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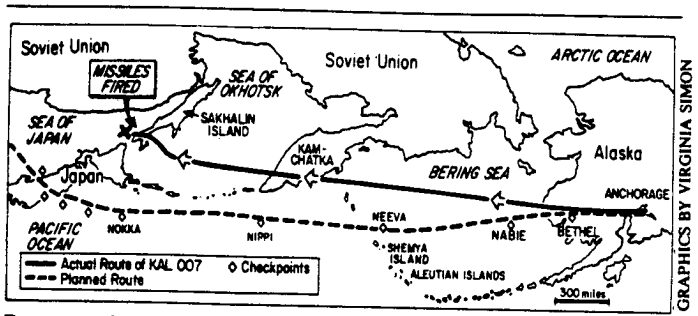
JOURNEY INTO DOUBT

New Pieces in The Puzzle of Flight 007

DAVID PEARSON AND JOHN KEPPEL

A year has passed since *The Nation*'s special issue on the downing of Korean Air Lines Flight 007, and the most important questions about the tragedy remain unanswered. How did the airliner get to the spot over Soviet territory where it was shot down on the night of August 31, 1983? What was it doing there? What did the U.S. government know and when did it know it?



Reconstruction by David Pearson and John Keppel, based on U.S. and Japanese radar data and other material in the public record.

In recent months, however, new information has come out that sheds some light on these issues. Most notably, the Japanese government has made public radar data that directly contradict the Reagan Administration's official version of events leading to the downing. Other material already in the public record—including the tape of the final transmission recorded by Tokyo air traffic controllers thirty-eight seconds after the airliner was hit by one or more Soviet missiles—has also been subjected to state-of-the-art technical analysis, the results of which are reported here for the first time. If the new evidence is accurate, the following can now be demonstrated:

§ That K.A.L. 007 changed altitude and speed as it entered and flew over Sakhalin Island in Soviet territory, without reporting to Tokyo air traffic controllers as required under international aviation procedures.

David Pearson, a doctoral candidate in sociology at Yale University, is working on a book about K.A.L. 007. John Keppel, a retired U.S. Foreign Service officer with two tours of duty in Moscow, took part in the abortive cover-up of the U-2 flight in 1960. *The authors acknowledge the role of the Fund for Constitutional Government in financing the ongoing acoustic study of the communications tapes.*

§ That near the end of the flight, Tokyo air traffic controllers received reports, ostensibly from K.A.L. 007, about an altitude change by the airliner that never took place.

§ That the airliner changed course over Sakhalin Island without reporting to Tokyo air traffic controllers.

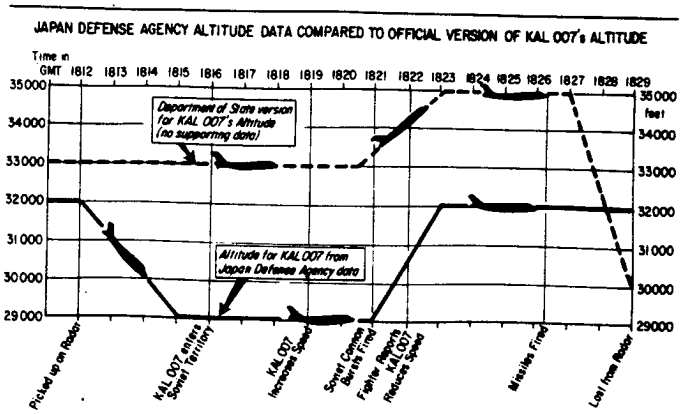
§ That early in the flight K.A.L. 007 must have made an unreported turn to the north toward Soviet territory.

§ That the tape of the airliner's final radio transmission says something quite different from what the International Civil Aviation Organization (I.C.A.O.) claimed it said in a report that U.S. officials have heralded as "authoritative."

The new information, some of which has received extensive attention in the international press, has disturbing implications. It shows that the crew of the Korean airliner could not have accidentally or unknowingly flown its dangerous course over the Soviet Union's Kamchatka Peninsula and Sakhalin Island. This means that the official U.S. government and I.C.A.O. explanations of the tragedy—that K.A.L. 007 innocently flew over Soviet territory as a result of some navigational error—are not credible. It also strongly suggests that the Reagan Administration, which had its own information and must have had access to that of the Japanese military at the time of the incident or soon afterward, has covered up vital evidence about the downing.

