good morning thank you for joining us

here at NASA Kennedy Space Center's launch pad 39a the sts-130 crew is here

for their terminal countdown

demonstration test and would like to answer a few questions it's my pleasure

to introduce the commander of space

shuttle Endeavour commander george zamka

thanks Andrea boy good morning great to see y'all another great morning here at the Kennedy Space Center we've had a great trip so far today's you can see we're here at the launch pad and we're gonna do some emergency drill training
today just so we don't have to worry about things on launch day and we're ready to take any questions that you have hi good morning I'm James Dean from Florida today good morning you guys are kicking off what obviously could be a historic year for the program first of the last five flights if things fly out on time this year and finishing station assembly so I'm just wondering how much for Colonel zamka or whomever would like to comment how much is that on your mind is you prepare for your final flight and one of the last major construction
missions for the station James I think

I'm gonna give that to our senior

veteran flier Steve Robinson thanks I

think you know where we're thinking

about STS-130 every minute of every day

but it occurs to me having worked on the

space shuttle a really long time that

when we come back the reality of what

this year really means to the space

shuttle program is gonna kind of set in

it's bittersweet you know we all love

the shuttle look at that grand thing

look what human beings can do and but

you know what the history of space

43
00:01:54,659 --> 00:01:59,399
travel has shown that when one program ends the next program is even more exciting and more motivating and more compelling to go into the future than the one before it and we don't know exactly what's going to happen after the shuttle but we do believe that's going to be the case for 4k you have strong ties to this community as you said when you arrived still considering Merritt Island one of your homes so just wondered if you could talk about the excitement of returning again as an astronaut preparing to fly into space and but also at a fairly
difficult time as you know for the center in the community where I imagine many people that you may know many people who work here could face layoffs as the program winds down oh yeah it is great to be back it feels like I've coming home see so many familiar faces and I just feel so fortunate to have this experience to come from the work force at the Kennedy Space Center and knowing the people that work here and also just what it takes to process this fantastic vehicle to be able to put it into space and conduct the complicated
missions that were able to perform

with this so it's just such a fantastic

experience for me to be able to see the

other end of it the portion of being

able to fly this vehicle and yeah we

know there's obviously changes coming

and I know there are a lot of concerns

among the workforce but these folks are

strong and they believe in space and

space exploration and they're gonna be

here to support whatever programs are

going to follow on so I know a lot of

folks are concerned but I think that

everything will work out just fine
Justin Wright with the space flight now

comm I guess for the commander what is

your confidence level of the new ammonia

hoses they're going to be ready in time

for you guys to go launch on February

7th and to do a full duration flight

Wow great question let me hand that to

our lead spacewalker Bob Behnken

that is a great question and we've been

close attention right now haven't really

heard the entire story so we've been
we've been watching them closely for a

00:04:22,029 --> 00:04:25,719
long time now

00:04:23,259 --> 00:04:28,479
last weekend our crew was up to a

00:04:25,720 --> 00:04:30,940
huntsville at marshall actually getting

00:04:28,478 --> 00:04:32,860
a chance to see the first line as it was

00:04:30,939 --> 00:04:34,538
coming together and actually put it on a

00:04:32,860 --> 00:04:37,090
test rig to make sure that it was going

00:04:34,538 --> 00:04:38,800
to do the job that it was intended we're

00:04:37,089 --> 00:04:41,049
expecting this saturday to fly up and

00:04:38,800 --> 00:04:42,400
see all four lines in a pretty good

00:04:41,050 --> 00:04:44,829
configuration pretty flight

00:04:42,399 --> 00:04:46,478
representative and those lines after

00:04:44,829 --> 00:04:49,149
that will actually come down here to the

00:04:46,478 --> 00:04:50,889
case k SC space center for for

00:04:49,149 --> 00:04:52,598
processing and installation into the
orbiter and so right now the schedule appears for that set of lines to be a couple of days ahead our original plan.

