


GRAA NEWSLETTER

P.O. Box 1184, Greenbelt, MD 20768-1184

November 2023 <https://GoddardRetirees.org> 39th Year of Publication

UPCOMING LUNCHEONS: We meet at 11:15 AM on the 2nd Tuesday of each month at the American Legion Post #136 at 6900 Greenbelt Road. **Reservations are required;** please contact graalunch@gmail.com (preferred) or call (410)-709-8889 **before Thursday, November 9th.**

Nov 14	 <p>Michael Moreau, of Goddard's Flight Dynamics Facility, and deputy project manager for OSIRIS-REx will describe the challenges in navigating to and around the asteroid Bennu, and the sample collection and successful return to the Earth.</p>
December	No Luncheon. Happy Holidays!

COMMENTS FROM TONY COMBERIATE and ARLIN KRUEGER

Our October speaker was **Robert Benson**, Emeritus Scientist in Goddard's Geospace Physics Laboratory (and GRAA member). His talk, entitled ***The First Winter at the Amundsen-Scott IGY South-Pole Station*** described his experiences as a member of an 18-man (and one dog) team that spent the first winter at the South Pole over 65 years ago. The International Geophysical Year, which ran from July 1957 through December 1958, was a program to coordinate observations among the world's geophysicists. Following the award of his BS in Geophysics from the Univ. of Minnesota, Bob was selected to collect seismic data and assist in ionosphere observations in the first South Pole winter-over scientific team. He returned to earn his Master's Degree in Physics at Minnesota and his Ph.D. at the University of Alaska, before joining Goddard in 1965.

Bob described the exploits of the team (half scientists and half military) and showed many photos of the South Pole Station that was constructed by Navy Seabees in late 1956. It contained a mess hall, sleeping quarters, a science building, a dark room for developing film, and an emergency shelter some distance from the main station. Two large generators (one as a backup) provided electricity. The exhaust pipes from the generator served as the snow melter to provide the water supply. The temperatures in the living quarters were about 60 °F, while the temperature in the tunnels between the buildings was about -40 °F and outside temperatures were as cold as -100 °F; the winds were often 20-30 knots. There was a washing machine, using water from melted snow, which had to be dug up routinely, put on a sled, and carried to the snow melter. Supplies were delivered to the team via many airdrops. A second

D-2 tractor was being parachuted to the Pole when it fell off its pallet and lost its parachute. It plunged 30 feet into the 2-mile-deep snow and ice as verified after a lot of digging.

The scientists brought instruments to study the Sun and the Earth, including a seismometer, ionosonde, cameras, and other instruments. They collected data from their instruments daily and logged parameters including temperature, wind speed, auroras, earthquake data, etc. During the 6-month winter, Bob and his colleagues weathered the darkness and harsh environment to compile many 35-mm color slides (digital versions used in his presentation) and over 50 rolls of 8mm movies. Using a pinhole camera Bob collected a 4-day time exposure of the moon as it circled the Pole. The team celebrated the June 22nd mid-winter day around a picnic fire, although their Uke would not stay in tune in the -60° weather.

A serious question was whether the ionosphere would disappear without sunlight to form ions during polar night. If so, communication from the Pole by HF (short wave) radio was impossible since it requires ionosphere reflection. Fortunately, they found that it still existed throughout the winter. They established contact with McMurdo Station and various ham radio operators, including a student in New Hampshire who monitored his radio all night for a chance to talk to the scientists at the pole.

The first artificial satellite, Sputnik, was launched by the USSR during their stay. Although its orbit inclination kept it below the horizon they listened to its 20 and 40 MHz HF transmissions which bounced between the ionosphere and ground multiple times on the way to the Pole.

The description of his experience based on his 8-mm movie film is available from antarctican.org (select "video" from the drop-down menu under "Pack Ice" at the top of the page) and also at polargateways2008.gsfc.nasa.gov (select "discussion documents" from the list at the left).

DIRECTORIES AND NEWSLETTERS: Send your email address to goddardretirees@gmail.com. to get our monthly Newsletters, which include synopses of the talks, special community announcements, and obituaries. Past Newsletters and links to videos of the talks are on our website <https://goddardretirees.org>. Multi-month abstracts of Newsletters are mailed to the retirees with only residential addresses in our files. We depend on retirees to furnish their home addresses to be listed in the biennial GRAA Membership Directories; only available as mailed hardcopies to members. These mailings are supported by donations to GRAA, P. O. Box 1184, Greenbelt, MD 20768-1184.

