



NATIONAL MUSEUM
OF THE UNITED STATES AIR FORCE®
Wings & Things Guest Lecture Series

The Sky is My Office

Aviation pioneer Col. (Ret.) Joseph Kittinger Jr. talks about his 29-year Air Force career, including his record-breaking high-altitude jumps.

Well, I'm really honored to be here. I was honored when General Metcalf invited me to be here this evening. This is my second appearance giving a lecture here. And I'm surprised he invited me back after the first performance but they did in some ways or another. I've had a wonderful career in aviation. I've had wonderful opportunity because of the United States Air Force. I spent five years here at Wright Field doing some interesting work. There's people here in the audience this evening that I have worked with that gave me the tools and the initiatives and the support to do the work that I did and without those wonderful guys and girls that were here at Wright Field I could have never done what I did and always be indebted to them.

I thought I'd try something little different this evening and kind of show you my progression through life and through my aviation career and I want to try this out. Don helped me today to get these slides in order. I hope they will work out okay. So, if you're ready, I think I'm ready. This is going to be, "The Sky is My Office." When I was a young lad, I dreamed about flying airplanes but I did an awful lot of outdoors. I was very active in the Boy Scouts, which I'm still active by the way. And I really believe in the Boy Scouts and I do all I can do to promote them. But I did a lot of hunting and fishing, and when I got to be about 16, I started racing boats and private plane. And that was an awful lot of fun. The name of that boat was "Homesick Angel" and it frequently had me airborne. Well, I found out that I had to get two years of college before I can enter aviation events. So, I went to the University of Florida for two years and as soon as I had my two years, I enlisted in the aviation cadet program. I went to Goodfellow Air Force Base and flew T-6 and then I was assigned to Nellis Air Force Base where I flew the P-51. This is Nellis Air Force Base on the flight line with a bunch of beautiful P-51s at the background there and what I wanted for an airplane that was to learn how to fly during the very beginning of my aviation career.

I volunteered to go to Germany because they were flying P-47 Jugs over there when I got finished with my assignment at Nellis. And on my way to depart to go overseas, the day I was getting ready to leave, the war in Korea started. I walked up to the first Army captain I could find; I volunteered to go to Korea, and the guy told me, "Well, I can't do anything because you're Air Force and I'm Army. And besides that, when you get to Germany you volunteer over there. Well, we cannot do any good for you." So, I said, "Well, they really need me over there and I'm a P-51 pilot." But I was denied.

So, I went to Germany and I flew P-47s Jugs. I was in the last P-47 outfits, it was the 19th Air Force and that was a lot of fun to fly. Then we got F-84s. This was in November 1950. We got F-84E models and I had the wonderful opportunity to learn to how to fly that wonderful airplane.

And in fact, I had my own airplane, number 209 that I polished it up beautiful as I could get it. When I got finished with – but let me tell you what happened when I got to Germany, walked to my squadron commander's office and I saluted and I said, "Sir, Second Lieutenant, Joseph Kittinger reporting for duty." He said to me, "Damn, Second Lieutenant," that was his introduction to my introduction to him. And then I said, "Sir, I'd like to volunteer to go to Korea." Boy, that didn't go very good. He said, "Well, you know, we've lost five lieutenants here in the last six months and you are another potential casualty." He said, "Let me tell you two things in this squad. First of all, don't get killed and second of all don't ever volunteer to lead my squadron again."

When I finished my tour in Germany, I volunteered to go to research and development command because I thought that'll be a lot fun flying different new airplanes. So, I unfortunately got assigned to Holloman Air Force Base out in New Mexico. I was in the Fighter Test Section there. I arrived there in 1953 and it was just a wonderful assignment, flying all different kinds of airplanes. And the second year I was there, I volunteered to go get my parachute ready. So, I went to China Lake Naval Air Station and I made 10 parachute jumps with the United States Navy. The Navy-made jumpers do not jump rope jumps; they only jump free-falls. So, I made my first 10 parachute jumps with the Navy getting my parachute rating and this by the way was my first jump at El Centro. And the guy right here is a fellow by the name of Larry Lambert, and Larry Lambert made the first ejection in United States right here at Wright Field in 1946 out of the P-61. That right there – the first ejection in this country and about a month later a fellow by the name of Vincent for the Navy did an ejection. But that was my very first parachute jump.

At Holloman, I flew 11 different types of airplanes at one time. I flew L-19s and F-100s and F-104s and P-26 and C-47s. It was just the golden era of aviation. Imagine flying 11 different wonderful airplanes at one time. I was one of the luckiest guys in the whole world. This was a formation of 80 sectors we had there. We had P-51s and 86s and 100s. And I'll come back for a minute about the 100. One day, our boss brought us in at the Fighter Test Section and he said, "We're looking for a volunteer to work with Dr. Stapp on zero gravity." He said, "I'll need a volunteer." Well, I had my hand up immediately. I looked around. I was the only guy who had his hand up. It kind of bothered me but most of my life everything I've ever done is done because I volunteered. But he said, "Go and see what Dr. Stapp wants." So, I go over there, make an appointment with Dr. Stapp and I go in there and Dr. Stapp was the visionary. Dr. Stapp was a man back in the early '50s that knew that we were going to go into space. It was a thought that no one thought was really seriously ever going to happen. But Dr. Stapp knew we were going to go into space and there were certain things that we needed to find out. One of them which was quite important was zero gravity because he had never done any real work with a human to see how human would respond to a zero gravity condition. So, Dr. Stapp said, "Well, I guess we'll go out and find out ourselves." So, we got a T-33 which is only airplane we could have. Those days it was – it could carry two people. And they had a very sophisticated instrumentation for zero gravity. We had a golf ball on a string. I had pushed on a pole and dive down and pull up to steep climb and then pushed on a pole and when the ball would flow that was pretty close to zero gravity. One time he put a cat in there at the back of the guy. And you know, cats when you drop them, they always land on their feet. So, we thought, "Let's see, what happens on this case." So, we went up and turned the cat upside down and I think the cat peed on the guy in the back. He did not volunteer to go back cat-experimenting again after that and