was to do our fit check and our opportunity with them next weekend but they're there ahead now and we'll be able to do that this Saturday which is a great news as you you may know the program is also pursuing a second set of lines that would allow us to launch at a slightly delayed launch date with a full capability for node 3 so the program is pursuing two courses but plan one that we're moving forward
with right now is actually ahead of schedule like I said giving us that chance to do a fit check a week early and that's really good news as we move forward to flight the microphone can you just sort of give us a snapshot of each of the or 3e bas and and and also as part of that as any of your content changed given the the changes in the and the ammonia jumpers those are both good good questions to ask the the first one kind of the official content for our flight has been relatively fixed that's one of the nice things about bringing a
new module and a big construction flight

to the space station if we're bringing

node 3 our EVs are probably going to

entail taking care of node 3 and getting

it on board the the space station so our

first spacewalk will involve Nick

Patrick and I heading out to the shuttle

payload Bay and basically unhooking node

3 and getting it configured so that'll

be ready to attach to the space station

so that's what we'll focus on for our

the beginning of our first spacewalk the

end of the first spacewalk will entail

hooking up power to that module

so that we'll focus on for our
so that it will be able to you know have

heaters and things those are the same

things that will be disconnected from

the payload Bay will be hooking up when

it actually gets onboard the space

station for the first spacewalk the

second spacewalk is going to focus on

getting the cooling system those ammonia

lines that you referred to in your

previous question hooked up on to node3

and connecting it into the the lab

thermal control system so that will will

actually have cooling and allow node

three to be activated and come all the

way up to the full operation at the end
of evey a two for Evy a three we're
gonna focus on a little bit more
outfitting on node three get the second
cooling loop for redundancy squared away
on it and Nick will actually release the
launch locks on the cupola window so we
we hope to have the cupola relocated
between EBA s2 and EBA three and then on
EB a three when Nick opens those launch
locks be able to open the windows and
complete the outfitting of all three of
those all three of those modules Steve
would and online aviation magazine a v8
magazine comm a question regarding the
shuttle itself a little bit basic how

many of you are trained to fly the

shuttle and what sort of training did

you undertake and how did it go I think

let me give that to Terry it's a good

question well if we're flying the

shuttle there's several different phases

of flight the shuttle starts out as a

rocket and during the launch phase the

commander Colonel Zemke and myself are

both trained to fly it manually

normally the computers fly it for the

ascent but but we can take over and fly

it if something went wrong and then
there's the orbital phase when the shuttle turns into a spaceship and again Colonel Zemke and I will both be doing different maneuvering burns we call them in space to speed up or slow down to do a rendezvous with the station or to point the shuttle in different attitudes to keep the Sun at the right angle or there's different needs that we have four different maneuvering in space so we we both do those and actually all the mission specialists on the flight at times will get involved in maneuvering the shuttle too so we're all familiar
with that and then the third phase the

shuttle turns into an airplane for

landing

and again the commander and pilot both

do a lot of training for that the last

two nights we've been practicing landing

here at the shuttle landing facility in

the shuttle training aircraft and so

we've gotten lots and lots of practice

dives to get ready for the landing day

so there's kind of three different ways

of flying and that's how that's broken

down okay talking about landing it's a

long runway in terms of a conventional

aircraft but it's pretty short I guess
in terms of the shuttle

what sort of aircraft do you use for training the airplane that we have is

modified Gulfstream - it's a about a medium sized business jet and it has special thrust reversers on the engines that allow them to deploy in flight so the engines are actually running in Reverse to provide a lot of drag because the shuttle dives at a very steep angle about 20 degrees as compared to the conventional airliner is only three degrees so it's a much steeper it's more like a dive-bombing pattern and a
fighter jet than it is a normal airplane

approach and the airplane also has a

computer-controlled system that makes it fly like a shuttle which is a lot different than a normal airplane so that's the bear plane and the training that we use and the runway is very long it's about three miles long even longer with that with over runs here but we do land a lot faster than normal airliner so it's nice to have that long piece of concrete in front of us just a quick one for Nicholas I notice you're interested in flying yourself what do
you fly in in the UK I I learn to fly in

