

# ISRAEL'S 1979 NUCLEAR TEST AND THE U.S. COVER-UP

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In the wake of the 1963 Partial Test Ban Treaty, the United States launched a series of satellites under the name Vela (after a constellation in the southern hemisphere sometimes called “the sails” because of its configuration).<sup>2</sup> The Vela satellites were designed to monitor compliance with the treaty by detecting clandestine nuclear tests either in space or in the atmosphere. The first such satellite was launched in 1963, the last in 1969. They operated by measuring X-rays, neutrons and gamma rays, and, in the case of the more advanced units, emissions of light using two photodiode sensors called bhangmeters (derived from the Indian word for *cannabis*). These satellites had a nominal life of seven years, after which the burden of detection was to be shifted to a new series of satellites under the Defense Support Program (DSP), equipped with infra-red detectors designed to pick up missile launches as well as nuclear tests. The Vela satellites, however, kept operating long past the end of their nominal design life and one of them, designated Vela 6911, detected an event on September 22, 1979, that has become a subject of intense interest ever since.

## THE MYSTERIOUS FLASH

What Vela 6911 detected was a light pattern that had the characteristic “double hump” shape associated with a nuclear explosion.<sup>3</sup> As a function of time, the observed light pattern of a nuclear test rises to an initial peak of luminosity with a subsequent decline due to the obscuring of the fireball by a shock wave (a thin layer of highly compressed air). As the shock wave cools, it becomes less opaque. The fireball is then increasingly visible, with luminosity rising to a second peak before declining monotonically.<sup>4</sup>

Ordinarily, both bhangmeters on the satellite would have recorded exactly the same signal with an amplitude or phase difference depending on the spatial orientation of the satellite with respect to the point of origin of the blast. However, one of the bhangmeters, possibly because of a malfunction, did not reproduce precisely the record of the other.<sup>5</sup> This has been a key element in the argument of the increasingly small community of interested parties who believe that no test took place.

In any case, the U.S. government acted quickly and began searching for data from sources other than the Vela that could

corroborate the event as a nuclear test. This included data from the bhangmeters on the DSP satellites and the Ionospheric Observatory at Arecibo (Puerto Rico), which might detect an ionospheric wave resulting from an atmospheric test. Aircraft were dispatched to try to obtain evidence of radioactive debris in the atmosphere in the vicinity of what was calculated to be the site of the event, an area off the coast of South Africa that comprised parts of the Southern Indian and Atlantic Oceans, including the region around Prince Edward Island. In addition, the Naval Research Laboratory (NRL), which had played an important part in establishing a nuclear-test detection system early in the Cold War era, prepared to analyze any data that would be collected by U.S. Navy ships dispatched to try to collect radiological evidence in the ocean. NRL's task included collecting and analyzing hydro-acoustic and ocean-wave data that might also provide evidence of a nuclear test.<sup>6</sup>

The results of these efforts were mixed. The DSP satellites recorded no flash,<sup>7</sup> and no radioactive debris was found. But a researcher at Arecibo recorded an ionospheric wave traveling in an anomalous direction that could have been the result of a nuclear test.<sup>8</sup> The NRL analysis of its hydro-acoustic and wave data took time to prepare and in the end convinced its scientific director that a nuclear test had taken place.<sup>9</sup> However, the data and analysis are still classified.<sup>10</sup> The lack of an immediate and definitive corroboration that a nuclear event had taken place led to rampant speculation about the event. The initial assessment of the National Security Council (NSC) in October 1979 was that the intelligence community had "high confidence" that the event was a nuclear test.<sup>11</sup> A later NSC report altered

this conclusion to one of "a position of agnosticism."<sup>12</sup>

### WHO DID IT?

In the meantime, the Carter administration had to think about the political ramifications of a test, if indeed one had taken place. One problem was that a clandestine test not definitively labeled as such meant that the system for detection could be claimed to be insufficiently reliable, calling into question the ability to detect any Soviet cheating on the Limited Test Ban Treaty. This would undermine the value of the second Strategic Arms Limitation Treaty (SALT II) that had been signed in June 1979 and was awaiting a Senate vote on ratification. Carter had made nonproliferation and disarmament a key element of his presidency and was expected to run for reelection in 1980 touting his successes in that arena. A Soviet clandestine test was unlikely, but if the "mysterious flash" was not a Soviet test, who else would have and could have done it?