The New Japanese Radar Data

The most dramatic advance in the case during the past year was the release of altitude and speed data from the Japan Defense Agency (J.D.A.). These data show that at 1815 Greenwich mean time (G.M.T.), almost precisely the moment K.A.L. 007 entered Soviet territory over Sakhalin, it descended from an altitude of approximately 32,000 feet to approximately 29,000 feet. The airliner was supposed to have been flying at its assigned altitude of 33,000 feet. It increased speed as a Soviet SU-15 interceptor aircraft closed in. After the Soviet pilot fired tracer rounds as a warning signal, the airliner ascended 3,000 feet, and in the final moments before the fatal missile was fired, the J.D.A. data suggest, the pilot of K.A.L. 007 once again increased speed (see chart below).



SOURCES: Japan Defense Agency, U.S. State Department

For obvious safety reasons, all changes in altitude and speed are supposed to be reported to air traffic controllers, but the airliner's pilot did not do this. On the contrary, at 1815 G.M.T., Tokyo air traffic controllers received a calm-voiced radio transmission, ostensibly from Flight 007, requesting permission to ascend to 35,000 feet. Five minutes later, Tokyo called back granting permission. Three minutes after that, another calm-voiced transmission reported to Tokyo that the airliner had reached the new altitude. Yet, according to the radar data, the ascent to 35,000 feet never took place. Instead, it was during the time between these transmissions that the Soviet interceptor fired cannon bursts and overran the Korean airliner. Why did the two calm-voiced transmissions fail to report the airliner's actual altitude changes or the grim reality that the plane was being intercepted? Was the crew deliberately sending false reports to Tokyo? Or might the transmissions not have come from K.A.L. 007 at all? Tapes of the transmissions, withheld for nearly two years and finally released in July by the J.D.A., may provide some answers once they are analyzed.

Meanwhile, however, the J.D.A. data suggest that K.A.L. 007's pilots were aware of the airliner's position on approach to Sakhalin, that they knew shortly thereafter that they had been intercepted by Soviet aircraft, that they took evasive action rather than comply with warnings as is called for in international aviation agreements and that Tokyo air traffic controllers were deliberately deceived about what was happening. All this stands in direct contradiction to both the I.C.A.O. and U.S. government accounts, which say that the airliner's crew, unaware of its position, maintained assigned altitude until the plane was shot down. (Neither account mentions changes in speed.)

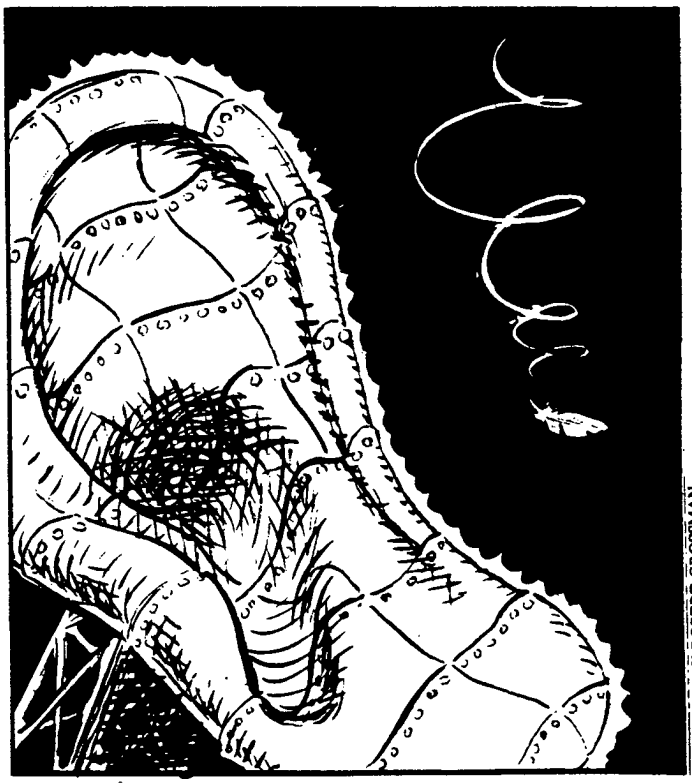
The release of the radar data, informally in March and then formally in May by Prime Minister Yasuhiro Nakasone to a member of the Diet, made front-page news in Japan. In the United States, by contrast, the story was picked up by only some of the major media and was given cursory coverage. *The Washington Post*'s article appeared on page A19 under the subhead "Significance of Incorrect Altitude Unclear." *The New York Times* made no mention of the story at all. Of those publications that did mention the new Japanese data, none commented on the serious implications.

