Air Force Missileers

The Quarterly Newsletter of the Association of Air Force Missileers
Volume 23, Number 1 *"Advocates for Missileers"* March 2015

The Mission of the Association of Air Force Missileers -
- Preserving the Heritage of Air Force Missiles and the people involved with them
- Recognizing Outstanding Missileers
- Keeping Missileers Informed
- Encouraging Meetings and Reunions
- Providing a Central Point of Contact for Missileers

AAFM Special - Free Three Year Electronic Membership for new Active Duty Enlisted Members

Association of Air Force Missileers

Membership Application

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Breckenridge, CO 80424
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Membership Categories

Annual ($20) ____ Active Duty/Student ($5) ____
Three Years ($50) ____ Active Duty/Student ($14) ____
Lifetime ($300) ____ (Payable in up to 12 installments)
Awarded Missile Badge - Yes _____ No _____

Member Number _____

Name

Home Phone

Address

E-mail

City

State

Zip Code

Rank/Grade

Active Duty ☐ Retired ☐ Reserve or Nat Guard ☐ Discharged/ Separated ☐ Civilian ☐

Can AAFM release this information-only to members and missile organizations? Yes ____ No ___

Signature

Summary of your missile experience - used in the AAFM database - attach bio if you have one

Missile Systems and Units

Navaho____

Thor___ Units_____ _____

Matador ____ Units _____ _____

Blue Scout ___ Unit _____

Titan I ___ 568___ 569___ 850___ 851___ 703/451SMW___

Titan II ___ 308___ 381____ 390 ___

GLCM __ JCMPO__ 38___ 303___ 485___ 486___ 487___ 501___ Dugway__ 868TMTS/G___

Snark ____ 702SMW ____

Jupiter ____ Italy___ Turkey ___

Bomarc ___ Units ____ _____

Mace ____ Units_____ _____

Atlas D___ E___ F___ 548___ 549___ 550___ 551___ 556___ 567___ 576___ 577___ 578___ 579___ 706/389SMW__

ALCS___ 2ACCS___4ACCS___

Minuteman I____ II/Mod____ III____ Peacekeeper____ 44___ 90___ 91/455 ___ 321 ___ 341 ___ 351___ 4062 (MM Train)___ Small ICBM__

Space Systems___ Thor___ Atlas___ Titan II___ Titan III___ Titan IV ___ Delta ___ Nike ___ Vanguard ___ Scout ___ EELV___ Apollo___ Mercury___ Gemini___ MOL___ Agena___ ABRES___ Ranger___ Shuttle___ Skylab___ Sat Control___ SpaceSurv___ BMEWS___ DSP___ DMSP___ DSCS___ GPS___ PavePaws___ Other Space System_____ 21SW___ 30SW___ 45SW___ 50SW___ Other Space Units_____

Airlaunch___ AIM___ AIR___ AGM___ SRAM___ ALCM___ ACM___ AAMRAM___ RPV/Drone___ Hounddog___ Quail___ Skybolt___ Other Airlaunch Systems_____ _____ Airlaunch Units _____

Headquarters/Numbered Air Force/Specialized Units (Check only if assigned to the headquarters level)

JCS/DOD/SECAF___ Air Staff___ AFIG___ AFOTEC___ SAC or JSTPS___ AFSPC___ AFGSC___TAC___ ACC___ STRATCOM___ PACAF___ USAFE___ EUCOM___ NATO or AAFCE___ AFSOUTH___ AU___ AFMPC/AFPC___ DTRA/OSIA____ Other MAJCOM_____

HqARDC/AFSC___ WDD/BMD/BSD___ BMO___ SAMSO___ SMC___ WTR___ ETR___ 6555___ 6595___ SACSO___ SATAF_____

HqAFLC ____ AMC___ Ogden___ SBALC___ SAALC___ SMALC___ AGMC___ SACLO___

HqATC?AETC___ CTTC___ LTTC___ STTC___ VAFB ATC___ 381TRG___ 392TRS___ 532TRS____ 533TRS ____

NAF 2___ 3___ 5__ 8___ 14__ 15___ 16___ 17___ 20___

Division Hq 4___ 12___ Other ____

Vandenberg Units 1MslDiv___ 1STRAD___ 392___ 394___ 395___ 576___ 4315___ 3901___ 51MMS ____ Other VAFB Units _____

Other Units _____

Specialties Operations___ Maintenance___ Munitions___ Comm___ Facility Mgr___ Safety___ Civil Eng___ Support___ Research/Devel/Test___ Instrumentation___ Security___ Contractor___ ( )Other _____

Missile/Space Competition Participant___ Years_____

Commander -Sqdn___ Group___ Wing___ Other_____

Other Information_____
_____
_____

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The New Visitor Center at the Minuteman Missile NHS in South Dakota

Join AAFM at MiMi in September

On Saturday, 26 September 2015, the National Park Service (NPS) will host the grand opening of the new Visitor Center at the Minuteman Missile National Historic Site (MiMi). AAFM is working with the NPS to make the grand opening ceremony a fitting event to commemorate the mission of intercontinental ballistic missiles during and after the Cold War.

The site, called MiMi by many, consists of a Launch Control Facility complete with the underground Launch Control Center D-01 and Minuteman Launch Facility D-09, a few miles away. The new Visitor Center replaces trailers that have been used since the site opened in 2001. MiMi already hosts a large number of visitors every year, and the NPS expects the new center to increase the number of people who stop along I-90. The new center will include a number of outstanding displays, including both a Minuteman work cage and an LCC blast door exhibit that will give visitors a real feeling of what life is like in the silo and the control center. The two sites were originally part of the 44th Strategic Missile Wing/Missile Wing at nearby Ellsworth AFB. AAFM worked with the NPS in the mid-1990s and the NPS was able to get the two facilities turned over to them in 1999. A number of AAFM members took part in the ceremony that year that marked the turnover.

MiMi represents much more than just two intercontinental ballistic missile facilities for Ellsworth, The site has done an absolutely outstanding job of telling the stories of the Cold War and nuclear deterrence, and the site has a significant role in preserving the history of that era and that mission. The site also tells the story of the mission of nuclear deterrence that is still just as important now as it was when the Minuteman missiles came to Ellsworth over fifty years ago.

The program at the new Visitor Center at 1000 on 26 September will feature senior leadership from the NPS and the Air Force. AAFM expects most of our board members to attend, and we will present a painting by board member CMSgt (Ret) Joe Andrew to the NPS for display in the new Visitor Center. A number of AAFM members have expressed an interest in attending, and we expect more to join us as the word spreads about the event.

AAFM has arranged lodging in Rapid City at the Comfort Suites just off I-90 between the town and the base. We have arranged special rates for all those who want to join us, and we will host a dinner Saturday evening at the hotel after we return from the ceremony. We will have charter bus transportation to the ceremony, so attendees will not have to make the hour drive to the site that is east of Wall. Following the ceremony, the buses will visit both the LCF and the LCC for above ground visits. Due to the size of the crowd expected, underground tours will be extremely limited. Remember that the elevator at our early sites only held a few people, and space below ground is very limited. AAFM will also host a reception at the Visitor Center following the ceremony.

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Launch Control Facility D-01 at MiMi

We have met with the leadership of the 28th Bomb Wing at Ellsworth, and they will be involved, providing a color guard and other assistance, as well as support for senior Air Force leaders who attend to participate. If you have time during your visit, you may also want to stop by the South Dakota Air and Space Museum at the front gate at Ellsworth. They have extensive missile and aircraft displays.

The registration form on the inside back cover of this issue has full details on the hotel and how to make reservations, as well as a form that you can use to sign up for the bus and the dinner. You will make the hotel reservations directly and pay on your own, and you can mail a check for the dinner and bus or go to our web page to register and pay by credit card. If you can join us, you will need to register soon, since we expect to fill both the hotel rooms and the available bus space. We strongly recommend that you do not try to attend the ceremony on your own without registering with AAFM due to the large number of people we expect.

For those who want to stay for more than just the two nights before and after the ceremony, the hotel will offer the same special rate for a few days before or after. The hotel also has an airport shuttle available for a small fee. The room rate includes breakfast each day, and there are several dining choices nearby.

We will have full details on the dinner, the bus transportion, tours and possible organized tours for both the museum and the bomb wing at Ellsworth. There is a box to check if either of these interest you. We will advise of any fees there. We will not arrange buses for these tours so you will need to have tranprort if you plan to visit the base, the SD Air and Space Museum or MiMi on a day prior to or after the ceremony.

You can call AAFM at 970-453-0500 or email us at aafm@q.com, or visit the Warble Tone part of our web page at afmissileers.org for more details.

JB-2 Loon

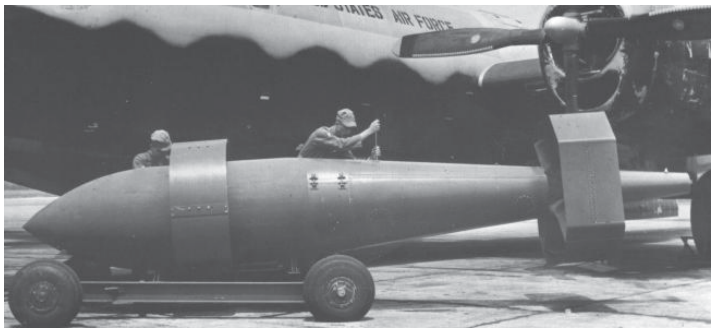
Do Missileers Get Overseas Tours?

– by Col (Ret) Charlie Simpson, AAFM Executive Director

The majority of us who served in missile operations, maintenance, security, communications, munitions, research and development or other areas spent our time in the continental United States, since most of us were in the intercontinental ballistic missile part of Air Force missile programs. Most of us spent a lot of time in what we sometimes call the "Northern Tier" or at some Midwest prairie state. But some of you may be surprised to know that some of us got to serve overseas – in a foreign country – in an Air Force missile assignment.

Some of our members worked on what we sometimes call the "small missiles," those carried by fighter aircraft, like Sidewinder, Falcon, AAMRAM or one of the many others over the years. The officers and enlisted members who worked on those systems also earned the missile badge, and we have a couple of hundred members who spent most of their career in those systems. They served overseas, fought in Viet Nam, and spent time with fighter units at locations around the world. They are Missileers just as much as those of you who were in Minuteman at Minot – they just had a little more variety in lifestyle, duty station and experience.

