00:00:00 --> 00:00:08
HELLO EVERYONE AND WELCOME TO TODAY'S PRELAUNCH
STATUS BRIEFING

00:00:08 --> 00:00:13
FOR ORBITAL ATK INTERNATIONAL SPACE STATION.

00:00:13 --> 00:00:17
I'M KATHRYN HAMBLETON FROM NASA OFFICE OF
COMMUNICATION.

00:00:17 --> 00:00:21
ORBITAL ATK CYGNUS CARGO SPACECRAFT LOADED
WITH ABOUT 5100 POUNDS

00:00:21 --> 00:00:23
OF CARGO FOR THE SPACE STATION.

00:00:23 --> 00:00:29
THE ANTARES ROCKET LIFTS OFF TOMORROW AT 8:03 PM EASTERN
TIME FROM THE MID-ATLANTIC REGIONAL SPACEPORT.

00:00:29 --> 00:00:32
LAUNCH PAD HERE THE FLIGHT FACILITY.

00:00:32 --> 00:00:36
HE TALKED ABOUT HOW PREPARATIONS FOR TOMORROW
ARE PROGRESSING.

00:00:36 --> 00:00:40
OUR JOE MULTIPLE AUTO DEPUTY MANAGER INTERNATIONAL
SPACE AGENCY

00:00:40 --> 00:00:44
PROGRAM FOR NASA'S JOHNSON SPACE CENTER IN
HOUSTON.

00:00:44 --> 00:00:49
FRANK CULBERTSON SPACE SYSTEMS GROUP PRESENT
ORBITAL ACK MIKE
PINKSTON ENTERS PROGRAM VICE PRESIDENT AND GENERAL MANAGER

ORBITAL ATK.

SARAH DAUGHERTY TEST DIRECTOR AT WALLOPS FLIGHT FACILITY.

AN DALE NASH EXECUTIVE DIRECTOR FOR VIRGINIA COMMONWEALTH

SPACEFLIGHT AUTHORITY.

US WATCHING TV ON TV OR ONLINE WOULD TAKE QUESTIONS FROM SOCIAL MEDIA.

DURING UPDATE YOU # ASK NASA.

FOR THOSE ON THE PHONE PLEASE PRESS STAR RUN ANYTIME FOR THE ANSWER INTO THE QUEUE.

FIRST OF ALL THANK YOU VERY MUCH AND WELCOME AGAIN TO THE
SPACE STATION

26
00:01:38.540 --> 00:01:41.380
PROGRAM GLAD TO BE BACK.

27
00:01:41.379 --> 00:01:46.679
WE MISSED SEEING THE LAUNCHES FROM HERE.

28
00:01:46.680 --> 00:01:50.470
THE ORBITAL ATK TEAM HAS DONE A FANTASTIC
JOB GETTING US WHERE WE

29
00:01:50.469 --> 00:01:51.920
ARE TODAY.

30
00:01:51.920 --> 00:01:55.609
WE LOOK FORWARD ON THE EVE OF THE LAUNCH TO
SEE ANOTHER CYGNUS

31
00:01:55.609 --> 00:02:00.099
SPACECRAFT BIRTH INTERNATIONAL SPACE STATION.

32
00:02:00.099 --> 00:02:01.459
WE HAVE A BUSY WEEK.

33
00:02:01.459 --> 00:02:05.659
THIS LAUNCH TOMORROW NIGHT STARTS TO WEEK
BUSY TRAFFIC.

34
00:02:05.659 --> 00:02:09.280
FOR THE INTERNATIONAL SPACE STATION.

35
00:02:09.280 --> 00:02:13.960
YOU HEARD EARLIER ABOUT 5000 POUNDS COMING
ON BOARD TO US WE HAVE

36
00:02:13.960 --> 00:02:16.200
A LAUNCH SLIGHTLY AFTER 8:00 P.M.

37
00:02:16.199 --> 00:02:17.199
LOCAL HERE.

38
00:02:17.199 --> 00:02:20.489
WE'LL HAVE THE BIRTHING ON THE 19TH.
SHORTLY AFTER 7:00 A.M. EASTERN TIME.

THAT'LL JUST BE THREE HOURS AFTER LAUNCH FROM WITH THREE CREW MEMBERS.

NASA ASTRONAUT TO RUSSIAN COSMONAUTS.

THEY WILL LAUNCH OUT OF THE MEETING TODAY ROUND OF YOU.

THE BE ARRIVING SPACE STATION FRIDAY MORNING EASTERN TIME SHORTLY

JUST AFTER 6:00 A.M.

LOCAL.

BRING US BACK UP TO SIX PEOPLE ON BOARD THE INTERNATIONAL SPACE STATION.

THAT WILL BE SURE LIVED THIS 10 DAYS OF LATER WILL HAVE THE UNDOCKING OF THE GROUP THAT LAUNCHED EARLIER
THIS SUMMER.

00:02:56,299 --> 00:03:01,469
UNDOCKING RETURNING HOME ENDING THEIR MISSION.

00:03:01,469 --> 00:03:06,079
IN EARLY MID NOVEMBER AFTER NOVEMBER 16 WILL HAVE ANOTHER LAUNCH

00:03:06,079 --> 00:03:08,680
AND WILL GO BACK UP TO SIX CREWMEMBERS ON BOARD THE INTERNATIONAL

00:03:08,680 --> 00:03:10,599
SPACE STATION.

00:03:10,598 --> 00:03:11,709
WITH THAT I WANT TO THANK YOU.

00:03:11,709 --> 00:03:15,109
I WANT TO THANK ORBITAL ATK AND THE FOLKS THAT SUPPORT THEM

00:03:15,109 --> 00:03:17,890
GETTING US WHERE WE ARE TODAY.

00:03:17,889 --> 00:03:21,318
>> GOOD AFTERNOON.

00:03:21,318 --> 00:03:23,419
WELCOME BACK TO WALLOPS.

00:03:23,419 --> 00:03:31,199
THIS IS A VERY EXCITING TIME FOR US AT ORBITAL ATK WANT TO THANK

00:03:31,199 --> 00:03:34,818
EVERYONE WHO HAS A PART IN GETTING US BACK TO THIS POINT GETTING

00:03:34,818 --> 00:03:36,329
READY FOR A LAUNCH AFTER TWO YEARS.

00:03:36,330 --> 00:03:38,719
A LOT OF HARD WORK HAS GONE INTO THIS.

I ESPECIALLY WANT TO THANK NASA WALLOPS INCLUDING THE TEAM THAT WEATHERED THE HURRICANE NICOLE AND BERMUDA.

AND GOT IT BACK ONLINE FOR SO QUICKLY.

AS WELL AS PROTECTING THE HARDWARE SO WELL.

EVERYONE HERE AT WALLOPS VIRGINIA SPACEFLIGHT AUTHORITY, THE RANGE, THE SAFETY FOLKS EVERYONE WHO HAS WORKED TO MAKE THIS HAPPEN.

I ESPECIALLY WANT TO THANK THE MEMBERS OF THE FLIGHT SYSTEMS GROUP ANTARES TEAM EVERYONE WHO IS WORKED ON PREPARING THE ROCKET AND MAKING SURE THAT WE ARE READY TO GO.

THE CYGNUS SPACECRAFT ALSO READY LOADED WITH ABOUT 2400 ~GRAMS OF CARGO.
THE GROUP EAGERLY AWAITS AS ALWAYS.

EVERY CARGO MISSION IS LIKE CHRISTMAS.

THEY NEVER KNOW WHAT THEY'RE GOING TO FIND WHEN THEY OPEN THE HATCH.

I WILL LOOK FORWARD TO THAT HONOR ON 19 OCTOBER.

AS JOEL SAID LAUNCH TIME IS 8:03 PM WILL LAUNCH OR WILL RHONDA VIEW AT ABOUT THE SAME TIME IN THE MORNING.

