

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
VOICES ORAL HISTORY ARCHIVES
IN PARTNERSHIP WITH NOAA HERITAGE AND THE NATIONAL WEATHER SERVICE

AN INTERVIEW WITH ALBERT “BENJIE” SPENCER
FOR THE
NOAA 50TH ORAL HISTORY PROJECT

INTERVIEW CONDUCTED BY
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MG: This begins an oral history interview with Albert Benjie Spencer for the NOAA fiftieth oral history project. The interview is taking place on June 2, 2020. The interviewer is Molly Graham. It's a remote interview with Mr. Spencer in Fort Washington, Maryland, and I'm in Scarborough, Maine. We left off last time with your time working on the AWIPS [Advanced Weather Interactive Processing System] project, and where we were going to go next was your time with the census. You'll have to explain to me the connection between the census work and NOAA [National Oceanic and Atmospheric Administration] in the first place.

AS: Okay. So you remember I had made a comment back around 1990, '91 – they had established the NOAA System Acquisition Office. The purpose of that office was to manage all the major acquisitions for NOAA. As a result of doing that, we wound up developing a cadre of talent and skills at an acquisition level that really didn't exist anywhere else, from a government perspective, probably outside of DOD [Department of Defense]. It's very typical where you would go to a contractor to get that level of acquisition support. So we had developed a capability in house. One of the individuals in a leadership role with the System Acquisition Office was a part of an independent board, group, or something. In one of their sessions, a person from the Census was talking about how they needed help in the acquisition area. So he said, "Hey look, we got an acquisition office over at NOAA. We'd be more than glad to help out." So we put an agreement in place between NOAA and the census. In all, it probably would have been about maybe five or six of us that wound up going over there working. Someone went over to help in the software capacity. Someone went over to help out in the engineering capacity. I was asked to come over and help in the capacity of being the person that did the day-to-day activities in keeping up their integrated master schedule. So there was an agreement between NOAA and census. The particular office was called the Data Capture Office. So Congress had directed census to contract out the data-capture portion of the census. The data-capture portion means this is the material that goes out to the public. At that time – this is back in 1999-2000 – when it would come back, you would actually have to take the form that we normally would fill out for the census, and the system would have to capture that information off that form and store it. A system had to be built to actually be able to do that. So they had one contractor for the system and another contractor for the entity of human resources that actually did all that. So I'm dumb and happy doing my stuff with the schedule ... that was the wife.

MG: If you need to take a break, please don't worry.

AS: No, the wife is out doing some shopping, and she just asked me about one particular item. So they found out at the census that I had a testing background because, through my career in front of that, even though being involved with and leading various things, my cornerstone was testing. So they found out I had a testing background. So then they asked me to, in conjunction with doing the scheduling, also manage the testing program, which I did. So I wound up managing the testing program through the entire development aspect for the 2000 census. We stayed on board during the actual operation part when they went into the 2000 data capture. It was interesting. I spent the majority of time up in the facility that was in Baltimore, on Route 40. They had that one. They had another one near Phoenix, Arizona, and another one in Pomona, California. There's one that's in Jefferson, Indiana, across the river from Louisville, Kentucky. It's actually a census location year-round. We actually were subjected to bomb scares, because the people that were anti-census. So being in the facility in Baltimore, more than once, we had

to vacate the building. Boxes would come in with stuff that could harm you. Then there were those that came that people actually sent money in because they supported it so much, they wanted to help offset the cost of actually doing the census. Some people sent in a videotape where they videotaped their entire life history and thought that was relevant. We had people that did dissertations. It was interesting to see how various people of the country interpret what the purpose of the census was, other than an attempt to just capture information as of today, da-da-da. So it was a good experience. It's one of the kinds of things where you have an opportunity to have insight into something that you normally don't do. Once it was done, I was almost unemployed coming out of the census. The System Acquisition Office was stood up by an action from Congress that instructed NOAA to stand it up. Generally, when Congress directs you to do something, it generally takes Congress to undo it. For whatever reason – I'm [not] one hundred percent clear on – we were basically instructed to kind of like stand down as the System Acquisition Office. Instead of going back to Congress and have us removed out of the budget, what they did was they just zeroed out our budget. By doing that, when we had completed the 2000 census in 2000 – because it basically ran like – I think it kicks off the month of February. It runs for about a month or two months or something. I had shared with the census that I'm out of a job. They said, "Hey, we'll bring you onboard, since you know something about tests, and we'll put you in our software lab and teach you how to do that, and we'll go from there." I said, "Thank you, okay." So I had not done anything official or formal as far as transferring to census. At the time, I was still a NOAA employee at the census facility. Right at that same time, the National Weather Service sister line office NESDIS for the satellites – National Environmental Satellite, Data, and Information [Service]. I think that's what it is. Some of us that were in the System Acquisition Office – because what happened was the office just broke up. The people went to different places. Some of them went to NESDIS. Some of those that went to NESDIS were now involved in the new program NPOESS, National Polar-orbiting Operational Environmental Satellite System, which is a tri-agency program – DOD, NASA [National Aeronautics and Space Administration] and NOAA. They knew – they being individuals that I have been working with over the past ten years or so – it's interesting. It's like a cluster of us engineers that have been moving together. We're kind of like an informal, established group. But once you got one of us, it worked out where, "Hey, okay, we can use you." So what happened was Paul Wofsy called me one day. He said, "Hey, Benjie." I said, "Hey." He said, "So what are you doing?" I said, "Well, I'm trying to get a job at census because, as you know, the Acquisition Office is gone." He said, "Have you heard of NPOESS?" I said, "No." He said, "Would you be interested in working on the satellite program?" I said, "Oh, hell yeah. That'd be great." He said, "Look here. I've been talking to John Cunningham, who was the program manager for NPOESS, and we are in need of somebody that understands testing from the government side. I told him about you, so he wants to meet you. Can you come here on such-and-such a day and talk to him?" I said, "Sure, that'd be great." So he said, "Meet me at like 6:30 in the morning outside of the building." You've been to downtown Silver Spring?

MG: Yes.

AS: Do you know where the McDonald's is?

MG: Yes.

AS: Right beside McDonald's is an office building. That's where the NPOESS program office was – in that building, on the fourteenth floor. “Be there at 6:30 in the morning, go upstairs with John Cunningham, who's the PM [project manager].” The deputy PM was there. Paul Wofsy was there, and a couple of other people, and we're having a conversation. At the end of the conversation, John said, “Great. I want to bring you on board.” I said, “This is great.” This is where it gets humorous, because at that point in time in history – and then I'm going to jump forward a ways, and then I'm going to come back. So he said, “Great, so can you start Monday?” This is the month of August 2001. I said, “I would love to, but I cannot start on Monday.” He went, “Well, why not?” I said, “I'm invested in Disney. I just spent money to take the whole family to Disney for a week. If I have to start Monday and not take the family to Disney, then I'm going to have to give up the job because I'm invested in Disney.” He said, “Okay. So when can you start?” We pulled out a calendar. I said, “The 27th.” He said, “Great.” So life went on. I went back to the census. I told them, “Hey, I got a new job. I'm going to be working for a satellite program office called NPOESS.” They said, “Well, what are you going to be doing?” I said, “I'm going to be heading up their test program.” They said, “Heading it up?” I said, “Yeah.” They said, “You know how to do that kind of stuff?” I said, “Yeah.” “Well, can I come with you?” [laughter] So I'm going to jump ahead quite a few years. So this cluster of us that moved around, we were also in the NEXRAD [Next-Generation Radar] program, the radar, back in the late '80s, early '90s. Every year, and even to today – this might be the first year we don't have it – but every year, in the month of August, we have the NEXRAD crab feast, where we all come together. We typically go to Michael's in Riva, Maryland, near Annapolis every August. We might not do it this year because of the pandemic.

MG: You'll have to get curbside service.