Initial speculation centered on South Africa<sup>13</sup> because of the calculated geographic location of the event and the knowledge that South Africa was developing nuclear weapons. In addition, a *Washington Post* story revealed that U.S. intelligence had tracked a secret South African alert of some of its naval forces a few days prior to the Vela event and an associated movement of some of its ships in the calculated vicinity at the ostensible time of the event.<sup>14</sup> A January 1980 intelligence report sent to the Arms Control and Disarmament Agency said South Africa was the most likely perpetrator. But the South African program was actually insufficiently advanced at that point to conduct a small clandestine test, a conclusion that was verified later by the International

Atomic Energy Agency, among others.<sup>15</sup> Attention then turned to Israel, presenting the Carter administration with additional political concerns.

### ISRAEL'S NUCLEAR AMBIGUITY<sup>16</sup>

The United States had been attempting to track Israeli nuclear-weapons activities from the time it became aware of the secret project at Dimona toward the end of the

Eisenhower administration in 1960. Before admitting the true nature of the project, which started as a secret joint venture with France

in 1957, until President Charles DeGaulle ordered an end to French participation, Israel claimed at various times that the Dimona project was a textile factory, an arid-land research plant, a metallurgical research plant, and finally a nuclear research plant for peaceful purposes. But the Kennedy administration understood its real purpose, and attempts were made, including by President Kennedy himself, to prevent the development of nuclear weapons by Israel and get the Israelis to pledge that Dimona would be used only for peaceful purposes, backed up by inspections by U.S. scientists. These efforts failed, and in March 1965, the U.S. Department of State recorded its view that Israeli scientists had put into place all the elements for assembly of a nuclear device.

But while the U.S. State Department continued trying to pressure Israel to stop its march toward the bomb after President Kennedy was assassinated, President

Lyndon Johnson saw such efforts as politically undesirable. Thus, when the State Department tried to tie U.S. exports of advanced tanks and planes to nuclear controls on Israel, Johnson dismissed such efforts and was satisfied with an Israeli pledge "not to be the first to introduce nuclear weapons into the Arab-Israeli area" (later modified to "into the Middle East"). Israel is believed to have built its

first weapon in approximately the same time frame that the Nuclear Non-Proliferation Treaty was opened for signature in 1968, and

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neither Johnson nor his successor, Richard Nixon, were going to pressure Israel to become a party to the treaty.

Indeed, in July 1969, Nixon signed off on NSSM 40, a study headed by Henry Kissinger stating that the United States should have the "unstated objective of keeping Israel's weapons from becoming public knowledge" and that Israel should reaffirm its pledge not to be the first country to "introduce" nuclear weapons into the Middle East ("introduce" was to mean "possession"). Israel never expanded its pledge to bar possession, and in a meeting between Nixon and Prime Minister Golda Meir in 1969, an agreement was concluded in which the United States would not ask Israel to sign the NPT. In addition, the United States would not interfere with and would avoid public knowledge of Israel's nuclear-weapons development activities in return for an Israeli pledge to make no visible introduction of nuclear weapons

or undertake a nuclear-test program. Thus was born the Israeli policy of nuclear ambiguity, with the United States in the role of partner/enabler, a position adopted by every U.S. president thereafter. It would have been politically difficult for Jimmy Carter to abandon this policy under any circumstances, but Carter had specific reasons for not wanting to publicly raise the possibility of an Israeli nuclear test in 1979.

### **CARTER'S OTHER CONCERNS**

The Camp David agreement between Israel and Egypt had been brokered earlier that year by President Carter and was also going to be an important element of Carter's reelection campaign. Assistant Secretary of State Hodding Carter described the State Department attitude as one of "sheer panic" upon receipt of the news of the Vela incident and that Israel might be involved.<sup>17</sup> The State Department had taken a hard line toward Pakistan in 1977 and 1979, cutting off economic and military assistance as a result of Pakistan's nuclear enrichment and reprocessing imports, which had violated the Symington and Glenn amendments to the Foreign Assistance Act, even though Pakistan was still years away from the ability to test a nuclear device. Under the circumstances, the U.S. government would be hard-pressed to ignore an evident Israeli test, especially since Israel had signed the Limited Test Ban Treaty. To do so would have negative repercussions in the Arab world and possibly blunt progress toward peace in the Middle East. To take any punitive action against Israel, however, would upset the Jewish Diaspora in the United States, an important constituency for Carter and the Democratic Party.

