1 00:00:01,719 --> 00:00:06,259
good morning and welcome to today's

2 00:00:03,589 --> 00:00:08,419
mission status briefing with us today is

3 00:00:06,259 --> 00:00:10,789
Derek hospin the International Space

4 00:00:08,419 --> 00:00:14,780
Station lead flight director who's just

5 00:00:10,789 --> 00:00:16,519
coming off as orbit to shift daring good

6 00:00:14,779 --> 00:00:19,879
morning thank you and it's good to be

7 00:00:16,519 --> 00:00:22,489
here today to talk about what is another

8 00:00:19,879 --> 00:00:24,108
productive and very busy day on board

9 00:00:22,489 --> 00:00:26,689
the shuttle endeavour and the

10 00:00:24,109 --> 00:00:28,820
International Space Station as I left

11 00:00:26,689 --> 00:00:31,310
the the control center the both crews

12 00:00:28,820 --> 00:00:33,530
were wrapping up their day with

13 00:00:31,309 --> 00:00:35,000
preparation for tomorrow's spacewalk of

14 00:00:33,530 --> 00:00:38,000
course we'll be conducting the second
spacewalk EVA to tomorrow and the

spacewalk and crew which were EV a2 is
going to be drew foist I and Mike Fincke

were wrapping up their final

preparations final review of their

procedures gathering of the tools and

eventually they'll be spending the night

in the airlock overnight so we'll button

them up in the air lock and then depress

it to 10 to and it's into psi and start

what we call overnight campout but I'll

go back and start with the beginning of

the day as you heard yesterday from

Leroy Cain the the shuttle program
decided to do a focused inspection which

is a procedure that we have a

placeholder for on flight day six and

it's a way to use the orbiter bloom

sensor system to take a closer look at

areas of interest on the orbiter tile

what that involves is using the space

station robotic arm to grapple the OB SS

and pull it out of the orbiter payload

Bay or the the cradle along the edge of

the payload Bay within maneuver the OBS

has to hand off position at which point

the shuttle arm grapples the OBS s

station our backs off and then the

shuttle crew execute a pre-planned
series of maneuvers that put the OBS s
in the right position so the sensors
take a look at the areas that folks
wanted to look at that's all completed
that was done without incident and
procedure took on the order of two hours
of crew time and that the data and all
the imagery collected from that focused
inspection is now on the ground in the
hands of the imagery team that's going
to do the analysis and report back to
the mmt and my expectation is that when
Leroy's back to briefly this afternoon
you'll he'll hear more about the results
of that focused inspection in a dish

in yesterday's briefing we talked about an issue that we had yesterday during EV

a one with Greg shama Tufts space suit or zmu the issue was i failed carbon dioxide sensor when we lose that carbon dioxide sensor we have rules in place that say that we have to assume a lesser capability so we had to cut EV a1 a bit short that again as we mentioned yesterday that suit will not be used on EV a's two or three so it will be reused outside but what we did today was
perform a dry out procedure in which we
blow a cool air through the suit and and
over the sensor in an effort to dry it
out interestingly enough when we
activated the suit this morning the
sensor had already been recovered we had
we had a good at nominal reading from
the co2 sensor which is not completely
unexpected as its moisture in the sensor
that causes the problem and you would
expect once we get the crew out of the
suit that that moisture would abate in
evaporate but we went ahead with the dry
looks good so we're assuming that it's
going to be good and we're going to plan
to execute a nominally VA for but we do
have pre-planned bingo points and all of
our EVs or spacewalks such that if you
have an issue at any point of the EBA
any any number of reasons can cause you
to come back inside but we have
pre-planned points at which we can back
out we understand the work ahead of us
so that we can cleanly and efficiently
cut the spacewalk short and we've got
those identified for EBA for so our plan
going in is to just take one final look
at those bingos that we define

