NASA OFFICE OF PUBLIC AFFAIRS
303 E STREET, S.W., #P
WASHINGTON, D.C. 20546
(202) 358-1600

STS-116 Post-Launch News Conference

SPEAKERS:
MICHAEL GRIFFIN, Administrator, NASA
BILL GERSTENMAIER, Associate Administrator
for Space Operations
LeROY CAIN, Launch Integration Manager,
Space Shuttle Program
MIKE LEINBACH, Shuttle Launch Director

[Moderated by Dean Acosta, NASA Press Secretary]

10:00 p.m., EST
Saturday, December 9, 2006

NASA Kennedy Space Center

[TRANSCRIPT PREPARED FROM DVD RECORDING.]

MALLOY TRANSCRIPTION SERVICE
(202) 362-6622

P R O C E E D I N G S

MR. ACOSTA: Good evening, and welcome to the STS-116 Post Launch Press Conference. I am NASA Press Secretary, Dean Acosta, and what a spectacular evening tonight it was. I hope everybody enjoyed it, and this is our press briefing.

To my left, let me introduce our panelists. To my left, NASA Administrator Michael Griffin; to his left, Associate Administrator for Space Operations, Bill Gerstenmaier; to his left, Launch Integration Manager, Space Shuttle Program, LeRoy Cain; and to his left, NASA Launch Director, Mike Leinbach.

We will have some opening remarks, and then we will go around the room for your questions. It is my pleasure to turn it over to NASA Administrator Michael Griffin.

ADMINISTRATOR GRIFFIN: Good evening, and thanks for being here.

What you have seen today, this evening, was the successful accomplishment of the most challenging, demanding, technically state-of-the-art, difficult thing that this nation or any nation can do, and today this team

accomplished it successfully. It is an extraordinary event, and I hope everyone appreciates just how extraordinary.

In fact, today when we started out, this morning at the tanking meeting, between the weather guys and everything else, we thought maybe we had a 30-percent chance, or maybe even less, of getting this vehicle out of town tonight. We were about 3 hours down on the count at that point, and the weather was not looking good.

But weather is very difficult to predict, and you hate to give up any chance of a good day, and there were some indications that the front was blowing through a little quicker than people had anticipated and it might turn good instead of bad.

Mike Leinbach's crack team of Shuttle Launch processing guys thought that if they had a few hours to work it, they could get back on the timeline. So, when we met at 9:45 this morning, they said give us until 12:30 and we will make the call, and at 12:30, they said they were back on schedule and we could have a try at it if the weather would cooperate. The weather started getting better instead of worse, and so it made our bet pay off,

and you saw that tonight.

This is the best team in the world, and I am just proud to be here with them.

Thank you.

MR. ACOSTA: Thanks, Mike.

Bill?

MR. GERSTENMAIER: This is a great start to a great mission. We have got 12 pretty exciting days in front of us, lots of exciting things on tap for the assembly of Station and the activities, the EVAs, but I can't think of a better way to start than the way we did tonight.

So we are off to a great start. It won't be easy. It will be a lot of fun for the next 12 days. The teams are ready, and we will do as good on those other days as we did today.

MR. ACOSTA: LeRoy?

MR. CAIN: Okay. Thank you.

I don't really have much to tell you, other than this is an outstanding team. The vehicle was awesome. The team was awesome. I am extremely happy for the team and for the crew and for all the folks who have worked so hard

on getting us to this point.

When Mike Leinbach called me about 6 o'clock this morning and we started talking about where we were on the timeline, I wondered if the day was going to turn out like this. So, from the time my wife woke me up this morning and said Leinbach is on the phone until now, it has been a really exciting day.

[Laughter.]

MR. CAIN: And I just couldn't be happier about the performance of the team, and again, the vehicle has just been outstanding. It is a great day in manned spaceflight. It is a great day for human spaceflight. It is a great day for this team, so thank you.

Mike?

MR. LEINBACH: Thanks, LeRoy.

We did start out the day a little bit down, but I never doubted it, if we were in the ball park of a launch attempt tonight, that the guys in the control room and the guys out at the lauchpad would pull this off. So we did make the recommendation about noontime to give us a shot at it, and it all just came together perfectly.

