

'Buzzing Bee' Missile Mythology Flies Again

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An early morning ICBM launch in 1964 was photographed from a nearby mountain site, uncovering a design flaw that resulted in tight security and a UFO myth that refuses to die.

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An important advance in national test-range instrumentation was made in the fall of 1964 at the California Air Force Western Test Range (WTR). An experimental, state-of-the-art, video-equipped telescope was transported from the Range Measurement Laboratory, located at the Eastern Test Range in Florida, to a California coastal mountain ridge near Big Sur. The objective was to evaluate the ability of this instrument to enhance the analysis of flight anomalies and failures during ICBM testing from Vandenberg Air Force Base. Unprecedented views of intercontinental ballistic missiles in flight were obtained, and one of the launches revealed a flaw in design that was deemed quite important at that time. Eleven launches were



viewed over the month of September, and the telescope and its crew returned to Florida in October.

As the project initiator and engineer, I had worked for months to gain the required clearances, arrange the myriad support mechanics, and assemble a crew. The Range Measurements Laboratory was headed by Walter Manning, an unforgettable character with remarkable energy and enthusiasm. The Air Force assigned Lieutenant Bob Jacobs from the WTR 1369th Photo Squadron as the telescope site commander for logistical and security matters. A bright and eager officer, he was a key contributor to the ultimate success of the project. Decades later, he concocted a story that we had filmed an alien UFO that circled an ICBM in flight, altering the missile's course with an energy beam. He asserted that the project became a cloaked intelligence effort to hide proof of scientifically advanced space aliens. This preposterous fabrication was founded on a lack of understanding mingled with distant recollections—and perhaps some tongue-in-cheekiness by Bob Jacobs—who left the Air Force for a college teaching career in, oddly enough, journalism and broadcasting.

Jacobs's first pronouncement was in the *National Enquirer* in 1982, and a more comprehensive version was published later (Jacobs 1989). The incident he described became known as the Big Sur UFO. A friend gave me the article after finding my name mentioned in it. I later submitted an unsolicited rebuttal to the *SKEPTICAL INQUIRER* (George 1993).

The Jacobs article correctly states the basic facts of the deployment. The telescope, called the BU Scope for short, had been assembled by Boston University for the Eastern Test Range. A modified 90 mm military gun mount is the cradle for a twenty-four-inch primary telescope mirror and a 240-inch basic focal length. An image orthicon television camera was the sensor, and the thirty-frame-per-second 875-line interlaced output was displayed on a kinescope in an accompanying van for recording by a 35 mm motion-picture camera. The site was close to Anderson Peak in the Los Padres National Forest near Big Sur at an altitude of 3,400 feet, approximately 110 miles to the north-northwest of Vandenberg Air Force Base. The launch that Bob Jacobs makes the centerpiece of his story was an Atlas missile nicknamed Bzzzzing Bee, released just before dawn on September 22. Conditions were ideal for the light-sensitive image orthicon

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to capture the best shots. My report in October 1964 (George 1964), the only contemporary written material on Bzzzzing Bee still in existence, indicates that it was tracked for about 400 seconds. At the end of the image-tracking the Atlas missile was roughly 3,000 miles away from our location.

Jacobs made six assertions near the end of his 1989 article. My 1993 rebuttal in *SI* concentrated on these items by countering with what we had actually captured on film that day. In a nutshell, the Atlas launch to the Kwajalein atoll included deployment of two decoy reentry vehicles (RVs) intended to confuse enemy defensive radars. Our photography showed that the decoys did not deploy properly after the main propulsion phase ended and were surrounded by pieces of Styrofoam packing from their launch tubes. Thus, the “real” warhead, released before the decoys and without the packing, stuck out like a sore thumb. The Strategic Air Command (SAC) headquarter analysts subsequently recognized this as a shortcoming of a major weapons system and classified the film as top secret. Film footage seen up to the time of this new classification was the origin of Jacobs's fantasy, as his security level was not high enough to handle the film or talk about it after re-classification. Nor was mine, at that time, but my clearance level was increased very soon thereafter.