AS: [laughter] So somewhere – I guess it may have been like around 2007 or something. I don't know. But quite a few years had gone by. So we're at the crab feast. It was me and Margo, my wife, Paul Wofsy and his wife. So we're sitting there, right? We're reminiscing. So Paul said, “Hey, Benjie, you remember when you came over to NPOESS, and you told John Cunningham you couldn't start the following Monday?” My wife went, “What? What did you say?” He said, “Benjie told him he couldn't start the following Monday. If he had to start the following Monday, he couldn't take the job because you all were going to Disney.” “You mean to tell me that you were going to pass up on a job because we were going to Disney?” I said, “Yeah, that's right.” [laughter] Margo had not heard the story before then. So people just fell out laughing and everything. Margo was not laughing at all. She could not believe that I had actually done that. I'm like, “Well, what's the worry now? I've been working here now, so what's the problem?” So that was my introduction to NPOESS. I went from the NOAA System Acquisition Office. While there, I worked for census. While in census, they decided to shut down the System Acquisition Office, and they did that by a zero-out of the budget. If you go back and look at the budget at that time, zero dollars was appropriated to the System Acquisition Office. From that, finding work, thanks to Paul Wofsy, I wound up landing a job in NPOESS. If I was to go through my career from each job, I could probably give you the name of the person that was instrumental in me moving from one job to the next job to the next job, even to the last job that I'm in now. So that was the census. That was from 1998 to 2001 because right after I started working for NPOESS – August 27, 2001 – the first trip I did was on September 10th. When we got up the next morning, it was 9/11. So I will never forget that a large group of us had flown

out to Denver, Colorado, for a meeting with Raytheon. When we got up that morning, we woke up to 9/11.

MG: What was the meeting with Raytheon about?

AS: We were still in the up-front part of the program. When I came on board, they had already did the down-select from three to two. Now, we were in a part of the acquisition of two offers [that] basically, positioned themselves to submit an RFP [Request for Proposal] for the contract. So we went out to – and what we were doing – we were actually visiting the potential contractors' facilities and engaging them face to face on various stuff. So Raytheon wound up being the subcontractor to Northrop Grumman. Hold on just one moment. The wife is calling here.

[TAPE PAUSED]

MG: You were talking about the meeting in Colorado.

AS: Yes. So Raytheon, which wound up being the subcontractor to – so during that time, it was TRW. TRW was bought up by Northrop Grumman. So at that time, it was TRW. Raytheon was the ground side. TRW wound up being selected with Raytheon as their sub. So when I went there in 2001, we had not made a selection yet, so it was still having that up-front engagement with the various potential contractors at that time. So it was probably – oh, God – it was enough of us out there, we could probably fill a coach bus, and we all flew out. So we got up that morning. We went to the Raytheon facility. Needless to say, no meetings took place. Everybody was glued to the TV screen. We stayed glued to the TV screen for the majority of the day. We had an emergency meeting. John Cunningham, who was the program manager, was out there with us also. By the end of the day, we said that we would get back tomorrow – no. That same day, one of the individuals there had said that number one, you can stay here until this blows over and air travel is back, and planes are up and flying, and you can fly home. Two, they looked into getting vans and buses as a way to – as a group, we would go back across the country from Denver back to the Washington, DC area. Then there was you use your rent-a-car. So all those options were out there. So on that particular occasion, Jim Schaeffer – the car was rented in his name – so Jim, Paul Wofsy and I had a discussion. We said, “Okay, why don’t we just take the car and go back East?” So Jim had called the rent-a-car company and said, “Hey, I know I got a return rental. I would like to convert it to a one-way cross-country.” They said, “No, you cannot do that.” He said, “What would happen if I dropped this car off at another location?” “We would convert it into a one-way rental.” “Okay.” [laughter] So we loaded up the car with gas, and we drove from Denver, Colorado to BWI [Baltimore/Washington International Thurgood Marshall Airport]. The interesting story there is we left midday the next day, which would’ve been the 12th. I think it took us two days, or a day and a half – no, it was a day and a half because what happened – because we left there midday. That night, we were eating dinner at a barbecue place in Missouri, if memory serves me correct. We left there and continued. The only thing we did was we rotated through drivers. We didn’t stop and check-in a hotel. So when we got to BWI, it was maybe three o’clock in the afternoon or something like that. We would stop and get gas. It was interesting. Almost everybody we were encountering – it was a rental vehicle that they had, and they were trying to get back home. If you tried to get a

rent-a-car at that time, you were out of luck, because nobody had any. We got to BWI. If memory serves me correctly, either Margo had taken me to the airport, or I had taken a cab. But I know I didn't have a car at the airport. So the original plan was I was going to go to – we were going to go to BWI. Jim and Paul had their car at BWI. We got the car. I rode with Jim to Silver Spring. My wife was going to come pick me up in Silver Spring, but she was unable to. So I got on the Metrorail, took the Metrorail to one of the stops near here, got on a bus and came home. So I had an interesting journey by rent-a-car to BWI, with Jim to Silver Spring, from Silver Spring – from Metrorail to one of the Metro stops out here. It was Southern Avenue. I caught the bus there to drop me off right at the back of my development. Ironically, I caught the very last bus that made that run. That was 9/11. That was my introduction to NPOESS. That would be something I never forget. Starting on the 27th, first trip with the NPOESS program on the 10th of September, and then waking up to 9/11 and watching – and we were up early enough there and early enough to see the second plane fly into the tower. Ironically, earlier that year, we had gone and seen our family in New York. My older sister Carol lives in Poughkeepsie. Her second-oldest son, Damani, lives right there in Harlem area of – I guess that's Manhattan. Her oldest son, Diallo, lived in Newark. Then there was Rashida and Hashim. So we all had met down there by the – what's that park? – whatever the name of that park Battery Park is. We all met there, then we took the ferry, went over to the Statue of Liberty. We got there just out of the time to be able to go up into it, so we just walked around it, went up to the first deck level, took the ferry back, took pictures of New York City, including the World Trade Center. That was spring 2001. So I actually have pictures in my collection from that trip where it became kind of historic because, for us, that was the last time we were in New York before the World Trade Centers were attacked.

MG: Was your life or your work impacted in any way by the attack on September 11th?

AS: No, it was not. By being in Silver Spring – remember, there was some caution, a heightening of security. Night was interesting. I live about, on a direct line, maybe ten miles from Andrews Air Force Base. I'm between Andrews Air Force Base and the Potomac River. I'm about five minutes south of Woodrow Wilson Bridge in Fort Washington, Maryland. At night, the jets would actually be flying. A couple of times, it sounded like they kicked in those afterburners. I mean, all of a sudden, it got real loud. The house was shaking. You looked up, and you saw these four red balls. It's because they were that close as they merged, as they went in the distance. So it was a nervous time because of not knowing exactly what could potentially happen next. From an aviation perspective, based on where I live – hey, I'm fifteen minutes' drive time from downtown DC. So yes, the White House, the Pentagon – from that perspective, we're nearby, so didn't know what would happen. It didn't affect me job-wise. My wife's story was along the lines of – my wife had just started her new business in 2001, I believe. For some reason, she was in the same building – I think it's at – it wasn't Dupont Circle. I have to think about it [inaudible] a moment, but it's where the airline pilots' union is. She was in the building working. Our kids were attending St. Stephen's and St. Agnes in Northern Virginia. So when the plane hit the Pentagon, she was there. She said it didn't take long, but all of a sudden, you started seeing these military vehicles and people with automatic weapons, right? She's thinking, "How do I get to the kids?" There's a reasonable percentage of parents that are in the military whose kids all go to the same school. The school had basically taken the kids into the lower level of the structure to keep them safe. And St. Stephen's has three different campuses – one