### **THE RUINA PANEL**

To relieve the political pressure and parry the growing opinion in intelligence circles that the Vela event was a nuclear test, the Carter administration seized upon the discrepancy between the Vela bhangmeters and speculation that the meters could have recorded a combination of natural phenomena (e.g., lightning plus a meteor strike) that might mimic a nuclear test.

The White House asked Frank Press, the president's science adviser and director of the Office of Science and Technology Policy, to convene a panel of scientific experts to review the available data and determine whether the "double flash" was the result of a nuclear test, a natural phenomenological event or a satellite malfunction. An MIT electrical-engineering professor and long-time consultant to the government on defense matters, Jack Ruina, was made chairman of the panel, which included the scientific luminaries Luis Alvarez, Richard Garwin, Wolfgang Panofsky, Richard Muller, Alan Peterson, William Donn, Riccardo Giacconi and F. William Sarles. The panel was specifically tasked to ignore all political questions concerning the event, such as who might be in a position to conduct such a test if it was nuclear.<sup>18</sup> CBS News reported that the administration withheld intelligence data from the Ruina panel showing that Israel and South Africa were cooperating on the development of missiles that could carry nuclear warheads.<sup>19</sup> This guaranteed that Israel would not be mentioned in the report if the conclusion was that a nuclear test had occurred.

Thus, while the Carter administration did not create false intelligence data to reach a desired conclusion, it hoped to create an alternative explanation of the data at

hand that could enable it to ignore or counter the conclusion of a growing number of the government's intelligence analysts.

One possibility was the effect of sunlight glinting off the debris of a micrometeoroid that had struck the Vela satellite. Studies had been performed by Mission Research Corporation (MRC) and Sandia National Laboratory suggesting several meteoroid shape and trajectory models that could explain the waveform observed by the Vela bhangmeters. In addition, there was considerable data from an experiment on the spacecraft Pioneer 10 that might shed light on what kind of optical signals might be detected from meteoroid collisions. SRI International was tasked in December 1979 with assessing the probability that the Vela signal was caused by a sunlight-meteoroid interaction, and examined both the Pioneer 10 data and whether the circumstances postulated in the MRC and Sandia models would actually come about, taking account of the number of sensor observations over the life of the bhangmeters. The SRI report concluded that the Pioneer 10 data contained insufficient information to make a definitive judgment about the Vela signal's origin, but that the aforementioned models would require more than one meteorite strike with a particular set of characteristics to result in the Vela signal of September 22, 1979. The probability of this happening was calculated to be on the order of one in 100 billion.<sup>20</sup> Their calculation was reviewed and affirmed in the context of other data in a 1980 DIA study.<sup>21</sup>

### THE PANEL'S REPORT

The Ruina panel's report was classified and officially presented on May 23, 1980. An unclassified version was released on September 23, 1980. The report focused

on the differences in the measurements obtained by the two bhangmeters and concluded that the signal was probably not that of a nuclear explosion, though it could have been. The panel offered an alternative explanation of the signal, suggesting the possibility that it could have come from sunlight glinting off the debris of a micrometeoroid that had struck the Vela satellite. As indicated above, the probability of a micrometeoroid causing the bhangmeter signals of September 22, 1979, was estimated as one in 100 billion. A personal explanation of the Ruina panel's conclusion was provided by Luis Alvarez in his 1987 memoir.<sup>22</sup> He states that he asked DIA to provide a selection of the Vela records that indicated events that were nuclear explosions, or were ambiguous as to their origin but had some signal characteristics associated with a nuclear explosive event. The latter were called "zoo animals" or "zoo-events" in reference to the "zoo-ions" that physicists like Alvarez called the unexplainable tracks in a bubble-chamber experiment. Alvarez apparently had a memory lapse when he wrote his memoir, claiming that only one bhangmeter recorded the September 22 "flash," and on that basis suggesting that the flash was a "zoo-event." But the panel's report and other accounts of the flash refer to differences in the two bhangmeters' recorded intensities and phase differences, rather than a complete non-detection. The bhangmeter data for the September 22 event, which I examined at one point, was unequivocal in showing data from the two bhangmeters. What Alvarez was probably referring to was not the bhangmeters but a third optical sensor that was used normally to locate the geographic origin of an event but was no longer operating on Vela 6911. A paper by Carey Sublette<sup>23</sup> in the Nuclear Weapon

Archive lays out other flaws in Alvarez's defense of the Ruina panel's report, which had concluded that the Vela signal more likely represented a "zoo-event" than a nuclear explosion.