The U.S. government has made no public statement about the Japanese radar data. On "background," a State Department official dismissed the data as "fragmentary and defective." "You know how inaccurate radars are," he told *The Nation*. But the Japanese senator, Yutaka Hata, who requested and received the J.D.A. data said that the discrepancies in altitude could not be accounted for by the radar's margin of error or errors in on-board altimeters.

The State Department official also said that the I.C.A.O. had been given the Japanese altitude and speed material and had considered it in its report. However Marinus Heijl, a member of the organization's inquiry team, admitted to *The Nation* that the I.C.A.O. had never seen it. Thus the cornerstone of the U.S. official line, the I.C.A.O. report, was based on woefully incomplete information.

More disturbing, there is good reason to believe that the United States had access to the Japanese radar data soon after the downing. The State Department official refused to comment on this on the record, but the Administration has publicly acknowledged that it received Japanese recordings of communications between Soviet pilots and ground controllers—a form of intelligence that is generally considered more sensitive and less likely to be shared than radar data. Moreover, according to an account in Tokyo's *Asahi Evening News* based on interviews with Japanese government sources, Japanese intelligence on Flight 007 "was checked against information obtained by the U.S. from satellites and American facilities within Japan and confirmed as accurate." The sources revealed that "information concerning the Soviet Far East forces is constantly being exchanged between the United States and Japan." The Japanese analysis of the K.A.L. 007 data, the *Evening News* reported, began one and a half hours after the airliner was shot down. Four hours later, the analysis, including verification with U.S. sources, was concluded. That is, the Japanese and the Americans were comparing their data before the Administration even acknowledges it had any information about the downing.

Even if the U.S. government did not see the Japanese radar data until it was publicly released, it must have had independent information about the movements of K.A.L. 007 from its own radar and electronics stations at Wakkanai, on the Japanese island of Hokkaido, and Misawa, on the Japanese island of Honshu, and perhaps from other listening posts. Secretary of State George Shultz's statement on September 1, 1983, contained references that showed the United States had radar data other than those of the Japanese. The United States must also have intercepted com-



DRAWINGS BY ROBERT GROSSMAN

PROPAGANDA COUP

When K.A.L. 007 went down over Sakhalin Island, the U.S. government immediately went on the air with its version of the event: the airliner had strayed inadvertently over Soviet territory without the knowledge of U.S. intelligence, and Soviet pilots had shot it out of the sky without warning.

Voice of America transmitters were boosted far beyond their normal capacity. A week after the downing, the station was broadcasting ninety additional hours a week. Engineers warned that sustaining the effort could lead to major equipment failure, but every technical resource was pushed to the limit because, as one VOA news manager told me, "This was the biggest story of the year, maybe the decade."

The K.A.L. story became the "Must Lead" item on each newscast in all forty-two languages broadcast during every on-air hour. Excerpts from an interview with U.S. Ambassador to the Soviet Union Arthur Hartman were broadcast frequently. Secretary of State George Shultz's day-after speech was translated into Russian and Ukrainian and repeatedly aired. So were President Reagan's speeches of September 5 and 10 (the full text of the latter was translated into forty-one languages). In addition, VOA carried heart-wrenching stories about the victims' families compiled by a stringer in Seoul.