I'm sitting there and all of a sudden the cat comes soaring up by me. So, I pushed the cat back to the guy at the back and I think he's the one that pushed the cat up to me. But anyway I did over 500 runs in zero gravity. They used the last 30, 40 seconds and I think from there the F-89s, F-94 Cs, F-100 Fs, F-104s and of course, getting more zero gravity time in each for these aircraft. But there was a bunch of nuts in those days too. We had one flight surgeon. This guy was so bad. We had to walk down the street. Whenever you'd say, "Airplane," he would throw up. Well, this guy ended up to be in my airplane. And he was throwing up before we took off. But anyway, after a couple of flights he wrote a paper – scientific paper that said that man will not go into space because he gets sick and nauseated. And I walked up this guy and said, "Hey, doc, how come you said that?" Well, he said, "Won't you all get sick?" I said, "I'm a pilot. I love it. I enjoy it. I never get sick. Why don't you say something about the fact that not everybody gets sick?" Well, he said, "You're a pilot?" I said, "Sir, I think pilots are going over to space." But there were a lot of folks around those days that had some really weird ideas and this was one of them. But, Dr. Stapp being the visionary that he was knew that we had to find out about that.

One day Dr. Stapp called me and he said, "Joe," he says, "We have an experiment coming up where we're going to do a sled-run." And he said, "I need a pilot to come in and take pictures of this for the launch." And that's all he told me. And he said, "I need you to be 5,222 feet into the runway at 455 feet per second and accelerate." I said, "Dr. Stapp, forget about all that. Let me go out there and practice. I'll figure up how to do it." So, I go out there and I make five different flights and came around. I had to count down 5-4-3-2-1 and never hit it. And the day before the sled-run, Stapp told me he was going to make the run. I had no idea that he was going to make that run. The distance between Alamogordo and Kirtland is 250 miles, and I'll tell you why that's important, just a minute. So, comes the day of this run – this was 1955, I come roaring down there, 350 miles an hour on this T-33 right on the deck with the photographer from the back end and the only time out of – probably about a 100 runs that he did perfectly right on time, right on airspeed, right on altitude was that time when I had to do it. And I hit right on the button and that sled propelled him up to 614 miles an hour. And he was going so damn fast, I figured that the first pass will be Albuquerque. He hit into that sled from the time he started and coasted and stopped. It was 3500 feet. He made 614 miles an hour. He pulled minus 41 GEs on deceleration. The Air Force at that time thought about 18 minus Gs was the limit but he pulled minus 41 Gs and he looked like it hit him at the head with the baseball bat but he survived. And he did that because we were looking at ejections at high speeds. We were looking at deceleration for space flight. All of these were things that – information that Air Force institute and space program was going to need. And Dr. Stapp knew what he got to subject himself for the physical beating he's going to take. I've always figured that he's the bravest man I've ever met in my life because he took that chance knowing exactly what was going to happen to him. Dr. Stapp also knew that moving into the space we were going to have a small capsule, a small spacecraft. We had not determined the life support systems; we had not determined the communications, the selection process, the training process and communications. We had really not got down to looking at how do you build a lively capsule to go into space? Well, Dr. Stapp came up with the program called Manhigh and this program was to investigate those things that Dr. Stapp knew that we were going to need to know to go into space. Once again, I volunteered to be on the program and my boss wrote me a little – Dr. Stapp asked for me to be on the program and my boss wrote a note back to me and said, "Can you come here? Here is your approval, more guts than brains." Yeah, I think he was right. I had my own DC-3 all rigged

up with the crew. When I went up, we chased balloons and with creatures on board that gave the same oxygen intake and CO₂ output and I had to go get a new pressure suit. I had to go and get 24 hour claustrophobia test, a lot of physiological test – I'm going to share one thing that they were concerned about steroids and so for about a week before the flight I had to urinate in a bottle. And from 12 o'clock in the morning to 12 o'clock at night – two different bottles. So, every place I went I had to take these bottles with me. So, we were in Minneapolis one night we decide to go to the bar and have a beer. So, we were at this bar downtown Hennapin Street and we had a beer and I had to go to the bathroom. So, I get up and I take my jugs with me and when I get in there place was full, everybody was taken so I just pulled my bottle out and used it. This guy walked up along side of me and said, "My, ain't you fancy." So, anyway I went back, we left, we stayed at the Curtis Hotel – went down to Curtis Hotel and all of a sudden I realized that I left that damn bottle in that bar. So, I called back to the bar, the phone rang and rang and rang, finally the guy answered the phone and said, "Yeah?" I said, "Sir." I said, "Are you open?" He said, "No, I'm supposed to meet my girlfriend. I'm getting to leave here." I said, "Sir, please don't leave." I said, "We were, a bunch of us, sitting right across the bar there, remember?" He said, "Yeah." I said, "There's something very important there. Would you go there and look underneath that table and see if there's a bag there with a couple of bottles in it?" Then he came back and he says, "Yeah. It looks like it's full of pee." "No way sir," he says. I said, "Sir, would you please wait?" I said, "I've got to get that bottle." He said, "I getting ready to leave." I said, "Sir, I'll give you 20 bucks if you'll wait." He says, "I'll wait an hour if you'll give me \$20." So, I got driving back there and the guy gives me the bottle and he says, "It sure does look like pee to me."

