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[full name of interviewee]  
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[main focus of interview]

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Interview conducted by Robert B. Merrifield - Staff  
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## CONTENTS:

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

Education - \_\_\_\_\_

Career Path - \_\_\_\_\_

Topics - Mercury 7 astronauts worked for Gilruth; Astronauts ~~worked~~ <sup>Changes in organization w/</sup> in areas of specialization; growth of Astronaut Corps; Slayton grounded; organ of Astronaut Office w/ Slayton head, second group (~~of~~ nine); mail & administration; Slayton Asst Dir Flight Crew Operations; Shepard grounded - ~~took~~ <sup>role of</sup> in Astronaut Office; 14 more pilots, 6 administrative flights; 3 three-man Apollo crews for each Apollo flight; Cooper head of Apollo Application Area of Astronaut Office; Scientists nuclear; Flight Crew Support Division; crew training; crew integration; Aircraft Operations Office; test flight operations; maintenance inspection; responsibility for lunar landing research vehicles; training facilities at MSC & Cape; gym; public affairs; public appearances <sup>in 3</sup> categories; public, NASA Hq, post mission, (over)

Mail volume; Contracts w, Life Magazine  
and World Book. Astronaut selection  
Criteria (~~change~~ <sup>requirement</sup> Dropped test pilot in 3rd  
round ~~to~~ <sup>to include</sup> operational pilots).  
4th group was Scientists; <sup>NASA</sup> Institute of  
Study Concept; astronaut corps  
sufficient in number.

10/17/67

Interview with D. K. Slayton

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Slayton: When we astronauts came onboard we kind of operated as a conglomerate of seven guys all reporting directly to Gilruth, more or less independently. We didn't have any flight crew organization, per se. Voas was sort of a training officer and Keith Landell was sort of a training officer. In terms of direction, I guess this came from Gilruth, because that's the only guy we ever worked for directly.

50-1  
We each assumed a different area of specialization and worked with the people in the Center that were responsible for these areas. Shepard, for example, worked with Bob Thompson and others concerned with recovery. I was concerned with the Atlas boosters and spent a lot of time with GDA. We just worked with the engineers that were concerned with the same problems we were and whenever we had trainers to train with, we trained.

50-1  
The first time there was any change in organization was about the time we decided we needed to bring some more astronauts onboard. Mercury program was pretty well along and the decision had been made to go to the Apollo Program. If I remember correctly, that decision came before the Gemini program was approved. The Gemini program was sort of a fallout -- we needed an interim manned spaceflight program to give us more knowledge before we went into Apollo. Anyway, at that point we apparently needed more flightcrews than we had and it was also evident that we would not be able to continue to operate the way we had been. I'd been grounded for Mercury flights at least, no decision having been made beyond that point, and was supposed to be helping Walt Williams on some operational problems. I don't know who initiated the suggestion, but I guess Shirra,

Grissom and Shepard decided, well, hell, if we're going to have to have a boss, why bring somebody in from the outside and superimpose him on us? They decided they would rather have me. I went to talk to Gilruth about it, he agreed, so that's when we organized the Astronaut Office. This took place prior to Shirra's <sup>The Gemini</sup> ~~first Gemini~~ flight, because I remember I had to make the decision as to who would fly the next mission.

yl? About the same time we selected the second nine guys and they came onboard just about the time of Shirra's flight. We again organized into areas. Grissom was in charge of most of the new guys as he was assigned the area of Gemini systems. About that time we also set up an administrative staff. We created a mail room to handle official astronaut mail. At this time astronaut mail was being processed everywhere -- at the Cape, Marshall, and Headquarters and seemingly every place else. We decided to set up an internal organization and do it in one place. The same thing applied to personal appearances.

We operated in this mode until the decision was made to create new directorates. At that time the Astronaut Office was reporting directly to Gilruth as a staff office. Kraft was reporting directly to Gilruth as a division chief. North was head of the Flight Crew Operations Division, and all were reporting independently to the Gilruth and Jim Elms his deputy. One day Gilruth and Elms asked me if I'd like to take on the additional job of handling everything associated with flight crew as an assistant director instead of chief of the office. We had been having some organizational problems anyway with the astronauts wanting one thing and the other people who are really supposed to be supporting them wanting

262  
something else, and things were not getting done right, so that seemed like a sensible solution. I ended up being assistant director of what was called Flight Crew Operations, and North's division was redesignated Flight Crew Support Division. The Aircraft Operations Group was set up as a separate office. We ended up with two offices, the Astronaut Office and the Aircraft Operations Office, and the one division, Flight Crew Support. Up to that time, aircraft operations had been reporting operationally to me as the chief of the Astronaut Office and administratively to North, and about that time the decision was made that NASA would buy their own airplanes instead of depending upon bailed aircraft. I continued to act as head of the Astronaut Office because we couldn't get anybody else to run it. This went on until Shepard came down with an ear problem and was grounded. He was a logical choice to take over the Astronaut Office.