the Royal Air Force volunteer reserve at

University British Aerospace a British

Aerospace Bulldog t mark one I came back

to the States

to grad school and obviously I've stayed

here ever since and before I got

assigned to this flight I used to spend

time as a flight instructor and I'd like

to fly all kinds of light aircraft and

helicopters anything I can really um

Chris Gebhardt with NASA Space Flight

comm with a one for Terry I believe

could you describe some of the robotics

could you describe some of the robotics
operations that are going to be used on

00:10:30,809 --> 00:10:33,719
this mission in terms of getting the

00:10:32,159 --> 00:10:36,000
node and cupola into their correct

00:10:33,720 --> 00:10:37,440
positions sure there's a lot of Robotics

00:10:36,000 --> 00:10:38,820
going on on the flight and actually

00:10:37,440 --> 00:10:41,400
everybody on the crew will be doing

00:10:38,820 --> 00:10:43,170
parts of them at times we use the

00:10:41,399 --> 00:10:45,360
shuttle arm mainly for inspection so

00:10:43,169 --> 00:10:47,309
we'll grab the boom and use that to

00:10:45,360 --> 00:10:47,820
inspect the shuttle before we back and

00:10:47,309 --> 00:10:50,789
after we on

00:10:47,820 --> 00:10:52,800
the the main meat of the robotics once

00:10:50,789 --> 00:10:56,339
we once we are docked we'll be using the

00:10:52,799 --> 00:10:57,990
station arm the SSRMS first of all to

00:10:56,340 --> 00:11:01,019
grab node three during the first
spacewalk Kay and I are doing a lot of
the station arm work together we're
gonna grab another three pull it out of
the shuttle payload Bay and attach it to
the side the left side or the port side
of the station and then we're going to
use the same arm on a different day to
grab the cupola which is launched on the
end of node three and it has to be
launched there because that's the only
way that it fits in the shuttle payload
Bay we're gonna take it off the end of
the node and then attach it to the
bottom of the node so it'll be facing
the earth and it'll also have a good
view of most of the station and then
later in the flight Bob and Nick are
gonna take that same arm the big station
arm and grab what's called PMA three
it's an adapter that allows to shuttle
the dock to the station it's one of our
three pmas they're gonna grab that and
move it so those are the main station
robotic operations that we're doing and
for the entire crew what sort of an
in-flight experiments are you gonna be
doing on this flight flight experiments
at barber Nick Jerry yeah we've got
we've got the well let me let me give

this to Bob since you're handling the

NLP we actually have a limited number of

payloads on this on this flight we

actually have a cells and viruses

experiment that will launch in the

mid-deck we actually won't have it

powered so we won't be taken care of

cells on on the way up he'll will swap

that apparatus out with one that's

onboard the space station

Nick's actually going to perform that

swap out to provide them with a new

incubator if you will to have on-orbit


on the on the space station we're also

00:12:34,049 --> 00:12:39,209
going to be flying a freezer a glacier

00:12:37,559 --> 00:12:40,649
as the payload name so as you can

00:12:39,210 --> 00:12:42,509
imagine it's probably pretty cold on the

00:12:40,649 --> 00:12:46,470
inside but so we'll be flying that up

00:12:42,509 --> 00:12:48,059
with with some samples inside in a also

00:12:46,470 --> 00:12:49,590
in a cold bag that will get transferred

00:12:48,059 --> 00:12:51,359
over to the space station then we'll

00:12:49,590 --> 00:12:53,670
bring back some frozen biological

00:12:51,360 --> 00:12:56,250
samples from the station crew primarily

00:12:53,669 --> 00:12:59,719
medical data that's been collected on

00:12:56,250 --> 00:12:59,720
the on the crew members themselves

00:13:00,159 --> 00:13:03,889
hi I'm Sandra Frederic from the

00:13:02,179 --> 00:13:07,669
Washington Times this questions for

00:13:03,889 --> 00:13:09,710
Terry you um you mentioned you spend a
lot of time in training but you haven't really seen the shuttle up close what was your first impression over the endeavour and are you flying anything from home this is a beautiful vehicle we have a great view here it's just amazing to see the Space Shuttle I think what stands out to me is how big it is when you walk up to it it's just such a large vehicle the external tank the solid rocket boosters it's amazing to think of that vehicle weighing you know almost 4 million pounds it's just impressive and yes I am flying a few things from
Maryland one of the things is from the Aberdeen Iron Birds I’ve got something from my high school Oakland Mills High School a banner from them and so a few momentum mementos from Maryland the next question is for Steve hi there you’re the veteran and learned on the flight and also unit 3 flights that you’ve been on have been all on Discovery so you’re going on endeavour for the first time is she any different than this and then discovery yeah in a way I guess I’m a rookie art I’m an endeavour rookie
yeah first-time flyer on endeavour

yeah well excited to to fly another

Space Shuttle I haven't seen much of her

tomorrow I get to climb in when she's

pretty much in the flight config and and

take a look around and I've kind of

curious myself to see if I notice any

differences between discovery and

endeavour but it's amazing that we have

even more than one of these things isn't

it that's all the time we have for

questions if we could have you stand

just for a moment for a photo

opportunity

opportunity
thank you to the sts-130 crew have a great day

enjoy your training