

The World Series of Bombing

Strategic Air Command's Annual Bombing and Navigation Competition, 1948–1985

by Dr. Andrew J. Birtle

"The success of realistic deterrence is determined in large measure by the professionalism of crews who man our strategic weapon systems. Exercises like the SAC Bombing Competition provide the confidence necessary to insure that our strategic forces can in fact accomplish their assigned mission."

—Secretary of Defense Melvin Laird, 1971¹

For nearly four decades Strategic Air Command's best crews have gathered to participate in the Command's annual Bombing and Navigation Competition. Over the years the competition—known affectionately as the "bomb comp"—has played an important role in sharpening the competitive edge of SAC's bomber and tanker crews. Originally designed as a way to improve the Command's bombing accuracy, the annual competition gradually evolved into a complex test of the all-round combat capability of the nation's strategic bomber and tanker forces. The competition has thus served as a barometer of the Command's capabilities as it progressed from the World War II vintage B-29 to the most sophisticated bombers and tankers of today's Air Force.

Origins of the Competition—The Bombing and Navigation Competition had its origins in the late 1940s when America's strategic air forces were in a period of adjustment. Postwar demobilization and budget cuts had taken their toll on America's once mighty strategic bombing fleet. In March 1946, U.S. Army Air Forces grouped the nation's long-range bomber and reconnaissance aircraft into a new Strategic Air Command (SAC). In addition to the many organizational and administrative problems incumbent upon the establishment of a new Command, SAC suffered from critical shortages of manpower, equipment and facilities. These shortages were only exacerbated by the rapid growth of the Command over the next two years—from 37,092 men and 279 aircraft in 1946 to nearly 52,000 men and 837 aircraft in 1948.² Pre-occupied by the many difficulties associated with the formation and expansion of the Command, it was only natural that the level of training suffered during SAC's early years.

In May 1948, SAC Deputy Commander Major General Clements McMullen instructed all bomber units to concentrate upon improving their bombing capability. He also announced that a competition would be held to reinforce this order and to focus attention on the need for improved accuracy. The following month three crews from each of SAC's 10 B-29 groups gathered at Castle Air Force Base (AFB), California, to compete in the first bombing competition. The first competition was a rather simple affair, with each crew

required to drop three bombs visually and three by radar from an altitude of 25,000 feet. The groups were ranked according to their performance, and the best crew, led by 1st Lieutenant M.J. Jones of the 509th Bomb Group, received a letter of commendation from General George C. Kenney, SAC's first Commanding General.³

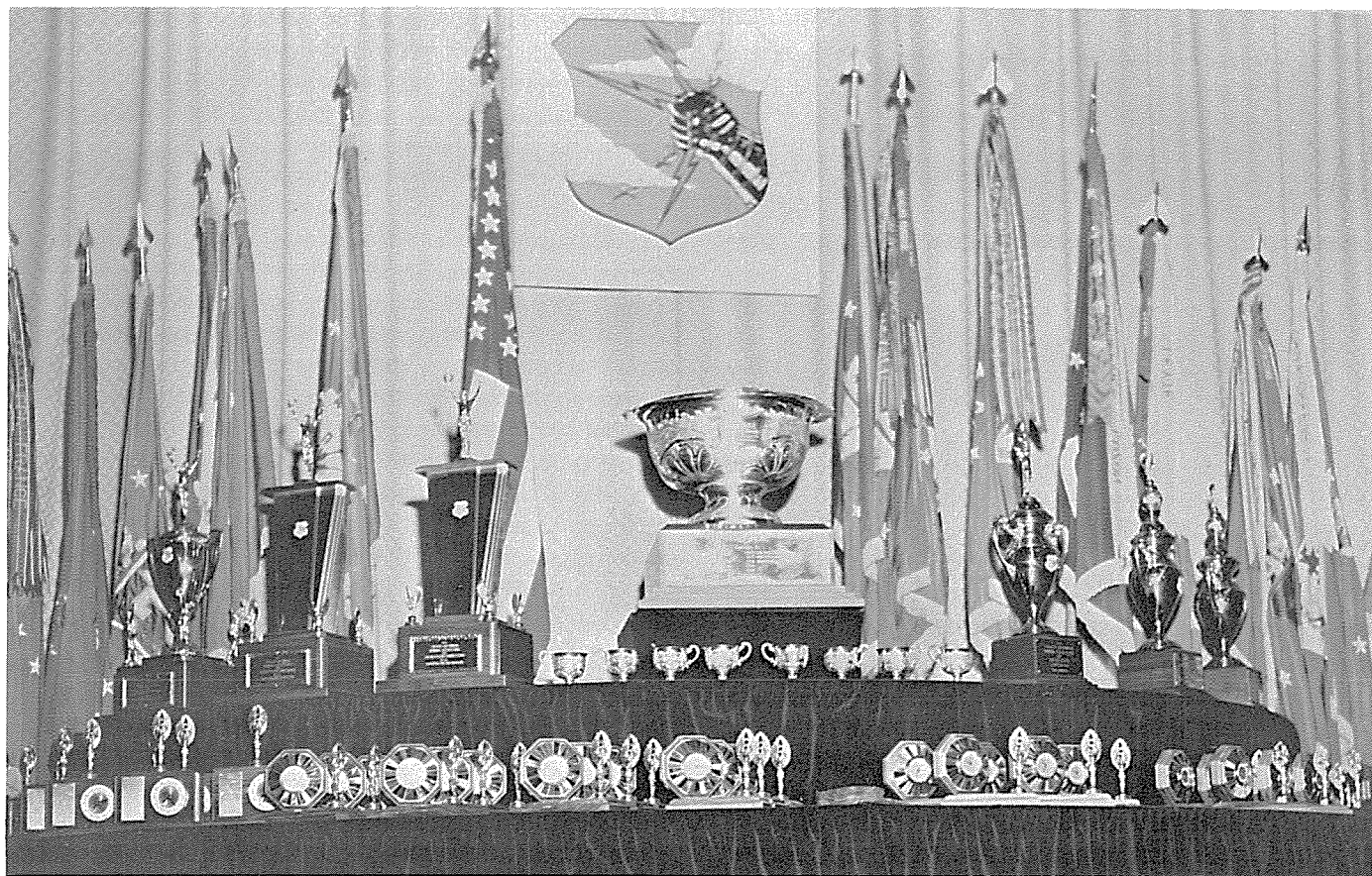
The results of the competition confirmed that there was room for improvement in SAC's bombing capability. Jones' crew had done very well, with a circular error average (CEA) of 601 feet.* However, the best group's CEA was only 1,065 feet while the worst group had a CEA of 2,985 feet.⁴