THE CREW COME ABOARD ON FRIDAY.

ABOUT 6:00 A.M.

EASTERN TIME.

THIS PARTICULAR CYGNUS SPACECRAFT IS ALL OF SO FAR IS NAMED AFTER.

A FORMER ASTRONAUT THIS ONE IS NAMED AFTER ALAN POINDEXTER.

CAPTAIN KNIGHT STATES NAVY RETIRED.
ALAN IS A SECOND PHASE ASTRONAUT WAS ACTUALLY PARTICIPATED IN THE ASSEMBLY AND OPERATION OF THE INTERNATIONAL SPACE STATION.

ALAN WAS A FORMER NAVY FIGHTER PILOT A TEST PILOT, AND FLEW INTO SHUTTLE MISSIONS PRIOR TO RETURNING FROM NASSAU.

HE WAS ON SES 122 THAT CARRIED THE COLUMBUS LABORATORY FROM ESA TO BE INSTALLED ON THE SPACE STATION.

A GREAT ACHIEVEMENT IN TERMS OF EXPANDING THE CAPACITY AND SCIENTIFIC CAPABILITIES OF THE STATION.

AND THEN HE COMMANDED STS 131 ABOARD DISCOVERY WHICH WAS INTERESTINGLY A CARGO MISSION.

AND THEY CARED ABOUT 6000 KILOGRAMS OF CARGO TO AND FROM THE STATION.

AND SO WE THINK IT'S VERY FITTING THAT THE ALAN IS A NAMESAKE FOR
THIS PARTICULAR CIGNA WERE VERY HONORED TO HAVE HIS NAME AND HIS PICTURE IS A PART OF THIS SPACECRAFT.

WE DO HAVE A VIDEO THAT I WOULD LIKE TO RUN THROUGH.

THAT WILL GIVE YOU A LITTLE BIT OF AN IDEA OF THE CYGNUS SPACECRAFT AND ITS COMPOSED OR CONSISTS OF MANY OPERATIONS THAT WILL BE SEEING OVER THE NEXT FEW DAYS.

THE SERVICE MODULE WHICH IS INTEGRATED AND TESTED AT OUR DULLES VIRGINIA FACILITY NOT TOO FAR FROM HERE.

YOU SEE IN THIS PICTURE THE SOLAR RAYS THAT ALSO BUILT BY ORBITER.

ATK THE DEPLOYMENT TESTING AND THEN CYGNUS PRESSURIZED CARGO

MODULATOR SO COMES FROM TELUS FELLOWS ALENIA ITALY.

MADE WITH THE CYGNUS SERVICE MODULE USING THIS PICTURE HERE VERY
115 00:06:33,680 --> 00:06:36,019
DELICATE OPERATION.

116 00:06:36,019 --> 00:06:38,959
TAKES QUITE A WHILE TO ACCOMPLISH BUT OF COURSE
VERY IMPORTANT IN

117 00:06:38,959 --> 00:06:43,068
MAKING SURE THE TWO SPACECRAFTS ARE SECURELY
ATTACHED TOGETHER.

118 00:06:43,069 --> 00:06:46,259
ROTATED INTO VERTICAL CARE TO THE DRILLING
FACILITY AROUND THE

119 00:06:46,259 --> 00:06:48,240
ISLAND.

120 00:06:48,240 --> 00:06:50,978
THEN AFTER FUELING ITS TAKEN INTO THE HORIZONTAL
INTEGRATION

121 00:06:50,978 --> 00:06:55,949
FACILITY THAT YOU SEE HERE TO BE READY FOR
MATING TO THE LAUNCH

122 00:06:55,949 --> 00:06:57,978
VEHICLE ITSELF.

123 00:06:57,978 --> 00:07:01,848
ONE OF THE LAST THINGS WE DO IS LOAD SOME
CARGO PRI OR TO THE LAST

124 00:07:01,848 --> 00:07:06,060
CLOSING OF THE HATCH THAT WE CALL LATE LOAD
THE THINGS THAT NASA

125 00:07:06,060 --> 00:07:09,360
BRINGS IN LATE THAT THEY HAVE BEEN PREPARING
THAT THEY NEED TO GO

126 00:07:09,360 --> 00:07:11,699
ON THE LAST WEEK OR TWO.
SOMETIMES AS TIME CRITICAL SOMETIMES IT’S NOT.

THIS TIME IT’S NOT THAT TIME CRITICAL BUT IT WAS LATE.

ONCE IT’S ASSEMBLED TO ANTARES MICHAEL TULLY ABOUT THE LAUNCH

JUST A MOMENT THEY DELIVER US INTO ORBIT.

WE SEPARATE FROM THE LAUNCH VEHICLE DEPLOY THE SOLAR RAYS THIS

PARTICULAR OPERATION TAKES OVER 15 MINUTES.

THIS IS SPEEDED UP BECAUSE JOEL DOESN’T REALLY WANT ME TO TALK

THAT MUCH.

[LAUGHTER] OVER THE COURSE OF THE NEXT TWO DAYS WILL RAISE THE

ORBIT AS WE CATCH UP WITH THE SPACE STATION AND PREPARE FOR THE

FINAL RHONDA VIEW.

AND BIRTHING.

AND BIRTHING.
AS WE APPROACH THE STATION THE CREW WILL BE WATCHING THIS VERY CLOSELY.

PREPARING TO SNAG US WITH THE CANADIAN REMOTE MANIPULATOR SYSTEM OR THE ARM.

AND THEN AS WE GET WITHIN 10 METERS OF THE STATION KEPT THE LECTURE GRAPPLES WITH THE END EFFECTOR VERY DELICATE OPERATION THAT CONSISTS OF MATING US WITH THE THIS CASE NOTED ONE OPENING THE HATCH TO SEE WHAT’S INSIDE.

THEY BEGAN THE ACTIVITY OF UNLOADING THE 2400 KILOGRAMS.

THEY UNLOADED WITH DISPOSABLE CARGO OR SOME PEOPLES TERMS TRASH.

DEPLOY US FROM THE STATION WHERE WILL FLY AWAY AND BEGAN OUR REENTRY OPERATIONS.

DURING THE EIGHT DAYS FOLLOWING OUR TIME ABOARD
THE STATION WILL

00:08:30,228 --> 00:08:32,009
CONDUCT A COUPLE OF EXPERIENCE.

00:08:32,009 --> 00:08:34,379
THE FIRST ONE WILL BE OF FIRE EXPERIMENT ON BEHALF OF GLENN

00:08:34,379 --> 00:08:39,580
RESEARCH CENTER CELL FIRE REACTS AND DRG REDEPLOY SOME CUBESATS

00:08:39,580 --> 00:08:43,840
FOR AN ATARAX ON THE OUTSIDE OF THE SPACE STATION.

00:08:43,840 --> 00:08:45,889
AND THAT IS ABOUT REAL TIME THERE.

00:08:45,889 --> 00:08:49,009
IT'S QUITE A OPERATION.

00:08:49,009 --> 00:08:54,200
ONCE WE'VE COMPLETED ALL OF OUR POST ORBITAL ACTIVITIES, WILL

00:08:54,200 --> 00:08:58,028
REENTER OVER THE PACIFIC THIS ACTUAL VIDEO TAKEN FROM AN AIRCRAFT

00:08:58,028 --> 00:09:01,259
DURING THE OA SIX REENTRY.

00:09:01,259 --> 00:09:03,528
WE DO MONITOR THAT.

00:09:03,528 --> 00:09:06,200
WE HOPE IT ALL COMES DOWN UNINHABITED AREAS.

00:09:06,200 --> 00:09:10,120
SOMEONE WE DON'T WANT TO LAND ON ANYBODY'S HEAD NOR DO YOU.