The Air Force pressed on with projects to place a permanent telescope at Anderson Peak and equip it with our own image orthicon device. We also placed a telescope on Santa Ynez Peak to the east of Vandenberg AFB. Both sites were upgraded through the following decades. The image orthicon, difficult to adjust and “tune” in the field, was replaced with image-enhancement devices, auto tracking was developed, and many other improvements made. Use of the two sites allowed mapping of deployment events and reconstruction of three-dimensional depictions. The exercise of 1964, owing to Bzzzzing Bee, was a huge success that significantly enhanced the ICBM development programs.

The Resurrection of the Alien Myth

After my 1993 *SI* article, the more skeptical UFO aficionados took Big Sur off of their lists. But the Big Sur UFO story resurfaced on the Internet, implausible as Jacobs's tale was. I received a complimentary copy recently of *International UFO Reporter* magazine (Hastings 2007) with a fourteen-page cover story by Robert Hastings on the same subject. Hastings apparently has no personal connection to the original project but has carefully reviewed what is known and Jacobs's postulates and added some fantasies and idle thoughts of his own. His lengthy write-up is sprinkled with numerous snide comments about *SKEPTICAL INQUIRER*, its staff, and members of the Committee for Skeptical Inquiry, and in passing calls my earlier effort in *SI* “. . . a dismissive but factually inaccurate summary of [the incident]. . . .” The Hastings rehash contains

a host of minor issues that are not worthy of rebuke, but there are three major items that need to be addressed.

The Image Orthicon (IO) and Optical System

The first item in the Hastings article is a brief Physics 101 analysis of optics by Mark Rodeghier, one of the editors of the *International UFO Reporter*. Rodeghier concludes that his analysis “. . . thus generally supports the observations and testimony of Jacobs and Mansmann.” There are a number of serious objections to that conclusion.



The Image Orthicon telescope system in 1964, and some of the crew. Lt. Bob Jacobs is at far right holding a camera.

The IO was a very significant invention, especially useful in the early days of television because of its high sensitivity. It was called an “Immy” in the TV industry, corrupted into the term “Emmy” for the TV awards. It has a series of electron-multiplier stages to boost the output signal and can detect very dim stars to twelve or thirteen stellar magnitude—the naked eye sees sixth magnitude readily, but it has trouble at higher numbers. Brightness decreases by a factor of two-and-a-half as the numbers progress.

My 1964 report states that the BU Scope was set to 720 inches, indicating that a 3× Barlow magnifier was used to increase image size. The magnifier degrades the image inten-

sity at the focal plane, so the sensitivity of the IO tube was “pushed” to compensate for this, with a consequent lowering of the dynamic range and resolution on the display kinescope.

The IO controls were set to a level just below the point of electron avalanche to prevent image or monitor screen “white-out.” A very bright object causes a dip in the sensitivity of the photon detection layer—called blooming—which lasts for several frames. A tadpole effect is seen as the image moves across the screen, leaving a slowly shrinking and vanishing tail. In daylight, with the IO sensitivity in a normal range, we would see a tiny image of the missile tankage prior to burnout, even for a vehicle three or four hundred miles away. However, the background of a brightly daylit sky after engine shutdown was always too much for the small spotting telescopes used by the manual trackers, and tracking would halt.

When explosive events occur, such as reentry vehicle shroud-cover removal and RV separation, a fast-expanding, gassy exhaust cloud is seen, lasting only a very few film frames in the vacuum of space. It can be identified by printing enlargements of individual frames. Stars whiz through the projected film with regularity, the brighter ones with arcing tadpole tails—the apparent star motion, of course, is present because the telescope was being trained manually on the fast-moving target, modified by slight jerky errors of the azimuth and elevation wheel operators.

The Atlas vehicle, with payload shroud, is about ten feet in diameter and one hundred feet in length. At engine shut down, the vehicle is between 500 and 1,000 miles in altitude. The distance to the telescope at shut-down would have been at least 500 slant miles, growing to 2,000 miles or more at film run-out. The tank image length on the face of the IO tube (seven or eight arc-seconds) would be roughly twenty-seven thousandths of an inch at first, or perhaps twenty-four scan lines, diminishing to around two thousandths, or a single scan line, by the end of the viewing. The IO bloom from the big Atlas tank caused the largest white spot on the film but no “shape.” Other much smaller objects provided smaller spots—less blooming effect—so we could eventually infer which spots belonged to known objects. The big main tank reflecting sunlight was all



that could be detected through the spotting telescopes used by the azimuth/elevation trackers but was bright enough for them to maintain track until film run-out.

