

# F.A.S. PUBLIC INTEREST REPORT

Journal of the Federation of American Scientists (FAS)

Volume 42, No. 6

June 1989

## LASERS THREATEN SATELLITES: BUT ARMS CONTROL CAN HELP

After a five year hiatus, anti-satellite weapons are returning to center stage. Several new anti-satellite programs, spawned by the Strategic Defense Initiative, including several ground based laser weapons, threaten to begin a new space weapons competition in the next several years, threatening American military satellites and overturning one of the major arms control achievements of recent years.

Negotiated limits on the new ground based lasers could enhance American security. But some members of Congress and others have questioned whether limits on the testing of these weapons can be verified. Although satellites for this purpose are currently under development, they are not expected to be launched until the late 1990s.

A cooperative approach to verification could resolve the problem. Less exotic, ground-based technology could be used to verify limits on the brightness of ground-based lasers of the type that could be used to attack satellites. Such a device, located perhaps within a kilometer of a laser facility, could monitor weapons testing by detecting and measuring laser light scattered by aerosols suspended in the atmosphere. A near-term demonstration of the possibility of verifying such limits is the single most important step that can be taken to consolidate the progress that has been made in recent years toward averting a space weapons competition.

### A US Breakout?

In 1983 the Soviet government initiated a moratorium on the testing of anti-satellite (ASAT) weapons. As a result, the United States Congress reciprocated with a moratorium, subject to annual renewal, on the testing of the new F-15 air-launched ASAT system then under development. At the end of 1987, the Air Force decided to cancel this system.

In 1988 the United States Congress rejected a move to make the ASAT moratorium a permanent ban, not subject to annual renewal, and it also failed to extend the moratorium for another year. While the failure to extend the annual moratorium is a cause for concern, the cancellation of the F-15 air-launched ASAT means that there will not be an immediate resumption of American ASAT testing.

Ease of verification was one of the key elements in the successful effort to persuade the US Congress to enact the ASAT test moratorium. It was generally accepted that a moratorium on the testing of anti-satellite weapons such as the Soviet co-orbital system and the American F-15 system could be verified using existing means.

*Continued on page 2*

**Arms Control Leadership—3; Zero Missiles—4; MX & Midgetman—5;  
Chemical Weapons—6; Cambodia—7**

### FAS-CSS PRESENT VERIFICATION PLANS

On May 8, before an audience of Congressional aides, Frank von Hippel, Chairman of FAS's research arm, and Academician Roald Sagdeev, of the Committee of Soviet Scientists For Peace and Against the Nuclear Threat, summarized progress being made in the U.S.-Soviet Joint Verification Project. This included development of detailed proposals for verification of deep reductions, warhead dismantlement, fissionable materials production cutoffs, and cruise missile limitations.

A high point of the briefing was a demonstration of the conceptual basis under which powerful ground-based lasers that might otherwise threaten satellites could be controlled through cooperative means. Black boxes, perhaps within a kilometer of the lasers, would measure laser brightness using atmospheric scattering of their light. The demonstration was designed and carried out by Ron Ruby, Professor of Physics at UC Santa Cruz.

FAS's collaboration with the Committee of Soviet Scientists continues to be productive. The briefing followed an FAS-CSS workshop on laser brightness verification organized by Dan Hirsch, Director of the Stevenson Program on Nuclear Policy, UC Santa Cruz. Sagdeev co-signed with von Hippel an agreement in principle to pursue the subject of laser brightness verification in further workshops here and in the USSR. ■



*FAS Laser Brightness Conference. L to R; Frank von Hippel, Rep. Pat Schroeder (D-Colo), Rep. George E. Brown (D-Calif), and Academician Roald Sagdeev.*

*Continued from page 1*

More advanced versions of such rocket-launched kinetic-kill interceptors may soon pose a clear threat to satellites at all altitudes. But the general perception is that limits on the testing of these devices could be adequately verified using existing and prospective intelligence collection systems. Thus the primary obstacle to negotiated limits on these systems is political.

However, there are serious doubts, both in the Congress and the American technical community, concerning the ability of existing means to verify limits on the testing of ground-based laser weapons such as the MIRACL (Mid-Infrared Advanced Chemical Laser), and analogous Soviet systems. Space-based systems for intelligence collection and, potentially, verification of directed-energy systems are currently under development in the United States, but their deployment is not anticipated until the late 1990's. By this time, progress on ground-based lasers is likely to have proceeded to the point that competent ASAT lasers will have been tested, and competent anti-missile lasers may be within reach. In the absence of reassurance on the question of verification of testing of ground-based laser systems, the prospects for anti-satellite arms control are not good.