The countdown itself, there were just very few

problems, just nits, nothing I could even talk about. It was so clean. The vehicle was so clean. Once we got into the final count, we just executed. It was like a sim run with no problems. It was just outstanding.

To see Discovery lift off for the first night launch in 4 years was just a thrill, and the whole control room just erupted in applause. Then I told them, "Calm down a little bit. We still got 8 minutes to orbit." So it worked out really, really well. I am glad we were given the chance to go for it tonight.

Thanks.

MR. ACOSTA: Spectacular. Great job, guys.

All right. We are going to open it up for your questions. I ask that you please identify yourselves and who your question is for.

We will start off right here in the front.

ADMINISTRATOR GRIFFIN: And we will stay here until you are done.

MR. ACOSTA: Absolutely.

ADMINISTRATOR GRIFFIN: So just relax.

QUESTIONER: Seth Borenstein, Associated Press, for Mike Leinbach.

Can you explain briefly what caused you to get a little bit behind?

And by the time you were, around noon, to launch, how little time was left as a cushion that you usually build in? It seems like you were right at the skin of your teeth.

MR. LEINBACH: We were pretty close to a net fit, once we picked up tanking. We were 2 hours late tanking and the best we had ever done before was an hour and 45 minutes late.

As I told the guys in the control room, all records are made to be broken, and so we broke one today by tanking the latest ever in the program.

We were a net fit. After we got out to the launchpad, the final inspection team did a very thorough inspection of the external tank and the vehicle, but they did it in a slightly different order and saved us come time there, and we were able to get the flight crew out to the pad on time. So, from the astronauts perspective, we didn't have any problems at all. So they were ready to go, and once they got to the pad, it just clicked. Everything was just clicking today.

You know, some days you feel good and you know it is going to come together. Other days you know you are going to have problems. Today, everything felt good today.

QUESTIONER: Just a follow-up. The reason you were behind again?

MR. LEINBACH: We went into a 48-hour scrub turnaround with an operation where we top off the hydrogen for the fuel cell system, and that is a very difficult job to pull off in 48 hours. We proved that that is a net fit. In fact, we were about 4 hours behind that schedule when we showed up this morning, made up that time throughout the day.

So it is an operation that we have in the books. I told LeRoy, "Let us have a shot at this one today and see if we can make up the time," and the guys really came through.

MR. ACOSTA: Next question, let's go to the corner back there. Let's go along the wall first with Mike Cabbage, and then we will go to John.

QUESTIONER: Mike Cabbage with the Orlando Sentinel for Mike Leinbach or LeRoy Cain.

You talked about how smooth the countdown went.

How was the vehicle's performance during ascent? Did you guys see anything, and did you get any initial reactions from watching the ET cam video on the way up? Did you see anything potentially there?

MR. LEINBACH: Let's see, Mike. The vehicle performance was outstanding from the preliminary data that we had; of course, in the firing room.

I spoke to our colleagues in Mission Control before I came in here, and they had absolutely no problems that they were working, not even a single fault summary message going uphill, no indication of any faults or problems with the systems on board the vehicle, so, again, just an outstanding vehicle. The performance has just been great to this point.

As far as the imagery so far, I have seen very little of it in real time. I haven't seen very much of it in replay. I think Gerst may have seen some of it in replay. Of course, we will have lots of looks at it over the next several days, but I don't have even a preliminary report for you, Mike, along those lines. Gerst may have something. I don't.

MR. GERSTENMAIER: I looked at the video, and

what is pretty impressive is -- and you kind of may have saw it in some of your video -- is when the main engines, plumes, kind of expand, there is pretty good lighting, and you can get to see pretty good views underneath the orbiter. Then when the orbiter separates and the thrusters fire, it illuminates the bottom of the orbiter very well. So the guys will grab some good screen captures, shots of those. They will review those and take a look at them, but the lighting was probably better in that region than we would have thought or would have guessed from the preflight stuff.

So, again, no results in terms of anything we saw from a damage standpoint, but just from the quality of the video, there will be some good quality video available around external tank separation.

MR. ACOSTA: All right. John Schwartz, I think you were next.

QUESTIONER: Cabbage asked it. Thanks.

MR. ACOSTA: All right. We will go with Greg.

QUESTIONER: Thank you. Greg Dobbs with HD-Net. Congratulations.

