





## THE 6TH DIMENSION

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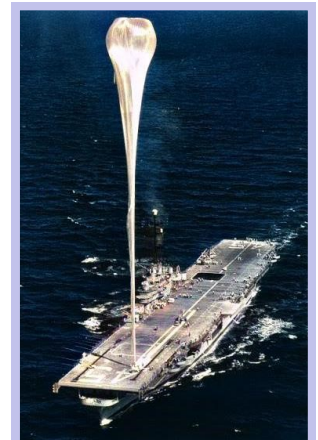
This 6th Dimension Newsletter is published for the exclusive use of our 6WSAA members. Information is included as reported without vetting and is edited for space. If you discover an error or items that need a correction, please notify Gerry Guay Editor, Email: [weatherman@6thweathermobile.org](mailto:weatherman@6thweathermobile.org) Members are encouraged to submit articles, information or stories that would be of interest to the general membership.

### *My Notes from 6th Weather Squadron ~ January to December 1972*

*6th Weather Squadron History for 1972 written by Gerry Guay, Webmaster and Newsletter Publisher obtained from archives of 6th Weather Squadron history of 1972 as recorded by the 1<sup>st</sup> Sgt SMSgt Heydon. The January to June half and July to December half were written separately and very short in length. I will do my best to convey the projects and happenings at 6th Weather in 1972, with more descriptive narratives of the projects if possible. The AWS form 21 which was used the past few years was discarded and the history was written in no formal manner.*

**1972** and 6th Weather Squadron (Mobile) is carrying on its assigned mission and many projects with all the professionalism and accuracy in a timely manner as it always has. "Willing and Able" is the appropriate motto for the 6th. The 6th Weather Squadron continues its assignment to Military Airlift Command (MATS) and 7th Weather Wing with the 6 detachments assigned to it last year. For all of 1972 Col Howard Turner continues as Commander with Lt Col George Akers as the Operations Officer. The manning chart shows an average of 182 personnel, an increase of 12 from the previous year and included 6 officers, 176 Airmen including NCOs and 1 civilian. There were 34 projects although some should be considered more as activities than actual projects. Providing weather support meant travelling to the countries of Germany and Argentina and 14 states: WA, MA, OK, CO, NE, NY, SD, AZ, VA, AK, TX, CA, HI and NM.

**Operations Projects include:** **Project Cold Fog** at Hahn AB, Germany, Elmendorf AFB, AK and Fairchild AFB, WA with 9 wx observers and 1 maintenance technician. A continuation from Oct '71 to March '72. They provided wx support for seeding operations and analytical determination of techniques and assisted project coordination. **AFCRL TPN-19 Project** at unknown location with 3 wx observers and 1 maintenance tech. A continuation from Oct '71 to March. They provided 68 upper air soundings with UMQ-9 and associated equipment. **Project Haven Hop II** (AFCRL) at Las and Bueyeros NM, Dalhart, Sunray, Spearman, Wilderado and Spearman TX, Boise City and Eva OK. Support provided by 21 wx observers and 11 maintenance techs from January to March. A total of 430 upper air soundings were made to 40,000 feet min. **Project Gallant Hand** at Fort Hood, TX, 2 wx observers provided 221 surface obs and 21 pibal observations during March for this huge six-day exercise which involved more than 23,000 men from the Army and Air Force, including Air National Guard and Air Force Reserve. **MAC Airlift** was part of Project Gallant Hand and 3 wx observers provided MAC aircrews with 120 surface obs including winds, ceiling and visibility during March and April. **Project Ashcan** a balloon air sampling program that was conducted by the Atomic Energy Commission to obtain samples of radioactive debris and pollutants in the atmosphere in several points in the entire world as a result of atomic tests by the Soviet Union and atomic powered satellites reentries. 1 wx observer and 1 maintenance tech provided support as needed in different areas of the world. **Weather Symposium** in San Diego, CA. Two wx observers were deployed to display Tactical Weather Equipment for Air Weather Service in March and April. **All Weather Topographic Mapping System (AWTMS)** at Gila Bend, AZ where 2 wx observers and 1 maintenance tech provided data from 22 upper air soundings with a UMQ-9 and UMQ-26 in support of HIRAM measurements in photomapping project. **Project Land Mine** was a US Army project at Camp A.P.Hill, VA. From March to May, 3 wx observers and 1 maintenance tech provided 16 radiosonde soundings and 45 pibal obs. **SAMTEC TPQ-18 Test** at



