

## Air and Space this Week

### Item of the Week

# GENERAL HENRY HARLEY “HAP” ARNOLD

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**KEY WORDS: USAAC USAAF Five-Star Hap**

*January 15 is the 75<sup>th</sup> anniversary of the passing of General Henry “Hap” Arnold. He was an aviation pioneer, instructed by the Wright Brothers themselves; the Chief of the U.S. Army Air Corps prior to WWII; the Commanding General of the U.S. Army Air Forces in WWII; the first Commanding General of the U.S. Air Force when it became a separate service (which makes him the only person to hold five-star rank in two separate Services!); one of the founders of the RAND think tank; one of the founders of Pan American World Airways; and the person who made sure a number of aircraft were preserved after WWII (they constitute much of the collection of the National Air and Space Museum, see the National Air Museum). Wait, there’s more. Hap Arnold was awarded the very first MacKay Trophy, which quickly became a very prestigious award. Then he won another. Whew!*

## BOYHOOD

Henry Harley Arnold was born on June 25, 1886, in Gladwyne, Pennsylvania, a suburb of Philadelphia. His father, Herbert A. Arnold, was surgeon and a devout Baptist. When the Spanish-American War began, he joined the Pennsylvania National Guard, where he would serve for 24 years. Henry’s mother, *nee* Anna Harley, was the first in her family to attend high school, and was more of a free spirit than her husband, in spite of both their families’ strong Mennonite ties.

Two twists of fate stepped in to help shape young Arnold’s path in life.

Henry graduated from high school in nearby Ardmore, PA, in 1903, and planned to attend Bucknell University in preparation for entering the ministry. His father had become enamored with the Army from his own experience in the Reserve, and pushed Henry’s older brother, Thomas, to apply for West Point.

Twist One came when Thomas refused his father. Parental pressure met less resistance with Henry, and he took the entrance exam, placing second on the nomination list for PA applicants. Twist Two came when the first choice was found to be married, a violation of USMA policies. Henry would matriculate, but the delay in his replacing the married guy caused Henry to arrive for classes a month late, so he had to serve as a “cadet private.”

Henry was somewhat of an indifferent student at the Point, but he did participate in a variety of sports, his best being polo. Accordingly, he was hoping to be assigned to the Cavalry upon

graduation, but his class standing, 66<sup>th</sup> out of 111, sent him to the Infantry as a new Second Lieutenant instead. He didn't like it, but accepted a commission to serve in the 29<sup>th</sup> Infantry, based in the Philippines, arriving in Manila on December 7, 1907.

## EARLY MILITARY CAREER

Duties with the Infantry was not Henry's "cup of tea." He turned proactive, and wrangled a temporary assignment to assist Captain Arthur Cowan in mapping the island of Luzon. After successfully completing the mapping detail, Cowan was transferred to the Signal Corps, which would soon become home to the Army's nascent aviation component. Arnold told Cowan that he wanted to join him in the Signal Corps, but Cowan did not respond, at least at first.

The 29th Infantry relocated from Luzon to Fort Jay, New York, in June, 1909, moving to their new home by going westward, rather than across the Pacific. In the process, Lt. Arnold had one of the engaging experiences felt by some many of his contemporaries. He saw aviation pioneer Louis Blériot flying over Paris, the first time he had seen an airplane in his life. He was smitten.

Promotions were scarce in the Infantry and Arnold was still a Second Lieutenant. He still hadn't heard from Captain Cowan, so he put in for a transfer to the Army's Ordnance Department, because they had a billet that would mean an instant promotion to First Lieutenant. Of course, Cowan the Signal Corps came through immediately thereafter and just as immediately Arnold put in an application for the Signal Corps.

On April 21, 1911, 2Lt. Arnold received a Special Order that transferred him and 2Lt [Thomas DeWitt Milling](#) to Dayton, Ohio, where they were to undergo training as pilots in the Wright Brother's aviation school there (now Wright-Patterson AFB), under the tutelage of [Arthur L. Welsh](#). Their May, 1911 class included three civilians and Lt. [John Rodgers](#) of the U.S. Navy (a cousin of early aviator [Calbraith Perry Rodgers](#)) who had a number of interesting career events prior to his untimely death in a crash in the Delaware River on August 27, 1926). 2Lt Arnold soloed very soon after graduation and received FAI pilot certificate #29 on July 6, 1911; he would become Military Aviator Certificate #2 a year later. He is first on the list of rated military aviators (second to Milling in some sources), and received the new Military Aviator badge (it was buried with him).