With a deep bow to the fabulous sequential-scanning color HDTV systems of today, our primitive IO set-up of 1964 would not have produced something with a distinct shape. The film was a collection of energetic blobs in black-and-white that only made sense when the launch exercise was understood in detail. It was a matter of weeks of analysis before we finally unscrambled the meaning of what we had filmed and confirmed the SAC analysis. The Rodeghier analysis in Hastings's article is simply irrelevant given the low-grade optical capability of the 1964 BU system and its very poor resolution on film.

Energy Beams in Space

The second issue involves Star Trek devices. Perhaps readers are familiar with the roar of the Starship Enterprise passing through space and the brightly visible laser beams traded with Klingon cruisers. The vacuum of space does not permit sound travel or colorful side-visible rays of any kind. In his MUFON exposition, Jacobs suggests "energy beams" of some sort, but the type doesn't matter. Dust particles, ionized particles, or sustained gas clouds are required to detect a focused laser or energy beam, such as when a mist is displayed to identify lasers in a jewelry heist movie. What one might see if a laser was used in space would be a hot spot or meltdown of the outer skin of a target. Could the white spot turn even whiter? No, the BU Scope would not permit that kind of detail to be observed.

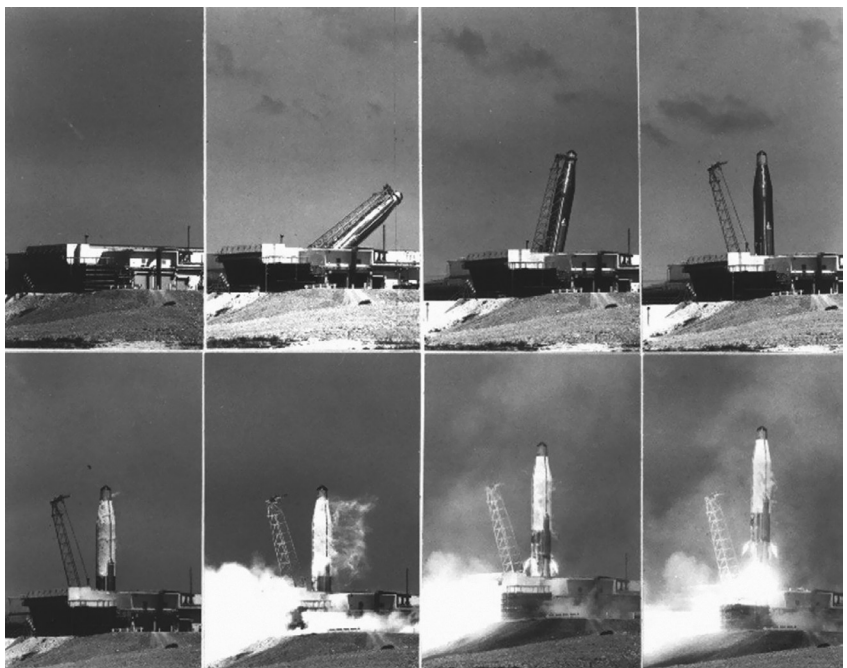
Hastings mentioned the northern lights as a type of light caused in the upper atmosphere by sun-generated particle streams. A relatively rare phenomenon at our latitude, the aurora borealis involves a huge number of sparse particle streams spread over a vast space above the arctic sky.

What Launch Did Jacobs Describe?

Jacobs's account indicates a launch "that may have occurred on September 2, 3, or the 15th with an Atlas type F or D." Film was exposed on nine launches in total, missing two due to weather or mechanical problems. The Vandenberg AFB launch summary from the 30 Space Wing Office of History indicates eleven launches took place during the month of September in 1964. Two of these were space launches toward

the south from Vandenberg on September 14 and 23 and were of marginal interest to us at the time. Seven were Minuteman ICBMs on September 1, 8, 10, 15, 21, 23, and 29. The other two occurred on September 15 and September 22, an Atlas D nicknamed Butterfly Net and an Atlas D nicknamed Buzzing Bee. Buzzing Bee carried a simulated reentry vehicle warhead and decoys, duplicating the packages on the active (on-alert) Atlas F weapon system, and Butterfly Net carried an advanced reentry vehicle for study via terminal area radars.