### THE NRL REPORT

It is interesting to compare the U.S.

government's treatment of the Ruina panel's report with other classified documents that suggested more definitively

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that the Vela event was a nuclear test. In the late fall of 1981, I interviewed Alan Berman, the former scientific director of the Naval Research Laboratory, who had retired from NRL and was then the director of the marine laboratory of the University of Miami. I had known Berman for more than a decade as a result of my part-time consulting and research position at NRL. Berman was unanimously viewed at the laboratory as a superb scientist and administrator who would never color a scientific data-based conclusion because of political or ideological considerations. My interview with him took place about 18 months after a 300-page classified NRL report had been completed in the summer of 1980, laying out the laboratory's analysis of the hydro-acoustic and other data collected following the Vela event. According to one account, the report concluded that the event was most likely a nuclear test and was accompanied by a large underwater signal resembling those given by previous nuclear explosions conducted by France in the Pacific in the 1970s.<sup>24</sup>

Berman had said that pulses of underwater sound detected by Navy sensors at two locations following the blast were the strongest corroborative evidence that a nuclear explosion had taken place. Regarding that evidence, he said further, "It's strong enough to make the case in its own right."<sup>25</sup> The Navy sensors showed

that the explosion's signal was reflected off the Antarctic shelf, and the reflection was also detected, allowing for

a calculated estimate of the event's location, in the vicinity of Prince Edward and Marion Islands.

The White House ignored the NRL report and referenced only the Ruina panel's report whenever publicly queried. Berman had vociferously objected when the Ruina panel's report was released prior to the completion of the NRL report, and he was still furious when I interviewed him in his office. On two other occasions in late 1980, following the delivery of the NRL report, he had contacted the White House with new information indicating additional support for the conclusion that a nuclear test had taken place and offering to undertake a broader analysis of the information. But his offer was ignored or rebuffed.<sup>26</sup> One of these contacts was by means of a letter to John Marcum, then a senior adviser to the White House on technology and arms control.<sup>27</sup> Marcum was one of the officials helping the administration deflect attention from the growing consensus in the intelligence community that the Vela signal was nuclear in origin.

**FURTHER EVIDENCE:  
A PERSONAL EXPERIENCE**

Based on what I had learned in a number of briefings, I had myself reached the conclusion that the September 22 event was a nuclear test, and I was not shy in offering that opinion during discussions within the government on nonproliferation issues. But I said nothing publicly. The first news story about the Vela detection occurred on October 25, 1979, when John Scali, then working for ABC News, broke the story of the flash after being briefed by contacts at the Pentagon. But Scali did not claim that the event was a nuclear test. Others, however, did.

One of the most outspoken proponents of the notion that a nuclear test had taken place was Major General George J. Keegan, former head of Air Force Intelligence. Keegan had had a long military career before retiring in January 1977 and received much notoriety for claiming that the USSR had achieved a breakthrough in the development of directed-energy weapons, specifically in the area of particle-beam weapons, which would have constituted a serious shift in the balance of strategic power between the two superpowers. Although both President Carter and Defense Secretary Harold Brown issued public statements refuting Keegan's claim, the administration responded to political pressure from Congress on the issue and significantly expanded the American-directed energy program. Later it became clear that Keegan had misidentified a nuclear-rocket facility in the USSR as a particle-beam facility.<sup>28</sup> Keegan took a significant hit to his reputation over this error, and he became persona-non-grata within the Carter administration, whose personnel began referring to his claims as "Keegan's Follies." Thus, when Keegan publicly

stated his opinion that the Vela event was a nuclear test, the Carter administration lost no time in pointing out how wrong he was in the past on the directed-energy weapons.

This was brought home to me personally when, at a nonproliferation briefing given by Carter administration personnel, I was taken aside and told that if I persisted in stating my belief that a nuclear test had taken place on September 22, my reputation would take a hit and I would suffer the same fate as Keegan. Nonetheless, in my role as staff director of the Senate Subcommittee on Energy and Nuclear Proliferation, I continued to make numerous requests to see the classified data from Vela 6911, but without success. I felt I was being stonewalled.

All this simply reinforced my belief that the Vela event was a nuclear test and that the Ruina panel was engaged in an exercise designed by the White House to give it the ability to point to an alternative scenario, one which, however, had low probability of occurrence.

