robert collier commissioned a trophy in 1910 to encourage the american aviation community to strive for excellence in paranoiac development since that time the robert j collier trophy has been presented in honor of the greatest achievements in aeronautics and astronautics in america the list of Award winners has come to represent a veritable timeline of aviation as many of the awardees mark major events in the history of life building a spacecraft takes just about
everything technical in the encyclopedia

you have to build a little microcosm out

there and everything that it takes to be

a functioning human being on the ground

you have to replicate out there when you

decide to do it internationally then it

clearly does become a representation of

the earth from which we come and so we

bring all of our problems requiring all

the solutions with us whether it's

environmental or food or or political or

financial we all have to face it so this

becomes a little laboratory a testing

ground where we can do that it involves
so many different cultures not just
people culture but space cultures and
they're all very different and so that
the biggest challenge is is getting
everybody to appreciate and understand
how these all work together technically
we're all very smart people you know
physics is physics and we're going to
solve problems but getting everybody to
to overcome the boundaries of the
cultures both people and space cultures
is big challenge as you look through
history there are many great
achievements that you could point to in
terms of stretching technology of the
time and of the moment got to all the
wonders of the world and that we know of
in history both in ancient history and
modem history I think the ISS is the
greatest human endeavor ever in the
history of the world in terms of
complexity and the challenges that are
brought with that complexity but today
we find history is important to tell us
where we've been and where we're going
we don't very basic exploration things
we did get to the west coast of this
country are similar things you have to
prepare for in order to travel to Mars I
mean it's all about logistics and having a vehicle that will get you there safely and understanding the risks associated with it that's something that kids need to take to learn

the biggest shock I was saying the biggest impact that I had during my flight is the first time I looked out the window of the orbiter and saw the space station it was huge it was huge and shiny and beautiful looking at it and knowing that a man-made structure
that big is actually up there

the ISS comes in sort of two flavors

there's the technological achievement of building it at all and then there's the

scientific achievements that will start flowing faster as the laboratories are activated and so the engineering

challenge of bootstrapping up from parts that are not capable of surviving on their own having to care for them on the

launch having to integrate them in to activate them and keep the viable space

station running in all stages of development it's one of the hardest
technical things that we've ever tried
to do
to look out the window from space
station of space shuttle or any
spacecraft and view the earth is just
magnificent experience to see all of the
details of the planet surface the the
planet is vibrant when you look at it I
mean that we are endeavouring and search
for life elsewhere it's very obvious
that there's life on Earth it speaks of
vibrancy of life when I talked to folks
all over I mentioned that none of these
parts have been put together on earth
and I think they all stop and go wow

101
00:05:25,730 --> 00:05:29,240
that's pretty incredible because when

102
00:05:27,230 --> 00:05:31,340
they get up to space they all magically

103
00:05:29,240 --> 00:05:33,949
fit together which means the cooperation

104
00:05:31,339 --> 00:05:36,579
on the engineering and technical side is

105
00:05:33,949 --> 00:05:36,579
really working

106
00:05:36,990 --> 00:05:43,740
the ISS role now is learning about all

107
00:05:42,149 --> 00:05:45,539
those things that we thought we were

108
00:05:43,740 --> 00:05:47,610
smart enough to design around that turns

109
00:05:45,540 --> 00:05:50,010
out maybe there was still a thing or two

110
00:05:47,610 --> 00:05:52,170
we needed to learn I think the biggest

111
00:05:50,009 --> 00:05:55,589
lessons learned from us are the ones

112
00:05:52,170 --> 00:05:57,509
where we find out why things didn't work

113
00:05:55,589 --> 00:06:01,319
exactly the way we planned on them

114
00:05:57,509 --> 00:06:06,149
working yeah do much the movies did not
lift up I think we are diverted from

Iraq when not only cosmonauts will have

access to space but scientists and amateurs as well we get the lube ETA

going a personal cut without me

practically forgot oh no was more than

people space will be open to mankind

wasn't what else to do spiritual during

the first part of space station

construction we were able to have a

strong science program now that we're

finished building the space station we

are going to be able to accomplish the

dreams the initial dreams that we had
for everything that we can do by having zero gravity by having a vibration free environment by looking at how how flames how materials how new protein crystals all these things will grow in space and we will get so much more science bang for the buck now that workstation complete the children all over the planet can see it grow and read about its progress and they will come to realize that this is the time when the human species left the planet for good when we became a spacefaring species looking out into
space you feel like you're our planet is just one of them very very many small little pieces that are part of the whole Universal so you sort of feel like even just part of earth is just a little citizen of our universe the ISS broke the frontier on how to live and work in space over a long period of time and to sustain that operation from the ground over a long period of time and I firmly believe that the ISS is in part anyway setting the framework and the foundation to be able to do that for future exploration
this is really the key to the future to

learn how to operate internationally to

make those trays to make those decisions

to do the best thing not just for one

country but for the overall good of all

the partners they're participating that

will be the real challenge as we move

forward to more dynamic and more

challenging environments even beyond

space station I think that when people

look back at this era of space

exploration they'll realize that's the

time that people look back at the planet

and said I'm from that planet and not

from that country as Carl Sagan said
when we get to Mars Earth will be a pale blue dot and you won't really care which side of it you came from I think people will remember this program as the first time that the world started to think that way you