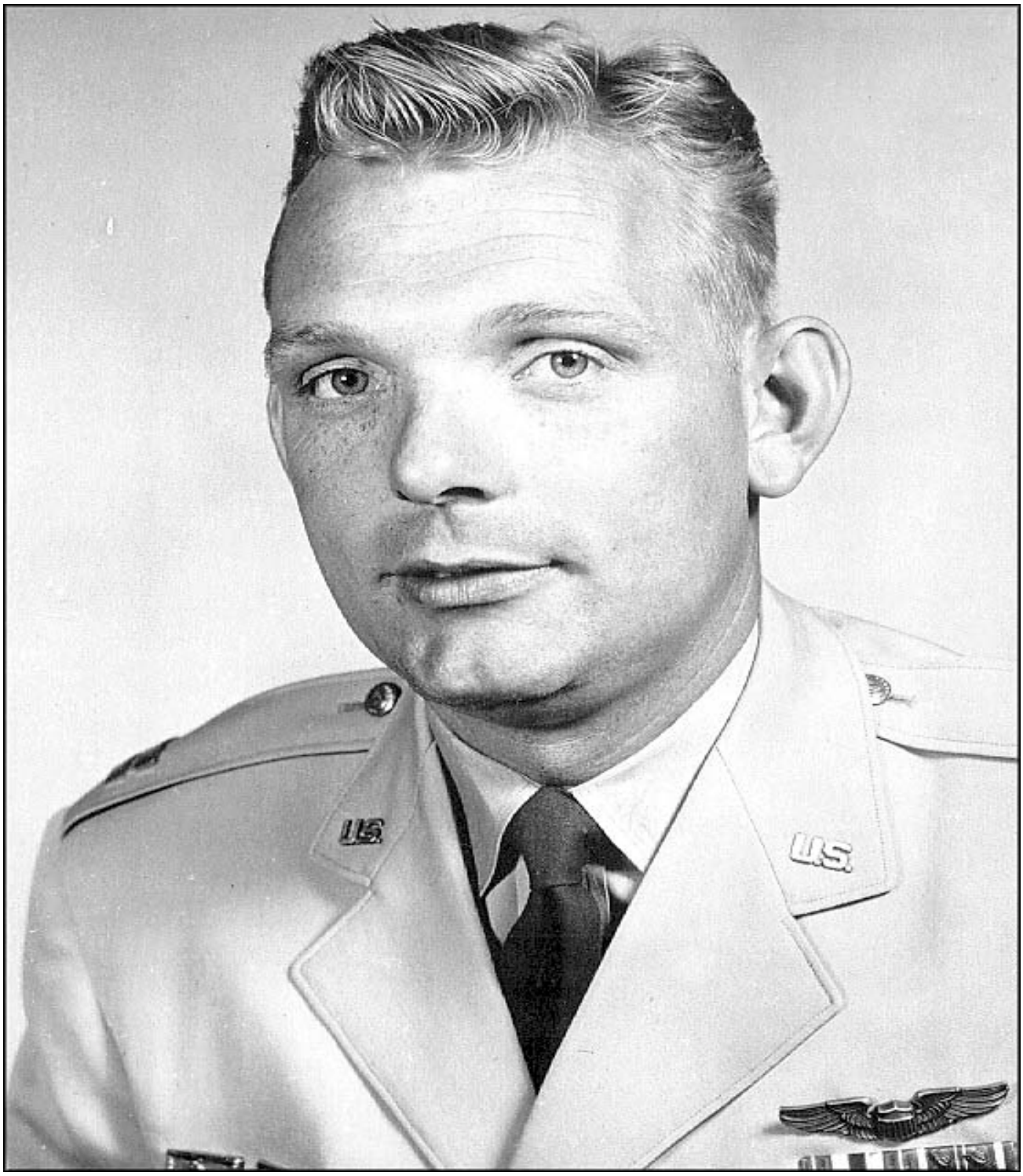
Sigma Phi Epsilon Fraternity
Indiana Alpha Chapter
Purdue University

Class of 1948 & 1949
Plaque Dedication Ceremony
Iven "Carl" Kincheloe, Jr.

