

# AVIATION WALL OF HONOR

**Lt. Colonel**

**Reino Roy Niemi,**

**USAF (Ret.)**



Reino Roy Niemi ("Ray") was born August 20, 1937, in Marquette, MI, to Arne E. and Katherine M. (Jarvinen) Niemi, both of Finnish descent. The Niemi and Jarvinen families had settled in the Upper Peninsula of Michigan because, with lakes and forests, it was reminiscent of Finland, their homeland. Ray grew up in Skandia and attended Graveraet high School in Marquette (class of 1955). He graduated from Michigan Tech in 1959 with a B.S. in Electronics,

Communications option. Ray served active duty in the U.S. Air Force (1959 - 1963) and reserve duty thereafter utilizing his expertise in combat communications, operations, and navigation. During his reserve duty, he served as the Huntsville, AL area's liaison officer for the U.S. Air Force Academy from 1973 to 1974; he next served as the navigation Aids & Communications Management Officer, then finally as the Deputy Operations Officer of the 226<sup>th</sup> Combat Communications Group before retiring from the Air Force Reserve in 1986 with the rank of Lt. Colonel.

It was while on active duty and assigned to the radar squadron at Thomasville Air Force Station, Alabama (1960-1962) that Ray met Florence Arcola Tucker. They wed on August 6, 1961. Ray was offered a regular commission in the Air Force, but declined in favor of a civilian engineering career in the aviation and space industry (1962). This path led him to Huntsville, Alabama ("Rocket City") during the decade that placed man on the moon, and while the aerospace field became his passion and pursuit. Ray's career continued to follow both military and civilian tracks as he remained in the Air Force Reserve for over two decades. In June 1984, Ray received the Air Force Commendation Medal; in November 1986, he was awarded the Air Force Meritorious Service Medal.

As the United States was entering the space race, Ray arrived in Huntsville, AL in 1963, beginning a career of 34 years in the U.S. aerospace industry. His contributions include engineering design and development work in avionics, ground support systems, command and data systems, and various telemetry systems (technology that allows the remote measurement and reporting of information of interest), with a primary focus on rocket boosters, various launch vehicles, and space transportation during some of the most exciting years of our nation's aeronautical history. The yearly years of Ray's career were devoted to support of NASA Marshall Space Flight Center (MSFC) missions including the Saturn, Apollo, Skylab, and Space Shuttle programs, and culminated with the SpaceLab and SpaceHab programs (both of which flew modules in the Space Shuttle cargo bay), ending with his work on Expendable Launch Vehicles. Ray's SpaceLab work was documented in a Mining Journal article (Marquette, December 9, 1983) which displays his excitement about the space program. The article by Kevin Brown was appropriately titled: "Ex-Skandia man helps make Space Lab work."

It was not long after reaching Huntsville that Ray and Arcola's family had grown to five, with the addition of three children -- Kathy, Kevin and Kim -- so the Finnish roots soon sank deep into Alabama soil. Ray's initial work at Brown Engineering and then Sperry was in support of the MSFC Saturn and Apollo programs specializing in various telemetry system design and development. Next, with Sperry then United Space Boosters, Ray took design and engineering lead on electrical support equipment for the Space Shuttle solid rocket boosters (SRBs) and an

SRB simulator used at Kennedy Space Flight Center. Ray moved to McDonnell-Douglas Aerospace (MDA) in 1978. His work initially focused on support of the NASA MSFC SpaceLab program where he managed design of flight avionics and SpaceLab command and data management systems. Ray soon worked his way up from Technical Specialist to Unit Chief, SpaceLab Command and Data Management Systems in which position his unit successfully carried out the design, development, test and implementation of the SpaceLab Verification Flight Systems flight and ground support equipment. In 1983, Ray was promoted to Section Chief, SpaceLab Command and Data management Systems. His responsibilities included managing the design maintenance and new design activities for the flight Avionics and EGSE. From 1989 to 1993, Ray – handpicked as Manager of SpaceHab Avionics and Ground Support Systems – managed the design, development and testing of the flight avionics and ground support systems hardware and software for an entirely new vehicle, SpaceHab. His work culminated with the 100% successful flights of SpaceHab modules one and two. Next, as Senior Principal Engineer, he worked on the MDA Expendable Launch Vehicle, finally finishing his career with McDonnell-Douglas Aerospace after 34 years devoted to engineering and development in aviation and the space program. Ray's many significant contributions happened in a period that will long be remembered as the golden era of man's pioneering the final frontier, space.