Anyway, the next day, I turned them into Simon, I never did tell you what happened; I paid \$20 both ways. But that was just one of the tests but that's one of the little fun things that happened. And I've never told that story before, I only got to tell again. Finally on the 1st of June in 1957, everything was copasetic on the weather and we were given the go-ahead. So, I get in the capsule at the plant in Minneapolis. They flushed the nitrogen out of the cockpit. And at 4 o'clock in the morning they rolled me into the backend of a pickup truck and drove me 18 miles to South St. Paul Airport, kind of a really fancy launch vehicle that we were using. I get out there and they launched me at 6:30 in the morning. Mine was a test flight. Originally, Major Simons was going to fly it but Dr. Stapp said, "No." He said, "I want a test pilot in there. I want Kittinger into flying that flight." So, I take off and ride the flight, left takeoff I found out that my VHF transmitter is not working, I can only see but I can't transmit and I had to C Dubia and that's a laborious way to communicate. So, I got about 40,000 feet and I realize that half of my oxygen is gone. And it was gone, it was depleting real rapidly. So, I had a problem there. So, anyway I get to 97,000 feet, the highest before that was 72,000 feet. I went to 97,000 feet. I was really the first man in space. I was up there where the pressure was about minus 5 millibars, the sky was black, it was an eerie sensation. But I had a real problem because of the oxygen was almost gone. So, I did valving but the sun was coming up and heating up the gas and so I would valve but I couldn't come down because the balloon just wouldn't start down. I didn't have very much balance which meant that if I got come down too fast I didn't have at least to stop the decent. So, I was being very cautious about how I valved because I didn't have any extra balance. So, about that time, Simons says to me, in kind of belligerent tone, "Come, down. Get down, come down." Well, it really ticked me off because I've been working for about an hour trying to get down. And so, I said, I tapped out on my Morse Code, I said, "Come up and get

me.” That blew his mind, that blew his mind. He turned to Dr. Stapp, he says, “My God, he’s got a breakaway phenomena.” I couldn’t even spell phenomena much less go through it. But any of that, I came down and I landed and the only piece of emergency gear I didn’t have, I didn’t have a pedal and I landed in a creek. And Dr. Stapp and Dr. Simons were there and they stood me back up, this is a capsule three feet across, seven feet high and if it looks small, I’ll guaranty it is. And the pressure suit is very confining and hot, uncomfortable but that’s exactly where it was – the same slip down into the bottom of the canestry there. And that was the Manhigh capsule. And it’s on display upstairs down at the space exhibit. It had a 30 pound cap of dry ice on the outside to keep me comfortable. While I was there at Right Field, let me back up just a minute. It was a very successful flight. After this flight Dr. Simon and Cliff McClure made two more flights in the capsule and it was a very successful flight program. And information that we gathered helped NASA when it came time for them to develop the mercury program. And really progress is made on very small increments and we helped, we speed them up a little bit on how they came to the conclusion for the mercury program. So, what Dr. Stapp envisioned was in fact something that was really needed. There’s a very famous poet by the name of Ernest Gann, and Ernest Gann says, “Hide if you can, run if you may. You are the query, fate is the hunter and fate is the hunter.” In September of ’57, I made this flight in June, I was taking off in F-100 on a test flight and I just take off airplane, engine blew up, that plane caught on fire, the pole came back in my lap and I had no control of the airplane. So, I had to eject at 800 feet, took one swing and landed and I was elated that I was still alive because it was a very close call. And fate is the hunter because a week later Dr. Stapp called me in he said, “Joey,” he said, “I’m going to Wright Field to be chief of the Air Med Lab and I’d like to offer you the opportunity to go there and work on escape systems.” Well, I just had my butt saved about a week before that by a very good escape system, a very good parachute and so I really felt obligated and go back in and do what I could do to help fighter pilots and just to give my thanks to those great people that designed that systems of parachutes. So, I volunteered once again to go with Dr. Stapp to come here at Right Field. I worked in the biophysics escaped division and I test the equipment. I tested parachutes, rope centrifuge, altitude chamber.

And this picture here is a jump we made in Lake Erie. We go to the Lake Erie and jumped, test water stuff and we also go down to Key West and test equipment there. So, I was very much involved in testing new pressure suits and parachutes that were coming along for the United States Air Force. This is one of my pressure suits that I was getting ready to go up in. This is a – I’ll tell you in a minute about the stargazer program. We had a gondola here that had been designed originally for the original program High Dive and it was a great piece of equipment made right here in the shops – I think building 5, I think when it came building 5 as well – were the greatest artists down there, the greatest technician who had wonderful equipment – they could build anything you put down there. Well, they build this gondola and it was not being used. I got a phone call from Smithsonian Observatory telling me that they had a guy that were the telescope want me to go up will I take him up there? And I thought that’d be a lot of fun. So, I go and see Dr. Stapp and said, “Dr. Stapp, we’ve got program possibly that like to use our gondola.” And Dr. Stapp said, “Well, Joe, what will the Air Med Lab get out of it.” I said, “Sir, we won’t get a hell of a lot but we’ll get quite a bit but we’ll do a wonderful lot of good for basic research and science and astronomy.” I said, “It’s a great program for the science and for the Air Force in our country.” And Dr. Stapp said, “Well, even though we won’t get a lot in the Air Med Lab go ahead and do it.” Now, Stapp is the only man that would have approved that program

because Stapp was interested in science, was interested in technology and even though it didn't helped here in med lab that much he had the courage and the convictions that if it's worthwhile doing, let's go ahead and do it. So, he gave me permissions to go on this program.