The Signal Corps had recognized early on the value of the new-fangled aircraft in military reconnaissance and communications. Lieutenants Arnold and Milling were assigned to the Signal Corps' new Aeronautical Division in College Park, Maryland, to be the Army's very first flight instructors. The teachers were expected to do a lot of flying, and Arnold set a number of altitude records. Navigation aids were non-existent in those days, and sometimes a non-airport landing was necessary. On August 11, 2Lt Arnold was in his first piloting mishap while trying to take off from a farmer's field, where he had stopped to get directions (from a rather surprised farmer, I'd reckon). Arnold became the very first pilot to deliver the mail, flying a bundle of letters on a short hop on Long Island. Arnold also moonlighted as a pilot in two of the aviation-related silent films of the day, [The Military Air Scout](#) (almost certainly the first movie made about military aviation) and [The Elopement](#), which had a utterly ridiculous plot (not to be

confused with *The Assisted Elopement* or *An Interrupted Elopement*, both also released in 1912).

Arnold's first flight instructor, Al Welsh, was killed in a gruesome fatal crash at College Park on June 11, 1912. On August 12, Arnold and Milling, flying a seaplane, had to make a weather-caused forced landing in Massachusetts Bay. Arnold's second flight mishap resulted in a crash on takeoff, in which he suffered a gashed chin. On September 18, yet another crash claimed the life of 2Lt Lewis Rockwell, an Academy classmate of Arnold.

The cumulative effects of these unhappy experiences took a toll on Arnold, and he started to fear flying. Undaunted, he and Milling turned-to when ordered to enter the inaugural competition for the MacKay Trophy (which in later years became very prestigious). Arnold won! He successfully found a company of cavalry from the air in spite of lousy weather.

The next assignment for Arnold and Milling was to go to Ft. Riley, Kansas, to develop the capability of using two-seater airplanes as artillery spotters, communicating by radio to guide the fall of shot. On November 2, Arnold flew while 1Lt Follett Bradley operated the crude radio; they successfully sent the first air-to-ground wireless transmission to a receiving station six miles away.

On November 5, Arnold flew an artillery-spotting test flight with 1Lt Alfred Sands as observer. For some reason, the plane stalled and went into a serious spin, from which Arnold saved it just before it hit the ground. This close call really triggered his fear of flight, and he immediately thereafter applied for, and received, a leave of absence, and returned home.

Grass did not grow under 2Lt Arnold's feet during this interlude. It gave him the chance to get re-acquainted with one Eleanor Pool, daughter of the local banker, who was also one of his father's patients. They would marry on September 10, 1913, with Lt Milling as his best man.

2Lt Arnold took a staff assignment on December 1, 1912, as the new head of the Signal Corps' Aeronautical Division, stationed in Washington. His first duty there, which he did not enjoy, was to oversee the closing of the College Park facility. He promoted to First Lieutenant on April 10, 1913, but unhappy with his new assignment, he put in for transfer back to the Philippines, in the 9<sup>th</sup> Infantry on July 10. His transfer was delayed by politics; the House Military Affairs Committee was fighting over possibly moving aviation from the Signal Corps to make it a separate Air Corps. 1Lt Arnold testified before the Committee and recommended that the planned separation was premature. Arnold ended up in a temporary assignment in Kentucky, and was transferred to the 13<sup>th</sup> Infantry on November 1, 1913. The Arnolds arrived back in the Philippines in January, 1914, where Arnold met and became close friends with 1Lt George C. Marshall. His first child, Lois Elizabeth Arnold, was born on January 17, 1915. In January, 1916, Arnold completed his two-year stint with the 9<sup>th</sup> Infantry and was transferred to the 3<sup>rd</sup> Infantry, in New York.

Meanwhile, an officer by the name of Major William "Billy" Mitchell had become an assistant executive of the Aviation Section in the Signal Corps, and contacted 1Lt Arnold with an offer

that, if Arnold wished, he could re-join the Signal Corps, keeping his 1Lt rank, if he agreed to be on non-flight status.