However, any small doubt I might still have harbored about the origin of the double flash was erased by an event that took place in the office of Senator John H. Glenn of Ohio on March 6, 1981. At the time, I was working as Glenn's chief adviser on nonproliferation issues as well as in my formal position on the Senate subcommittee of which Senator Glenn was the ranking member (he lost the chairmanship when the Republicans took over the Senate in the wake of the 1980 election victory of Ronald Reagan over Jimmy Carter). I had received a call to my own office that morning from Robert Pierpont, a well-known CBS News reporter. He said that CBS was doing a story on the "mysterious flash." He had heard that I had some "interesting" opinions about it, and

asked if I would be willing to say those things on camera for possible broadcast on the CBS Evening News, anchored by Walter Cronkite. Perhaps naively, I said "OK," and gave Pierpoint permission to bring a camera crew to my office. A few hours later, while they were setting up their equipment, the phone rang, and my secretary announced that Senator Glenn was on the line. The first thing he said to me after I said hello was that a call had been made to his office by the White House. Much to my astonishment the White House had heard that I was going to give an on-camera interview about the Vela event. The senator asked if that was true, and I said that the camera crew was setting up in my office as we spoke. Senator Glenn responded that the White House was very upset and that I needed to come to his office immediately to discuss this. I excused myself, telling Pierpoint I needed to talk to Glenn for a few minutes.

It took about three minutes to walk to Glenn's office. He was there with his press secretary and erstwhile campaign manager, Steve Avakian. They looked grim. Glenn told me again how upset the White House was about the proposed interview and asked what I intended to say. When I said, "I intend to say that the 'mysterious flash' was a nuclear test," he responded sharply, "No! You can't say that!" He reiterated how upset the White House was and how damaging the political fallout could be if I went ahead. Glenn said the White House told him that my interview could result in a serious foreign-policy problem for the United States. Then he uttered a cryptic comment about how his political enemies would make hay over this, were I to cause a problem.

I was stunned. I had given interviews before on other issues but had never been

given an order to say or not say something. Since I was not about to risk losing my job, I said I would call off the interview. At this, Avakian jumped in and, with Glenn's evident approval, said "No! You have to go ahead with the interview, but you can't say there was a nuclear test!" As I started walking out I asked who had made the call to Glenn. They said it was John Marcum, the person Alan Berman had written to in an attempt to get the White House to pay attention to the NRL report and the laboratory's capabilities in analyzing any new data. Only now, Marcum was representing the Reagan administration in trying to scuttle unwanted comments and conclusions about the Vela event. Clearly, concerns about Jimmy Carter's presidential fortunes in September 1979 were not the only reason for White House panic over the "flash." It was now a bipartisan panic, and that meant to me that Israel was involved.

I left Glenn's office with my head swimming. How was I going to do an interview on the Vela event without lying or saying explicitly that I believed it was a nuclear test? I decided the least I could do was to indicate my disdain for the alternative scenario contained in the report of the Ruina panel. I said, "I was surprised at the zeal which some people were bringing to the question of proving that this was not a nuclear event." I paraphrased what Glenn had said was the White House message in its phone call: "If this was a nuclear event, it would present a great political problem for the United States." I concluded, "I don't think it is possible to lay this event to rest with a report that indicates that a group of people feel that the probability of its not being a nuclear event is perhaps more than half, and on that basis we all should forget about it and go to sleep." The



comment about the event being a political problem for the United States was code for the headaches that would be created by naming Israel as the culprit.

I was upset that I had to resort to verbal subterfuge to get my point across, but I was relieved that Pierpoint did not accuse me of bait-and-switch. In fact, the interview was the last segment of Walter Cronkite's farewell broadcast as anchor before he personally signed off. But my experience that day in Glenn's office and the representations made of the panicky White House phone calls were the last bits of evidence for me, if any were needed, that Vela 6911 had recorded a nuclear test, and that the most likely perpetrator was Israel, probably with South African support. To underscore the unique nature of my interaction with Glenn in this case, I worked for him for another 18 years, gave many interviews, and never was told again what I could or could not say.