Project Ashcan

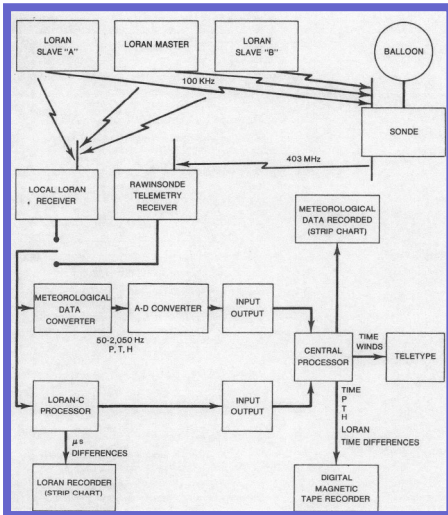
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Don't forget to visit our website at: <http://6thweathermobile.org>

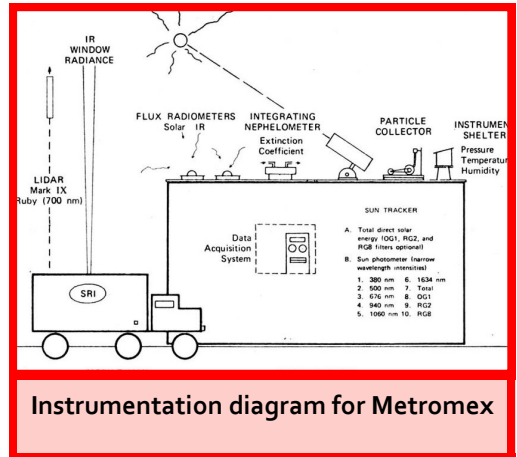
My Notes from 6th Weather Squadron ~ January to December 1972 (Continued from Page 2)

Kaena Point, HI with 2 wx observers and 1 maintenance tech. Support was provided with 30 radiosonde soundings for refractive index calculations in March and April. **Project Middle Gust** at Air Force Weapons Laboratory (AFWL) at Ordway, CO for "Laboratory Studies of the Response of Soil and Rock to Blast-Type Loadings". 6th Wx provided upper air obs and hourly surface obs by 4 wx observers and 1 maintenance tech from April to June and in August. **Exercise Exotic Dancer V** (was this really a project or wishful thinking?) 1 wx observer provided support for a joint exercise in May at unknown location. *Ha..ha..ha.. Sorry, still thinking about the Exotic dancer.* **AFSC 679A** in Seattle, WA required 1 wx observer with a PMQ-1 observing kit to obtain 83 observations with rainfall rates in May and June. **Locate School** at Beukers Laboratory in St. James, NY provided 3 wx observers and 1 maintenance tech with instructions in operation and maintenance of the Locate System. This was in support of the IFYGL project and held in May. IFYGL is a program jointly sponsored by Canadian and U.S. National Committee for International Hydrological Decade for coordinated research into the physical, chemical and biological aspects of Lake Ontario to improve our understanding of the Lake and its basin. **NSSL** at Tinker AFB, OK in April thru June where 4 wx observers augmented the permanent radiosonde section at NSSL for special soundings. **IFYGL Data Acquisition** in Rochester, NY providing support to NOAA with 2 wx observers from April to December. They assisted in programming data acquisition and disposition at the