Arnold now faced a key decision point in his life. He could avoid his past fear of flying and continue with his Army career. Or, if he could re-qualify for a rating of Junior Military Aviator, a temporary promotion to Captain would be required by law. Thankfully for history, Arnold chose the latter path.

Arnold reported to the Signal Corps aviation School at Rockwell Field, California, on May 20, 1916. He was the Supply Officer there, but he was on flight status, and he flew often to overcome his flight fears. He soloed again on November 26, and qualified as a JMA on December 16.

Captain Arnold was notified of his new billet on January 20, 1917, one day after the birth of his second child, Henry Harley Arnold Jr. His first assignment as JMA would be to assemble the 7<sup>th</sup> Aero Squadron from scratch in New York by February 5, and then find them a suitable location for flight operations in the Panama Canal Zone. He encountered serious disagreement there on any site, and was ordered back home to resolve the problem. He was aboard ship bound for D.C. when War was declared against Germany. Captain Arnold wanted to be posted to France, but the Aviation Section needed him more than France did.

Captain Arnold proved adept at a variety of assignments and tasks that followed. Promotions followed too: Arnold became a Major on June 27, and he became the youngest full Colonel in the Army on August 5, even if it was only a temporary promotion. By then, he was the Executive Officer of the Air Division. He spent the War in Washington, and became quite adept at thriving amongst the changes in the structure of the American military.

In May, 1918, the U.S. Army Air Service was created when the unit was separated from the Signal Corps, with Colonel Arnold as the Assistant Director of the Division of Military Aeronautics.

The Arnolds' third child, William Bruce Arnold, was born on July 17, 1918. Colonel Arnold was sent to France to brief General John Pershing on the military potential of an "unmanned aerial torpedo" called the [Kettering Bug](#), a radio-controlled propeller-driven early version of the V-1 bomber of WWII. He caught the Spanish Flu on the ship heading for Europe, and didn't reach the front and Pershing until November 11, 1918, the day the Armistice was signed.

## **BETWEEN THE WARS**

Colonel Arnold may have been the Assistant Director of the Division of Military Aeronautics, but his boss was Major General Charles Menoher, an old-school guy who strongly felt that aviation must be a subordinate arm of the Army. In 1921, a new boss was rotated into Menoher's billet, one Major General Mason Patrick, who shared Menoher's beliefs (and his personal distaste for Arnold). However, Patrick was willing to learn new things, and he applied for and received a rating of Junior Airplane Pilot, even though he was 59 years old at the time. Flying changed his

outlook completely, and he quickly converted to become a leading advocate for airpower from an independent Air Force.

Arnold's temporary rank ended on June 30, 1920, and went back to being a Captain, then automatically went back to being a Major. Even so, the changes scrambled his office. Things changed for the better, at least professionally, when Major Arnold was one of 21 Infantry Majors transferred to the Air Service.

The first half of the 1920s were really bad for Major Arnold. He suffered several bouts of poor health, including a number of ulcers, and he lost parts of three fingertips in an accident in 1922. His son, Bruce, almost died from scarlet fever, and his fourth child, John Linton Arnold, died of appendicitis in 1923.

August, 1924, saw Arnold assigned for further schooling, after which his former boss, General Patrick, chose him to head the Air Service's Information Division, a plum assignment. There he worked closely with Billy Mitchell; the two saw eye-to-eye on the future of air power. Mitchell had gotten into trouble demonstrating planes could sink large naval ships a few years earlier (see [here](#)), and when he made sharp criticisms of top brass in the wake of several aviation accidents, he was brought up on charges of insubordination.

Douglas McArthur was one of the judges, and Major Arnold and a number of prominent aviators testified in support of Mitchell, including Eddie Rickenbacker, Carl Spatz, Ira Eaker, and even Fiorella LaGuardia. All of them risked retribution for testifying on Mitchell's behalf. But their defense and support were based on their perception of his beliefs on air power as accurate, not the military charges of insubordination at hand. Mitchell was found guilty on all charges and suspended him for five years without pay. He resigned his commission soon thereafter.

Retribution came soon, especially for Arnold. He and other officers agreeing with Mitchell's views on air power continued to promote it, speaking to air-minded Congressmen. In February, 1926, Secretary of War Dwight Davis ordered a crackdown, to be handled by General Patrick, who chose to make an example of Arnold. Patrick said he would allow Arnold to resign to avoid court-martial. Arnold demanded the latter, knowing that the times they were a changing, and Patrick would have a difficult time getting a conviction.