for the lower school, one for the middle school, and one for the upper school. At this time, Tiffanie was in the upper school. I think Mikaela was in the middle school. She had to figure out how to get to the car that was at the Metro station. I don't remember. I think she was parked at the Metro station at the end of the yellow line in Alexandria – Huntington Metrorail Station. She couldn't get into the Metrorail station first. When she eventually found a Metrorail station she could get into, they weren't going under the Pentagon. So to get from downtown DC to Huntington, you usually take the yellow line that goes under the Pentagon. I think, first, they had stopped it and wasn't allowing it to go under it. Then I think they allowed it to move, but it wouldn't stop at the Pentagon. So eventually, she got to the car some hours later because, remember, it happened in the morning. So some hours later, she got to the car. And then the neighbors were calling and saying, "Could you pick up my kid? Could you pick up my kid? Could you pick up my kid?" So we had a 2000 Nissan Quest at that time, and it was designed to seat eight people. I think she had like ten or twelve kids in there. They were sitting on the floor. So she decided to stop and pick up some food because kids – they're always hungry, which was a smart thing. Then she had to fight her way across the bridge out of Virginia into Maryland, where we lived because traffic was a disaster. Fourteenth Street was definitely a disaster because it's right near the Pentagon. Then you had the increase of traffic trying to get across the Woodrow Wilson Bridge. Of course, I'm on the other side of the country. [laughter] So my two daughters at that time – let's see. Tiffanie was seventeen. She was seventeen when that happened. That would mean Mikaela was twelve years old. So probably one of the bad times for Daddy not to be home. Margo did a marvelous job of managing that whole situation. We had a friend of ours that actually works at the White House. Her name is Beth. She actually told Margo that, when they got the word what was happening and that the plane target was the White House, she said there was a mass of them that just left the White House and went running up Sixteenth Street. She said she didn't even realize that she was running up Sixteenth Street without shoes on. That's how stressed it was. So we have friends that were closer than I was to various situations and so forth, what have you. So that was an interesting time, all wrapped around a new job, the first trip for this job, the country gets attacked, away from the family. But we lived through it.

MG: Before you talk more about NPOESS, I wanted to ask what was the justification for defunding the System Acquisition Office?

AS: I have my theory since I was not a part of or privy to the decision making. I believe what happened was the System Acquisition Office was a very successful program, successful to the extent that we were helping out other government offices and agencies with their acquisition. The cost of that was probably minuscule to what a contractor would charge. We thought that the benefit of actually doing that was, by us being a government entity, working with another government entity, we could have the open, frank discussion on what we need to do as an acquisition on behalf of the government. I believe that it was probably some contractor, some companies that took issue with what we were doing, and they made a complaint down at the Commerce level to the extent of where it resulted in just zeroing out on our budget as opposed to going back to Congress. As a result of what we were doing, we were putting agreements in place, and we were actually bringing money into NOAA by doing this work, which would enable us to operate in the black as the System Acquisition Office. But somebody else took, I guess, issue with it. Everybody in that office went through a hundred and sixty hours of major

acquisition and contracts training. That was very vital to establishing what that office was and to its success. There were other pushbacks in the office. I think, originally, I think the threshold with like anything – I could be wrong, but I’m going to just put a number – so anything that was like five-hundred-thousand dollars or something like that would have to be directed to the System Acquisition Office to manage that acquisition. Line offices didn’t take too kindly to that. They kind of felt that if it was their money, they should manage their money. They didn’t want the System Acquisition Office managing their money. Well, the System Acquisition Office didn’t manage their money. The nuance is the System Acquisition Office didn’t own anything. You come with your needs, your requirements, your concept of operation. We have the talks. We basically are being put in place to do an acquisition to acquire something that your office is going to take receipt of and going to have to operate and sustain. But that wound up being the rub. So under the auspices of the System Acquisition office, I did NEXRAD, which was the radar. Then I did the aircraft, which was the acquisition for the G4. Then I did AWIPS. Then I did the census. There was another little thing in there, but it didn’t pan out, so – a government office wanted our help. We went to them, and they really weren’t ready to – I guess we better say they really didn’t fully understand the nuances of them doing an acquisition. So what we were bringing to them to help them and tell them how we could help them, they were still having some issues or problems understanding it. So they backed off of it. But those programs – NEXRAD, aircraft, AWIPS, and the census – was what I did in that ten-year window between essentially 1990 and 2001. It’s interesting. So in the ’80s, I was with the Engineering Division of the National Weather Service. In the ’90s, I was in the NOAA System Acquisition Office. From 2001 to 2011, I was in NESDIS and the NPOESS program. So now I’m here. I guess I cannot work beyond 2021. That would just mean I’ve upset that [pattern]. [laughter] So that’s my theory.

MG: Can you tell me the NPOESS program story? What was your involvement in it? What was the program’s mission?

AS: Okay. So NPOESS, the National Polar-orbiting Operational Environmental Satellite System, was a program that came together. It was determined – and I think it was by Congress – that NASA deals with satellites, DOD deals with satellites, and NOAA deals with satellites, all from an environmental perspective. So it was like, “Well, hey. Look, why don’t we bring these three together to save taxpayers’ money?” I think this goes back to the [Bill] Clinton administration. I think it was – Al Gore may have been the one that was pushing this, I think. NASA already had a satellite they were working on – MODIS [Moderate Resolution Imaging Spectroradiometer] I think is the name of it. So that would be the basis of this going into this program since NASA was already going down this path. So it was agreed they would establish a tri-agency; it was a tri-agency program. It wound up being a fifty-fifty split funding-wise, between NOAA and DOD, and NASA was there for their expertise. The simplicity of it was to actually acquire and deploy a single satellite platform that would meet the needs of those three agencies. TRW wound up winning the contract. Right after they won the contract, Northrop Grumman bought them out. That started my life with NPOESS when I came on board, in 2001, to run their test program, to be the government test manager for the NPOESS program. I had a counterpart on the contractor side to me where we worked together with developing the various aspects, and what have you. So I started out as the test manager in 2001. Somewhere in there – I think around about 2005, maybe – I moved up to being the deputy chief for engineering. Around

about 2009-ish, I became the chief of it. I was tapped to head the restructuring of the NPOESS program. I think that was like around 2008. At that time, I think NPOESS was up at around about a twelve-billion-dollar program. We were required to restructure it down to, I think, eight-billion dollars. That took about a year and a half. The original program manager, John Cunningham, was gone. At this particular time, this was Colonel [Susan] Mashiko that was serving in the capacity of program manager. I'll never forget. It was three of us. When she came, she said, "Okay, we need to do a restructure here." Alright. Somehow I got pinged to be the lead on it, and so we got the contracting officer and the budget officer. The three of us got together on that particular day. The budget officer was Beckwith. That was his last name. The contracting officer – I see his face, but I can't pull his name out yet. So three of us got together. We went into a room. We planned it out. We determined it was going to take eighteen months to restructure. So we took that to Colonel Mashiko. She said, "Do it in twelve." It took eighteen months. From the time that we sat in that room until the time, eighteen months later, when we went to the Air Force base in Los Angeles – the Air Force base that does not have an airstrip. [laughter] Actually, it's in Redondo Beach, but it has no airstrip – El Segundo, in that in that area right there. But that's where the – it was a DOD acquisition [office], so we were following the DOD acquisition rules. For the restructure to be approved, we had to go to legal and also the head of contracts for DOD, Air Force, which was out in El Segundo. So the contracting officer and I went there, and we did our presentation. We gave our situation – this, that and the other. They gave us the thumbs up. So we now had a restructured program. Then came the demise of the program. So with your major program, with your major acquisition, we do these things called major reviews. On the engineering side is we have these reviews that we go through, and you have a standard review board, a technical review board. These are the greybeards of the community. So you have maybe six, seven, eight, ten of them. When you add their years of service, you easily have anything like four-hundred years of satellite and space service amongst them, because they know the stuff. We had what we call a critical design review, which is the last major review. The critical design review is where the contractor of the program demonstrates to the board that we have dotted the I's and crossed the T's relative to start what we call bending metal, which is actually building. We have a baseline set of requirements. We have that the risk is at an acceptable level. The amount of open paper is under control. We got a design that holds together. The budget is there. The schedule is there. Everything is there. Go build a satellite. This also takes into consideration the individual instruments. One of the things the NPOESS program had done was they had started the development of the design and development and building of the satellite instruments before we even had a contract for what we call the bus that we actually integrate the instruments on. That actually started in the late '90s as a way to mitigate some of the risk and schedule. So when we got to the CDR [critical design review], we actually had instruments that were in a state where they were being built such that, by the time the bus would be ready, it would be ready to be integrated onto it. So thumbs up. Then, February 2010 is when they told us – they called us into a meeting. They said, "We're shutting down the program. We, at that time – and probably even some of us right now – did not understand why the program was being shut down if the so-called experts had said, "Go build a satellite." So we got called into the auditorium right there on NOAA's campus. I'll never forget it. So we're all sitting there – DOD leadership, NOAA leadership, NASA leadership. NASA leadership told their people, "Hey, don't worry about it. You can come back to Goddard Space Flight Center. You got a job. You got nothing to worry about." DOD told their personnel, "You will get orders in the near term on where you will go from here." NOAA got up there and