The disappointing results of the first "bomb comp" added momentum to the Air Force's drive to improve the accuracy of its strategic bombardment forces. Headquarters U.S. Air Force (USAF) recognized that the mass saturation raids of World War II were no longer practical in the atomic age. Accuracy was essential if America's relatively small stockpile of atomic weapons was to be used effectively. The Air Force, therefore, directed that SAC crews be indoctrinated into the "single bomb" (or "single shot") philosophy. Radar bombing was especially important if bomber crews were to be able to drop their bombs accurately in all kinds of weather, yet it was in precisely this area that SAC units were most deficient. During 1948, for example, the 22nd Bomb Group had a CEA of 3,400 feet when performing radar bombing from an altitude of 25,000 feet. Even worse was the performance of the 92nd Group, whose radar CEA was 6,496 feet.⁵

Such was the state of affairs when General Curtis E. LeMay took command of SAC in October 1948. LeMay was dismayed to find that "we didn't have one crew, *not one crew* in the entire Command who could do a professional job."⁶ Training was unrealistic and neither aircraft nor crews were prepared to fly high-altitude missions. Upon assuming command, LeMay ordered a command-wide bombing exercise against Wright-Patterson AFB near Dayton, Ohio. The results were abominable. The circular error probable (CEP)* for the average crew

* (U) CEA is the bombing error in a given bombing attack, expressed as the average distance of the bomb impacts from the center of the target.

* (U) CEP is the probable bombing error expressed in terms of the radius of a circle centered on the mean point of impact of a bombfall and containing half of the expected bombfall, excluding gross errors.



was approximately 14,000 feet—over half of the simulated bombs dropped two and a half miles or more from their targets.⁷

SAC's poor performance at Dayton led General LeMay to impose a rigorous training program for all bomber crews. The training paid off, and by the end of 1949 SAC's average CEP had improved from 3,679 feet to 2,928 feet.⁸ The improvement was clearly evident in October when SAC held its second bombing competition. The contest was similar in nature to the first competition, with the new B-36 and B-50 bombers joining the original *Superfortresses*. MacDill AFB, Florida, was designated as the competition headquarters and staging area for medium bombers (B-29s and B-50s), while the heavy bombers (B-36s) flew out of Carswell AFB, Texas, and Rapid City AFB, South Dakota. Fifteenth Air Force supplied both the best unit (93rd Bomb Group) and the best crew (28th Bomb Group). General LeMay felt that the competition was beneficial in building crew morale and highlighting the importance of bombing accuracy, and he decided to make the competition an annual event.

A Decade of Growth—the “Bomb Comp” in the 1950s— The sudden outbreak of the Korean War led to the cancellation of the “bomb comp” in 1950, but LeMay revived the event in 1951. Over the next nine years the competition continued to grow in size and scope, and by the end of the decade, it had matured into a tournament of major proportions.

Several important features were introduced in 1951 which would characterize the competition for years to come. First, a navigation phase was added to the tournament, both to allow SAC's reconnaissance aircraft to participate and to stress the

Trophy display at the 1959 competition, McCoy AFB, Florida. The Fairchild Trophy is top center.
(U.S. Air Force Photo)

importance of navigational skills in the success of bomber missions.⁹ Second, the number of simulated bomb releases outnumbered the number of actual bomb drops. This reflected the Air Force's deemphasis of bomb drops and the elevation of radar bombing as the standard of achievement in bombing accuracy. Radar Bomb Scoring (RBS) sites were used to determine the results of the simulated bombing. As the bomber approached the target it would emit an electronic tone. The crew would turn off the tone at the exact moment at which they normally would have dropped their bombs. The RBS sites on the ground would monitor this procedure and calculate where the imaginary bomb would have fallen based on the speed, direction and distance of the aircraft from the target, weather conditions, known characteristics of the “bomb,” and other factors. These scores would then be relayed to the 1st Combat Evaluation Group which has scored every bomb and navigation competition since 1948.¹⁰

In 1951 each crew dropped three bombs and simulated the release of four additional weapons using RBS techniques. Between 1952–1954 each competition included a single bomb drop, but thereafter all bombing runs were simulated RBS runs. Not until 1984 did SAC crews once again actually drop an “inert” weapon in the annual combat competition.

The growing importance of navigation and radar bombing were not the only hallmarks of the Third Bombing and Navigation Competition. The Royal Air Force (RAF) Bomber Command gave the 1951 competition an international flavor by sending two B-29 crews. This was the beginning of a long, yet intermittent, association of the RAF with the SAC bomb

competition.

Perhaps what best symbolized the competition's place as a permanent institution was the establishment of the Fairchild Trophy in 1951. Hughes Aircraft Corporation donated this large silver trophy as the symbol of excellence within SAC bomber units. Named for former USAF Vice Chief of Staff General Muir S. Fairchild, the trophy was awarded to the outstanding unit in the fields of bombing and navigation. Other trophies were given to the unit with the best bombing score and the unit with the best navigation score. Various crew awards existed as well, and over the years many new trophies and honors were added. Yet no award ever approached the prestige of the Fairchild Trophy.

The bombing competition flourished during the LeMay years, growing as SAC grew from 837 mostly propeller-driven aircraft to 2,711 aircraft, most of which were jet propelled. For most of the 1950s each SAC bomber wing was represented in the "bomb comp" by two crews, although in 1958 each wing submitted four crews. Because of the large number of aircraft and personnel participating in the bombing tournaments, two bases were used to hold the competition during the 1950s. These bases were rotated amongst the Command's numbered air forces. Each year Headquarters SAC would designate one base as the competition headquarters while a second base would be used to help stage some of the participating aircraft.