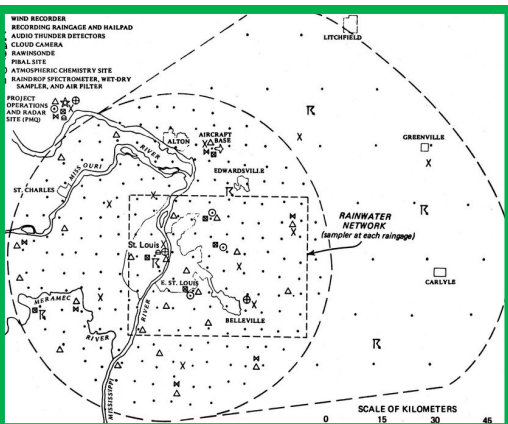


Lo-Locate System Instrumentation Diagram

Rochester headquarters. **Mixed Company** supporting Defense Nuclear Agency near Grand Junction in Colorado; 2 wx observers for May to October. They used a Weather Bureau Radiotheodolite ranging equipment with a computer connection in tracking the package. **NCAR/National Hail Research Experiment II (NHRE)** in Grover, Fort Morgan and Sterling, CO and Kimball, NE. This Project required 29 wx observers and 8 maintenance techs to provide a minimum of 4 rawinsonde runs a day, 6 days per week to 100 Mbs and 11 hourly surface observations. This support was provided April to August. (This



Instrumentation diagram for Metromex



METROMEX-networks and facilities of Illinois-State-Water-Survey-1972

project in the St Louis, IL area conducted by Illinois State Water Survey with scientists from 7 groups with goals related to precipitation scavenging, effects from urban environments

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### *My Notes from 6th Weather Squadron ~ January to December 1972 (Continued from Page 3)*

on physical effects on the atmosphere. 6thWx supported this with 21 wx observers and 5 maintenance techs providing pibals with double theodolite and rawinsonde observations using UMQ-9s in July and August. **AFCRL/Warm Cumulus Modification Support** at Tinker AFB, OK by Tinker Permanent Rawinsonde Section in July and August. **Wave Propagation Support** in Haswell, CO was a NOAA study with 3 wx observers and 1 maintenance tech providing 2 daily upper air rawinsonde observations in August. **Command Visit** by Commander, Col HD Turner to Wright-Patterson AFB, OH and Robbins AFB, GA in November and December; then McGuire AFB, NJ in August-September. **Have Lent II Site Survey** at South Point, HI in August with 1 wx observer in preparation for Project Have Lent II. **IFYGL** (International Field Year for the Great Lakes), a joint United States-Canadian program conducted in 1972-73 for the study of Lake Ontario and its basin. 6<sup>th</sup>Wx provided 19 wx observers and 4 maintenance techs in support of NOAA at 4 locations in up-state NY: Rochester, Lakeside Beach, Stony Point and Sodus Point. All rawinsonde soundings used the Lo-locate System. The support took place from April thru March 73. **Project Ash Can/cDNA Project 5710** at Fort Wainright, Fairbanks, AK with 1 wx observer and 1 maintenance tech providing balloon position fixes and temperature data to AFCRL in August and September. **MAC Combat Airlift Competition** in the Amboy, and 29 Palms, CA area where 4 wx observers provided pibal observations as requested in support of the competition in August and September. **Air Weather Service Display** at the Argentina International Aeronautical and Space Exposition, 6thWx provided 3 wx observers and 1 maintenance tech to display a TKR-1 (APT) van and 1 RISC set during September to November. **CAT II Weather System** an AFCRL project at Hanscom Field, MA with weather support by 4 wx observers providing 24 APT runs, 70 surface obs and local area charts in October. **Project Cold Draft** conducted at March AFB, CA with 2 wx observers and 1 maintenance tech. They provided GMQ-26 RISC wiresonde runs, 100 gram marker balloons and limited surface obs for Headquarters AWS in October. **Project Diamond Ore** at US Army CE Lawrence Livermore Laboratory in Livermore, CA with 1 wx observer providing pibal observations during October. **Project AX (Attack Experiment)** at Systems Command with 2 wx observers providing theodolite observations to 10,000 ft from October to December. **Project Cold Flake/Cold Fog** at Hahn AB, Germany with 6 wx observers supporting seeding operations and on-the-spot analytical determination of techniques and assisted project coordination in October thru March '73. **Eglin Support** at Eglin AFB, FL with 2 wx observers providing 1 to 3 RISC observations per day to 200 mbs in November and December. **Project Cold Bounce** at the Air Force Avionics Laboratory at Wright-Patterson AFB, OH with 4 wx observers and 1 maintenance tech support of rawinsonde and surface observations in November and December.

