00:00:01,070 --> 00:00:06,120
station this is Houston are you ready

00:00:03,388 --> 00:00:07,949
for the event Houston this is the

00:00:06,120 --> 00:00:12,660
International Space Station I'm ready

00:00:07,950 --> 00:00:14,910
for the event Canadian Space Agency pio

00:00:12,660 --> 00:00:19,920
this is Mission Control Houston please

00:00:14,910 --> 00:00:21,448
call station for a voice check station

00:00:19,920 --> 00:00:23,609
this is Julie at the Canadian Space

00:00:21,449 --> 00:00:30,779
Agency in Centerburg Quebec how do you

00:00:23,609 --> 00:00:33,090
hear me Julie I hear you loud and clear

00:00:30,778 --> 00:00:34,859
and nice to be talking to people at the

00:00:33,090 --> 00:00:40,079
Canadian Space Agency and everyone in

00:00:34,859 --> 00:00:45,750
Canada good morning so I have two lists

00:00:40,079 --> 00:00:47,910
for you hi Chris it's Jackie

00:00:45,750 --> 00:00:52,558
I'm from the CPC's the nature of things
and what I wanted to ask you on this great day you've managed to create an incredible platform while you've been out there seems everybody is tweeting is watching is listening how do you want to use this opportunity you know there are a lot of really interesting things going on in Canada right now and around the world and in all different fields and we tend to only focus on a few the ones that somehow bubble up to to a level of public perception personally I think what we're doing in human exploration in trying to understand our world better
trying to understand the area around our planet better and then try to understand the rest of the universe I think that is important I think it's a critical thing for the health of the planet the health of the Canadian economy and and just generically for people and so for the last 20 years as an astronaut I have been speaking at schools talking to the media writing and doing everything I can to try and just let people know what the Canadian Space Agency is doing and now living on the space station with the incredible privilege of command
this spaceship and also with the new technology that's available through social media and the direct links that NASA has built between this spaceship and Earth it has given us the opportunity now to really clearly transmit what it is we're doing up here and to let Canadians and really the whole world see and that is the goal and I'm really delighted at the just the level of response when you give people a chance to see what's happening here in the universe around them when you get them to experience it as people then the response becomes overwhelming and at the
you know Twitter is just a means of
communication it's just another form of
radio but it's extremely vivid the level
of public support and I'm really pleased
to see it and I think it's the science
is important but I think people's
awareness of the science we're doing is
important as well and I'm just pleased
to be the the messenger in the middle
good morning mr. Hadfield so excuse me
you were saying effectively that science
it's very important because it helps us
to better understand the universe the
planet we live on and I just wonder
within this framework is scientific research important in Canada since obviously there's been some policies the financing with respect to some of these scientific research projects so can you tell us how important is research and what have been some of these research projects that you've been involved in doctor - sure absolutely it is always very necessary economy within a country like Canada and province like Quebec in Canada it's like a family like at home it's good to have a balance
between your dreams and what is practical between what I want to do and what I have to do every day and just as it is at home you have to use a part of the money for today and some of the money for the problems insurance health and all of that stuff but also at the same time you have to look at some of this and save it for the future and look out for the future to inspire my children our children and to be able to better understand the environment for health in the future for my family or for our country so the big question is
what is the proper balance within this

obviously and so for me and in Canada we

have for me to have fantastic balance

because we have a very high quality of

life and at the same time we have a lot

of universities we also have the

opportunities for the young Canadians as

never before and it is difficult it's

maybe not the easiest moment in history

but between the first and the Second

World War it was a tough time every

historic time there's always problems so

this reminds us or make us think that

these are the worst problems ever but

they may not be at the same time you
always have to be thinking long term and

to have a balance between today and

tomorrow

and with what we do here today we have

our manipulating arm and also we have

some experiments

Darla’s starts young come in the station

such as the micro flow that was designed

and invented in Canada in Quebec that

valves and this is a huge improvement

for blood tests for Canada this was an

invention for the station

to the money for research we were able

to do this but also it was financed by
some Canadian businesses and it's good

for Canadian health and it's not only my
decision obviously but was circa Jeff

and me from what I do as an astronaut is
to work as hard as possible so that
every penny that is given to the agency
to me because this is my responsibility
I fulfill it to the maximum potential

for me and for the station for the space
station program and for Canada hi Chris
it's Peter Roy from The Canadian Press
we've seen you smiling all the time
we've seen your tweets we've seen your
pictures question I have to ask and
people kind of wander sometimes is there anything you find frustrating up there

is there anything that just gets you get your temper going I just wonder if there's any difficulties you face any frustrations but to keep to yourself or just to keep yourself going and if you can answer in French as well I'd appreciate it Peter this this is a marvelous human experience and the only thing that gets me mad is I have to sleep I mean it's this is a tremendous opportunity one that I've dreamed about since I was a young
Canadian and one that I've worked