Several different types of aircraft competed against each other during the 1950s as SAC continuously expanded and modernized its bomber fleet. Three different types of aircraft (B-29, B-50 and B-36) were in use by 1951. The variety of aircraft systems naturally meant that some crews had an advantage over others in the competition. During 1951-1952 SAC used a handicapping system in order to compensate for the varying capabilities of each of these systems. When the B-47 joined the other three bombers in the 1953 tournament, the handicapping system was dropped and all four aircraft competed on an equal basis. Instead of trying to equalize the performance of each type of aircraft, a new set of awards was devised. The top wing and crew for each type of aircraft now received an award. This helped to compensate those crews who were less likely to win overall trophies due to the limited capabilities of their equipment. SAC continued to give awards to the top wing and crew for each type of aircraft throughout the 1950s and early 1960s.¹¹ One final addition to the "bomb comp" during the LeMay years was the inclusion of a photoreconnaissance phase in the 1956 and 1957 competitions. The inclusion of photoreconnaissance, though, was short-lived, and after 1957 it was never again a part of the Bombing and Navigation Competition.

During the two years after General LeMay left SAC in June 1957, the "bomb comp" continued to grow. General Thomas S. Power, LeMay's hand-picked successor, experimented with the format of the annual Bombing and Navigation Competition. After a four-year hiatus the RAF returned to the competition with *Valiant* and *Vulcan* bombers in 1957. The following year 39 bomber wings sent four crews each to the competition where they were met by eight RAF crews. Then in 1959 tankers were allowed to enter the "bomb comp" for the first time. The first inclusion of an air refueling phase was an overwhelming success, with 91 of the 94

refuelings having transferred the correct amount of fuel.¹²

Perhaps the most important innovation which appeared in the post-LeMay years was the use of "spot" promotions to reward outstanding performances by the top air and ground crews at the competition.¹³ General LeMay had introduced the "spot" promotion system into SAC as a way of encouraging experienced personnel to remain in combat crews, but it was General Power who first dispensed "spot" promotions at the competition itself. In 1958 General Power promoted 10 airmen each from the maintenance teams of the wings that had won the Fairchild Trophy and the best overall crew award.¹⁴ Headquarters SAC continued to give out "spot" promotions at the "bomb comp" over the next 11 years. When in 1965 Headquarters Air Force decided to abolish the "spot" promotion system, it acquiesced to CINCSAC General John D. Ryan's request that he still be allowed to dispense temporary promotions at the bomb competition. Consequently, the air and ground crews of the Fairchild Trophy winner continued to receive temporary promotions until 1969, when the last promotions were given.¹⁵

The use of "spot" promotions at the "bomb comp" symbolized the prestige which had come to be associated with the annual competition. Indeed, during the 1950s the competition had begun to lose some of its austere military attributes as it evolved into a large and increasingly expensive tournament. The inclusion of tankers, coupled with the growing size of the bomber force, greatly increased the number of participants in the competition throughout the 1950s. By the end of the decade the tournament had begun to reach unmanageable proportions. No fewer than 188 aircraft and crews participated in the 1959 competition, the largest competition ever. Some form of retrenchment was necessary, and in 1960 SAC radically revised the competition.

The Reforms of 1960-1961—General Power wanted to achieve two things when he reorganized the "bomb comp" in 1960. First, he wanted to reduce the size and cost of the competition. Second, the reforms were designed to add greater realism to the competition in order to make it a more meaningful test of the Command's military capabilities. Instead of allowing every bomber and tanker unit to send two crews to the meet, SAC's three numbered air forces (Second, Eighth and Fifteenth) held preliminary trials. Each numbered air force was allowed to select two B-52 and two B-47 wings and two KC-135 and two KC-97 squadrons to represent it at the competition. Those wings or squadrons that were chosen to compete would then send one aircraft and two crews each to the "bomb comp." Finally, the Second Air Force was allowed to enter a B-58 unit and an additional KC-135 team to support it. Thus, only 52 crews participated in the 1960 competition compared to 188 the year before.¹⁶ The small size of the competition allowed it to be centralized at a single location (Bergstrom AFB, Texas) for the first time since the start of the annual competition in 1948.

Several new features were added to the 1960 Bombing and Navigation Competition which made it both more challenging and more comprehensive than the earlier tournaments. In addition to aerial refueling, navigation and high-altitude bombardment, all crews had to scramble from an alert posture. More importantly, a low-altitude bombing run and

an electronic countermeasure phase were included for the first time in the competition. Finally, the annual munitions loading competition was held together with the "bomb comp."¹⁷ The following year the munitions loading competition was actually factored into scoring for the Fairchild Trophy, while mobile RBS sites were used to score the low-level bombing phase. The ability to move these electronic scoring units around the nation by rail made the bombing competition more challenging by presenting aircrews with new and unfamiliar targets. All of these changes produced a more realistic and challenging test of Strategic Air Command's combat capability.

The addition of low-level bombing reflected important changes in the tactics of SAC's strategic bombers. Traditionally bombers had flown at the highest altitude possible to escape the dangers of hostile interceptors and antiaircraft artillery (AAA). Nevertheless, by the end of the decade Strategic Air Command had begun to give increasing attention to low-level tactics. The primary reason for the change lay in the increasing sophistication of Soviet radar and surface-to-air missiles (SAMs). Realizing that the steady improvement in Soviet air defenses would soon make high-altitude flying extremely hazardous, SAC began to shift emphasis away from high-altitude operations to low-level attacks best suited to penetrating Soviet defenses. Electronic countermeasures were likewise increasingly important if SAC aircraft were to successfully penetrate the more sophisticated air defenses being developed by the Soviets.