Saturday, September 13, 2003



Iven “Carl” Kincheloe, Jr.
1928 - 1958

Dedication Ceremony

Welcome.....David Strother, Alumni Corporation Board President

In Honor.....Jim Guidos, Senior, Aviation Technology Student

Kincheloe in the Classroom.....Larry Cargnino, retired professor

Brother Kincheloe.....Classmate from ‘48-’49

Kincheloe’s Aviation Heriocs...John Norberg, University Relations

Presentation of Plaque to Indiana Alpha....Classmates from ‘48-’49

Presentation to Mrs. Dorothy Kincheloe.....Class of ‘48-’49

Special Presentation.....David Strother

Response.....Mrs. Dorothy Kincheloe

Tour of Grissom Hall.....Mr. Tim Bobillo,
Development Officer, School of AA

ΣΦΕ

In Honor…

(A brief history of Iven Kincheloe dedicated by James Guidos, a Senior in AA Engr. from Potown, In and a member of Sigma Phi Epsilon Fraternity at Purdue University.)

Iven "Carl" Kincheloe, Jr., was born on July 2, 1928, in Detroit, Michigan. When Kincheloe was three his father lost his job in the engineering department at Graham-Paige Motors, and the family moved to a farm in Cassopolis, Michigan. It was there that young Kincheloe grew up. From the very beginning he was interested in airplanes and first flew in one before he was five years old. You would often see other kids gather around him when he got ready to launch his latest model airplane into the air. Unlike most boys, however, he graduated from flying model airplanes to flying the research planes that paved man's way into space.

By the time he entered high school, Kincheloe had decided upon his life's work. Although his parents had hoped their only son would be a doctor or a lawyer, they realized how much he yearned to be an aeronautical engineer and never tried to dissuade him. When at the age of fourteen, young Kincheloe wanted to learn to fly, his father not only approved but took flying lessons himself. After two hours of instruction Kincheloe was ready to solo, but the law required him to wait until he was sixteen. For two years Kincheloe waited impatiently, and when he finally soloed on his sixteenth birthday, he was already as proficient at acrobatics as his instructors and had logged over two hundred hours.

A year later Kincheloe graduated from high school and enrolled in Purdue University because he felt it had the best school of aeronautical engineering. Purdue also had an ROTC program and Kincheloe entered it with enthusiasm. In the summer of 1948 the ROTC encampment was held at Wright-Patterson Air Force Base, and Kincheloe met Chuck Yeager, who, a few months earlier, had become the first man to exceed the speed of sound. Yeager liked the blond young ROTC cadet with the steady barrage of questions, and even allowed Kincheloe to sit in the cockpit of the Bell X-1 Rocket Plane. Kincheloe's mind was made up. When he received his engineering degree at Purdue he would join the Air Force and become a test pilot. He wrote to his parents, "I think I have found what I really want to do now."

Despite his busy academic schedule, Iven Kincheloe was very active in campus life and is probably best remembered by his classmates for his response to a prank perpetrated by rival students from Indiana University. During the 1948 football season Purdue's students awoke one morning to the air let out of the tires of their cars and the campus littered with pamphlets ribbing the Purdue football team. The hijinx could not go unanswered but the Indiana University Campus was now guarded against "visitors" from Purdue.

Kincheloe (front center) at Wright-Patterson AFB in July 1948 while a member of Air Force ROTC, Purdue University.

The student council approached Kincheloe, who had organized a flying club and was part owner of a surplus Fairchild PT-19. A short time later the PT appeared over the rival school. Swooping low over the campus several times, Kincheloe attracted the attention of a large group of students who had come out to watch. Then Kincheloe tossed a few packages out of the plane, and the students looked up helplessly as ten thousand leaflets came fluttering down on their campus.