00:08:15,319 --> 00:08:22,250
towards ever since and my resolution has

00:08:19,850 --> 00:08:24,050
been to make the absolute most of it to

00:08:22,250 --> 00:08:25,850
spend as little time sleeping as I can

00:08:24,050 --> 00:08:27,889
if I get an extra three or four minutes

00:08:25,850 --> 00:08:30,140
go look out the window when I get back

00:08:27,889 --> 00:08:32,149
from this I'm gonna regret every minute

00:08:30,139 --> 00:08:35,750
that I didn't spend looking at the world

00:08:32,149 --> 00:08:37,819
or or trying small experiments or doing

00:08:35,750 --> 00:08:42,200
things that that are impossible in the

00:08:37,820 --> 00:08:45,890
rest of my life and no I mean you can

00:08:42,200 --> 00:08:47,870
find beauty and pleasure in every day or

00:08:45,889 --> 00:08:49,549
you can find frustration and hate and

00:08:47,870 --> 00:08:51,649
every day it's kind of a personal choice

00:08:49,549 --> 00:08:53,208
and up here the
opportunity for the pleasurable

beautiful part is overwhelmingly in the majority so I don't let myself get that way it's not going to help and it's kind of cowering into it counterintuitive to being in a place like this yeah fancy french shucks your everyday everybody has to choose whether you want to be frustrated or wonder whether you want to have a good emotion that's a privilege in a to be ready for the day fine about everything that's gonna happen today and I have been dreaming about being in the station
since I was 9 or 10 years old and I've been training for this moment all my life so for me the most frustrating part maybe is the need to sleep because this takes out a couple of hours of my day and like I said before it is an environment that is amazing inspiring and when I have three extra minutes we have the window that is like a dream to look out that window and so I would say no limos yonder I chose the emotions of being here I can change the emotions myself this is a personal choice so I choose to be in a good mood and to fully
appreciate the taste of being here hi

Chris it's Jackie again from the nature of things at CBC and because I'm here

for the nature of things I'm wondering if David Suzuki was up there with you

what would you want to tell him and show him about how the science and space has applications down here in the real world

jaci the real world is a tiny little blue speck surrounded by everything else

and we are only just now just starting to understand about all the rest of that

and it is only by by taking these first steps away from our planet both with
machinery with robots but but more

interestingly and much more deeply with

people that we can really start to see

the world's place in all of that and so

for any person that came up and we we we

grab each other by the scruff of the

neck up here but for any person that

that came up here to the space station

of course the first thing I would do

would be to take them to the big window

so they could truly see our earth to

understand the magnificence of it the

inevitable power of it the size the the

rolling beauty of it but also the

inherent fragility of it and when you
see the blackness and the harshness

of the universe and the one layer of onionskin atmosphere that surround our planet then it becomes so vivid in your mind that it permanently changes your thinking if you hadn't thought about it before and then of course just the science that's on board we're running hundreds of experiments on the space station that can't be run on the surface of the earth and so after we got over the initial wonder of it I would go around to each of the racks around and talk about the the metals
research that's going on in that rack

over there or the crystallization

research that's going on over my head to

try and make better materials on earth

or micro flow here in my hands it's

floating around a Canadian experiment

that has taken this challenge and

necessity of keeping people healthy out

here and as a result have come up with a

way of doing blood analysis in something

that you can see is the size of a red

box or a big loaf of bread that when you

challenge people with a new extreme with

a new frontier and a new environment
they come up with new solutions and

mounted to the top of this Space Station

is the Alpha Magnetic Spectrometer the

control computer is right here beside me

and it is trying to understand the

absolute stuff of the universe

what is antimatter what is the

percentage of antimatter and dark matter

collecting dark energy from the universe

something that has just very recently

even been theorized and proven and we

are using this human platform to dig

into that to actually get out there and

sample it something that can't be done
any other way so it would be with with

272
00:13:45,778 --> 00:13:51,019
great pleasure and pride that I would

273
00:13:48,958 --> 00:13:52,948
have anybody come up and someone of

274
00:13:51,019 --> 00:13:57,179
David Suzuki stature

275
00:13:52,948 --> 00:13:59,490
would be a wonderful guest but also a

276
00:13:57,179 --> 00:14:01,349
wonderful representative of humanity to

277
00:13:59,490 --> 00:14:05,000
come up and really see the magnificence

278
00:14:01,350 --> 00:14:05,000
of what we're doing together up here

279
00:14:10,330 --> 00:14:17,020
we have a bomb I see good morning mr.