For the past several years, discussions among American and Soviet specialists have focused on the possibility of using special sensors, collocated within a few kilometers of directed energy weapon facilities, to verify limits on the testing of such systems. It is generally agreed that in principle such sensor devices could monitor testing limits by detecting laser light scattered during weapons tests.

### Inspection Not Required

Additional cooperative measures could be envisioned for directed energy verification that would entail direct access to the facility in question. While such measures would pose less of a technical challenge than a co-located brightness box, these intrusive measures are only applicable to declared facilities.

The problem of undeclared facilities may be particularly acute for a directed energy limitation regime because of the relatively small size of facilities of interest, and the potential absence of unambiguous facility signatures.

The INF Treaty did not completely address the undeclared facility problem, given the limited nature of the Treaty's provisions. The issue of undeclared facilities may prove a more difficult problem in the START negotiations, given the more sweeping provisions of this agreement. The United States government has indicated a strong disinclination to accept "anywhere, anytime" inspection of American facilities by Soviet inspectors, in order to preclude Soviet access to sensitive American intelligence and other military facilities.

At the same time, some Americans may argue that "anywhere, anytime" American access to Soviet facilities may be required to address the problem of undeclared facilities and suspect sites. This dilemma is likely to prove more acute in a regime limiting directed energy weapons.

*Continued on page 3*

## FAS

Chairman: ANDREW M. SESSLER  
Vice Chairman: \*ROBERT M. SOLOW  
President: JEREMY J. STONE  
Secretary: ANN DRUYAN  
Treasurer: CARL KAYSSEN

The Federation of American Scientists (FAS), founded October 31, 1945 as the Federation of Atomic Scientists (FAS) is the oldest organization in the world devoted to ending the nuclear arms race.

Democratically organized, FAS is currently composed of 5,000 natural and social scientists and engineers interested in problems of science and society.

FAS's four decades of work as a conscience of the scientific community has attracted the support of the distinguished Sponsors listed below.

### SPONSORS (partial list)

*Philip W. Anderson (Physics)	Roy Menninger (Psychiatry)
*Christian B. Anfinsen (Biochemistry)	Robert Merton (Sociology)
*Kenneth J. Arrow (Economics)	Matthew S. Meselson (Biochemistry)
*David Baltimore (Biochemistry)	Neal E. Miller (Psychology)
Leona Baumgartner (Pub. Health)	Philip Morrison (Physics)
Paul Beeson (Medicine)	*Daniel Nathans (Biochemistry)
Lipman Bers (Mathematics)	Franklin A. Neva (Medicine)
*Hans A. Bethe (Physics)	*Marshall Nirenberg (Biochemistry)
*Konrad Bloch (Chemistry)	Robert N. Noyce (Indus. Exec.)
*Norman E. Borlaug (Wheat)	*Severo Ochoa (Biochemistry)
Anne Pitts Carter (Economics)	Charles E. Osgood (Psychology)
*Owen Chamberlain (Physics)	*Linus Pauling (Chemistry)
Abram Chayes (Law)	*Arno A. Penzias (Astronomy)
Morris Cohen (Engineering)	Gerard Piel (Sci Publisher)
Mildred Cohn (Biochemistry)	Charles C. Price (Chemistry)
*Leon N. Cooper (Physics)	Mark Ptashne (Molecular Biology)
Paul B. Corneley (Medicine)	*Edward M. Purcell (Physics)
Carl Djerassi (Organic Chem.)	George Rathjens (Political Science)
*Renato Dulbecco (Microbiology)	*Burton Richter (Physics)
John T. Edsall (Biology)	David Riesman, Jr. (Sociology)
Paul R. Ehrlich (Biology)	Walter Orr Roberts (Solar Astron.)
*Val L. Fitch (Physics)	Carl Sagan (Astronomy)
Jerome D. Frank (Psychology)	*Arthur Schawlow (Physics)
John Kenneth Galbraith (Economics)	*J. Robert Schrieffer (Physics)
Richard L. Garwin (Physics)	*Julian Schwinger (Physics)
*Walter Gilbert (Biochemistry)	*Glenn T. Seaborg (Chemistry)
Edward L. Ginzton (Engineering)	Sunley K. Sheinbaum (Economics)
*Donald Glaser (Physics-Biology)	*Herbert A. Simon (Psychology)
*Sheldon L. Glashow (Physics)	Alice Kimball Smith (History)
Marvin L. Goldberger (Physics)	Cyril S. Smith (Metallurgy)
*Alfred D. Hershey (Biology)	*Henry Taube (Chemistry)
Roald Hoffmann (Chemistry)	*Howard M. Temin (Microbiology)
John P. Holdren (Energy/Arms Con.)	*James Tobin (Economics)
*Robert W. Holley (Biochemistry)	*Charles H. Townes (Physics)
*Jerome Karle (Physical Chemist)	Frank von Hippel (Physics)
*H. Gobind Khorana (Biochemistry)	*George Wald (Biology)
*Arthur Kornberg (Biochemistry)	Myron E. Wegman (Medicine)
*Polykarp Kusch (Physics)	Victor F. Weisskopf (Physics)
*Willis E. Lamb, Jr. (Physics)	Jerome B. Wiesner (Engineering)
*Leon Lederman (Physics)	Robert R. Wilson (Physics)
*Wassily W. Leontief (Economics)	C. S. Wu (Physics)
*William N. Lipscomb (Chemistry)	Alfred Yankauer (Medicine)
*S.E. Luria (Biology)	Herbert F. York (Physics)