**Weather Equipment Maintenance:** The 6WSq Intermediate Maintenance Branch (6WS IMB) performs maintenance on all 6WS weather equipment and maintenance support to AWS, ANG, and AFCS units. They visited 42 units and 5 special visits to AWS.

**Motor Pool Maintenance:** is responsible for the maintenance and dispatch of all motor vehicles, van, trailers, and power generators. Squadron vehicles were driven a total of 294,162 miles in 1972 and they performed 168 scheduled Annual Vehicle Maintenance Safety Inspections and 330 unscheduled maintenance repairs.

**Training:** There were a total of 51 personnel in upgrade training in first half and 59 in second half of the year with 58 total upgraded.

### ***-End of 6<sup>th</sup> Weather Squadron (Mobile) 1972 History-***

*To Bob Epps from Laddie.....*

*A thousand balloons have been released toward heaven Bob and you and I were responsible for many of them. None, to the best of my knowledge, ever reached that height. I do know in my heart and soul, that you surely did. I remember our years at Tinker Field and the South Forty and then the many deployments to the locations in Tornado Alley in our own United States. Then some of us went to small islands in the South Pacific to assist in the birth of the nuclear age. But always back to the WWII barracks. Hot in summer and always cold in winter with the wind & dust, joining in. I had never seen snow before, and you just laughed. I dearly hope and pray that your last launch was a great launch and you rose higher than the highest of our balloons and missiles. No one deserved it more. I miss you, but I still have my memories. Say Hi to Jack Fisher for me.*

*God's Speed, Laddie Varnado, [aka] Florida*



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**Cost of Living in 1972:** Inflation: 3.27%; Average Cost of new house: \$27,550; Average Income per year: \$11,800; Average Monthly Rent: \$165; Gallon of gas: 55 cents; Average price of a new car \$3,690; US Postal stamp: 10 cents; Ground Hamburger 98 cents/lb; Milk \$1.20/gal; Eggs 33 cents/doz; United States population: 210 Million. Life expectancy: 71.2 years; Top movie: The Godfather

**The Easter Offensive of 1972** was a large, three-pronged invasion of South Vietnam by North Vietnam using heavy tanks and mobile units. The North Vietnamese government in Hanoi attacked South Vietnam in January, knowing that the United States was losing its will to continue the war in Vietnam. The offensive consisted of a three-pronged assault that hit South Vietnam in its northern, central and southern regions. The North Vietnamese army forces easily overran the South Vietnamese army forces located in Northern South Vietnam.



**The Munich Olympics massacre September 5** - The Munich massacre was a terrorist attack committed by eight members of the Palestinian militant group Black September during the 1972 Summer Olympics in Munich, West Germany. They broke into the Olympic Village, murdered two members of the Israeli Olympic team, and kidnapped nine other people.



**The Strategic Arms Limitation Talks (SALT I)** agreement is signed - 26 May. US Senate ratifies the Anti-Ballistic Missile Treaty.



**The Pioneer 10 spacecraft** was launched into space- on March 3, 1972. The first trip to Jupiter was successfully completed by the NASA spacecraft Pioneer 10, which was launched in 1972. The first of five man-made objects, Pioneer 10, attained the necessary escape velocity to leave the Solar System.



