

# Contents

<b>Frontispiece.....</b>	<b>viii</b>
<b>Dedication .....</b>	<b>ix</b>
<b>Acknowledgments .....</b>	<b>xi</b>
<b>Preface.....</b>	<b>xiii</b>
<b>Part I   Setting the Stage</b>	
<b>1    Introduction .....</b>	<b>2</b>
<b>2    The Sputnik Reaction .....</b>	<b>5</b>
<b>3    The President.....</b>	<b>7</b>
3.1    A Secret Conference with the President.....	7
3.2    The Press Conference Opening Remarks.....	10
3.3    The President’s Remarks .....	11
3.4    Dr. Killian’s Secret Memorandum.....	16
<b>4    The National Security Council.....</b>	<b>21</b>
<b>5    The Congress .....</b>	<b>24</b>
<b>6    The Department of Defense and Other Agencies .....</b>	<b>26</b>
6.1    Advanced Research Projects Agency.....	27
6.2    Army Ballistic Missile Agency .....	28
6.3    U.S. Air Force .....	29
6.4    U.S. Navy .....	30
6.5    Department of State.....	31
<b>Part II   Creating the Space Team</b>	
<b>7    Creation of the Space Task Group.....</b>	<b>35</b>
7.1    NACA – From Aeronautics to Astronautics.....	35
7.2    The Core Team .....	36

7.3	The Lewis Contribution.....	40
7.4	The Goddard Contribution .....	43
7.5	The Ames Contribution .....	46
7.6	Wallops Island Contribution.....	47
7.7	The High Speed Flight Station's Contribution .....	50
7.8	White Sands Missile Range Contribution .....	52
7.9	The Arnold Engineering Contribution .....	53
7.10	Marshall Space Flight Center .....	53
<b>8</b>	<b>The AVRO Canadians.....</b>	<b>54</b>
8.1	History .....	54
8.2	The STG Captures the Talent .....	55
8.3	The AVRO Contribution to the STG .....	57
<b>9</b>	<b>The STG Organization .....</b>	<b>59</b>
9.1	The Directive .....	59
9.2	Staff Offices.....	59
9.3	Flight Systems Division .....	65
9.4	Operations Division.....	69
9.5	Engineering and Contracts Division.....	76
<b>10</b>	<b>Representatives and Contractors .....</b>	<b>79</b>
10.1	Military .....	79
10.2	STG Contractors.....	80
10.3	Mercury Control Center Contractors.....	80
<b>11</b>	<b>The Need for More People.....</b>	<b>83</b>
11.1	Langley Support to Project Mercury .....	83
11.2	STG Hiring.....	85
<b>12</b>	<b>The End of the Space Task Group.....</b>	<b>89</b>
12.1	The Decision.....	89
12.2	The Move.....	92
<b>13</b>	<b>Some Key Project Mercury Decisions and Lessons Learned.....</b>	<b>95</b>
13.1	Management .....	95
13.2	Engineering .....	101
13.3	Operations .....	120
13.4	Scientific.....	133
13.5	Medical.....	137
<b>Part III Achievements</b>		
<b>14</b>	<b>Facilities Created for Project Mercury .....</b>	<b>143</b>
14.1	Mercury Control Center .....	143
14.2	Bermuda Control Center .....	151
14.3	Mercury/Manned Space Flight Network.....	153
14.4	Mercury Procedures Trainers .....	155

<b>15 Mission Designs and Concepts.....</b>	<b>158</b>
15.1 Mission Rules.....	158
15.2 Operational Procedures .....	160
15.3 Simulations.....	161
15.4 Spacecraft Designs .....	164
15.5 Launch Vehicle Designs .....	165
15.6 Mercury Full Pressure Suit.....	165
15.7 Mission Analysis and Trajectory Planning.....	166
<b>16 The Impact of NASA and the STG on History.....</b>	<b>169</b>
16.1 Organizational Excellence.....	169
16.2 Mercury Mission Accomplished .....	171
16.3 Future Programs .....	171
16.4 Technology Transfer.....	175
16.5 National Pride.....	176
16.6 Generational Impact .....	177
<b>Appendix 1: STG Organization Lists, Charts and Manning.....</b>	<b>179</b>
<b>Appendix 2: Biographies .....</b>	<b>197</b>
<b>Appendix 3: STG Technology .....</b>	<b>295</b>
<b>Appendix 4: Some Photos.....</b>	<b>301</b>
<b>Appendix 5: Quotes.....</b>	<b>309</b>
<b>Appendix 6: Stories and Trivia .....</b>	<b>319</b>
<b>Appendix 7: Author’s STG Experience .....</b>	<b>329</b>
<b>References .....</b>	<b>335</b>
<b>Credits .....</b>	<b>337</b>
<b>Glossary .....</b>	<b>340</b>
<b>About the Author .....</b>	<b>344</b>
<b>The Front Cover.....</b>	<b>347</b>
<b>Index.....</b>	<b>348</b>

The Birth of NASA

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

von Ehrenfried, M. (Ed.)

2016, XV, 358 p. 157 illus., 48 illus. in color., Softcover

ISBN: 978-3-319-28426-2