The MIT developed a star tracker and a stabilization system. The Navy provided a 12 half inch cassegrain telescope and the program lasted four years. Kenny Arnolds did the cameras on it, I think he did all my projects and it was a great program. Unfortunately, didn't have that much success with it. We went out there in 1962 and Bill White who was a Navy astronomer, great guy. We went up 87,000 feet above the earth's atmosphere, looked at stars and planets without the haze and turbulence of our atmosphere for the first time. It was a phenomenal program. Landed near Lawrenceburg, New Mexico at about 4 o'clock in the morning and I'll show you what it looked liked. Now, that is like a crash job. That was a very good landing I'll tell you. It was 8 feet across. We are very proud of that program. And we were scheduled to go back for the next flight. Unfortunately, Dr. Stapp had gotten transferred. So, I went back out for the next flight out to Alamogordo. We closed up the capsule – first of all we kissed all the girls goodbye – closed the capsule, pressurize it, all ready to go and all of a sudden there was an explosion and the balloon took off and we're sitting on the ground. It was really embarrassing. So, I went in, I called John Glenn, I was mad as a wet hen. I told John, "What happened?" John said, "Well Joe, I'll let you use all the NASA engineers to help you solve the problem." So, the one thing that we worry about the most on the Mercury program – they had 46 different actuators in that program. We worried more about something like it happened to you that happened to us in the capsule. So, we were very concerned about that. So, about 6 weeks later I went back out for the second flight, kissed all the girls goodbye, pressurize the gondola, sitting there and bam – the second balloon took off with me sitting on the ground. But unfortunately Stapp had been transferred by this time, I didn't have any support and General Schriever said, "Kittinger why don't you do something else besides flying balloons?" So, that was the end of the Stargazer program. As a matter of fact, that was the last scientific balloon flight ever made – manned balloon flight. The last one ever made was that flight we made with the Stargazer. Unfortunately, we could save billions of dollars if we could continue because we could do research and astronomy above the earths atmosphere for pennies by comparison what NASA ended up spending. But that's another story.

So, the war was starting in Vietnam, I volunteered to go to Vietnam because I was a fighter pilot and I figured I owed it to my Air Force. So, I volunteered to go to Vietnam and I went over there and I flew P-26s. We flew 75% of our time at night and the day time 25% at night. We carried ordinance on every flight. All of us that were there believed in what we were doing. We were trying to prevent a small country from being overtaken by the communist and we believe in that, we believe that they deserved the right for a democratic life. I was there six months.

Unfortunately, the wing started coming off the airplane because we were really abusing them and the ground of the airplanes in March of 1964, I came back and that was my first tour. About a year later, I – we had new airplanes A-26s which had complete different airplane, beautiful new engines, a beautiful new wing, we never had a wing fair in the airplane. And I led the first eight of these A-26s across the Pacific into [indiscernible] where we were stationed. Our job on that particular mission was to fly at night over the Ho Chi Minh trail to stop the trucks and run down the Ho chi Minh trail. We carried our own flares though we also worked with other airplanes with flares. And we killed an awful lot of trucks. We could only get credit for a truck kill if it burned and lot of time we stop a truck and we diesel fuel all around it but then if it get burned.

So, we didn't get credit but I'll guarantee you that the morale went very high. It was dry going down that road at night. Well, one time my first sergeant came to me and he said, "You know, Colonel," he said, "We have a problem of getting rid of some of our models." Take an example, we had Pearl beer and it costs 10 cents a bottle and it wasn't worse more than any of the other but anyway we had 10,000 empty Pearl beer bottles. So, I said, "Bring down the flight down at night." So, they did. They brought two pickup trucks full of Pearl beer bottles – empty Pearl beer bottle. I close the bomb bay on airplane and loaded two pickup loads full of empty Pearl bottles on my bomb bay. Took off, flew over North Vietnam, found me a hunk of road, and dropped that load right on top of that highway. And laughed my butt all the way back to [indiscernible]. Once a week I took a load of Pearl beer bottles and dropped them in North Vietnam. We figured that's pretty good use of a product. We also laughed about those folks in the ground saying that, "What the hell are these people doing?" But we had lot of fun doing it. That was a very interesting assignment that I had there in flying those A-26s. And then I went over to Germany. After that Simon and I was with his 10 Special Forces group for a year, made 35 jumps all around Europe and then I volunteered to go back to Vietnam. This time I went back in F-4s. I was stationed at Udorn and shortly after I arrived there I was made the squadron commander over the Triple Nickel. The Triple Nickel shot down more MiGs than any other squadron that was in South Vietnam and still holds a record in Air Force today for the most MiGs that were shot down, and I was a proud commander of that squadron. We had 25 F-4s, I had 350 men loading bombs and maintaining the airplane. And I had 55 pilots and back-seaters to fly the airplanes. There's no better assignment for a fighter pilot than to be the commander of a great fighter squadron like I had.

After one of the missions, this is at squadron headquarters at [indiscernible] and every fighter pilot dreams about being an ace. That is the ultimate dream for a fighter pilot. And to do that you got to get 5 airplanes. And that's all we work for – it was to shoot down MiGs. And finally on the 1st of March 1972, I shot down a MiG-21 in combat and I only had 4 more to go. So, in celebration of my shooting that MiG, they – oh by the way this is Robin Olds, the greatest fighter pilot that's ever been next to me. But a wonderful guy and he flew with the Triple Nickel, by the way. We flew mostly about 80% was in daytime, 20% at night and we did re-fuelling at almost every mission particularly if you end up in Vietnam. Here is what we did. They put my Jeep in the office club. The door is smaller than that Jeep. It took the civil engineers two weeks to figure probably get that damn Jeep out of that club. But we celebrated my big kill by putting my Jeep in the club. Well, that was the 1st of the March. On the 11th of May 1972, I was flying the MiG cap over Hanoi and all of a sudden I looked up and I saw an airplane look like a MiG. So, we started chasing it, and I asked my wingman who could identify as a MiG, nobody could. There was a Navy picket ship offshore called "Red Crown" and I called Red Crown and I said, "Red Crown, you see that airplane up there. If you could identify that as a MiG I can kill it." And you know what he said, "Stand by," which is what you would imagine they would say. So, we chased that MiG and chased it. Now, you got to be very careful in combat. First of all the Navy flyers were flying A-4s and that's a small little airplane and it's got a platform that looks a lot like a MiG. And the Navy's always lost anyway. I didn't want to shoot down a buddy, even a Navy buddy. So, I didn't shoot because I wasn't absolutely positive, you got to be positive about these things. So, I kept chasing that MiG, chasing that MiG, and I called my wingman, everybody to try to identify, I was almost about 95% sure it wasn't MiG but I wasn't sure. And all of a sudden I heard – I was doing Mach 2 by the way. I was going as fast I could go. And all

