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STEPHEN G. JURCZYK
INTERVIEWED BY SANDRA JOHNSON
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JOHNSON: Today is September 22nd, 2021. This interview with Steve Jurczyk is being conducted for the NASA Headquarters Oral History Project. Mr. Jurczyk is talking to me today over Microsoft Teams from Fredericksburg, Virginia. The interviewer is Sandra Johnson and I'm in Santa Fe, Texas. I appreciate you talking to me today for this project, and I want to start out by asking you if you could talk about your background, about your education, and why and how you came to NASA and those first years before you ended up at Headquarters.

JURCZYK: Yes. Sure. I'm a graduate of the University of Virginia [UVA, Charlottesville]. I have a bachelor's and a master's degree in electrical engineering from UVA in '84 and '86. I actually ended up at NASA because a branch chief at NASA Langley Research Center [Hampton, Virginia] did on-campus interviews at UVA in 1986, and I signed up for an interview and got an interview. His name was Glenn Taylor. Then back in that timeframe he did not have a civil service position, so I was hired on with a contractor at Langley and I worked with an on-site contractor for two years. Then in September of 1988 I was hired as a civil servant in the Electronic Systems Branch, the Flight Electronics Division, at NASA Langley Research Center. That's how I ended up at NASA. It was an on-campus interview with a NASA Langley branch chief.

Actually back then you would go to a room that had boxes on tables with the name of the company or organization that was conducting interviews a few weeks out and you would drop a

resume in the box. I was with a friend who said, "Oh, hey, NASA Langley, I want to interview with them." I said, "All right, I'll interview with them." It turns out that his name was Steve [Stephen] Sandford and his father Maynard [C.] Sandford worked at NASA Langley, and so I had that connection too. I happened to go to grad school with the son of a NASA Langley researcher who grew up in Hampton, Virginia. We both ended up interviewing, both ended up at NASA.

I was an electronics engineer for years, mostly working on remote sensing systems to support Earth science research that flew on a number of satellites and eventually one on International Space Station [ISS]. Then went into line management and worked my way up from branch chief to deputy director of engineering, director of engineering, director of research and technology, Deputy Center Director at Langley, Center Director at Langley, and then Associate Administrator [AA] for the Space Technology Mission Directorate. That's when I came to Headquarters in March of 2015 to be the AA for Space Technology Mission Directorate.

Then in February of 2018 Robert [M.] Lightfoot was the Acting Administrator and had been the Acting Administrator for a little over a year at the time. He brought me up to the Office of the Administrator to help Lesa [B.] Roe and himself, Robert, to help run the Agency. They were both doing two jobs, Acting Administrator and Acting Deputy Administrator, and Associate Administrator and Deputy Associate Administrator jobs. So when Jim [James F.] Bridenstine was confirmed in April of 2018, I was on a detail with the Office of Administrator and sort of acting like the Associate Administrator, because actually Lesa had left earlier and Krista Paquin had become the Deputy Associate Administrator, and then Robert left and Jim Bridenstine came in, and I was the continuity between Robert along with Krista and others in the Administrator's Office, the continuity between Robert Lightfoot and Jim Bridenstine.

JOHNSON: Let's talk about that period before Jim Bridenstine came in. He was picked by the president [Donald J. Trump] in September 2017, but he had a long period before he actually started April 23rd, 2018. His approval process was somewhat contentious, and it took a long while, and Robert Lightfoot ended up being the longest-serving Acting Administrator because of it. But talk about those first impressions maybe that you had in that position helping Robert run the Agency and being that Acting [Associate Administrator].

JURCZYK: Yes. As the Space Technology Mission Directorate AA I was a direct report to Robert. So I had sensed for months that Robert was working long hours and working very hard to be the Acting Administrator as well as do the Associate Administrator job. I had offered several times to Robert, saying, "Hey, listen, if you need help, I'd be more than willing to come up to the Office of Administrator and help out. My deputy in Space Technology Mission Directorate, Jim [James L.] Reuter can act and he's very capable of running [the directorate]."

That went on for a little while and then I had a conversation with Krista Paquin and said, "Hey, listen, I told Robert, I'll tell you, I'm more than willing to come up and help, because I know you guys are just stretched really really thin." That's how in February of 2018 I ended up going up to the Office of Administrator. Now Robert did an amazing job, 15 months acting as Administrator. He did an amazing job. But trying to do both, run, I'll call it the up and out job with the new [presidential] administration and other government agencies and international partners and do the down and in job, essentially the chief operating officer of the Agency. He was working very long hours and stretched very thin. So I felt with my experience as a Center Director and AA I could help him, and he took me up on that offer about a year in.

But he did do an amazing job along with Lesa and then Krista. It's a difficult job. First of all, any job where you're acting is challenging. You're not sure where the boundaries are between what decisions you can make and what decisions you need to defer to the person coming in permanently to the job. The second thing is a new administration, and you're not their person, you're not the political appointee in the position. So you have to also develop those relationships and do the best you can knowing that they've nominated somebody and they're going to be waiting for that confirmation to make some decisions and figure out how to move the Agency forward.

Acting in general is very challenging, particularly when you're a career civil servant acting a political appointee position. Yes, hats off to Robert in the job that he did in those 15 months.

JOHNSON: Did you follow the confirmation process that Bridenstine was going through?

JURCZYK: Somewhat. It was quiet for a long time between his hearing and his vote, because at least one or more senators had put a hold on his nomination, and that's all it takes is one senator to put a hold on it, at least back then. So there wasn't much to follow between his hearing and his confirmation.

Now during his vote we were in Colorado Springs [Colorado] at the Space Symposium. I was with Robert, as Acting Administrator, and we were meeting with heads of international space agencies and industry representatives, and we were listening to the [U.S. Senate] vote on somebody's iPhone as we were walking between meetings in Colorado Springs at the Space Symposium. I'll never forget it was going to be a tie the way the vote initially stood before they

closed the vote out, and I think [Vice President] Mike [Michael R.] Pence was in Florida. He was not there to go to the Senate and break the tie. Then I think it was [Senator] Jeff [Jeffry L.] Flake changed his vote from no to yes, and that gave Jim Bridenstine the 51 votes he needed to be confirmed. So yes, even up to the end in the final vote there was a little bit of drama there.

Jim Bridenstine was at the Space Symposium also when the vote occurred and then he was sworn in in the following days and probably was sworn in that next week and started that next week in April.

JOHNSON: What were your impressions of him as a potential Administrator and then those first days?

JURCZYK: There was a lot of obviously second- and thirdhand information through the press. Some of it I think was politically motivated. There are a couple of things that he was quoted as saying early on in his career in the House of Representatives, particularly relative to the LGBTQ [lesbian, gay, bisexual, transgender and queer or questioning] community, and climate change. I tried to just—that's politics and it's noise and I'm just not going to pay attention to that.