said, "We'll get back to you." [laughter] So those of us that were NOAA were like, "Whoa, what do we do now?" That initiated the shutdown of the program. That was February 2010. I officially was no longer a NESDIS employee come May 2011. From February 2010 to there was we were shutting down the program, looking at where people would be relocated within NOAA. At that time, they were talking about having me serve on what is the JPSS [Joint Polar Satellite System] program in the technical director position for the JPSS. So from February 2010 to, I would probably say, September 2011 – excuse me. From February 2010 to September 2010, I was dealing with the transitioning of the NPOESS program and shutting it down. The reason it was only that narrow window was because of a young lady by the name of Daria Webb, who I met when I was on the AWIPS program. She came to the AWIPS program after I did. It appears that I was one of the first individuals she had met. I think I may have told you that I'm involved with the NOAA Fish Fry. So Daria and I were professional colleagues at best. Okay? We saw each other, we spoke, right? So at the June 2010 NOAA fish fry, she came back in the kitchen. She said, "Benjie, when you finish doing your cooking, come on out. Let's have a beer and wine, whatever. I got something I want to throw out at you." "Sure." So I went out there. We got together. We sat down. She said, "You know Deirdre Jones." "Oh, yeah, I know Deirdre." She said, "Well, she works for my boss, Don Berchoff." "Okay." "Well, Deirdre's moving on to the operational side of the house of National Weather Service." "Okay." "Well, I suggested to my boss he should consider you for the position." "What position?" "Deirdre's position." "Okay. So what position does she have?" "Well, she's the director of the System Engineering Center for the National Weather Service." I said, "That's an SES [Senior Executive Service] position." She said, "I know." Because I was a fifteen. So to give a little bit more sharpness to that – I had decided, while in the NPOESS program, that we would launch our first satellite. I would be at least fifty-seven in age. My youngest kid would have graduated. That would have put her out of high school, if not college. So I was going to retire, throw in the towel. I turned sixty-four this month. So that's at least seven years ago. Charlie-I was supposed to launch at the end of the program. I think we were talking about launching Charlie-I around 2011, 2012, which would have been the first satellite. It was Charlie I, Charlie-II and Charlie-III. Don't ask me why they call it Charlie. I don't know. But that's how it was referred to. So I was planning on retiring. So when the program was shutting down, I was just looking at it this way – two out of three is met, the program's shutting down, not sure where this is going – fine. I'm just going to retire. So Daria threw that out. I'm like, "Okay." She said, "I'd like you to come over and talk to my boss." I said, "Okay." I said, "Well, let me ask you a question. Why me?" She said, "For two reasons." I said, "Okay." She said, "When I came to AWIPS, you were the only person that ever showed some degree respecting me. Number two, you save our hide" – talking about the National Weather Service because – I think I may have shared this with you. I had done this recordkeeping for AWIPS, where I had the one box per site. I had distributed the cost of everything in the AWIPS program across the sites. I came up with a way of doing that, and I had levied the software cost, all the software-development costs, on one site. I don't remember if it was the GAO [Government Accountability Office] or the IG [Inspector General], but she said, "They came there; they wanted to know how much money was spent on AWIPS software development. You had it on this one site, so we took it to them, and showed it to them. They were happy. They came back again. After the second time they came back, they put a post-it sticky on the box. So every time after that they came, they just came into the room. They'd just point – 'It's that box right there.' So they stopped coming. I thought that was extraordinary for you to think that far in advance to do something like that that resulted in saving the Weather

Service's hide. I shared that with my boss and said he should consider you." So then, in September, October 2010, I went over to Weather Service on a detail for that position. That January, I applied for the job. I remember spending Christmas working on ECQs [executive core qualifications] like crazy. I interviewed February 2011; got selected in February 2011. A part of the SES process, even though once you're selected, there's still a process where it has to be approved at the NOAA level, then it has to be approved at the Commerce level, and then it ultimately has to be approved by OPM [Office of Personnel Management]. That was in May. The interesting thing about that is I wasn't looking to become a senior executive. I hadn't even taken training that you would typically take, like the departmental-level senior executive training. I had not taken that. But I had taken the NOAA LCDP, Leadership Competency Development Program, which is an eighteen-month great training class – great class. I had taken that. So I say I tripped into becoming a senior executive. That position also was a result of a person asking me to consider doing that, which has been my whole career of people asking me to take a position, lead a position, and is a result of where I am today. So, since 2011, I've been a senior director with NOAA in two different positions, kind of doing the same thing. Because when I came on board, it was the National Weather Service, Office of Science and Technology, System Engineering Center. In 2015, we did the reorg [reorganization], so now it's the National Weather Service, Office of Planning and Programming for Service Delivery, OPPSD, Engineering Standards Division. So my title changed, but kind of doing the same thing. That's the last twenty years, so to speak. I didn't think I was going to be here now. Actually, if the Weather Service had not reorged, I probably would have retired by now.

MG: Can you say a bit more about the Weather Service reorganization? What were the changes?

AS: [laughter] So why did the Weather Service reorg? The short answer is the National Weather Service got in trouble for misappropriation. The director at that time and the budget officer was basically released of their job. I know the previous director, Dr. Jack Hayes, who's ex-military, the predecessor to Dr. [Louis] Uccellini because when I was on the AWIPS program, we had certain involvement with each other. When I came back to the Weather Service, I remembered Jack, but I didn't know that Jack remembered me, which was interesting. So what precipitated the reorg of the National Weather Service was there was a program by the name of the Weather Radio Improvement Program, WRIP. The Weather Service, without the permission of Congress, used funding that was for the WRIP program for other operations within the National Weather Service. That led to the removal of the director, Jack Hayes, and the budget officer. Dr. Uccellini wound up being selected as the new director of the National Weather Service. So when you have something like that, you have to be able to demonstrate to Congress that you're going to get the house in order. So Dr. Uccellini developed a concept for a reorg of the National Weather Service that we're operating right now. Congress is very pleased with the reorg. That's kind of what happened. So now, engineering is an interesting thing. Back in the '80s, we were very engineer-oriented because we actually did the design, development, testing, and having the systems built and deployed. When you look at where we really are now, we tend to be more kind of IT-ish [information technology] than engineering. So from my vantage point, the various challenges that I see that we have are because we have so much gotten away from the discipline and structure of engineering and just look at things from an IT perspective. Even with the reorg of the National Weather Service, from my perspective, I was