164
ALL BURNS UP.

SO WE FEEL VERY CONFIDENT OF WHAT'S GOING ON.

AGAIN, WE'RE VERY PROUD TO BE AT THIS POINT.

VERY GRATEFUL TO ALL OF THE HARD WORK THAT'S GONE INTO GETTING US HERE.

WE ARE READY TO GO TOMORROW.

GO ON TOWERS GO CYGNUS NOW GO MIKE.

THANKS FRANK.

I'D LIKE TO START BY SAYING HOW GREAT IT IS AND HOW EXCITED WE ARE TO BE BACK HERE WALLOPS AND OPERATIONS MODE WITH ANTARES ROCKET.

ON PAD 08 GETTING READY FOR LUNCH TOMORROW.

I THINK I'VE GOT A SHORT VIDEO TO TALK A LITTLE BIT ABOUT THE UPGRADED ANTARES ROCKET.
THE SHOWS CUTAWAY FASHION THE MOST SIGNIFICANT UPGRADE WE MADE TO
THE VEHICLE IS A NEW RD-181 GOING REALLY FAST
RD-181 ENGINE TO
ENGINES POWER THE VEHICLE THE CORE HAS TWO PROPELLANT TANKS RP
TANK WITH ABOUT 21,000 GALLONS UNLOCKS TANK THAT WAS BLUE BUT IT WENT REALLY FAST.
ABOUT 40,000 GALLONS REVERSING THE CIGNA THE SECOND STAGE THAT I MISSED.
IT IS A CASTOR 30 XO BUILT BY OUR ORBITAL ATK TEAM UP IN UTAH.
ALL OF THAT UPPER STACK IS ENCASED BY A FEARING THAT'S ABOUT WERE GOING TO DO IT AGAIN.
A FEARING THAT'S ABOUT 10 METERS LONG.
THE BOYS WAS WERE UP OUT OF THE ATMOSPHERE THINK THAT'S ENOUGH OF
THAT ONE.

190
00:10:38,470 --> 00:10:44,110
[LAUGHTER] TAKE A TREMENDOUS AMOUNT OF WORK TO GET TO THIS POINT.

191
00:10:44,110 --> 00:10:48,949
BETWEEN THE RECONFIGURATION OF ANTARES GETTING THE PAD READY TO

192
00:10:48,948 --> 00:10:52,819
GO WE HAD A VERY SUCCESSFUL STAGE TEST WHICH IS ALMOST LIKE A

193
00:10:52,820 --> 00:10:55,670
LAUNCH IN AND OF ITSELF BACK IN MAY.

194
00:10:55,669 --> 00:11:00,429
AND THEN PREPARING THIS VEHICLE FOR LAUNCH I WANT TO SAY THANKS

195
00:11:00,429 --> 00:11:08,399
AND COMMEND THE ENTIRE TEAM ORBITAL ATK DALES MID- ATLANTIC

196
00:11:08,399 --> 00:11:14,740
REGIONAL SPACEPORT TEAM THE WALLOPS TEAM FOR A TREMENDOUS EFFORT

197
00:11:14,740 --> 00:11:19,250
UNBELIEVABLE HOURS THAT WENT INTO THIS AND GETTING US READY FOR A

198
00:11:19,250 --> 00:11:21,620
SPECTACULAR MISSION COMING UP TOMORROW.

199
00:11:21,620 --> 00:11:25,240
I THINK I GOT ONE MORE VIDEO TO TALK A LITTLE BIT ABOUT THE

200
00:11:25,240 --> 00:11:26,730
LAUNCH OPERATION.

201
00:11:26,730 --> 00:11:32,709
THIS IS THE VEHICLE AND THE HEFT WE MADE IT
SUNDAY NIGHT THE TEAM GETTING IT PREPPED AND READY FOR FEARING

MADE THE FEARING GETS MATED A COUPLE MORE TESTS ARE RUN AND THE

WORK READY TO ROLLOUT.

THIS HAPPENED THURSDAY EVENING.

ROLL THE VEHICLE TO THE PAD GOT IT READY TO ERECT.

THE COUNTDOWN TOMORROW WILL START OUT AT ABOUT T MINUS SIX HOURS.

WE BEGAN FUELING THE VEHICLE ABOUT AN HOUR AND A HALF OUT

HERE WE ARE AT ABOUT T -10 MINUTES WHERE WE DO OUR FINAL

READYNESS POLES AND GO FOR LUNCH CALLS.

AT ABOUT THREE MINUTES AND 30 SECONDS WILL ACTUALLY TRANSITION TO

AN AUTO SEQUENCER THAT CONTROLS THE COUNTDOWN.
ALL THE WAY DOWN TO T0 IN THE T0 WE HAVE IGNITION SHORTLY

THEREAFTER LIFT OFF.

THE VEHICLE DOES A LITTLE WIGGLE MOVEMENT THERE TO AVOID PUTTING

THE PLUME ON THE TRANSPORTER RECTOR SO DON'T LET THAT STOP YOUR HEART.

IT DOES MIND BUT IT'S ALL PERFECTLY NORMAL.

AND THEN WERE OFF WITH STAGE ONE BURNING STAGE ONE BURNS FOR

ABOUT THREE AND HALF MINUTES.

AT WHICH POINT WAS SEPARATED.

WILL CODED FOR A LITTLE BIT.

AND THEN SHORTLY AFTER STAGE I SEPARATION WILL COME UPON FEARING

SEPARATION.

EXPOSES THE SECOND STAGE IN THE CYGNUS PAYLOAD REIGNITED SECTION.
STAGE.

THE SECOND STAGE FOR LITTLE MORE THAN TWO IS.

TO TAKE CI GNA TO ORBIT AND BURNOUT WILL DO LITTLE BIT OF REORIENTATION AND THEN YOU GET A TICKET SHOT ON FRANK'S VIDEO BUT WILL SEPARATE THE PAYLOAD ABOUT NINE MINUTES INTO THE MISSION.

THAT'S ALL WE GOT IN STORE FOR TOMORROW.

JUST THANKS AGAIN.

REALLY EXCITED TO BE HERE AGAIN.

MY COMMENTS TO THE ENTIRE TEAM IT'S TAKEN A HECK OF A LOT OF WORK TO GET TO THIS POINT.

NEXT I'LL JUST ECHO EVERYBODY ELSE THAT'S COMMENTS THAT WE ARE VERY EXCITED WALLOPS LAUNCH RANGE THE BIG SHOW BACK IN TOWN WE
BEEN BUSY OVER THE LAST COUPLE OF YEARS WITH OTHER MISSIONS WERE ALWAYS EXCITED TO HAVE AND TERRY'S BACK HERE LAUNCHING WITH US.

AS FAR AS LAUNCH RANGE INSTRUMENTATION AND STATUS GOES WERE CLEAR ON ALL OF OUR ASSETS ALL OF OUR TRACKING RATERS AND TELEMETRY SITES FRANK ALLUDED TO EARLIER.

OUR BERMUDA TRACKING STATION AFTER A COUPLE OF DOWN DAYS DUE TO HURRICANE NICOLE FARED REMARKABLY WELL AND THAT WEATHER AND MAJOR KUDOS TO THAT TEAM THERE THAT WEATHER THE STORM AND WAS ABLE TO GET THOSE SYSTEMS BACK UP AND RUNNING.

AND THEY ARE GREEN AND FUNCTIONING NORMALLY AT THIS TIME.

WERE READY TO GO.

OUR LAUNCH WHETHER OFFICER JUST A LITTLE WHILE AGO GAVE US ABOUT
IS CLEAN OF A BILL OF HEALTH AS YOU CAN FOR WHETHER SO THEY CAN

GIVE US 100 PERCENT CHANCE OF NO VIOLATIONS WE GOT 95 BUT I THINK

THAT'S A TYPICAL WEATHERMAN THERE.