of a sudden my wingman calls up and he says, "Break right." Those are the worst words that you can ever hear in combat. About that time a missile hit me and MiG it come at my butt and shot me down. In one minute, I'm doing Mach 2 and the next minute I'm ejecting out of – airplane is tumbling all over the place. I ejected at mock 1 at 18,000 feet and my back-seater went out before I did. And I came down about 30 miles to the north-west of Hanoi. About half way down they started shooting at me and I figure they weren't playing neighborly of them. It was going to be fast because we're right in the middle of a rice patty, there wasn't a tree within 500 miles and I spend all that training on how to evade and escape and I was going to be able to use one bit of that information that I had. When I landed, I was pounded on by about 50 folks just jumping around the top of me and tore my flying suit off and shortly a Malaysian man showed up and saved my life because one woman tried to hit me with machete and she missed. And then a guy tried to hit me with a machete and he missed. The Lord was taking care of me in that field because it was a very close call. Well, the soldier comes there find and saves me. We walked about quarter of a mile and I had a real bad injury on my left leg and of course, I pointed to it and the guy just ignored me. He took me, he hog-tied me and threw me in the back end of the truck and about four hours later I'm taken out of the vehicle and taken into a room, still blindfolded and I'm sitting there and thinking that you know, "Ain't this a mess. Last night, I was in Udorn, had a nice big, thick steak and a glass of cold beer. And here I am in Hanoi, Hilton." It was really a crappy day, I'll tell you that. And it was going to get worse. Pretty soon, they came in and asked me where I was? And I gave them my name, rank and serial number and the guy said, "We want more than that. We want to know what squadron, what airplane you flew." And I said, "Sir, the Geneva Convention only required me to give you name, rank, serial number and date of birth." He said, "We don't believe in the Geneva Convention. You're not soldiers, you're criminals." "We treat criminals differently than soldiers." But I had made up my mind that I was going to state name, rank and serial number because I figured that was an easy way to do it and I didn't want to go off and make any compromises. So, that was my stand what I was going to do. My leg was really bothering me. I had a real bad injury and I was really thirsty and I asked the third time he came in the room, I asked him, I think to fix my leg and give me a glass of water and they just laughed. It was a mistake I made because I told them I was thirsty and that's the bad thing to do to let them know that you were thirsty. So, I will make it short, I spend 30 days in solitary confinement. I was tortured brutally. I prayed many a times to die rather than to compromise my country and what I believed in. They finally broke me to the point that I told them I was flying an F-4 but they knew that anyway because they had a big pile up there in their rice field. And then, they tortured me for the next couple of days, and they finally got me to tell them that I was in the Triple Nickel, which I had a patch of in my flying suit – they knew that anyway. But they just did it to break me. They just did it to embarrass me that I could not stand up to their torture. I did stand up a long time. But about the second week I was in there, I was really feeling bad for myself and just before I went to the Air Force, my mother was a wonderful Christian lady, the week before I went to the Air Force, my mother said, "I want you to memorize this Psalm." I said, "Oh, mother." She said, "Yeah, it's important to me. I want you to memorize this Psalm." And it was the 23rd Psalm and I sat down and memorized it because my mother asked me to. The second week I was in Hanoi, I was really badly beaten up, thirsty, hungry, tired, discouraged and all of a sudden I remembered that 23rd Psalm and boy that just lifted me right up. It gave me strength and I resisted for another week before they broke me because of that confidence that my mother gave me in that 23rd Psalm. And I am sure that that Psalm was written for a POW because it says all the things that a person that is in turmoil needs

to find him comfort. And then one day, I was sitting there, and I looked at the same wall and every time they interrogate me except when they tortured me I stand at attention and looked at the wall, I bet you 50 hours and all of a sudden I looked and there was a cross inscribed on that wall. Some POW had inscribed that cross in that wall. And I looked that wall for almost 3 weeks before all of a sudden I saw that little cross. Boy, that sure feeling gave me a wonderful of comfort. After 30 days, they think I thought I was going to lose my leg because it was really badly infected. So, they put me back out with the rest of the POWs. That was quite a gathering. Because we were all of the new guys gathered. They divided the POWs up into 2 groups: the first group that were gathered were shot down before December of 1971. These guys we called the FOGs – Funny Old Guys. Yeah, you got it. And then, the new guys, they called them FNGs – the guys that were shot down from December on. So, they kept us separated. They didn't want us to give comfort to the old guys and they didn't want the old guys to tell us how to operate. They did all they could do to keep us separated for a good reason or so – they were concerned.