It was probably a year or two before Jim was nominated, he gave a talk at the Space Symposium about a piece of legislation that he had proposed, the [American] Space Renaissance Act. It was a set of policies and reforms focused on civil and national security space. It was very well thought out and addressed a large number of the challenges in civil and national security space. His talk walked through that proposed piece of legislation. Later on I found out that he never thought it would get passed as a single piece of legislation because it was so

comprehensive. But it was passed, elements of it were proposed and passed in Congress. I'm not sure exactly which ones those were. I don't remember off the top of my head.

Yes, I was very impressed with the quality of the work that went into the Space Renaissance Act, and the thoughtfulness of addressing some of the challenges in civil and national security space by Jim and by his staff when he was in the House.

JOHNSON: When he started and you were still Acting AA, how soon after that did they ask you to continue on in that position?

JURCZYK: I'm trying to remember whether I started the AA position in May or June of 2018. But it was within four to six weeks of Jim coming on board in the end of April, maybe seven or eight. Four to eight weeks of Jim coming on board in the end of April, where I met with Jim and Jim said, "I'd like you to stay on as the Associate Administrator." Relatively quickly after he was sworn in.

JOHNSON: Did you expect that, that they would ask you to continue on?

JURCZYK: I wasn't sure. Different leaders have different approaches to coming into a new organization. Some will rely on people who are there and in the organization and bring in some of their own people that they have relationships with and trust. How much they ask the existing staff to stay on or the career staff to stay on versus bring in new people varies from leader to leader. Obviously, Jim brought in some of his staff from the [Capitol] Hill, Deputy Chief of

Staff Gabe Sherman. Matt [Matthew M.] Rydin who eventually became his press secretary. They came from his staff, his [Washington] DC and local staff when he was a congressman.

Then others like myself and Melanie [W.]Saunders who's Deputy AA came from JSC [NASA Johnson Space Center, Houston, Texas]. He drew on people from inside NASA. So it seemed like Jim had a balanced approach to bringing people in that he knew and had a relationship with and drawing on people from the organization that had experience to help him be successful.

JOHNSON: Sometimes transitions between one Administrator to the next and the staff changing out, it can be smooth, or it can be contentious. It can be a lot of different ways. How did you feel about this transition? Especially because it was changing from Robert Lightfoot and being an Acting Administrator for so long and then to Bridenstine. As you said, he brought his own people with him. Did things mix well during the transition?

JURCZYK: Yes, he kept me on as AA. We had Melanie as Deputy AA. He did not replace any of the AAs, at least initially. That comes later. Or Center Directors. That happened over time as Center Directors retired, so there wasn't a lot of turnover. Same thing with Chief Engineer and Chief of Safety and Mission Assurance. There wasn't a lot of turnover in the highest level of career civil servants. Yes, the transition was relatively smooth with respect to personnel and organizational structure and personnel.

The challenge was developing an updated strategy for the Agency, updated program content, and budgets to go along with that program content that aligned with the new administration's priorities. That's really where the challenge was, and that happens in every

change in administration. Sometimes even from the first term to the second term of the same administration. That's really where Jim asked a lot of questions and in some cases challenged us to think about how we planned and implemented programs in different ways to align more effectively with the new administration's approach and priorities.

JOHNSON: Unlike some of our Administrators he was coming from that political background instead of a NASA background. Do you feel that helped him? Like you said he was asking questions and he had to learn about the programs and what was going to go forward. But do you think being in that political position helped him?

JURCZYK: I think so. He understood how Congress worked. He had relationships with his former colleagues in Congress. I think that not only helped Jim Bridenstine but is also helping Senator [Bill] Nelson advocate for the Agency. He has even a longer history with Congress on the Senate side than Jim did on the House side. I think that helped.

The interesting thing was Jim didn't fully understand how the executive branch worked necessarily. When I mean work, I don't mean the role of the executive branch as opposed to the legislative and judicial, but how the Office of Management and Budget [OMB] worked with the White House to develop the president's budget request. I think that was the new experience for Jim that he just, not having been in the executive branch, just being the receiver of the president's budget request when he was a congressman, he didn't realize how we worked closely with the Office of Management and Budget and our examiners at OMB to develop the president's budget request on an annual basis to submit to Congress. I think that was the new piece for Jim. Yes.

JOHNSON: Like you said, it was the opposite side of what he was used to, that's for sure.

JURCZYK: Yes, he was the receiver of that document, not the developer of it, so yes, that's right.

JOHNSON: Talk about those first few months. You mentioned his priorities, his strategic vision, and the things that he had to accomplish that the president wanted. Let's talk about those first few months and maybe some of those priorities and how those priorities—which there were some changes—how that was received at Headquarters.

JURCZYK: First there was a real focus on advancing human exploration, what NASA calls exploration, but human exploration, and focusing on returning astronauts to the Moon and to the lunar surface. But also something a little bit different than the previous administrations was using the lunar orbit and lunar surface as a proving ground for technologies, systems, and operations for an eventual human mission to Mars. It was an "and." Before in the George W. Bush administration it was the Moon. Then in the [Barack] Obama administration it was Mars and Asteroid Redirect Mission. With the new administration we had worked to develop this more comprehensive approach to human exploration which made returning astronauts to the Moon a priority, but also had the horizon goal of human missions to Mars. That was definitely a large focus for the Agency leadership along with the administration from early on in Jim's tenure.

There was support for space technology because it was an enabler for human exploration. But again the focus for space technology was more on technologies to enable human exploration

of the Moon and Mars. The focus previously had been on developing crosscutting technologies that would help human exploration and robotic exploration and science as well as commercial space interests. There was a little bit of an adjustment there in the space technology portfolio to make sure that the lion's share of the investments were going into technologies like higher-performing, higher reliability environmental control and life support systems, advanced space suit technology, including the Portable Life Support System, more efficient and higher thrust propulsion technology to reduce trip time for mission to Mars, etc. In situ resource utilization using the resources of the Moon and Mars to produce materials and supplies to reduce the logistics burden, etc. There was that shift in space technology, again reflecting the priority on human exploration. But the good news there too was that they proposed budget increases for space technology that were very helpful in advancing those goals and objectives.

Then there were a couple of controversial things in that first budget that Jim did not necessarily support. One was zeroing out the budget for education for the Office of STEM [Science, Technology, Engineering, Math] Engagement. Jim personally did not support that and pushed back on that and was told to submit a budget with $0 there. Of course the funding was put back by Congress when they appropriated dollars every year. Then also Earth science. Yes, the administration was not necessarily supporters of NASA's Earth science programs and missions, including climate research and climate missions. I'm not sure that budget was necessarily reduced. It was reduced some. But they didn't get the increases that they needed to really move forward on the missions in the Earth Science Decadal Survey.

So those were a couple of areas where some priorities' budgets were flat, or cuts were made just about that first year and every year. That money was really for the most part restored by Congress through the appropriations process. Because the administration has their priorities,

but of course Congress has their own, and those things very rarely are in 100 percent alignment. We worked through all that across the four mission areas. Aeronautics research was pretty much held flat or given modest increases. It was not necessarily a priority. Nor was it an area they were looking to cut funding.