Ray's commendations from NASA include the Apollo Achievement Award (1969) for service and advancement of our nation's capabilities in aeronautics and space, culminating in Apollo 11's successful achievement of the first human landing on the moon, and the Skylab Achievement Award (1974) for service to our nation extending our knowledge and capabilities into space. In addition, McDonnell-Douglas Aerospace awarded Ray commendations for his contribution to the success of the SpaceHab mission on Space Shuttle STS-60 (1994), and for his work on the Delta IV evolved Expendable Launch Vehicle (1966).

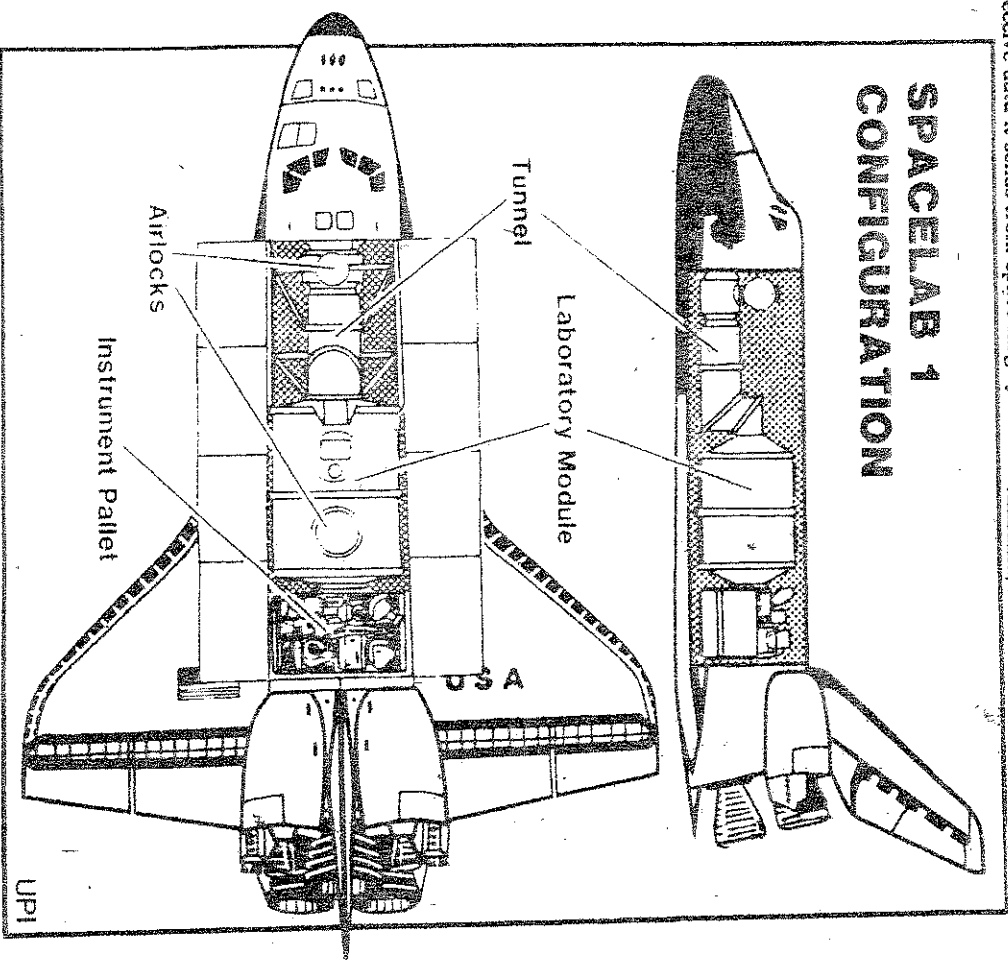
Northern Michigan University student Matt Moran, who ran for the city commission as a write-in candidate, received 22 votes. Robert Nemacheck was the only candidate seeking the BLP seat being vacated by Leonard Angell. Angell is stepping down from the BLP after serving two terms. Nemacheck received 420 votes.