But those who worked the airborne systems are only part of the story. Over the years, there have been numerous opportunities for Missileers to serve at bases outside what we sometimes call the CONUS (the contiguous 48 states). In the first decade or so after the Air Force became involved with missiles, we had a lot of people assigned to systems and units in Europe and the Pacific. But even before that, a



VB-13 Being Loaded on a B-29

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The VB-3 Razon on Display at the National Museum of the Air Force (NMUSAF Photo)

few people probably had not even heard the term Missileer when they got involved with some very new missile systems. AAFM Member Ron Plante recently sent copies of a document from 7 September 1948 titled "Progress Report on Proposed Alaskan Program for 1948-1949 Test Season, for week ending 3 September 1948." The document, from the Commanding Officer, 1st Cold Weather Test Detachment, at Ladd AFB, Alaska (APO 791), summarizes upcoming tests. The cold weather tests include 16 air launches of JB-2 missiles from B-29 aircraft and 10 ground launches. The JB-2 was the Loon, the US version of the German V-1 Buzz Bomb. Ford Motor Company manufactured about 500 Loons. The test also included test of "VB-13 (Tarzon) missiles – 8 air launches from B-29s and 8 free drops of 12,000-lb bombs" and "VB-2 (Razon) missiles – 25 drops of inert bombs from B-29 aircraft."

The VB-3 Razon (for range and azimuth) was a 1,000-pound general purpose bomb fitted with flight control surfaces. Development began in 1942, but it was not used during World War II. During the Korean War, 19th Bomb Group B-29s dropped 489 Razons, the first in August 1950. Razons were not ideal weapons. For instance, the warhead was usually not big enough to drop a bridge (it took on average four Razon hits). Also, about one-third of those dropped did not respond to radio control. Despite these difficulties, B-29 bombardiers destroyed 15 bridges with Razon bombs. (from the National Museum of the Air Force Fact Sheet)

The Bell Aircraft VB-13/ASM-A-1 was an unpowered free-fall bomb fitted with a circular lift shroud and a tail-mounted octagonal control shroud. Because of its size, it could be carried only semi-recessed in the bomb bay of the B-29. When the bomb was dropped, a bright flare in the tail was ignited, which was then visually tracked by the bombardier. When the VB-13 deviated from the planned course, he would use a control stick to send corrective commands to the weapon, which had movable flying surfaces on its tail shroud. The guidance system consisted of the AN/ARW-38 radio transmitter in the B-29 and an AN/URW-2 receiver in the missile. Beginning in December 1950, the VB-13/ASM-A-1 was used in the Korean War for attacks on selected strategic bridges, which were hard to hit, let alone destroy, with conventional unguided bombs. There were several problems with the Tarzons, but the weapon was eventually credited with six destroyed targets in Korea. However, in mid-1951 the Tarzon was withdrawn from service, mainly because the continuing technical problems (including safety problems which had caused the loss of one aircraft with all crew) and the huge maintenance, training and procedures overhead necessary with this "non-standard" bomb. (from the Directory of US Missiles and Rockets)

By the early 1950s, the Air Force had a significant number of Missileers overseas. The Matador, the TM-61, missile was deployed in Germany beginning in 1954, when the 1st Pilotless Bomber Squadron began operation at Bitburg AB, Germany. Matador remained in service until it was replaced by the Mace, the TM-76. The missiles were later deployed to the Pacific, in Okinawa, Taiwan and Korea, and the last unit shut down in October 1969, the 498th Tactical Missile Group at Kadena AB, Okinawa. We have a large number of members who served in Matador and Mace during its lifetime, and have had numerous articles and stories about life in Matador and Mace in our newsletter. You can find them listed in the index on our web page. We have also had a story about testing of the missiles in Libya, where operational testing, called Annual Missile Launch Operations, took place similar to what we now do at Vandenberg.

When I began missile duty in Titan I at Mountain Home AFB, ID, almost all of my enlisted troops from SSgt to MSgt had come from Matador and Mace. They were a great asset as we began operating the new ICBMs, since they already had years of experience in missile operations and maintenance.

George Mindling and Robert Bolton, both AAFM members, wrote an excellent book about the history of Matador and Mace titled "US Air Force Tactical Missiles,

Matador with Bitburg Missileers

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Thor on Alert in the UK

1949-1969, The Pioneers." The TAC Missileers web site is also a great source of more information.

Many others of you served at about the same time, in the early and mid-1960s. We deployed the Thor intermediate range ballistic missile (IRBM) at bases in the United Kingdom, jointly operated and maintained by US Air Force and Royal Air Force Missileers. At the same time, we fielded the Jupiter IRBM in both Italy and Turkey, again operated and maintained jointly by US Air Force personnel and host nation forces. By April 1965, all of the IRBMs were gone from Europe and many Air Force Missileers from those systems joined us in Minuteman and Titan II.

John Boyes authored a great history of Thor in the UK titled "Project Emily, Thor IRBM and the RAF."

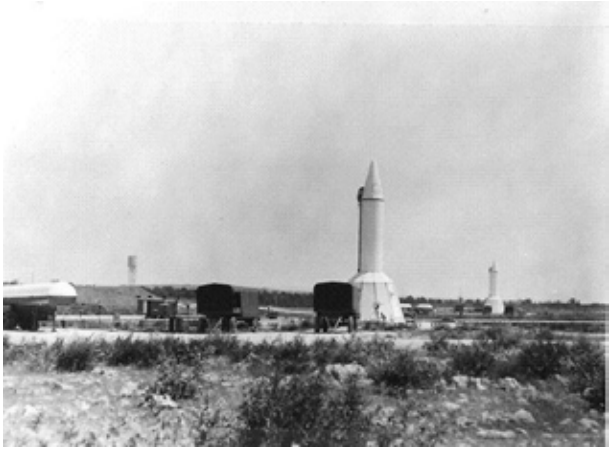
After the end of Thor and Mace, Missileers lost the opportunity to serve overseas unless they left the career field, except for a small number at places like Johnson Island in the Pacific, where we had Thor missiles operational for a while, and downrange in the Atlantic and Pacific. The largest group was probably at Kwajalein Atoll, which has served as a target area for ICBM testing for many years, and still has that mission. We also used Eniwetok Atoll for a target area for several years, but when I visited there in 1966, there were only two Air Force officers and two enlisted members, with most of the workforce there made up of contractor personnel. There were a very small number of positions as some of the overseas headquarters, and some of our members got to serve overseas in the space mission area, but these weren't really Missileer jobs.

In the early 1980s, the world changed dramatically for Missileers. President Jimmy Carter made the decision to deploy the Pershing II, an Army system, and the Ground Launched Cruise Missile (GLCM), an Air Force System, to counter the Soviet buildup of intermediate range missiles in Eastern Europe. We tried very hard to get the Soviets to stop the buildup and sign the Intermediate Nuclear Forces treaty, but that act didn't happen until the deployment of GLCM was almost complete years later.

President Reagan placed a very high priority on GLCM and Pershing, and a whole lot of Strategic Air Command Missileers, including the author, ended up in Europe in missile assignments. We began building six new missile bases for GLCM, two in the United Kingdom, and one each in Sicily, Germany, Belgium and Holland. All of the bases except the one in Holland became operational, but before the unit there could become combat ready, the Soviets signed the INF treaty, and we destroyed the GLCM missiles and closed the GLCM bases.

I was selected to go to Comiso AB, Sicily (it bounced back and forth between being called an Air Base and an Air Station), and was the first US Air Force person to be permanently assigned to a brand new base near where General Patton had landed in 1943. The base, destroyed by us during the invasion, was still a collection of bombed out Italian and German Air Force buildings when I arrived in April 1983. The base had fallen so quickly during the 1943 invasion that the Stuka bombers that took off to bomb the American forces landing on the beaches eight miles away were met by American soldiers when the pilots landed to be refueled and to have bombs loaded. You can read about the building and operation of the GLCM bases in several articles in the AAFM newsletter, all listed in the index on our web page.

Between 1982 and 1991, a whole lot of SAC Missileers ended up being US Air Forces in Europe (USAFE) Missileers, performing the mission of nuclear deterrence in a far different environment than they experienced back at SAC missile wings. The only underground part of GLCM was the foxhole you dug at the remote site in some forest where your flight of 16 missiles in four mobile transporter-erector-launchers, two mobile launch control centers and a mixture of maintenance, security and support vehicles dug in and hid during periods of increased readiness. Those of us who had lived through numerous SAC Inspector General visits, the Operational Readiness Inspections we all loved, got to experience something entirely different, the North Atlantic Treaty Organization (NATO) Tactical Evaluation (Tac Eval). SAC ORIs were never easy, but the intensity couldn't compare to a seven to ten day Tac Eval, with evaluators coming from all the NATO countries. GLCM was



Jupiter on Alert

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GLCM LCC in the Forest

a NATO system, jointly manned by US Air Force Missileers and security forces from both the US and the host nation. We spent hours or days in chemical gear, the evaluators used real smoke and real explosives, and we ran around carrying M-16s and digging holes.

My own experience in GLCM was short – I was sent for a twelve month non-accompanied tour to oversee getting a new base ready. From the time I arrived at the end of April, things moved fast. Within ten days after my arrival, we had almost 500 permanent party and temporary duty military on a rapidly growing base. The initial folks lived either off base in leased apartments or hotels, or in the case of many, twelve to a room in portable steel buildings hastily constructed on base. We had temporary quarters, temporary offices and shops, a temporary dining facility and temporary "everything else." Two months later, at the end of June, we stood up the 487th Tactical Missile Wing as maintainers, operators and nuclear security forces joined all of the support folks who had arrived in the last few weeks. No families, an Italian decision, just lots of work. In the fall, the entire GLCM flight, people, equipment and missiles, arrived at the nearby Naval Air Station all on one day, and suddenly, we had an operational nuclear mission at Comiso.

