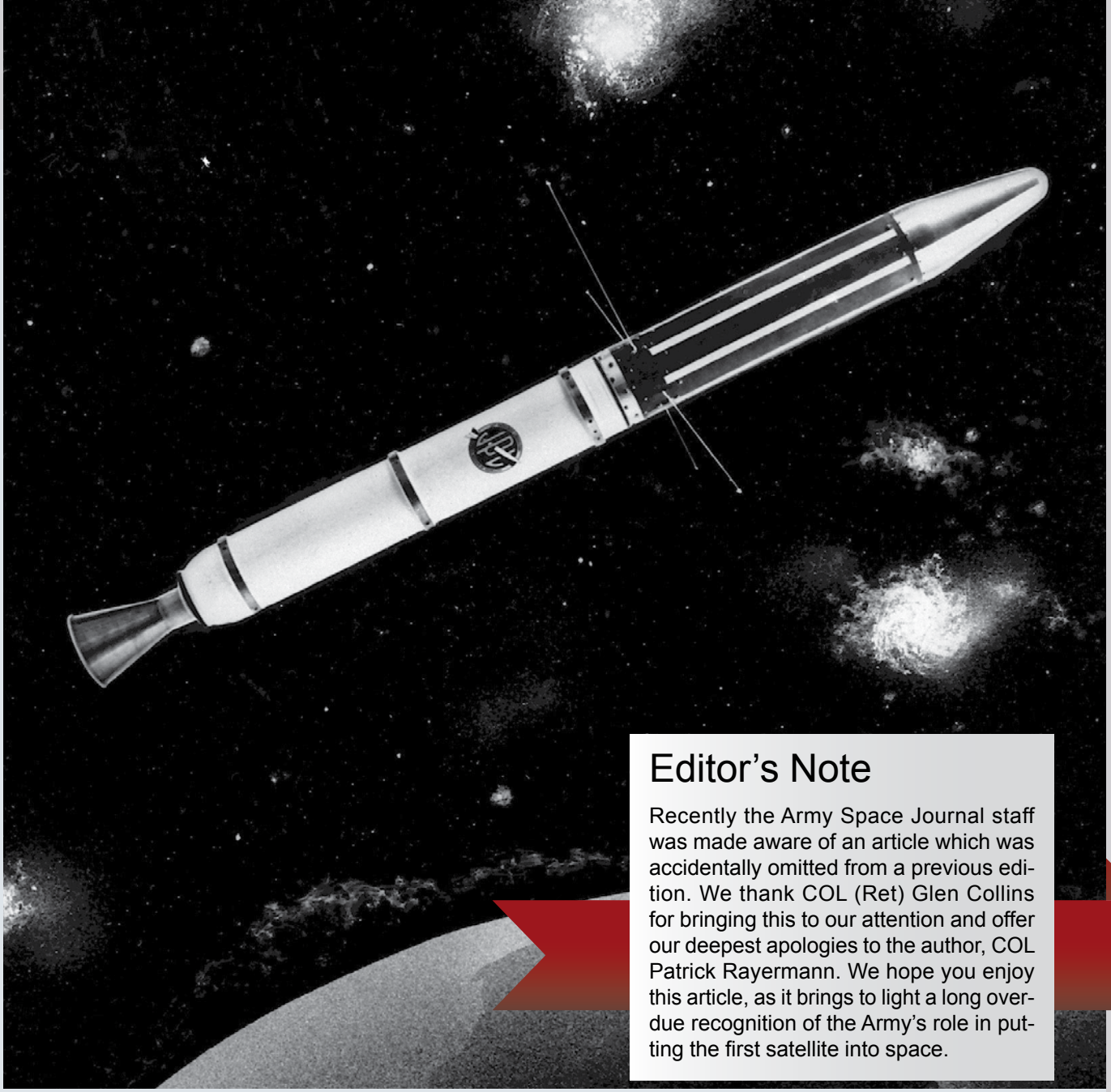

Editor's Note

Recently the Army Space Journal staff was made aware of an article which was accidentally omitted from a previous edition. We thank COL (Ret) Glen Collins for bringing this to our attention and offer our deepest apologies to the author, COL Patrick Rayermann. We hope you enjoy this article, as it brings to light a long overdue recognition of the Army's role in putting the first satellite into space.

