

MSFC HISTORY
MRS. RUTH VON SAURMA
INTERVIEWED BY A. DUNAR
7/21/89

VON SAURMA: I really believe it was a great relief for many of our team members to have the feeling that they were not developing another missile for wartime purposes, but that they could finally do some of this scientific research. Research in the higher atmosphere, then of course, going on beyond the limits of the atmosphere and going upward to the wide universe and concentrating on the moon. Also especially on the Mars mission, the one Werhner von Braun really tried to push. He wrote his Mars Project while he was in Ft. Bliss and had some time. I am sure you have seen the booklet, The Mars Project that he put together. For them it was a great relief to go into the scientific aspect. I think this quite often has been distorted. Our picture of the Apollo Program. We did not see it as very shrewed political statements by President Kennedy, who at that time, really had the problems of the Bay of Pigs. There was a disenchantment that the Russians had dominated in outer space. That America was no longer number one in science and technology which they had prided themselves for such a long time. I feel that President Kennedy was not very interested in the scientific aspect of what the lunar soil looks like. He was interested in our developing some sort of J1 rocket as a means to go into space and outdoing the Russians. Von Braun being a fabulous communicator and having dreamed all his life of bringing men into outerspace, it was just the ideal situation that he could help

with the suggestion that the moon would really be an ideal focus for anything. As you know, for a great project you have to have specific goals, a specific timetable, and a specific amount of money. To set up something as a project of national priority and funding it with the promise of funding it for a whole decade (although Kennedy could not know exactly what would happen three or four years later, unfortunately, he never saw the end result) it really was a unique set of circumstances. What is interesting, what always kind of intrigued me. Don't forget, we came here from a rather small country, Germany, which had suffered greatly and where of course a lot of money during that time was spent on armament. It was absolutely amazing there is no doubt, that the development of rocketry and the development of jet propulsion was far ahead of what had been here in the United States. I mean, they did not bring the German Scientists and did not start Project Paperclip for nothing. This was a true assessment that this could help push technology here to a higher level. Certainly American industry and scientists could have done the same thing, it just would have taken longer. What has always intrigued me, as I mentioned, here we came into the land of what really seemed at that time, unlimited opportunities, money was made available. In the beginning there were a few struggles while we were under the Army. We were allowed to launch the project with what money the Army would get for the missiles and the Air Force would get. After the first Explorer was launched, more money was available. Everyone realized in the government and top circles that more had to be done in the field

of space exploration. Now you have this group of people with this great vision, and enthusiasm, and for some also a very sincere interest in the scientific exploration. The feeling was the human urge to explore and combine that with the American spirit of well, we no longer have a western frontier, now we get a new frontier out there. The great amount of money that was available in the early 60's, that prompted many, I think to get into a certain euphoria and to plan things far ahead of what really could be done at a later time. It was one of the German scientist, Herman Kurter that headed the Jupiter Projects office at that time, one of the officers similar to that, he wrote in a book, dedicated to von Braun [on his fiftieth birthday, he wrote about the plans for the Saturn V. They almost assumed that we would launch a Saturn V each week. It was absolutely amazing!

DUNAR: Project Horizon?

VON SAURMA: He headed up the larger....

DUNAR: They kept a very frequent schedule.

VON SAURMA: I think the Nova project. The one that was suppose to be launched from the water, because it could not be transported over land. Because so much had been possible during a certain time, people were not used to seeing, as they are perhaps now, and the idea that not only public interest changed, but also their priorities changed. It was just the idea, here

was this greatest country on the earth, here was the most money we had ever seen, it was all so much more and was poured into space, that in many of the studies, we went a little bit overboard. Of course it is hard to tell. Von Braun with his great enthusiasm was a great promoter of the idea of a space ride. If he had not been, I think that space travel in this country, aside from maybe a small group at Goddard and a small ABMA Rocket Society, this was just 20 or 30 people. It really started with von Braun's articles in "Collier's" magazine. That really was the very beginning.