The "bomb comp" mirrored the change in tactics, and after 1960 the competition placed increased emphasis on low-level bombing and navigation. The name of the competition was changed to the SAC Combat Competition to emphasize the fact that all phases of SAC combat operations and not merely bombing were being tested. The change was most noticeable in scoring for the Fairchild Trophy. In 1951, 70 percent of the competition's points were earned in bombing and 30 percent in navigation. In 1960, on the other hand, bombing only accounted for 37.5 percent of all possible points, while navigation counted for 25 percent and elec-

tronic countermeasures, air refueling, and ground alert each counted 12.5 percent.¹⁸

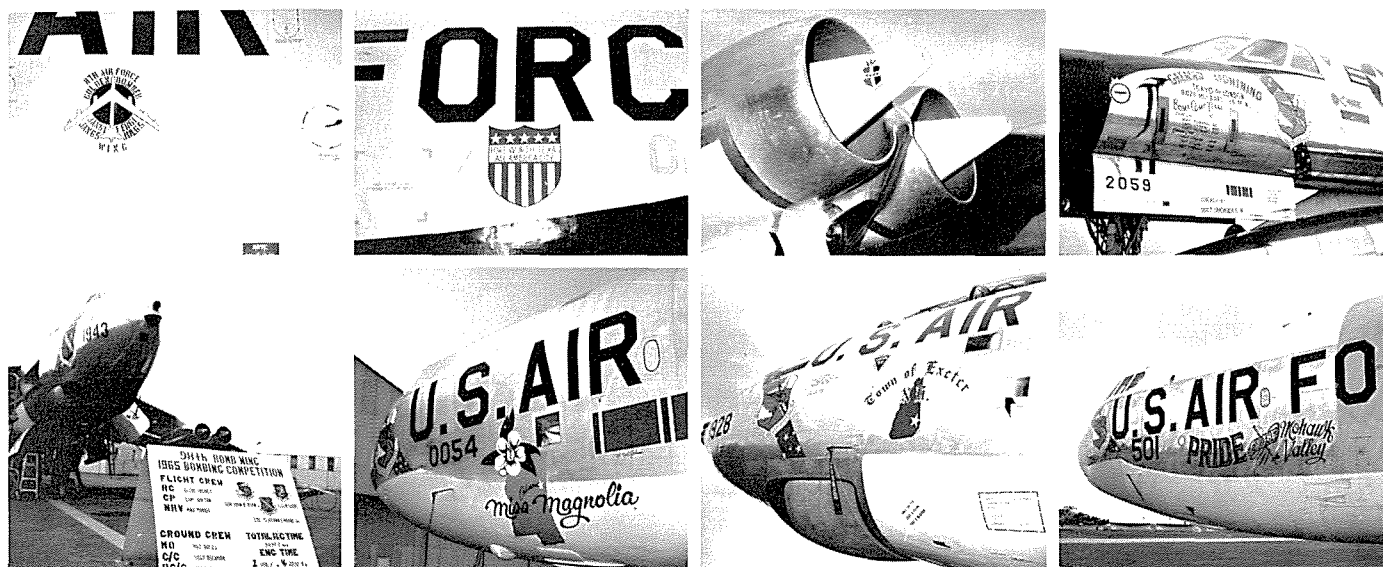
The Competitions of the Vietnam Era, 1965-1974—

Although the "bomb comp" emerged from General Power's reforms as a more realistic test of SAC aircrews, the very survival of the competition soon came into question as outside events led to the cancellation of many of the competitions over the next decade. Only six competitions were held during the 13 turbulent years between 1962 and the fall of Saigon in 1975. The 1962 competition was canceled due to the Cuban missile crisis and the increased alert posture associated with it. Similarly, operational commitments and cost reduction efforts led to the cancellation of the 1963 and 1964 tournaments. For a while it seemed as if the competition were dead, but a new CINCSAC, General John D. Ryan (1964-1967), revived it. General Ryan shared General LeMay's belief that the competition was a powerful force in building *esprit de corps* amongst SAC combat crews. The Combat Competition thus returned in 1965-1966, only to be canceled once again in 1967 and 1968 because of operational commitments in Southeast Asia. The "bomb comp" resumed in 1969 until events in Southeast Asia—including Linebacker II operations over North Vietnam—led to the cancellation of the 1972 and 1973 meets. Finally, CINCSAC General Russell E. Dougherty (1974-1977) revived the "bomb comp" in 1974, only to cancel it the following year amid a storm of controversy.

During these troubled years several important changes occurred in the structure and scoring of the competition as it responded to a changing world. The trend in the 1960s was toward smaller competitions as tankers were excluded from the tournament and bomber units were occasionally too busy with operational duties to compete. Similarly, the relative importance of high- and low-level bombardment fluctuated during these years. High-level bombing had been deempha-

A B-52E awaits its turn to compete in the 1965 Bombing and Navigation Competition at Fairchild AFB, Washington. (U.S. Air Force Photo)





sized in 1960, only to receive renewed weight in competition scoring in the early 1970s as SAC conducted high-altitude missions over Southeast Asia. Once America's participation in the Vietnam war was over, low-level bombing resumed its place of prominence in the competition. Unfortunately, the most important trend during these years was a gradual decline in the amount of realism in competitive missions, and by 1974 the tournament had lost much of the realism introduced by the 1960 reforms.

The trend toward smaller competitions was dramatically reversed in 1970 when the number of competing crews doubled over that of the previous year. The return of tankers to the competition was largely responsible for this increase. The tournament was headquartered at McCoy AFB, Florida, and spanned a five-day period between November 15–20. Twenty-eight B-52 wings and 28 KC-135 air refueling squadrons were each represented by one crew. As in every other competition held between 1966 and 1980, SAC was joined by several RAF crews flying Britain's delta-wing *Vulcan* bomber. Finally, the contestants had a new opponent on the scene, as two FB-111s made their first showing at the competition.