The station's coverage of the story was coordinated by the Special Planning Group on Public Diplomacy, established by the executive branch in January 1983. Each day for two weeks after the tragedy representatives from the departments of State and Defense, the National Security Council, the United States Information Agency, the Agency for International Development and the Voice of America met to plan strategy. A liaison from the State Department's Korean Working Group consulted daily with VOA personnel. Policy directives for coverage of events drew from both White House and State Department sources. And the State Department had heavy input into the station's frequently aired editorials.

Although the Voice of America is only a small component of the foreign policy apparatus, its role in the government's K.A.L. propaganda effort was significant. VOA's heroic efforts paid off when Reagan requested $48 million in additional funds for the station for fiscal 1984. Appropriations for 1985 were approximately $160 million, and Congress has allotted $1.3 billion for a multiyear expansion and modernization program now under way. In his request for money following the K.A.L. incident, Reagan said, "In times like this, few assets are more important than the Voice of America and Radio Liberty."

LAURIEN ALEXANDRE

Laurien Alexandre, a research associate at Immaculate Heart College Center, is working on a book about Voice of America.

munications of the Soviet Air Defense Forces as it tracked the airliner over Soviet territory. U.S. deputy representative to the United Nations Charles Lichenstein appeared to confirm this at a Security Council meeting on September 2, 1983, when he told Soviet deputy representative Richard Ovinnikov, "We followed you following the flight."

That U.S. intelligence obtained information from "satellites and American facilities within Japan," as the *Evening News* reported, indicates that the U.S. government knows more about the event than the Administration has admitted. Why has the government kept the information secret for nearly two years?

The Flight Path in Soviet Airspace

The Japanese radar data are only part of the evidence indicating that K.A.L. 007's pilots were deliberately flying the airliner over Sakhalin Island. The day Flight 007 was shot down, the J.D.A. put out a map describing the course of the airliner over southern Sakhalin. The map showed that K.A.L. 007 had been flying a broad arc, a turn of about twenty degrees in total, which the plane's crew could not have flown unknowingly. Although U.S. journalists saw the map, the only U.S. publication that reproduced it was the aerospace industry journal *Aviation Week & Space Technology*. The turn over Sakhalin has been confirmed by Yoshitaro Masuo, in the May 1985 issue of the Japanese magazine *Sekai*, and by Duncan Campbell, in the April 26 issue of *New Statesman*.

What is known about K.A.L. 007's course suggests that the airliner had made another turn, to the west-northwest, as it approached Sakhalin. The radar data show that the plane flew an arc over Sakhalin. Assuming the plane was not flying in circles prior to that, it is logical to infer that it made an earlier turn to get into the curving path. Moreover, at 1809 G.M.T., the pilot of a Soviet SU-15 interceptor reported to his ground controllers, "Affirmative, it has turned . . . the target is eighty [degrees] to my left." The recently released J.D.A. data are not instructive on this point because they begin at 1812 G.M.T., three minutes after the turn likely took place. It is probable that J.D.A. radar at Wakkanai picked up K.A.L. 007 earlier than 1812, however, because at that time the airliner was well within its range. According to a U.S. government spokesman, the plane was also tracked by J.D.A. radars at Nemuro and Abashiri, on the north coast of Hokkaido. Data from the radar at Abashiri as well as earlier data from Wakkanai could describe the turn toward Sakhalin. Documentation of such a turn would provide further evidence that the airliner was flown deliberately over Soviet territory.

The Early Course

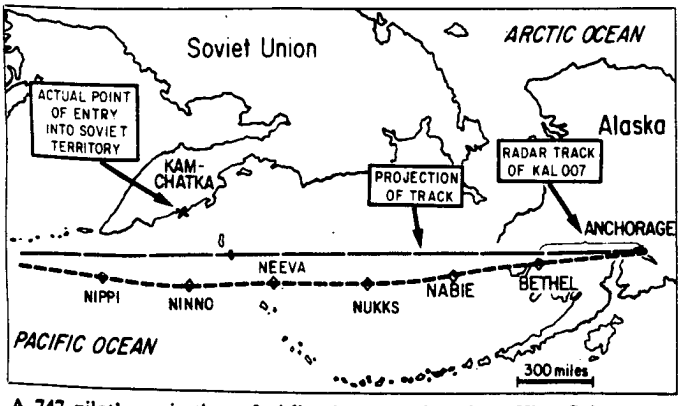
Analysis of data from the air traffic control radar at Kenai, Alaska, and from the military radar at King Salmon, Alaska, shows that K.A.L. 007 was off course virtually from the beginning and, furthermore, that it must have made a turn toward Soviet territory early in the flight. The data, made public last year in response to Freedom of Infor-