**The Apollo 17 mission - on 7 Dec 1972** The last mission of NASA's Apollo program, Apollo 17 (December 7-19, 1972), marked the last occasion that humans stepped foot on the Moon or left low Earth orbit.



**Break-in at Watergate - June 17** - President Richard Nixon's administration in the United States was embroiled in the Watergate controversy from 1972 to 1974, which forced Nixon to resign. The Nixon administration's efforts to hide its involvement in the break-in at the DNC headquarters in the Watergate Office Building in Washington, D.C. on June 17, 1972, led to the controversy.



**Changes:** To keep our costs low: Please keep us informed of any e-mail or address changes by e-mailing us at [weatherman@6thweathermobile.org](mailto:weatherman@6thweathermobile.org) or USPS mail us 6WSAA c/o Buck Bucklin, 8 Sherwood Lane, East Hampton, NY 11937



### *I have some Feedback from Don Hassenbein who served in 6th Wx Sq in 1964 to 67*

Upon my arrival at 6th Weather Sq at Tinker, they sent 2 of us to Dugway, Utah for briefing and then shortly thereafter to Fort Greely, Alaska. Our initial job was running cable from the command post in a clearing to a wooded location, which had also been cleared out, where 3-100 foot towers were located in a circular fashion. After cables were run, weather equipment sensors (I think, they were very futuristic looking devices), were placed at different levels on each tower. For our safety, we were informed as to



how to inject our thighs in the event nerve gas was suspected (you had 8 seconds to inject yourself) and the injection would save your life. If you did not inhale nerve gas and injected yourself, you would be sick as hell! After that, they had artillery fired to a target the center of the 3 towers but unfortunately one of the initial shots (with no nerve gas inside) landed about 25 feet from our tent. After targeting, they fired "live" nerve gas shell into the center of the circle and our equipment recorded the results. On one occasion, the live shell knocked out 2 of our sensors and I, as NCOIC, was ordered by the civilian in charge (CIC) to take one of my airmen, "suit him up with a mask" and replace the 2 units

immediately! I asked my airman to test his mask which he was reluctant to do. I ordered him to enter the test cabin and turned out his mask was defective! The CIC then decided that the two of us would replace the units. Upon entering the tower area, there were dead bear and caribou laying on the ground and I was quite nervous. We finished and returned to the control post and decontaminated ourselves.

I also served in Ghinnir, Ethiopia where we lived in a mud house, had a baboon mascot named "Fred" and was surrounded by hyenas, lions and tigers, every night when we went to bed on our army cots. Turns out I was the "mechanic" for the site and had to overhaul the generator, which stopped working a month earlier on my arrival. I also wired our mud house so that we had lights at nights and reinforced the roof of the house, placed a 50 gallon drum filled with water, which heated up quickly since every day was 100 degrees plus. The two other guys had not had a shower since their arrival months earlier and really enjoyed that first shower! I also served on Fanning Island in the South Pacific. Our mail was air dropped and they once dropped our equipment and paychecks in the ocean. But Fort Greely was the assignment where I was the most concerned about my health. As you may know, I have photos posted on our website from both the Ft Greely, Alaska and Ghinnir assignments. Those were the days! Don



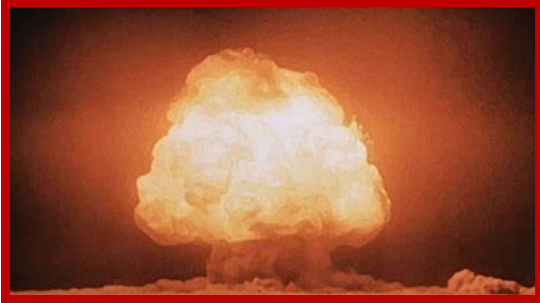
### **More on NHRE**

The National Hail Research Experiment (NHRE) was conducted in the tri-state area of Colorado, Nebraska, and Wyoming, with the field headquarters located at Grover, Colorado. The experiment was conducted from 1971 to 1976 and aimed to gain an increased understanding of all aspects of the cloud dynamics and microphysics governing severe convective storms that produce damaging hailfall at the ground. The research program was designed to answer the question of whether or not man can modify hailstorms, knowledgeably and systematically, to reduce their vast potential for destruction. The researchers used radar, research aircraft, automatic sampling devices, and other techniques to make detailed observations of both seeded and unseeded hailstorms. The experimental area was chosen based on certain minimum requirements: it had to be in a region of high frequency of hailstorms with modest year-to-year variance; have fairly level and uniform (NHRE continued on page 7)