COMMEMORATING THE ARMY'S ROLE IN EXPLORER I

By COL Patrick H. Rayermann

Photos courtesy COL Timothy Coffin

It was getting to be late in the evening of Friday, Jan. 31, 1958. The tension and anxiety among the relatively small coterie of "rocket scientists" at Cape Canaveral, Huntsville, Pasadena and Washington, D.C. who knew of the impending attempt was palpable; the tension, anxiety but also excitement had been growing for weeks. Having offered and been rebuffed on multiple occasions, the consolidated team of expert Soldiers, engineers and technicians from the Army Ballistic Missile Agency and Jet Propulsion Laboratory plus experimental scientists from the State University of Iowa were now at the shore of their professional Rubicon.

The Nation – led by President Dwight Eisenhower, a Soldier himself – had initially turned to the National Academy of Sciences for the building, launching and operation of its first orbital satellite, designated as Project Vanguard. Originally asked to prepare for a launch attempt late in 1958, the Vanguard team had accelerated its efforts in response to the Soviet launch of Sputnik 1 on Oct. 4, 1957, followed scarcely more than a month later by Sputnik 2 – carrying the first representative of Earth's life into orbit, the dog Laika.

The Project Vanguard team did their utmost, and proceeded with its first launch attempt on Friday, Dec. 6, 1957. But the launch vehicle encountered a problem precisely at liftoff; its rocket engine never achieved sufficient power to lift the vehicle and its payload off the pad: both came crashing back down upon themselves, the rocket immolating itself and the Vanguard satellite surviving its impact onto the concrete of the launch pad. Indeed, sensing the change in acceleration as it hit the concrete pad, the payload's electronics believed that they had entered orbit and began transmitting the signals intended only to be sent from a successful orbit.

Americans – already reeling from two Soviet orbital successes and the apparent "superiority" of Soviet technology and engineering, were stunned. Perhaps more anguishing and alarming was Pravda's [the "official" newspaper of the Soviet state] publication the next morning of a Soviet offer to provide technology assistance to the poor, beleaguered, and evidently technically-backward United States.

With the Nation's sole established program for launching its first satellite in tatters, the prestige of the United States teetering, and an American "quid pro quo" to the Soviet's orbital successes yet to be made, the Army – through MG John Medaris, the Director of the Army Ballistic Missile Agency, again offered to launch a satellite into Earth orbit for the United States. The Army's offer – and its confidence in its ability to deliver – was founded on the work, experience and plans of the German engineers under the leadership of Dr. Wernher von Braun whom the Army had brought to the United States at the end of World War II.

Von Braun's dream was to put people in space and have some successfully travel to the Moon and even Mars – an Earth orbital satellite was a clear first step toward doing so. His Army Ballistic Missile Agency team had pursued several rocket development programs for the Army since being brought to the U.S. The Redstone rocket was their most mature success and powerful missile in 1957: prospective evolutions of the Redstone – which became the Saturn rockets used by NASA in the 1960s and 1970s – were already on agency drafting boards in 1957.

Over the previous decade, von Braun had developed a partnership and friendship with Dr. William H. Pickering, a New Zealander who had immigrated to America, pursued his post-secondary education at the California Institute of Technology, conducted very successful, pioneering high altitude research for two decades and emerged as the Director of the Jet Propulsion Laboratory, which CalTech created to support Army interest in the application of rocket technology to military needs. Since its inception in 1944, the team at the Jet Propulsion Laboratory had developed what, in 1957, were still a relatively unique set of skills, capabilities and experience in high altitude sensing and the delivery – telemetering via radio waves – of the data collected to receiving stations on the ground. Von Braun and Pickering had discussed the possibility of using an Army Ballistic Missile Agency Redstone rocket to place a Jet Propulsion Laboratory vehicle into Earth orbit on several occasions – if the Army ever was given a green light to proceed, Dr. Pickering and the Jet Propulsion Laboratory were von Braun's pick to design, develop, build, deliver and operate the vehicle which would orbit the Earth.

After the Vanguard 1 debacle, President Eisenhower was ready – possibly, even eager – to accept an offer from the Army. But how quickly could the Army respond when it had no program in place to develop and build a satellite and necessary launcher? Von Braun was confident: he desired to commit to a 60-day deadline. GEN Medaris, who had been working with von Braun for years, had confidence in Dr. von Braun and his team – but he also felt caution and prudence were in order: he pronounced that the Army could launch a first satellite on behalf of the U.S. within 90 days.