I met Dr. von Braun for the very first time in New York in 1953. It was in November when he had been invited by one of the CBS or one of the television channels to be interviewed on his ideas of a space station. It was fascinating. It was a breakthrough, so to speak, into the idea, being maybe not yet excepted, but being discussed in a public forum. My husband knew von Braun. [He] had not been on the von Braun team in Germany. He had been an enthusiastic part of it as a volunteer for the German Air Force. He was in the Air Force development of the V-1. In the last year of the war, also was on the island of Peenemunde, but involved as chief engineer of the testing and military deployment of the V-1. They were on different sides. The Air Force wanted the money for fighter bombers and for the V-1. There was von Braun for the V-2 who wanted all the money for the V-2. They met on a very pleasant and friendly circumstances and we really had a fantastic relationship with von Braun and his family. He really was a drawing card for us to finally come to

Huntsville. There was no, aside from his brilliant mind and his being a great leader of people, who at the age of 25 became the technical director of a tremendous research and test facility at Peenemunde. By the time he was 28, he had 10,000 people under him. He had a fantastic chance to develop his leadership capabilities.

DUNAR: For people that were not among the originally group that came, did von Braun contact the people after and invite them to come later? Or did they, people like your husband, ask to come here because of von Braun being here. How did that work?

VON SAURMA: Actually the very first contact that my husband had was with someone from the Defense Department, asking him if he would come, (that must have been in 1946), because he was on the list of people that they were interested in getting over here. But at that time, we would not have been able to come over here as a family. So he declined. Then they came back to him in early 1953 and again the Department of Defense, and asked him if he would want to reconsider. In the meantime, we had received some information from others who had come to the United States. Also, the contract was rather generous in such that it would allowed us to go back if we had found circumstances to be pleasant or acceptable. It was when we arrived here, we came at the end of October 1953, and there had been refugees from the Eastern part of Germany, behind the Iron Curtain. The life of a refugee is not something to be desired. Actually for anyone who

has been interested in research and technology, the United States offered a tremendous drawing point. There was so much potential to develop things and interest. In Germany, my husband was not allowed to fly anymore, he had been an enthusiastic pilot. There was no aircraft industry. It really was a difficult time to establish yourself again. We excepted. Von Braun had heard about it (as I had mentioned, he was in New York) and he contacted us and had written my husband and had invited him to come. My husband also went to Dornberger to Buffalo, to see if that would be a good idea. He went to White Sands and Fort Bliss. Do to the fact that he had 10 years of Latin, 7 years of Greek, but only 3 years of English, that was one point where he thought it would be better to start out with a German group. Really the drawing card was von Braun. It was interesting, you never had a dull moment with von Braun! It really is too bad, I wish you would have been able to see him in person. He was a man not only with a great vision, but also with a great sense of reality, who adapted remarkably well to the whole system. He had excellent family background, but also was a fantastic companion. I think there was hardly anyone who did not like him and looked up to him, although he never looked down on anyone. He always seemed to be on the same level as the person he would be talking to. What was fantastic, the individuals grew tremendously under his leadership and performed so much more for him as a group than they ever would have been able to do individually. It was more than the sum of each individual. It was really fascinating. I remember if he asked you to come to his office to discuss

something. You went there and he immediately said, 'While you are here couldn't you do so and so?' I would never have dreamt of writing an article or doing anything like that. But he said it, and I felt that if he had the confidence that I could do it, then I would try. It was extremely simulating to work with him.

DUNAR: There's this concept that teamwork on the part of the von Braun team, did that come strictly because of von Braun's leadership? Some have made references to the fact that this was the structural system that was used in Peenemunde that was brought here. Then there is also the Army Concept that is thrown in to this as well. Can you sort those things out as to how they all contributed to the way in which von Braun ran things and the way in which ABMA at that point, was structured?