## Trinity Test Site, New Mexico

On July 16, 1945, one week after the establishment of White Sands Missile Range (WSMR), the world's first atomic bomb was detonated in the north-central portion of the missile range, approximately 60 miles north of White Sands National Park. For the Project Trinity test, the bomb was placed atop a 100-foot steel tower that was designated Zero. Ground Zero was at the foot of the tower. Equipment, instruments, and observation points were established at varying distances from Ground Zero. The wooden observation shelters were protected by concrete and earthen barricades, and the nearest observation point was 5.7 miles from



Ground Zero. At 5:30 a.m. on July 16, the nuclear device, known as "Gadget," was successfully detonated. To most observers—watching through dark glasses—the brilliance of the light from the explosion overshadowed the shock wave and sound that arrived some seconds later. A multi-colored cloud surged 38,000 feet into the air within seven minutes. Where the tower had been was a crater one-half mile across and eight feet deep. Sand in the crater was fused by the intense heat into a glass-like solid, the color of green jade. This material was given the name trinitite. The explosion point was named Trinity Site. In 1965, Army officials erected a monument on Ground Zero. In 1975, the National Park Service designated Trinity Site as a National Historic Landmark.



*(NHRE continued from page 6)*

terrain; have a good road network; and not be under air traffic of such high density that release of the area by the Federal Aviation Administration (FAA) during operational periods would be unobtainable.

The NHRE field research was centered around a five-year program of observations and cloud-seeding experiments conducted in northeastern Colorado, in the vicinity of the Pawnee National Grassland. During 1971, field research facilities were established near Grover, Colorado.

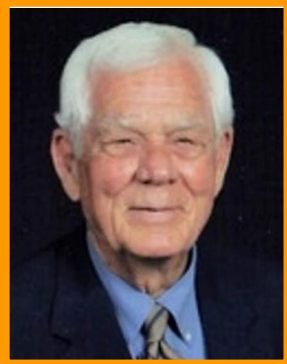
The research objective for 1972 was "to gain an increased understanding of all aspects of the cloud dynamics and microphysics governing severe convective storms that produce damaging hailfall at the ground." The research program developed in response to this objective was considered to be of importance for the following two reasons:

1. The economic feasibility of hail suppression rests heavily on the ability to forecast hailstorms reliably. A study of the synoptic and mesoscale environment in which hailstorms evolve, oriented toward better techniques of forecasting, is essential to this end.
2. The numerical modeling of thunderstorm processes without supporting observational data is a slow and uncertain exercise. In an effort to improve the progress in this area, the research program was oriented toward first providing greatly lacking data on cloud variables to modelers and second, providing opportunities for the modelers to test their predictions against field observations of real thunderstorms.

Based on the above objective the goal of the 1972 field season was to conduct intensive studies of isolated "single cell" storms. In terms of operational procedures, it was intended to concentrate all measurement systems simultaneously on the same storm, observing it through its life cycle.