Iven Kincheloe graduated from Purdue in June 1949 with a Bachelor of Science degree in aeronautical engineering and as a member of Sigma Phi Epsilon Fraternity. Through the ROTC program he was commissioned a Second Lieutenant in the Air Force Reserve and assigned as a student pilot to Perrin Air Force Base, Texas. He still had his heart set on test flying as a career, but in June 1950, while he was flying TF-80 jet trainers at Williams Air Force Base, war broke out in Korea and Kincheloe knew he could count on going into combat. He looked forward to it because he realized that the demands of combat flying would make him a better pilot. Test flying, for the time being, would have to wait.

Kincheloe graduated from Pilot School on August 4, 1950. His parents drove down to Arizona from the farm in Michigan to attend the celebration, and his mother proudly pinned the silver Air Force pilot wings on her son's uniform. From there, the rest is history...a history that marked many aviation firsts. A history that we are all so very proud of today.

As a aviation student, Brother Kincheloe laid the foundation for space flight. His heroics brought so much recognition to Purdue University and our aviation schools. On behalf of all aviation students before me and after me, we thank him for his dedication, commitment and achievements to the space and aviation programs.

Capt. Iven Kincheloe and X-2 is pictured here following a high speed research flight. Note heat-blistered paint on vertical tail.

Plaque Contributors

Iven C. Kincheloe, Jr.

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If Kincheloe wanted to get into combat immediately he was disappointed, The Air Force was not sending its brand-new pilots into the war without further training in combat equipment. Kincheloe was assigned to the 62nd Fighter Interceptor Squadron at Chicago's O'Hare Airport where he learned to fly the North American F-86 Sabre. Just when he felt that he had mastered the F-86 and was ready for combat, a request came from the Air and Research Development Command for a pilot to do a special test project on the F-86 at Edwards Air Force Base. Kincheloe got the Job.

The test were routine. All Kincheloe had to do was fly a new type of Sabre, the F-86E, checking out the armament and other new equipment: that had been installed. While at Edwards he was able to meet more test pilots—Bill Bridgeman, Pete Everest, Scott Crossfield, and his old friend Chuck Yeager. Out on the flight line he inspected the various research projects—the "X" aircraft—and talked to the mechanics and technicians. Kincheloe stored the knowledge away in his head for the future when he, too, would be a test pilot.

Soon, the F-86E project ended and Kincheloe reported back to Chicago. But his brief service as a junior test pilot was on his records, a mark which he hoped would be in his favor when he applied for a test pilot assignment after the Korean War.

In September 1951, Iven Kincheloe finally arrived in Korea as a replacement pilot in the 325th Fighter Interceptor Squadron, whose primary job was to fly escort for B-29's and RF-80 reconnaissance planes. The squadron also flew fighter sweeps and shot down as many aircraft as they could. The primary enemy fighter was the Russian MIG-15, similar to the F-86 in appearance but superior in performance.

Kincheloe flew ten missions before he got a fairly close look at an enemy plane, but the MIG did not hang around long enough for him to shoot at it. By November he had flown sixteen missions without even damaging a communist plane. Then he was transferred to the 25th Fighter Squadron at Suwon, which was equipped with the F-86E, the plane Kincheloe tested back at Edwards. From then on the action picked up. On January 25, 1952, Kincheloe's flight dived on three unsuspecting MIG's. Kincheloe sighted on one of the enemy planes and raked it from wing tip to wing tip. Pieces of the enemy's wing flew off and suddenly the MIG exploded. A week later he received a spot promotion to captain. On February 2, he got his second MIG. By the end of the month he had flown seventy one missions with only twenty-nine to go before he had to be sent home. Kincheloe wanted to go back as an ace.

On April 1, Kincheloe shot down two MIGs within a few minutes. He dived vertically on the first MIG, his bullets ripping into the fuselage near the cockpit. The communist pilot bailed out and Kincheloe swung around on a second MIG. He fired a long burst and part of the tail came off. The MIG spun into the ground with its pilot still inside. One more to go, and Kincheloe would be an ace.