101
00:03:52,550 --> 00:03:56,780
pre-flight and then make sure that they

102
00:03:54,830 --> 00:03:58,550
make sense now that we've got once we

103
00:03:56,780 --> 00:04:00,259
have EV is one through three behind us

104
00:03:58,550 --> 00:04:02,530
and then we'll make the right decision

105
00:04:00,259 --> 00:04:05,870
based on what happens during DBA for

106
00:04:02,530 --> 00:04:08,360
we're assuming that this CO2 sensor will

107
00:04:05,870 --> 00:04:10,969
work well but there's a lot of variables

108
00:04:08,360 --> 00:04:12,650
in terms of how hard Greg is working how

109
00:04:10,969 --> 00:04:15,500
much he's perspiring how much other

110
00:04:12,650 --> 00:04:17,899
moistures in the suit etc etc so we got

111
00:04:15,500 --> 00:04:20,060
a good dry out a good sensor and we'll

112
00:04:17,899 --> 00:04:21,289
plan a nominal EBA with an

113
00:04:20,060 --> 00:04:23,060
understanding that if we have a repeat

114
00:04:21,290 --> 00:04:25,629
of the problem we understand how to
back out of that EBA if we need to
additionally yesterday you you received
a briefing on the plans for the for us
obtaining imagery during the 25 Soyuz
undock we're still continuing working
toward that goal the plans and
procedures are coming together in terms
of the status nothing has changed since
yesterday as a matter of fact as I left
the control center the 25's crew Dima
Paulo and Katie were viewing procedures
and uplink messages from our Russian
colleagues related to that to the unique
aspects of the the imagery during the
00:04:58,069 --> 00:05:03,050
undock and they were there was a plan to

00:05:00,589 --> 00:05:05,029
have a tag up with the experts in Moscow

00:05:03,050 --> 00:05:06,740
to talk about those procedures so that

00:05:05,029 --> 00:05:09,469
that plan is coming together very nicely

00:05:06,740 --> 00:05:11,300
we have all the technical aspects nailed

00:05:09,470 --> 00:05:13,520
down in terms of the station attitude

00:05:11,300 --> 00:05:15,800
the attitude timeline the plan for the

00:05:13,519 --> 00:05:18,799
Soyuz and then the plan for the

00:05:15,800 --> 00:05:20,900
activities of the Soyuz crew inside the

00:05:18,800 --> 00:05:23,449
spacecraft in order to get the imagery

00:05:20,899 --> 00:05:25,819
that we want to get so that's I'm really

00:05:23,449 --> 00:05:27,918
impressed with the off console team that

00:05:25,819 --> 00:05:29,889
has worked over the past five or six

00:05:27,918 --> 00:05:32,359
days to make that story come together
now they've handed that package off to the real time team and we'll start working it as a nominal part of the mission planning looking forward to the undock on Monday as I mentioned we started preparations for EVA 2 when I did the pre-flight briefing I identify dva to as protected as possibly one of the more challenging EPA's just because we're actuated a number of quick disconnects or cuties related to the ammonia system these are cuties that haven't have had leaks in the past and have been difficult to manipulate in the
past so there's a real possibility

158
00:06:07,160 --> 00:06:12,439
tomorrow that we will have some ammonia

159
00:06:09,079 --> 00:06:14,569
leakage as we set up these cuties

to do the refill of the leaking

160
00:06:12,439 --> 00:06:17,168
photovoltaic thermal control system

161
00:06:14,569 --> 00:06:19,519
we've got the procedures in place such

162
00:06:17,168 --> 00:06:21,649
the EV will be decontaminated the EV a crew

once they get inside the airlock we've

165
00:06:23,360 --> 00:06:26,538
draeger tubes that will monitor the amount of ammonia in the

166
00:06:24,949 --> 00:06:29,569
atmosphere and so we feel comfortable

167
00:06:26,538 --> 00:06:31,759
going forward with EBA with

168
00:06:29,569 --> 00:06:33,848
understanding if we do get

169
00:06:31,759 --> 00:06:36,050
contaminated with ammonia which is

170
00:06:33,848 --> 00:06:36,769
possible
we understand how to clean the crew up and keep them safe once they come inside.

one question that came up yesterday that I didn't have an answer for was the total volume of this photovoltaic or PV TCS loop that we're filling the total volume in the system the volume of ammonia is 55 pounds and what we plan to transfer or top off the system with is 5 pounds of ammonia from the external thermal control system which was one of the primary systems on the truss I think that's all I have for status okay Derek thank you very much we'll take questions
now starting here in Houston we'll ask you to step up to the mic please and please remember to state your name and affiliation yes great Phillip sauce with NASA Space Flight com can you just talk about progress in terms of your amid deck transfer status yeah actually I got a status this morning from our a CEO who's a flight control position in the shuttle flight control room that manages transfer and I don't have specific numbers but he told me this morning that we're well ahead so mid-deck transfers are all going extremely well we didn't
have a lot of transfer on this flight