Was there any time today, taking a look at the

probability of launch, taking a look at the stiff winds all day when it was a tough call, go or no go?

MR. LEINBACH: You don't make the final call on weather until the hold at 9 minutes, and so while the winds kind of bounced around a little bit today, cross-winds and potentially pad winds, it doesn't matter until you get to the hold at 9 minutes, and we were absolutely clean and green there. So, from our perspective, you wait for that time.

It is an interesting exercise to go through the discussions for 6 hours about weather, but it doesn't matter until you are 15 minutes out from launch.

QUESTIONER: Was that the case when you decided this morning to go ahead with the tanking? That wasn't a tough call?

MR. LEINBACH: Well, this morning, from my perspective, you know, if you have a shot at a launch, if you have a decent shot at a launch, you ought to go for it. It would have been a bad call, as it turns out, not to tank today and go for it. That, of course, is hindsight, but, again, from the operations perspective, unless you have clear and convincing evidence that you have virtually

no shot at a launch, you should go for it, and we did.

MR. CAIN: And I would just add from a tanking decision standpoint, as Mike said, there are several factors that we consider, and the weather, of course, is one of them.

There is a point at which we want to cut our losses, whether it is to top off the propellants or to give the crew rest or whatever it might be. We weren't there today, and we had good enough weather to press forward. Based on Mike's team's recommendations and his recommendation that we had a shot to get there today is the reason for it.

QUESTIONER: Pat Duggins, WMFE and National Public Radio, for whoever wants to take this, and it is kind of getting into the mission.

There is a lot that the astronauts have on their plate. What is the bare minimum they have to get done in order for you all to go home happy?

MR. LEINBACH: Again, we want to get the P5 truss installed, and that is first up and to get that out of the cargo bay. We would like to get along in some of the activation steps and get some of that done.

We have got some points if the array doesn't totally retract. We have got some break points there that we can accommodate.

So I think kind of from an overall standpoint, we get the truss attached, we get moving through the power-up stuff and the power transfer to the new permanent systems, and we are pretty much the minimum of what we really need to accomplish on this flight.

We have got some plans. We can move some stuff into the stage if we need to. We can move some stuff later. So we have got lots of backup operations to go, but, again, I think the teams are really well prepared for this mission. They have simmed a lot. They have trained a lot.

During all of this time we have been activating the solar arrays -- we had the tooth crash software, which we fixed. That is now on board. That has been fully checked out. We have activated the thermal rotary joint. We have actually moved it. We actually spun the pumps, the ammonia pumps that will be brought up for a little bit. We spun them for a couple seconds, just to see if they still spin. We checked the power to all the valves. I mean,

they have done everything they can to be prepared.

So the teams are ready, the crews are trained, and it will be fun watching them execute over these next couple days.

MR. ACOSTA: Great. Let's stay along the wall. We will go with Todd.

QUESTIONER: Todd Halberson of Florida Today for Mike Leinbach.

Mike, I just wanted to know what it felt like to launch a former TASC colleague.

MR. LEINBACH: I have known Joanie a long time, and it is a cool feeling to launch any astronaut, to be part of this team to put astronauts on orbit.

To have a close friend going up makes it even more special. I am sure Joanie is having just a hell of a good time right now.

MR. ACOSTA: Did I just hear feelings? Is that feelings I hear?

[Laughter.]

MR. LEINBACH: There is one Mike on the panel that has feelings.

[Laughter.]

MR. ACOSTA: All right. I wanted to make sure.

ADMINISTRATOR GRIFFIN: He is better at it.

MR. ACOSTA: All right, great. Who else has got a question? Let's work our way on the other side of the room with Tom Costello over here with NBC.

QUESTIONER: Hi. It is Tom Costello with NBC.

Again, congratulations.

To Dr. Griffin, this is kind of the finale for a great week for you. You have announced that you have found evidence of water on Mars. You have announced the plan to build a moon base by 2024, and you have now managed to get Discovery up in the air on just a second chance here, a second try.

For the big picture, though, can you give us a sense of what is all this for? In terms of the Space Station, there are questions about whether it is worth the cost, whether it will be -- in fact, when it is all done, will it justify the cost and the scientific achievements that you hope to get from the Space Station?