I agreed to stay an extra couple of months past my twelve month normal rotation date to be there for the first Tac Eval, but when the team of over 100 NATO evaluators arrived in June 1984, the Italian base commander informed the team, during the in brief, that no Tac Eval could take place "this week" because the Italians were having national elections. The Tac Eval team packed up and left, to return months later. I packed up and headed east, to Incirlik Air Base, Turkey, where I got to experience the demanding Tac Eval that a fighter wing with a nuclear mission goes through, so I got my share of gas masks, smoke bombs and explosives in a new world for a lifelong SAC Missileer. My overseas tour, coming when I had almost 24 years in the AF, resulted in five consecutive years in Europe, with a tour in Spain coming after the one in Turkey. It also gave me the opportunity to experience a totally different aspect of our service, since the tours in Turkey and Spain were on fighter bases, a life far different than that of a missileer.

GLCM went away quickly. Once the INF treaty was finalized, both sides began dismantling the nuclear forces on both sides of the Iron Curtain. I retired in 1989, and got invited to return to Comiso in May 1991 for the deactivation of the missile wing there and the closing of a very interesting chapter in Air Force missile history.

I am only aware of one more instance where missileers had an opportunity to serve overseas, and this time, it was in a combat role in the Middle East. In September 1990, Colonel Doug Livingston, an AAFM Member and the last commander of the 868th Tactical Missile Training Group, the GLCM training unit at Davis Monthan AFB, AZ, was tasked with assembling an organization, the 4468th Tactical Reconnaissance Group. The unit would quickly deploy as part of Operation Desert Shield, which became Desert Storm, or the first Gulf War. The mission of the unit was to deploy and launch BQM-74C drones, manufactured by Northrop for the Navy. The drones were to operate as decoys over select Iraqi targets permitting Air Force "Wild Weasels" to destroy enemy radar and SAM sites as they tried to track the drones. The effort involved 78 missile operations, maintenance and security personnel and ten others who worked the program but did not deploy. On 19 January 1991, the group carried out its mission and launched 30 drones from their mobile location near the Iraq border. You can read a full account of the story of the 4468 TRG in the June 1999 issue of the AAFM Newsletter.

So, no, missileers don't have a lot of opportunities to serve outside the US, but when they do, what they are involved with is far from routine. This article can be a good lead in for your stories about life as a missileer outside the US. We will publish stories from you in as many issues as it takes to tell everyone's story. You can send your story or article to us by mail on paper or electronically by email to aafm@q.com.

Gen Chuck Horner and 4468th Missileers

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Museums You Need to Visit

The Association of Air Force Missileers has been providing grants to museums since 1994. Each year, we send out applications to over 30 museums, and usually receive between 5 and 10 applications. We ask museums to request grants in the $2,000 to $5,000 range, normally, so we can provide several grants with the $10,000 we allocate for missile display grants each year.

To date, we have provided almost $210,000 to 24 museums, and we donate these grants each year in memory of AAFM members who have passed away since the last grant cycle.

We asked all the museums on our mailing list to provide short articles about the facility, the displays and information on how to visit. We have the first few articles in this issue, and will add other articles each issue in the future until we have featured all the museums that respond.

Plattsburgh Atlas F Site Model

Plattsburgh AFB Museum

Plattsburgh Air Force Base (AFB) was unique in USAF missile history. It was home to the only in-ground ICBMs east of the Mississippi River, with ten Atlas missile silos in northeastern New York and two in Vermont.

The new Plattsburgh AFB Museum, which opened on 7 June 2014, tells the story of the Atlas missiles which once ringed the former Strategic Air Command Base. Thanks to a grant from AAFM, the museum was able to devote a quarter of its main display area to the Atlas missile.

Ten story board panels tell of the Atlas missiles, their crews and their operational history. Visitors can also view a 1/72 scale model of a launch complex with a missile, above-ground buildings ventilators, and entrance to the underground complex, along with model figures to provide a sense of scale. Visitors can also view artifacts of the Atlas era, and even learn the final disposition of each Atlas missile and launch complex.

The museum is operated by the Battle of Plattsburgh Association and is located in the former Plattsburgh AFB Military Museum building. This is the first building on the right when a visitor enters the lakeside portion of the former base. Hours are 10 am to 3 pm, Wednesdays through Saturdays, May through October. Admission is $2.00 per person, or $5.00 per group, up to ten persons. Individual membership is available at $25.00, with lifetime memberships at $250.00.

Commander and Deputy Commander "Hard Hats"

For further information, contact Dave Deno, the Battle of Plattsburgh Association Manager at 518-566-1814 or at manager@battleofplattsburgh.org. The museum has its own Facebook page, which is a great way to keep up to date on recent news and events at the museum.

Museun of the Western Prairie Exhibit

The Altus Museum *- by Bonnie McAskill*

The designation of Altus AFB, OK, as the location of the 577th Strategic Missile Squadron in 1961 had a long-lasting influence in Southwest Oklahoma. In a permanent exhibit, the Museum of the Western Prairie in Altus showcases the history of the twelve missile sites that were located within a forty-mile radius of Altus AFB.

Based on work that was done for an Atlas exhibit launched in 2003 with a grant from AAFM, an all-new exhibit named "The Weight of the World on Its Shoulders"

Museun of the Western Prairie Exhibit

was unveiled in 2014. The exhibit details the Cold War Era policies of the early 1960s, explores the construction and operation of the sites, and explains the reasons for their being phased out in 1965.

The new exhibit showcases an actual Launch Control Console positioned so that museum visitors can see the front of the console as well as its "innards" reflected in a mirror situated behind the opened back of the console. Using narrative, photographs, and graphics, a 16-page flip book explores *The Development of the Atlas Missile, The Arrival of the Atlas, The Missile Complex, Life as a Missileer,* and *The Retirement of a Pioneer.* Central to the exhibit is a hand-carved replica of the squadron's patch which symbolized their mission: To be on constant alert, day and night, around the world.

The exhibit is now a standard field trip for a nine-week advanced placement history class at Altus High School titled the Cold War in America. Oklahoma History Teacher of the Year for 2014 James LaGrand brings his students to the museum for a director-led tour of the exhibit.

Future plans call for touch screen loaded with videos to further engage visitors in the history of the 577 SMS.

The Museum of the Western Prairie is at 1100 Memorial Drive, Altus, OK 73521, 580-482-1044. Open Tuesday-Saturday 10 am to 5 pm, admission Adults $4, Seniors $3, Children (6-18) $1, Military $3.

Minuteman Missile National Historic Site

The Minuteman Missile National Historic Site was established in 1999 to preserve two 1960s era Intercontinental Ballistic Missile (ICBM) sites: Launch Control Facility Delta-01, including the underground Launch Control Center, and a Launch Facility (missile silo) Delta-09. Minuteman Missile is the only national park unit specifically designated for the Cold War.

The park is open on weekdays during the fall, winter and spring from 8:00 am until 4:30 pm, seven days a week Memorial Day through September. The park is closed three days per year: New Year's, Thanksgiving, and Christmas.

A visitor center at exit 131 on Interstate 90 opened in November 2014, and exhibits which will tell the story of the Minuteman Missile's role as part of the United States' policy of strategic nuclear deterrence during the Cold War will be installed in advance of a scheduled grand opening and dedication ceremony for the facility on Saturday, 26 September 2015.

Contact information: Minuteman Missile NHS, 24545 Cottonwood Road, Philip, SD 57567, 605-433-5552

LF D-09

Indiana Military Museum

Established in 1984, for 26 years it was a nice under-visited museum with a surprising amount and depth of military relics. In 2010, that changed when it relocated to its present site adjacent to the George Rodgers Clark National Park, site of the most western battle of the American Revolution in 1779.

The museum contains artifacts dating from before the fight for American independence to the present. It has been described as "one of the best, most comprehensive collections of military memorabilia in the country" by General William Westmoreland. The armor collection includes tracked and wheeled vehicles from the US and other countries, both friend and foe. Many are in running condition and, along with a vast assortment of soft-skinned vehicles, are demonstrated at various events and reenactments throughout the year. It also has one of the best collections of General Officer uniforms in the country, from WWI to present day.

Aircraft and related artifacts range from a fragment of a WWI Zeppelin to a modern F-16. Displays also include

Indiana's Mace

small items, such as cloth wings worn by the pilot of the first allied glider to land preceding the D-Day invasion, the trousers worn by Doolittle Raider Ted Lawson, pilot of the B-25 "Ruptured Duck," and author of the book, Thirty Seconds Over Tokyo. There is a garrison cap belonging to Captain Robert Morgan, pilot of the B-17 "Memphis Belle,"

Of special interest to members of the AAFM is a TM-76B (CGM-13B) Mace that was the restored with AAFM grant assistance. 59-4870, now named "Miss L" by the volunteers who restored her, was a training bird at Orlando AFB, FL, from 1960 to 1964 and now proudly stands guard at the main gate welcoming visitors to the museum.

The museum offers a library for educational and research purposes. While its collection encompasses a number of military subjects, it focuses on WWII: the political background, biographies, autobiographies, political and military figures and more. The library is open during museum hours for the cost of admission.

The museum is open daily 7 days a week from 10:00 am to 4:00 pm. Winter hours (January and February) are 11:00 am to 4:00 pm, closed on Mondays. Admission for adults is $5, Veterans and seniors $4, Children 6-18 $3, WWII veterans and children under 6 free. The museum is located at 715 S. 6th St. in Vincennes, IN, and its web page is www.indianamilitarymuseum.com. You can keep up with its activities on Facebook at Indiana Military Museum Inc. The phone number is 812-882-1941.

Preserving the SAC ABNCP/ PACCS Role in Nuclear Deterrence

- By Lt Col (Ret) Hank Carriger, AAFM Mbr No A2270, Bellevue NE.

The United States deterrent strategy during the Cold War was "mutual assured destruction," and success in implementing that strategy depended on the US being able to command, control, and communicate with its nuclear forces under all conditions. Simply put, the nuclear mission was to make sure that an adversary knew that if they launched a nuclear attack on the United States it would mean the end of the their world – they would not prevail. An adversary might not be deterred if the adversary thought it could exploit US command, control and communications (C^3) vulnerabilities to launch a nuclear attack without fear of also being destroyed.

