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[full name of interviewee]

about Simulator training and Mercury flight
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Control logistics

Title: 1962 - Mercury Procedures Trainer
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CONTENTS:

Biographical - [date/place of birth; family background] _____

Education - _____

Career Path - 1960 - NCSU Aeronaut Eng; 1960 - NASA STG at Langley
+ AF commission
Spacecraft Operation Branch

Simulation engineering training for
Topics - Mercury Simulator; Original 7 astronauts;
flight control simulator; ^{cap com} fill-in at remote
tracking sites; ^{ship} ~~experience~~ off Liberia for Glenn flight;
delays + killing time in Liberia (2 mos); Hawaii for
Carpenter flight; ^{oversight} misquote re computers'
condition; assisted Glenn as CapCom for
Schirra flight; Glenn's Celebrity status;
expenses + ~~early~~ travel as flight control problems;

Interview with James W. Prim III

December 8, 1967

I joined NASA in October 1960. I had just graduated from North Carolina State University with a degree in Aeronautical Engineering and an Air Force commission. I was all set to join the Air Force until I separated my shoulder at summer camp. I had gone to Langley Air Force Base to take a physical so I could be commissioned, and while I was there, I met a friend who was working for Langley Research Center. He suggested that I apply for work with NASA because he was ^{in the} Air Force working for NASA. It was hard to get a job with anybody else, ^{with Active Duty Orders} so I went over to Langley and applied. Langley Research Center didn't have any openings, so I next went over to see Burney Goodwin in STG and he set up appointments for me to talk with several STG people. Afterwards he told me he'd put my name on the Civil Service register, but that there were a lot of people ahead of me. He'd have to send them letters and try to let me know something within a week. A week later I hadn't heard anything so I went back and talked with Burney again and told him I was married, I had a brand new car, nobody would hire me, and I wanted to go to work. He asked me if I were willing to work for 30 days and I said yes. I went to work on this 30-day appointment and as it turned out, this was extended either 2 or 3 times before I was finally hired as a permanent member of STG.

I went to work in the Spacecraft Operations Branch. We were responsible for operation of the Mercury Simulator. The Branch also handled the Alpha simulator and all of the flight planning. What there is now a division to do, our branch did in the early days of Mercury. My first assignment was

as an instructor on the Mercury simulator, together with two other engineers, Charles ^{OLASKY}~~Lasky~~ and Rod Higgins. Before long, I became the project engineer and only engineer on this simulator.

49 As simulation engineer, it was my responsibility to make sure the simulator agreed with the vehicle, and to train the flight crews in the systems and emergency procedures. This was their basic training. They got their final training at the Cape in the last few months prior to launch. But with that simulator we trained all of the original 7 Mercury astronauts at Langley. In addition to the Mercury simulator, we soon added a simulator for the flight controllers which was remotely controlled from the Mercury simulator. These were all fairly simple simulators compared to what we have now, but we used the Mercury simulator and the remote control simulator to 50 train the flight controllers for Mercury. Because of my familiarity with the flight plans, the systems, and training of the flight controllers and because of the shortage of personnel, I was asked to double as a CapCom for the remote control stations. This worked out well because when we had a flight there were no astronauts at Langley to train; therefore, no reason why I shouldn't go to one of the remote stations and fill in as a Capsule Communicator.

I was first assigned as a flight controller in a training role at the Point Arguelo Station in California backing up Arnie Aldrich for Enos the chimp's shot. On that assignment I got to see Arnie Aldrich remotely fire the retrorockets to bring down the spacecraft. ^{I WAS AT THE CAPE FOR AL SHEPHERD'S FLIGHT.} For the second manned flight our first child was due so I didn't leave town. For John Glenn's flight I was assigned to the Roseknot Victor/off the coast of Monrovia, Liberia. We left Langley