263  
264  
About this time we picked up another 14 pilots. We didn't change much organizationally. All the administrative support continued to be performed in a branch under the Astronaut Office. As far as Gemini flight crews were concerned we had a prime and a backup crew which consisted of four guys, and we broke these out functionally as units supporting missions. Astronauts were also assigned to administrative flights as differentiated from their functional assignment, as a solution to the problem of shuffling secretaries every 6 months, and moving people from one office to another. We organized six flights, with astronauts assigned alphabetically with one guy administratively in charge of each flight. Thereby we could have people staying in the same office working with the same secretary in spite of changes in their mission assignment. But functionally they reported through the guy who was command of the specific operational flight that they were assigned to.

80-3  
The one additional change we made when we went into the Apollo program was brought about by the fact that we now had two three-man crews. We made a decision to take the newer group of flight crew personnel and use them as a third, or support crew in addition to the prime and backup crew. We did this starting with Apollo 1, and intend to follow it on through. This means we have nine astronauts assigned to each mission. Functionally that's just about the right size group for the flight commander to control, Since our training cycle is also now longer than formerly, these guys end up working together for about a year now instead of 6 months as was the case in Gemini. The scientists we brought onboard have been integrated with the pilots in terms of administration.

288-2  
We've also created an Apollo Applications area within the Astronaut Office. ~~Al Bean~~ <sup>Donald Cooper</sup> is head of that and has reporting to him the scientists on various AAP missions plus all the new guys left over from direct crew assignments. We have 27 astronauts assigned directly to main line Apollo. Everybody else is assigned to Apollo Applications with the exception of the last group of 11 scientists [who we really didn't need at all]. They are now going to ground school. We'll send them to flight school and by the time they get through with flight training, we may have a better understanding of what we will need them for. [If we don't really see any use for them at that point, we'll make a decision as to whether to assign them temporarily elsewhere in the Center or some place outside the Center, until we need them for an operational flight.]

The Flight Crew Support Division has not changed appreciably since I became responsible for it. We have two major elements -- one in the training

area and the other in the crew integration area. As our functions change, we add organizational elements, such as an EVA training section.

The majority of the work done in the Aircraft Operations Office is done by contractor personnel. NASA personnel fly test operations and pilot the administrative aircraft. They also fly in support of the earth resources program. We've always felt that our prime role in this office should be operating the airplanes. In the past we have been obliged to build experimental instruments, and record, reduce and analyze data. We're now getting back to our primary function which is flying the airplanes and installing and removing equipment.

The other element that we have is responsible for the maintenance inspection of all our aircraft. The lunar landing research vehicles are also under our jurisdiction. We operate them at Ellington, primarily with contractor personnel and limited civil service management. In general, the ratio in the Directorate is <sup>Three</sup> ~~five~~ contractor personnel to each civil servant.

When the Center was finished we moved all Site elements into Building 4 and Building 5. The Aircraft Operations Office remained at Ellington. Building 5 is the trainer building. In it we have a docking trainer, an AMS, an LMS, two part task trainers, a dynamic <sup>Crew</sup> ~~trac~~ procedures trainer, a water tank and all the mockups. Building 35, under construction across the street from 5, will also be primarily crew training, and will house our part task trainers and a big water tank for 1/6 g and zero g simulations.

At the Cape, we have a training building which houses two Apollo mission simulators and one LM mission simulator. There's also room for some mockups



and we intend to put in an LLTV facility. We use the skid strip and the hangar across from the fire station. We have an Astronaut Office, a gym, and crew quarters on the third floor of the ~~MSH~~ building.

At Ellington we have a hangar and really need two hangars. Our LLTV facility on the northeast corner of the field consists of a small hangar, ramp pads, operating trailers, and office ~~trainers~~ <sup>trailers</sup>.

We also have a gym here at the Site -- a separate building in the warehouse area out in the boondocks.