A Joint Chiefs of Staff (JCS) sponsored study released in 1979, using the then current estimate of an enemy nuclear attack, concluded that "… such an attack would destroy approximately 90 percent of ground based elements of the Worldwide Military Command and Control System within 15 minutes of the attack initiation". The study also concluded that only the airborne C^3 assets would remain after the initial attack.[1] The US civilian and military leaders

The SASM EC-135 Aircraft

already knew the US had C^3 vulnerabilities and must have thought those potential C^3 vulnerabilities were significant because they spent billions of dollars over almost thirty years to provide a survivable, airborne command control system known as the Post Attack Command Control System (PACCS). Our leaders also thought that the PACCS was so important that PACCS aircraft were given take-off/launch priority over nuclear armed aircraft in most situations.[2]

The Strategic Air Command (SAC) Airborne Command Post (ABNCP), airborne 365/24/7, and the PACCS fleet, on ground alert and launched on warning, provided four (4) elements essential for deterrence:

(1) A general officer, the Airborne Emergency Action Officer (AEAO), ready to assume command of SAC under specified conditions.

(2) Assurance that command control messages could be disseminated from the National Command Authorities (NCAs) to the ground missile and bomber crews controlling nuclear weapons.

(3) Command and control of residual weapons and reconstitution of the nuclear force in the post attack period.

(4) Direct programming and launch of isolated Minuteman missiles (including Emergency Rocket Communications System (ERCS) missiles) using the Airborne Launch Control System (ALCS).

The SAC ABNCP (for the rest of the article, we will just use ABNCP) provided significant capabilities which prevented an adversary from adopting a strategy of targeting the US C^3 nodes in order to prevent our nuclear forces from receiving nuclear execution instructions from our NCA, a tactic sometimes labeled "decapitation". With the ABNCP on airborne alert all the time, our adversaries could not concentrate their weapons on Headquarters, SAC, the Numbered Air Force command posts, or other communications nodes in an attempt to decapitate our nuclear weapons. Since the ABNCP was also ALCS equipped and could directly send a complete launch command to all 1,000 Minuteman missiles, our adversaries could not concentrate their weapons on the Minuteman missile launch control centers (LCCs). As an added plus, the ABNCP could directly insert command control messages into the payload of an

ERCS missile and then directly launch the ERCS missile to broadcast the messages to our nation's nuclear forces throughout the world.

The battlestaff on the ABNCP had the expertise, communications and documents (and later computers) to determine if there were important adversary locations which were not struck by US forces. The battlestaff could assist the AEAO with locating such uncovered targets, find resources to strike those uncovered targets, plan missions to strike the uncovered targets, and, finally, issue the required order to the selected crew to strike the covered targets. In addition, the battlestaff could assist the AEAO in locating the President of the United States, or a successor; in locating CINCSAC, or a successor; and in beginning the reconstitution of the United States nuclear forces.

The PACCS crews were trained and evaluated in much the same manner that SAC's aircrews and missile crews were trained and evaluated. Every person involved had to undergo constant and rigorous training, evaluation and testing to ensure that each one of them could meet the extremely high standards that were required of all nuclear crews in SAC. PACCS crews pulled alert in a normal environment but had to be ready to operate with degraded capabilities and communications without warning.

The first ABNCP mission was on 3 February1961. Initially, that system was an ABNCP, a modified C-135 aircraft and crew, call sign "Looking Glass", on airborne alert 24/7 over the central US. The survivable system later expanded into the PACCS which provided a fleet of EC-135 aircraft and crews to form an airborne communications chain from the Washington, DC, area to all Minuteman missile fields. The ABNCP and PACCS were also part of the World Wide Airborne Command Post (WWABNCP) system, a system which also included the National Emergency Airborne Command Post (NEACP) and the airborne command posts of Commander in Chief European Command (CINCEUR), Atlantic Command, (CINCLANT) and Pacific Command (CINCPAC). Together, the WWABNCP ensured that all nuclear forces, including the Navy missile submarines (SSBNs), received emergency action messages.

On 24 July 1990, over 29 years after the first SAC ABNCP sortie, General Jack Chain, CINCSAC, flew the last continuous airborne mission on an EC-135C, aircraft tail number 38049. A changing world situation and improved systems made it possible for the Looking Glass mission to assume ground alert using EC-135C aircraft. The ABNCP would still make random airborne alert flights. The changing world situation and improved systems also made it possible to take the other PACCS aircraft and crews off alert and dissolve those organizations. The CINCEUR, CINCLANT and CINCPAC ABNCPs were also deactivated. With the deactivation of the PACCS aircraft and the CINCEUR, CINCLANT and CINCPAC ABNCPs, the ABNCP assumed more responsibility to ensure that all nuclear forces were executed. On 1 June 1992, the ABNCP became the Strategic Command (STRATCOM) ABNCP. On 1 October 1998, the mission was transferred from the EC-135C aircraft to a fleet of the Navy's TACAMO E-6B aircraft.

Our Nation's leaders continue to review and validate the requirement to have an ALCS capable ABNCP on ground alert with random airborne alert flights.[3] I foresee a time in the future when there will be a variant of the KC-46, the replacement for the KC-135 tanker, on alert as an ALCS capable TACAMO/STRATCOM ABNCP.

The SAC bombers, SAC missiles, and Navy SSBNs were the muscle behind US deterrence strategy. There would have been little deterrence without the actual weapons, and each weapon system filled an essential role in the deterrent strategy. But, without an ALCS equipped ABNCP, and PACCS, an adversary might have been able to decapitate US nuclear forces and/or delay the launch of US nuclear weapons using sabotage, conventional weapons or nuclear weapons. An adversary was more likely to be deterred from launching a nuclear attack on the US if it knew that the ABNCP was airborne and PACCS was on alert.

The ABNCP/PACCS, then, was a key factor which allowed SAC missiles and bombers, and Navy SSBNs, to be successful in deterring nuclear war. The result was nuclear peace. Some people have called the Looking Glass aircraft a doomsday airplane. On the contrary, the Looking Glass mission was to ensure nuclear peace. The EC-135 was used to deter doomsday – a mission which EC-135 aircraft and crews successfully completed for over 37 years. Thanks in large part to the ABNCP/PACCS, SAC bomber and missile crews, and each individual in SAC, can proudly say that peace was their profession.

Does the US public support our policy of nuclear deterrence? In the December 2014 edition of the AAFM Newsletter, the AAFM Executive Director stated that the leaders of our nuclear forces believe that "many in our country and the world don't even know that the [nuclear] mission, and the force, or, in today's words, the [nuclear] enterprise, even still exists." He called on Missileers to spread the word about deterrence and the fact that we still have nuclear missiles on alert 365/24/7 and bomber crews trained to perform the nuclear mission. (To his call, I would add that Navy SSBNs are also still on alert and would suggest that all persons associated with nuclear weapons should spread the word).

One way to preserve our nuclear deterrent history and to spread the word about nuclear deterrence is to support museums which have exhibits related to nuclear deterrence. A partial list of such museums is at afmissileers.com/Grants14.pdf. Tours given at those museums are an excellent way to inform the public about nuclear deterrence. When you are discussing nuclear deterrence, be prepared to talk about how deterrence requires that our nuclear weapons

also be safe and secure. Having given numerous LCC tours, I have found that the public is also concerned about nuclear accidents and the potential for nuclear terrorism.

The Strategic Air and Space Museum (SASM) near Omaha, NE, has several bombers and a few missiles on display. AAFM has encouraged SASM to add more missile related displays. SASM intends to include much more emphasis on SAC and the Cold War. SASM also has EC-135 aircraft 38049, the aircraft which was used for the last continuous airborne ABNCP sortie, waiting to be restored and not yet on display. Aircraft 38049 represents all of the EC-135 aircraft that were in the ABNCP/PACCS/WWABNCP fleet which contributed to the deterrent mission of the United States' missiles, bombers and SSBNs.

Fortunately, SASM, along with a committee of volunteers, has developed a plan to preserve the history of the ABNCP/PACCS by restoring aircraft 38049 to its last operational configuration. The aircraft will be a permanent "walk through" exhibit, with related permanent exhibits, and will tell the aircraft's history and the crew's role in fighting and winning the Cold War. A program plan and manager have been established to move this project forward. The Museum has established a restricted account specifically for restoration of the aircraft 38049 and to building the related exhibits. While the Museum currently has a very small amount of money on deposit, the Museum estimates that full restoration and building exhibits will take two years and in excess of $200,000.

A walk-through tour on aircraft 38049, with related interactive exhibits, will highlight the four essential elements that the ABNCP and PACCS provided towards deterring a nuclear exchange. Since neither an ALCS nor an ERCS discussion is included in any planned exhibits at the Minuteman Missile National Historic Site west of Kadoka, SD, an exhibit discussing the ALCS and ERCS capability on the EC-135C may be the only way that the public will be made aware of those two important aspects of the Minuteman missile system.[4] The ABNCP/PACCS story needs to be told and restoration of aircraft 38049 will require an aggressive commitment from former SAC personnel so that the story can be told.

Many people in SAC made significant contributions to the success and history of the ABNCP/PACCS. With their help, CINCSAC could confidently tell our nation's leader that SAC's nuclear forces were under continuous command and control. People wanting to preserve the success and history of the ABNCP/PACCS can visit the SASM's website to donate or volunteer. They need to simply click on the "Restoring the EC-135 Looking Glass" icon in the middle of the museum's home page.

(Endnotes)

1. Historical Division, Joint Secretariat, Joint Chiefs of Staff, A Historical Study of Strategic Connectivity, 1950-1981, 1982, p. 33, found at website http://www2.gwu.edu/~nsarchiv/nukevault/ebb403/docs/Doc%201%20-%20connectivity%20study%201982.pdf and which summarizes a Navy Connectivity Study dated Feb 1979.

2. The emphasis placed on command control was a big deal. For another example of our Nation's leaders sacrificing nuclear weapons for C^3, see the December 2014 AAFM Newsletter, page 5, in which the author states that ten Minuteman missiles at Whiteman AFB were dedicated to the Emergency Rocket Communications System.

3. For a related story, see the December 2014 AAFM Newsletter, page 12, discussing the 625th STOS.

4. Oscar -1 LCC in the Whiteman AFB Museum still includes an ERCS console but, because the LCC is on Whiteman AFB, MO, the LCC is not normally accessible by the public and is only open on an irregular basis.

How I Got Into Missiles - Part V

We continue to receive stories form members about how they became missileers. We add one more this issue.

Richard A. Rice

I suspect my entry into missiles will be unique compared to those arriving in more conventional ways. Who would have ever thought an infected foot would be the reason. It was early in 1955, when I was enrolled in an engineer equipment maintenance course at Fort Belvoir, VA. Almost through the ten week course, I awoke one morning to a painful and swollen foot. The medics sent me to the hospital where I was kept for a week.