VON SAURMA: It isn't quite easy for me to say that, but I think in earlier years engineers and scientist could work by themselves and accomplish great things. They could be in a small room, like Edison and others, and it could be a great breakthrough for just one individual. But once you start with building items as complex as guided missiles and rockets, you really needed people from various disciplines, so teamwork became a must. It was very fortunate circumstance that von Braun was there to become the leader to pioneer in this teamwork concept. I can't tell, there may be studies in administrative sciences that you can find similar teamwork in many other areas. But it was really carried out to a very unique point here. I remember that von Braun wrote

an article on teamwork and leadership or teamwork. We have had several reprints done on that because it reflected so well his idea of how each and everyone contributes to it. I will never forget. His door was always open. At one time there was a goof in one of the rockets. He said, "Well, listen, we have to get to the bottom of it. Just be honest. Let's find out what it is." Then someone came forward and said I think it happened because I did so and so. Von Braun did not chew him out, he sent him a bottle of champagne! He was a great master, he had a great skill in promoting this sense of we have to accomplish it together. He never would, whatever tribute was made to him, he always said, it's the whole team behind us. Of course it was not just the German Team. It was the whole civil service team, the contractor team. It was the university research. It was a tremendous team made up of so many of us. In fact, it sometimes embarrassed him that so much of the credit for the Apollo landing went to him, because he had been one of the great spokesman for the Apollo program. Of course, he was just Director of one of the NASA centers, and he did not want to belittle the efforts of the other centers, like Dr. Gilruth in the Manned Spacecraft Center, the launch and jet propulsion laboratories. Be it far from him to try to get more publicity for himself. Whatever publicity he had, I think, he enjoyed it to the extent that he had helped space flight and the idea of the exploration of the universe.

DUNAR: Was there some resentment towards him because of all the attention he got?

VON SAURMA: I don't think among his colleagues here. Especially among his German colleagues. They were so happy that he spoke, because he had a tremendous articulation. He was never lost for words. He had a fantastic way of bringing idioms and comparisons that were truly American and not based in his earlier knowledge of the German language. He really had a fabulous way of expressing things. There was no one as good as von Braun in front of the television microphone. Dr. Stuhlinger is very good in doing this. But for example, his deputy, Dr. Rees, said I will look after the technical side, after all we need to perform. We always called him the "nuts and bolts" man. It was an ideal situation. You can not always run from Congressional meeting, some meeting of important group Congressmen, who wanted in their district to have a very good speaker in order to further their own goals and objectives. So it was good when so many of the others were not interested in taking the role that von Braun took. Whether there has been any [I wouldn't call it animosity] sometimes I think that some of the people in NASA headquarters were not always that happy.

DUNAR: Yes, in fact we came across letter that asked him to tone down his activities at one point!

VON SAURMA: ...that was kind of a difficult point, too. While von Braun did not start his development of rocketry under Hitler, you always had to keep in mind that one sector of the media would

always bring out that here was this former Nazi that had even been appointed a member of the SS, who all of a sudden is in the limelight. That aspect bothered us quite a bit. It really was due to the fact that no one ever thought von Braun would become the administrator of NASA. I think there were certain limits, due to his background. Also, I am sure the position as Administrator of NASA, is not always the most desirable one. You have to go to Congress for money, it really is a chore. As you may notice in the TIMES, and in several historical writings, when von Braun finally went to NASA Headquarters, I think it was some sort of a let down. There again, people will speculate and give you varying opinions of why von Braun went to Washington. I think it is a great amount of reasons, why he did it. One of the reasons I think was the cutting down the organization that he had put together, and the cut down had already started in 1967. He knew there were more cuts coming. It is not one of the very desirable objectives of a manager. That was really one item I am sure that prompted him to leave. Another one was probably the hope that he could somehow get the Mars project going. That really was under study yet. Spiro Agnew was then the head of the Space Counsel. He had endorsed the Mars project, so people were working feverishly on making some studies on how to do it. I also think that Mrs. von Braun, did not like the publicity. You know publicity is really something. It has a tremendous amount of drawbacks. Unless it furthers your own career, or lets say you are a great actor, [where] publicity is very necessary and it brings in money and fame. The fact that a 100,000 people adore

you, it does not mean they march to your own life and your own family. In fact, it can be the greatest nuisance, the greatest danger. Mrs. von Braun always stayed out of the limelight and never wanted her children to be exposed to some of those aspects. She kept them on a very reasonable level. They knew what their father was doing. They participated, if he got an invitation to the White House, or he got some award, certainly the family was there. But she did not enjoy being singled out and I think she lives very happily in Alexandria where she can arrange her life as she sees fit.

I think we got off the subject.