No wonder America was caught flat-footed in the build up to WWII, with vindictive old fuds like Patrick causing damage! Rather than risk adverse publicity, Patrick exiled Arnold back to Fort Riley, to command the 16<sup>th</sup> Observation Squadron. Now Arnold faced a choice: he could remain in service or take an offer to be CEO of a new commercial aviation operation, Pan American Airways. Thank goodness for our country he chose the former.

Major Arnold was not revenge-minded, but it must have given him considerable professional and personal satisfaction when his unit performed with excellence at war games held in May, 1927. Arnold impressed his successor, the Ft. Riley base commander, and more importantly, James Fechet, Patrick's successor as Chief of the USSAC.

Arnold continued to advocate for stronger Air Service/Army coordination, but he also had some other things going on. His son, David Lee Arnold was born in February, 1927, and he wrote and published six books for juveniles in 1928, each of which was written to inspire young readers about military aviation.

Arnold's position mitigated the pain of the stock market crash and bank collapses in 1929 that heralded the Depression. However, his parents were hit very hard, and his mother died in early 1931, events that understandably bothered him greatly. His family had nicknamed him "Sunny" years before, and they and his wife called him that. After his mother passed, his wife started calling him "Hap," short for "happy," in order to cheer him up. The new nickname stuck, and one and all began using it.

Hap's next billet was command of March Field, in southern California. His buddy, Carl Spaatz, was in command of the small Wing based there. Arnold had the mandate from above to make March a showplace, and to do that, he first had to improve relations between the base and the local community, which was reeling from the economic woes of the early 1930s. He encouraged people in his command to join local organizations and support local relief efforts. Arnold took command of Spaatz's Wing in early 1933, and he "led from the front on those efforts, arranging for aerial food drops in areas hard-hit by bad winter weather, assisting with recovery efforts after the terrible Long Beach earthquake in March, 1933, and establishing CCC camps for over 3000 young men. Arnold's military acumen was getting really good; he began acquiring land for a bombing and gunnery range at nearby Rogers Dry Lake, which is today part of Edwards AFB.

Arnold was also learning a lot about public relations. He staged a demonstration flight from Bolling Field, near D.C. to Fairbanks, Alaska, by 10 Martin B-10 bombers, a then-astonishing 8290-mile journey, which won him yet another MacKay Trophy in 1934, and a belated DFC, awarded in 1937.

All USAAC combat aviation units operating in the U.S. were consolidated under the command of the General Headquarters Air Force. Its commander, Frank Andrews, selected Arnold to retain command of the now-expanded 1<sup>st</sup> Air Wing, Spaatz's old command, which under the new organization became a position that came with another temporary promotion, this time to Brigadier General, effective March 2, 1935. A much bigger promotion came later that year.

Malin Craig became the new Army Chief of Staff on December 23, 1935. He had met and played golf with General Arnold two years earlier, and wanted Arnold to be the Assistant Director of the USAAC, in charge of procurement. There had been somewhat of a scandal a few years earlier in that program, and Craig and the USAAC boss, Oscar Westover, wanted Arnold to clean things up. Westover was killed in an air crash at Burbank on September 21, 1938, and Arnold took the position. He still was facing opposition in some quarters from his support for Billy Mitchell, but his political skills had been improving, too, and he was able to overcome.

Arnold had made some enemies back in the Mitchell court-martial, and they were still around. Roosevelt was cold to the idea of Arnold taking the post Westover held. But he also had some

allies, and between his record and support from other officers, Roosevelt decided on September 29 to appoint him to be the Chief of the Air Corps, with the rank of Major General.

## **CHIEF OF THE U.S. ARMY AIR CORPS**

General Arnold had been an advocate of air power from back in the days with Billy Mitchell. At first, Arnold's perspective seemed to emphasize using air power defensively. One of his first projects at air chief was to develop the B-17 "Flying Fortress" long-range, heavily-armed bomber. At first, the bomber's mission was scouting and coastal defense; the "Fortress" in the nickname meant the B-17 would extend the range of effective coastal defense that a castle would have had back in the olden days. He soon began to take more of a strategic view, realizing that long-range aircraft could damage a foe's ability to make war. He had been attuned to the importance of military hardware and logistics for a long time, and his knowledge and skill sets were growing as fast as his career.