The course ran in two week cycles and since a week was lost, I was cycled back two weeks. Meanwhile orders for Germany were rescinded and new orders were cut assigning me to Fort Wadsworth on Staten Island, NY. My elation on being stationed on such a historic and beautiful installation was short-lived, when further orders came assigning me to the 505th AAA Missile Battalion (Nike-Ajax) at Fort Tilden on Rockaway Beach in the Queens.

There, I found none of the engineer equipment that was part of the Fort Belvoir training, so I had to learn a lot in a hurry. Except for a three-month trip for more schooling at Fort Gordon, GA, and the last two months (of a three year enlistment) at West Point helping with summer missile training, I spent the remainder of my time at Fort Tilden. I was discharged as a Guided Missile Installation Electrician and an E-5 Sergeant on 20 September 1957.

Thirty five days after discharge, I enlisted in the Air Force as a staff sergeant under the Air Force prior service program. My Army Military Occupational Specialty was converted to a 43252 (Missile Specialist) Air Force Specialty Code (AFSC). Later on, that AFSC became 44370 or Missile Maintenance Technician. During the next nine and one-half years, I had some great jobs, which helped tremendously in personal and professional development.

My first assignment was working on the BOMARC A testing program at Patrick AFB/Cape Canaveral with the 6555th Guided Missile Squadron (GMRon). We were fully integrated with Boeing technicians, for on-the-job training. After a year the program was transferred to Hurlburt Field, FL, where I remained for three and one-half years, assigned

to the 4751st Air Defense Missile Squadron. I worked out of a tool box for a few months, and during that time I was directed to write an Unsatisfactory Report (UR). Since I had no experience with Air Force documents, I asked the near-fatal question of my noncommissioned officer in charge (NCOIC), "What's a UR." He not too pleasantly said that a staff sergeant in the USAF should know what a UR is. The kind people in quality control directed me to the proper manual, and I wrote that UR and several others in the coming weeks.

Then the NCOIC of Quality Control advised that the first lieutenant who edited and processed the URs was leaving and asked me to take his job. Reluctantly, I accepted, only because I had never been anything but a "nuts and bolts" person. The job lasted two years, at which time the AF began using an automated method of reporting failures. I grew a lot in that job, which enabled me to see and understand a bigger picture of AF operations, at least from a maintenance and equipment perspective.

Next I was assigned to the BOMARC B testing program and became involved in configuration control. As in most testing programs, there are lots of changes which must be documented and follow-ups made. During this time I was the Squadron Representative on the joint Boeing/Wing Configuration Control Board CCB). Then I got transferred back to Patrick AFB/Cape Canaveral.

There, it was back to the tool box and those "nuts and bolts" working on the Titan II testing program with the 6555th Aerospace Test Wing. The mechanical crew was an integration of Martin-Marietta and AF personnel. Looking at that Titan II first stage engine reminded me of a vastly enlarged BOMARC A engine. When the program was winding down, I was reassigned to the Gemini Launch Vehicle Division, Astronaut Safety Branch, as NCOIC of configuration control. It was January 1964, and ir was a great honor to be part of a manned space program.

All proposed changes were forwarded to engineering personnel involved with each system. As wing representative to the Martin-Marietta CCB, I presented the AF position and comments on change proposals. Near the end of the program, I was called in for a physical and flunked. Ultimately, the Physical Evaluation Board recommended a disability retirement and in a couple of months I was a civilian. I was there for all launches and consider those three years as the high point of my short-lived military career.

On the day of retirement, I went to work for General Electric on the Apollo Program as a Configuration Control Specialist. Three years later, after the moon landing, I was laid-off and opted to attend college full time. A year later I earned a Bachelor of Science degree, started while on active duty. Ultimately, I moved to a small town in Tennessee, completed a masters degree and taught in the local high school for 21 years.

While the AF was good to me in many ways, the problem of not getting promoted in all those years was a bit hard to swallow. With outstanding Airmen Peformance Reports, lots of atta-boys, college credits, extension courses, and an AF Commendation Medal, I was unable to break the promotion barrier. In all fairness, however, I recall only about 6 persons in my AFSC who made TSgt in those nine and one-half years - and all those were persons with more time in service and in grade. Did you get into missiles in a more unique manner than an infected foot?

Then Capt Martinson with a BQM-34

A Different Missile Job *- by Col Dave Martinson, AAFM Mbr No A2749, US Naval War College, Newport,RI*

After my initial ICBM tour at FE Warren AFB, WY, I had a follow-on assignment to Tyndall AFB, FL, with the 82nd Aerial Targets Squadron (ATRS), in Air Combat Command, in 1997. There were two missileer billets in the squadron. The mission of the 82 ATRS is to provide realistic threat simulators (target drones) for fighter aircraft. We also provided drones for Aegis cruiser and destroyer weapon systems tests and US Army Patriot battery tests.

Capt Martinson Preparing to Fly

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QF-106 Drone

Part of the mission involved the BQM-34 Firebee and the MQM-107D/E Streaker. The missileers were assigned to the squadron because of these sub-scale drones. This was in the days before the Predator and Reaper were operational so the idea of UAVs, UCAVs, RPAs, etc., was relatively new. ICBM ops is vastly different than drone ops, but the Air Force considers unmanned aircraft to be "missiles" and that is why we were assigned there. This is evident by their weapon system designators.

A BQM designation, for example, means it can be launched from more than one environment (B), it is a drone (Q), a vehicle designed for target reconnaissance or surveillance and the third letter (M), means it is capable of being launched from more than one environment. If the first letter of the designation is M, it is a drone, guided missile launched from a ground vehicle or movable platform.

Contrary to popular belief, the drones are typically not on a one-way mission to meet a fiery death. They are expensive so are usually flown back to base where they are recovered and flown again. The spectacular scenes you may have seen of full scale and sub-scale target drones being exploded by air-to-air missile shots are typically conducted on drones that have reached the upper end of their operating life and therefore are not suitable for repeat missions. On routine Combat Archer missions (air-to-air live fire), the warheads are removed from the air-to-air missiles and replaced with telemetry packages. The drones are outfitted with scoring antennas that measure "kills".

On Duty at the Drone Control Panel

The 82 ARTS was an interesting assignment for an ICBM guy. Most of the other officers in the squadron were fighter guys, since the full scale drones could also be manned for certain non-weapons tests and for use as chase aircraft for unmanned drones launching and recovering. During my time in the squadron, we primarily used QF-106 drones and QF-4 drones for the full scale missions. The QF-106 ended its service in 1998 while I was at Tyndall, and I understand the QF-16 is now online as a drone. One of my other duties in the squadron was overseeing the assigned watercraft. We had three 120 foot missile retriever boats that were used to clear civilian boats from the shoot areas and also to pick up subscale drones in case they went into the drink (not preferred). Also, we had two 25 foot Boston Whalers that we used to clear the launch corridor. A missileer was in charge of the Tyndall Navy.

So, are UAV pilots missileers? It's hard to say. I have been told that the 82 ARTS doesn't have missileers in the squadron anymore. And the Predator and Reaper weapon systems only have a two letter designator (MQ-1 and MQ-9) versus the three letter designator the Firebee and Streaker used. Regardless, it was a fun and interesting mission for a missileer, and broadened my perspective on the Air Force.

The Tyndall "Navy"

USAFA Cadets Visit FE Warren

- Lt Gen (Ret) Jay Kelley, AAFM Board Member and former President, Mbr No L194, Colorado Springs, CO.

On 15-17 January 2015, I was privileged to join 19 US Air Force Academy Cadets of the Class of 2015 on a trip to FE Warren AFB, WY. A wonderful and very enlightening experience, both for the cadets and for me !

I am sure you all are well aware of the developments over the past year with the nation's nuclear forces, especially the ICBM force. Among the actions taken to help improve the missile force, was to direct a large number of the graduating class of 2015 to the ICBM career field, 13N.

At the time, no graduating cadets (Class or 2015) had volunteered for missiles. As a result, 56 members of

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USAFA Cadets at Warren

2015 are now going to missiles after graduation this May. To put this in perspective, there have been very few Academy grads go directly into missiles over the years. There was a period following the merger of the space and missile career fields when a few cadets did volunteer for missiles, but that was because that was the route to get to space…three or four years in missiles and then to space. That is no longer the case. Even then, however, there were not many, so to have 56 all at once will be a huge change! And I must add, the missile career field has not been highly regarded among cadets almost from the beginning.

Very little is said about missiles as weapons systems, let alone nukes, and not a great deal about strategic warfare and strategy. About all they hear is from other cadet...rumor-mongering…and from assigned active duty officers on the faculty and as Air Officers Commanding (AOC). They hear almost nothing in a positive sense, although there are a few who can speak from first hand knowledge and experience and do so quite well, But, they tend to be voices in the wilderness across the cadet wing. An outstanding example of such a voice and the Academy POC for this trip is Major Josh Henderson, the AOC for Cadet Squadron 7. Josh is the All American guy next door…rock solid missile career, and a graduate of the Weapons School at Nellis as a Missileer! Well on his way to be a future senior leader for our AF in the missile business!

The Commandant at USAFA, Brig Gen Steve Williams and Josh's boss, played a crucial role in laying the groundwork to see first hand what missiles were all about, especially since none were volunteers! The Commander, AF Global Strike Command, Lt Gen Seve Wilson, and Vice Commander Maj Gen Rich Clark both strongly supported the initiative, and Gen Clark visited the cadets at USAFA, spoke with them and select members of the Class of 2016, and traveled with the 13N cadets to FE Warren. The Vice Commandant for USAFA, Col Dale Holland, former UH-1N IP at Malmstrom also accompanied and mentored the cadets. I was along simply as a "senior mentor"…to ask questions of both the cadets, as well as to ensure the various presenters were clear in their presentations - with a few awkward moments - and to answer the inevitable questions after we departed, like, "What did he mean by that?"