DUNAR: No, that is fine. One of the things that you mentioned in passing before that we could go back to. You mentioned something about your husband's own background and the cultural differences he had beforehand. Was that a difficult adjustment coming to a small town in north Alabama? There simply weren't the cultural activities available?

VON SAURMA: My husband grew up in Silesia on an estate in Silesia which is behind the Iron Curtain. From a rather prominent family in that part. But of course all of them leftbecause they did not want to be taken over by the Russians. As a young man, he taught himself how to fly on the fields of the farm. He and his brothers bought their own aircraft. That was in the 20's. They then taught themselves how to fly and they were fascinated by all aspects of technology. They built their

own radios as boys. I think there was never a moment that they didn't have some project that they enjoyed. We had a yard on the Baltic. It was a life that was tremendously filled. He liked to be outdoors, he was a good huntsman. For him, I think the adjustment to Huntsville was not as great. Of course, he had a job that was intriguing, new things. For me, it was a shock. I was born in Frankfurt, grew up in Berlin, married in Paris. I really had been a big city girl. The day we arrived here, he had to promise me we wouldn't stay. I wanted to hear it. But, what made it easier was the fact, there was so much for us to learn. You couldn't rent a house. You could have rented some, but they were really undesirable. So we for waited for a[433] we tried to build a house. Then we bought a boat on Lake Guntersville. We had to get used to the American way of life. After about a year and half, he went together with some of his colleagues and they bought a private plane. I wanted him to play golf, but I ended up on the airport learning how to fly. I must say however, I enjoyed things or started to enjoy things after I had some special assignments from von Braun. My husband was special assistant to him at one time. There was a lot of foreign mail coming in at the time. I had studied foreign languages and so he said why don't you make a translation of that, or can't you write a little answer for Dr. von Braun, look we have such a stack of things. I did that and that was kind of a challenge. I did it without any pay because the Army cannot pay people on the outside unless they let us contract, and I wasn't qualified for that. So when the first Explorer was launched in January of

1958, there was such a pile of congratulatory messages, telegrams from all over the world that I was asked if I would consider joining the Army Missile Ballistic Agency and work starting out as a translator. It put me on the administrative staff. I worked in the very beginning, I said I would love to do it if I could work from 8 to 2, because I wanted to pick up my daughter right after school and I wanted to be at home with her. The pay was not tremendous, because it was on top of my husband's salary, I needed special transportation, I couldn't join a carpool because of my different working hours. I needed a little bit more help, you felt like you needed to be properly dressed, so it was not a tremendous money-maker. But, it was a tremendous challenge. Also it put me in touch with a good many public affairs specialists and journalist who really had an excellent command of the English language and I learned a tremendous amount from them. I was grateful for that, because I had studied English and my English was very good, but still it left a lot to be desired. It is very important that when you are in a foreign country, when you are with other people, that you learn from people whose knowledge of the language is good. If you learn from G.I. Joe, it does not help you in a great career later on. You may learn a lot of good common sense, but it would not be a very educated way of talking and writing. This altogether made it very intriguing for me. Unfortunately, my husband died very early in December of 1961. The job had grown so much we first had someone else on the staff that immediately I was put on and it became a full-time job. I had to take the government exams in

translator. I flunk the very first test, I had never done a test here. Then I had to redo it a second time and then I knew better about how the whole thing was set up. My first title was translator and then I became foreign international relations specialist and later on public information specialist. Does that answer the question?

DUNAR: On the language issue. You have a group of people that are working with one another, I assume they were speaking in German on the job over here or was the Rocket team integrated enough with Americans that they spoke English on the job?

VON SAURMA: I think they would really speak English on the job.

DUNAR: I just wonder how they made that transition into speaking English both in written and in spoken.

VON SAURMA: I think you have to ask someone who came over here in 1945 or 46, because we came to Huntsville in 1954 and by that time you already had leading German engineers already were lab directors, etc. They had their secretaries and they could even out the few things if necessary. Of course if they talked with one of their German colleagues there was German spoken because it was easier on them. I found these strange, if I met someone first in a German circle and was introduced to him in the German language, he would always fall back into the German language very easily. But if you met him in an American environment, then

immediately he would talk English. I am sure you may have heard that in Germany we still have the formal address. There are still some members in our group that address themselves as Mr. or Mrs. Although they have know each other since 1941 or 43, which makes it 45 years! Its funny I think, the way you start out determines whether you stay it. Its also a matter of adapting and adjusting in some respects.