Finally, and I must say, and by the way, Jonah King was one of the FOGs and I got several chance to talk to him through the fence. Everyone of us there believed in what we were doing. There wasn't a single guy that was a POW they didn't believe in what we were doing was correct, not one. We were there as soldiers, we were there to prevent the country from being overrun by Communists. We were there and doing a job that we thought was correct. And 99% of us believed that we were there for a reason and for us it was a crummy assignment but we were there as soldiers, we were there as sailors and marines and air-men doing our job. They were happy about it but we did the best we could do to maintain the dignity of our service. Finally, in February of 1973 they signed the Geneva Peace Agreement between North Vietnam and us and South Vietnamese and they started releasing the POWs. They released the old guys first – the FOGs first and later the FNGs who have been shot down later and on the 30th of March 1973, we were released. And it was the happiest day of my whole life. I thought I had been happy before, I have never been happy like that. When you are relieved from a Communist jail and you are back to freedom, oh, that is one wonderful feeling. We were treated royally. All of the services did a wonderful job of taking care of us, we came back, we flew from there the next... we stayed there four days at the cart field and finally we were flown back to the States. This is a landing this was in Hawaii. As we were coming back, here is a welcoming ... By the way, this is 3 o'clock in the morning in Hawaii and I walked by this one lady and she put a lei around my neck that was full of liquor bottles, little miniature liquor bottles and she gave me a great big wink. But we had a wonderful reception, wonderful treatment from everybody in America when we were released and came back. But we landed at San Anton, and being the senior ranking guy, I have to make statements so I get off the airplane. I looked up and there was a big commotion in the back and I see these guys pushing; the security police are holding him. I looked back and it is my first Sergeant, Sergeant Roy. He was back there trying to convince people to see me. So, I said on the microphone, I said, "Sergeant, would you bring that man up here please?" So, he brought him up there and he gets up there to me, we hugged and everything, he turns around the security policemen, he said, "You see, I told you, you son of a bitch, I knew him." Anyway, it was a wonderful reception when we came back. When we got back, they said, OK, you can have any assignment that you need, you want. Well, the Chief of Staff of the Air Force is already busy, so... I have never been to senior college, War College. So, I volunteered to go to war-college and that's where I met the commander of the commander of this wonderful institution

here, Chuck, and it was a wonderful year. And as a fighter pilot I've learned hell of a lot. I learned instead of saying "BS," you say, "Well that's incredible!" It took me a year to learn that. I'll tell you that. But we had a lot of fun doing it. When I got out of the Air Force, I went back to Orlando and I met this guy here named Bob Snow, he had a dining entertainment complex at downtown Orlando and he asked me to come work for him and it was one of the greatest jobs that man could ever have in his whole life. We flew... this is a helium balloon, this is a launch from Queen Mary parking lot, the first Gordon Bennett Race in 1979, I won this race four times, I flew it eleven times and we flew these types of gas balloons all over the United States and in Europe. And that was one thing we flew. He and I flying the gas balloon. This actually was in Germany, a balloon that we had in Germany. That's a lot of fun, flying those old gas balloons. This is a hot air balloon. Also, I did sky writing. We had a T-6 and a [indiscernible] and I did sky writing. And that was an awful lot of fun. Bob Snow took me out to a bar one night and they were... had never done sky writing, I'm a fighter pilot, I can fly anything but we sit down the bar with a bottle of wine and Snow goes through all of the letters, how to do each one of them, draws them down and everything. So, I take it over to the next day, I get up, I go up to do sky riding, my first sky writing job. So, I was going to write "Rosies." So, I get up there and I write R and I forget the O and I write an S and I said, "Oh, my God." So, I went back and I drew a line through it – you know, there's nothing else you can do.

So, when I land, Snow was on the phone and he says, "Kittinger, I can teach you how to sky write; I can't teach you how to spell." That was one of my happy faces. This is my wife Sherry with a Beech Stackwing that we had, we flew all over the United States, one time we flew an airplane from Orlando, Florida to Alaska, 95 hours. Oops, wrong way, sorry. We had 450 Stearman. We did sky writing in England. Now these are my toys; look at this collection of toys. I actually had 6 hot air balloons. I had 2 gas balloons. I had 6 airplanes, you can see in the background there. I had 12 cars – Deussenbergs, Rolls Royce, you name it. And I had all of these with my toys. You talk about the best job in the whole world, that was it. And I flew every day, a beautiful P-51. Grumman Cat – we had three of these that we did the sky writing. And that was a fun airplane to fly too – 600 horsepower.

I also did a lot of test flying. Now, this is a fleet wing airplane. This airplane was built in 1930 and it looks like a boat and that's what it flies like too. Now the next airplane is a Mo Taylor's air-car and it looks like a car and it flies like a car. But I flew all these kind of airplanes, test fly them for Craig Harrick in Minneapolis. And that was an awful lot of fun, test flying those old antique type airplanes. Then we started barn storming. My wife and I barn stormed in this airplane for nine years. We ride 4 people in the front cockpit and of course, the pilot is in the back. It was a wonderful airplane. It was built just for barn storming and then we also flew a chipmunk. This was a chipmunk that Steve Oliver flies his acrobatic routine and I called the chipmunk steroids because they had a 350 horsepower engine in it. Here we are, by the way Sherry was the first woman to be on the winning team of the Gordon Bennett Race. She is also the youngest co-pilot ever on the Gordon Bennett Race. My grandson and the airplane – we had an awful lot of fun on the airplane. We had an awful lot of fun in the airplane and in nine years, we flew 10,000 passengers in that airplane. One year, we went from Vero Beach, Florida to Tillamook, Oregon, 26 fuel stops. Boy, we had a lot of fun but it was just an awful lot of fun and the passengers loved it. I remember there was one passenger out of 10,000 that didn't enjoy that flight because the open cockpit was just the way it was back in the '20s.

And one of the first flights that I had, I had this little kid, the flight was about 10 minutes and after the flight this little kid rolls up to me he said, 10 years old, he looked at me and he said, "Mister, that was the best 10 minutes of my whole life." To every place we go, we would find a family that couldn't afford a ride. And we would surely walk up to him and say that the pilot would like to give you a ride. And every community that we went to, we always found the family that couldn't afford it and gave them a ride. I'll never forget the first time in Galveston, Texas, we said, "Sir, would you like to ride the airplane?" He said, "I can't afford shoes for my kid." So I said, "Sir, you get your butt on that airplane with your kid" and away we went and we did that every time because we thought it was paying back the community, sort of thanks for letting us barnstorm there. But we shared a lot of fun flying that wonderful airplane.