The "Mighty Ninety" was superb in execution of the visit, from the very minute we arrived at Warren on the 15th till we drove off the LCFs/MAFs on the 17th. The cadets saw first hand every aspect of the missile business. The maintainers put on a masterful demonstration at U-01 on base as well as in the Weapons Storage Area. The Cops likewise provided a powerful example of ability and equipment, in coordination with the maintainers. The helo squadron was excellent in delivering the tactical response force and equipment. In the evenings and at lunch the cadets were able to meet and talk with senior leaders on one evening and Lieutenants the second (a major highlight of the trip wasto talk with someone near your age about what they do day in and day out as an Lieutenants in missiles). Can't say enough about how well the 90th Missile Wing did in providing these cadets their first beak to beak experience with the missile career field! Simply awesome!

Going up and driving back, there was much discussion with and among cadets, and I can tell you the nature of the conversations changed significantly on the way back - excitement, upbeat, and more. They were highly impressed and many even enthusiastic about going into missiles! We had a Public Affairs airman along, SRA Veronica Ward. Airman Ward took many photos and has written an article about the trip which is included in this newsletter; please read it! The article, along with the impressions by the cadets are already spreading through the cadet wing….positive !

A second group of graduates going to missiles is coming up late April-early May. I am sure it will be even more impressive than our first, and I know the Mighty Ninety will excel again! It's great, for the first time, to hear positive comments from cadets about missiles.

Looking forward, I do not know what to expect for next year's grads (2016). Will we see another large group go to missiles…time will tell? But this year, we are seeing an infusion of top notch young men and women entering the missile career field…and we, AAFM, will expect great things from them! I am confident they will deliver!

Keep your mailing address, email address and personal data current with AAFM and help us keep you in the loop, as well as save us some of the money we spend on returned mail. Contact AAFM at aafm@q.com or 970-453-0500 with updates to address or other information

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The Atlas Launch 134D

The Kennedy Atlas Launch - 43 Years Ago

On 23 March 1962, a crew from the Atlas wing at FE Warren AFB, WY, launched an Atlas D missile from Vandenberg AFB, CA, while President John F. Kennedy watched from a viewing area as the missile lifted off. AAFM Member TSgt (Ret)Frank Waters was part of the crew, and recently took part in a commemorative event at Warren.

Your executive director was at Vandenberg that week for Titan I maintenance officer training. Earlier that week, all of us junior officers there for training were told we could leave a day early - they wanted us off base before the Presidential visit.

The official Air Force press release from 23 March 1962 is reprinted below with some minor editing. Note that it doesn't mention that the President was there for the launch. The crew commander, Major Simonson, presented the President with a missile badge after the launch.

The Atlas was called Curry Comb I, Atlas number

President Kennedy Congratulates the Crew

Maj Simonson Presenting Missile Badge to the President

134D, tail number 60-5476, and carried a General Electric Mark 3 Mod IIIB Reentry Vehicle. The launch was from site 576 B-2, one of the hardened Atlas D coffin sites at Vandenberg. The launch to the Eniwetok Lagoon, 4386 miles downrange, was successful, and was the 7th Category III operational test. The flight was also called Project Skyrocket as the designation of President Kennedy's visit.

The Warren crew was assigned to the 565th Strategic Missile Squadron (SMS) there. Another crew from the Vandenberg Atlas unit, the 576 SMS, prepared the missile for launch. Note in the photo of this crew the variety of uniforms. White coveralls for the enlisted crewmembers,dress blues for the crew commander, the summer silvertan dress uniform for the guidance officer and fatigues for the pad chief.

Crew 10 That Prepared the Missile, from the 576 SMS
Capt Jernigan, Lt Glascow
SMS M. H. Moffitt, Pad Chief
TSgt Neely
SSgt Weathers, McDowell, Rhodus, Ellis and Soethaert
A1C Burnett, Geal, Blevens, Wood and Motz

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Some of the Warren Crew at Work

News Release - Vandenberg AFB, 23 March 1962

A Strategic Air Command missile combat crew from Warren AFB's 389th Strategic Missile Wing today successfully launched an Atlas ICBM from Vandenberg AFB, CA.

This operational training launch was another in a program to return SAC ICBM crews from their operational sites to Vandenberg to demonstrate readiness with an actual launch.

The launch was made after the huge ICBM was raised from a horizontal semi-hardened emplacement similar to those located at Warren. The exercise thus enabled the SMW crew to demonstrate its operational capabilities under the same conditions which exist at its operational site.

The Warren crew had originally trained at the sprawling Air Force missile facility in California prior to Warren less than a year ago.

The eleven man missile combat crew commanded by Major C. W. Simonson, 41, of Deerwood, MN, arrived at Vandenberg 25 February and performed a complete exercise of the Atlas in a dress rehearsal prior to today's launch.

Major General Joseph J. Preston, commander of the 1st Strategic Aerospace Division, said the launch was part of a continuing program designed to strengthen the proficiency and combat readiness of the ICBM force. It was the latest in a series of successful Vandenberg launches of Atlas by an all-SAC crew.

Members of the Warren crew performing key roles in the launch in addition to Maj Simonson were: Electronic Digital Data Processing Repairman SSgt A. E. Kovakka, 32, Jacobson, MN; Missile Pneudraulics Repairman SSgt D. M. Howe, 25, Clinton, IN; Guidance Control Officer Capt K. E. Haithcoat, 32, Kingston, IL; Ballistic Missile Analyst Specialist SSgt R. R. Egert, 30, Prophetstown, IL; Missile Electronics Repairman Technician, SSgt R. E. Bufkin, 32, Greenville, MS; Missile Electric Technician SSgt S. L. Jackson, 23, Tulsa, OK, Ballistic Missile Analyst Technician SMSgt W. J. Chupka, 40, Wyoming, PA; Missile Mechanic A1C J. W. Hill, 22, LaGrange, GA; Rate Track Systems Specialist A1C F. D. Waters, 26, Sylvania, GA, and Rate Track Systems Technician SSgt G. G. Beth, 23, Boulder, CO.

Under the SAC combat training launch program, combat missile crews from all Atlas operational squadrons will be returned to Vandenberg to perform training launches programmed to test their operational efficiency.

The same procedures will be followed when SAC's second generation ICBM, the Titan, assumes operational status this year.

Atlas squadrons on alert status today are located at Offutt AFB, NE, FE Warren AFB, WY, Forbes AFB, KS, and Fairchild AFB, WA.

A total of 13 Atlas squadrons will be located at 11 bases when the full complement of these weapons is operational. Twelve squadrons of Titan ICBMs are programmed to be located at nine SAC bases.

PBS Documentary

PBS is producing a documentary based on Eric Schlosser's very good book, "Command and Control," for airing later this year. Eric's book is a good review of the Titan II accident at Damascus, AR, as well as a good discussion of nuclear policy.

PBS has interviewed a number of AAFM members, including Col (Ret) John Moser, who was the wing commander at the time of the event. We gave the producer several other names as well as information about the Titan II system.

We will put the broadcast dates on our web page in the Warble Tone section when they are available.

Minuteman III Models

AAFM has a few Minuteman III models in the current version real colors available for immediate delivery. These models normally take from six to eight weeks for delivery, and are normally priced at $200. As long as the current supply lasts, you can have your own model for $150, shipped by Priority Mail as soon as we receive your order.

Supply is limited, so act now. You can order online with Paypal and a credit card on our Donations/Store area or send a check - use the form on page 20 and annotate the order as Special Order Minuteman III Model.

2015 Member Directory

A new Member Directory is available either by email or by mail. This 68 page document, which includes all current and past members names, and detailed information about current members. We don't post it online because we have not found a secure way to do that, so the directory will be sent only on request. Printed copies are available for a donation of $10 - just send a check to AAFM, PO Box 5693, Breckenridge, CO 80424. For an electronic copy, email us at aafm@q.com and request a copy.

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Nuclear Leadership Development Center to Focus on Deliberate Development of Nuclear Airmen - *by Carla Pampe, AF Global Strike Command Public Affairs*

Air Force Global Strike Command initiated the creation of a new Nuclear Leadership Development Center, which will focus on nuclear and leadership education, and professional development.

"The center will have several lines of effort designed to increase nuclear knowledge and leadership across the force," Col. H.B. Brual, deputy director of the Strategic Plans, Programs, Requirements and Analysis Directorate, said. The creation of the NLDC was driven in part by reports both before and after Global Strike Command's standup that noted a declined focus on the nuclear mission, with a lack of developmental opportunities for career nuclear personnel, Brual said. In addition, the reports identified gaps in the development of leaders and critical thought within the Air Force's nuclear enterprise as a whole. "The creation of this center will allow us to address those gaps and bring a nuclear focus back to the command's education and professional development programs," Brual said.

Capt Reed Elsbernd, NLDC Leadership Education Officer, said the center is not designed to compete with other education and professional development programs in the Air Force, but rather to complement them. This will leverage and capitalize on leadership development from other sources, while ensuring a nuclear focus.

"This is a different focus than traditional professional military education and professional development," Elsbernd said. "We want to create a culture that inspires transformational leaders and make them nuclear experts."

He added that while part of the NLDC is education focused, the other part is dedicated to deliberate development of nuclear professionals, including ensuring they get the right training at the right time in their careers, and identifying assignment opportunities to maximize their potential.

The center is developing curriculum for officer education and professional development, and will subsequently move to the enlisted and civilian force. The team is currently meeting with some senior enlisted members to chart touch points for the enlisted career life cycle.

"Over time, the NLDC will increase capacity," Brual said, "but to make sure we get it right, we're focusing on one segment of the force right now."

LGM-30G - a.k.a. Minuteman III

Cerberus in deep kennel lay
Hard champing at his chain,
Lolling there in disarray –
Three heads all insane.
A mythic beasty, sulfur-sired
Bedraggled, singed and charred
And tasked – his count'nance never tired –
Perdition's gate to guard.
Ingenious ploy, I give it nod
That lashing of three wills,
Odd-numbered for best odds "at odds"
Hence dispositioned-ill.
It kept him pacing, snapping-taut
Full at his serious play,
All knew that none would venture aught
Without his bite to pay.
And yet it seems a strange defense
Its logic on me lost;
The keeping of malevolence
And boarding at such cost,
When known the while our charge steadfast
Hard bred to stand us lee,
At first ken of long shadows cast
Would from our company flee.
It births a master's harried straits:
Hold fury ill in hand?
Or loose the hound that evil baits,
Run rampant 'cross the land?
When man's best fiend's his closest friend
Then's seen the coin he pays,
Reluctant dawning in the end…
A fence does catch both ways.
Prometheus, you've found new fire,
A fate revised in kind:
Embrace the beast with wilding eye,
Hope yours it does not find.
The things of gods best left to them
Not fare for hands so small,
Lest strength, less sense – most fearsome mix
Make devils of us all.