[LAUGHTER] THEIR INSURANCE PROBABLY REQUIRES A NEVER TO GIVE 100

PERCENT ADVANCE OF ANYTHING SO AGAIN, WORK CITED AND WERE READY

FROM THE LAUNCH RANGE ASPECT AND PASS IT OVER TO DALE.

THANK YOU EVERYONE.

THE COMMONWEALTH IS AGAIN VERY PLEASED TO PUT ON A SHOWCASE OF

WHERE THE COMMONWEALTH IS COMING IN AND CREATED A VERY STRONG

PARTNERSHIP WITH NASA IN ORDER TO ATK FOR GEOCENTRIC PARTNERSHIP.

REALLY THE BIRTH OF SPACE OUR SPACE PROGRAM IN THE US STARTED

HERE.
AT WALLOPS BUT WITHOUT THE INVESTMENT SIGNIFICANT INVESTMENT BY

THE COMMONWEALTH, IT WOULD ALL STILL BE SUBORBITAL ROCKETS.

THE INVESTMENT THAT'S COMMONWEALTH PUT IN THAT ENABLES US THE

ABILITY TO LAUNCH THE ANTARES ROCKET FROM HERE ALSO THE MASTER

CLASS ROCKETS IF YOU GO OUT THERE YOU SEE SIGNS IS A ON-RAMP TO

THE INTERNATIONAL SPACE STATION THAT FRANK DESIGNED THAT.

WE WILL LAUNCHING ANOTHER ORBITAL ATK MISSION WITHIN 12 DAYS

HEADED TO THE MOON WE JUST WANTED TO MAKE SURE THAT THEY DID GET

CONFUSED AND GO THE WRONG PATH WITH THE WRONG POCKET SO THAT'S

ONE TIME SAYS MOON AHEAD AND ON-RAMP INTERNATIONAL SPACE STATION.

WITH THAT INVESTMENT, WE HAVE ENABLED THIS NATIONAL ASSET THAT IS

A LOT OF CAPABILITY TO REALLY GET INTO THE
THE PARTNERSHIP ONLY BECOME STRONGER THROUGH THIS ENTIRE EFFORT.

AGAIN ORBITAL ATK A VIRGINIA-BASED CORPORATION.

WE HAVE STRENGTHENED AND RECOMMITTED OUR PARTNERSHIP UP TO AND INCLUDING THE GOVERNOR LEVEL AND CEO WITH ORBITAL ATK AND THAT WILL CARRY THROUGH THROUGH AT LEAST 2024.

WE HAVE REBUILT A PAD, WE HAVE PROBABLY NEVER HAD A CLEANER BETTER LOOKING PAD.

IT LOOKS REALLY GOOD.

THE WHOLE REBUILT EFFORTS WITH NASA AND OVER ATK STARTED WITHIN MINUTES AFTER THE EXPLOSION AND IS CONTINUED ON THROUGH.

WE DID COMPLETE THE PAD AND REBUILT IT IN ABOUT 11 MONTHS AND THREE WAYS BETWEEN
NASA OURSELVES AND ORBITAL ATK.

AS MIKE SAID THE TEST CAME OFF EXTREMELY WELL.

WET DRESS REHEARSAL WE FULLY IT UP DON'T FIRE IN DON'T LET IT GO

THOSE WERE TWO OF THE CLEAREST TESTS WE'VE EVER SEEN IMPROVED OUT

THE SYSTEM NOT ONLY TO REBUILD THE PAD BUT THE MODIFICATIONS WE

MADE FOR THE RD-181.

THIS FLOW IS GONE DESPITE BERMUDA HAS GONE

REMARKABLY WELL HERE.

WE ARE LOOKING FORWARD TO PUTTING YOUR ROCKETS OUT OF THE NASA

WALLOPS FLIGHT FACILITY AND PLAYING OUR PART IN THAT.

THANK YOU.

WE WILL NOW TAKE QUESTIONS FROM THOSE HERE IN THE ROOM AS WELL.
AS THOSE ON THE PHONE.

00:18:06,970 --> 00:18:09,730
AGAIN FOR THOSE ON THE PHONE PLEASE PRESS
STAR WANTS TO BE

00:18:09,730 --> 00:18:12,180
ENTERED INTO THE QUEUE AT ANY TIME.

00:18:12,180 --> 00:18:18,990
THOSE WHO ARE FOLLOWING US ON THE INTERNET
CHECK PLEASE USE A #

00:18:18,990 --> 00:18:35,690
ASKED NASA.

00:18:35,690 --> 00:18:36,690
>>.

00:18:36,690 --> 00:18:44,028
[INDISCERNABLE]

00:18:44,028 --> 00:18:46,849
>> IT TOOK A LONG TIME BUT ALTERED TO MAKE
IT BRIEF IN TERMS OF

00:18:46,849 --> 00:18:51,240
EXPLANATION BUT WE DID HAVE TO MAKE SOME CHANGES
TO THE

00:18:51,240 --> 00:18:55,180
STRUCTURES THAT ARE USED TO TRANSFER THE TRUST
FLOWS FROM THE

00:18:55,180 --> 00:18:58,759
ENGINE TO THE CORPORATE PROPELLANT TANKS THE
CORE STRUCTURE

00:18:58,759 --> 00:19:01,869
ITSELF WAS LARGELY UNCHANGED.

00:19:01,869 --> 00:19:06,649
AIRED GREATLY BY HOW CLOSE THEY MATCH THE
TWO ENGINES WERE IN
SOME OF THEIR KEY CHARACTERISTICS.

WE HAVE DIFFERENT CONTROL SCHEMES ON THE ENGINES.

ON THE RD-181 THAT WE HAD IN THE AJ 26 AS WELL AS SIGNIFICANT ENHANCEMENTS IN THE AMOUNT OF INSTRUMENTATION WE HAVE ON BOARD.

BOTH OF WHICH DROVE SOME FAIRLY SIGNIFICANT CHANGES TO OUR AVIONICS IN ORDER TO WORK TOGETHER WITH IT AND THEN OBVIOUSLY SOME DIFFERENCES AND UNIQUE INTERFACES FROM APPELLANTS AND GASES AND COMMODITY PERSPECTIVE IT ALL HAD TO BE IMPLEMENTED SO IT WAS A VERY DETAILED METICULOUS PROCESS.

BUT AS EVIDENCED BY THE STAGE TEST WE GOT IT RIGHT.

READY TO GO READY TO GO TOMORROW.
>> WHAT WE WOULD DO IS TOMORROW'S LAUNCH IS GOOD AND THEY WOULD

HAVE THE BIRTHING ON THE 19TH IF HAVE TO PUSH TO MONDAY THEN

CYGNUS WOULD GO HEADED LAWYER FOR THE CREW WOULD COME INTO THE

DOCKING.

THE CYGNUS CAPABILITY REVIEW TO FLIGHT READINESS REVIEW THEY HAD

WORST-CASE 20 DAYS, 20+ DAYS AND WITH A NOMINAL ASSET THEY WOULD

HAVE ALMOST 40 DAYS.

SO NOT AN ISSUE AT ALL BUT CYGNUS WOULD STAND DOWN AND WAIT FOR

THE HUMAN SPACEFLIGHT TO GO AHEAD AND DOCK.

>>.

WE WORK NOURISHES ON CYGNUS READY TO GO.
ANXIOUS TO GET GOING.

WEATHERMAN MAKES ME NERVOUS BUT.

ANY OF US HAVE BEEN IN THIS BUSINESS A WHILE YOU TAKE THIS VERY SERIOUSLY AND YOU WANT EVERYTHING VERY CLOSELY.

YOU'VE GOT TO COUNT ON LOVE PEOPLE.

YEAH ALWAYS NERVOUS.