The FB-111s made a stunning debut, with one crew capturing the wing bombing trophy while the other narrowly missed winning the navigation award.¹⁹ The criteria for winning the Fairchild Trophy had been changed, however, for starting in 1970 the trophy was awarded to the outstanding bomber unit *and* associated tanker squadron in the combined field of bombing and navigation. Since the FB-111's parent organization—the 340th Bomb Group—had no collocated tanker unit, it was ruled ineligible for the Fairchild. Nevertheless, the FB-111's outstanding performance in its first competition heralded the beginning of the end of the B-52's long dominance over the competition.

The war in Southeast Asia intervened for the last time in the scheduling of the bombing competition in 1972 and 1973. When the competition resumed in 1974, America's participation in the Vietnam War was over. But while the 1974 competition was the first post-Vietnam competition, it was in many ways the last of the old-style tournaments. A shift towards low-level operations, the rise of the FB-111, and mounting criticism over how the competition was being

Pride is an important factor in the "Bomb Comp," and competition aircraft have occasionally been adorned with various logos. Shown here are some of the distinctive designs that appeared on the sides of B-52, B-58 and B-47 aircraft at the 1965 competition. (U.S. Air Force Photo)

handled all led to significant changes in the format of the "bomb comp" after 1974. Thus 1974 would prove to be a watershed year in the history of the "bomb comp."

Giant Voice 1974—The Nineteenth Annual Bombing and Navigation competition convened at Barksdale AFB, Louisiana, on 10 November 1974. Each of the 55 participating crews flew two missions. With SAC's participation in the Vietnam War at a close, emphasis reverted to the type of low-level operations SAC bombers would have to perform to penetrate Soviet air defenses. Each bomber simulated eight low-level releases and two high-altitude releases. This set the pattern for the future; low-level bombing and navigation would be much more important than high-altitude operations in the scoring of the "bomb comp."

Another turning point was reached in the history of the "bomb comp" when *Vulcan* and FB-111 bombers broke the B-52's long monopoly over the top competition trophies in 1974. For the first time, the RAF captured major awards in competition with SAC bombers by taking home both the Mathis and wing navigation trophies. Even more significant was the performance of the 380th Bomb Wing's FB-111As. The 380th captured not only the Fairchild Trophy, but the crew and wing bombing trophies as well. Designed specifically for low-altitude missions, the FB-111's "coming of age" coincided with the shift in emphasis to low-level operations in the "bomb comp." The FB-111's sophisticated avionics system made it especially difficult for the B-52 to compete against it. As CINCSAC General Richard H. Ellis commented several years later, "The FB-111 is the most advanced bombing machine in the whole United States Air Force. If it works right, it ought to win."²⁰ And win it did. For the next 11 years the FB-111 would win every "bomb comp" but two.

The FB-111's long reign over the "bomb comp" had two effects on the competition, both of which were felt almost immediately. First, SAC revived the practice of rewarding the best performance made by each category of aircraft. SAC had

stopped this practice after the B-47 was phased out in 1965. Thereafter, B-52s, B-58s and FB-111s had all competed for the same set of trophies. Yet it was already becoming evident that the B-52s would have difficulty competing against the more advanced FB-111. Consequently, separate awards were given out in 1974 for the best F/FB-111, B-52, KC-135 and *Vulcan* missions. Each competition thereafter included similar awards so that regardless of who won the major trophies, each crew would have a chance at being recognized as the best for their particular type of aircraft. Not until the B-52s received a new avionics system in the 1980s would they be able to compete with the FB-111s on an equal footing.

Perhaps the most significant aspect of the Nineteenth Bombing Competition was the air of scandal that hung over the competition as charges of waste and abuse were leveled at the "bomb comp." From its humble origins in 1948, the annual bombing competition had evolved over the years into an elaborate, almost festive event. The competition was nicknamed the "World Series of Bombing," and distinguished officers, politicians and businessmen were flown from all over the United States to participate in the competition festivities. By the 1970s the "bomb comp" had become a tournament—a media event designed to project a positive image of Strategic Air Command's power and importance to the public. All of this fostered a spirit of competitiveness amongst SAC's combat crews and gave them an incentive to improve their skills. But as one might expect in such a prestigious event where honor, glory and perhaps even a promotion were at stake, some commanders placed too much emphasis on "winning" and lost sight of the real purpose of the event. While the competition might foster *esprit de corps* among the select few who were able to participate, there were allegations that it sometimes had a demoralizing effect on those who stayed at home. Furthermore, commanders obsessed with "winning" sometimes placed the entire resources of their wing at the hands of the crew which was to represent the unit at the competition, to the detriment of the training of the rest of the wing. Although there had been some effort in the early 1960s to make the competition a more realistic test of SAC's capabilities, these measures had not fully taken root. The competition courses were not always as realistic as they might have been, and the analysis of the results at times got lost in the excitement of the meet. Indeed, many people equated the "bomb comp" with a sport—a game to be won rather than a military exercise.²¹

(U) This "golf tournament" mentality came under serious public attack in 1974. Led by Congressman Les Aspin, the future Chairman of the House Armed Services Committee, critics of the Giant Voice competition charged that it had become a public relations extravaganza with little or no military value. Ten days before the Nineteenth Bombing and Navigation Competition was set to begin, Aspin asked Secretary of Defense James R. Schlesinger to cancel it. The Congressman from Wisconsin made two charges: "First the crew preparation for the contest detracts from the overall readiness of the Strategic Air Command. In addition, the Air Force has added many unnecessary frills in order to improve the show for the Air Force Association."²² The latter charge stemmed from the fact that the Air Force Association was holding a symposium at Barksdale concurrent with the "bomb comp."

With the nation still reeling from the effects of the Arab oil embargo, Aspin questioned the merit of "using fuel on this Monte Carlo-type operation which does nothing at all to further our nation's security." He concluded that the entire affair was a boondoggle and "a needless waste of taxpayer money."²³

Aspin's attack failed to stop the competition, but he did not let up in his criticism. On November 14, with *Giant Voice* 1974 in full swing, Aspin charged that Air Force generals were operating a six-figure gambling pool in conjunction with the competition. The charges proved unfounded, although small bets were indeed being made on the competition results.²⁴ Nonetheless, the damage had been done, and the gambling charges merely added to the adverse publicity surrounding the competition. CINCSAC General Dougherty vigorously defended the ethics of SAC personnel, but he realized that the competition would have to change if it were to survive.