TREASURER'S REPORT: Treasurer Jackie Gasch received donations from Hongwoo Park, Frank Ottens, Ellen Herring, Bill McGuire, Bill Townsend, Richard Tagler, Joe Bredekamp, Gifford Moak in memory of David Littmann and John Purcell in memory of Linda Howard.

FROM THE GODDARD ARCHIVES: November 15, 1972 Scout launched SAS-2/Explorer 48 from San Marco Platform in the Indian Ocean off coast of Kenya, to do gamma ray research.

REMEMBERING OUR FORMER COLLEAGUES:

Dr. Min Namkung, 71, died on July 30, 2021. He was born on February 6, 1950 in Cheongju, Korea and moved to the United States in 1976 to pursue graduate studies in science, eventually attaining a doctorate in Physics from the College of William & Mary, and a graduate degree in Material Science from the University of Virginia. Min spent his professional life as a researcher within various divisions of NASA, where he worked in the fields of solid state physics, aerospace, nanotechnology, and space science with additional involvement in the STS program. He held over twenty patents and received the Exceptional Engineering Achievement medal from NASA for his pioneering work advancing nondestructive evaluation techniques for aerospace and commercial applications.

Dr. George Zerdian, 78, died on July 27, 2023. He was born in 1945 in Manhattan. He had several engineering degrees, including several PhD's. He studied at University of New York, City College of Engineering, Pratt Institute, Franklin University, and Johns Hopkins University. During his career at GSFC, he supported the moon landings, Skylab, Apollo Soyuz, the Space Shuttle, and EOSDIS. George also worked for the FAA.

Edward Fletcher Walker Jr., 92, died on September 24, 2023. He was born on August 23, 1931 in Baltimore, MD. He attended Olympia Community College for several years majoring in Architecture before enlisting in the Air Force. He subsequently graduated from George Washington University and began a career at GSFC as an electrical engineer. After raising two daughters, he and his wife, Laura, moved to Cocoa Beach Florida where, before retiring, he supported the Apollo and Space Shuttle programs.

John F Corrigan, 93, passed away on September 25, 2023 in Pinehurst NC. John joined the National Advisory Committee for Aeronautics (NACA) in 1957 and moved to GSFC when NASA was created. John supported many missions, including serving as the Launch Vehicle Manager for the NOAA-7 spacecraft launched on June 23, 1981 on an Atlas rocket, but spent the majority of his career on the Delta Launch Vehicle program until his retirement in 1987.

Robert H. Markley, 84, of Slanesville, WV, died on Tuesday, September 26, 2023. Robert (Bob) was born on October 13, 1938, in Union, West Virginia. He worked at Goddard as an engineer and project support manager in the Engineering Directorate and on the Earth Radiation Budget Experiment (ERBE) and Gamma Ray Observatory (GRO) projects for more than 20 years before retiring back to his home state of West Virginia in 1995.

Jack VanZant, 91, of Gate City, VA, died on October 8, 2023. Jack was born on October 26, 1931, in Scott County, VA. He worked for 32 years as an engineer at Goddard, Laboratory for Planetary Atmospheres, Experiment Development Branch, and for the Laboratory for Extraterrestrial Physics, Infrared Astrophysics Branch.

Dr. Nelson C. Maynard, age 85, of Gilford, NH and Greensboro, VT passed away on October 13, 2023. Dr. Maynard was a world-renowned research scientist and experimental physicist. He received a BS in Electrical Engineering from the University of New Hampshire in 1960, a MS in

Electrical Engineering from MIT in 1962, and a PhD in Physics from the University of New Hampshire in 1966. He then joined the Electrodynamics Branch at Goddard Space Flight Center as an Astrophysicist and pioneered techniques for measuring electric fields in the ionosphere.

Mary Rouland, 79, died on Friday, October 13, 2023 at her home in Crownsville, Maryland. Mary Ann Dahlstrom was born on December 24, 1943 in Fargo, North Dakota. She worked in the Stabilization and Control Branch Systems Division where she worked on the Automatic Scaling Program, a digital program designed to eliminate the tedious, time-consuming process of manually scaling a linear or nonlinear system of differential equations for an analog computer and was co-author of a 1970 report on "Automatic Analog Computer Scaling Using Digital Optimization Techniques."

Thomas C. Moore, 91, of Easton MD, died on October 17, 2023. Tom was born in Brooklyn, NY on November 21, 1931. Thomas worked as a Mission Support Manager for Goddard.