BUT I'M EXTREMELY CONFIDENT.

IN THIS HARDWARE.

I THINK THE CREW IS GOING TO GET THEIR PRESENCE ON WEDNESDAY.

WE GET IT OFF TOMORROW.

>> I'LL JUST ADD FROM IN ANTARES SITE.

AS OF THIS POINT WE'RE NOT WORKING ANY MAJOR ISSUES I'M SURE I
COULD HAVE SAID IT ANY BETTER THAN FRANK DID.

WERE ALWAYS NERVOUS BUT WE WOULD HAVE A ROCKET
OUT THERE WHO ARE

CONFIDENT WE WEREN'T READY TO GO.

>> TAKE HER NEXT QUESTION FROM SOCIAL MEDIA.

>>.

[INDISCERNABLE]

>> WHEN WE RECEIVED THE CARGO FROM NASA'S
ALREADY PREPACKED AND

BAGGED OF VARIOUS SIZES OF HIS SENSITIVE EQUIPMENT
ALSO ENCASED

IN FOAM.

WHICH IS GOOD AND BAD WHEN YOU GET UP THERE
HAS TO DO WITH THE

PHONE BUT ALL PACKED IN.

LIKE ALL THOSE BOXES THAT Come TO YOUR FRONT
DOOR YOU GOT TO DO

SOMETHING WITH THE BOXES AFTER YOU OPEN UP
YOUR PRESENCE BUT THEY

364
00:22:42,500 --> 00:22:45,390
DO A VERY GOOD JOB OF THAT IT'S PACKED VERY
TIGHTLY IN THE CYGNUS

365
00:22:45,390 --> 00:22:49,980
SPACECRAFT WITH STRAPS TO HOLD IT IN PLACE.

366
00:22:49,980 --> 00:22:52,940
SO FAR WE'VE HAD VERY VERY GOOD SUCCESS WITH
THE HARDWARE

367
00:22:52,940 --> 00:22:56,058
ARRIVING AS FAR AS I KNOW 100 PERCENT.

368
00:22:56,058 --> 00:22:58,079
SUCCESSFULLY TO THE SPACE STATION.

369
00:22:58,079 --> 00:23:01,740
WHEN ASKED TO TAKE CARGO OFF THE STATION WE
CAN CARRY UP TO ABOUT

370
00:23:01,740 --> 00:23:06,480
3000 KILOGRAMS IF THEY SO DESIRE WHEN WE LEAVE
IN ABOUT 30 DAYS.

371
00:23:06,480 --> 00:23:10,259
THEY ALSO PACK IN FOAM PACKET VERY TIGHTLY
SO IT DOESN'T RATTLE

372
00:23:10,259 --> 00:23:12,929
AROUND INSIDE THE SPACECRAFT AND WE CAN CONTROL
THE CENTER OF

373
00:23:12,929 --> 00:23:16,320
GRAVITY MAKE SURE THAT EVERYTHING IS WHERE
SHOULD BE AS WE

374
00:23:16,319 --> 00:23:25,939
REENTER
THE ATMOSPHERE.

375
00:23:25,940 --> 00:23:26,940
>>.
[INDISCERNABLE]

>> NONE OF THE STAGES ARE REUSABLE.

THE FIRST STAGE DOES FALL INTO THE OCEAN.

THE SECOND STAGE MAY STEP A LITTLE WHILE BUT I'LL NOT VERY LONG.

IT WILL COME DOWN FROM UP THE ATMOSPHERE.

WHEN IT'S FINISHED.

>> FOR FRANK AND JOEL, WE HEAR FROM ORBIT TO SOME DISCUSSION

ABOUT POSSIBLE SIX-HOUR MISSION.

TO THE ISS.

I WAS WONDERING IF THE TEAM WAS BEING CHALLENGED TO LOOK AT THAT

AND VIRTUAL DO THINK THAT'S ACTUALLY A SERVICE NASA IS GOING TO

NEED THE FUTURE?

THANKS A LOT.
We would still like to look at that as a possibility we haven't had that requirement laid on us. I think it would take some additional work on the part of our stay spacecraft as well as NASA's ability to coordinate with us to make that happen.

There may be time in the future where we would like to get something to a station so quickly that we figure out a way to do that. Physically it's possible practically it's difficult. Right now it's was driving the time to get the space station is our science requirements. We been able to manage within the requirements we've had.
WITH THE TODAY AS THAT CHANGES WILL WORK WITH ORBITAL ANY OTHER PROVIDER TO SEE IF WE CAN SPEED THAT UP FROM OUR PHYSICS.

STANDPOINT YOU CAN DO THAT AND PICK THE RIGHT DAYS, THE RUSSIANS GENERALLY DO THAT THE SOY SPACECRAFT IN THE PROGRESS SPACECRAFT.

RIGHT NOW THEIR NEW VEHICLE THAT THERE EARLY STAGES BUT THE GO BACK A RENDEZVOUS.

>> JUST ONE THING TO ADD, CHALLENGE OF DOING THAT THE TIMING IS A STATION GOES OVERHEAD.

WE HAVE A FIVE MINUTE WINDOW TOMORROW.

WE CAN ACTUALLY ASSIST TO GO ANYWHERE BECAUSE WE CAN TAKE UP TO TWO DAYS TO GET TO THE STATION.

IF YOU WANT TO GET THERE AND FOR ORBITS AND WE BASICALLY STRAIGHT
OVERHEAD YOU MIGHT ONLY BE TO LAUNCH EVERY
THREE DAYS IS TO BE

00:25:31,390 --> 00:25:38,059
RIGHT ON THE CENTER.

00:25:38,058 --> 00:25:42,329
>> ANOTHER QUESTION?

00:25:42,329 --> 00:25:43,329
>>.

00:25:43,329 --> 00:25:44,470
[INDISCERNABLE]

00:25:44,470 --> 00:25:47,528
>> CAN YOU TALK A LITTLE BIT ABOUT YOUR FUTURE
HOPES FOR THIS

00:25:47,528 --> 00:25:48,528
ROCKET?

00:25:48,528 --> 00:25:52,000
YOU GET A MORE POWERFUL ROCK HIGHER THRUST
OF THE STEADY

00:25:52,000 --> 00:25:56,769
PRODUCTION LINE WITH THESE NEW RD-181 SO I
WOULD LIKE TO KNOW

00:25:56,769 --> 00:26:00,599
WHAT KIND OF NEW MISSIONS TO COULD BE ENABLED
BY THIS CONNECT

00:26:00,599 --> 00:26:02,759
WERE THE SATELLITES CAN LAUNCH?

00:26:02,759 --> 00:26:08,269
>> THE DAY YOU ANNOUNCED A SATELLITE LAUNCH
OF PROTON WHY NOT ON

00:26:08,269 --> 00:26:13,690
AND TERRY’S TALK ABOUT THAT WHAT YOU CAN DO
WITH ANTAES.
WERE PROPOSING THE USE OF CYGNUS FOR OTHER APPLICATIONS AND LOWER ORBIT.

TO INCLUDE SATELLITE SERVICING AND OTHER THINGS THAT ARE COMING IN THE FUTURE.

ANTARES WOULD CONTINUE TO BE THE IDEAL LAUNCH VEHICLE FOR MOST OF THOSE MISSIONS.

FOR OTHER SPACECRAFT FOR EXAMPLE THE COMMUNICATION SATELLITES.

THAT WE BUILD ARE ALSO IN MY GROUP BUT IN ORDER TO GET TO GEOSTATIONARY ORBIT TAKES A DIFFERENT UPPER STAGE THAN WHAT THE CURRENT ANTARES HAS ON IT SO WE HAVE TO MODIFY THE ROCKET MIGHT CAN TALK ABOUT THE FUTURE OF THAT.