mation Act requests, show that the airliner was six nautical miles north of course as it passed Cairn Mountain, an en route nonreporting way point, and twelve nautical miles north of course at Bethel, its first required reporting way point. Working from these data, a 747 captain who asked not to be identified projected the airliner's course on a computer. The results demonstrate that if K.A.L. 007 had continued on the course it flew from shortly after takeoff to Bethel, it would have flown substantially south of where we know it went and would have missed the Kamchatka Peninsula entirely (see map below). This means that the airliner must have made a turn to the north—toward Soviet territory—somewhere after Bethel. The plane's scheduled route called for a turn to the south at Bethel.

The turn toward Soviet territory may have been within range of one or both of the U.S. Air Force radars at Cape Newenham and Cape Romanzof, Alaska. Unfortunately, it is impossible to examine data from these radars, which were automatically sent in real time to the Regional Operations Control Center at Elmendorf Air Force Base in Anchorage. According to lawyers defending the U.S. government in a suit brought by the families of Americans who died on Flight 007, the Air Force erased the radar tapes from capes Newenham and Romanzof, even though it is standard operating procedure to save all information relating to an aviation disaster. Suggesting that the destruction of the tapes was routine, Jan K. Von Flatern, a Justice Department attorney, explained that the Regional Operations Control Center "had no idea that it was going to be involved or that that data would be useful in the litigation at any point." The data would, of course, be extremely useful in the litigation and in independent investigations as well. The destruction of the tapes provides another example of crucial information that has been denied to the public.

The Communications Tapes

This spring we obtained eight reels of tape of U.S. and Japanese air traffic control communications with K.A.L. 007. It is routine after airline disasters for both private and government investigators to analyze relevant communications tapes. We contracted with Aviation Safety Associates International (A.S.A.I.), a leading firm in the aviation accident investigation field, to do a state-of-the-art acoustic enhancement of the tapes in conjunction with the electrical engineering department at Brigham Young University. The enhanced materials were evaluated by a panel of experts which included our principal consultant, Malcolm Brenner of A.S.A.I., a Ph.D. in psychology (human factors) who is a legal expert in aviation accident investigation and has testified both in court and before Congress on a number of airline accident cases. The panel included another legal expert in aviation accident cases, a legal expert on voice tapes who has a Ph.D. in speech pathology, a former air traffic controller with a Ph.D. in speech, and a line captain of a major U.S. airline who served as principal investigator for a major accident involving an airliner. (Because of the sensitivity of the K.A.L. 007 case, four of the five requested anonymity.)



A 747 pilot's projection of airliner's course based on King Salmon and Kenai radar data.

We asked the panel to examine the final "distress message," ostensibly from K.A.L. 007, recorded by air traffic controllers in Tokyo at 1827 G.M.T. The transmission began thirty-eight seconds after the pilot of the Soviet SU-15 interceptor reported to his ground controllers, "The target is destroyed."* The I.C.A.O. report renders the final message as follows:

> Tokyo Korean Air zero zero seven
> Korean Air zero zero seven
> (unintelligible)
> rapid compressions
> descending to one zero thousand

The I.C.A.O. report assumes that the final transmission originated with K.A.L. 007, that it was addressed to Tokyo air traffic controllers, that it reported decompression in the airliner's cabin and that the pilots were following standard emergency procedures to descend. But our five experts disagree with that interpretation. While they do not all agree on the precise wording of the transmission, their analysis allows us to say a number of things with certainty. First, although the I.C.A.O. rendering suggests that the final message was directed to air traffic controllers in Tokyo, the consensus of our panel is that the word "Tokyo" is not discernible. Three of the five experts believe that Tokyo was not the intended recipient of the message. Second, the panelists agree that there are a number of additional words and syllables in the transmission not accounted for by the I.C.A.O. Third, a majority of the experts are confident that part of the passage found to be "unintelligible" by the I.C.A.O. says either "Repeat that" or "Repeating." Finally, the experts agree with the I.C.A.O. that "rapid compressions" or something similar was said, but not a single member of the panel hears "descending to one zero thousand." Three of them hear no numbers in this final passage.