And then when I was in solitary confinement, one of the things that kept me busy was thinking about flying around the world in a balloon. I really knew I wanted to do that and I planned the whole thing – the balloon, the communications, everything part of it, the weather. When I got back, I started working on that. I just had a hell of a time getting a sponsor. Finally I got a sponsor and I was clear to fly solo across the Atlantic Ocean. This is the flight. This is the launch site at the Caribou, Maine, and just before this, we have a dedication. And at the dedication I had a Catholic priest and a Baptist minister and if I could have found a Jewish rabbi and a Buddhist I'd had them in there too. Because I figure, I wanted all the help I could get flying across that ocean. Anyway, I took off, had a glass of champagne, took off and three and a half days later, I landed in Caribou, Maine, no in [indiscernible] Italy. I flew for 3600 miles. I set a record. It'll be long time before anybody ever beats it. I landed in the Alps in Italy at about 30 miles an hour, went into these trees and I got knocked out of the gondola and fell about 30 feet and hit the only rock within 5 miles and broke my foot. But it was worth it. We had a ball on this flight. Our goal was to set records and have fun and we did both.

But I must share one thing that happened. Remember I told you about fate is a hunter? I'm in the middle of the Atlantic Ocean, two days out, it was 2 o'clock in the morning, I'm a little bored, nothing to do, so I called on the radio on a 121.5 and I said, "Does any airplane hear me?" And an airliner came back, "Yeah, 101. So, let's go to 12345." We went over there and I said, "Where are you?" He said, "Well I am about 400 miles out from Heathrow, getting ready to start to lay it down." He said, "Where are you guys?" "I am on the middle of the Atlantic Ocean." He said, "Yeah, what's your name?" And I told him; and he said, "You know that's amazing because your chase crew is on board my airplane." Now there's 400 airplane that fly across Atlantic every day, I picked the only airplane with my chase crew on board that airplane. So, Sherry got on the radio and Bob Snow and we talked for about five minutes. So, you talk about a coincidence, fate is a hunter. So, the next day I landed in Italy but that was quite an experience. The third and the second day I was flying, I got boomed by the Concord. Some will get your attention. That will. I slept two and a half hours and three and a half days. I was up the highest 22,000 feet, 20 degrees below zero, it was a very interesting flight but I had a lot of fun because I made it.

I'm going to go back now and talk about the high altitude escape portion of this. When I came to Wright Field, there had been some guys who is going to try to do the same high altitude. They had the wrong attack. They tried but it didn't work and the program was canceled. And when I

got here with Dr. Stapp, it was canceled. So, I went to Dr. Stapp and I say, “Dr. Stapp, I think I have a different approach and I would like to rejuvenate this project.” So, Stapp says, “Well, how you are going to do it?” And I said, “Well, I want to do it more toward the pilot and astronaut. I want to do it the way you’ve developed in a new type of means of escape for high altitude.” So, Stapp said, “Go ahead and do it.” Stapp gave me the tools to accomplish this task. And without Stapp it would have never happened. Because he had confidence in me and he had confidence in what we were doing.

Now, if you remember back before World War II, the airplanes were kind of antiquated, at 10,000 feet, not very sophisticated, not pressurized and came World War II almost on overnight we would hear airplanes flying to 40,000 feet. We had fighters that were tremendous performers but very high altitude and all of a sudden, we started having people having to bail out that from very high altitude and we were getting data that we never had before that people dying because they hit the ground and the parachute didn’t open. So, we knew there was a problem on spinning from high altitude. We did a study with the dummies which you can see here. We take them up to 100,000 feet and cut them loose, and record their free fall, free falling body. They were anthropomorphic dummies, rigged up just like a man and we had RPMs as high as 200 RPM which would kill a man. So, we had demonstrations that there was a bit of problem and of course the way to get this problem is to have a way to get down safely. Well, there was a guy here whose name was Francis Beaupre and he was a genius, he was a parachute genius and a great guy to work with; a real character but a wonderful guy to work with. And he came up with the system called the, Beaupre Multi Stage Parachute and we decided to use that to accomplish our free fall. I’m going to go through these slides real quick. I wore a standard Air Force partial pressure suit. I also wanted to demonstrate to the air crews that we were given very good pressure suits. So, I used a standard pressure suit and by the way I had an X-15 full pressure suit and they are the only parachute jumper of the X-15 pressure suit and parachute prior to Scotty Crossfield’s flight. I could have worn a full pressure suit but I want to demonstrate that we weren’t giving our air crews very good equipment. Now, my buddy, Kenny Arnolds was with us and all of these tests, they go up to Holloman and we spent an awful lot of time out there at Holloman but we were gainfully employed. This is the gondola, an open gondola. This was actually – this was the consequence of the first jump, balloon in the background with an opened parachute. George Post, the backup jumper, my friend on the right there. At the bottom of the balloon there is a parachute that’s opened, after I jumped, they send a command to cut the balloon away and the gondola comes down with the parachute. In those days, I weigh 160 pounds and with all the equipment I weighed 320 pounds. On my left wrist, I have an altimeter stopwatch and a mirror so I could look up and see because you can’t look up because the pressure suit helmet. Kenny had cameras mounted on the side to document it and you’ll see some of those pictures in a little bit and in my kit I also had a camera. And this was made by a National Geographic camera from 102,800 feet. This is the White Sands at Holloman and this was the – President Eisenhower had been awarded the armor trophy and back in the background there is General Schriever. Jeff, could we have that film now please?

[Movie clip begins]

Narrator: Colonel Stapp foresaw that if man was to travel into space he would need to get outside his vehicle either to work on it or to bail out back to earth in case of emergency. This new

endeavor, Project Excelsior, led by Kittinger would set out to discover how man might survive such a life threatening ordeal.