## Final Launch



**Robert "Bob" Epps, Sr.** – 1929 – 2023 On Monday, June 12, 2023, CMSgt US Air Force (Ret.) Robert Edward Epps, Sr. died peacefully at Midwest City Hospital. Bob was born November 4, 1929, in Carnegie, OK to David and Thelma Epps. He graduated from Frederick High School in 1948 where he played football and baseball. He then attended Southwestern State College in Weatherford, OK, before joining the U.S. Air Force. He served in 6th Weather Squadron (Mobile) at Tinker AFB, OK from '61 to '69 and was a member of 6WSAA. After serving 20 years in the Air Force, retiring as a weatherman and Chief Master Sergeant and as a veteran of both the Korean and Vietnam Wars, he returned to Oklahoma to finish his Bachelors degree in Journalism and Masters in Education from Central State University (UCO). Bob then began a teaching career at Carl Albert Jr. High School in the Mid-Del School District. He taught

Yearbook and Geography for 20 years and also coached football. After his teaching career, Bob became a private pilot and flew many photographic and mapping missions in Oklahoma. He also flew over 80 Angel Flights. He truly loved to fly planes. Bob was preceded in death by his parents, Dave and Thelma Epps; brother, Thomas Michael Epps and sister, Carolyn Fillmore. He is survived by his wife, Katherine, to whom he had been married for 70 years; son, Robert Epps, Jr. and wife, Jan; son, David Epps and wife, Donna; four grandchildren: Robert Epps III, Chelsea Epps, Camille Macomber and husband, Micah and Evan Epps; and one Great Granddaughter, Macey Macomber.



**Stephen G. Gladish** – 1939 – 2023 Stephen G. Gladish of Tucson, Arizona, passed away peacefully on May 30, 2023, at Park Senior Villas, his recent assisted-living home. He was born to Dr. Donald and Alice Gladish on September 14, 1939, in Glenview, Illinois. There, he was their second child and was raised with five sisters. He received a Bachelor's Degree from the University of Illinois Chicago in English Composition and Literature, a Master's Degree from Northwestern University Evanston in American Literature, and a Master's Degree in Family and Career Counseling from the University of Arizona, Tucson. In 1965, he met and courted his soon-to-be future wife, Betsy Barnitz. They married September 3, 1966. Together, they raised two daughters, Dawn Gladish Graffam (Ray) and Reeve Gladish, as well as two sons, Steve Gladish (Gauri) and David Gladish (Leyla). Steve was extremely proud of his family's military history going back to the Civil War. This led him to join the U.S. Air Force, where he served in the Sixth Weather Squadron (Mobile) at Tinker AFB, Oklahoma from 1960 to 1963. From there his squadron deployed

at different sites in Tornado Alley, the Nevada Test Site, and throughout the South Pacific. Steve was also an active member of 6WSAA. After the service, Steve and Betsy settled down for several years in Flagstaff, Arizona, where he began what turned into fifty years of teaching college writing and film studies. He also taught composition, literature, and writing for twenty of those years in the state penitentiaries of the Arizona and Ohio Departments of Corrections. Steve published twenty-four educational and spiritual essays, six books as a teacher, four novels of adventure, romance, and historical fiction, titled, Moonlight, Missiles, and Moana, Mustang Fever Run Free with Wild Mustangs, Tracking the Skies for Lacy, Quannah: Last of the Paiute Warriors, one book on Education, Love in the Classroom, as well as a national Prison Anthology titled, Freedom of Vision: Voices Behind Prison Walls. For a child who grew up shy, introverted, a bullied, Steve blossomed in his adult years. He became a child of God, always seeking Jesus and the truth in each day. He recreated in hiking, white-water rafting, mountain climbing, travel, and playing with grandchildren. Steve followed the teachings of those who incorporate the metaphysical into their healing methods, such as Deepak Chopra, Louise Hay, and Bernie Siegel. And for the last nearly four years of his life, Steve had focused on and developed spiritually with an in-depth study of all 66 books of the Bible. Steve was preceded in death by his wife, Betsy, and his parents. He is survived by his four children, ten grandchildren, four great-grandchildren, and sisters Emily Smith, Sarah Campman, and Neva Asplundh. To those who knew him, Steve had a character that was larger than life. He held integrity, honesty, and time with family above all else and will be forever remembered as a generous, fiercely witty, and immensely intelligent man. He was widely loved and will be profoundly missed.