DUNAR: Another thing about the adjustment to Huntsville. We were talking about cultural aspect. I wonder also in terms of Alabama in the fifties had tremendous problems in the civil rights area, there were restrictions on minorities. Was there ever a feeling among the German group that you were being treated as separated and isolated from society? It is kind of a strange parallel, but it is kind of the same situation?

VON SAURMA: I think maybe some members of the group felt that way. While I never had that feeling at all. My husband and in fact, I must say, of course in the very first year there were so many new things that our social contact was a little bit more among the German group. But my husband worked very closely already in the beginning with some of the officers involved in the training of the deployment. So he had some good contacts with American officers and I had some very good contacts with neighbors who became very good friends. I never felt isolated in what I think...most of the people in Huntsville knew that this was not a group that had just come from nowhere, but that the

majority of them were people with a very good professional background. I have never felt any estrangement between the Huntsville natives and my husband and myself. In fact, I have made very many dear American friends and made many contacts that I enjoy greatly.

It was not easy for me to adjust. What we did as much as circumstances permitted, I think I had cabin fever every three months and then we would just have to go some places. I know that the very first years, at least once a year, we went to New York. Or we had been invited to some other places and we enjoyed that greatly. There is a big difference between living in a big city and living in a small city. Especially growing up in Berlin. You live in an environment of over stimulation. You have to learn just to put things aside because it is just too much and focus on a few things. While I had to learn when you live in a small place you have to do something on your own. You have to join maybe with some others who are interested in the same field. But, you know Huntsville has grown so tremendously. There is so much possibility now for cultural enrichment, professional development, social lives and activities. It is a difference between night and day. Although I must say there was a very well established group here in Huntsville that lead a very comfortable, if not to say affluent, life. They had all the opportunities and took advantage of them. Some of my friends had gone to Europe every year. Or they always went to New York to go shopping or to the theater. So Huntsville was not just a "hick" town. As you can see from the Twickenham District and the

antebellum homes, there were a good number of educated and prominent families who lived in Huntsville comfortable. It took some years to get to know some of them. I think there is always a certain "clannishness" in the very beginning and you have to learn to get to know people under varying circumstances.

DUNAR: What are the greatest changes that have taken place in this community since you have arrived?

VON SAURMA: There have been so many changes, that it is rather difficult to point out things. I think there is a world of openness in Huntsville. There is a great international community here. You have a very good program of cultural enrichment here. You have an excellent group of Doctors here. You don't need to go to Nashville, as we did in earlier years, or to Birmingham for medical treatment. You have a very excellent group of professional people here. It is a bustling place. I am delighted to see that it is no longer strictly based on cotton and Army and NASA missile programs. The diversification is tremendous. I think people have grown with it. I think the educational system, I mean we complain a lot about it, still leaves a lot to be desired. But in comparison, Huntsville outranks a lot of other places especially here in Alabama. Communication has made a big difference. And transportation. [changed sides of tape 733] very interesting with the space program and with a very close working relationship and also a personal relationship with von Braun. In the beginning, my

feeling was, if the von Braun's can take it, you can take it too. They were both some sort of an example because they had both come from prominent families in German and were of course also refugees from the eastern part of Germany. So there were many things that we somehow had in common.

DUNAR: You had made some comments before we began taping about von Braun and his broader vision, broader than just being a technician or a scientist. Could you repeat what you said in terms of what his humanitarian view and perhaps his willingness to deal with that issue of religion for example.