Written by AAFM Life Member, then Captain Dan Wetmore in December 1997. Dan is AAFM Life Mbr No L290, and lives in Albuquerque, NM. He served in Minuteman III at FE Warren.

AAFM is looking for later versions of the Minuteman Dash One, especially shortly before and after the REACT mod. We are also looking for crewmembers who remember their experiences with the Launch Enable System, Rivet Save, that added the code switches to the enable process during the 1970s. Contact us if you can help with either.

AAFM Newsletter
Volume 23, Number 1 March 2015

A Word from the Association

Omaha 2016 - Plans are moving ahead for our next National Meeting, 12-16 October 2016 in Omaha. We will be staying at the Omaha Sheraton, near the Westroads Shopping Center. As we normally do, registration and the welcome reception will be at the hotel on Wednesday 12 October. On Thursday, 13 October, we will spend the day at Offutt AFB, with tours and briefings from US Strategic Command. That evening, we will have dinner at the Strategic Air and Space Museum and give all time to view the exhibits. On Friday, most attendees will tour the new Omaha First National Bank Sculpture Garden, the Hot Shops Art Center, the Lauritzen Gardens and the Old Market, with lunch on your own during the Old Market visit. Some of us will play golf that day, and that evening, we will have dinner at the hotel. Saturday morning, we will have our traditional general membership and board meetings and offer optional tours in the afternoon. We will have our National Meeting banquet Saturday evening at the hotel, with our featured speaker. Registration will start in September.

2014 Financial Summary - Income for 2014 was $36,858.75, including dues of $26,666.95, donations of $4,879.35, interest of $2,675.01 and $2,635.47 carried forward from 2013. Expenses for 2014 were $1,665.00 for grants and awards, $12,126.09 for printing and mailing the newsletter, and $7,301.59 for a total of $1,9427.68 for a total of $17,431.10 carried forward to 2015. The Missile Heritage grants were not disbursed until early in 2015, due to a delay in getting funds transferred from one account to another. We provided grants of $10,710.42 to four museums on 6 January, leaving $6,730.68 to be carried forward for use in 2015. Our investment account has grown significantly over the last few years, and was valued at over $61,000 at the end of 2014, even after we transferred $7,500 from the account at year's end.

AAFM Newsletter - We started two new series in this issue of the newsletter, the collection of articles from museums that have missile displays, and a series about missileers and overseas duty. Your executive director has visited several museums in recent months, including the Jacksonville, AR, Museum of Military History, the National Atomic Test Museum in Las Vegas and the Strategic Air and Space Museum in Nebraska. All of these encourage you to visit, and all are working to improve how they tell the missile story. We will feature three or four museums in each issue until we cover them all. On the topic of overseas tours for missileers, we know that there are some very good stories out there - put yours together and send it in, by mail or by email. It doesn't have to be about work and missile duty, it can be about any aspect of your overseas experience.

Letters to AAFM

Address letters to AAFM, Box 5693, Breckenridge, CO 80424, or send by e-mail to aafm@afmissileers.org. Letters may be edited to fit - content/meaning will not be changed.

ERCS Followup - As a missile maintenance officer stationed at Whiteman AFB from 1979 to1983, I enjoyed Lt Col (Ret) Hastings' article on the Emergency Rocket Communications System (ERCS) in the December newsletter. The article does a good job on the purpose and operation of the system; however, it doesn't say much about the unique maintenance and communication requirements involved. The specific location of the ERCS sites in the 510 SMS was indeed classified. Work done by maintenance teams on any site in the squadron could therefore not reveal either the presence, or absence, of an ERCS payload. This meant that teams dispatching to the 510 SMS had to carry the equipment necessary for their work on a "regular" missile, plus any ERCS-unique equipment. For example, the shape of the ERCS package was slightly different from a reentry vehicle, so each had unique lifting gear. The additional equipment made preparation for dispatches to the 510 SMS more complicated and time-consuming. Additionally, prior to departing the base, any team going to the 510 SMS had to stop at Job Control for a "face-to-face," so they would know the status of the sites they were to visit. Once at a 510 SMS site, if equipment had to be lowered into the launch facility, both the ERCS and non-ERCS gear had to go down. All of this generally resulted in longer dispatches in the 510 SMS versus those in the other two squadrons, the 508 SMS and 509 SMS. In addition to the unique maintenance requirements in the 510 SMS, communication with the capsules in that squadron required a different approach. Crew checklists dealing with weapon system problems generally had a "contact Wing Job Control" step. Any discussion of the problem with Job could not indicate the presence or absence of an ERCS system so, lacking secure phones, communication was accomplished using code books. It got more interesting if dealing with a problem required discussions with, and/or the approval of maintenance managers. As the Job Control OIC, it was not unusual for me to get a middle-of-the-night "Lieutenant, could you come in" call. If I then had to inform, or get approval from a higher authority I would usually go to their quarters… after a wake-up call, of course! ***Lt Col (Ret) Dennis Lyon, AAFM Mbr No A0937, Layton, UT***

2014 Missile Heritage Grants - We receieved letters from the New Mexico Museum of Space History in Alamogordo, the Wings Over the Rockies Museum in Denver, The Evergreen Aviation and Space Museum in McMinnville, OR, and the Strategic Air and Space Museum outside Omaha, thanking us for our grants for 2014. We ran out of space this issue so we couldn't print these thank-you letters.

AAFM Newsletter
Volume 23, Number 1 March 2015

New Book on Minuteman

AAFM Member David K. Stumpf is writing a companion volume to his Titan II history that will focus on the Minuteman program in an equally comprehensive form. His co-author is Joseph Page, II, a former Minuteman launch crew member.

The University of Arkansas Press will be the publisher. All stories used in the book will be cleared with the interviewee before publication, and the authors are applying for endorsement from the Air Force. Just as with the Titan II book, technical detail will be augmented with human interest stories concerning day-to-day life as a crew member or maintainer. Details of the design of the missile, the development of various guidance systems, reentry vehicles and construction of the silos will be included. Anyone involved in development launches at the Cape or operational testing at Vandenberg AFB are also encouraged to contact David or Joe at minutemansystemq@gmail.com.

David submitted a request for assistance to AAFM, and the board of directors recently voted to provide him with a grant of $2,000 to help him with this new project. David and Joe Page sent the following thank you note to AAFM.

"We would like to thank you for the generous donation of $2,000 towards our Minuteman history project. There is an immediate use for this money as the AVCO engineer responsible for the Mark V reentry vehicle is still alive, 82, and interested in talking with David. He will need to travel to Boston and will stop in Virginia to visit with newly found Minuteman contacts. Again, many thanks for kicking off our work with your donation, David K. Stumpf and Joseph Page, II."

Thor IRBM: The United States and the United Kingdom in Partnership

John Boyes, an AAFM Member who lives in the United Kingdom, has just finished a second book about the Thor. His first book, "Project Emily, Thor IRBM and the RAF," was an excellent history of the deployment of Thor in the UK. The book will be available later this year, and we will provide information on how to obtain a copy.

Here is the publisher's description of the book: In the mid-1950s faced with worrying advances in Soviet missile technology, the United States sought to develop an IRBM to act as a stop-gap until the Atlas ICBM became operational. Intense inter-service rivalry followed before the US Air Force gained the upper hand in deploying the missile. The UK, keen to improve the "special relationship" with the US which had suffered following the Suez Crisis, agreed to accept 60 Thor missiles to be operated by RAF crews. Complex negotiations followed, and once the twenty sites had been identified, a considerable number of American personnel, both civilian and servicemen, crossed the Atlantic to build and commission the bases and experience the idiosyncrasies of life in rural England. The agreement allowed for training the RAF crews leading to some 1,300 personnel travelling to America to learn the complexities of the Thor system leading to a series of twenty-one launches from Vandenberg Air Force Base. The book uses personal experiences of many of those involved from both nations and features a number of previously unpublished photographs. Also included are diagrams of the RAF sites as well as the launch facilities at Vandenberg AFB. A list of all the identified Thors delivered to the RAF and their eventual fates is included and as are the related activities on Johnston Island.

Senior Leaders Change

Three important leadership positions will change soon, as recently announced by the Air Force.

General Robin Rand has been nominated to be the first four star commander for Air Force Global Strike Command. Lt Gen Steven Wilson, the current commander, will replace Lt Gen James Kowalski as Deputy Commander, US Strategic Command. Lt Gen Kowalaski is retiring.

Maj Gen Jack Weinstein, commander of 20th Air Force at FE Warren, has been nominated for his third star and will become Deputy Chief of Staff, Strategic Deterrence and Nuclear Integration, Headquarters US Air Force. Maj Gen Anthony Cotton will replace Weinstein.

Taps for Missileers

Lt Col (Ret) Carlos Galvan served in Titan II in the 308 SMW and lived in Las Cruces, NM.

Lt Col (Ret) Roland E. (Butch) Hahn, an AAFM Life Member, served in Minuteman in the 351 SMW and 91 SMW, at SAC, and in GLCM in the 501 TMW and the 487 TMW, and lived in Fall City, WA.

Msgt (Ret) Richard D. Gotts, an AAFM Member, served in Jupiter in Italy, Mace in the 38 TMW, Minuteman in the 341 SMW and in Space systems and lived in Orlando, FL.

Col (Ret) Thomas H. McCormick, an AAFM Member, served in operations and maintenance Thor at Vandenberg, in Atlas in the 389 SMW and 549 SMS, in Minuteman in the 341 SMW and the 351 SMW, in the 6595 ATW and Headquarters, SAC, and lived in Auburn, AL.

Major (Ret) Edward J. Rybicki, an AAFM Member, served in Snark in the 702 SMW, in Minuteman and Peacekeeper at the 90 SMW/MW at Warren, in SATAF, and lived in Cheyenne, WY.

MSgt (Ret) David L. Shaw, an AAFM Life Member, served in GLCM maintenance in the 501 TMW, and lived in Oklahoma City, OK.

Colonel (Ret) Floyd E. Wikstrom, an AAFM Life Member, served in Minuteman as the commander of the 90 SMW at Warren when the wing activated, in the 1 STRAD, at SAC and the Joint Staff and lived in Fox Island, WA.

