

The Birth of NASA

The Work of the Space Task Group, America's First True Space Pioneers

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The Work of the Space Task Group,
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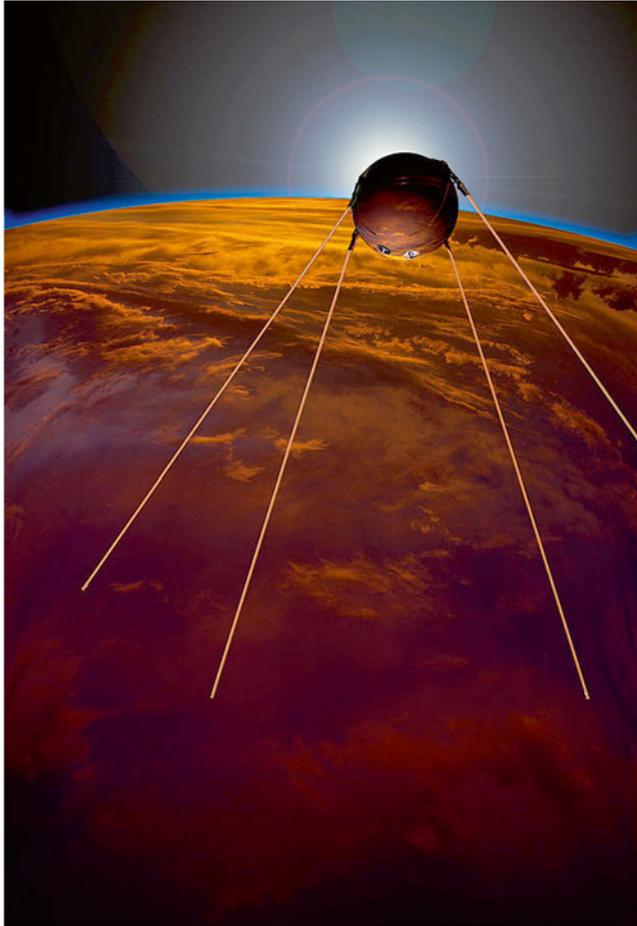
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Dawn of the Space Age

Created by Gregory R. Todd to mark the 50th anniversary of the launch of Sputnik.

This is the little ball that started it all!
(Photo courtesy of Wikimedia Commons)

When I first started this book, I wanted to dedicate it to the approximately 750 people who were at the Space Task Group (STG) at the Langley Research Center between 1958 and 1961, many of whom then stayed into 1962. I also wanted to include the small group at the NACA/ NASA Headquarters who met at the Dolley Madison House to kindle the sparks of a new spaceflight organization and program. These were the people that I thought of as America's first true space pioneers. But then I realized that hundreds of Langley Research Center scientists, engineers, technicians, tradesmen, secretaries, clerks, and others had also been working hard to support the STG without formally being part of the STG organization. I also realized that many of the men and women's families were also heavily involved. Everyone supporting Project Mercury worked very long hours and took the work home to the dinner table and often burned the "midnight oil."

Then I also realized that the entire Hampton, Virginia community and surrounding towns and villages were involved as well. They provided the food, the cars, the gasoline, the schools, the shops, and the entire infrastructure to support those working at Langley Field to establish a new space program. Then there were hundreds of contractors across the Nation supporting the project and, later, thousands of civilian and military people providing launch

and recovery support. Also, there were people all around the world at tracking stations and in other support roles. How can I dedicate the book to only 750 people?

The initial effort took its toll on men, women, and children. Years later, the Project Mercury Director Robert Gilruth pined about the good old days at Langley, saying that he couldn't do it again; it was a young man's job. And many of us were young and "wet behind the ears." Many of us were just or recently out of college. In our "20-something" eyes, our managers were what we thought of as "older" men; why, we thought, they must be in their late thirties or forties! At the time, I couldn't imagine how smart, indeed brilliant if not geniuses, these men and women were. It's only now that I have the experience of old age that I realize what a unique gathering of eagles came to alight in a nest called Hampton, Virginia.

If you were part of Project Mercury in any capacity, in any location, doing any support work, then this book is dedicated to you. You are a space pioneer because you were there at the very beginning! You made it happen! That was over half a century ago. Many, probably most, are now gone. Only we "20-somethings" and a handful of the "older men" are left. So this book is also dedicated to our prodigy and the next several generations of space enthusiasts and workers. You could be the ones to be "planetary pioneers." But we "Mercurians" were the original space pioneers! Forge ahead; it's your turn!

Acknowledgments

One cannot write a history of such a unique organization as the NASA Space Task Group (STG) without a lot of help. Fortunately, some of the members of this group participated in the Oral History program at the Johnson Space Center (JSC), formerly the Manned Spacecraft Center (MSC) where most of them moved to after the STG was merged into the MSC. Unfortunately, many of the members didn't participate in this effort and their histories are lost except for the memories of others and perhaps archive files at universities or NASA History and Personnel offices.

My thanks to Rebecca Wright of the JSC History Office for her work on the history project and help in answering questions about former STG people. Thanks also to Jennifer Ross-Nazzal for her research assistance.

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Mary E. Gainer from the Langley Research Center was most helpful and even started another page on their website to include the STG. It now includes cross links to the JSC histories as well as photographs of some original members. She also helped me with building locations, telephone books, and the confirmation of members. The Langley Alumni Association is aware of this effort to recognize those at Langley who contributed to the success of Project Mercury.

Thanks to Bill Barry and Connie Moore of the NASA Headquarters History Office for their contribution of an early phone book that helped me to identify who was at the Dolley Madison House and at nearby offices.