Operation High Noon and the Reforms of 1976—Dougherty canceled the 1975 *Giant Voice* competition and replaced it with a military exercise named Operation High Noon. High Noon was a two-day exercise designed to test SAC's ability to execute contingency operations. The exercise retained an element of competition and awards were given out afterwards, but there was no pomp or ceremony as before.²⁵

Operation High Noon served as a transition phase while SAC redesigned the *Giant Voice* competition. General Dougherty had three primary goals in reorganizing the "bomb comp." First, he sought to broaden participation in the competition in order to give all crews a feeling of participation in the "bomb comp" process. Second, he wanted to reduce the costs associated with the "bomb comp." Finally, General Dougherty sought to make the competition more meaningful by injecting more realism into the competition missions. As such, the reforms of 1976 reflected General Power's earlier efforts to transform the competition from a bombing tournament into a realistic test of the capabilities of SAC's best bomber and tanker crews.

In order to achieve the first of General Dougherty's goals, SAC reorganized the 1976 *Giant Voice* competition into three distinct phases. During the first phase (July–August), every combat-ready crew in SAC (with the exception of overseas units) would be evaluated with an eye toward selecting the top three crews of each unit. The top three crews from each unit, together with one "wild card" crew chosen by the wing commander, would represent the unit at the second or semifinal phase. Four RAF crews joined the American flyers in the semifinal phase which was held over a three-day period in late September. Each crew flew a prescribed course which was scored by the 1st Combat Evaluation Group. The two highest scoring crews from each unit would then progress to the final phase. Scores from both the semifinal and final phases would be used to determine the competition winners. Finally, a two-day symposium would be held at Barksdale AFB to announce the winners and discuss the results.²⁶ The three-phased structure thus ensured that all combat-capable crews would initially have a chance to compete, while the field was gradually narrowed down to each unit's best two crews.

The new format had several money-saving advantages over the old-style competition. First, as in Operation High Noon all missions were flown as part of regularly scheduled training from each unit's home base. This greatly reduced the cost of the competition since the fuel, maintenance, and other resources which were expended on competition missions were attributed to normal training. Second, only the finalists gathered after the competition in order to participate in the symposium. Transport aircraft were used to fly the participants to Barksdale AFB, and these flights were also scheduled as training flights. Finally, Barksdale AFB became the permanent competition headquarters—a logical choice since it was also the home of the 1st Combat Evaluation Group which scored the tournament.²⁷

The symposium itself played an important role in achieving General Dougherty's third goal. While the traditional social gatherings and award ceremonies were still held during the symposium, much greater emphasis was placed upon analyzing competition results. The symposium offered participating crews a chance to discuss the competition's events, make recommendations for the future, and evaluate the various tactics and techniques which were used during the tournament. Likewise, the competition report went to greater lengths to disseminate the "lessons learned" throughout the Command.

Finally, in addition to altering the basic format of the competition, SAC made the competition more realistic and challenging. Unlike previous competitions, mission materials in 1976 were not released until four days before the mission was due to be flown. Electronic countermeasures and evasive actions were woven into the competition missions as new ground-based missile defense simulators were used to add to the realism. All of these steps were designed to test important skills which would be needed in wartime above and beyond bombing and navigation.²⁸ As such, the 1976 reforms made the "bomb comp" results more meaningful, which in turn helped to justify the competition and preserve it from its critics.

Renewed Expansion, 1976-1985—The 1976 Giant Voice Competition established the pattern upon which subsequent Combat Competitions would be based. Each year's rules and requirements were slightly different, but the basic format remained unchanged. Beginning in 1980 the semifinal phase was eliminated and thereafter the competition consisted simply of a preliminary phase and a final competition in which the two best crews of each SAC unit competed for top honors.

The most important trend in the competition since 1976 has been the growth in the size and complexity of the tournament. Over the past decade non-SAC units have played an increasing role in the competition. TAC F-111s had become regular contestants since 1974, and in 1977 Air National Guard and Air Force Reserve tankers joined the fray. In 1980 Royal Australian Air Force F-111s came from down under to participate on a semiannual basis. The RAF had been flying in every "bomb comp" since 1966, only to miss the 1981-1983 meets while switching over from *Vulcan* to *Tornado* bombers. The RAF returned in grand style in 1984 by taking the bombing trophy, and the *Tornado* has provided tough

competition to SAC ever since. Even U.S. Air Forces in Europe (USAFE) got into the act when it sent two F-111s to the Twenty-Eighth Bombing and Navigation Competition in 1984.