Then the Mission Support Directorate and the Security, Safety, and Mission Success [SSMS] budget and the construction of facilities budgets, we were trying to negotiate the appropriate levels for those accounts with the White House. We did make some progress there in I think the second year of Jim's tenure on the administration side. But then on the congressional side through appropriations those budgets were held flat or cut. Again, dealing with NASA's infrastructure challenges was not necessarily a priority for the administration but we talked to them about the challenges and got a little bit of support there. Then we just need that SSMS budget to support procurement and legal and human capital and financing management. Unfortunately the challenge there is as the program budgets were increasing and the program content was increasing that budget was held flat or decreasing. That put stress on those mission support functions to be able to support the programs. That's something that I know over time Jim as Administrator, and now at least in the new administration before I left in May, that's something they were working on to make sure they had the resources in those mission support functions which are critical to the success of the programs.

JOHNSON: Part of getting his priorities across to NASA and to the people that would be approving the budget is the ability to communicate and to interact. Every Administrator has a different way of communicating. You were at Headquarters under Charlie [Charles F.] Bolden, and he had his own way of communicating. I know Robert Lightfoot did too. But let's talk

about Administrator Bridenstine's communication and the interaction that you may have had with him, and maybe some of the similarities or differences from some other Administrators you worked for.

JURCZYK: Yes. Jim was a really talented communicator. He viewed communicating internally and externally to be of critical importance with his job as Administrator. A critically important part of his job in gaining the broadest possible support for NASA and the mission of NASA both with stakeholders, the administration, and Congress, but also the broad public support for the Agency. Yes. He definitely put the time and attention into it that maybe previous Administrators just hadn't done because they had different backgrounds and different interests, and it was a different time when they were Administrator. That was one thing.

The second thing I would say is that Jim was talented in communicating in several ways. One of the ways was you could tell him something that he never heard before about a science program or research program or technology program and he would not only remember it, he would be able to, without notes, speak to it in a speech or in an interview as if he had known it for years and years and years and was intimately involved with it. He had this photographic memory or just this ability to not only absorb new information but also then talk to it and explain it in a highly effective way, and why it was important for NASA, and why it was important for the nation. That was just a skill and a talent that I haven't seen in very many people. That was another reason why Jim was very highly effective.

He really demonstrated a passion for the mission of the Agency and what the Agency was trying to accomplish. That's really important in communicating, having energy and passion for

what you're talking about is a really important part of being an effective communicator, and Jim absolutely had that energy and passion, and it came through.

He would prepare for interviews and prepare for speeches and events. But he would always speak extemporaneously. Very rarely if ever I saw him use a speech or notes or anything written. He just was able to take the information, prepare, organize it in his head, and then go out and talk extemporaneously and be very very effective, very comprehensive, accurate, and do a really great job. Jim made it a priority. He had a skill and talent for it. That was one of the things I would consistently hear from people inside and outside the Agency, is how effective Jim was as an Administrator, one of the reasons why Jim was so effective as an Administrator was because of his ability to communicate effectively.

JOHNSON: Being in the NASA workforce before he was appointed or before he was approved, and then afterwards when that communication became apparent, personally I heard a lot of people change their mind about him quickly. I think there was an anticipation of him being a certain way and then afterwards that changed.

JURCZYK: Yes. That really helped particularly down and in with the leadership and the workforce of the Agency. I will also say I think Jim surprised a lot of people because of all of what they had heard about Jim before actually getting to know him, in that when he became NASA Administrator, he was not political. I would say he was very apolitical because he knew he needed to build bipartisan support for the Agency. He needed Democrats to support the Agency as well as Republicans, particularly in Congress. All his thinking, all his communication, all his actions were focused on what's the best thing, what's going to help the

Agency succeed, what is the best decision, what is the best approach for the Agency to enable the Agency to accomplish its mission. I think that really won a lot of people over. They could tell that he was not playing politics with the Agency, he was really trying to build bipartisan and broad support, and his primary motivation was the success of the Agency and the people working in the Agency and for the Agency. I think that came across early on, yes.

JOHNSON: Not quite a year after you became the AA, in March 2019 the vice president announced that NASA would put a human on the Moon by 2024. Did you know that announcement was coming or were you there when he announced it?

JURCZYK: No, I personally did not have much of a heads-up that that announcement was coming. All of that happened in probably the period of a couple of weeks where we engaged in communication with the White House on that goal and then there was a National Space Council meeting where it was announced, I believe, later that month. That all happened very quickly. We knew that would be extremely challenging and would have felt comfortable with maybe a 2026 goal. But that's how organizations accelerate progress, is through these really challenging audacious goals. So we embraced it as a challenging and audacious goal and worked to put a plan in place to achieve the next astronaut landing on the Moon by the end of 2024, knowing that it would be very challenging. I think we were on this path for 2028 for the first year or so of the administration, and then March of '19 we got the direction, it was essentially the administration's policy that we would land the next astronauts on the Moon in 2024, and we put plans in place to do that.

JOHNSON: Then they said they were going to land the first woman and the next man.

JURCZYK: That's right. Yes. I'm trying to remember. Must have been May of '19, that year, late April, early May of '19. I was on a vacation trip to Hawaii and I get back from Hawaii and I hear about Artemis and the Artemis Program. I was like, "What's Artemis?" In that 10 or so days I was gone they were talking about what are we going to call our lunar program, both human and robotic exploration of the Moon. Somebody mentioned, and I believe Jim said it was a gentleman who's now the chief economist for the Agency, Alex [Alexander] MacDonald. I think Alex MacDonald ran into Jim Bridenstine in the hallway and said, "You know, you ought to consider calling our lunar program Artemis. She's the twin sister of Apollo and the goddess of the Moon." Jim goes, "Oh, that's great, that's brilliant, that's what we're going to do." So that was one of those serendipitous things where Jim just happened to bump into Alex. I think I have this right. I think Jim told the story in the going away event that we had virtually in January of '20. That's how it became the Artemis Program, and I think everybody's fully embraced that now, because Artemis is very well known definitely within the space community and somewhat beyond. I think it's a brilliant name for the program.

JOHNSON: A lot happened to say the least while you were AA. But one of them was in March of 2020 when everybody's life changed and we all went home and began working at home, and the country effectively shut down because of the pandemic [COVID-19]. That was somewhat challenging I would think especially for your position. Let's talk about what you were responsible for during the beginning of COVID, because we had to not only figure out how people could work from home, but we had to figure out how people could communicate from

home, and how we could still have meetings from home, and how to keep everyone safe if they did have to go onsite. Talk about what it took to keep NASA working toward those goals that were already set.

JURCZYK: Yes. Jim from the very beginning told me and the leadership team that our first priority was to keep the workforce safe and healthy, while keeping the mission moving forward as best we could. Mission-critical functions like continuing to operate the International Space Station effectively, to protect the health and safety of the astronauts and the cosmonauts. Jim set the tone from the very beginning.