That "rapid compressions" or something similar was said suggests that K.A.L. 007 had experienced rapid decompres-

* Although hit, the airliner was not destroyed immediately. According to George Shultz, it remained in the air and on radar screens for twelve more minutes.

Continued

sion of the cabin, an extremely serious condition for an airliner operating at substantial altitude. If the cabin had lost pressure, according to Brenner, the first item on the emergency checklist would be for the crew to don oxygen masks:

> At an altitude of about 32,000 feet [K.A.L. 007's altitude at the time], crew members and passengers would have about one minute of expected useful consciousness unless they successfully began receiving oxygen from an oxygen mask (in the event of a rapid decompression this time gets cut to about thirty seconds, since most of the air in the lungs gets sucked out during the decompression). . . . The Captain would then check with the flight engineer on the state of the pressurization system, and if pressurization cannot be maintained, would declare an emergency descent.

Although according to the I.C.A.O. the message indicates an emergency descent, that is not what the recently released Japanese altitude data show. They show that the airliner was still at 32,000 feet at 1829 G.M.T., two minutes after the final message was sent and more than two and a half minutes after the attack. This information contradicts an earlier official Japanese announcement that K.A.L. 007 had descended to about 30,000 feet by 1829 G.M.T. When Senator Hata formally asked the government of Japan why it had revised the figure to 32,000 feet, it responded: "In making public the altitude of the K.A.L. plane at 3:29 A.M., the expression of generally 30,000 feet, which gave some leeway, was used for the sake of caution." This "cautious" expression also conveyed the false impression that the airliner had followed emergency procedures and descended after the Soviet missile attack.

Some of our experts interpret the final transmission as a consecutive message from K.A.L. 007 reporting emergency conditions, but others are uncertain about what it might be. The airliner had already been hit by one or more Soviet missiles, yet the final message did not contain the word "Mayday." Brenner found this quite unusual: "There is a saying in aviation that 'one minute's flying is worth two days' rowing,' and for aircraft over water it would be critical to get the Mayday message started as soon as possible and lasting as long as possible. The ground station could then use the radio signal to take a fix on the aircraft's location and likely ditching site." Emergency procedures call for saying "Mayday" three times, followed by other information about the nature of the emergency, Brenner noted. The cockpit crew should have continued broadcasting until the last possible moment to help lead rescuers to the plane's location. But they did not.

Given the possibility that K.A.L. 007 was not communicating with Tokyo, to whom might the final message have been directed and what might it mean? One intriguing possibility is that the message was transmitted by two speakers, only one of whom was in the cockpit of K.A.L. 007. An examination of the average voice frequencies of the various parts of the final message reveals that there is a decided increase in voice stress toward the end, the only portion of the message where the words indicate distress. That disjunction leads two members of our panel to conclude that two people were speaking—the first with a decided "American accent." This hypothesis raises the disquieting possibility that K.A.L. 007 was in communication with some party of unknown identity after the missile attack.

At this stage we are not prepared to offer a definitive rendering of the final message. We believe, however, that our preliminary findings raise enough questions to warrant a complete state-of-the-art analysis of all voice communications and radar tapes, many of which are still unavailable to the public, by a committee of Congress.

Conclusion

The evidence that has come out in the past year casts considerable doubt on the investigation performed by the International Civil Aviation Organization. In its December 1983 report, the organization put forward two possible scenarios to explain how the airliner might have flown where it did accidentally. One posits that the crew of K.A.L. 007 misset a single switch at the start of the flight. The other proposes that the crew fed incorrect coordinates for Anchorage, its point of origin, into the airliner's inertial navigation system. Neither scenario withstands careful technical scrutiny. The I.C.A.O.'s own Air Navigation Commission refused to endorse either one, saying each "contained some points which could not be explained satisfactorily." [Drawing on interviews with seven senior 747 pilots, David Pearson discusses some of these unexplained technical points in a letter scheduled to appear in *The New York Review of Books* in early September.]

