The V-2 - The Rocket That Started It All
Presented by John Halchak
Retired Senior Fellow in the Engineering department of Rocketdyne (now named Aerojet Rocketdyne), Canoga Park, California

The German A-4 rocket was renamed by the Nazi propaganda minister Joseph Goebbels, as “Vengeance weapon No. 2”, and became commonly known as the V-2. It was the world’s first true ballistic missile. It also was the first man-made vehicle to enter outer space. Over 3000 of these were launched at various targets in WWII, killing perhaps 9000 people. However, far more slave laborers died producing it, perhaps as many as 25,000.

Although rushed into production, the V-2 essentially was a research vehicle, full of design and production flaws. Materials shortages in Germany required its designers to utilize some creative substitutions in material selections. It was a leap in technology, achieved in a very short time, yet most of its design features still are common in today’s launch vehicles.

Although it was a technological achievement, the fact cannot be ignored that it was produced in support of one of history’s most evil regimes, and its mass production plant involved untold human suffering and the death of thousands. The engineers developing the V-2 had been attracted by the prospect of exploring space; they found too late that they had entered into a Faustian bargain from which they could not escape even if they had wanted to.

Afterwards, the V-2 was the genesis for both the American and Russian space and missile programs, and eventually every other country’s program.

While working at Rocketdyne, I would occasionally run across information about the V-2 and gradually developed an interest in the rocket after reading copies of General Dornberger’s book on the V-2 (published in the US in 1957), and Dieter Huzel’s book – “Peenemunde to Canaveral”. There followed the gathering of more information on the rocket from numerous sources.

I had an advantage over many other historians – access to the Rocketdyne library where there were formerly classified reports on the V-2; discussions with a co-worker who had analyzed parts of the V-2 engine; and bound volumes of published reports written in the 1950’s by former German rocket engineers. Also, the fact that I was a Boeing director automatically opened doors - giving me access to areas of aerospace museums that others would not have.

I also was able to communicate with former German rocket engineers (Dieter Huzel, Konrad Dannenberg, & Rudy Schlitz). I had opportunities to see, up close, V-2 rockets and components, and had a chance to actually analyze some of these components.

John Halchak is a retired Senior Fellow in the Engineering department of Rocketdyne (now named Aerojet Rocketdyne), located in Canoga Park, California. For 13 years, he was the director of the Rocketdyne materials engineering department. With over 51 years of experience in rocket engine materials and processes, he has worked on virtually every major program for that company, including such programs as the Atlas, Gemini, Saturn V- Apollo, Minuteman, Delta, Peacekeeper, Space Shuttle Main Engine, Waterjets, Aerospike, Space Station, NASP, RS-68, X-33, MB-60, and J-2X programs.

In the course of his work, he has been a witness to, and a participant in, many of the historical events in the space program. He has had opportunities to accumulate information from many of the pioneers in rocket development, including some of the original German Peenemunde engineers.
John has given presentations on the history of the V-2 missile at professional societies, conferences, and universities throughout the United States. He is a graduate of Penn State’s metallurgical engineering department, a registered professional engineer, a member of TMS, a Fellow of the ASM, a member of the Air Force Association, and a recipient of the Apollo Achievement Award, the NASA Astronauts’ Personal Achievement Award, the Penn State David Ford McFarland Distinguished Alumni Award, a NASA Group Achievement Award (1995), the San Fernando Valley Engineers’ Council 2006 Distinguished Engineering Achievement Award, and the Rotary National Stellar Award for Achievement in Space Flight.

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<tr>
<th>WHERE:</th>
<th>CSUN – University Student Union East Conference Center-Pasadena Room</th>
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<tbody>
<tr>
<td>TIME:</td>
<td>6:30pm – Social (snacks &amp; refreshments will be provided)</td>
</tr>
<tr>
<td></td>
<td>7:00pm – Presentation</td>
</tr>
<tr>
<td>WHEN:</td>
<td>Thursday, October 26th, 2017</td>
</tr>
<tr>
<td>COST:</td>
<td>FREE-Donations requested to cover food cost</td>
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<tr>
<td>QUESTIONS:</td>
<td>Ray Engelhardt&lt;br&gt;<a href="mailto:erp@socal.rr.com">erp@socal.rr.com</a>&lt;br&gt;661-644-1029</td>
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Specific Directions to the Pasadena room. Enclosed map required.

1) Enter campus from Zelzah on Prairie Street.
2) Purchase parking pass at Booth #3 (If closed the automated teller must be used.)
3) Turn right on Matador Drive (North) pass the athletic field.
4) Turn right in Lot G4. (An automated parking pass teller is in the far north west corner of the lot. It is past the pathway in the far corner, as far as possible in the top left corner of the lot as depicted on the map)
5) You must get to the opposite side of the Student Recreation Center SRC on map.
6) Walk south and around the SRC to the main pathway of the USU plaza. The location is in zone F4.
7) Now use the more detailed University Student Union map.
8) The East Conference Center is next to the Student Recreation Center.
9) The meeting room is on the 2nd floor.
10) If you become lost, call my cell phone 661-644-1029 and provide your grid position.