Then in February we realized we may be going to remote work, and so we worked with Headquarters, the Centers, and the CIO [Chief Information Officer] to do a telework day out at [NASA] Ames [Research Center, Moffett Field, California] I believe it was. Then a telework day for the entire Agency to stress the IT [information technology] and look at how we would use [Microsoft] Teams and Webex and the tools [audio/video conferencing software], see what worked and what didn't work. I think that was just a tremendous thing. Doing the Center-level and then Agency-level telework days really helped us understand the strengths and limitations of the tools, make sure that the networks could handle the traffic, etc., and set us up for success in allowing people to work remotely and be productive. I think that was one thing that was really important that again Agency leadership, not just me but the team, had the foresight to suggest and to do.

The second thing was I remember we were still at Headquarters in late February, maybe it was late February, early March. At that time our political appointee CFO [Chief Financial Officer] had resigned and Melanie Saunders, the Deputy AA, went to be the Acting CFO. I had

asked Cathy Mangum, who was the Associate Director at Langley, to come up and be the Acting Deputy Associate Administrator in November of the previous year, November of '19. Cathy was my Acting Deputy at the time. I remember sitting in Cathy's office with Jane Datta and we had I think J.D. Polk, our Chief Medical Officer.

We put this decision-making framework in place that had stages, stage 1, 2, 3, and 4, with 4 being the most restrictive operations at Headquarters and the Center, and 1 being close to business as usual. We set criteria for what stage each Center and location would be in based on things like case counts in your area and region, hospitalizations, positivity rate, etc. That decision making framework—and we had to evolve it and tweak it over time—but that allowed each Center and each location to use data to determine what level of activity to have at their Center between stages 1, 2, 3, and 4.

Then the CIO put a dashboard in place that each Center could use and Headquarters that collected the data electronically on case counts and positivity rate and hospitalizations for their area and their state so they could, on a regular basis, go in and look at the data and determine what stage they needed to be in. I think that framework, plus the CIO setting up that tool so they could easily access the data, was really important in making sure we were making the right decisions and protecting the workforce while keeping critical activities moving forward.

Eventually all the Centers and locations were either in stage 3 or stage 4. A lot of them stage 4, which is mission-critical activities only, everybody else is teleworking, working remotely, and really limiting the number of people who are working onsite.

Then there were a couple of missions that we knew were critical that we needed to move forward with. One was the first commercial crew mission with SpaceX with crew, the Demo-2 [Crew Dragon DM-2, May 30, 2020] mission, which we kept moving forward with a lot of

precautions in place. We also made sure Centers and contract partners had personal protective equipment [PPE], social distancing where we could do social distancing, enhanced cleaning, contact tracing. That was another really important thing. We put a tool in place to allow each chief health medical officer at each Center to do contact tracing with help. Because initially we were going to rely on the local and state-level health offices do the contact tracing. But they became overwhelmed immediately. So we realized early on we were going to have to do our own contact tracing. For people working on-site we made sure that we had the PPE available, social distancing, cleaning, contact tracing. Made it clear to employees, "If you're symptomatic do not come into work, go see your doctor." Later on we put a contract in place to allow people to get kits so they can swab themselves at home and send them in and get test results.

One other thing we did, which is I thought really innovative, is the Fitbits [activity trackers]. For people who are working onsite like Stennis [Space Center, Mississippi] for the SLS [Space Launch System] Green Run test, they couldn't social distance. They were wearing PPE, but they needed to work in close quarters. We gave them Fitbits because the Fitbit monitors things like your pulse rate, your breathing rate, your blood oxygen level, while you're sleeping, and then in the morning you can look at those statistics. If your breath rate is way up, your blood oxygen level has dropped, it's like "Okay, I'm not going to work, I'm going to go see the doctor and I'm going to go get tested." That was something that J.D. Polk had read about that organizations were using. We gave people working onsite Fitbits to track some of their key health metrics. I think that helped people recognize that they might have COVID, not go in when they were asymptomatic, go get tested, and some of them tested positive and stayed away from work so we didn't have to worry about other people being exposed and doing the contact

tracing. So we did some innovative things like that too. All of that for the onsite work was really important.

All this was being worked in March and April and May and on through a team that I led initially that met every morning initially, and then every other morning, and then eventually a couple times a week. It had the Deputy AA on it, Jane Datta, the AA for Human Capital, AA for Procurement, Chief Health and Medical Officer, and others, our General Counsel, etc. Chief Financial Officer representation. We had a core set of people that basically met every morning to go through how are we doing with PPE, what Centers are at what stages, what Centers are proposing moving to a different stage, etc.

The other thing we did is we worked very closely with our on-site contractors and our prime contractors who were doing work at their locations to make sure that they had adequate funding so they wouldn't have to furlough or lay people off because not all of their folks could work off-site. Many of them could but some of them couldn't work off-site. We had people that couldn't necessarily get onsite to do their jobs and really couldn't work effectively off-site. So we had them do training or update procedures and things like that, our contractors doing that. But eventually you get to the point where it's hard to have work for some of the technicians, the people who are doing hands-on work, who are working on things that weren't as high priority to have them be onsite. So we also worked very closely with our contractors, and I think that was really important and they really appreciated that. That was enabled by a provision in the CARES [Coronavirus Aid, Relief, and. Economic Security] Act that allowed us to put agreements in place with contractors to make sure we had the workforce that we needed moving forward and they weren't going to furlough and lay people off. I can go on and on. As it evolved there are just so many things that we were learning and so many things that we were putting in place.

The other thing that we did is we developed guidelines for Centers for onsite work and then we let each Center develop their own plan for how they would implement those guidelines. So we gave local authority and control to the Center Directors and their leadership team within those guidelines, and each Center had a plan for what work they were going to do onsite that was critical, how they would move from stage to stage, and how they would work given their unique operations, their unique facilities, how they would perform onsite work but keep the workforce safe and healthy. That was giving guidelines but allowing each Center and location to develop their own plan. I think that was a good approach.

Then May came around and we had the flight readiness review for the first crew launch from Kennedy Space Center [Florida] in almost a decade, and we launched Bob [Robert L. Behnken] and Doug [Douglas G. Hurley] successfully in May and returned them in early August. That was the Demo-2 mission. Then we had two crew missions. We actually did three crew missions with SpaceX in 11 months between May of 2020 and April of ’21. That was kudos to the team. During a global pandemic.

Then the other priority was the Perseverance rover Mars 2020 mission because we had a planetary launch window end of April through early August, and if we missed it, the next window was 24 months out. So kudos to the team that was able to complete the flight hardware integration, and test and launch in July, land the Perseverance rover in February, and then also fly the Ingenuity helicopter on Mars not long after the landing. That mission is doing very well. The helicopter is still flying and helping them with reconnaissance and operations. The rover has collected the first three samples for the Mars sample return mission that’s in planning stages right now to go grab those samples and bring them back to Earth for examination and testing. So

it was a very challenging time, but we also kept the mission and missions moving forward and accomplished a lot of really difficult and important activities for the Agency and the nation.