General Arnold was also a big believer in using outside expertise in the aeronautical advancements he knew were possible. He knew that the same interrelationship I've mentioned in the past, where scientific inquiry and the technology that enables it are intertwined. Arnold knew that capability required the best tools and personnel available, and reached out to Cal Tech and the Guggenheim Aeronautical Laboratory's ace aerodynamicist, Theodore von Kármán.

War clouds loomed, and the Air Corps was dealing with internal organization issues. On June 20, 1941, the Air Corps and the GHQ Air Force were merged into a new entity, the United States Army Air Force (USAAF), with Arnold in charge. Two days later, the Germans invaded Russia. The next month, President Roosevelt asked Arnold and his Air War Plans Division to prepare a plan and the logistical needs it would require, that would accomplish four objectives: general defense of the Western Hemisphere, general defense strategy against Japan, a strategic air campaign in Europe, and a strategic air campaign against Japan.

The plan had to be ambitious in order to accommodate tasks the magnitude of Roosevelt's request, and would have to entail a lot of logistical considerations. Arnold and his team called it "AWPD/1," and estimated that the new USAAF would have to expand to a fleet of 60,000 aircraft of all types, requiring a force of 2.1 million men, for the plan to be successful. The plan also contained recommendations to pursue aggressively the development of evermore sophisticated and capable aircraft, including the B-29 and the B-36, then just concepts on the drawing board.

Arnold was promoted to Lieutenant General on December 15, 1941, a week after Pearl Harbor. Roosevelt issued an Executive Order that granted Arnold's USAAF full autonomy and separation from the U.S. Army's ground forces and supply. He was officially named the Commanding General of the USAAF, and he joined both the Joint Chiefs of Staff and the Combined Chiefs of Staff. He immediately took action to increase the logistical estimates made initially, and to aggressively implement the revised AWPD/1 Plan.

Arnold took pains to be more inclusive in his approach to personnel than was generally the trend in those days. He still backed a segregated Army, but did recognize the role women could play in defense of the country. He ordered the creation of the USAAF's Women's Flying Training Detachment, to be directed by famed aviator [Jacqueline Cochran](#). The unit morphed into the Women Airforce Service Pilots, with many women serving as pilots in non-combat situations.

The Eighth Air Force was slated to be the primary strategic force used against Germany. He posted trusted colleagues for key positions in it; Carl Spaatz would command the 8<sup>th</sup>, and Ira Eaker would command its bomber units. Arnold's focus was on Germany, but the first assignment for the 8<sup>th</sup> was North Africa, where he learned another key lesson, that bombers must have fighter escort in order to be successful without unacceptable losses.

General Arnold was also growing more aggressive in the face of serious losses, and being a former acquaintance was no shield for perceived under-performance. A number of changes at the USAAF's highest levels were made in the first half of the War. The air war in Europe was going well, with well-escorted B-17s and B-24s providing strategic bombing on War industries and infrastructure.

The picture in the Pacific Theater, at least from the USAAF's perspective, was not as favorable. The B-29s were finally in service, the backbone of the 20<sup>th</sup> Air Force, and great efforts were made to use them to hit targets in the Japanese home islands from bases in China. The logistic constraints were extreme, especially after the Japanese interdicted the Burma Road. The only way to supply a B-29 force with fuel and bombs was to fly it over the "Hump" (Himalayas) from bases in India. Losses [were ruinous](#). Supplying the force was ruinous. Arnold assigned General Curtis LeMay to run the B-29 operation, but the logistics were just too formidable. LeMay had the good sense to move the 20<sup>th</sup> to the newly captured Marianas Islands and bomb Japan from there. Success eluded them at first, in spite of Japan being within range. Only when he sent the bombers in at night, at low altitude, with fire bombs, was his strategic bombing campaign against Japan effective.

General Arnold had come to regard strategic bombing more and more as the War progressed, and he had set up an odd command structure where he would command the 20<sup>th</sup> Air Force personally, in addition to his Chief duties. During this time period, Arnold was under a lot of stress from his many important duties. He also had a very aggressive travel schedule, including supporting conferences of the Allies (and remember, air travel in those days wasn't particularly comfortable, it was physically demanding). His health hadn't been the best in the pre-War years, and now his duties were almost overwhelming, as they would be for anyone.