Impressive at the time but, perhaps even more so today, toward the closing of a decade during which few space programs seem to meet cost and schedule goals, von Braun's team at the Army Ballistic Missile Agency and Pickering's team at the Jet Propulsion Laboratory were able to go from scratch to successfully launching America's first satellite – Explorer I in just 84 days.

When COL Timothy Coffin, then the Commander, 1st Space Brigade, attended a ceremony to commemorate the 50th anniversary of the launch of Explorer I, he noted that the role played by the Army and its two pioneering organizations, the Army Ballistic Missile Agency and the Jet Propulsion Laboratory, were not recognized either by the comments made during the ceremony nor by the commemorative plaque prepared by the American Institute for Aeronautics and Astronautics, an organization of which Dr. Pickering had been a pivotal founder.

Coffin brought this fact to the attention of the members and leaders of the Army Space Professionals Association, who quickly agreed with him that the unfortunate oversight of explicitly recognizing the role which the Army, its Soldiers

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and its Civilians had played in providing the United States with its first success in lofting a satellite into space was an opportunity which the Army Space Professionals Association – one of whose goals is to foster understanding and recognition of the distinct history and nature of the Army's contributions to the history of the United State's exploitation and exploration of space – was uniquely suited to address.

The idea that the Army Space Professional Association could commission the preparation of a bronze commemorative plaque to be placed at Launch Complex 26 as a complement to the American Institute for Aeronautics and Astronautics' plaque was rapidly approved and coordination to do so proceeded in the months following the Jan. 31, 2008, 50th Anniversary commemoration at Cape Canaveral Air Force Station. COL Pat Rayermann, a Jet Propulsion Laboratory employee from 1974 – 1981, urged that the contributions of the Jet Propulsion Laboratory and the State University of Iowa in building the upper stages, satellite and science payload, were as important to recognize as those of the Army Ballistic Missile Agency: the Explorer I entire team had come together under Army leadership. The balance of the Army Space Professionals Association team agreed.

COL Glen Collins, USA (Ret) and Heidi Brandow from ITT Corporation played significant roles in coordination of the effort and obtaining ITT's agreement to help defray the costs of designing and creating the actual plaque. Emily Perry, the Curator of the Air Force Space & Missile Museum at Cape Canaveral Air Force Station was exceptionally receptive when informed of the initiative to add an Army Space Professionals Association-sponsored plaque adjacent to the American Institute for Aeronautics and Astronautics-sponsored plaque near the entrance to the original Block House for Launch Complex 26. Perry worked closely with Brandow and the Army Space Professionals Association over several months to complete coordination of this initiative and establish a date for the installation and unveiling of the plaque.

The dedication and initiative of the Army Space Professionals Association's members resulted in a successful installation and unveiling ceremony on May 5, 2009. Present from Cape Canaveral Air Force Station at the small ceremony were Lt. Col. Pat Youngson, commander, Cape Canaveral Air Force Station and Emily Perry. Attending from the Army Space Professionals Association were President COL Pat Rayermann and Vice President COL Tim Coffin accompanied by his wife Cheryl, along with Board Member and the Army Space Professionals Association's first president, COL Glenn Collins, USA (Ret). Collins also served to represent ITT Corporation, along with Heidi Brandow and fellow ITT Corporation employees Pat Carr, Robert Griffith and Mark Walther.

Now in place at the front of the Launch Complex 26 block house, the Army Space Professionals Association's plaque joins the American Institute for Aeronautics and Astronautics' plaque in greeting and informing the roughly 25,000 people who visit the site each year about the complete story of achieving America's first success in orbiting an object around the earth.

COL Pat Rayermann, COL Tim Coffin and Lt. Col. Pat Youngson unveil the Army Space Professionals Association plaque.

Left: COL Glen Collins, USA (Ret), Pat Carr, Heidi Brandow and Robert Griffith pose with the Army Space Professionals Association plaque immediately after its unveiling. Right: Close-up photo of the Army Space Professionals Association plaque commemorating the Army's contributions to the success of Explorer I.