JOHNSON: I wanted to talk a little more about that, especially about the one in May 2020, the Demo-2, because you led the flight readiness review for that. I spoke with Gabe Sherman for this project. He talked about the weight of that moment, that he could see that you felt the weight, and that he could see that you felt the weight of the decisions. Talk about that, because I also read a quote from you that said, "Managing space programs is really about managing risk." Talk about that flight readiness review and managing that risk and how you were feeling knowing that you were making that decision to go forward.

JURCZYK: One thing that we agreed on as a leadership team well before May actually, probably 18 months before the May launch, that every two or three months we would have a review of the Commercial Crew Program with Agency senior leadership. At that review—Kathy [L.] Lueders at the time was the Program Manager, now it's Steve Stich. One of the key things they presented was their risks and their mitigation plans for those risks and where they were with those mitigation plans.

Myself along with Agency leadership had a lot of insight into the risks, the mitigation plans, and the progress against those plans leading up to the flight readiness review. I think that was tremendously helpful with being able to ask the right questions at the flight readiness review and assure that the program had identified all the risks appropriately and had mitigated the risks that they could mitigate effectively, and that we were willing and able to accept the residual risk.

Because the other thing in spaceflight is there is always risk. The only zero-risk spaceflight is never launching. That's the only zero-risk spaceflight; it's not actually spaceflight. I absolutely felt the weight of the decision, but I also had these series of reviews with Agency leadership leading up to that final flight readiness review that prepared us to have an effective review, to ask the questions, and do that final check and assure ourselves that all risks had been mitigated appropriately and to the best of the program and Agency's ability, and we were willing to accept the remaining risk, the residual risk, and it was time to go fly. Yes. So I think that was really important.

JOHNSON: Talk about that, because it was the first crewed mission of Americans leaving from American soil since 2011. That's a long time, it's longer I think than we've waited before. Were you at that launch? Talk about what was going on during that time when it finally launched.

JURCZYK: Yes, we had a successful flight readiness review and we did a press conference after that and got some interesting questions. I actually signed two things at the end of that review. I signed the certification of flight readiness, the CoFR for that flight, but I also signed the human rating certification, which said that this vehicle, both the launcher and the spacecraft, meet NASA's requirements for a human-rated vehicle. Human-rated launch vehicle and human-rated spacecraft. With a few exceptions. Some things needed to be verified on future missions. So yes, I signed that human rating certification and I signed the certification of flight readiness that said this rocket and this spacecraft are ready to go fly people into space and astronauts into space. That was a really important outcome, and many years to get there.

Then I was on console in Firing Room 4, SpaceX's launch control center in the Launch Control Center at Kennedy Space Center. Yes, I watched. I followed along with the preparations for launch, Bob and Doug rolling out to the pad and getting into the vehicle, propellant loading, and liquid oxygen loading, which was a big deal because years before SpaceX had an incident on the pad, an explosion on the pad. They believed it was due to how they loaded liquid oxygen, given that they had what's called a composite-overwrapped pressure vessel pressurized to high pressure in the liquid oxygen tank that had been used for the system. So NASA and SpaceX did a lot of research on those systems, composite-overwrapped pressure vessels in a liquid oxygen environment, and changed the design, changed operations, and put controls in place of how they loaded oxygen, etc. That was a big deal to convince ourselves that we could have the astronauts on the vehicle while we were loading propellant and oxidizer.

I was following along just like everybody else with my headset on. There's a picture of me standing up in my suit and tie with the headset on during the launch, with my mask on. You can just see the concentration and concern in my eyes even with the mask on during the launch, because the team did everything they possibly could to have a successful launch, but these systems are so complicated that every once in a while, not often, but every once in a while, there is something missed and there's a problem.

But yes, the team did a great job with everything leading up to day of launch. The launch went off without a hitch. We got very lucky too because the first day we scrubbed. The second day the weather did not look great and there were several weather criteria that were not within the parameters for go for launch. It wasn't until, I'm not sure, I'm trying to think, it was maybe 20, 25 minutes before launch that several of the criteria, winds and other things, went green and we were go for launch. It worked out. That second day worked out. That's just the way it goes

sometimes. Sometimes everything looks great and then right before launch something happens with the weather or the system, and sometimes things don't look so good but then the weather clears and everything's fine and you launch, and that was the case on the second launch attempt for the Demo-2 mission.

Then we flew from Kennedy Space Center to Johnson Space Center to be in ISS Mission Control Center for docking and hatch opening. I'm trying to remember. I think Senator [Ted] Cruz was there, Congressman [Brian] Babin was there. They welcomed the crew and said some remarks. Jim Bridenstine made some remarks. Then Jim turned it over to me to make remarks. I didn't know he was going to do that. Then he turned it over to Vanessa [E.] Wyche, who was there for the Center, to make some remarks. I don't think she was planning on making remarks. But yes, it was great to see Bob and Doug on Station with their NASA and Russian colleagues for a relatively short duration mission, but it was a test flight. But on their over two months, I know they helped out quite a bit with Station maintenance and with the scientific and research and technology demonstrations that they were doing on Station over those two plus months.

JOHNSON: I imagine everyone had a big sigh of relief that day.

JURCZYK: Yes. Absolutely. It was a sigh of relief and a celebration. Then we got really good weather also, I think it was the first day we planned to return Bob and Doug in August. We got really good weather on the Gulf side. Water was really calm. Wave heights were really low, and everything was go for landing, and so we had a successful landing in August.

JOHNSON: July of that year, the rover was launched to Mars and it landed in February. Did you go to JPL [Jet Propulsion Laboratory, Pasadena, California] for that?

JURCZYK: I was. I was at JPL in the Mission Control Center at JPL for the Perseverance landing. So yes, that was a great experience. A little frustrating because they have two clocks on the wall, there's time on Mars and then the time when you're going to get the telemetry back, which is 11 minutes after it actually happened on Mars. Zero time we landed on Mars, and then we waited 11 minutes to get the data back because of the speed of light and the distance, and saw that we had successfully landed, and soon after got the first pictures back. That was the second time they'd used the Sky Crane [System] Entry, Descent, and Landing architecture to land a very large rover, a 1,000-kilogram-plus rover the size of a Mini Cooper, on the surface of Mars.

JOHNSON: Like you said, during COVID so many things were happening. That things continued on schedule; I don't know that everyone would have expected that at the beginning of the pandemic.

JURCZYK: Yes, it really was between JPL and Armstrong Flight Research Center [Edwards, California], which provided some of the transportation from California to Florida and Kennedy Space Center for the people who needed to be there for flight system integration to the Kennedy Space Center, Launch Services Program, Kennedy Space Center folks, and our contractors, ULA [United Launch Alliance], and our contractors that were able to protect the workforce but keep the mission moving forward so we didn't incur that 24-month delay, which would have been

really disappointing to the scientists and the mission folks as well as would have been very costly for the Agency. Yes.