280
00:14:13,450 --> 00:14:19,330
Hadfield friends McCarron 11 anecdote

281
00:14:17,019 --> 00:14:24,699
had my I would like to tell you a quick

282
00:14:19,330 --> 00:14:28,300
anecdote I had a colleague mr. that yes

283
00:14:24,700 --> 00:14:31,540
there boom aah what was that a very

284
00:14:28,299 --> 00:14:38,049
important time when mr. research I told

285
00:14:31,539 --> 00:14:42,159
him written Soviet song by writing sky
is no longer the limit and I saw this in

the office and for him this was a very

touching moment so I just wanted to

share this moment for you because I

thought it was beautiful I saw this on

his wall and I had a question you had

spoken certainly you mentioned condi

called you realize very well-placed to

realize that we are so small on this

earth and you mentioned how fragile the

planet Eire the planet is so I would

like to know monkey man

what do you think about global warming

when you look at it from space do you
think in Canada we should change the things we're doing in Quebec should we maybe wake up strongly regarding global warming what do you think we say common yes it is like having a glance here from the station when you look at Earth because right now you can see a very large lake I'm not sure French but the Aral Sea right between Kazakhstan and Russia and during my life and my experience the last 20 years the changes there were amazing and that was a human change circle change that has occurred thanks to what humans have done there
was a huge lake great circum a party of

it's almost like a small ocean and now

just really there's almost nothing it's

just sand that is a result of our

decisions of what we have done for that

rule missus maybe the future party for

some of the other parts of the world and

the planet and our country as well so

it's up to us to think about this to see

this to know this and it's hard to to

know obviously it's far from Canada and

you may say this is not our problem but

that's not true the big lakes are not

unlimited there is a limit of how much
water there is in the rivers in the

00:17:08,740 --> 00:17:16,689
lakes so it is needed so it's very

00:17:13,119 --> 00:17:20,109
important for us to think of what we are

00:17:16,689 --> 00:17:23,740
doing and obviously we cannot change

00:17:20,109 --> 00:17:26,828
that quickly people that small changes

00:17:23,740 --> 00:17:30,099
are what can translate into a bigger

00:17:26,828 --> 00:17:33,399
change and myself as an individual what

00:17:30,099 --> 00:17:37,808
you do what each Canadian does together

00:17:33,400 --> 00:17:40,298
it is possible to make a change so this

00:17:37,808 --> 00:17:43,808
is the first gradual but this has to be

00:17:40,298 --> 00:17:48,069
done gradually so climate is changing

00:17:43,808 --> 00:17:50,859
naturally and perhaps as a result of

00:17:48,069 --> 00:17:55,450
what we have done our influence like you

00:17:50,859 --> 00:17:59,168
said the global warming but it's not the

00:17:55,450 --> 00:18:00,190
first time in the planets history and it
won't be the last

and so maybe we just need to be more responsible in prolong the decisions we make and think of the longer term more than five years more than the upcoming elections more than just one life span

and think about our grandchildren and even further so with smaller changes and with very small steps regardless we may be able to keep the health of our planet for the future

I just want a quick last one Chris let's talk about social media you have half a million followers last I checked
and Counting can we talk about that in

the context of all those that you've seen out there of all the tweets that you've had of all the images you've shot

but particularly was there one that stood out and the other part is I understand your son Evan is also helping

you out on this so we can sort of wrap the whole social media together a bit

well first let me just say that a tremendous number of people have worked

very very hard to make this type of thing possible for our country and for me to be here as a representative
you know people right across the country

building Canadarm that was our ticket on

board the people at the space agency of

course do tremendous work I've worked to

this for a long time myself along with

the other astronauts and so this is only

the result of that that this possibility

even exists and the public awareness of

it comes from all that huge pyramid of

work that leads up to it and really is

is culminating now with something really

clear to focus on and I think it's great

I've enlisted the aid of someone who's

who's of the right generation to try and
give me advice on how to use social media in addition to all the other wonderful work that's being done and my son Evan has been helping me with that and doing a terrific job as evidenced by the number of people and Twitter's just one measure of course you know there's over half a million people following on Twitter but social media has many different forms and the numbers are good to read but what's what's important out of it is is the impact that it has and you asked what what is significant out of that for me I read constantly about school rooms
across Canada and around the world that are using this to teach that are using the work that I'm doing the science that we have on board like micro flow the pictures that we take of the world the fact that I speak three languages one reasonably and two passively they use that I play guitar and play music they use all of those different facets of this human experience leaving earth in order to teach in order to inspire young people all around the world but specifically for us of course in Canada.
too to make the most of themselves to
understand our place in the world and
it's it's a really clear message when
you can see one Canadian constantly
comparing all of these places around the
world almost simultaneously it it's
hard to view the other places as foreign
and different when they are all viewed
in 90 minutes and for me it's very
heartwarming when I see that people are
internalizing that when they start stop
using the third person and start talking
about we and us and not just you and
they and so I mean mine is just one
voice in in billions I'm the commander

of this spaceship but I'm the 35th commander of this spaceship this is this

is by no means any sort of pinnacle but

at the same time I'm trying to use whatever means I can in order to just help people see themselves better and to make better decisions whether they're five years old or whether they're 85 years old and social media and all of the work that the people are doing has been a big part of that station this is

Houston ACR the Canadian Space Agency

passes along their sincerest
appreciation that concludes our event

00:22:23,069 --> 00:22:30,220
thank you thank you very much nice a

00:22:26,380 --> 00:22:31,570
talk thank you Space Agency and thank

00:22:30,220 --> 00:22:33,069
you your Chris station we're now

00:22:31,569 --> 00:22:35,819
resuming our personal audio

00:22:33,069 --> 00:22:35,819
communication