General Arnold suffered a heart attack on February 28, 1943, just after his return from the Casablanca Conference. His recovery required three weeks after a hospitalization for a few days. The Army Regulations in place at the time would normally have forced Arnold from active duty, but Roosevelt personally intervened, and Arnold kept his post. Not only that, on March 19, 1943, he was promoted (temporarily) to the rank of General, and he would become a Five-



Star General of the Army on December 21, 1944, subordinate only to Marshall, MacArthur, and Eisenhower.

General Arnold had three other heart attacks requiring hospitalization during the War years, and another one that he toughed out. Health issues finally convince Arnold to go on light duty status, but he still traveled extensively.

Germany surrendered on May 7, 1945. On July 16, General Arnold turned the 20<sup>th</sup> AF over to General LeMay.

## **GENERAL ARNOLD AFTER WWII**

General Arnold may have been relegated to “light duty,” but he accomplished a lot after the War. One of the most important was directing the creation of Project RAND, with the mandate to facilitate the coordination of the military planning process with research and development process. The Project evolved to become the RAND Corporation, an important non-profit think tank, with a scope significantly larger than that of its original mission.

Alas, General Arnold’s health continued to weaken. He left active duty on February 28, 1946, and officially retired on June 30. Carl Spaatz replaced him, and would become the first Chief of Staff of the United States Air Force soon thereafter, when the USAF was formally made into a separate Service.

General Arnold earned a chest full of medals, among them the Army DSM, the DFC, the Legion of Merit, the Croix de guerre, the WWI Victory Medal, the WWII Victory Medal, and many more. He is the only U.S. military leader to hold Five-Star General rank in two different Service Branches.

General Arnold retired to a ranch north of San Francisco, and wrote his autobiography, *Global Mission*. He would pass away at his home on January 15, 1950.

***But not before he performed one more great service to the country!***

## **CODA**

General Arnold had learned from experience how important promoting military service to the public, especially young people. From the time he wrote pro-aviation adventure books to juveniles to the reflections of his career now he was retired, he wanted to commemorate the value of the USAF and aviation to all Americans. There were many aircraft that had made contributions to the War Effort that were no longer needed for national defense. Arnold made great efforts to save representative examples of aircraft and made them available to museums and other public organizations such as the VFW.

Two facilities received the bulk of General Arnolds legacy largesse: the Museum of the United States Air Force, and the Smithsonian National Air Museum. He arranged for the many aircraft that form the bulk of both facility’s fine collections.

Today, millions of Americans and foreign visitors can go to either/both museums to learn about military aviation and be inspired by the efforts and sacrifices made by the people who designed, built, and flew them.

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There are exhibitions of Arnold-related artifacts at the National Museum of the USAF(<https://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/Factsheets/Display/Article/196838/gen-henry-h-hap-arnold-artifacts>) and at the Smithsonian National Air and Space Museum (e.g. [https://www.si.edu/object/nasm\\_A19610010003](https://www.si.edu/object/nasm_A19610010003) )

*Smithsonian Magazine*: <https://www.smithsonianmag.com/smithsonian-institution/how-gen-henry-hap-arnold-architect-american-air-power-overcame-his-fear-flying-180977206>

*Air & Space Forces Magazine*: <https://www.airandspaceforces.com/article/0997hap>

History of the National Air and Space Museum:

Factsheet:<https://www.si.edu/newsdesk/factsheets/national-air-and-space-museum-history>;  
*Arnold's Evolution*: <https://www.airandspaceforces.com/article/0913evolution>

Arnold's five-star insignia was flown in Space on STS-134 then returned to the Museum of the Air Force for a gala reception:

[http://www.nationalmuseum.af.mil/news/story\\_print.asp?id=123266551](http://www.nationalmuseum.af.mil/news/story_print.asp?id=123266551) and

<https://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/Fact-Sheets/Display/Article/195961/AFmuseum/five-stars-in-space-hap-arnolds-rank-insignia-orbit-the-earth>

Wikipedia: [https://en.wikipedia.org/wiki/Henry\\_H.\\_Arnold#cite\\_note-26](https://en.wikipedia.org/wiki/Henry_H._Arnold#cite_note-26)

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