going in but we're hours and hours ahead

good Gina Gina sincerity ABC News you

know we heard the Pope this morning

visit with the crew and you know he

expressed good wishes for paolo nespoli

and what that brought to mind is just in

terms of long-duration spaceflight

you'll be dealing a lot with those kind

of family issues down the road so talk

to me a little bit about the wealth of

knowledge you're gaining on Space

Station for dealing with cruise with

long-duration spaceflight and their

family issues and and how you you know

you assemble that for going beyond

low-earth orbit someday now one of the

things that one of the lessons learned

that we we took forward from our

experience with US astronauts on the MIR

Space Station was was the importance of

connectivity with the folks on the

ground with family members with Mission

Control and of course on the MIR space

station

without a network of teedra satellites

they had very limited communications

opportunities with the ground you know a

few hours a day at best with the space
station with our network of teachers satellites we have quite a bit of coverage I mean at any given hour we have 40 45 50 minutes of communications with the ground so you know anytime any issue they can simply make a call to the ground and they have all the resources available to them that we're ready to provide in addition to that we have regularly scheduled personal family conferences or private family conferences which are video calls with the crew members family and we also have what we call the IP phone which is
which is a phone that they can essentially pick up and dial anybody on the planet for large portions of the day and it's not continuous but it's another important resources for the crew just to stay connected with friends and families and relatives we also have an organization here at JSC whose job it is to basically provide psychological support to the crew so meet their meet their needs while they're on orbit the personal needs with friends and family so I think I think we actually do a really really good job and we've come a
long way in terms of family support and psychological support for the long-duration crew members and that's been pretty consistent feedback that we've gotten when they come home and debrief is that they felt very connected any other questions are Robert I Rob Perlman with collectspace.com tonight this big work right soon the spacewalkers will be camping out for the evening but then for the third EVA as I understand you're going to be doing this new light weight exercise pre-brief and then if that works you may do it for the
fourth as well so this potentially could be the last camp out my question is how do you determine what works is it just waiting until to see if they for this new procedure does it is just waiting to see if they get the bends or is there some tests they have to pass what what qualifies this new procedure versus the campout okay what you're a friend to is the insuit light exercise or what you know everything's got an acronym so we've referred to it as aisle is le or i'll and first i want to make clear that the aisle protocol has gone through the same
rigorous ground testing that the campout protocol and the exercise pre-brief has done so it's been validated with many many test subjects under many different conditions against the same criteria that the campout protocol and the exercise pre-breathe protocol were validated against so it's a medically proven perfectly sound protocol so what we're doing on orbit is not a test but it's the first time we've used the protocol so that's why we decided to use it on TV a three by starting with
it on TV a one because any time you try

something different with something as complicated as station can be with it

with the airlock and the computer

systems and support systems we like to go through it carefully and methodically

so there is no larger risk of the bends

with the out protocol then there is with

any other protocols that we've been

using having said that that would

certainly be a criteria that at the end

of EV a three we would ask the crew for

feedback you know was there did you feel

any differently than you did for EV a 1
and EVA to with it was there anything that you didn't like about the way the protocol was executed were there any surprises with the procedures so you know really it's a a tested protocol it's a validated protocol we considered equivalent to the ones we're using the ones will use tonight the ones we've used in the past but since its new will have the tag up with the crew and say did you feel anything different which we don't expect and is there any where there any surprises with the procedures do we need to change
something to do we need to do something

00:12:55,610 --> 00:13:02,210
better does it make sense to do on an

00:12:57,769 --> 00:13:05,389
EBA for okay any other questions here in

00:13:02,210 --> 00:13:08,019
houston we have reporters on the phone

00:13:05,389 --> 00:13:11,230
bridge will go there now marshall done

00:13:08,019 --> 00:13:14,939
yes hi can you hear me yes hear you fine

00:13:11,230 --> 00:13:17,279
yes Derek I was wondering is there

00:13:14,940 --> 00:13:19,080
no way to replace the sensor in Greg

00:13:17,279 --> 00:13:21,689
Chamitoff suit or even give him a

00:13:19,080 --> 00:13:23,730
different space suit component so you

00:13:21,690 --> 00:13:27,150
don't have to worry about this month on

00:13:23,730 --> 00:13:29,730
the fourth spacewalk generally speaking

00:13:27,149 --> 00:13:32,189
it's difficult to do on orbit

00:13:29,730 --> 00:13:34,080
maintenance of the spacesuits just

00:13:32,190 --> 00:13:36,030
because of the you know the complexity
of the suits and the tools and the spare parts required ironically enough but we did fly we did fly a spare CO2 sensor on this flight it came up on you LF six however you know it was looking ahead to a point where we had a procedure in place to do the change out so we don't have the procedures not done it's not validated and we're not ready to do that kind of CO2 sensor change out on orbit although looking ahead to a post shuttle station at some point we will be able to do that and we'll have the spares in place and the procedures in place we
just don't have it for this mission the