We spend a lot of time in public affairs activities. It used to be when all seven of us were occupying the same office back at Langley, on any given day there'd be somebody from the press in there talking to one or another of us while the others were trying to get some work done. We sure got a bellyfull of that in a hurry. As soon as we organized into an Astronaut Office, one of the first things I thought out with the PAO guys was this matter of meeting with the press. We agreed that on one day a week we'll be prepared for it and they will be prepared for it. The rest of the time -- lay off! That's the way we've been ever since.

We do have a lot of commitments to give speeches and make appearances around the country. In what is called category one there are home town appearances, national youth activities (such as Boy Scouts) and technical conferences (such as AIAA). Every third week we supply one astronaut to the Headquarters. Headquarters uses him for a full week, which usually means touring any place around the country, and talking to different organizations. We have another category, called administrator exception, which means that if Mr. Webb has a special thing he wants done by an astronaut,

we make an astronaut available for this purpose. The other category in public affairs activity is the post mission assignment. We've an agreement with Mr. Webb which enables him to use the flightcrew for up to three appearances as he sees fit. This included New York type parades or however else he wants to use them. With these rules we are able to support most of the outside requests and still get our work done.

388-1 On the average we're running about 5,000 pieces of mail a <sup>month</sup> ~~week~~. The majority of the mail is for autographs, autographed pictures and information and all that sort of thing. The mail room very competently handles all that. They don't bother the astronauts unless it's a personal letter. Formerly, about 10 percent of the mail was requests for astronauts to go one place or another. Operating under the rules we have now we turn away about 90 percent of these requests.

Merrifield: There has been considerable public speculation in regard to the terms of the contract with Life magazine and World Book. Would you care to comment?

Slayton: The first we heard about this contract was at the time we first reported to Langley. A press conference had been held and it'd been announced that we were in the program. Prior to meeting with the press Bob Gilruth, Shorty Powers, Charlie Donlan and Paul Purser talked to us about the contract. I think Shorty was the guy that brought up the subject. As I recall, he said that we could expect to have some major problems in that people would be bugging us for personal stories and that sort of thing. We were all green as grass and didn't even know what he was talking about. He said that it was recommended that we band together as a group, that there had already been some proposals and that we'd hear about them that night.

They suggested that we accept them. That night we had a big dinner with the Chief of Staff of the Air Force, Chief of Staff of the Navy, Mr. Glennan who was then NASA Administrator, someone from Life magazine (I believe it was Ed Thompson), and a fellow by the name of Leo D'Orsy. D'Orsy had offered to act as our representative and Life magazine had made an offer to buy our personal stories as a group. It was pretty much cut and dried and it was recommended that we accept the offer. We did. We signed a contract with Life in which everybody participated equally and wrote stories of a personal nature as they saw fit. That arrangement continued through the Mercury program. I believe it was a 4 year contract. Anyway, well before we got to that point we'd already been publicly committed to the lunar landing program and we were also getting more people onboard. About this time we brought the second group of astronauts onboard. Field Enterprises and Life Magazine were interested in a continuation of the contract and so again working through D'Orsy and <sup>B</sup>~~Th~~atten, who was representing the second group of guys voluntarily, a new contract was drawn up which covered all 16 of us onboard at that time. Life handled the magazine coverage and World Book handled the newspaper feature articles. The contract was so written that new astronauts as they came onboard were included automatically. It was a 3 year contract renewable for 3 years assuming we were going to get to the moon at the end of the second renewal period. In the meantime we brought more astronauts onboard and were covered by the contract. When the renewal option came up in the spring of 1967 World Book apparently decided that they were not getting as much value from the contract as they had hoped for, and as it was their option to renew or to not renew, they

just decided not to renew. That left Life as the remaining member of the contract with the astronauts. Now everybody onboard with the exception of the last group of the 11 scientists, are under contract with the Life magazine for personal stories. The way these contracts were originally written, Field put x number of dollars in the pot and Life x number of dollars and this was to be prorated among whatever number of astronauts were onboard, which at the time the contract was drawn up was 33 astronauts, I think. Everyone got the basic amount that was predicted they'd get out of the contract. When the number of astronauts exceeded 33 (eventually it reached 55, including widows), the amount each received was prorated.