The latest evidence, particularly the Japanese radar data which the I.C.A.O. investigators never saw, further discredits the I.C.A.O. report's conclusions. The scenarios on which these rest do not work given the airliner's apparent changes in course: a turn to the north early in the flight somewhere past Bethel, a turn to the west-northwest approaching Sakhalin, and an arc over Sakhalin. They do not explain K.A.L. 007's unreported changes in speed and altitude over Sakhalin, which suggest the airliner was taking evasive action. Nor do they answer the many questions about the puzzling final transmission, including why there was no Mayday call.

Two years after the tragedy, the public has received no credible explanation for the death of 269 persons. Although the House Permanent Select Committee on Intelligence, according to a May 30 letter from committee chair Lee Hamilton of Indiana, is conducting an "ongoing" staff investigation into the K.A.L. downing, its commitment is limited. Michael O'Neil, chief counsel, said the staff is not actively pursuing the case but would examine any new information that came to its attention.

We believe there is already ample evidence in the public record to warrant a full-scale Congressional investigation. The data we have presented here would provide a good starting point. But there are many other leads for Congress to follow. Among the most intriguing:

§ Both *Der Spiegel* and *New York* reported last fall that shortly after the downing Secretary of State George Shultz, Director of Central Intelligence William Casey, Edwin Meese 3d (then counselor to the President), William Clark (then national security adviser) and two Under Secretaries of State, Lawrence Eagleburger and Richard Burt, held a

teleconference to discuss Flight 007. *Der Spiegel* also reported that a widely circulated story that the plane had landed safely on Sakhalin Island was planted by the Central Intelligence Agency to buy time for the U.S. government to coordinate its version of events with the governments of Japan and South Korea. Either story, if true, means the Administration knew what happened to K.A.L. 007 long before it says it did.

§ On August 23, 1984, attorney Melvin Belli, who represents several relatives of those who died in the disaster, reported on West German television station ARD a conversation he had in Seoul with the widows of the pilot and co-pilot of K.A.L. 007: "They told me that the captain and the co-pilot were paid to intentionally take this shortcut over Russian territory. They made this statement voluntarily in the presence of three other American attorneys and thirty bereaved persons. The widows said that K.A.L. paid its pilots special bonuses for flying over Russian territory. The widows, furthermore, stated that the pilots had become so afraid of these flights that they wanted to discontinue them." Another lawyer present during the conversation told *The Nation* that Capt. Chun Byung-in's widow said that Chun had told her Flight 007 was an especially dangerous mission.

Armed with subpoena power and the right to examine classified evidence, the House intelligence committee—or any other Congressional committee—could ascertain if there is any truth in these and other reports. Perhaps more important, it could legally demand access to:

- All data collected by U.S. military and intelligence radars in Alaska, the Aleutian Islands and Japan, and by U.S. military vessels and aircraft that were within range of K.A.L. 007's course.
- A list of all Japanese radar and communications data that the U.S. government has been privy to since the downing.
- All Soviet communications intercepted by U.S. military and intelligence, including air-to-air, air-to-ground and ground-to-air communications during the time K.A.L. 007 was approaching and passing over Kamchatka Peninsula, as well as Soviet ground-to-air communications during K.A.L. 007's passage over Sakhalin Island.
- Logs and names of officers and other military personnel from the relevant bases and headquarters (Elmendorf Air Force Base; Shemya Air Force Base; Misawa Air Base; Commander in Chief, Pacific Command, in Hawaii; the Pentagon; the White House) who were on duty during the afternoon and night of August 31, 1983.

A Congressional investigation could subpoena and question the duty officers and other working-level Federal Aviation Administration, military, intelligence and executive branch personnel about specific points raised by careful technical analysis of the documentary material. It could offer people in the military and intelligence services who may be unhappy about having become swept up in a cover-up a place to clear their consciences. Using the new information it developed, it would then be in a position to question higher-level officials—and come closer to solving the mystery of K.A.L. Flight 007. □