in early January, flew to New York and on to Paris. We spend the night
 in Paris and flew on to Monrovia, Liberia. There were ⁴ ~~3~~ of us. ^{Two of us} We gained
 entry to Liberia without visas, which was quite a trick. We didn't get
 our visas as when our passports were sent to Washington. ^{our shot records instead of} We were supposed
 to have a certification that our shot records were completely up-to-date,
 and lacking this information, they were turned down. Had we waited to
 resubmit the information we would have missed our plane. We met a member
 of the ^{MONROVIAN} State Department on the airplane and he got us in. He briefed us on
 what to expect from the taxicab drivers and to expect a demand for \$50 to get
 from the airport to the city. He told us that by bargaining it was possible
 to get a taxi for all of us for \$10. The cars were very small, and we had to
 go in 2 cars. It was quite a ride. From the airport to Monrovia was about
 20 miles. We left the airport and soon ran into a barricade across the road
 at a rubber plantation. Sure enough here were natives like you see in
 National Geographic. The cab driver said he had to detour. Off we go
 into the rubber plantation. We ride around for about 15 minutes and come
 out on the road about 300 yards from where we left it and now the barricade
 is gone. We are informed that the detour is going to cost another \$5 apiece.
 We drove on into the American Embassy and before we got to the Embassy and
~~before we got to the Embassy~~, the cab began to give evidence of losing a
 rear wheel bearing and the driver told us that was going to cost another
 \$5 apiece. ^{WE PAID THE ORIGINAL BARGAIN PRICE PLUS TIP BECAUSE HE TRIED SO HARD.}
 We spent one night in the hotel before we boarded our ship in
 Monrovia. In Monrovia's nice hotel, singles were \$22 -- and no break on prices
 for doubles. We stayed down at the bottom of the hill where the rates were \$12.
 There were beautiful buildings all over Monrovia, and absolute slums right
 next door to them.

We boarded the ship and went out for some simulations. After we had
 reached our position, ^{we} and were conducting ^{countdown for the launch when the} ~~one last simulation before the~~
~~scheduled launch,~~ the third mate began complaining of a sore shoulder.
^{asked if our doctor would examine the third mate. Dr. Ray}
^{Dr. Fred Kelly,} our medical monitor examined him and asked him if he had
~~ever~~ ever had any heart trouble. The guy said no, and Kelly informed him that
 he had had a heart attack. Kelly advised us that we had to get the man
 to a hospital. We called up the Control Center and asked and received
 permission to support the ^{mission} ~~simulation~~ while enroute to drop the third mate
 off in Monrovia. We anticipated that by the time the spacecraft came over
 we would be back on station. We dropped the third mate off and got back
^(mission was scrubbed for that day.)
 before the launch. The third mate died shortly after that. We later
 learned that he had known he'd had the heart attack for a week, but didn't
 tell anybody about it. The reason he didn't was that he had boarded the
 ship with a known heart ailment against regulations and was taking heart
 medicine which ^{they} ~~we~~ found in his belongings after he died. Had he admitted
 that he had had heart trouble after boarding the ship he could have been
 sent home and his pension and other benefits taken away from him because
 he lied about it to get onboard ship. It cost him his life, because he
 wouldn't tell anybody and finally when they called the doctor it was too
 late.

During the long hold that we had because of Agena fuel problems, the
 two medical monitors left the ship, and came back to the United States.
 The systems monitor and I stayed on in Monrovia, Liberia. We were unhappy
 about that arrangement. I asked for permission to come home for personal
 reasons and I got another TWX back asking me to expound on my personal
 reasons. I explained that my wife had been in the hospital before I

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left with severe kidney problems. By the time I got a reply, I couldn't catch an airplane. They only fly out of there once or twice a week, and I had already missed it. They sent me a TWX back saying my wife was fine, that mother-in-law, sister-in-law, brother-in-law were all sick. There my wife was taking care of all of them and I had just gotten her out of the hospital. But even if I had received a reply in time, I wouldn't have been able to get a flight home, as there were only 2 or 3 a week and I had missed the "last" one. While we were there, to pass the time, we would go ashore. But we couldn't stand Monrovia. The food on the ship wasn't so great, but it was better than eating on shore. What you would pay 75¢ for in any diner here, we paid \$5 for there in Monrovia. I got to know the people in the Embassy and fixed an outboard motor belonging to the exec officer at the embassy. The exec, a marine guard at the Embassy and I went fishing one day in one of the rivers that flows into the Atlantic. While we were trolling up the stream, I caught a baracuda and no sooner had I got him in the boat than the engine quit. To get back we had to drift downstream and the Marine jumped overboard and pushed us. He really had guts. I didn't trust that river that well. That's typical how we killed time.