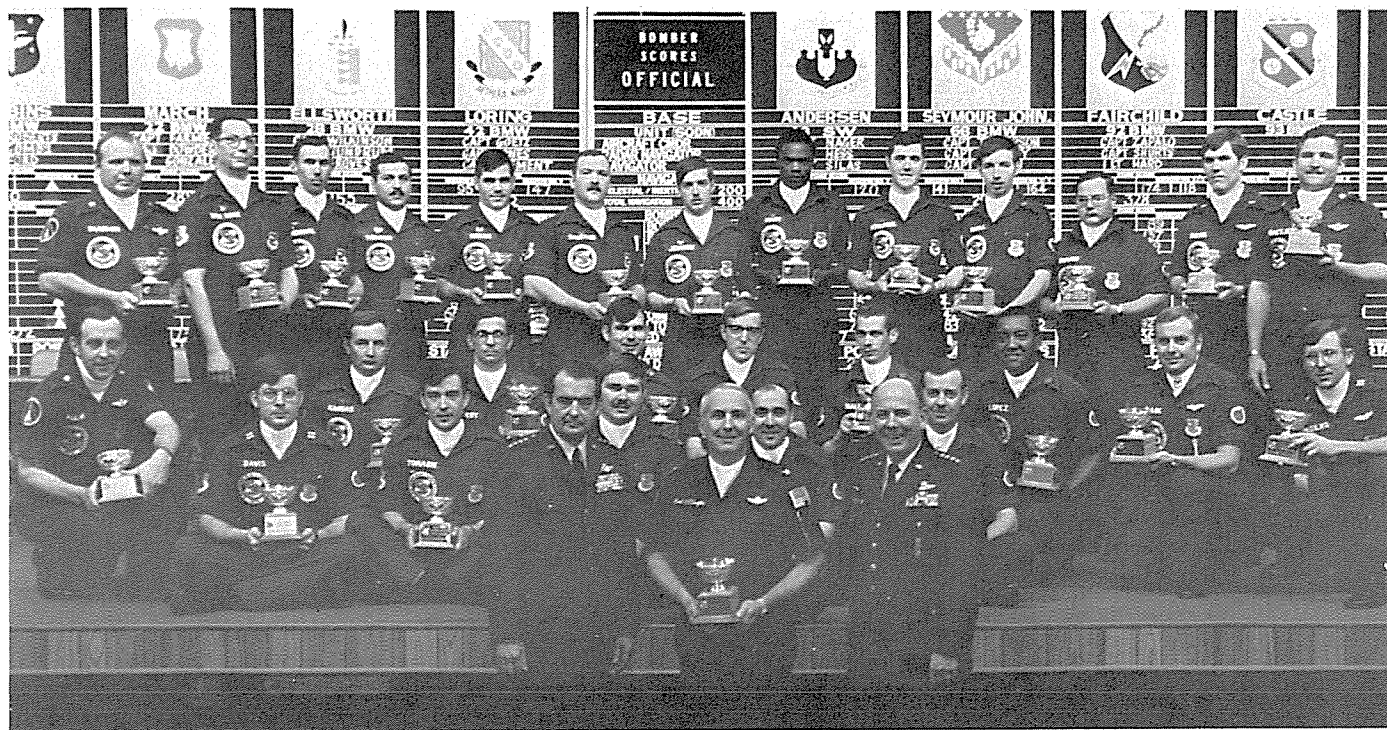
The participation of non-SAC units was accompanied by efforts to increase the level of difficulty in the competition. Electronic countermeasures became increasingly important as aircraft were required to evade and fend off "hostile" AAA and SAM defenses. In 1978 simulated launches of Short Range Attack Missiles (SRAMs) were added to the competition. The following year an entirely new dimension was added when Air Defense Tactical Air Command (ADTAC) interceptors were sent to "shoot down" the bombers during the competition. Now SAC crews had to try and evade live opponents on their way to their appointed targets. Although ADTAC did not participate in 1981, it participated in every competition thereafter.

Even greater realism was added in 1984 when SAC began to hold part of the competition over the Nellis AFB Red Flag Bombing Range. The use of the Nellis range permitted competition aircraft to drop inert weapons for the first time in 30 years. It also provided a more challenging environment as bomber crews attempted to avoid a barrage of simulated anti-aircraft fire, surface-to-air missiles, and NORAD interceptors. The experience gained from these exercises helped SAC develop new techniques that would be beneficial when operating in real life combat situations.

Along with the new phases of the competition came a host of new awards. In addition to reintroducing awards for the best crew of each type of aircraft, Headquarters SAC introduced eight major name trophies in the decade after 1974. These trophies awarded performance in a variety of categories and were usually tied to a specific type of aircraft (such as the FB-111 or KC-10). One result of adding so many trophies over the past decade has been that the number of awards has exceeded the number of SAC bomber wings which actually participate in the competition. This situation has raised the danger that the competition may once again be perceived as an extravagant tournament rather than a legitimate military exercise.

The Competition in Retrospect, 1948-1985—Over the years the SAC Bombing and Navigation Competition has evolved from a relatively simple bombing exercise to a challenging course which has tested the all-round skills of SAC aircrews. Ground crews too have been tested, especially after the use of spare aircraft was banned in 1953. By the mid-1980s high- and low-level bomb runs, low-level navigation and terrain following, fighter intercepts, missile defense runs, and a battery of other electronic warfare tests had been combined to provide a meaningful challenge to SAC crews.

The best crews and the best aircraft have always been the ones selected to participate in the "bomb comp," and as such the competition does not necessarily give an accurate picture of the Command's true capabilities. By its very nature, the competition will always take place in an artificial environment. Nevertheless, the "bomb comp" has established a standard of excellence toward which all SAC units can aspire. Each year's competition serves as a measure of where the Command is at in terms of the quality of its aircraft and



crews. Once measured in thousands, SAC bombing CEPs are now usually measured in hundreds of feet at the competition.

The prestigious awards handed out at the end of each meet have proven to be a powerful stimulus in getting wing personnel to sharpen their skills. The intensive preparations, the competition, and the rewards which follow have all worked to foster a spirit of *esprit de corps* within the competing wings. Unit cohesion and pride are unquantifiable, yet vitally important factors in the successful performance of a military unit. By cultivating a spirit of teamwork and unit pride, the competition has served to promote stability in SAC's vital aircrews.

Where the competition has occasionally run into trouble is when the competitive spirit has been allowed to get out of control to the detriment of training for the majority of SAC crews. Similarly, members of Congress have been critical of the competition whenever expensive festivities for civilian guests have overshadowed the military aspects of the competition. The reforms imposed after 1974 succeeded in preserving the competition from its detractors and resulted in a more meaningful competition as well, but experience has shown that SAC must keep a watchful eye over the competition to ensure that the frills of the awards ceremony do not overshadow the military purpose of the "bomb comp."

Strategic Air Command has gone through many changes since its formation in 1946, and the SAC Bombing and Navigation Competition has changed along with it. Changes in the Command's force structure, equipment, personnel and doctrine have all been mirrored in the annual bombing operation. Despite some of the competition's flaws, it has generally served to promote better bombing accuracy as well as higher all-round performance by SAC's air wings. Weapons and equipment have been tested and new techniques have been developed in the "bomb comp." Although rules and scoring procedures have varied from year to year, bombing has always been the premier event in the competition ever

Air Force Chief-of-Staff General David C. Jones (left) and CINCSAC General Russell E. Dougherty (right) congratulate Colonel Earl O'Loughlin (center) and the rest of the 380th Bomb Wing team for their outstanding performance at the 1974 "Bomb Comp." (U.S. Air Force Photo)

since the Air Force established precision bombing as the "measure of merit of strategic bombing organizations" in 1948.²⁹ For nearly two decades the SAC Bombing and Navigation Competition has continued to apply that standard in the interest of improving the skills of those men and women who are the backbone of America's strategic air forces.