### NATIONAL COUNCIL MEMBERS (elected)

*Julius Axelrod (Biochemistry)	Art Hobson (Physics)
Bruce Blair (Policy Analysis)	Robert W. Kates (Geography)
Deborah L. Bleviss (Energy)	Barbara G. Levi (Physics)
Rosemary Chalk (Pol. Science)	Francis E. Low (Physics)
Thomas B. Cochran (Physics)	Jessica Tuchman Mathews (Biochemistry)
E. William Colglazier (Physics)	Victor Rabinowitch (World Dev.)
Alex deVolpi (Physics)	Stephen H. Schneider (Climatology)
Hugh E. DeWitt (Physics)	Andrew M. Sessler (Physics)
*Dudley R. Herschbach (Chem. Physics)	George Stanford (Physics)
William A. Higinbotham (Physics)	Robert A. Weinberg (Biology)
Daniel O. Hirsch (Nuclear Policy)	

Ex Officio: John P. Holdren, Matthew S. Meselson  
\*Nobel Laureate

## FAS FUND

The Federation of American Scientists Fund, founded in 1971, is the 501 (c)(3) tax-deductible research and education arm of FAS.

Frank von Hippel, Chairman	Jeremy J. Stone, President
Moshe Alafi	Matthew S. Meselson
David Armington	Rosalyn R. Schwartz
Ann Druyan	Martin Stone
William A. Higinbotham	Martin S. Thaler
Proctor W. Houghton	Alan M. Thorndike
Jessica T. Mathews	Robert Weinberg

The FAS Public Interest Report (USPS 188-100) is published monthly except July and August at 307 Mass. Ave., NE, Washington, D.C. 20002. Annual subscription \$25/year. Copyright © 1989 by the Federation of American Scientists.

POSTMASTER: Send address changes to FAS, 307 Massachusetts Avenue, NE, Washington, D.C. 20002.



Ronald F. Lehman II

The co-located brightness box offers a means of resolving the dilemma. Because of the comparatively low cost of the installation (\$1-10 million per site), these devices could be readily placed at any number of suspect sites. Since the device would be capable of collecting only information concerning laser brightness (a fact established by the joint Soviet-American design and construction of the devices), emplacement of such devices at suspect sites would not pose the problem of potential compromise of information unrelated to verification of the agreement.

There are obviously a number of objections that can be raised to the whole idea of limits on the brightness of lasers. High-brightness lasers could be tested underground or in large test chambers. Atmospheric up-link and compensation tests could be conducted below the permitted brightness threshold. Lasers with brightness levels above the permitted threshold could be covertly built but left untested. And so on. These objections are ultimately "theological"—either one believes that untested weapons would not play a significant role in conflict and in the calculations prior to conflict, or one believes that national decision-makers will bet on untested weapons.