not thought of. True story – leading up to the official reorg of the National Weather Service, we were having an offsite [meeting], as we’re doing our planning and so forth of the National Weather Service. You know how you like to have these socials as a way to kind of break the ice and everything? I will not identify the person by name. The person walked up to me and said, hi, “I’m so-and-so.” I said, “Good evening. I’m Benjie.” Their response was, “Oh, so you’re Benjie?” I’m like, “Okay, yeah, so?” “We don’t know what to do with you.” “What do you mean you don’t know what to do with me?” “We don’t know what to do with you because we don’t know what to do with engineering.” “So all this time, I’ve been reaching out to you all, and now you all are coming to me at the eleventh hour, and you’re telling me you don’t know what to do with me and engineering. That is pretty sad.” So then they had a meeting with me. In that room were two other individuals that were degreed engineers that knew engineering. The other people there did not. As I attempted to explain in the simplest terms that I could about what we do as system engineers, the only two people that understood were the other two engineers that were in there. I had just simply made a statement and said, “Look at it this way. Look at it like a sphere. Okay? So from a system perspective, I’m interested in what’s coming into the sphere. I’m interested in what happens inside the sphere and what goes out.” *Whoosh*. They said, “We can’t comprehend that.” They said, “Based on what you just said, that would mean that you would serve in the same capacity as Dr. Uccellini.” I said, “No, that’s not what that means.” So that set the ground for the disconnect. So from my vantage point, what I saw was I was going to basically have to crawl engineering back into the organization. So even today, we’re still trying to get engineering to a point where I would like to say, basically, it’s a respectable discipline within the organization. It’s a challenge because the mindset today is we don’t need it. We can do everything without you. That’s kind of the mindset. Now, there are some exceptions. There are a few individuals here that believe that “Yeah, I need the engineering to get through this.” But in the general sense, it’s not there. Having been with NOAA and having been with the Weather Service, going all the way back to 1976, and have done pure engineering through the ’80s, through the ’90s and even in the first decade of this century, to come back to the Weather Service – when I came back to the Weather Service, we were doing engineering before the reorg, the kind of engineering we would expect for where the organization was at that period of time. But at the reorg, it was kind of like a step back. So one of the challenges right now is helping [the agency] understand the importance, the significance that engineering is. So the phrase I like to use is I view engineering as an enabler for everybody else. I don’t own anything, so my job is to help you be successful. I’m successful by making you be successful. It’s just that simple. So the reorg was an event that resulted in a removal of the director due to the misappropriation of funds, resulted in Dr. Uccellini coming in, a reorg of the organization, and, five years later, this is where we are because it was April 2015, I think, when it was official. So we’re five years in.

MG: Well, I know you want to get ready for your next meeting, so we’ll take a break and pick up again at 11:15?

AS: Yes. Sounds like a plan.

[TAPE PAUSED]

AS: So go ahead.

MG: Is there anything else you wanted to say about the work you're doing today or your career up to this point?

AS: Now what I'm doing, besides the professional stuff – what I'm required to do on paper – is trying to reach out to other people, especially people of color, to consider becoming a senior executive because there's not that many of us in NOAA. I think there's only two of us, maybe three – but definitely two. It just so happens – Deirdre Jones and myself, which is kind of sad. When I became a senior executive in 2011, if memory serves me correctly, there were twelve senior executives that were African American, and now we're down to two. When you look at what's going on in the country right now, it would be so great if we could be colorblind, but the reality of it is we're not there yet. So one of the things I'm doing is encouraging people of color to actually consider looking to become a senior executive. I'm affiliated with the African American Federal Executive Association, AAFEA, which is an African American organization founded on the premise to help African Americans to become aware and prepare to become a senior executive. So I'm going to be addressing a group next week, on the 9th. They asked me to do a talk with them, so I decided my title is “Congratulations, So Now You're an SES-er.” The reason I chose that title was because, since I was not seeking to become a senior executive, and I found myself a senior executive, each day is a learning experience in being a senior executive. Since I did not have that formal SES training in front of it that may lay the foundation in some respect, each day is like a learning day. So what I want to share with them is some of my lessons learned from being a senior executive, some of the expectations, and some of the things if I had known this, if I was better in this particular area – but then, at the same time, don't let that be a deterrent. Everybody has some type of talent or skill. From a societal perspective, in some manner [inaudible] society can benefit from. The question, in my mind, is how do you look at your talent, and how do you want to couple to that as to what you're going to do for society? As I mentor people, the two questions I always ask them – was never asked of me – I thought about it along the way, after I started engaging people in some capacity of mentoring – is I ask them what do they want to be when they grow up? I get the deer in the headlight [look] because they never really thought about it from that perspective. It sounds like something you would ask a kid. But what I found out, as an adult, a lot of times, we're doing a lot of stuff, but we never really thought out what is it that I really want to do? I'm doing stuff. But what is it I really want to do? And the second question is when you're done – retired, ready to sit back in a rocking chair and drink your lemonade – what would you like to say was your contribution to society? Why those two questions kind of came up – nobody ever asked me that. If somebody had probably asked me that anywhere along my career path, I may not be where I am right now. I may have done something differently because an unfortunate part of my growing up was – and I'll never forget it. When I was a child, pre-elementary – this is the '60s. I remember being at home. I was totally fascinated by the space program – eyes glued to the TV. My mom says, “No need to be interested because you'll never be that good.” As a kid, crushed me. As a kid, you feel like your parents know best. So even to this day, I'm still interested in the space program. Yes, I did watch the launch on NASA TV. [Editor's Note: Mr. Spencer is referring to the May 30, 2020 SpaceX launch of NASA astronauts, Douglas Hurley and Robert Behnken, to the International Space Station.] I watched the docking of it. Even watching the first two hours in front of the docking was still fascinating. If somebody had probably asked me, between the time my mom said that and now, and they said what did you want to be when you grow up, and I said

an astronaut, I'd probably start thinking about it sometime probably to the left of where I am now, there could be deviation, a change in what I would have done. I feel I was blessed to be on the NPOESS program because that put me closer to something that I truly love. I have been down to Cape [Canaveral] for two launches, for both of the GOES [Geostationary Operational Environmental Satellite] launches. I've been out to Vandenberg for two of the JPSS launches. What I was hoping to do before the NPOESS program had met its demise – I have always wanted to go to Antarctica, where we have an outpost there. The one up in the northern hemisphere, in Svalbard – up in that area. I can't think of it at the moment. So those are two places I was hoping to get to on the space program. So when I ask myself the question, "What do I want to do when I grow up?" – well, I'm kind of grown now, so I'm looking at it more as transitioning out of this into – my wife, for the last five years – "When are you going to retire? When are you going to retire? When are you going to retire?" "Yes, I'm going to." "Yes, I've been hearing that. When are you going to retire?" So that's probably in the foremost of my mind is ensuring how things are transitioning over to people before walking out the door. What I believe I've given to society – I think, when I look at it, is I have spoken with a lot of young people and helped them to look at things in certain ways, learn to think about things in certain ways. It's just knowing that I've helped somebody else in their decision-making process so that they can make a decision of where they want to go with their life. That's what I feel I've done. Peace, be still. [laughter]

MG: Well, I wanted to ask about the article in *Minority Engineer* that featured you. In the article, you talk about how to get minorities into NOAA but also into engineering in general. I also read that NOAA is investing about a million dollars in the Educational Partnership Program.

AS: Yes. I'm involved with that.

MG: Good.

AS: So EPP, Educational Partnership Program – and for the Weather Service, it's called NCAS [NOAA Center for Atmospheric Sciences]. This year, it's called NCAS-M [NOAA Cooperative Science Center in Atmospheric Sciences & Meteorology].

[TAPE PAUSED]

AS: So for the Weather Service, that's called NCAS. With the dash-M, it's meteorology. The reason they did that was because NCAS by itself was a funded program. NCAS-M is a newly funded program, and you cannot use the same name, based on how they do appropriations, so it was funded to continue. NCAS was funded; NCAS-M was funded, even though they do the exact same thing. Then, on the NESDIS side, it was called CESSRST [Center for Earth System Sciences and Remote Sensing Technologies]. So that was interesting. So the Weather Service does a stand-up [meeting] every morning. I guess around maybe 2016-ish, thereabout, in the stand-up – and they put the AA [Assistant Administrator] and DAA [Deputy Assistant Administrator] agenda – their schedule up every day, so you have an idea. They also used to do it for the week. Yes, they do it for the whole week. So, on Louis's calendar, he was going down to Howard [University]. I didn't know what NCAS was, but I knew what Howard was. So I was like, "Hey, Louis, what are you doing going to my school? What's going on?" He said, "Well,