It was perhaps a coincidence that, about three weeks after the CBS broadcast, I was finally allowed to see the Vela satellite data I had been seeking for months. I examined the graphed "flash" data along with the group of "zoo events" referred to by Luis Alvarez. Perhaps I should not have been surprised at that point, but notwithstanding the phase differences between the bhangmeters on Vela 6911, the plot of the data showed the two humps of the classic curve associated with the light intensity from a nuclear explosion. Moreover, there was not a single "zoo animal" that came close to the classic shape in duration and amplitude. Finding an alternative explanation other than a nuclear test for the "flash" of September 22, 1979, required some serious mind bending by the individuals on the Ruina panel.

## **RUINA'S DEFENSE**

The Ruina panel never faced a public hearing on the panel's report, and over the years panel members and their supporters have defended the report's conclusions in informal settings such as university seminars. But the arguments put forward in favor of the panel's conclusion are almost entirely based on a technical analysis of the Vela detection showing certain phase differences between the signals recorded by the two bhangmeters. In the same 1981 CBS News program referred to above, Jack Ruina said in an interview that the disagreements between his panel and many other scientists and analysts who had access to the Vela data and who believed there was a nuclear test simply showed that "two different people looking at the same data can arrive at different conclusions." But this was disingenuous. The fact is that the issue was not, and is not, just a matter of looking at the bhangmeter data, but at all the information surrounding the event, (1) intelligence about the activities of the South African navy on that day, (2) the close relationship between Israel and South Africa on nuclear technology and materials and specifically on the development of nuclear-capable missiles, plus (3) the analysis of hydroacoustic and other information performed by the Naval Research Laboratory in the search for corroborative data following the event. None of this was examined carefully by the Ruina panel, which followed its mandate to look narrowly at the issue and come up with an alternative scenario to explain the bhangmeter data.

## **FURTHER EVIDENCE**

In 1991, Seymour Hersh published *The Samson Option*, describing the history

of the Israeli nuclear-weapons program up to that time. Hersh reports that former Israeli government officials told him that Vela 6911 recorded an Israeli test of a low-yield nuclear artillery shell and that the test was the third in a series carried out over the Indian Ocean. Hersh writes that the test was preceded by a visit to the site by two Israeli ships, and that elements of the South African navy were observers. He

also describes the panic among White House and State Department officials upon learn-

ing of the Vela event. Hersh attributes the panic mainly to the Carter administration's concerns about the fate of the SALT treaty and the political ammunition a clandestine test would give to Republican opponents. My own experience showed that the Reagan White House was equally concerned over the prospect of a confirmed clandestine Israeli nuclear test at a time when the United States was ostensibly trying to hold the line on proliferation activities in Pakistan, and Congress was considering legislation prohibiting military assistance to that country in the event of a nuclear test. Hersh also quotes a number of prominent members of the Nuclear Intelligence Panel who had examined the Vela data and concluded it was a nuclear test but were ordered not to discuss it publicly. In particular, the chairman of the panel, Donald Kerr, who had been acting director of defense programs at the Department of Energy, told Hersh, "We had no doubt it was a bomb."<sup>29</sup>

On April 20, 1997, an article in the Israeli newspaper *Haaretz* quoted South African Deputy Foreign Minister Aziz Pa-

had as confirming that the Vela event was a nuclear test. The article said that Israel had helped South Africa develop its bomb designs in return for 500 tons of uranium and other assistance. Although Pahad later claimed his statement had been taken out of context, the *Haaretz* article was referenced in a July 11, 1997, Los Alamos Laboratory newsletter under the headline: "Blast from the past: Lab scientists receive

vindication." This referred to earlier work by the laboratory concluding that a nuclear

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test had taken place on September 22, 1979. Dave Simons of the Nonproliferation and Arms Control Research and Development division said, "The whole federal laboratory community came to the conclusion that the data indicated a bomb," and that "we were quite thoroughly convinced of our interpretation."<sup>30</sup>

That the Vela event was the result of a cooperative effort by Israel and the apartheid regime of South Africa has been claimed or suggested many times,<sup>31</sup> and such an effort would have been the logical result of an arms-trade relationship between the two countries that included the transfer of advanced military technology and nuclear materials. It has been reported that at one point in 1975, Israel offered to sell Jericho missiles to South Africa that could carry nuclear warheads; it may even have offered to sell the warheads themselves.<sup>32</sup>

**A U.S. COVER-UP AT THE TOP?**

The weight of the evidence that the Vela event was an Israeli nuclear test assisted by South Africa appears overwhelming. Today, the conclusion that the

Vela event was a nuclear test is shared by the directors of the U.S. nuclear-weapons laboratories, senior officials at the Defense Intelligence Agency and many members of the scientific community.<sup>33</sup> Others in the intelligence community who subscribe to the conclusion that the event was “most probably” a nuclear test include the director of Central Intelligence’s Nuclear Intelligence Panel, many scientists and analysts at the Los Alamos, Livermore, and Sandia National Laboratories, and at SRI International, DIA, Mission Research Corporation and the Aerospace Corporation.<sup>34</sup> Yet, despite this considerable body of expert opinion, the U.S. government under both Democratic and Republican administrations still has not admitted that a nuclear test took place.