At the time the original seven were selected, the ground rule was test pilot with an engineering degree. Even at this early date there were waivers made in the case of two guys that didn't have engineering degrees. During the second group selection we still held to the test pilot criteria. It became apparent after we went through that selection that we'd pretty well picked over the available test pilots. There were only about 500 test pilots in the country, and by the time you applied an age and height criteria the number that was left was pretty small -- only about 110. For the first seven of us 40 was the upper age limit and 5 foot 11 the maximum height. For the second group we cut the age limit back to 35 and we increased the height to 6 feet, and now we had something less than 100 candidates to choose from. By the time we screened that group, we knew that we weren't going to be able to get many more pilots from this source. So for the third group we selected, we changed our criteria to include operational pilots, with over 1000 hours of jet time. Almost half of the guys we picked up at that

341  
time did not have ~~this much~~ flight experience. But they were real good operational pilots, and where an operational pilot had a masters degree in astronautics or other useful training we could make a tradeoff between test flying and education. As the result, the educational level kept going up in these groups. The fourth group we selected was a group of scientists. We were planning the AAP program and after considering the kind of missions that were being predicted, we recommended recruitment of some scientists who were either pilots, or if they weren't we would make pilots out of them. We were looking for something like a dozen to 15 at that time but we only got 16 recommended from the Academy of Science. Out of that number we picked six, and ended up with five. We sent three out of the five to flight school. By the time they got back from flight school we'd added another 19 pilot astronauts, using the same criteria as for the third group. We integrated the five and the 19 into a ground training program and they're sort of been working as a group ever since. We're using a lot of them on third crews in Apollo. All the rest of them are to be used in Apollo Applications, probably the first program in which most of them will have an opportunity to fly. Our immediate requirements for scientists aren't very great but the reason we asked for scientists was that missions in Apollo Applications were designed around the scientific experiments and we thought it would be easier to take a basic scientist and give him some flying experience than it would be to take pilots and train them to be scientists to the extent needed for Apollo Applications. The question of when we will go from a pilot-type scientist to a nonpilot scientist is one that keeps coming up and I think that's strictly a matter of timing. I think sooner or later we'll reach

*in the hardware*

the point where we've got enough confidence <sup>in the hardware</sup> that we don't really need to train these guys to fly, but as long as we have three man crews and we're talking about operational missions as opposed to the research and development, I think it's mandatory that every guy ought to be able to operate the vehicle. He can certainly save himself even if he can't save anybody else. When we get into larger crews, six men or more, we will be able to afford the luxury of some crew personnel who aren't operators.

Merrifield: At one time there was some consideration given to the establishment of academy for astronauts. Would you like to comment on that?

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 Slayton: That was a paper exercise like a lot of others we get wrapped up in. *Compressed Teams* ~~Somebody~~ came up with the idea that since there is a West Point for the Army, an Air Force Academy for the Air Force, Annapolis for the Navy, why not a space academy for NASA? In my opinion we've been operating one here for the last five or six years. It's just a question of what kind of name you want to tack on it. I think most people, when they talk about an academy forget the fact that the service academies are undergraduate institutions. The people that we're selecting are all past the undergraduate level and of course in the case of scientists they're already Ph.D.'s. I guess about half our pilot corps now has at least a masters degree. So we're not talking about an academy in the accepted sense of the word. We're talking about an institute for advanced study or similar terminology, with specialized advanced study in manned space flight. I don't envision a requirement to have an undergraduate type school operating to train astronauts. As long as you've got 3 or 4 service academies and about 150 excellent universities around the country giving undergraduate

training in any area you can think of, I think we're better off to let them continue to do that and select their best people at the appropriate time. I don't see any point in limiting ourselves to a small number of people that might come out of a manned space flight academy. I think we'd do more harm than good.

Merrifield: Now some 50 flight crew personnel have been assigned astronaut duties. At one time it was conceived that there might be a need for more than 100. Does it appear that we have reached the point where we'll level off for awhile until new mission are developed?

389  
Slayton: For the programs we have on the books right now, we've got more than enough people. We selected people on the basis of what plans looked like a year ago. That's the reason we got the 19 pilots and the last 11 scientists. Since they were selected, the list of future programs has been whacked and it's pretty obvious that we just can't use all these people right away. Since we were committed to them, we figured we should bring them onboard and use them the first opportunity. I would guess that the astronauts that we've got onboard are adequate to support all probable progress for at least the next 5 years. Now if we start talking about large space stations and resupply vehicles where crews of 6 to 12 or perhaps 24 men are required, then we'll have to pick up some more people. I think we have about 3-1/2 to 4 years lead time in terms of crews. That seems like a long time, but you have to have a program plan that's longer than that in order to have the flight crew ready and the capability of adjusting to changes in the program plan.