WE LOOK AT THE VARIOUS A NUMBER OF DIFFERENT VARIATIONS AS A SET
OF CYGNUS CAN BE USED A LOT OF DIFFERENT PURPOSES.

THE TECHNOLOGY THAT WE USE IN THE CYGNUS CAN ALSO BE USED FOR A LOT OF DIFFERENT MISSIONS AND A LOT OF DIFFERENT OBJECTIVES AND

WE ARE EVOLVING THAT TO OTHER SPACECRAFT.

>> I DAD THERE'S NOTHING ABOUT THE ANTARES ROCKET THAT MAKES IT UNIQUE TO THE CRS MISSION CERTAINLY WE'VE GOT ASPIRATIONS TO MARKET AND SELL IT FOR OTHER SATELLITE APPLICATIONS.

ANYTHING IN THE MEDIUM CLASS.

AS FRANK SAID, ONE OF THOSE APPLICATIONS WOULD REQUIRE DEVELOPMENT OF A ALTERNATE UPPER STAGE CAPABILITY.

WE GOT THOUGHTS ON THAT WE COULD PUT IT TO WORK IN THE FUTURE.

AND CERTAINLY IN OUR CURRENT CONFIGURATION, LOOKING AT NASA SCIENCE MISSIONS, CERTAIN COMMERCIAL OPPORTUNITIES
THAT MAY

451 00:27:55,579 --> 00:27:56,579 EMERGE.

452 00:27:56,579 --> 00:28:03,168 I THINK IN ALL CASES, SUCCESSFUL FLIGHT IS GOING TO BE AN ENTRY

453 00:28:03,169 --> 00:28:05,940 REQUIREMENT TO ANY OF THAT AND SO THAT'S WHY WE HAVE BEEN

454 00:28:05,940 --> 00:28:10,820 SQUARELY FOCUSED ON OA-5 MISSION COMING UP BUT CERTAINLY THE

455 00:28:10,819 --> 00:28:14,358 FUTURE LOOKING TO DO MORE WITH ANTARES AND JUST ERS.

456 00:28:14,358 --> 00:28:18,980 >> WE'RE GOING TO GO TAKE A QUESTION FROM THE PHONE FIRST AND THEN

457 00:28:18,980 --> 00:28:29,009 WE'LL GO APPEAR IN THE FRONT.

458 00:28:29,009 --> 00:28:35,750 >> I HAVE TWO QUESTIONS.

459 00:28:35,750 --> 00:28:44,750 THE FIRST IS FOR MR. NASH.

460 00:28:44,750 --> 00:28:46,140 AFTER THE ACCIDENT THERE WAS QUITE A CONTROVERSY OVER REPAIRS.

461 00:28:46,140 --> 00:29:02,009 [INDISCERNABLE]

462 00:29:02,009 --> 00:29:04,160
>> WE WORK THROUGH THAT.

WE ARE COVERED BY INSURANCE.

WHAT WE BELIEVE NATIONAL POSSIBLE DAMAGES.

HAVE THAT IN OUR AGREEMENTS WITH ORBITAL A
2K AND WITH

CONCURRENCE FROM NASA.

>> QUESTION DOWN FRONT HERE.

YOU ALL TALKED ABOUT THE HOT FIRE TEST OCCURRING
BUT THAT THESE

ARE NEW MOTORS BEING USED FOR THE FIRST TIME
WITH THIS PARTICULAR

SPACECRAFT TAX IS UNUSUAL NOT TO HAVE A TEST
FLIGHT UNDER THE

CI RCUMSTANCES?

>> I DON'T THINK IT'S UNUSUAL.

WE CERTAINLY FEEL LIKE THAT WE FIRST OF ALL
THE ENGINES
THemselves are all tested.

To the full flight duty cycle before the delivered to us.

And then the stage test that we conducted back in May, is a full integrated test of a fully flight like first stage.

Provides us significant data.

A ton of data.

Including extra instrumentation that we added just for the test.

That the envoy could put on a flight vehicle.

We spent a lot of time digging through it.

Were complete confident that that gave us the information and the data that we needed to really assure ourselves that the vehicles ready to fly.
WE COLLECT ALL THE TESTS COVERED THE RISK THAT PEOPLE HAVE BEEN ABLE TO THINK OF THAT WE WOULD HAVE TO ADDRESS.

WE HAVE A LOT OF EXPENSE PEOPLE IN THE PROGRAM WHO ARE HAVE FLOWN ROCKETS FOR THE FIRST TIME AND THESE ENGINES HAVE FLOWED SLIGHTLY DIFFERENT VARIATIONS ON OTHER ROCKETS.

AS FAR AS EVERYTHING FROM THE FIRST STAGE UP, THE CHANGES OF THAT ARE VERY MINOR SPACECRAFT ITSELF IS DIFFERENT THAN WHAT WE WERE FLYING.

BUT WE FLOWN TWICE ON OTHER LAUNCH VEHICLE SO WE FEEL VERY COMFORTABLE THAT THE ENTIRE SYSTEM HAS BEEN WRUNG OUT WE DO UNDERSTAND THE RISK.

WE HAVE A LOT OF CONFIDENCE IS GOING TO WORK AS DESIGNED.
NASA HAS BEEN INTEGRATED WITH ORBITAL ATK'S TEAM WE'VE HAD PEOPLE FROM ENGINE EXPERTS PEOPLE FROM THE LAUNCH SERVICE PROGRAM OF KENNEDY SPACE CENTER TRAVELED TO RUSSIA WITH THE TEAM WE SEE CONFIDENCE.

>> TAKE A QUESTION YOU WILL START ONE DOWN IN THE MIDDLE HERE.

>>

[INDISCERNABLE]

>> COULD YOU LAUNCH CUBESATS WITH ANY UNUSED CARGO WEIGHT, AND

NUMBER TWO, YOU HAVE THE SAPPHIRE EXPERIMENT ON THE PREVIOUS

LAUNCH IT WOULD BE INTERESTING TO KNOW THE RESULTS OF THAT IN HIS

RIGHT FOLLOW ON THIS CURRENT FLIGHT.

>> AS WE SHOW THE VIDEO WE DID HAVE SAPPHIRE THE PREVIOUS
WE HAVE A VERY SIMILAR EXPERIMENT ON THIS MISSION ALSO.

AS I MENTIONED WERE GOING TO CONDUCT SHORTLY AFTER ON BIRTHING THE STATION.

TAKE AS FEW DAYS TO DOWNLOAD THE DATA FROM THAT THE VIDEO ETC.

A DIFFERENT CONFIGURATION OF THE SAMPLES IN THE BURN RATE THAT THEY EXPECT TO SEE BUT IT WILL BE A SIMILAR EXPERIMENT.

I THINK ALSO BE VERY INFORMATIVE TO THE DESIGNERS FOR FUTURE SPACECRAFT.

THE CUBESATS AS I SAID WERE GOING TO DEPLOY AN ADDITIONAL SET OF ANORAKS CUBESATS ON THIS MISSION AS WE DID LAST TIME.

THAT'S WHAT THE VIDEO WAS THAT YOU SAW FROM.
THE PREVIOUS MISSION.

00:32:56,808 --> 00:32:59,579
WE WILL DO IT FROM ABOVE THE STATION THIS TIME RATHER THAN BELOW

00:32:59,579 --> 00:33:03,009
THAT WILL GIVE THEM A LONGER TIME IN LIFE.

00:33:03,009 --> 00:33:04,319
ORBIT LIFE.

00:33:04,319 --> 00:33:08,569
BUT WILL BE WELL AWAY FROM THE STATION BY THE TIME THAT OCCURS.

00:33:08,569 --> 00:33:11,869
IT SHOULD BE VERY EXCITING TIME FOR THE FOLKS WHO HAVE BUILT

00:33:11,869 --> 00:33:15,569
EXPERIMENTS THAT ARE ON THOSE CUBESATS.

