00:15:56,899
and they don't often return a lot of an

334
00:15:55,100 --> 00:15:58,790
return a lot on the investments in the

335
00:15:56,899 --> 00:16:00,529
near term as soon as we figured out the

336
00:15:58,789 --> 00:16:01,759
earth to low Earth orbit piece and l

337
00:16:00,529 --> 00:16:03,529
think we're getting pretty close to that

338
00:16:01,759 --> 00:16:05,840
right now then the time is ripe for

339
00:16:03,529 --> 00:16:08,329
commercial companies to be able to step

340
00:16:05,840 --> 00:16:10,129
in and take over that piece and then the

341
00:16:08,330 --> 00:16:12,170
government's and the international space

342
00:16:10,129 --> 00:16:14,689
agencies will then take the next ride
and I think that's great and I think
the more vehicles that we have that are able to fly in space the better it is
for all of us now a very important question uh have you tried angry birds space yet
we don't have any electronics up here that we can capable of playing it oh no
video yeah it's too sophisticated for the space station yeah and
we are average psycho Ronnie is still with us yeah yeah well I'm sorry I I thought we might have lost you sure we
are Bloomberg TV we were wondering how

do you keep track of your investments

when you're so far away yeah we're all

looking at each other saying what

investments the folks that fly in space

generally don't do this to become to

become rich and you know the the

richness we have is in the opportunity

to do this so actually I don't really

think a whole lot about it and don't

don't really have a whole lot in that

maybe down the road sometime but for me

my focus has been you know working in

this business and working with this this
great team that we have on board and
with all the wonderful folks smart folks
that are on the ground that make it
possible one last quick question when
you learn I think our biggest I was just
saying I think I'll because efficient
investment is how families and that goes
well one quick question when you look
out the window everybody wants to see
obviously you can see earth I think we
only got about 30 seconds you can see
what other planets asteroids space junk
where what do you see out the window
well the thing that really captures your
the view is planet Earth I mean it is

00:18:35,240 --> 00:18:38,299
spectacular it is just beyond

00:18:36,890 --> 00:18:41,540
description at least beyond description

00:18:38,299 --> 00:18:43,279
for somebody like me and but with that

00:18:41,539 --> 00:18:44,869
said you can see stars that are just

00:18:43,279 --> 00:18:47,149
brilliant points of light that do not

00:18:44,869 --> 00:18:49,789
twinkle you see comets you see other

00:18:47,150 --> 00:18:51,560
satellites and spacecraft and but your

00:18:49,789 --> 00:18:56,599
eyes are always drawn back to our home

00:18:51,559 --> 00:18:58,279
planet Earth okay gentlemen thank you

00:18:56,599 --> 00:19:03,980
very much thank you for joining us on

00:18:58,279 --> 00:19:06,039
Ryan's Russia you be well Brian thank

00:19:03,980 --> 00:19:08,539
you is pleasure talking to you today

00:19:06,039 --> 00:19:11,629
station this is Houston ACR that

00:19:08,539 --> 00:19:14,539
concludes the event thank you
burgh TV space station we are now resuming operational audio communications