In his recently published book with diary entries, former President Jimmy Carter briefly, but revealingly, writes about the September 22, 1979, “flash.” In the entry dated on the day of the flash, he writes, “There was indication of a nuclear explosion in the region of south Africa — either South Africa, Israel using a ship at sea, or nothing.”<sup>35</sup> In another diary entry, dated October 26, Carter writes, “At the foreign-affairs breakfast we went over the South African nuclear explosion. We still don’t know who did it.”<sup>36</sup> It is no coincidence that this entry occurred the day after ABC reporter John Scali revealed publicly the existence of the Vela event. Five months later, on February 27, 1980, Carter writes, “We have a growing belief among our scientists that the Israelis did indeed conduct a nuclear test explosion in the ocean near the southern end of Africa.”<sup>37</sup> That Israel is immediately mentioned in the first entry by Carter about a possible nuclear test near South Africa is not a surprise. The intelligence agencies were watching the military

relationship between Israel and South Africa, and Carter was specifically aware of the Israeli nuclear-weapons program and where they might have obtained weapon materials. In a cryptic reference to the NUMEC affair,<sup>38</sup> his diary entry of August 2, 1977, reads as follows: “The question of lost uranium in the 1960s that may or may not have gone to Israel is a matter we have been discussing. It’s going to be a public issue shortly, when ERDA [the Energy Research and Development Agency] makes its report.”<sup>39</sup> It is clear from these entries that Israel was a prime suspect in the Vela event from the beginning, and the appearance of these entries in his book strongly suggests that Carter believes the flash was indeed an Israeli nuclear test. But he did not say anything approaching that when he was president. The public path of ambiguity taken by Carter as president on the Vela event has been trod by every president since then, enabled by a refusal to declassify relevant data and documents.

Keeping important evidentiary data still secret makes it difficult for independent investigators to evaluate critically and definitively the conclusions of the Ruina panel and the 300-page NRL analysis, among other things. One of the likely reasons that the U.S. government is withholding the declassification of relevant documents is to help Israel maintain its policy of opacity or ambiguity in nuclear affairs, a policy that, as indicated earlier, originated during the Johnson presidency and was reinforced in a bargain made during the Nixon presidency.<sup>40</sup> Abandonment of this policy, accompanied by the admission that Israel violated the Limited Test Ban Treaty, would create some serious political fallout for both countries. It is hard to argue, however, that helping Israel in this way contributes to U.S. national security,

particularly as the United States demands openness regarding nuclear activities from Iran, North Korea, Syria and all other countries.

### FINAL COMMENT

This raises a general policy question. The Iraq War has shown the harm that can result from the politicization of intelligence in favor of a desired policy outcome, public support for which would otherwise be problematic. In the case of the Vela event, U.S. administrations on both ends of the spectrum have sought to ignore or

demote the value of legitimately collected and analyzed intelligence information out of fear of negative political repercussions. Obfuscating or denigrating hard intelligence data to avoid a political problem can be as dangerous to national security and democracy as inventing bogus intelligence to smooth the way into a war. Both tactics are designed to mislead the public and are therefore antithetical to democratic governance. It is time for the U.S. government to open up its files on the Vela event and end a 30-year charade.

<sup>1</sup> This work was supported in part by the Nonproliferation Policy Education Center, Washington, DC.

<sup>2</sup> S. Singer, "The VELA Satellite Program for the Detection of High Altitude Nuclear Detonations," *International Electrical and Electronics Engineers Proceedings* 53, no. 12 (1965): 1,935-48, <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1446400>.

<sup>3</sup> J. Richelson, *Spying on the Bomb* (W. W. Norton and Co., 2006), 285; and C. Sublette, "Report on the 1979 Vela Incident," *Nuclear Weapons Archive* (2001): 2, <http://nuclearweaponarchive.org/Safrica/Vela.html>.

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