### Cooperation for Common Security

Anti-satellite weapons pose a major threat to stability, both directly and as a means of continued development of anti-missile systems. While kinetic energy interceptors are probably the major source of concern from an operational point of view, ground-based laser weapons pose the greatest verification challenge. However, collocated brightness monitoring equipment offers the prospect of a near-term solution to the verification problem that also resolves the problem of suspect sites. Near term demonstration of the feasibility of such a device would be an important step in reversing the momentum towards space weapons. In addition the cooperative Soviet/American design and development of this device would be an important political statement of our awareness of the imperative for common security. □

—John E. Pike

## NEW ARMS CONTROL LEADERSHIP GRILLED

It appears that Ronald F. Lehman II will have his hands full as the new Director of the Arms Control and Disarmament Agency (ACDA) when and if he tries to maintain a modicum of control over Richard Burt who is slated to be chief U.S. negotiator on nuclear and space weapons but who reports to the Secretary of State.

Lehman, 43 years old, who has been both Assistant Secretary of Defense for International Security policy and Chief Negotiator for Strategic Nuclear Arms, is a mild mannered and polite former Hill staffer. He knows the field well and has close ties to many key participants in the Bush Administration. Conservative by inclination and training, Lehman is intelligent but not brilliant. He is, however, keenly aware that Gorbachev provides "opportunities" for the U.S., and he would like to pursue them.

Burt, 42 years old and former Ambassador to the Federal Republic of Germany, is the more combative of the two. His is the style of the *New York Times* newspaper man he was—cynical and hard-driving. When congratulated, at his confirmation hearing, by an FAS official on his new assignment to "save the world", he clapped the official on the back and said: "Saving the world! That's your job."

Flanked by two conservative Senators who introduced him to the Foreign Relations Committee, he spent his time fending off attacks by Senator Jesse Helms. Helms was intent on embarrassing him for alleged leaks, long ago, to *New York Times* reporter Judith Miller, with whom he was then, as the newspapers put it, maintaining a social relationship.

### Negotiator A Heavyweight at State

Inside the Department of State, Burt has already been both Director of the Bureau of Politico-Military Affairs and Assistant Secretary of State for European Affairs. Accordingly, he is unlikely to defer to ACDA Directors. And having written widely on national security affairs at the Institute of Strategic Studies (ISS) as well as at the *Times* he does not lack self-confidence in the field.

Complicating the bureaucratic relationships is the fact that Reginald Bartholomew is now the Undersecretary of State for Security Assistance, Science and Technology, and as such is above the Director of the Bureau of Politico-Military Affairs. He is an experienced and vigorous bureaucratic player, now back from serving as Ambassador to Lebanon, and he will be advising the Secretary of State as well.

It is evident from the recent Administration quarrel with the Federal Republic of Germany over negotiating about short-range missiles that the Administration does not understand or sympathize with the FRG's political dilemmas. If he wants to be, Burt could be useful to the Alliance by speaking for the FRG to the Administration. However, he is less likely to take career risks for disarmament than Lehman. □

## ZERO MISSILES WILL MAKE EUROPE SAFER

The imbroglio over NATO's modernization of its short-range nuclear forces that has occurred during the past several months threatens to unravel alliance cohesion at a critical juncture. At a time when the East-West confrontation appears to be winding down, the Western alliance is involved in a test of wills over the best course of action to take in the face of the continued success of Gorbachev's public-relations blitz.

At the heart of the disagreement is a dispute over whether to deploy a follow-on to the U.S. LANCE missile system, operational since the early 1970's in West Germany. With the NATO Summit meeting in Brussels, scheduled for May 29-30, fast approaching, American and German officials have been scurrying back and forth across the Atlantic in an effort to reach a compromise and not spoil the alliance's fortieth anniversary. The result is likely to be a non-solution: an agreement to put off any LANCE missile modernization until at least 1992, and acceptance of some formula for measuring progress at the conventional arms talks in Vienna over the next several years, that would then allow NATO to enter into parallel talks on cutting short-range nuclear forces.