A few days later Kincheloe's flight was escorting a group of F-84s just south of the Yalu River when someone spotted a dozen MIGs patrolling the river. Outnumbered, Kincheloe swooped close behind a MIG and let him have a long burst right up the tailpipe. The MIG dropped lower, but Kincheloe stayed with him, jockeying for another burst. Suddenly the MIG pilot lowered his dive brakes and slowed down, hoping Kincheloe would zoom past. But the alert F-86 pilot dropped his dive brakes, too, and stayed behind the MIG. Lower and lower the spiraled. For five minutes Kincheloe chased

the MIG over the tree tops and finally let the MIG have another long burst. The MIG rolled over on its back and crashed into the hills. Kincheloe had become an ace on his eighty-fourth mission. Iven Kincheloe flew his last mission in the middle of May. He had flown 101 sorties in F-86s, thirty in F-80s and had knocked down ten enemy aircraft and damaged eleven more. Now, on his way home, he looked forward eagerly to that long awaited test pilot assignment. To his disappointment he was ordered to Nellis Air Force Base, Nevada, as a gunnery instructor. Because his captaincy was a combat promotion he was also reduced to the rank of First Lieutenant. This, he must have thought, was a fine way to treat a double-ace just returned from Korea. Kincheloe immediately applied for a transfer to the test pilot school at Edwards Air Force Base and settled down to work, waiting impatiently for the transfer. But it did not come. He flew as often as he could, checking out in every type of plane available at Nellis, and going on long cross-country flights to build up flying time. Again he applied for a transfer. Again nothing happened. The fighting in Korea ended in the summer of 1953, and Kincheloe was again made a Captain. But he was still unhappy with his assignment and began to think about resigning from the Air Force. Two aircraft manufacturers had offered him Jobs in production testing and Kincheloe knew that he would have to make up his mind soon. The jobs would not wait forever and other pilots were anxious to get them. But still Kincheloe was reluctant to leave the Air Force.

One day Kincheloe talked about his dilemma to a friend in the Pentagon and learned about an opening at the Empire Test Pilot's School in England. The United States and Britain had an exchange program in which two American pilots went to the English school, while two British pilots attended school in the United States. Would Kincheloe be interested? The answer—was an enthusiastic "Roger". The Empire Test Pilot's School had the reputation of being one of the best in the world, equaling that of the USAF's own school at Edwards. Kincheloe's classmates were the best pilots from Australia, Canada, England, France, Italy, the Netherlands, Norway, and Thailand. In February 1954, the ten-month c course began. In the morning the pilots attended classes and in the afternoon they were given testing assignments in the various British jets, turboprops, and propeller-driven aircraft. They flew fighters and multi-engine bombers, light planes and helicopters. They even flew gliders. They flew everything. When the course was finished, Kincheloe was flying better than ever and could translate his in-flight observations into precise, clearly worded technical reports. And when he returned to duty in the United States he found himself assigned to the USAF Flight Test Center at Edwards Air Force Base. His dream had come true. Many types of testing were being done at Edwards but the most exciting was the advanced research work. Test pilots assigned to advanced research work flew the mysterious "X" planes designed not for combat but to investigate the phenomena of high speed flight at high altitudes. Its motto was AD IN EXPLORATA, Toward the Unknown.

As a newcomer on the job, Kincheloe could not fly the research aircraft right away. Instead the new test pilot flew "chase" for the more experienced men in the experimental planes. The chase pilot flew alongside the test aircraft and watched for any external trouble which the pilot could not see. Kincheloe flew as many chase flights as he could get and finally was assigned to his first test project—checking the gunnery defects in a new supersonic fighter, the F-100. He did the job so well that he was given better assignments flying the initial Air Force evaluation tests on such brand new fighters as the McDonnell F-101, Convair F-102, Lockheed F-104, and Republic F-105. These were the Phase II tests in which Air Force pilots put the new plane through its paces after a few demonstrations by the manufacturer. One day Kincheloe saw a fabulous new research plane- the Bell X2.