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Between simulations onboard ship, the crew would put steaks or a roast on a great big hook and fish for sharks. They delighted in catching sharks, killing them, and hanging them over the side to bleed to draw more sharks. It was as if they felt they had to kill as many sharks as they could. But there were very few sharks to be caught, as fishing was very poor. As we were at a point where the ocean was deep. However, we did get into a school of tuna one night. We hung a light

over the rear of the ship at night and we could see them everywhere. I think we finally hooked 6 during about a 12 hour period.

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Life onboard the ship was miserable. The four flight controllers had a small room. We had our own private bath, but there were 2 bunks on each side of the room, one on top of the other, and the generators were right next to us. When they were running it was almost impossible to sleep, although eventually I got quite used to them. The only section of the ship that was air conditioned was where we had all of our mission equipment. Off the equator was great fun with so little air conditioning. The principal recreation we had onboard ship was fishing, which was terrible. We had a weights room up in the bow of the ship, but it was in a dark hold and a real sweat box without ventilation. We had a pingpong table in the #2 cargo area, which also located in an area that was not air conditioned. If it was cool enough we could play a little pingpong but it also was in a dark hold, which limited our interest.

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We ate with the ship's officers in the officer's mess. We occasionally played cards with the crew in the crew's mess or onboard deck. One of the crew members had a speedboat onboard but we couldn't get it into the water. I later recommended that they put a pleasure boat onboard for use of flight controllers and the crew for water skiing or swimming. I was told that to drop a boat over the side required rigging and the rigging interfered with the antenna patterns. We were onboard that ship almost 2 months. During this period one of the stewards in the crew mess came down with syphilis. I don't know whether he contacted it in Monrovia or whether he brought it from New York with him, but thank goodness we had 2 doctors onboard and they were able to diagnose it and isolate him.

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After the flight, we were requested to return to the States as soon as possible in order to attend the flight debriefing at Langley. Had it not been for a smooth talking Dr. Roy Kelly, we might still be in Monrovia. When we entered Liberia, we were supposed to take out citizenship papers. ~~if we lacked a visa. I had no visa and did not take out citizenship papers.~~ When we left the country, the officials said you don't have a visa and we won't authorize you to leave. I don't know what Roy did, but he took our visas and with the help of the Embassy we finally got permission for us to leave the country. There were only 2 flights a week out of Monrovia and so we were happy to get out. It was about a 20-hour flight from Monrovia to Paris, and a total of about 24 hours ^{travel time} ~~nonstop~~ from Monrovia to London - all on Super Connies, and I was beat. I spent the night in London and the next morning got up and flew from London to New York. I can remember sitting in the JFK terminal in New York with only one nickle and couldn't get anyone to lend me another nickle so I could call my wife collect. I flew back to Langley, got a cab to take me home, woke up the neighbor, and borrowed enough money to pay the cab. They carried me down to the bus station where I caught a bus to Richmond, called my parents and told them I was ^{then I caught a train to my wife's home.} home. My wife almost wouldn't claim me: I had grown a small goatee and mustache and I was wearing a beret that I had picked up in Paris.

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While we were in Monrovia, Liberia, the Russian astronaut Gargarin came there. There was a big todo about him swimming in the surf off the coast near Monrovia. A bunch of people were used to form a human line to keep sharks from coming in and getting him. My biggest thrill down in Monrovia, I guess, was when I found a coca-cola, because we couldn't drink

the water unless it came bottled and certified pure and I didn't like beer.

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119 I got a couple of letters from my wife during the approximately 2 months in Liberia. Mail was very slow. Some of the crew had not received mail for a couple of months. We were told that if we sent anything, especially at the Monrovia postoffice, if it had any value, it probably would never be seen again. With only 2 flights a week out from Monrovia, it was hard to get mail out anyway. Pan Am flew 1 nonstop flight from Monrovia to New York, but very few people took it because for the same price you could go through London or Paris and I guess everybody likes the fact that for the same price, you might see a little bit of the world.

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119 My next assignment as a flight controller was in Hawaii for Scott Carpenter's flight. We got home in late February following John Glenn's flight and then in May I left to go to Hawaii. I went down and hocked everything I owned and bought a ticket for my wife and took her with me. It almost broke us up financially. Everybody had been staying on the Island of Kauai and getting real good rates even in the penthouses, but just as we got there, the hotel was sold and the daily rates were raised to \$30.00 for food and lodging. We stayed there one night, then rented a duplex.