# Ex-Skandia man helps make Space Lab work

By KEVIN BROWN  
Journal Staff Writer

HUNTSVILLE, Ala. — When Space Lab 1 blasts off the launch pad of the Kennedy Space Center in Florida Nov. 28, ground stations will receive data it sends from space largely due to

## SPACELAB 1 CONFIGURATION



registered the highest unemployment rate, although the figure has dropped from an August rate of 15.5 percent. A year ago the Flint rate stood at 17.9 percent. The Upper Peninsula's September rate of 12.8 percent registered a slight decrease from the August figure of 12.9 percent, showing 18,300 jobless residents regionally. The rate showed

the work of a former Skandia man.

Ray Niemi, who graduated from Graveruel High School in 1959 and from Michigan Technological University in 1969, is a unit chief with the McDonnell Douglas Corp., builders of the space lab. Contacted at his home in Alabama, Niemi traced the history of the project

per their fortunes. Niemi said MESC unemployment figures do not include residents who have dropped out of the job market altogether. But the statistics do include people no longer drawing unemployment compensation, she said.

and his role in it. "The space lab was conceived by the European Space Agency," he said. "They contracted with other European countries to fly a space lab behind the space shuttle. "NASA contracted McDonnell Douglas to work with the Europeans to make sure the space lab was compatible with the orbiter (space shuttle).

What the space lab provides is a "shirt-sleeve working environment" for three scientists who will accompany three space shuttle crewmen on the Space Lab 1 flight. Niemi said the lab, connected to the rear of the space shuttle, is 12 feet wide and 23 feet long. "It looks like a big tin can," he explained. While in flight, scientists will conduct 72 experiments in areas of astronomy, solar physics, plasma physics, life sciences and material sciences. And that's where Niemi comes in.

"The plan was to have a VFI (Verification Flight Information) system on board," Niemi said. This system, he explained, would make sure that instruments on board the space lab would transmit accurate information while undergoing the stress of a space flight with its thunderous lift-off, extreme cold temperatures and the wrenching strain of re-entry.

After completing work on the VFI system, Niemi was given the job of designing some of the flight equipment as well. Niemi worked on a system which assures accurate transmission from two television cameras on board the

spacecraft. These cameras serve a scientific use and also provide TV networks with footage of the space flight. Niemi began working with McDonnell Douglas when it took on the space lab project six years ago. But he explained that he has worked in the space program since 1963. After leaving the air Air Force, where he was a communications and electronics officer who also worked with radar, "I applied for jobs in areas I was interested in. One of those areas was the new space program." The former Skandia resident said he joined the new program because "it seemed the most exciting" career choice. Niemi worked on telemetry systems — those which transmit data from space — for the first Saturn rockets.

Now 46, Niemi said "There's nothing routine" about working with the space program. "There are new challenges every day." Niemi lives in Huntsville, with his wife Arcola. They have three children, Kathy, 21, Kevin, 20 and Kimberly, 17. He said the family vacations almost every year in the area. "We like to come back to Upper Michigan," he said. "We enjoy it a lot."

He noted that Alabama has some things in common with the U.P. — forests, streams — even a hockey team at the University of Alabama in Huntsville. Still, Niemi said, "I do miss some of the winter sports."

See Section B

## Journal cookbook featured

Looking for some new recipes to try out on family and friends? Look no further than Section B of today's Mining Journal, the eighth annual Mining Journal Cookbook. Featured in the cookbook are the recipes of semianalysts and grand prize winners in the Journal's annual cook-off, held Saturday at Northern Michigan University, as well as other recipes entered in the contest.

The cookbook offers everything from appetizers to desserts. Among the recipes are Stuffed Mushrooms, Apple and Sprout Salad with Cucumber Dressing, Crispy Crunchy Potatoes, Pecan-Breaded Chicken with Mustard Sauce, Egg Nog-Cherry Nut Loaf and Italian Cannoli Torte, to name a few. Please turn to this section, which salutes the great cooks of Superiorland — and enjoy!