The rocket-powered plane was designed to investigate performance at speeds and altitudes never before reached by man, and to explore the aerodynamic heating problems encountered at these speeds and heights. To do this task the X-2 was built with aimless steel wings and tail, and a K-Monel metal fuselage. Its rocket engine burned a mixture of liquid oxygen and alcohol, and the craft had to be launched from a B-50 bomber in flight. The first X-2 had exploded over Lake Ontario, killing Bell's test pilot, Skip Ziegler. This was the second X-2 which now rested, quiet and docile, in the hanger. Iven Kincheloe knew he had to fly it. Pete Everest was the pilot on the X-2 project, and he chose Kincheloe to fly chase for him. On its first flight the X-2 was slightly damaged in landing, and the program was delayed. Kincheloe returned to more routine flying and was selected as project officer for the new F-1OOC which kept him busy well into the spring of 1956. But he still had his heart set on flying the X-2. In April the X-2 program went into high gear when Pete Everest flew the rocket plane to sixty thousand feet at one thousand two hundred miles per hour. Then Everest received word that he might be transferee and recommended Kincheloe and another test pilot, Mel Apt, as his alternates. Meanwhile, he would continue to fly the X-2 while breaking in the new men. On May 22 Everest flew the X-2 at 1,650 miles per hour and earned the title of "the fastest man alive." Kincheloe made his first checkout flight in the X-2 on May 25, 1956. He was five inches taller than Everest and in his pressure suit and parachute, he had no room to spare in the tiny cockpit. "I just won't rattle around as much," he quipped. The flight itself was not very spectacular. Its purpose was to give Kincheloe the feel of the airplane, not to make records. On July 23, 1956, Everest made his last flight in the X-2 and reached one thousand nine hundred miles per hour, almost three times the speed of sound. Then he left on another assignment, and at last the X-2 belonged to Iven Kincheloe.

His first goal was to reach an altitude of 100,000 feet or better, but first he had to feel out the plane's reactions at a slightly lower altitude. On August 3, 1956 Kincheloe climbed to 87,750 feet at a speed of one thousand seven hundred miles per hour with no control problems. Now the stage was set for Kincheloe's flight into the fringe of space.

At 9:17 a.m. on September 7, 1956, the X-2 dropped from the belly of the B-50 at 29,500 feet and Kincheloe started his journey to an altitude no man had ever explored. The X-2 shot upward, its rocket tubes spitting a long white trail...45,000 feet...55,000 feet...65,000 and still going strong Kincheloe's voice was being recorded on tape as he calmly reported his instrument readings, ninety thousand feet. The X-2 climbed at more than one thousand five hundred miles per hour, one hundred thousand feet. Two minutes and thirteen seconds after he started the climb the rocket engines ran out of fuel, but the X-2's momentum carried it upward. Iven Kincheloe was in space. Almost 100 percent of the earth's atmosphere was beneath him. There was no air to support the X-2, and at one hundred twenty thousand feet the sky was a deep purple. The sun-rays, unfiltered by atmosphere, were so bright that Kincheloe could not read his knee-pad. The X-2 was losing momentum now. It reached the top of its curve at 126,200 feet and began to nose down toward earth. Kincheloe let the plane dive vertically and the speed picked up to more than one thousand seven hundred miles per hour.

A Bell X-2 drops away from its Boeing B-50 mothership. ca,1955-56, credit - *NASA*

As he entered the denser atmosphere, Kincheloe began to level out. At fifty thousand feet his chase pilot came alongside and escorted the X-2 down. The rocket plane touched down at 240 miles per hour and slid for over a mile before it came to rest. Iven Kincheloe was acclaimed as the first man into space.

The X-2's next flight was made by Mel Apt on September 27, 1956. It was a speed run and the X-2 reached 2,060 miles per hour, exceeding Everest's record. Then the rocket plane went out of control and crashed. Mel Apt was killed and the X-2 program ended.

Kincheloe missed Mel Apt and he missed the little white X-2. But a successor to the X-2 was already being built by North American. It would have four times the power of the X-2, twice the speed, and would climb twice as high. It was the X-15. However, the test program was three years away, so Kincheloe satisfied himself with more routine jobs, hoping to be named to the X-15 assignment.