Butterfly Net was launched in the morning, long after sunrise, with a bright sky behind it. The image orthicon would



A series of images from an Atlas launch.

have been adjusted for daylight. The manual trackers were handicapped after engine shut-down, when the vapor trail of engine fuel was depleted some 240 seconds after lift-off. Their inferior spotting telescopes would not permit direct viewing for more than a few seconds. It was disappointing, as we were half-way through the project and had not yet scored as I had hoped. Could the crew have filmed something and kept it hidden from my knowledge? Not possible—I was totally "on top" of every inch of film exposed that whole month, and I was likely on site for the launch, although I was not on site for every one of them.

Buzzing Bee was launched more than a half hour before sunrise at Anderson Peak. The ICBM broke into sunlight well after lift-off, while the background sky was still dark and many

stars were still visible. The site was in complete darkness. Our “score” had come at last. Without a shadow of doubt, what we had captured, and what had excited Jacobs as well as many others, was *Buzzing Bee*. The launch dates, nicknames, and times are all easily verified by simple Internet searches.

One More Quandary: What about Mansmann?

Both Jacobs and Hastings mention SAC Major Florenz Mansmann Jr., who was the photographic support coordinator for the First Strategic Aerospace Division at Vandenberg AFB. I have reviewed post-retirement letters purported to be from Mansmann, and they indicate that he agrees, in general, with Jacobs’s conjectures. He passed away, according to Hastings, in 2003.

Mansmann would have determined the photo requirements for every launch and issued directives to the 1369th Photo Squadron. The launch personnel were busy in those days, as more than one hundred test launches were taking place yearly in the early 1960s. I made more runs to the Squadron lab over the next decade than I could count, so my memory does not let me pick out particulars during that September. Owing to his substantial workload, Mansmann was only marginally interested in the Big Sur site and the purpose of the project. He visited the Anderson site only once that I can recall, in early September.

On September 22, about twenty films would have been processed, including those from the pad cameras and all the local tracking cameras. Within a few days, reduced 16 mm copies would be made and sent to a variety of analyst offices, including the SAC headquarters in Omaha, Nebraska. It was weeks before we heard anything about the sensitivity of our IO film. The preliminary report I wrote does not go into any detail of the launch, but the fact that I published it on or about October 13 (the date stamped on the title page) indicates that at least two weeks had passed without any clamp-down from SAC headquarters. Otherwise, I could never have mentioned it or even hinted at some sort of anomaly. Jacobs is totally wrong to suggest that the “men in black” appeared the day after the launch at a special showing.

Why would Major Mansmann agree with Jacobs? It is doubtful that in 1964 he had more than a small inkling of what the *Buzzing Bee* films showed—and even less interest many years later. Would he have supported his former “comrade in arms” after he was long retired and short on memory of those busy times? And might it have even been amusing to him? I remember Mansmann for his great sense of humor and friendly nature.

Conclusion

The only reason the film became top secret is because it revealed a weakness in the Atlas weapon system, which was our only on-alert ICBM at the time. All the original films of all launches would have been destroyed or recycled decades ago, or else today we would need a Pentagon-sized warehouse just

to hold all of them. A couple of years after the master copy had been stored in a vault used exclusively for top-secret storage, I was asked if it could be destroyed to conserve space, and of course I approved.

The Western Test Range was very pleased by the hugely successful project. A 16 mm, forty-five-minute publicity film of the project was assembled in Hollywood by the Lookout Mountain Photographic Squadron shortly after the project. I wrote the script for the film, which included footage of operations, including some of *Buzzing Bee*. There was a copy of this film in my office for several years, but in shifting jobs and office assignments, it eventually vanished. Portions of it were used in the Air Force Quarterly Film Report, likely the Winter or Spring issue of 1965.

The Western Test Range gained an extraordinary new capability from the Big Sur project. Jacobs’s conjectures may mystify and amuse many and even seem persuasive to those without an appropriate background. That, plus the fact that the physical evidence is long since gone, is likely why myths continue to surround and degrade the historical significance of the Big Sur adventure. □

Note

Except for the 1964 report, several references can be readily found on the Internet by a Web search for “Big Sur UFO.” I have an original of the 1964 report and could provide an email copy on request.

References

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