JOHNSON: We talked about managing risk, because you weren't only managing spaceflight risk, but you were managing COVID risk, that risk to keep people healthy.

JURCZYK: Yes, that's exactly right. Again trying to figure out how to do the transportation and operations at JPL and Kennedy and balance, make sure the risk of the workforce was acceptable while they were working and keeping things moving forward. I think we slipped a few days in the launch window. We didn't make the first day of the launch window. We had a few challenges with the flight system and with the launch vehicle. But yes, they got it. They also got favorable weather on the first launch day attempt, which was a few days into the opening of the launch window, and was able to launch in late July and land in February. Yes.

JOHNSON: Going back to President Trump, and Administrator Bridenstine had to work toward what the President wanted and the goals that he had for NASA, the President announced and signed several space policy directives. There was a variety of them, some of which were just reestablishing some things I think that NASA was already doing. But one of them was the establishment of the [U.S.] Space Force. Let's talk about that for a second and just how or if NASA discussed what type of relationship, even though it's a separate military branch, but NASA does have a history of working with the military. Talk about how the Agency was going to collaborate with that new military branch.

JURCZYK: Yes. A conscious decision was made in 1958 to have a separate civil space agency from the Air Force and military space. I think actually it served the nation and NASA very well, because we're viewed by foreign space agencies as a civil space agency, and we can enter into agreements and go places and do things that if we were both a civil and a military space organization we could not do. Jim fully believed and all of us fully believed we wanted to maintain that distinction between NASA as a civil space agency and the Air Force and now the Space Force as a military space organization.

Now having said that, we do collaborate particularly on science and technology. We do collaborate developing advancing science and developing technologies that enable NASA as well as enable the mission and capabilities for national defense, both the military and intelligence communities. We were doing that mainly with the Air Force and the NRO [National Reconnaissance Office], and now the Agency has continued and will continue to do that with the Air Force, the Space Force, and NRO. Three times a year we have meetings with the NASA Administrator, the Secretary of the Air Force, and the Director of NRO. Then once the Space Force got established, General [John W. "Jay"] Raymond, the Commander of the Space Force, was added to that group of principals that had met three times a year. I was the person at NASA that worked to set the agenda and prepare for those meetings with colleagues at Air Force, Space Force, and NRO. I think that collaboration is really important.

Then the other thing that's really important, and I think Scott [N.] Pace has said this, and others have said this, that space is getting both congested and contested. We've enjoyed I would call the good of the commons in space where everybody behaved in a way that was consistent with norms of behavior, some of which were established in the UN [United Nations] Space Treaty [Treaty on Principles Governing the Activities of States in the Exploration and Use of

Outer Space, including the Moon and Other Celestial Bodies] and subsequent agreements. I think that's continued although there are many more systems being launched into space now than ever before, so we have that space traffic management challenge and debris challenge.

Also there are countries that are developing not only defensive but offensive capabilities in space, and so we look to the Space Force to protect and defend not only military and intelligence assets in space, but civil space assets and capabilities as well as commercial space systems and assets and capabilities. That's something I think that's evolving, this protect and defend mission that the Space Force has, and again if we can contribute from a science and technology standpoint to enable those capabilities, we, NASA will, as well as share information, particularly operationally.

We actually have several people who are out at Vandenberg Air Force Base [California] at the Combined Space Operations Center, who look at the tracking information for spacecraft to do what we call congestion assessment to see if any spacecraft are going to approach, have a close approach with a probability that they might collide. Sometimes we maneuver the International Space Station, we maneuver science spacecraft to make sure we lower the probability of those collisions if analysis says there's going to be a close approach. That's another where we've collaborated with the Air Force, and now we're collaborating with the Space Force from an operations standpoint.

Those are the things that we're continuing to do and have done with the Air Force in the past that NASA will now do with the Space Force. But Jim and all of us agreed that we wanted to maintain this separate civil space agency, separate from Air Force, Space Force, NRO, the military and intelligence space agencies.

JOHNSON: Another thing that the President did is reestablish the National Space Council. Let's talk about that and what impact you think that had with the vice president leading the Space Council. Even though we had had it in the past, it had been disbanded for a long time.

JURCZYK: Right. I think Scott Pace and his staff did a really great job in working with agencies and commercial space entities to craft the policy directives that were ultimately signed by the President. I think all the research and legwork and crafting of those policies were done by Scott. A lot of it was done by Scott and his staff at the National Space Council.

Also it did give the ability for Jim to have access to the vice president that he wouldn't have had if the vice president wasn't engaged and chairing the National Space Council. It wasn't often that Jim went over to the White House to meet with the vice president and the Executive Director of the Space Council, Scott Pace, and others, OMB, if there was a budget challenge. But yes, he had the ability to do that, which I think was important. Because he works for the president and he was even more aware that he met with the president. But the president was looking to the vice president to chair the Space Council and for space policy, and so it was important that there was somebody very high up in the White House that was paying attention to space and space policy that the NASA Administrator could meet with to talk through some challenges or work through issues or take advantage of opportunities. I think that was another important aspect of reestablishing the National Space Council with the vice president being the chair of it.

JOHNSON: One of the other things that was going on during this time on top of the pandemic was a lot of social unrest. There was an effort by NASA to make sure that the workforce knew that

NASA was inclusive. Were you involved in setting up some things to help the Centers deal with that?

JURCZYK: Yes, that was really important. Like I said, one of the most important things that Jim did, and that he made a priority, was communication. I think that goes for leaders in general. Communicating. It's really important to be an effective communicator if you're going to be an effective leader just in general.

One of the things we did during COVID and the social unrest was have virtual town hall meetings with Jim Bridenstine, Jim [James] Morhard, myself, sometimes Cathy Mangum, J.D. Polk, etc. We took questions ahead of time, and then people upvoted the questions. Jim insisted on, and we agreed, going through each question in rank order. If it was a repeat question, we'd read the question and we'd say, "Well, we believe we've answered that question in the answer to question number three. Just to expand on it a little bit." Jim never skipped a single question. We didn't have time to answer all of them but we went in the order they were voted starting at the top and working the way down, going through as many as we could in the hour, hour and a half that we were doing this town hall meeting. I think that was really important.

We not only addressed questions related to COVID, but we addressed questions related to social unrest and made statements up front before we went to the questions about the social unrest. I think that recognition that this was an issue that the nation was struggling with for many many decades and for the existence of the country pretty much, and that we were in a time where we had some of these new and unique challenges, or challenges that had been around for a while that had bubbled up to the top of everybody's attention and consciousness. I think that recognition was really important.

We had discussions among the senior leadership team including the Center Directors about our personal experiences with things that had happened in the past that were relevant to what was going on now. Very powerful, particularly from our African American colleagues and our Hispanic colleagues and our LGBTQ colleagues or colleagues that had LGBTQ sons, daughters, friends, etc. Having those open and honest conversations I think was really important for us to make sure we were connecting with what was going on. The other thing that I did, and that all the Centers did too at the senior level and at the workforce level too, was continue engaging in conversations, because how I communicated to the leadership was "Hey, we need to listen, empathize, and support as best we can, because that's really what we can do."