In August 1957, Air Force Chief of Staff General Thomas D. White presented Captain Iven C. Kincheloe with the Mackay Trophy for "the most meritorious flight of the preceding year." A month later Kincheloe was selected as the X-15 project test pilot with Captain Bob White as his alternate.

The X-15 would not be ready to fly until 1958 at the earliest, but Kincheloe spent the intervening time undergoing a rigorous training program. He was introduced to the centrifuge which simulated the G forces he would encounter in the X-15. He participated in experiments in weightlessness and spent hours in a mock-up of the X-15's cabin. He tested his new space suit as well as his own reaction in a vacuum chamber which would simulate as altitude of one hundred miles. In June 1958, he got his first look at the nearly completed X-15 in which he planned to "blast out of this world."

Kincheloe seated in cockpit of an F-104.

Kincheloe in full pressure suit prior to a high altitude flight in the F-104 Starfighter.

Meanwhile, Kincheloe kept flying. On July 26, 1958, he took off in a F-104 to fly chase for Lou Schaik, a civilian test pilot for Lockheed. The F-104 was a, and is, a mean airplane. Although it was almost fifty-five feet long, its stubby wings spanned only twenty-two feet. Its gliding angle was straight down and pilots respectfully dubbed it the “missile-with-a-man-in-it.” Another feature was the pilot’s ejection system. Instead of ejecting upward through the canopy, the pilot shot himself downward out of the airplane. Kincheloe climbed to almost two thousand feet when suddenly the engine quit. Immediately the plane began to fall, and Kincheloe was already too low to eject downward, while he still had control of the plane, he began to roll it over on its back, calling over the radio, “Edwards, Mayday Seven Seventy-two, bailing out.” The plane was almost inverted when Kincheloe ejected, his parachute still unfurling, followed into the flames. Captain Iven Carl Kincheloe, Jr. was dead, and was buried with full military honors at Arlington National Cemetery on August 1, 1958.

To perpetuate the memory of Captain Iven C, Kincheloe, Purdue University established the Kincheloe Scholarship Fund to aid undergraduates in the study of aeronautics and astronautics.

The X-15 made history. On June 27, 1962, Joseph A. Walker flew it at 4,105 miles per hour and Major Bob White, Kincheloe’s alternate, reached an altitude of 314,750 feet (59.6 miles) on July 17, 1962, fulfilling the dream of America’s first spaceman.

Kincheloe Air Force Base was named in his honor on September 25, 1959.

While flying an F-104 ultrasonic jet from Edwards over the Mojave Desert on July 26, 1958, he crashed to his death near Rosamond Dry Lake. He was buried in Section 2 of Arlington National Cemetery on September 18, 1959. Kinross Air Force Base, Michigan, was named Kincheloe Air Force Base in his honor. He posthumously received a number of awards for pioneer experimental flights, including the Air Force Association David C. Shilling Award, the Astronautic Award from the American Rocket Society, and the Legion of Merit from the Air Force. He had been chosen by the Air Force to be one of the first men to fly into space.

Special Thanks and Recognition

Sigma Phi Epsilon Class of 1948 and 1949, Purdue University
Mrs. Dorothy Kincheloe
Mr. David Strother, President, Alumni Board, Sigma Phi Epsilon
Mr. Jeremy Diehle, VP of Alumni Relations, Sigma Phi Epsilon
Mr. Jon Espense, VP of Housing, Sigma Phi Epsilon
Mr. David Huhnke, Sigma Phi Epsilon and Interfraternity Council
Mrs. Carol Oswalt, Sigma Phi Epsilon, House Cook
Mr. James Guidos, Sigma Phi Epsilon
The Brothers of Sigma Phi Epsilon Fraternity
Mr. Joe Bennett, VP of University Relations, Purdue University
Mr. John Norberg, University Relations, Purdue University
School of Aeronautics and Astronautics Engineering (AAE)
Mr. Larry Cargnino, retired professor, AAE (1945-1979)
Mr. Tim Bobillo, Developement Officer, School of AAE
University News Service
Purdue Alumni Association
Neil Armstrong
NASA
United States Air Force Museum
Edwards Air Force Base
Arlington National Cemetery
National Public Radio