why don't you come on down there with me?" That's when I became exposed to NCAS. I became a part of the NCAS program as being a NOAA employee and also by being an engineer, even though they were primarily scientists. The CESSRST side had also had me to be involved with certain things as well, by me being involved with NCAS because both of them are under the Educational Partnership Program, so there's some cross-integration there. As a result of that, I've spoken at Hampton [University], I've spoken at Jackson State [University], and I even spoke at a company, Boston Scientific, out in Dorado, Puerto Rico about STEM [science, technology, engineering, and mathematics] and the importance of it. When I'm given opportunities, I still try to get people, whether to STEM or not – I'm biased to engineering. I always like to give scientists some type of a rub that engineers are better than scientists, just to kind of get the conversation going. Anyway, yes, I am involved with NCAS. Now, I am on the NCAS-M External Advisory Board. This last summer, they asked me if I would be on it. It's a two-year commitment. So now I'm on the NCAS-M External Advisory Board. What does that mean? There is a separate group that is the opposite of the external – the internal board. Okay? The external board is basically people that are outside, not hands-on, dealing with the day-to-day activities of ensuring the program. We come together on a periodic basis, as needed, to see how things are going. So I have participated in certain things as a board member. Then I think it was just about a month ago, if that long, we just had a report out to the regular board on how we see things, how things are going, what can be done better, da-da-da. The NCAS consortium, if I remember correctly, with Howard University being the lead, I think it is a consortium of like thirteen universities, and they are universities for people of color. Howard University has the lead. The purpose of the program is to bring in underrepresented people into the program – undergraduate, graduate, doctorate – bring them in [with] the intent of – with the NOAA dollars, we're going to educate you and give you hand-on experience in atmospheric science, with the hope and intent that you will come and work for NOAA; if not with NOAA, at least in the community at large because it is our position that, even if you're not in NOAA, you're still contributing to the mission of NOAA as well. So that is the purpose of the NCAS program. On the NESDIS side, it's more engineering versus science, and it's engineering associated with the various satellite programs under the NESDIS directly.

MG: Can you say a little more about the relationship that NCAS has with Howard University or other colleges?

AS: So, under NCAS, Howard University is the lead university of a consortium of thirteen colleges, which requires Howard University to establish the program and execute the program, which includes executing the funds. They allocate a part of that one million dollars to the program. The kids typically come there in the summer. They get a stipend. They do work throughout the year, so the outgoing person that was heading that up was Dr. Vernon Morris, who has just left Howard, went out West to a different school, in Arizona, I think – Arizona State University. So he had to manage and orchestrate that and do a report every year [saying], "This is how we're spending your money, NOAA, taxpayers. These are the type of programs we're working on – atmospheric science. This is what we have done. This is what we have produced." Some of the stuff they do is a direct ask from the scientists, the meteorologists, and some of the things are a good-to-do on behalf of what they do. So Howard has the responsibility, as the lead university, to manage and orchestrate the NCAS program.

MG: I saw your name on a list of NOAA mentors. Is that a program you're still involved with?

AS: If they call me up, they got me. [laughter] We just had – what? – two weeks ago, the Weather Service held a senior executive panel – three days. The first and second one was essentially the same, which was the process – why did you become an SES-er? What is it like being an SES-er? Da-da-da. They did like two days of that – only for about a half a day, but two separate days. Then, on the third day, was why do I want to become an SES or why should I become an SES – something along that line. So I called into that one. I was the only person of color on that day one. As a matter of fact, out of the whole thing, I think I was the only person of color that was on the panel. Even there, I had made myself available to those who are interested, because I did make the statement, for those of you that feel uncomfortable or that you're unable to actually engage a senior executive that doesn't look like you, I'll make myself available to you to work through that. Three different people had reached out to me after that. Somebody was asking me about that, and I told them – I said, “Yes, I've actually had people tell me that, in so many words, they have gone to senior executive and it was more like, ‘talk to the hand.’” Based on the training that I've had, I feel that, as a senior executive, a part of my job is to help a person get to where they want to go, period. So if they are doing something that they don't like doing, they don't think they should be doing, then I should help them to try to get from that to something that they want to do. What some of the people have shared with me is – even coming out of this panel – it was kind of like, “Well, you're not ready.” What does that mean? So I felt like a senior executive as opposed to telling the person you're not ready, you sit down and have a conversation with them, and you try to understand where they are and help them understand what it takes to get there. To tell somebody that you're not ready – I don't know what that means because, in my mind, there are senior executives that it's easy to question, how did they become a senior executive. But no matter how they became one, I still believe, based off [how] I was trained, my job is to help. If being a senior executive is about being visionary, being strategic, moving an organization somewhere in the future, you can't – the organization, no matter how big, is no bigger than a single individual that enabled that organization to be what they are. To tell somebody that they're not ready and shut the door – I've had that done so many times in my life – “You're not ready. You're not ready.” Okay. So what does that mean? What do you mean “is not ready”? So I feel as though, that, as a mentor, as a senior executive, as a person of color, it is part of my job to help individuals. One of my interesting proteges or mentees, whichever word you want to use [inaudible] – the person didn't even work for the federal government. He worked at Stevens Institute, up in Hoboken, [New Jersey]. We came to know each other because I had got involved with the NDIA, the National Defense Industrial Association, which is an integrated group of DOD, military, nonmilitary, civil, industry, academia. It's a group of engineers that come together on a regular basis that is about continuing engineering as a part of the major element of the success of any program. So I met him through this. He asked, could he come visit my office? “Yes, sure. No problem.” So not on the first visit but not too many visits after the first one, he said, “Could I ask you to give me some degree of mentoring?” [laughter] I was totally blown out of my seat that this person would do this. So I'm like, “Sure. I'll give it my best.” He wants to be a lab director as an engineer. There are engineering labs, just like you have science labs. When we had our discussions, what was clear to me was the likelihood of moving up to the director of a lab was going to happen only if the person – or persons – that were in the position left, retired, or died. Generally, they don't retire. They don't leave. It's kind of like it's the holy grail, being a lab director. So I talked to him

about that and how to approach it in various ways, including looking elsewhere. So long story short is he is now out in Idaho – Idaho Falls, Idaho – where he is the director of a unit out there at the Idaho National Laboratory. It's the place where we first started doing nuclear experiments and stuff. My understanding, based on what he was saying, that was the first place that they actually powered a city or part of a city off of nuclear energy. So initially, his wife didn't have good words for me because, when he accepted the job – it was funny – he went out there to see the facility and everything, based on the way he tells the story. At the end of it, they said, "The job is yours. This is your office." [laughter] And he's like, "Wait a minute. What?" They said, "Yeah, the job is yours." "I haven't even said anything to my wife." So he lives up in New Jersey. So going from New Jersey outside of New York to Idaho Falls is a transition. So when I met his wife for the first time, which was at a social here in DC – it was an evening social based on the kind of work we do as engineers. I'm also on another board that's associated with the NDIA stuff. I don't even know if – I guess it's in there somewhere. I don't know. Eventually, this stuff runs together, and I'm just glad to help out. Anyway, so we're at the social. My wife is with me, Margo, and his wife, whose name I can't remember right now, is with him. So I walk up. He said, "Benjie, I'd like to introduce you to my wife." She said, "Oh, so you're Benjie." [laughter] If I could count the amount of times in my life that somebody said, "Oh, you're Benjie." [laughter] If I got a dollar for each one of those, I'd be a rich man. But that was one of my most interesting mentoring – that somebody outside of the federal government actually approached me and asked would I do some degree of mentoring with them? So I'm here to help.

MG: You've alluded to thinking about retirement. Do you have any real plans? How much longer do you think you'll stay on?

AS: I have nothing solid. I have not taken the serious thing and said, "Okay, this is it. I'm done." I guess because I still feel that there's something that I want to do relative to ensuring engineering is getting stood up in the Weather Service. And it's just not there yet. We're scratching at it. That's probably a part of it. I would like for engineering to be at a better respectable level in the Weather Service than what it currently is.

MG: This oral history project is to document the fiftieth anniversary of NOAA. So I'm wondering if you can reflect a little bit on the agency's evolution and where you hope or expect it to go in the future.