00:33:15,569 --> 00:33:17,418
>> WE CAN DO THAT ON EVERY MISSION.

00:33:17,419 --> 00:33:20,659
IF WE ARE ASKED TO DO SO.

00:33:20,659 --> 00:33:24,730
>> 45 KILOMETERS ABOVE THE SPACE STATION THAT WAS A DIRECT REQUEST FROM THE SCIENCE RESEARCH COMMUNITY FOR THE OWNERS OF THE

00:33:24,730 --> 00:33:28,460
SATELLITE.

00:33:28,460 --> 00:33:30,038
WE NEED MORE OVER LIIFETIME CAN YOU GO ABOVE ISS.
WE WORKED WITH THE DIFFERENT TEAMS.

WORKED WITH ORBITAL ATK TO MAKE SURE WE COULD GET WHAT WE NEEDED.

IT'S A HUGE SUCCESS STORY.

>> REASSIGNED SPEAKING BEFORE THIS MEETING IN WHICH WE HAD

INVESTIGATORS TALK ABOUT THOSE TWO INVESTIGATIONS SPECIFICALLY

CAN CATCH THAT ON YOUTUBE AND ALSO HAVE THOSE INVESTIGATORS

TOMORROW FOR REPORTERS THAT WANT TO DO ONE-ON-ONE INTERVIEWS.

YOU CAN FIND OUT THROUGH THE MEDIA CHECKING STATION IF YOU'RE INTERESTED IN LEARNING MORE ABOUT THOSE AS WELL.

>>.

[INDISCERNABLE]

>> THE UPGRADE ANTARES WHAT IS THE RECYCLE TIME LOOK LIKE IN THE
CASE OF A HOLD DURING THE TERMINAL COUNT.

551 00:34:16,260 --> 00:34:19,470
DO YOU HAVE THE OPPORTUNITY TO SET THE LAUNCH
VEHICLE AND TRY

552 00:34:19,469 --> 00:34:22,129
MORE THAN ONCE THAT FIVE MINUTES IS A KIND
OF A ONE AND DONE

553 00:34:22,130 --> 00:34:24,250
SCENARIO?

554 00:34:24,250 --> 00:34:27,730
>> REALISTICALLY ONCE WE GET THAT FAR DOWN
IN THE COUNT WE WILL

555 00:34:27,730 --> 00:34:30,380
SELECT A LAUNCH TIME.

556 00:34:30,380 --> 00:34:35,050
IT'S VERY UNUSUAL THAT WOULD HAVE A SITUATION
WHERE A ONE OR TWO

557 00:34:35,050 --> 00:34:39,460
MINUTE HOLD WOULD SAVE THE DAY BUT IT CERTAINLY
ISN'T OUT OF THE

558 00:34:39,460 --> 00:34:40,980
QUESTION.

559 00:34:40,980 --> 00:34:45,289
WE CERTAINLY USE THAT FIVE MINUTE WINDOW TO
WORK AROUND COLAS AND

560 00:34:45,289 --> 00:34:46,949
OTHER THINGS LIKE THAT.

561 00:34:46,949 --> 00:34:48,639
BUT IT'S PRETTY TIGHT.

562 00:34:48,639 --> 00:34:51,730
HE MISSED THAT FIVE MINUTE WINDOW AND WERE
DONE FOR THE DAY BUT
WE DO HAVE THE CAPABILITY TO TURN AROUND AFTER SCRUB DALE AND HIS TEAM HAVE ALL THE RIGHT COMMODITIES AND EVERYTHING READY TO GO WE SHOULD BE ABLE TO GIVE IT A SHOT THE NEXT DAY.

>> PART OF WHAT WE TOOK ADVANTAGE OF THE DOWN TIME TO REALLY UPGRADE OUR CAPABILITY SO POTENTIALLY WE CAN GO RECYCLE 24 HOUR RECYCLE DAY AFTER DAY AFTER DAY.

THE PEOPLE TIMEOUT BEFORE THE FACILITIES. AND THAT'S THE WAY YOU WANT IT.

>> WE CAN'T BACKUP IN THE COUNT DOWN.

IF THAT'S WHAT YOU'RE TRYING TO GET TO.

FOR SAFETY AND RELIABILITY AND HARDWARE REASONS WE JUST KEEP CONTINUING.

FORWARD INTO WE GET IT.
I want to ask about FAA significant hike and how much liability insurance you have to care for this flight.

Are not familiar with the issue you're asking about on the insurance requirement on the launch license.

I think it's pretty much the same as it's been on previous missions.

Maybe some changes began to CRS to but right now the licensing is the same as it has been an analysis being conducted by both the FAA and the range better than it's been in the past more.
SOPHISTICATED THE BROAD EFFORT INTO GETTING READY FOR THIS

PARTICULAR LAUNCH AND INCREASING OUR LAUNCH PROBABILITY.

VERY HAPPY WITH THE TEAMWORK BETWEEN ALL OF THE PARTIES INVOLVED

HERE.

>> ON THE MANIFEST QUESTION.

WE'VE REMOVED ALL THAT BALLAST REPLACED IT WITH A SURPRISE

THROUGH CLOTHING SOME COMPUTER RESOURCES UPGRADE LAPTOPS AND THEN

SOME VERY SMALL AMOUNT OF EVA HARDWARE.

>> GO DOWN HERE.

>> MY QUESTION ABOUT THE SAPPHIRE EXPERIMENT.

ARE THERE ANY SPECIAL CONSIDERATIONS THAT THE ISS CREW HAS TO

MAKE WHEN LOADING THE CYGNUS BACKUP FOR DEEPER THING AND TO NOT

MESS WITH THAT EXPERIMENT.
AND IS THERE ANY WHERE THERE BE ANY ADVERSE EFFECTS THAT

EXPERIMENT SET THE WHOLE ON FIRE BEFORE REENTRY?

>> THE WEATHER EXPERIMENT IS DESIGNED AND BEEN TESTED EXTENSIVELY

IT CANNOT ACTIVATE ITSELF PRIOR TO LEAVING THE SPACE STATION.

IT HAS SEVERAL INHIBITS TO KEEP IT FROM RECEIVING POWER OR BEING

ABLE TO IGNITE ANY OF THE MATERIAL.

WERE VERY CONFIDENT THAT'S GOING TO WORK THAT WAY.

NASA TEAM DESIGNED IT THAT WAY INTEGRATED INTO THE STATION WITH

THE RIGHT SPACE VEHICLE WITH THE RIGHT SAFEGUARDS.

WHILE THE CREW HAS JUST MAKE SURE THAT THE VENTILATION PADS

REMAIN OPEN AND THEY STAY OUT OF THE KEEP OUT ZONES WHEN THEY

LOAD THE CARGO AND OTHERWISE THEY DON'T NEED TO TOUCH IT OR DO
ANYTHING TO MAKE IT READY TO ACTIVATE.

OR RELIEVE THE STATION.

WE FEEL LIKE YOU WILL GO TO SICK DI D LAST TIME.

>> WE HAD NO ISSUES IN THE LAST MISSION.

>> WHY WERE THAT MANY VOTERS AVAIL ABLE THE DAMAGE TO THE PAD

>> THERE WERE LOTS OF PHOTOS.

[LAUGHTER] I CAN'T HELP YOU THERE.

I FOUND THEM.

>> I DON'T KNOW WHERE YOU LOOKED BUT I SAW PHOTOS EVERYWHERE.

>> DO WE HAVE ANY OTHER QUESTIONS FROM THE AUDIENCE?

>> WE HAVE AN ELECTION GOING ON.

THIS LAUNCHES GOING TO BE LOOKED AT ALL OVER THE PLACE INCLUDING
OVER IN DC.