So, in the end, what is all of this going to accomplish in terms of the Space Station? What will the Space Station, when it is fully completed, do for the

American people and for the world?

ADMINISTRATOR GRIFFIN: Well, Tom, that is a great question.

The questions about the Space Station I think were very appropriate, and I asked many of them myself earlier in my career when the United States lacked plans for going beyond the Space Station.

I think it was not put any better than it was put in the report of the Columbia Accident Investigation Board by Admiral Gehman and his troops when they pointed out that -- I guess the bumper-sticker version of it is that for the foreseeable future, space travel is going to be expensive, difficult, and dangerous, but for the United States, it is strategic. It is part of what makes us a great nation.

I believe that, and they pointed out that if we were going to do it, the goals ought to be worthy of the cost, the risk, and the difficulty, and that stopping at the Space Station did not meet such a standard.

So President Bush responded to that report. The administration looked at where we had been in space and said we need to do more, to go further, and the Congress ratified that overwhelmingly, with an overwhelming majority

on both sides of the aisle, saying that the purpose of the United States manned space program is to go beyond, to explore the solar system for purposes of human exploration and scientific discovery.

The Space Station is now a stepping stone on the way to that rather than being the end of the line. On the Space Station, we will learn how to live and work in space. We will learn how to make hardware survive and function for 3 years that we are going to need if we want to go to Mars. The Space Station is on the footpath toward becoming a space-faring nation.

Similarly, if we are going to go to Mars, if we are going to go beyond, we have to learn how to live on other planetary surfaces and use what we find there and bend it to our will, just as the Pilgrims did when they came to what is now New England.

The Pilgrims, you might recall that half of them starved over the first winter. There was a reason their celebration was called "Thanksgiving." They were only a few thousand miles from home, and they were people who farmed for a living, and yet when they came to a new arena, they didn't know how to farm. They didn't know what food

would grow and what food wouldn't. They didn't know what they could eat and what wouldn't.

We are going to have to learn how to live and survive in other places, and the Moon is a stepping stone along that path. When you bring it all together -- the Space Station, the Moon, looking forward, past that, to Mars -- these are the steps that we have to take if we want to become a space-faring nation.

I think that we should want that. I want that. I want that for the American people, for my grandchildren, for my great grandchildren.

NASA is the arm of the Federal Government that takes on this task. We do it as well as we can. Sometimes we stumble. Today, we didn't stumble. I am proud of the team, but the nation should look ahead toward what the future brings and what the future will look like if we choose not to be a space-faring nation.

MR. ACOSTA: All right. Let's come back ground here to the front row.

QUESTIONER: Hi. Mark Kirkman with Interspace News. This is for the other Mike that actually has some feelings.

[Laughter.]

QUESTIONER: I was just wondering if you have any nostalgic thoughts on this being --

ADMINISTRATOR GRIFFIN: I've got one I can drag out and warm up for you, if you want.

[Laughter.]

QUESTIONER: Mike, I was just curious if you had any nostalgic thoughts on this potentially -- or what should be the last Shuttle launch from Pad B and what the plan is in the interim, I guess, to prepare it for potential launch, I mean, but I guess this is the last flight for a Shuttle off that pad. Do you have any thoughts about that?

MR. LEINBACH: Well, it is the last planned launch off the Pad B.

Our Administrator approved the Hubble Servicing Mission, and as part of that approval of that next and probably final mission to the Hubble with the Space Shuttle anyway, we were asked to preserve the option of launching off Pad B for the rescue mission, should that become necessary.

So we have to keep it in Shuttle status. What we

have to do is also prepare to start the modifications that the Constellation program is going to need since that will be the first pad that they launch off of.

So there is kind of a balancing act that we have to go through, keep it available for us, let them get in and start doing as many modifications as they can, as soon as they can, without impacting our ability to launch off of Pad B. It is the last planned launch off Pad B.

The folks that work out there, I know a lot of them personally. They will go over to Pad A. So there are no jobs in jeopardy here. It is kind of the end of an era.

We have also gone through a demolition of the Shuttle Launch Control Room out of Control Room 1, Firing Room 1, and it is kind of a sad feeling to go look inside the doors of Firing Room 1 and see nothing but a floor where we used to launch out of there. Of course, that supported the Apollo program too.