AS: I have worked in three different capacities, I guess, with NOAA – the National Weather Service, I worked with NOAA, and I worked with NESDIS. NOAA has really become a highly respectable entity. The reason I say that – whenever I go somewhere – I've even had people to reach out to me to say, "Hey, I want to work for NOAA because I love your mission." To work for an agency that deals with the – essentially, from the ocean floor to the sun, that's us. When I joined NOAA, it was just a word. Hey, what? [I'm] twenty years old? [laughter] Okay. I actually had no – the only thing I knew [was] I wanted to do engineering. That was it. For who was – I don't know. But I just wanted to do engineering. You look at where we now, as integrated as we are as an agency – when you look at NOAA, the NESDIS, the Weather Service, the OAR [Oceanic and Atmospheric Research], the NOS [National Ocean Service] – it's you really now, I believe, more so than twenty and thirty years ago, have a really better

understanding of the relationship between the line offices and what they do for the world at large, not just a community. Where is it going? I think, as we continue to get faster computers and we probably will be increasing our modeling capability, it's going to be monumental. We sometimes take the weather for granted, because, hey, I can see it on TV. I can get it on the cell phone. At the core of that, yes, that's NOAA – the reason that you can. Number two, we have improved, speaking from the Weather Service perspective, our long-range prediction. As we get better with computers, it will even get better. It's the ability to plan out in weeks and months, based on prediction as opposed to just days or weeks is monumental. There are a lot of people that live in areas that are affected by weather. Sometimes you cannot give ample warning in time for that volume of people to move. You look at a place like the Outer Banks – primarily, you got two bridges. If you're going to move all those people out of the Outer Banks, you need ample time. The bridge on the north side is a four-lane bridge, and you got a four-lane highway that takes you up into Virginia. The one on the south side, I think, is a four-lane bridge, but that turns into a two-lane road through North Carolina. So when you start talking about having to move people, prediction becomes very important, and the quality of that is important. I think NOAA has really done a good job in the quality of the predictions that they do. I see it only getting better with time. It's an exciting agency to work with. The environment is unpredictable. That's why we're in the prediction business. If we had the perfect model, you wouldn't need all of us. [laughter] We don't have the perfect model. That's what we're striving for, so it's pretty exciting. Space weather is a big thing. That's exciting in its own arena. So I've been fortunate working for NOAA, working for the Weather Service. Currently, if you even take something like space weather – I'm in the spectrum area now, so working with satellites, the Weather Service having the responsibility for reporting out on space weather-related things. So satellites – we got the sensors on it, okay for the test. Weather Service – we do the reporting of it. Now I'm in the spectrum. Now what we're finding out is space weather is a huge thing because it's not only space-borne sensors, you've got earth-bound sensors, and they're looking at all of this. The reason it's a spectrum – interesting thing – because the sun operates on all frequencies. There are certain frequencies that we need to detect for certain things. So from a space weather thing, there are a lot of frequencies that we use. Well, we're talking about 5G, amongst other things, so there's a lot of what we call spectrum that industry wants to use. So why is that relevant, based on what we're talking about? When are you look at NOAA, and we're about the environment, if there's anything that impacts our ability to detect the environment, including what's outside the atmosphere, that is space weather – nifty name, even though it's not really weather in space, but it kind of works – it will affect our ability to do what we need to do as an agency. That is critical. So working with NTIA, National Telecommunications and Information Administration, and FCC, Federal Communications Commission – so FCC deals with the commercial side, the issue of licenses, and NTIA works with the government side, where they allocate you frequencies you can use. Industry wants as much as the frequency they can. So anything that we need to detect relative to the environment – if we're unable to use those frequencies to do that – will impact NOAA's mission. Then the question becomes, are there other ways of doing it? And that's TBD [to be determined]. So where NOAA's going in the future? I think NOAA's mission is clear. It's the environment, period. Period. Ocean floor to the sun, period. What can we improve upon? It's dealing with what we need to continue to improve the way how we detect, measure, and report, because it's about minimizing the loss of life – being informative to the public, to the world, to minimize the loss of life. I think that's why so many people are fascinated by NOAA and want to come work

for NOAA in various capacities. Me? I just kind of tripped into working for NOAA, thanks to a frat brother. But there's a lot of people, and people have reached out to me, and I connected them to other people even in different line offices for potential possibilities. That is also one of the beauties of the LCDP [Leadership Competencies Development Program]. We're such a vast network within NOAA of talent and skills. It's rewarding to know that you can reach out to another LCDP graduate and say, "Hey, I got a person here. They're interested in something that you're doing in your particular area." The response you always get – "Hey, give them my number. Let me talk to them." Because if somebody's interested in something that we do for NOAA, the last thing we want to do is turn them away, because potentially that's our future.

MG: Yes. If you have a few more minutes to spare, I wanted to ask you how you met Margo, and about your life outside of work.

AS: Sure. So how did I meet Margo? [laughter] This would be spring 1976. I was pledged into Phi Beta Sigma Fraternity, Incorporated, and she was pledged into Zeta Phi Beta Sorority, Incorporated. We are constitutionally connected as a brother and sister fraternity and sorority. So we were pledging, and our lines were facing each other. So that was the first time I met her. We did not date for the first time until 1982. Between those two dates, we were just the best of friends. We'd do anything for each other. In 1982, we started dating. In 1983, on the 3rd of September, we got married. She's from Shreveport, Louisiana. I'm from Portsmouth, Virginia. So this year will make our thirty-seventh anniversary. So that's how we met. We decided to stay here in the Washington, DC area, raised two kids, Tiffanie and Mikaela. What else? [laughter]

MG: Well, you talked about your children last time, and they've been enormously successful. You must be so proud.

AS: Yes, we are. We decided to put them in Montessori school at the young age – Henson Valley Montessori School, and went from there to a college prep school, which was St. Stephen's & St. Agnes, over in northern Virginia. Meanwhile, in Henson Valley, I wound up being on the yard and facilities committee and eventually got on the trustee board, and then became the chair of the trustee board, while they were there. They left there, went to St. Stephen's & St. Agnes. So Tiffanie left there. She thought she wanted to be in a space program of some sort, so she wound up going to Notre Dame. After her first year, she decided that that wasn't something she wanted to do and changed her major, I believe, to psychology. She found out that she enjoyed working with students. She landed a job in the office of student affairs at Notre Dame. She worked in that office all four years and realized that you can't do anything with an undergraduate degree, and so she went to the University of Pitt [Pittsburgh], got a master's, left there, and went to work at – what's the college down in Texas? What's the name of the school, south of Houston? I'm drawing a blank. This is the same town where they had the Kool-Aid man. This is the one where the FBI –

MG: In Waco?

AS: Waco, Texas. The school there. It'll come to me eventually. Whatever school that's in Waco – she left there. She worked there, I think, for like three or four years.

MG: Baylor University.

AS: Baylor – yes, which is an interesting story too. When she left there, she went to the University of Georgia and got a doctorate, and left there, landed a job at the University of Vermont, Burlington. So one of the reasons they were interested in her at Baylor was because, since she had gone to Notre Dame, which is considered the mecca of Catholic schools – and Baylor considers themselves in the South to be the same. I think they were Baptist, I think. So they felt that she had something to bring to them. So she is now living in Vermont, working for the University of Vermont in South Burlington. Mikaela went to Ohio State University, and her interest was in Spanish. She's fluent in Spanish, so she did Spanish, international relations, and linguistics. I think it was a double major in Spanish and international relations and a minor in linguistics. Then she went and got her master's at American University in DC. She's had a couple of jobs. But currently, she is working for the University of Edinburgh out of Scotland in their global office in New York City in Rockefeller Plaza, and she loves it. She has been to Scotland. As a matter of fact, she was supposed to have gone there, I think, a few weeks ago, if we hadn't been in a pandemic. She loves her job. She loves being in New York. Tiffanie is somewhat reserved. Mikaela is just full of energy, and so it had worked out. The schools that Tiffanie went to married her personality. Where Mikaela went – the same thing. Ohio State is a big school. I mean, it is all energy. That's her personality. New York City is perfect for her. So we love them. We are quite pleased with them. Then I have the two kids before marriage, which is – my oldest is Latitia, called Squeaky. We named her Squeaky – who lives in Portsmouth. She has four kids, so I have four grandkids – Derrick, Stacia, Tori, and TJ [short for Troy Jr.] – and love them all. Love them all. Then I have Aaron who's down in North Carolina. He's my only son. He's number two in line. So I am a sixty-four-year-old man, married. I have four kids and four grandkids. [laughter]

MG: Well, the last thing I want to ask you about is just to reflect on the times we're living in. We couldn't get together in person because of the global coronavirus pandemic.