COMPETITION AIRCRAFT, 1948-1985

Model	Years in Competition
B-29	1948-1953
B-50	1949-1954
B-36	1949-1958
RB-29	1951
Washington	1952
Lincoln	1952
B-47	1953-1965
RB-36	1954-1957
YRB-47B	1955
RB-47	1956-1959
B-52	1956-present
Valiant	1957-1958
Vulcan	1957, 1966-1980
KC-97	1959-1961
KC-135	1959-present
B-58	1960-1969
FB-111	1970-present
F-111	1974-present
KC-10	1982-present
Tornado	1984-present



SAC Commander in Chief General Richard H. Ellis (left) awards the Saunders Trophy to the 380th Bomb Wing at the Twenty-third Annual Bombing and Navigation Competition (1979). (U.S. Air Force Photo)

Fairchild Trophy: Named for General Muir S. Fairchild, former USAF Vice Chief of Staff, the Fairchild Trophy has been awarded at every bomb competition since 1951. The trophy, which was donated by Hughes Aircraft Corporation, was awarded to the best bomber unit in the combined fields of navigation and bombing (1951–1969) and to the outstanding bomber and associated tanker unit in the combined fields of bombing and navigation (1970–1985).

Wing Navigation Trophy: From 1951–1958 the Wing Navigation Trophy was given to the wing with the highest score in navigation. During the next 10 years (1959–1969), the trophy was awarded to the bomber unit with the best score in navigation. The criteria changed again in 1970, and from 1970–1976 the Navigation Trophy was presented to either the bomber or tanker crew with the best score in navigation. Since 1977, the trophy has been given to the tanker unit with the highest score in navigation.

P.T. Cullen Trophy: Named after Brigadier General Paul T. Cullen who died in a C-124 crash on 23 March 1951. Awarded to the reconnaissance wing with the best combined score in photoreconnaissance and navigation. The award was actually established in 1952 and was presented at the annual Reconnaissance Competition. In 1956–1957 the Reconnaissance Competition was merged with the Bombing and Navigation Competition, thus bringing the trophy into the “bomb comp” for a brief time. The P.T. Cullen Award has not been awarded in conjunction with the bombing competition since 1957.

Saunders Trophy: Named after Brigadier General Donald W. Saunders, commander of the 57th Air Division. Brigadier General Saunders was killed while attempting to set a world cruise record on June 27, 1958. The Saunders Trophy has been given out every year since 1960 to the tanker unit with the best score in the competition. The award was donated by Headquarters USAF.

Mathis Trophy: Named after 1st Lieutenant Jack W. Mathis, a World War II bombardier who received the Medal of Honor posthumously for bravery over Germany. The trophy was sponsored by the Air Force Association. Between 1970–1974 the Mathis Trophy was given to the bomber unit with the best score in bombing and navigation. Since 1976 the trophy has been used to reward the bomber unit with the best combined score in high- and low-level bombing.

Crumm Linebacker Memorial Trophy: Named for Major General William J. Crumm, former commander of the 3rd Air Division. General Crumm died on a combat mission on July 7, 1967, when his B-52 crashed into the South China Sea. The trophy was donated by Boeing Aerospace Corporation in memory of the SAC crews killed during the Southeast Asia War. The trophy has been awarded to the best B-52 crew in high-altitude bombing.

Meyer Trophy: Named after General John C. Meyer, former CINCSAC. The trophy was donated by the General Dynamics Corporation and has been awarded to the best F/FB-111 or *Tornado* unit in the competition.

Doolittle Trophy: Named for Lieutenant General James H. Doolittle, an outstanding aviator and former commander of the Eighth Air Force. This trophy, which was donated by the Rockwell International Corporation, has been given to the numbered air force whose B-52 units compile the best overall results. The Doolittle Trophy has been awarded annually since 1977.

Bartsch Electronic Warfare Trophy: Named for Major James F. Bartsch, a 410th Bomb Wing electronic warfare officer killed in a B-52 accident on 2 April 1977. Donated by the Association of Old Crows. Awarded to the B-52 crew compiling the most ECM points during the competition.

Dougherty Short Range Attack Missile (SRAM) Trophy: Named for former CINCSAC General Russell E. Dougherty, this trophy has been awarded annually since 1978. Donated by the Boeing Corporation, the Dougherty Trophy is given to the B-52 or FB-111 wing with the best score in simulated SRAM launching.

Curtis E. LeMay Trophy: Named for former CINCSAC General Curtis E. LeMay and donated by Norden Systems, this trophy has been awarded to the crew with the best score in high- and low-level bombing. First presented in 1980, the LeMay trophy replaced the earlier Crew Bombing Trophy.

McDonnell Douglas KC-10 Trophy: Donated by the McDonnell Douglas Corporation, the trophy was awarded to the KC-10 team with the best score in inertial navigation exercises. First presented in 1982. The trophy was subsequently renamed the Ellis Trophy in honor of former CINCSAC General Richard H. Ellis.

Ryan Trophy: Named after former CINCSAC General John D. Ryan. Donated by the Boeing Corporation and given to the best B-52 unit in combined high- and low-level bombing.

B.L. Davis Trophy: Named after former CINCSAC General Bennie L. Davis, the Davis Trophy was donated by the Memphis Chamber of Commerce in 1984. The purpose of the trophy was to honor the “most improved” unit in the competition.

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ABOUT THE AUTHOR

Dr. Birtle is currently employed as a historian by the U.S. Air Force. He received his degree in Military History from Ohio State University December 1985.