We obviously need to make sure we have an inclusive and equitable organization that doesn't discriminate in any way but there's only so much we can affect as an agency. But we need to listen to our people, our workforce who are struggling and challenged, etc., we need to empathize with what they're going through, and we need to help support as best we can even if it is just listening and empathizing. So I think that all the leadership stepped up to that from the senior leaders all the way down through branch chiefs and had discussions with employees at multiple levels through Headquarters and the Centers. I think that was really important.

Then we did some concrete things like also Melanie and I had meetings with representatives from the employee resource groups from around the Agency. African American, Hispanic, Asian and Pacific Islander, women, LGBTQ. We asked for one or two representatives from Headquarters in each Center and we did a few hour Teams calls with them and sent them questions and things to consider ahead of time, got their responses to those, and just went into a discussion and a dialogue. We took some things out of those meetings and acted on them. I

think the Agency should continue to use ERGs [Employee Resource Groups] as a resource, particularly in advancing diversity and inclusion.

Then we added a fifth value. There's safety, teamwork, integrity, excellence. Then we added an inclusion value, which I think was really important to really raise that to the level of the other values and hold each other accountable for behaving in a way that is consistent and honors all five of those values. Some people argued a little bit that it was redundant with teamwork or maybe redundant with integrity. But we felt it was important to have inclusion as a separate value to really highlight the work we needed to continue to do around equity and inclusion.

JOHNSON: Let's talk about when Jim Bridenstine stepped down and you became Acting Administrator. From what I've learned talking to some of the other people for this project, his administration wanted to keep things in place as much as possible going into the next administration and were trying to set it up to do that. Talk about that for a minute and those four, five months where you were actually the Acting Administrator, and how those priorities were continued and how it was expressed to the next administration that they should be continued.

JURCZYK: I think one of the things we wanted to do is make as much progress as we could on Artemis. I think we made good progress on SLS and Orion and Exploration Ground Systems. One of the important things that happened when I was Acting Administrator was the SLS Green Run test. We had an 8-plus-minute hot fire with a core stage of SLS and then we delivered that to Kennedy Space Center for integration. Hopefully for the uncrewed test flight of SLS and Orion later this year if not early next year. I think that was really important. That continuous progress moving forward was important.

We awarded the contracts for the first elements of the [lunar] Gateway and we're moving forward with the Gateway including power and propulsion element and habitation and logistics outpost, and logistics for the Gateway. Then we awarded the initial contracts for the human landing system. Then while I was Administrator, we downselected to one contractor, SpaceX, for the first what we're calling the test flight of the human landing system from lunar orbit to the surface and back to lunar orbit. That was a little bit controversial because we had expressed a desire to select two contractors for the human landing system and do two test flights. But we requested $3.2 billion or $3.3 billion for the human landing system for FY21 and we received $800 million. So given the shortfall in that funding we just couldn't figure out a way to select two contractors and ended up selecting one, the contractor that was rated highest by the source evaluation team. But it was important I think to keep the human landing system moving forward because that kept the Agency moving forward towards that next landing. Now it's the first woman and the first person of color to walk on the Moon. So yes, I think that progress was all really important.

Jim also wanted to name the Artemis cadre of astronauts, which we did in December down at Kennedy Space Center. I think it was the final National Space Council meeting. It's a fairly diverse set of astronauts, 12 of them. Six men, six women, and fairly diverse in other aspects. NASA sometime in the future will name the astronauts who will fly on the Artemis II mission, and then the Artemis mission that'll be the next landing on the Moon, and the next two astronauts to walk on the Moon. All of that was good progress and really important to show that we had a plan and we were executing on it with a new administration.

Having said that, we weren't sure when a new administration came in what their policy was going to be particularly towards human exploration. We knew some things that were

validated later, that they were going to put a focus on Earth science at NASA because climate change was a priority. We knew that the budget for Earth science and particularly climate missions and research would increase, and it did in the president's budget request for next fiscal year, current [Joseph R. Biden] administration.

We also knew aeronautics research was important, particularly green aviation, reducing fuel burn, reducing emissions, and reducing noise. We had plans to work on technologies to do that for transport aircraft and hopefully the Agency will be able to accelerate those plans with the additional funding in aeronautics research.

Then we were unclear of the priority for human exploration and support for the Artemis Program. We gained clarity in an interesting way. I think this was in March. I'm not sure about the exact dates. March, or maybe it was in April. There's the daily press briefing by Jen [Jennifer R.] Psaki, the [White House] Press Secretary, and she got a question by a Fox [News] reporter, Kristin Fisher. It turns out Kristin Fisher is the daughter of two astronauts, Anna [L.] and Bill [William F.] Fisher. She asked, "Does the administration support NASA's Artemis Program?" Jen Psaki said, "I don't know but I'll find out."

This is the day after or couple days after she got the question about the Space Force, does the administration support the Space Force, and gave an answer that was a little unsatisfying for some people. Some of the political folks who were at NASA from the Biden administration were in communications with the White House that evening. Hey, tell us about the Artemis Program. Where are you guys? Then that next day at the end of the remarks I think Jake [Jacob J.] Sullivan, the National Security Advisor, made some remarks. Jen Psaki made some remarks. At the very end of her remarks before she went to questions said, "Oh, I want to follow up on a question by Kristin Fisher from Fox News yesterday regarding the Artemis Program." Then she

went ahead and said, "The Biden administration supports the Artemis Program, we're really excited about it, first woman and first person of color on the Moon. I'm going to tell my daughter about it because I think she's going to be excited about it." Etc., etc. There you had it. That was it.

From then on, we had public acknowledgment that the administration supported Artemis and they were able to work with the White House and with me on the budgets that supported Artemis, supported Earth science, supported additional support for aeronautics research.

The other good thing, the new administration, they didn't cut other areas to fund those priorities like Earth science and aeronautics research. They actually increased the NASA budget in their priority areas. That's always a good thing where you don't have to take money from one area and give it to another. You actually get an increase and can maintain a balance across the programs and mission directions and programs. That was a positive too.

Yes, that's the story. At least my understanding how things evolved over those two days. I actually talked to Kristin. Kristin Fisher is now at CNN. She's the space and security reporter in Washington for CNN. I actually talked to her out at the Space Symposium off the record and thanked her for her question. Because it prompted a dialogue and an answer that the administration was willing to maintain some level of continuity on human exploration and Artemis Program from the previous administration and the current administration.

JOHNSON: Yes. Good thing she asked that question, right?

JURCZYK: It definitely accelerated getting a read from the White House on it.

JOHNSON: We've been talking about an hour and a half. If you have a few more minutes, I just have a couple more questions, wrap-up questions.

JURCZYK: I absolutely have a few more minutes. Hopefully I'll be able to continue to be semicoherent.