VON SAURMA: What really was fascinating with von Braun was that he was not a myopic person. He was really one of the few persons that had a wide range of interests. It was not just of being excellent and having a brilliant mind that could solve problems that were related to engineering aspects. Great interest in scientific exploration, be it in the underwater or in the sky, or above the atmosphere. He had a great interest in philosophy. He had great interest in music. I personally collected a good deal of his articles in publications that dealt with science and religion. I think there was a certain need to clarify your position because as a scientist you were often considered to be an atheist, because you dealt with scientific formulas and mathematical calculations and everything had to be reasoned out. Then comes this great step where you ask, "How does God fit into this picture? Are we just people of reason or is there more to

humanity?" I was very glad that he was frank in speaking out as he put it, "Science and religions are sisters. We just pursue different aspects of our being." I found it fascinating to see that aspect and also his grasp of the political situation here in the United States. I mean he learned very fast who pulls the strings. He learned that you have to have good connections with the local community. You have to know your state senators. You have to know your Congressmen and Senators in Washington. He learned very fast how the system works. It was just any conversation with him, no matter on which subject it touched, it was of great interest. Of course I never had an engineer background. I just had married an engineer and grew up listening to a lot of engineering discussions. But what fascinated me more was some of the political aspects and philosophical aspects of the whole program and some of the human aspects. The human interaction between the team members. How von Braun was looked upon by the members in his group or by other Center Directors. So it all had a wide range of possibilities and ideas.

DUNAR: You mentioned something about the interaction between the people that were subordinates. How did he encourage creativity among these people. Here you are seeking a scientific mission, and yet there is that other aspect to it to, scientific creativity. How did he encourage an environment where you had a task to perform?

VON SAURMA: I think he himself thought of things very clearly. Dividing the task into several minor tasks and then leaving it to the individuals that he thought were best suited to solve the subtask. That encouraged this confidence that he placed in his co-workers, made them grow beyond the natural growth factor, I would say. Also the fact that you have a terrific task is something that is very stimulating. It releases more energies than you would normally have when you know you have to focus on something. Like you know when you have to pass your bar exam or something. You just put all your energies to it. For people it was just like passing another exam. Getting whatever technical department they had and whatever they had taken to task, this has to be solved. Of course he had a terrific group of specialists in their particular fields. They had been selected because of their knowledge of various areas. They really in the beginning, some of the Germans who had come over here, were ahead of their American counterparts because of their very intricate knowledge and because also of some their mistakes that they had made before and didn't want to make again. In the beginning they really were in certain ways the leaders in their particular fields. Of course after a while this changed because Americans gained knowledge in the same areas. If you look at the directory chart of the Marshall Spaceflight Center and the ABMA, you see that in the very beginning most of the lab directors were German origin, while later on things shifted, because in the meantime Americans had developed the same expertise of those particular fields.

DUNAR: There was a period right after the end of Apollo when there was a crunch and reduction of personnel with the RIFS and all. We have gotten some inclination that there was almost a purge of some of the people in the higher positions. Maybe to bring in younger people, maybe to bring in Americans instead of some of the Germans...

VON SAURMA: I think some who were caught in this purge may think it was because they were Germans. I don't quite buy that idea. I think after a while, don't forget those people had grown much older, and there comes a time even if you have been the director of a lab that you have outgrown a little bit, your usefulness. There are other people in the ranks whose knowledge is just as good and who might even be more adaptable to work on some new projects or work better with some of the under counterparts. I don't know if you have heard of the German "hard heads", (some who are very strong characters) some who have real difficulties working with some American or with a group of Americans. While they were undisputed leaders at one time, but that doesn't mean that you remain undisputed leader. There are others who grow up next to you and might fill the position better than you did. I think it was more the idea, if you want to keep a viable team together, it is better to let the older people go and not keep them in positions and discourage the younger people. I think it was more this trying to keep a certain growth potential that put some of the older people out. I think in some cases they were even offered other positions. But these other positions did not

have the same social standing or professional standing and they considered it beyond their dignity to take a step down. There may have been a lot of reasons, and I am sure if you talk to them, you will get many different opinions. I personally had the feeling that it was really directed against the individual because he was of German descent. Otherwise, why Frederick Spear become the associate Director of Science afterwards, if there really had been an animosity against the German background people. George von Tiensenhausen also stayed on the job. I have never thought that idea, but of course people feel very differently and you always have to appease your own self-esteem a little bit. Sometimes its hard to acknowledge that you are getting older and that your alertness or your astuteness or your way of assimilating new information is no longer as great as it used to be.