AS: Yes. How about that?

MG: I don't know if you have any thoughts about how our worlds have changed so much in the last few months.

AS: I would like to think that being in the area of science and engineering, for me, it's all interrelated. If you look at our world as a system, everything affects everything. When things happen, the system responds. If Mother Nature is ultimately in control, then Mother Nature's going to do what Mother Nature needs to do to take care of Mother Nature. We people are no more than just pawns on this planet. The pandemic is a sad thing to happen, based on how it is actually affecting people. I'm not going to proclaim to know what initiated the likelihood of it spreading throughout the world. One thing we know – you can't change history. So we have it. We have to learn how to live with it or combat it. We have to do it as the world because, if we don't do it together, then we will not be able to live with it and/or combat it. It's just that simple. It will pass. We don't know when, but it will pass. We're still learning so much about it because there's more that we don't know than what we do know about it. It is causing people to live in a

state of fear, and there're some people that just don't care. That's the human race. Pick your bin, fall in it, and you're with those that are just like you. Some of us rationalize things. I tend to be objective. Yes, I do rationalize things, and my wife would tell you sometimes she wishes I wouldn't be objective, but I am. Then when you take what has happened this week, which has happened with Floyd –

MG: George Floyd. [Editor's note: On May 25, 2020, George Floyd was killed by officer Derek Chauvin during an arrest in Minneapolis, Minnesota. Following his death, protests for racial equality and reform were held in hundreds of cities in the United States and around the world.]

AS: George Floyd. That brings up stuff. I lived through the civil rights era. Yes, I've seen Ku Klux Klan up close and personal. Yes, I've been shot at. Yes, I've had police to pull me over for no reason at all. It's almost like, "Here we go again." The one difference that is noticeable this time – there are more people that don't look like me as a person of color that is a part of what is going on as far as the protest than when you go back to like during the '60s. I would like to think that the world is beginning to get tired of not respecting each other as a human race. I kind of believe – from a biblical perspective, you wandered in the wilderness for forty years. Right? So I feel like that's what's going on now. I believe, in this country, we still have a few more generations to go before the older generation that still have some perspective or opinion or position that they are different than others to – essentially, they are no longer here. The other part that goes with that is that following generation saying that is something that I don't want to do. I feel that we have to get through that with each generation. With each generation, I like to think that there's more of [a feeling of] we are the same as opposed to we are different. So when you look at the various protests happening now, I do believe that many people are beginning to realize that, when you look at it, we have integrated so much over the decades that there's no such thing as a pure person. What is that? I mean, it's our understanding of Native Americans are the foundation of this country, and they're almost treated like they're foreign as opposed to "Gee, thank you for sharing your country with us." When I did my DNA, which we had talked about, my father's lineage is up in Europe. My mother's lineage is over in Africa. So from a DNA perspective, I'm not a pure anything. I am a mix of something, which is essentially probably all of the world. The likelihood of somebody saying – unless you've been indigenous your entire – you're on some island, nobody has come in to affect them in any kind of way, and they themselves are a one hundred percent indigenous group of people – does it exist? I think so, because some of these natural science shows and stuff, where they'll talk about a group of people where they don't want people to come there for the fear that you'll take a disease there and it could wipe them out one hundred percent. Anyway, this time, I think we're in a pivotal point in society, where society has to say that we have to, as a people, be willing to do more than just speak to what we're experiencing and have the hard conversation on what do we do, where people are actually treated equally, and people have equal opportunity. How do we make that happen? So I would have never thought what had happened in this calendar year of 2020 – there's no way I could have, in my wildest dreams, ever predicted that we would be experiencing this pandemic and this uprising right now. But I can relate. Even as an adult, I have been in certain places where people look at me as like you don't belong. It's a reality. I have accepted that, during my lifetime, I don't expect it to change. It was just like who would ever believe that [Barack] Obama would have become president? It was amazing. I would have never believed it in my lifetime, but it happened. We all are one, as the song says. For my children not to have to

be subjected to things that I was subjected to is a plus. Have my children been subjected? Yes, they have been subjected to it. In their younger years, did they really know that they were being subjected to racism? When our kids were in Montessori school, we always eat dinner together – the four of us – Margo, Tiffanie, Mikaela and I. We’re sitting at the table one night, and one of them said, “What is a n****r?” So we had never used that word in front of our kids. So somebody at school had used that term, and my daughter came home and repeated it. I just so happened to be on the board. I may have even been the chair of the board at that time. So I had determined which child had used the word. So, as a board member, I had the parents come to a board meeting – not me by myself. Their position was, “What’s the problem? We use the word all the time. Isn’t that what you are?” So when you have a mentality where that is comfortable, and that is okay, that is hard. So even though our kids, at that young age, didn’t know what were all the ramifications of that, that was the first introduction to it. St. Stephen’s & St. Agnes is a predominantly white school. There were various things that happened while they were there, even where there were parents that believed that we should not be there, and they would have their kids to ask our kids certain things to find out certain things. Like we’re sitting at the dinner table. One of our daughters asked, “So how many square feet is our house?” What kid in the world would ask such a question, right? My wife determined who it was and gave them a call and said, “If you want to know, you need to ask me. You don’t need to send your kid to ask my kid.” So those kinds of things like that – we explained to our kids what it was and how to handle it, but not handle it in a violent situation. So these are interesting times. We will get through this. But I just pray and hope that, when we come out on the other side of this, we are a better people, we are a better country.

MG: I hope so too. Well, I really appreciate you spending all this time with me and sharing your story. I think this will be a valuable addition to the archives and NOAA’s history.

AS: Svalbard. [laughter] So remember, I was talking about the places to go on the satellite program – Antarctica – Svalbard. That’s the northernmost location where they have a ground station for satellite contact. That’s the way my brain operates is things just come up after the fact. It’s like when we had talked before, I was talking about the person in the choir, who’s Richard Smallwood, and the song is *Total Praise*. I think I had said *Perfect Praise* or something, but it’s *Total Praise*. The thing there was, in the Howard Gospel Choir, he – I came in just as he was leaving out, and he’s one of the most well-known gospel singers in the world. *Total Praise* is sung in more languages than probably any other gospel song. I told you about the choirs I sing in. I told you that I enjoy riding a bike. I play at golf. I do the genealogy stuff. I wish I knew how to play the keyboard. I’m toying at it. Hopefully, I’ll learn that. So if there are any follow-up questions, don’t hesitate. If you think there’s a hole somewhere, there’s something, don’t hesitate to reach out to me.

MG: Same with you.

AS: Just as much as I told you, I’m quite sure there’s just as much that I didn’t tell you. [laughter]

MG: I know. I look at my notes. I have ten pages here, and I think we could talk forever.
[laughter] But this has been such a treat. I really have enjoyed meeting you. I hope we can get together in person someday.

AS: I hope so too. [laughter]

MG: It would mean this is all over, and we can come out of our homes.

AS: Yes. Yes. We're going to try to do an excursion. We're going to try to get away this weekend, just go somewhere just to be somewhere different. I mean this is week number twelve, so that's three months. I don't see anything that is like, "Okay, we're ready to do this." I find it hard to tell people that you can go back to doing what you're doing without having a vaccine. With the uprising, it's going to be interesting to see, over the next two or three weeks, if there's a rise in the number of cases because everybody has been out protesting. We can only wait and see. These are interesting times. These are different times. I would like to hope it's these kinds of things that are happening that bring us together as a people as opposed to tearing us apart.

MG: I hope so.

AS: Yes. Well, it's been a joy. It's been a pleasure.

MG: Yes, we'll have to stay in touch.

AS: Yes. Yes. Maybe one day we will be able to meet face to face. [laughter]

MG: I'll make a point of it if I'm down in Silver Spring.

AS: Please do. We'll do lunch or something.

MG: I would love it.

AS: Okay.

MG: Alright. Well, it's so nice to talk to you. We'll talk soon. Thanks again.

AS: Okay.

MG: Bye-bye.

AS: Bye-bye.

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Reviewed by Molly Graham 7/26/2020

Reviewed by Albert Spencer 4/15/2021

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