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the book. Arnie could not have had a more distinguished career in spaceflight. He rose to the highest levels in NASA and later in the aerospace industry. I'm grateful for his knowledge and insight.

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While I obtained a lot of information from various NASA websites, they say very little about the STG people from nearly 60 years ago except for the key managers and the astronauts. I made good use of the internet search engines like Wikipedia, Bing and Google. The many books that I used for reference are included at the back of this volume.

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Preface

This book should have been written about half a century earlier! For such a great period in space history, more can be said about the personal contributions and stories of the early space pioneers who scrambled after the surprise of Sputnik to start the American space program. While I knew many of the people in the Space Task Group (STG) at the Langley Research Center in Hampton, Virginia, there are hundreds I didn't know. Even then, as a young man, I had little knowledge of their backgrounds and experiences. I was what they now call a "newbie." In those more formal days of the 1950s and early 1960s, we might be addressed as "young man." There were many of us in our twenties. Our managers were, for the most part, in their late twenties to middle thirties.

I've learned more about the STG people in writing this book than I ever knew at the time. It is difficult even now to find some of their names, let alone their contributions. The NASA History Offices at the Johnson Space Center (then the Manned Spacecraft Center) and the Glenn Space Center (then the Lewis Research Center) have, over the years, obtained oral histories from many of the Project Mercury people. The Langley History Office recently added a Space Task Group webpage with links to the Johnson oral histories. I have read most of them. Unfortunately many people didn't participate in the Oral History Project, with the result that their contributions are essentially lost. Some of the histories aren't available online but are VHS tapes held in storage somewhere. It is sad that the contributions of some very key people are not recorded anywhere that I could find.

In many cases, when I read the oral histories the individual says very little about their early STG career, focusing more on their later contributions to major programs like Apollo and the Space Shuttle. While I find these oral histories very interesting, the average reader today might view them as rather rambling and sometimes incoherent memories. To get an overall sense of what was going on, you would have to read a lot of them. I wanted to capture what these early Mercury space pioneers accomplished.

During 2015, in researching this book, I talked with many STG people who are now in their twilight years – as indeed am I. It seems easy for them to recall special events such as the spaceflights, but not the day-to-day particulars of their work over half a century ago.

They remember only some of their co-workers. Some of them have kept in touch, but most drifted apart over the years. To my great delight, I heard from one man who is now 93 years old and is able to recall events in great detail.

The STG only existed for three years. Almost immediately after NASA was itself formed on October 1, 1958 the STG was formally organized on November 3, 1958. Only three years later on November 1, 1961, the STG staff was formally declared part of the new Manned Spacecraft Center which didn't even physically exist. Everyone's badges changed, but it had little effect on those preparing for John Glenn's flight. Over the next eight months, people relocated to the as-yet-unbuilt Manned Spacecraft Center in Houston, Texas. They were temporarily housed in a variety of rented office buildings in Houston. We all wondered why we were leaving beautiful Virginia for what we considered the "Wild West." After John Glenn's flight, I took a trip to the proposed site and found cows in a big pasture. A now-famous photo of those cows is included later just to show you how things were in those days. It was hard to believe that out of 20 cities evaluated to host the Manned Spacecraft Center, Houston was chosen, especially considering its distance from the launch site and control center at Cape Canaveral in Florida. I have included a discussion of that decision.

When NASA was first established there was great organizational upheaval, with some people transferring to NASA Headquarters, some from one Center or Laboratory to another, and some to various aerospace contractors. A new agency was being pieced together to lead the Nation's new civilian space program. This involved bringing together people from many locations and organizations to tackle an unprecedented technical challenge. To express it in the context of the title of this book, it was a rather sudden and difficult birth!

I have made an attempt to write the story about the birth of NASA and the STG in three parts. The first part, "Setting the Stage," discusses the beginning of America's space program ranging from Sputnik to the creation of NASA out of many existing organizations. Then "Creating the Space Team" begins with the creation of the STG organization, explaining where people came from and where they ended up in the organization. This part ends with the decision to disband the STG and establish the Manned Spacecraft Center, but it lists some of the key decisions and lessons learned in management, engineering, operations, science, and spaceflight medicine. The third part, "Achievements," lists the major accomplishments of the STG and the Project Mercury team. This includes the facilities that were specifically created as well as the unique and creative mission designs, operational concepts, and methodologies. The story is wrapped up with some philosophical thoughts on the impact of this experience on future spaceflights, management of complex systems, political will, and national pride. I also predict the date of the first landing of humans on Mars.

These three parts are supplemented with many appendices that give more detail, including a significant number of biographical profiles that describe where these space pioneers came from and the work that they did, both in the STG and subsequently.

I describe the Mercury missions from operational, science, and medical perspectives. The astronauts were part of the STG and many of us worked with them as part of their daily work routines. Most of their time was spent on training and a variety of engineering and operational assignments. Only two astronauts flew during the three years of the

STG. In fact, more animals than astronauts flew during this period. The lives and contributions of the astronauts of Project Mercury have been well covered by many historians. Excellent books are referenced at the end of this volume.

In summary, the intent for this book is to capture as much as possible, the roles of America's first true space pioneers. Most are now in their twilight years. Many of those that feature in the history books are long gone, having taken the ultimate spaceflight. So the intent of this book is to chronicle as much as possible the Space Task Group's contributions to history; if not for the participants themselves then for their children and grandchildren.

Lago Vista, TX, USA
Winter of 2015

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