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119 Scott Carpenter's flight was not delayed as long as John Glenn's. We were only on site for approximately 2 - 2½ weeks. The flight went fairly well until the last orbit. Hawaii was to read Scott his checklist and prepare him for reentry. He came over our station with a control problem which complicated things and we ended up reading the preretro checklist to him in the blind not knowing whether he received it or not. As

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he came over California, he fired his retrorockets, and then overshot the recovery area by several hundred miles. Nobody left the console until we knew that Scott had been picked up and that he was all right. Our station had made a comment to the effect that we thought Scott had been preoccupied or slightly confused. The previous station to us in the debriefing had said they thought Scott was tired and somehow the press got hold of these statements and quoted Hawaii as saying that Scott Carpenter was tired and confused. We thought maybe Scott had been preoccupied at the time because he had discovered what John Glenn had reported as fireflies were ice crystals from the side of the vehicle and as they popped off he could see them. We thought he might have been preoccupied with that. That misquote caused some problems.

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After that mission, we came back to Langley, managed to sell the house at half price I paid for it and moved to Texas. The rest of the flights were controlled from Texas. For Wally Schirra's flight, which was the next in sequence, I was requested to go to the California tracking station and assist John Glenn as capsule communicator. John had never manned a remote control station and since I was familiar with the routine and had trained ~~some of~~ the crew in the Mercury simulator (and which I was still acting as project engineer of), I went along. We ended up keeping the same hours as the Cape. We had to get up much earlier than the Cape and going to work we had to drive through fog. It was bad. Going up to the station, our headlights attracted all kinds of deer, which made driving hazardous. 205-2
John had completed his flight several months earlier, and as a hero his autographs was being sought by everyone. John took this very well. We

would go to church at 11:05 so we wouldn't be bothered by everybody and would sneak out the door right before the final few

chords of the last hymn. Wouldn't you know, one Sunday a meeting was held prior to the worship service and church was postponed until the meeting ended. There we stood with the entire congregation surrounding John Glenn, waiting his autograph and the grandmothers almost mauled him to death.

Another incident happened to him which I thought was great. Every evening he would get in his car and drive out one of the back roads in the neighborhood to where it was quite hilly. He would run up and down the hills to stay in shape. One evening as he was running up these hills, an old Model T pickup truck pulled along side him, the driver leaned out the window and looking John right in the face yelled - "Hey, buddy, who are you going to fight?" John really enjoyed that because everybody seemingly wanted his autograph, and here this fellow thought he was in training for a fight.

Some of the problems we had as flight controllers in the early days were associated with travel. When I made my first trip to Point Arguelo, I ran low on money. My bank was back at Langley Air Force Base and I was sure the merchants wouldn't want to cash my check, but surely a bank would. I went into the bank in Lompoc asked them to cash a check and they kept passing me up the chain until I finally got to a Vice President. He told me they wouldn't cash a check for me as they didn't know who I was nor who NASA was. I suggested that they could call the bank and see if I had any money. They wouldn't do that, saying I might have money in there now, but if they were to cash a check for me it was possible for me to call home and have all of the funds withdrawn. I finally went downtown, and bought a

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Timex watch. The owner of the store was willing to cash a check for about \$20 - \$30 more than what the watch cost, which was enough to get me home. I vowed right then and there, I was going to get an American Express card so I could get a check cashed.

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The next time I tried cashing a check in Lompoc was for Wally Schirra's flight. I went back in the same bank and this time I bypassed the tellers and went straight to the Vice President. I identified who I was, that I was with NASA, was out there supporting Wally Schirra's flight, and needed some money. I wanted to cash a check, and how much identification did he want to see? He said, write out the check, we are glad to have you with us, your boys are doing good work and there would be no problem in cashing my personal check. It nearly bowled me over, as it was such a complete about face from what I had experienced before.

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Incidentally, I found when I was in Paris that shopkeepers would rather have American Express travelers checks than dollars. I could get more perfume by pulling out an American Express check than I could buy with the equivalent amount of American dollars.