It is evolution. It is part of what Mike talked about. It is evolution. It is what this country wants us to do, and we can't just stay where we are. We can't just keep doing what we are doing. We have to move on.

So the last planned launch off Pad B, yeah, a

little nostalgic. It might be cause for a celebration here or there when the time is right. I am sure we will do that.

MR. ACOSTA: All right. We will stay with that front row. Let's go to Lisa, right there.

QUESTIONER: Hi. Lisa Stark with ABC News.

You have now had three, apparently, successful launches this year, and I am wondering. I know you have even a more ambitious schedule on tap for next year, I think with maybe four or five hope-for launches.

How critical is it to get that many in next year, and is there any reason to believe, given what you have accomplished already this year, that you wouldn't be able to do that?

MR. GERSTENMAIER: Again, I think, you know, we kind of take it each launch at a time, and we get prepared. We get ready to go execute. We have laid out the schedule for next year.

The teams are kind of getting back into rhythm again, and things are getting to feel natural again, but then we got to caution when it starts getting easy that we don't give up or lose our guard, or we lose that edge. So

then we got to kind of challenge ourselves to keep looking, to keep challenging, to make sure that we have done everything we can to get this vehicle ready to go fly.

So, again, I think we got a plan that lays that out, and we will approach each one of those flights as they come. We will see how they go. We will learn from each one. We will continue to reassess where we are and see where we end up at the end of next year, but there is time in the manifest. We can slip a couple of those flights if they have to. There is no urgency there, but, again, we have got the right schedule that keeps us with the right focus, moving forward, that allows us to continue to fly safely, and that is what we are about.

And it is both. We have to fly, and we have to be safe. You can't do one or the other. You have got to do both. So we will trade those, actively balance those, and I think this year showed that we can get back into the kind of pace we need. We have got the plans in place, and we will go execute next year and see how it comes.

But I caution us, before we start thinking a lot about that, we have got 12 pretty busy days in front of us. We want to get this vehicle back here to KSC. So the time

is to not worry too much about next year, but to think about those 12 days right in front of us right now and watch what is unfolding in space.

MR. ACOSTA: Well said, Gerst. Well said.

All right. Who wants to ask a question that hasn't been able to?

All right. Can you move over here, sir? Come over here. There you go.

QUESTIONER: Thomas Nordegren, Swedish Broadcasting.

I just wonder if in 3 years, when the Space Shuttles become museum things, isn't there a risk that -- I think New York Times wrote the other day that the Space Station is to be assembled in space. Can you really use the Space Station effectively when you are so targeted to the Moon and Mars when you don't have the Space Shuttle?

ADMINISTRATOR GRIFFIN: I am not sure I understood all of that question.

We do have challenges for us in the period of time between when we retire the Space Shuttle, which is almost 4 years distant -- not 3 -- but between when we retire the Space Shuttle and when the Orion Crew

Exploration Vehicle replaces it.

We have a challenge for Space Station logistics, and we are going to meet that with international partner capabilities, the ATV and the European Space Agency ATV and the Japanese HTV as well as with Russian capabilities, Soyuz and Progress.

I think you know also that we at NASA have put in place some Space Act Agreements for commercial orbital transportation services that we hope can mature into suppliers of Space Station logistics.

So we are working a number of avenues, and we recognize the problem. We are doing the best that we can to solve it within the fiscal constraints that we have.

MR. ACOSTA: All right. Any other questions?

Come back over to Seth.

QUESTIONER: Seth Borenstein, AP, for Mike Leinbach again.

Maybe my memory is bad, but I believe the last three launches have been, as you point out, nearly flawless. The last mission, that was the mantra at every briefing. There was no -- has there been a series of launches so much in a row, with so little problems? I

mean, have you ever seen this streak of flawless launches before?

MR. LEINBACH: Well, you will recall we had a little bit of difficulty getting STS-115 launched.

ADMINISTRATOR GRIFFIN: We had some weather challenges on 115.

MR. LEINBACH: We had some weather challenges.

ADMINISTRATOR GRIFFIN: Hurricanes, little things like that.

MR. LEINBACH: Little things like that.

Once we get into the terminal count, it is going pretty well.

Back before the Columbia accident, we were launching on the first attempt quite often, and we felt good about that.