WHAT YOU HOPE THAT FOLKS OVER IN DC TO TRY TO GO AHEAD AND GET A BUDGET TOGETHER FOR ALL THIS ARE GOING TO GO AHEAD AND LOOK AT IT 803 AND WAS THE THING WITH THE THOUGHTS GOING TO BE?

>> I SPENT A LOT OF TIME LAUNCHING SHUTTLES IN FLORIDA.

FRANK AND IF YOU TIMES SEVERAL TIMES.

THERE ARE TREMENDOUS ADVANTAGES TO BEING WITHIN DRIVING DISTANCE

I THINK WE HAVE TWO BUSES NOW COMING DOWN FROM THE SEA WITH STAFFERS WHO ARE VERY VERY INTERESTED.

IT IS ALWAYS A TREMENDOUS ADVANTAGE TO HAVE SOMEONE COME DOWN AND EXPERIENCE LAUNCH VERSUS SING IT.
As all of you know.

There's a huge difference.

Very very confident.

We think will put on a great show and nighttime launch always.

Really good too.

We hope it puts on a good show for everyone.

They enjoy some of the everyone enjoys it.

We get a wide viewing angle reload people get to go out on.

Capitol Hill or elsewhere in the northeast and have our.

Midatlantic and have a good look at the launch.

>> You got over hundred people coming from the Hill on.

Washington.

>> There'll be plenty of people from Washington here to watch it.

FOR THOSE DOZEN OR SO PEOPLE IN WASHINGTON
ARE WATCHING THIS

PRESS CONFERENCE, YOU GO ANYWHERE ON A HIGH
HILL AND LOOK TO THE

SOUTHEAST ABOUT 8:05 PM.

TIME FOR A FEW MORE QUESTIONS.

GIVEN THE STATE INVESTMENT YOU TALKED ABOUT
WHERE THE

OPPORTUNITIES THAT THIS OFFICE FOR THE STATE.

YOU THINK IS A BUSINESS IN THE FACILITY.

WALLOPS ALWAYS HAD A SIGNIFICANT IMPACT
HERE BUT IT IS BEEN

POWERFUL EVEN IN THE FOUR YEARS THAT I'VE
BEEN HERE THAT IMPACT

ADDITIONAL WORK EMPLOYEES OVERLAY DECAY OURSELVES
AND OUR

SUPPLIERS BEGAN TO MIGRATE APPEAR HAD ON THE
AREA.

IF YOU LOOK AT THIS ROCK I THINK WE COULD
GET VERY BUSY HERE IN
THE NEXT FEW YEARS.

664
00:42:42,239 --> 00:42:47,869
THIS IS NOT ME, THIS IS THE CHAMBER OF COMMERCE
STATES THAT EACH

665
00:42:47,869 --> 00:42:50,359
LAUNCH IS EQUIVALENT TO THE PONY SWIM.

666
00:42:50,360 --> 00:42:58,420
THOSE OF YOU WHO ARE FAMILIAR THAT’S THE BIGGEST
EVENT HERE.

667
00:42:58,420 --> 00:43:04,159
ONE THING YOU ASKED ABOUT CUBESATS BUT ONE
THING THAT WE AGREED

668
00:43:04,159 --> 00:43:10,210
TO IN A LONG-TERM AGREEMENT WAS ORBITAL ATK
WE IN VIRGINIA GET

669
00:43:10,210 --> 00:43:16,320
THE EQUIVALENT OF 12 CUBESATS EACH LAUNCH
AFTER WE GET NOT RIGHT

670
00:43:16,320 --> 00:43:21,080
NOW BUT AS WE GET THROUGH ALL THE APPROVAL
AND EVERYTHING SAFETY

671
00:43:21,079 --> 00:43:24,239
AND THEY WILL BE ON THE SECOND STAGE.

672
00:43:24,239 --> 00:43:28,799
IT WILL BE A SHORT TIME IN SPACE AND WE ARE
TRYING TO GET THAT TO

673
00:43:28,800 --> 00:43:32,890
POCKET CUBES SO YOU CAN IMAGINE 96 POCKET
CUBES IN EVERY LAUNCH

674
00:43:32,889 --> 00:43:36,929
THE IMPACT THAT WOULD HAVE ON THE STEM AND
OBVIOUSLY VIRGINIA

675
00:43:36,929 --> 00:43:40,829
WILL HAVE A HIGH PREFERENCE FOR THOSE POCKET CUBES BUT IT WON'T BE TOO LONG BEFORE WE HAVE EXHAUSTED THE PEOPLE WANT TO COME IN

VIRGINIA AND I SAID THAT SPREADING OUT WELL ACROSS THE NATION MAYBE INTERNATIONALLY SO WERE VERY EXCITED ABOUT THAT.

AND THE COMMITMENT FROM ORBITAL ATK TO LET US PURSUE THAT AS PART OF THE IMPACT NOT ONLY ECONOMICALLY BUT THE WHOLE STEM.

>> WHAT DALE IS TALKING ABOUT IS NOT SATELLITES BUILT BY COMPANIES OR LARGE ORGANIZATIONS BUT SATELLITES AND EXPERIENCE DESIGNED BY STUDENTS ALL THE WAY DOWN TO ELEMENTARY SCHOOL.

LOTS OF HIGH SCHOOL STUDENTS BUILDING STATS COLLEGE STUDENTS AND SO WE WILL BE EXPOSING OR ENABLING EXPOSURE OF SPACE EXPERIMENTATION TO PEOPLE ALL THE WAY TO THE SCHOOL SYSTEMS.
687
00:44:28,199 --> 00:44:33,609
SPREADING OUT FROM HERE TO WALLOPS I THINK
IT'S A BIG DEAL.

688
00:44:33,610 --> 00:44:40,559
>> WE HAVE TIME FOR ONE MORE SESSION.

689
00:44:40,559 --> 00:44:45,269
>> JUST CURIOUS, WITH THE LAUNCH OF THE ANTARES
LOOK ANY

690
00:44:45,269 --> 00:44:50,530
DIFFERENT FROM THE OLDER VERSIONS.

691
00:44:50,530 --> 00:44:58,040
>> THE THRUST AND WAIT A LITTLE BIT HIGHER
SO MAY COME OFF THE

692
00:44:58,039 --> 00:44:59,039
PAD A LITTLE FASTER.

693
00:44:59,039 --> 00:45:02,730
THE THING COMES OFF AS LONG SURE LITTLE FACTORS
GOING TO BE

694
00:45:02,730 --> 00:45:08,460
NOTICEABLE BUT BEYOND THAT I DON'T THINK YOU'LL
TELL A

695
00:45:08,460 --> 00:45:09,460
DIFFERENCE.

696
00:45:09,460 --> 00:45:13,150
AS I MENTIONED IN MY VIDEO COMMENTARY, ELECTION
BECAUSE OF THE

697
00:45:13,150 --> 00:45:17,650
HIGHER PERFORMING ENGINES WE REALLY NOTICE
IS THE END OF THE

698
00:45:17,650 --> 00:45:18,650
MISSION.
WE'LL HAVE CYGNUS IN ORBIT ABOUT A MINUTE EARLIER THAN WE WOULD HAVE ON A PREVIOUS VERSION OF ANTARES.

>> THAT'S ALL WE HAVE TIME FOR TODAY.

I WOULD LIKE TO THANK EVERYONE FOR JOINING US.

IF YOU'RE ON THE EAST COAST IS A CHANCE YOU MIGHT GO TO SEE THE LAUNCH FROM WHERE YOU ARE.

CHECK OUT THE DOING MAPS ONLINE.

YOU CAN FIND THOSE MAPS AND MORE ABOUT THE MISSION@NASA.GOV SLASH ORBITAL ATK.

TUNE IN TOMORROW NIGHT LAUNCH COVERAGE BEGINS AT 7:00 P.M.

THANK YOU.