JOHNSON: These shouldn't be too hard. Based on your experience with NASA before and after Jim Bridenstine's tenure, what would you consider the lessons learned from his administration?

JURCZYK: I think one of the lessons learned is that obviously developing good technology, doing good engineering, good program management is critical, but also communicating effectively and telling the story of NASA and what NASA is trying to accomplish, not only inside the Beltway but more broadly in the public, is really important, and we can do it and be successful. I'm really proud of the leadership and workforce for stepping up to that using Jim as an example of really reaching out at the federal level with stakeholders, at the state level, the local level, and just the general public, and with youth and inspiring youth to go into science, technology, engineering, math, and aerospace. I'm really proud of everybody from the leadership down to the engineers and scientists and techs for getting out there and doing that. I think that's important and will continue to be a priority for the Agency.

It's almost paying it forward with early career folks and folks K through 12 [kindergarten through 12th grade] growing up and in college, inspiring them, using NASA as an inspiration, inspiring them. I have a big smile on my face every time I see somebody post on LinkedIn that

they just got an internship at NASA and how they're thrilled and it's the opportunity of a lifetime. I think that's one thing.

The other thing I think is we should continue to be a learning and continuous improvement organization. Doing things like we've always done them is not necessarily the best thing to do moving forward. As technology advances, as policy changes, as society evolves and changes, etc., the world, the only constant is change. Change seems to be coming more rapidly. I think the other thing with Jim is he challenged leadership to do things in different ways. He was open. He tried to get everybody to say, "Yes, if. Yes, Jim, I think we can do that if we do this, this, and this." It's like maybe we can't do it exactly the way you want to do it, Jim, but rather than no, we can't do that, it's "yes, if."

As a team we'd work through "Okay, how can we make this happen?" That was absolutely true of private astronaut missions to the International Space Station. We had multiple meetings to work through the risks, all the risks, technical, programmatic, political, and get to "*Yes*, we can do private astronauts *if* we have medical screening and they pass the appropriate training and they take out insurance." Just an example of yes, if. Initially it was no, we cannot do private astronaut missions for this, that, and the other reason. Then say, "Let's talk through it. How can we mitigate those risks? How can we get to yes, if?" We did. Now Axiom is going to do the first private astronaut mission to the Space Station in January of next year. That's just an example. I think that's the other thing that I would say was an evolution.

The other philosophy Jim had was Jim tried to eliminate all conflict and division. That included within the Agency and external to the Agency. It was unnecessary. It takes up energy and time, it distracts. Jim would try to sense any conflict and engage the parties and talk through it and see if he could minimize it or eliminate it. That was a mantra of Jim's and a focus of

Jim's, is this seeing where there was conflict or emerging conflict and being proactive and engaging.

I think we built on Charlie, Robert, and Lesa's legacy in having a leadership team and an Agency that was more collaborative and less stovepiped and working together more effectively across the mission directorates, the Centers, and the offices of the chiefs. I think that serves the Agency well because working together as a team we could take on these challenges more effectively and be more successful. Like I said I give Charlie and Robert and Lesa a lot of credit because I think they started us down that path of breaking down the stovepipes and working together more effectively as a leadership team, and then we just continue to take their momentum and build on that with Jim and Jim and Melanie and myself.

JOHNSON: Let's talk about your decision to leave NASA after more than 30 years. In May 2021, which was not that long ago, you decided to retire. Talk about that and how you came to that decision and why you felt like it was a good time to leave.

JURCZYK: When you get to a certain level in an organization and get fairly senior, you know that you serve at the pleasure of the leadership or the leader. I knew there was some probability that the new Administrator could come in, Senator Nelson in this case, and want his team and his people in senior leadership positions, including the AA position. I had conversations with Senator Nelson and decided that the best thing for him to effectively lead the Agency was to have Bob [Robert D.] Cabana come up from Kennedy Space Center and be the Associate Administrator, and then the best thing for me was to retire and move on to my next phase of my career life. Just talked through it with the new Administrator and thought it over, and talked it

over with Ann, my wife, and decided that the timing was right for me to retire and to move on. It worked out.

After I retired, I took some time off and spoke with a lot of former colleagues at different aerospace organizations around the country and other people I had developed relationships with, and decided to take a job in an investment and consulting company and try my hand at being an entrepreneur. I've only been working for about six weeks now. I started in August. But so far, it's been fun. Very different, fun. Learned a lot in a very short period of time about the business side of things and being an entrepreneur, what it takes to build and run companies. So far so good. But yes, the combination of new leadership coming in and the timing for me personally was right. I'd been fully eligible to retire for a few years, and I took advantage of that.

JOHNSON: You probably have more time now with your family than you did.

JURCZYK: A little. Although my calendar is starting to fill up again as I'm getting into my new job. The other thing I'm doing that's really interesting with some former NASA colleagues is I'm an adviser on a documentary film about Artemis with three film direction and production companies. We're developing the concept for a 10-part series, and seeking distribution for it, and then once we get a distributor then we'll sit down with the NASA Office of Communications and work out an agreement for how we go about doing this. That's fun. I'm really enjoying doing that. Again something completely different.

JOHNSON: Yes. Sounds like it. Something out of what your norm has been. That sounds like it'd be fun and challenging.

JURCZYK: Yes. Again some retired NASA colleagues. It's nice to connect with them too.

JOHNSON: I just have one more question. I was wondering if you could talk about what you feel your chief accomplishment when you were in this AA position at NASA would it be if you had to pick one?

JURCZYK: I never thought I would say this until March of 2020, but yes, it's leading the Agency through COVID, the social unrest, and being able to accomplish the things that we accomplished as a team. The Demo-2 mission, the Perseverance launch and landing, and two other crewed missions in 11 months and everything else, including the safe operations of ISS and everything else. That was a tremendous challenge for Agency leadership and the Agency in general. I think the team really stepped up.

JOHNSON: It feels like it's been about 10 years in the last year and a half.

JURCZYK: Yes. Just no experience to draw on. Never had to manage an organization like NASA through a global pandemic, and nobody had. We all had to figure it out as we went, and I think the team did an amazing job.

JOHNSON: I think so too. I appreciate you taking the time to talk to me. Is there anything we haven't talked about that you wanted to mention?

JURCZYK: No, I think eventually we got around to everything, particularly around Jim. Trying to think if there's anything about Jim that I missed. Super smart, Jim Bridenstine, and Jim Morhard. Super smart. Also a person of very high integrity. Says what he's going to do and does what he said he was going to do. Holds people accountable for doing what he expects them to do, but in a way that is effective. Yes, got a lot of respect for Jim and the job that he did as Administrator in a relatively short time he was in the role. Also a lot of respect for Robert Lightfoot too, for being the Acting Administrator for 15 months, a really long time to be in that role as Acting during transition of the new administration. Yes, I think we covered everything.

JOHNSON: Okay, well, I appreciate it, and we'll be in touch again soon with your transcript.

JURCZYK: Sounds good. Have a great evening.

JOHNSON: Okay, you too, have a good day.

[End of interview]