So we are getting back into the groove. We feel like we are back in business. So we are getting there. We have more rules in place than we did before. So we have more constraints to meet -- not many, but a few. So it will take us a little bit of time to get us back up to the pre-Columbia time frame, but I can tell you, to a person in the control room, we were all feeling like we are getting

there, if we are not already there.

MR. ACOSTA: Great. All right. Any other questions? Anybody else want an opportunity to ask a question?

All right. Let's work our way right over here, second row.

QUESTIONER: Stefano Coledan for Italian National Radio.

For Dr. Griffin. I was just wondering. You were talking about, you know, the United States being a space-faring nation and there are other nations that would like to be space-faring nations, but with the current budgets, how can the United States be a real space-faring nation and inspire generations when we are talking about a generation down the road before going to Mars, if not longer?

ADMINISTRATOR GRIFFIN: Well, we have to go as we can afford to do so. We will be making incremental steps.

As I say, the Space Station now has a role in this larger plan over the next 4 years. Over the next almost 4 years, we will be systematically completing the Station. We will be expanding to a crew of six. They will

begin to do more and more productive work, and we will watch the Space Station come to fruition. I think that will be exciting.

We will begin to watch. Shortly after the Station is retired, we will be beginning to see the test flights, the development of the Orion Crew Exploration Vehicle, and the Aries I Crew Launch Vehicle. I believe that will be exciting.

Procurements will go out, contracts will go out for the next Lunar Module. After that, we will begin constructing the Cargo Launch Vehicle, which is big enough not only to take people to the Moon and hopefully in company with our international partners that we have put together on the Space Station, and with that cargo vehicle, it is also large enough to take people to Mars. It has been sized such that a few launches of that cargo vehicle will be big enough to assemble a Mars-size payload.

Yes, it will take us a generation to get to Mars, but it will be a busy generation, and we want to have you with us.

MR. ACOSTA: All right. One more question, right here.

QUESTIONER: Dr. Griffin, Leo Enright from Irish Television.

Just sticking with the big picture, I was wondering, now that you have begun consultations with your international partners about the Lunar project, the Moon-based project --

ADMINISTRATOR GRIFFIN: Well, I actually started that about 2 weeks after I was put in office, but I didn't -- that wasn't just yesterday, but -- sorry. Go on with your question.

QUESTIONER: I do understand, but I am wondering what you are saying to your partners about the reliability of the United States in such an enterprise in terms of the waxing and waning of American politics, the political support for space exploration.

Are there things that you can say to them that can reassure them that there is a long-term commitment and that at some stage in the next series of elections, the natural course of democracy, that there wouldn't be a change of heart?

ADMINISTRATOR GRIFFIN: Well, of course, there is nothing I can say that is in the way of a guaranty.

No present U.S. Congress can ever bind a future U.S. Congress, and it is the same way in the other democracies.

In fact, the United States is not the only nation that experiences a waxing and a waning of interest in particular things. All of the partners on Space Station from one time and another have difficulties sustaining internal support. We try to help each other.

All that I can do is to say that what the United States is doing with its space program has changed, is changing, that it is not that we are asking for, or getting, a significantly changed amount of money for the program.

What we are doing with the money that we get is changing, and we have been very clear to our partners that we, first of all, are going to meet our commitments and finish the Space Station -- and I hope that that serves to give them some confidence in us for the long term -- and secondarily, that when we are done with that, we want to have them with us as we take the next step.

I do believe that enterprises of this magnitude must have a leader, and I think that in this era of world

history, the United States is that leader, but it needs to be an alliance, and we hope that others will take the risk and go forward with us.

MR. ACOSTA: Any other questions?

All right. We still stay on that row.

QUESTIONER: Jackie Garod [ph] for the Times of London.

Dr. Griffin, I just wanted to follow up on my friend's question here about the fact that this week you have had the announcement of your plans for the Moon base, the discovery of water on Mars, and now a smooth Shuttle launch.

It might seem to the public that suddenly things are looking very -- like NASA is making things look very easy, and I wondered if you could sum up how momentous a week this has been and how difficult it has been to get here.

ADMINISTRATOR GRIFFIN: Well, I would never want to convey the impression that what we do at NASA is easy because it is not.