DUNAR: I wonder to if that is related to one of the comments that a few of the people that we have talked to is that the training of the German engineers was different than that of the American engineers in that most of the German engineers had some hands on experience. Another thing too that we have seen is the decline of the Arsenal concept as you get on and start bringing in more contractors. Of course the German team was very much tied to that arsenal concept with the hands-on knowing every aspect of the approach. Was that related you think to the changes in personnel at the end? Maybe NASA was moving more

toward a contractor-type relationship rather than the Arsenal concept?

VON SAURMA: I am sure that had something to do with it to. Of course it hurt the ones that felt strongly that it was much better to keep the arsenal concept, do the work yourself. But you see, what they also never realized and there I think the administrator of NASA, Webb, was a master player. He realized that unless you spread the pie you will never get a good consensus on this project. I mean, we would not have needed a manned spacecraft center in Houston, TX. It was completely unnecessary. But he spread out the money into all the areas where he wanted to buy support. Of course this was something that very alien to the to the idea of our engineers who wanted to produce things in the very best, economic and proficient way. They did not think in political terms at all. Von Braun learned to understand that way well and learned to play on that piano well himself afterwards. There are so many aspects of the project as such that if you are in a driving project like Apollo was and I have to give them the credit for that. They concentrated on their special task. For for some of them, there really wasn't enough time to acquaint themselves with community projects, national scene, political intricacies and things like that. If you don't grow up with it, then it is very alien to you. In some cases, this part of life in the U.S. may still evade some of them today.

DUNAR: That's true. If you did grow up here and if you are in engineering and very task oriented, it is a very unusual individual that is political as well.

VON SAURMA: Exactly, you have that everywhere. But what is very true of course about what you mentioned. The education of an engineer in Germany had a far broader basis than here. Not only with the hands-on experience, because they all had to be in some workshop or some factory, etc. Also they had the broader range of things that fall into the field of humanities. In order to be admitted into the university, they had to have a broader base of knowledge than is required here by high school graduation. In some cases, may have made them look down on some of the American engineers that did not have that knowledge. Although, it is unfair to do that because if a person did not work under the same circumstances, he can not blame him for it!

DUNAR: There's another apparent contradiction, I think, in that same period. There is no question that von Braun had all these visions for where the program might go. Yet, there are a lot of people that criticize NASA at large and Marshall as well, for not having really planned beyond Apollo, that suddenly when this ended (certainly there other things that entered in as well, such as budget problems and so forth), but that there was really no vision that NASA had after Apollo.

VON SAURMA: They all had the vision, but they could not sell the vision. That was the problem. Blaming NASA headquarters for it is really very short-sighted. In my book, they were all these great plans. We had mapped out things for the lunar colony. I remember my husband talked to a group of architects in 1958 about a lunar settlement. It just did not work out at that particular time, that you could find enough support on the political scene. I think if you look at it objectively, I think the space program has enriched science and technology to a tremendous amount. It has created so many new things that we profit from in the fields of communication, materials research, etc. On the other hand if you look at the knowledge that we have gained specifically from the moon, that is rather limited. It remains to be seen when really a great national project can find enough supporters and when the time has come. I think it was terrific to see the celebration of the lunar landing. It certainly will remain one of the major breakthroughs of the century, but I personally feel that time is not right for another project of similar dimensions that will go far beyond what the lunar landing was. [And] I think that I would be all for some extended unmanned scientific probes. I hope the space station will be viable. I wish it had not been laid out as grandiose as it is. I wish the shuttle wouldn't be as big as it is, because then it would not take up that much money and we would have more chances for scientific exploration.

DUNAR: Was there some regret at the time when von Braun made the concession to go with the lunar orbit rendezvous rather than with the earth orbit. There are some that say if we had stayed with the earth orbit there would have been some natural spin-offs of that and we would have had some kind of a space station in place already. Were there regrets that they had taken that route?

VON SAURMA: I think a few regrets. It would have established our basis in earth orbit a little bit better. I really think in order to get the project going within the time frame available, the way it was done was finally may have been the best solution. I am unable to judge it, but I assume they figured it out and decided that was the best way to go. The trouble was, I wish at the time it would have been enough to establish the manned space station in earth orbit, and not shooting as far as going to the moon, because then you would still have a nice progression ahead of you. But it was such a spectacular first that times would have to change before we can expect another first to be funded and supported and be accomplished.