Speaker 1: Project Excelsior was on the far edges of high altitude research, what Joe Kittinger wanted to do with Project Excelsior was go to 100,000 feet above the surface of the earth in an open gondola, jump out, free fall back to earth. This was a notion that no one had ever contemplated before.

Narrator: The secret was to find a way to free fall safely down to an altitude where the opening shock of the parachute would not be fatal.

Speaker 2: We did a whole series of dummy drops at 110,000 feet, first of all defined a problem and we found that without stabilization that a man free falling from very high altitude could enter a violent spin and this could be fatal to a man. So, we ended up looking at how do you prevent this from happening?

Narrator: The breakthrough came with the invention of a multi-stage parachute by Air Force engineer Francis Beupre. It was designed to get the person safely but as quickly as possible down from the minus 100 degree atmosphere to a much warmer, safer altitude. 17 seconds after bailout, a small five foot drogue shoot would open stabilizing the jumper to free fall feet first down to 18,000 feet where the main shoot could be safely deployed. To add to the danger, Kittinger would rise in an open gondola to ensure easy bailout from the vehicle. The only thing that's between him and the hostile space was his pressure suit and several warm layers of clothing. The box pack strapped to his suit contained his oxygen supply, survival gear and several cameras. In November 1959, Kittinger and the Excelsior gondola were ready. The Air Force was extremely reluctant to proceed.

Speaker 2: Stapp was the reason we can do it. He went to bat for us. We launched at a little town called, had an interesting name called Truth or Consequences, New Mexico. I always thought that was pretty appropriate because if we didn't have the truth, we are going to have to bear the consequences.

Narrator: Despite the fact the project had little money, it was run with all the precision of a Cape Canaveral countdown. On November 16th, 1959 after the 1,000 item Kittinger was cleared to go. The balloon rose and the pressure suit inflated perfectly on schedule at 40,000 feet. At 76,000 feet, he made the final preparations to jump. But somehow, horribly, the box strapped to him was stuck to his seat.

Kittinger: I couldn't stand up. I was trapped in the gondola and I've done this a 100 times at altitude chambers so it was kind of distressing to me. And all of a sudden, ready to go, I can't stand up.

Narrator: With a huge effort, Kittinger wrenched himself loose and stepped over into the abyss. In struggling, he had inadvertently armed the parachute release timer.

Kittinger: So, when I jumped out of the gondola instead of free falling for 16 seconds before the small stabilization chute out, I only fell two seconds and the chute deployed and not having sufficient velocity, wrapped around my neck.

Narrator: Kittinger then entered the dreaded flat spin turning at a 120 revolutions per minute. He lost consciousness. At 18,000 feet his main canopy opened, entangled with the drogue shoot still around his neck.

Speaker: When his reserve popped out, it also initially fell around the main canopy areas of great mess but luckily due to the fourth side of Francis Beupre who had put reduced strengths shroud lines on the main canopy, it broke away, the reserved deployed and Kittinger landed safely, very luckily on the white sand.

Narrator: Barely conscious Kittinger had miraculously survived the dreaded flat spin. Crushed by the system failure, he immediately resolved to make a second jump.

Kittinger: When I landed there was a whole bevy of people that said, "Let's cancel. We came very close to killing. You're killing Kittinger and let's cancel." But Dr. Stapp went to bat for us again.

Narrator: Kittinger launched Excelsior II a month later. This time the mission was a total success. From 74,700 feet, the chute worked like a dream, bringing Kittinger safely and securely to earth.

[Movie clip ends]

The last jump was 102,800 feet. Obviously, I made it. It was a big difference to me – that jump because I always said that if something happened on the lower jumps, something went wrong with the pressure suit, that I had a chance to live. From 102,000 feet if something happens to that pressure suit, you're dead and that is not a very comforting thought. I had trouble with my right pressure suit glove on the way up, and that wasn't very comforting because you know, if one thing goes wrong, what's the next thing going to be? But when I got there, I had to sit there for 11 minutes and I had to look out on the horizon and see the black sky overhead, see the thunderheads 340 miles away. It was a heck of an experience for me. But as beautiful as it was, I was in awe of the fact that it was deadly because it's just like having arsenic all around you because if you are exposed to that vacuum you are dead. So, it is beautiful but it is hostile. And that's what I told the folks on the ground, that we'll never conquer space. It's beautiful but we will never be able to live there. And that's the truth because it is not conducive to humans without the adequate protection. On my last jump I free fell for 4 minutes and 36 seconds, the shoot opened at 18,000 feet and I landed on the desert elated. I was elated because we had demonstrated we could do it, and I was elated because I had a great team of people there supporting me that made it possible to be there. We have accomplished exactly what we set out to do. We were trying to develop a system to provide needs of high altitude escape. We did not do it to set records. That was the last thing on our mind would be set records but together we did what we needed. Six years later, by the way, this parachute system – the stabilization chute – was accepted by the Air Force and incorporated, and six years later there was guy by the name of

Bill Weaver who was flying an SR-71 at 80,000 feet at Mach 3.18, and the airplane came apart and he got out of it and free fell down and survived because he had that stabilization parachute that we developed for him. Today, every ejection seat in the world, including the Russians, use the small 5 foot diameter stabilization parachute that we developed on Stargazer. So all of us that were associated are really proud that what we did – did accomplish something. Unfortunately, NASA didn't use the system. The people on the Challenger could have survived if they did have had one of our parachutes on board. That was unfortunate because they did not because they were still alive when they hit. But I had a great team of people made possible by the dedication of Dr. Stapp. I ended up having a wonderful career in United States Air Force, 29 years made possible by great people that crewed the airplanes and provided the technical support that they do for the Air Force plus a great team that we had at Wright Field. So, I have been blessed and the sky is still my office. I still fly airplanes, I still fly balloons. I'm still vertical, I'm still happy and I still remember the 23rd Psalm.