Every time I am in a meeting at NASA or with and among our contractors who support the program -- and

frankly, 85 percent of our money goes out to the industrial members of the team. Every time I am in such a meeting, I am impressed with just how smart the people are who are there, and still it is not easy. Sometimes we stumble.

So let me address some of the things that you talked about in turn. Of course, today's launch was great. That is the first step in a difficult mission, one of the more complex pieces of Station assembly that we will do, but as my colleague, Bill Gerstenmaier, just pointed out, we have got 12 days in front of us. We have about an hour and a half behind us. So maybe we should keep that in perspective.

One of the things we are going to learn from Space Station is, in fact, how to work through -- I will just say outright -- failures or problems. We are going to have problems. We are sailing this ship of space for years at a time.

Up until we started to build Space Station, everything that the United States did in space was in brief episodes, you know, a few weeks here, at most a few weeks there. Even Sky Lab, with the longest mission that we were in, 84 days, it was less than 3 months. When we go to

Mars, we need 3 years. So we have a long way to go and a lot to learn, and it is not easy.

Water on mars, that is an exciting discovery.

The photographs that we have analyzed from our Mars Global Surveyor spacecraft and others convince us that there have been -- that the most likely explanation for those photographs is the very recent release of water from subsurface deposits on Mars. Very exciting, obviously. Something we have been looking for, for 40 years, in robotic Mars exploration, something that when we eventually land there with people, it will matter a lot. So, yeah, that's a big deal.

You mentioned the Moon base. I think that is a bit overblown. What we have offered is a Lunar Architecture that addresses the issues of what we are going to do on the Moon when we return there, why we will do it, and who we will do it with, hopefully, and pointed out that the best way to achieve those objectives is to concentrate our resources in one particular area and to allow that to grow into a research station.

I have said over and over again, for me the model for that really is Antarctic exploration. Others may have

their own model, but this is mine, and I will give it to you. I have said this to some of you in the media before. You have heard it.

I think it is a really good analogy because Antarctica is a very hard place to get to on Earth and a very hard place to survive in. So the first humans went to Antarctica successfully in 1912, when Amundsen reached the South Pole, and then for 40-plus years, nobody went again. And when they went, a different nation took the lead. It was the United States, and the then-Soviet Union was also a leader in that, with a wholly different technology, ice-breaking ships, not dog sleds, and so on and so forth.

And then a few years after people started returning to Antarctica and enough capital equipment, if you allow me to put it that way, enough assets had been piled up, people started wintering over, and today there are multi-national bases there where people go for tours of duty for months at a time. They conduct a huge backlog of scientific research. This is all funded in the United States by the National Science Foundation. I am not cognizant of the funding arrangements that other nations use, but I am sure it is similar. Scientists and explorers

and investigators of many kind go down there for months at a time.

Now, Antarctica is not a colony. It is not a town. The research bases down there are research bases, but we have found it productive to concentrate those resources at certain locations in Antarctica to get the most leverage from what we do there, rather than to scatter different sites around that continent.

I believe, and I think we have come to believe, that a similar strategy will follow Lunar exploration. When we finally put people back on the Moon again, it will be 50 years since they have been there before, but we plan not to sortie initially. Initially, we plan not to sortie to a half-dozen different locations. We can do that if we wish to, but we plan -- we think it makes the most sense -- to concentrate resources in one spot, and as you saw, if you saw the news releases the other day, we are thinking that the South Pole or the Moon makes a likely spot.

Now, that is not carved in stone. It isn't even written down in indelible ink, but that is what we are thinking about at the moment.

So I hope I have been able to put a bigger

picture on that for you. Thanks.

MR. ACOSTA: All right. We have been going a little more than 30 minutes. Any other questions? Anybody else want an opportunity to ask a question?

[No response.]

MR. ACOSTA: All right. Well, it is a terrific evening. I hope you enjoyed the launch.

For more information on tonight's launch and, as Bill Gerstenmaier said, the upcoming 12 days of the mission, please go to www.NASA.gov. I appreciate your review this press briefing, and have a nice evening.

Thanks.

ADMINISTRATOR GRIFFIN: Thanks, everybody.

MR. ACOSTA: Great job, guys.

ADMINISTRATOR GRIFFIN: Thanks.

[End of STS-116 Post-Launch News Conference of December 9, 2006.]

- - -