other challenge we have is that this is

an extra large hard upper torso or hut

that shamit off where's and we don't

have another one of those on board the

third thing so it's not a simple change

out the third thing I point out is that

there's no guarantee even if we did

change out the center that we wouldn't

have a repeat of this issue you know

it's all driven by moisture which in

turn is driven by many times how hard

the crew is working so what we think is

the best posture at this point is the
dried the sensor out as we did today and
then give it a go and ba for thank you
and I was just wondering if you could
talk about your feelings and your team's
feelings during the Pope's call it was a
historic moment on both fronts I'm just
wondering if you could talk a little bit
about that aspect please I I thought it
was just an amazing event really really
a beautiful event as we as we set up for
the event was up the video and checked
the video in the end the sound with the
crew on our monitors and Mission Control
we had a shot of the Vatican and people
passing by and then we had a shot of the

of the Pope getting set up and getting

miked up and I you know it it was just

an amazing beautiful event I thought his

words

were extremely eloquent and I thought

the crew did a great job of addressing

his question so it was an honor and a

privilege to be a part of it thank you

very much you're welcome bill Harwood

yeah thanks quick question from

yesterday we were told during the

undocking briefing that we got that it

once they've undock they cannot redock I

got to thinking about that I'm just
curious if they really did have a problem resealing the habitation module or something like that is there no way to come back to station or is that absolutely forbidden Thanks well I'll tell you that a redock is not analyzed and when I say analyzed I mean the specifics of the clearances the loads on the station the attitude control coming back in so that is not it's not an analyzed configuration that we would call a nominal back-up plan in addition as you heard yesterday the hatch a hatch leak scenario or an
inability to close the hatch is considered a very very remote outcome if there was a small leak as you heard yesterday the expectation is that that we would feed that leak and get the crew on the ground having said that in the extremely unlikely scenario that you couldn't get the hatch closed my expectation is that we would that soy swit station keep for as long as required a day maybe two days until we as the two programs got comfortable that it was safe to redock and my expectation in that scenario is that we would get
there we would get comfortable and in that unlikely event we would redock

thank you okay James Dean I thank you

James Dean from Florida today I've sent a few questions first araki with you

were you mentioned the potential for ammonia contamination as I recall the fake-out procedures and things like that can be pretty time-consuming I was just wondering if that's built into the EBA timeline or if if you do have to do something like

is that going to jeopardize getting any of the planned work done now for better
or for worse we've got a lot of

experience with these quick disconnects

and the ammonia leakage that often

accompanies those operations so so what

we do is we build what we call the wet

ammonia quick disconnect operations or

de the operations that the crew is actually

opening and closing the valves and

making the connections we build those we

build the timelines such that those

activities with the so called wet cuties

or in the first half our first third of

the EBA so therefore you know we get to

a point about halfway through the EBA

where we're done with ammonia and then
we can take credit in terms of baked out
time in the second half of the EBA for
ev a to for example we're doing work on
the the solar alpha rotary joiners Sarge
so we're getting baked out credit for
that entire time we were doing other
work so generally speaking we don't lose
content if we get contaminated thanks
regarding that Sarge work I was
wondering if you could bear it at all to
what was done on 126 I was thinking that
maybe that was a little bit more arduous
because there was some debris that
needed to be scraped up and cleaned off
that I presume isn't going to be
necessary this time but how similar are
they very similar operations we don't
expect to do like you said we don't
expect to do the kind of clean up that
was required on previous missions the
lubrication itself is very similar and
as a matter of fact I mean this this
particular the port Sarge has been
performing very well and we're a few
months ahead of where this preventive
maintenance would actually be required
but we since we had the opportunity
we're going to go into it go take care
of it now and get it out of the way but

'only don't expect and hope we don't

find any significant debris or any other

contamination on the joint thank you and

lastly I just have heard some mentions

of storm troubleshooting I'm not

familiar with what's going on there and

I just wonder if you can explain that

and it

there any potential issues regarding the

rear on day who and use the storm for

that no issues big picture no issues

with the storm hardware and no impacts
are no changes to the rear and about that

00:19:54,638 --> 00:20:05,469
we plan for undocking day okay so I did

00:20:01,148 --> 00:20:08,798
from you James thank you any other

00:20:05,470 --> 00:20:10,749
questions here in Houston seeing none

00:20:08,798 --> 00:20:13,869
we'll wrap up this briefing you can

00:20:10,749 --> 00:20:15,308
follow activities in space the

00:20:13,869 --> 00:20:21,449
International Space Station and

00:20:15,308 --> 00:20:25,079
dependavors flight sts-134 at w is a govt

00:20:21,450 --> 00:20:25,080
thank you for being here