In addition to the NASA flights that perfected the technologies required for the Apollo lunar program, the Gemini spacecraft was considered for many other missions. Some of these involved minor upgrades, while others proposed highly modified variants of the basic Gemini capsule and adaptor. Most of these proposals never got past the study phase, but a few got to the mock-up stage or even the beginning of fabrication of flight hardware (e.g., Manned Orbiting Laboratory). This presentation takes a fresh look at the little-known Gemini applications, who sponsored them, and how they related to other contemporary space projects.

Michael J. Mackowski is a retired spacecraft engineer whose career spanned 45 years. He has worked on such programs as Landsat 8, the Fermi and Swift gamma ray observatories, the Iridium communications satellite constellation, several other NASA science satellites, the X-30 National Aerospace Plane, and the Space Shuttle. He started his career with McDonnell Douglas Astronautics Company in St. Louis, Missouri in 1977 and retired in 2018 as an employee of Northrop Grumman Innovation Systems (formerly Orbital ATK) in Gilbert, Arizona. Having started his career working for engineers who had only ten years earlier build Mercury and Gemini, it is no surprise that McDonnell’s Gemini two-man spacecraft is one of his favorite space vehicles. He is an Associate Fellow of AIAA, the current chair of the Phoenix Section, and is a member of the AIAA History Committee.

**The Lost Missions of Gemini**

Presented by Michael Mackowski, Retired Spacecraft Engineer

In addition to the NASA flights that perfected the technologies required for the Apollo lunar program, the Gemini spacecraft was considered for many other missions. Some of these involved minor upgrades, while others proposed highly modified variants of the basic Gemini capsule and adaptor. Most of these proposals never got past the study phase, but a few got to the mock-up stage or even the beginning of fabrication of flight hardware (e.g., Manned Orbiting Laboratory). This presentation takes a fresh look at the little-known Gemini applications, who sponsored them, and how they related to other contemporary space projects.

Michael J. Mackowski is a retired spacecraft engineer whose career spanned 45 years. He has worked on such programs as Landsat 8, the Fermi and Swift gamma ray observatories, the Iridium communications satellite constellation, several other NASA science satellites, the X-30 National Aerospace Plane, and the Space Shuttle. He started his career with McDonnell Douglas Astronautics Company in St. Louis, Missouri in 1977 and retired in 2018 as an employee of Northrop Grumman Innovation Systems (formerly Orbital ATK) in Gilbert, Arizona. Having started his career working for engineers who had only ten years earlier build Mercury and Gemini, it is no surprise that McDonnell’s Gemini two-man spacecraft is one of his favorite space vehicles. He is an Associate Fellow of AIAA, the current chair of the Phoenix Section, and is a member of the AIAA History Committee.

**Schedule**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00 – 7:00 CT</td>
<td>Presentation</td>
</tr>
<tr>
<td>7:00 – 7:30 CT</td>
<td>Additional questions or follow-on conversations</td>
</tr>
</tbody>
</table>

**Menu**

None – all virtual due to COVID-19

**Ticket Price**

Free

*Please RSVP by completing our Jotform*

[https://form.jotform.com/211245157155147](https://form.jotform.com/211245157155147)

Contact [John Schaefer](mailto:John.Schaefer@AIAA.org) for questions

---

**Tuesday, May 18, 2021**

**Virtual Zoom Meeting**

Meeting login information will be distributed via email