Donate to AAFM Missile Heritage and Enlisted Recognition Funds

Select logo and collector's items from below for your donation

Missile Badge and Space Badge lapel pins - silver, inch and quarter
Circle Choices - $5 each or any 6 for $25
Total Amount for Missile Badge and Space Pins $_____

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Indicate Quantity of each

AAFM Golf Cap $15 EACH
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$5 each or 6 for $25
Quantity ___Total $____

Minuteman II
100 and 200 Alert Pins
$5 each 100___ 200___
Total $_____

SAC Lapel Pin
$5 each or 6 for $25
Total $_____

AAFM Dress Shirts
Call or email for style, colors, sizes and prices or visit our web page for details and to order. Price and availability vary.

Guardian Challenge Coins
2006 _____ 2008 _____
$5 each Total $_____

AAFM Golf Shirt
Blue___ White__
S-$25 M-$30 L -$35 XL-$35
Other sizes available
Call or email first for availability

AFSGC
Challenge Coins
$5 each
2010 ____
2011_____
2012 _____
2014_____
Total $_____

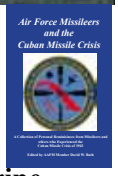
AAFM Coin - $10 each
Quantity _____
Total $_____

AAFM Brief Case
$15 each Total $_____

AAFM Patch
$5 each or 6 for $25
Quantity ____ Total $_____

Subterranean Sentinels Patch
$10 each or 6 for $50
Quantity ___ Total $_____

Reproduction Patches
Made for reunions and donated to AAFM
$10 each Total - $_____ (indicate choices)



341 MIMS ___ 321 OSS ___ 6555 ATW ___ SAC with Stripe ___

2012 National Meeting
Cuban Missile Crisis and
First Minuteman Alert
Commemoration
Lapel Pins
$5 each ___ or 3 for $10 ___
Total $_____
Commemorative Patch
$10 each _____
Total $_____
Print - A06 Alert
$15 each _____Total $_____
Missileers and the Cuban Crisis
Book - Stories by Members
$15 each ____ Total _____
DVD - Briefings and Talks
$10 each ___ Total _____

Donate to AAFM Missile Heritage and Enlisted Recognition Funds

Select logo and collector's items from below for your donation

AAFM CD Collections - for research and historical use only - Photos, Tech Orders, articles, publications, other data - For example, Atlas is 8 CDs of data - CIRCLE CHOICES

AAFM and Historical Data CD set - $10	Early and Airlaunched CD set - $10	Minuteman CD set - $10
Atlas CD set -$10	GLCM CD set - $10	Titan CD set - $10
Competition and Peacekeeper CD set - $10	Matador and Mace CD set - $10	All Eight CD sets - $50

AAFM DVD Collections - for research and historical use only - Collections of films and videos from various sources, including documentaries that AAFM advised on CIRCLE CHOICES

AAFM Historical DVD set - $10	Competition DVD set - $10	Minuteman DVD set - $10
Air Force Space DVD set - $10	Early/Airlaunched DVD set - $10	SAC DVD set - $10
Atlas and Titan DVD set - $10	GLCM DVD set - $10	All eight DVD sets - $50

Bill McKee's Cartoon Book, "Missile Business" - $5 **Greg Ogletree's "History of the Missile Badge"** - $5

1998 AAFM Book, "Air Force Missileers" - $30 **SAC Memorial DVD** - Dedication at Dayton - $10

Randy Mayse signed print for Malmstrom 25th Anniversary - TE on site - $25

Signed/numbered Art Project Print "Countdown - 5,4,3,2,1" - $20 **The Groobers Missile Music CD** - - $10

Bob Wyckoff's Collection of Poems - printed on photo paper for framing with background graphics - $10
Olympiad, The Unsung, Elegy to a Silo Queen, Birthright, Excellence, Liftoff, Cold War, Victors in the Cold War, Missile Maintainers plus AAFM's "We are Missileers" For the poem Missileer - choose graphics preference - one, more or all
Original Missile Badge - Basic Senior Master Missile Badge with Ops designator Basic Senior Master
Space Badge Basic Senior Master

Missile Models - Minuteman I, II and III models - available in white or real colors. Delivery time about two months $200 each - call AAFM for details and to order or go to our web page to order.

New Manufacture Original Missile Badges or Combat Crew Badge
Note finish and sizes available below - NS is Non-shiny, CF is chrome finish.
FS - full size SS- smaller size for shirt outer wear $10 Each Total $_____

1 2 3 4 5 6

Combat Crew Badge
NS FS
$10 Total $_____

Indicate Quantity of each
1 - Basic, No Ops Design - NS FS____ SS ____
2 - Senior, No Ops Design - NS FS ___ SS ____
3 - Master, No Ops Design - NS FS ___ SS ___
4 - Basic, Ops Design - NS FS ___ CF SS ____
5 - Senior, Ops Design, not available
6 - Master, Ops Design - CF SS _____
Official Chrome Finish badges, any of the six in either full size or shirt size available by special order, $15 each.

Order and Pay on-line at the Donations/Store area on our web page
Books and Special Collectibles (pins, prints, etc.) also shown there

Complete the form below and send your check to AAFM to the address below - shipping included

Name:
Address:
City, State, Zip code:
Total Donation

Association of Air Force Missileers, PO Box 5693, Breckenridge, CO 80424

The New Members Page

For all of you who have joined recently, here is a recap of the benefits and activities for AAFM. One important facet of AAFM is that the dues have not changed since we began in 1993. Annual dues are still $20 per year ($5 for active duty and students), $50 for three years ($14 for active duty and students) and $300 for a lifetime membership. Life membership donations can be made in up to 12 monthly installments. All dues can be paid by mail using a check or on our web page using Paypal. No other credit card options are offered. Our benefits and programs:

- A quarterly, 24 page newsletter featuring articles and stories by members, official news releases and other information. The newsletter is available in full color for those who select the electronic edition, at the end of March, June, September and December. For those who prefer the print, mailed copy, the mailings follow the release of the electronic version by about three weeks, and the issues don't have color illustrations.
- Email updates monthly or as needed, to every missileer on our contact list. Please keep AAFM advised of email address changes.
- AAFM's web page, at afmissileers.org, featuring information about all of AAFM's programs, a frequently updated "Warble Tone" section with the latest news about missileers, meetings, books and much more, including our "Taps for Missileers" list of missileers who have passed away, and more. Our page also includes access to Greg Ogletree's collection of missile patches and our entire newsletter library.
- A complete Member Directory, updated fully every three years, and with changes as they occur, available free electronically and for a small fee for a print copy.
- National Meetings every two years, always near a base with a missile-related mission.
- Occasional local area meetings at locations around the country.
- Missile Heritage Grants to museums, donated in memory of members who have passed away, to museums for missile and missile-related displays. AAFM has donated almost $200,000 to date to museums for displays.
- Participation in Air Force events, including the Bomb and Missile Competition and others.
- A large library of publications, videos and CDs about missile history and missile programs.
- A Donations/Store area with a wide variety of logo items, lapel pins and badges, CDs and DVDs, models, books and much more. A link is on our web page.

New Members since 1 January 2015

Corl, Kenneth Foss, Stuart Hill, Roland Huebner, Kent Isaacs, Stephen Marsalis, Edwin Nelson, Calvin Nelson, John Nuri, Ismail Sanks, Julius Schneider, Dennis Sherwood, Stephen Taylor, James Valentine, Norman Walsch, Stephen

New Life members since 1 January 2015 - some converted from annual membership, some are new members this year.

Bain, Gary Frank, Stephen Mitnaul, Henry Thompson, Wayne Torres, George

Membership Program for Active Duty Enlisted Missileers

If you are an active duty enlisted member and don't belong to AAFM, complete the form on the facing page and return it to us, or go online to afmissileers.org and complete a registration. Just tell us by e-mail or on the form that you are a new member taking advantage of this special offer.

Registration - Minuteman Missile NHS Grand Opening

25-26 September 2015 Rapid City, SD and at the Minuteman Missile NHS

Hotel - Comfort Suites, 1333 Elk Vale Rd, Rapid City, SD - Rate $78, slightly higher rates for larger suites, breakfast included, for reservations, call hotel at 605-791-2345. Call before 1 September

(Rate available before and after for those who want to enjoy the area for a few days)

You can also register on-line at afmissileers.org

	Number	Total Cost
Dinner at the Hotel, Saturday at 1800, $28 each	____	_____
Bus to Grand Opening Ceremony and Tour, 0800, Saturday, $25 each	_____	_____
	Total for Check	_____

Name_____ **Guest/Spouse**_____

Address_____ **Mail Check to: AAFM**

City, State, Zip _____ **PO Box 5693, Breckenridge, CO 80424**

I am interested in

Underground LCC Tour_____ **Bomb Wing Tour** _____ **SD Air and Space Museum Tour** _____

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Reunions and Meetings

485 TMW (Florennes GLCM) – 22-25 May 2015, Sheraton Music City Hotel, Nashville, TN, contact Steve Lampley 615-898-0767, lampleyprnc@aol.com, www.485tmw.com
Strategic Air Command 70th Anniversary Commemoration - Shreveport/Barksdale AFB, LA, 21-24 April 2016. More details as they become available.
TAC Missileers - 28-30 October 2015, Orlando, FL, conatact Max Butler, maxandlois05@gmail.com or 812-307-0187, or go to tacmissileers.prg.

Association of Air Force Missileers - Twelfth National Meeting, 12-16 October 2016 in Omaha, NE. Registration to start with the September Newsletter. **Hold your unit reunion with us in Omaha - we do all the work, you have a great reunion.**

Get your reunion and meeting notices to AAFM as early as you can - we will post them on our website and include them in the newsletter. Consider holding your next unit reunion with us as part of our next National Meeting. We do all the work, and you have a good unit reunion combined with a meeting with many other missileers.

AAFM is a non-profit, tax-exempt organization under section 501c(3) of the IRS Code. The Newsletter is published quarterly, printed by Leesburg Printing, Leesburg, FL.

Association of Air Force Missileers, PO Box 5693, Breckenridge, CO 80424 970-453-0500
afmissileers.org aafm@afmissileers.org or afmissileers@msn.com or aafm@q.com