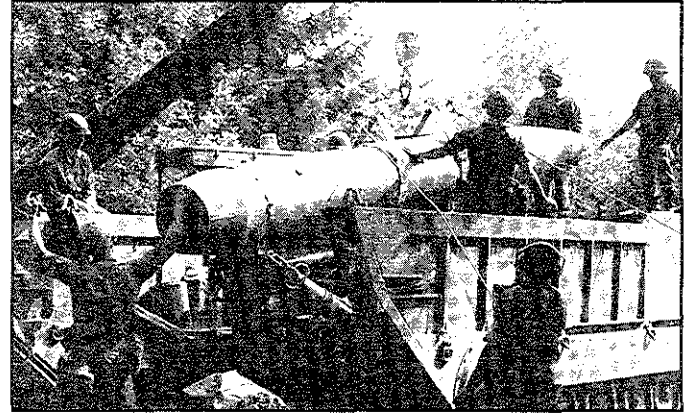
### Zero Missile Option

While such an agreement may allow NATO to paper over its differences in the near-term, a far better long-term solution, from both a military and political standpoint, would be for NATO to propose the elimination of *all* ballistic missiles from Europe. As former Reagan arms negotiator Paul Nitze, Congressman Les Aspin, Senator Sam Nunn and others have suggested, NATO needs to regain the initiative on arms control and not cede the moral high ground to the East. The elimination of land-based missiles in Europe is ambitious, politically attractive, and militarily in the interest of both Europe and the United States.

A zero option would eliminate the largest remaining Soviet offensive threat to Western Europe: its thousands of FROG, SCUD and SS-21 missiles which, carrying either nuclear, chemical or conventional warheads, could destroy critical NATO targets such as airfields, nuclear storage sites, transshipment points, and coastal ports in the opening minutes of an attack. Given the 12:1 Warsaw Pact superiority in launchers of these missiles that Western officials keep citing, such an agreement would clearly be to NATO's military advantage.

Just as with the December 1987 treaty that eliminated Soviet and American intermediate-range missiles, a ban on short-range missiles would ease verification concerns. The elimination of short-range missiles is far easier to verify than merely a cap on their deployment (as Nitze has proposed) because it would require the Soviets to remove all of the launchers, deployed and non-deployed missiles and any other associated equipment. None of the infrastructure identified with those missile types could remain in place.

Another money-saving by-product of zero ballistic missiles in Europe is that it would eliminate the need for a costly anti-tactical ballistic missile system that some have



LANCE Missile

advocated to counter the Soviet short-range missile threat.

And, for those who are concerned about the battle for public relations, a zero missile proposal would re-capture the diplomatic offensive and force Gorbachev to either accept NATO's proposal or provide a persuasive rationale on why he could not. It would help shift European public attention away from NATO's own future modernization plans and onto the significant upgrading that Soviet short-range missiles have undergone in the past decade.

### Zero Missiles Does Not Mean Zero Weapons

Finally, it is important to distinguish between zero *missiles* and zero *weapons* in Europe. Those who oppose talks on short-range nuclear forces claim that the "third zero" will mean the total elimination of NATO's tactical nuclear stockpile that is designed to deter a Soviet *conventional* attack, not counterbalance Soviet nuclear forces. But even after eliminating all ballistic missiles, NATO would retain thousands of nuclear weapons that could be carried on dedicated aircraft to targets well behind enemy lines.

Zero ballistic missiles would represent a more gradual shift away from hair-trigger nuclear forces in Europe ("fast-flyers" in Reagan Administration parlance), not a sudden abandonment of NATO's strategy of flexible response. Combined with a comprehensive program that also removed additional obsolete artillery shells from Germany, zeroing out ballistic missiles might also make it easier to proceed with one other nuclear modernization effort—a new air-to-surface missile planned for deployment on NATO aircraft in the 1990's which, thus far, has not been a source for as much attention or opposition as the new LANCE.

Given the direction of German politics, many knowledgeable observers are questioning whether the LANCE follow-on will ever be deployed. The British and American governments look increasingly obstreperous in their opposition to negotiations and the West German government is less and less willing to allow its domestic political requirements to play second fiddle to alliance concerns. A zero missile proposal is a forward-thinking idea with a sound military and political foundation. It is an idea whose time has come. □

—Thomas K. Longstreth

## FAS OPPOSES BOTH MX AND MIDGETMAN

*In an editorial released on April 19, 1989, the FAS Council opposed as anachronistic, mobile MX or the procurement of Midgetman missiles. There were, it felt, better uses for the funds, even if strengthening the deterrent were necessary—which, it felt, was not the case. In any case, solutions to land-based missile vulnerability based on disarmament, rather than procurement, should be looked into. (There was one dissent, published below.)*

### NEITHER MX NOR MIDGETMAN ARE NEEDED

The "window of vulnerability" was the original justification for modernizing our land-based missile force. According to this now discredited theory, an attack on US land-based missiles could credibly be followed by an ultimatum not to respond with thousands of other surviving weapons.

The Scowcroft Commission officially closed this rhetorical window in order to justify its proposal for a few tens of MX deployed in vulnerable silos. But before it was closed, Congressional moderates had invented and pressed their own (unMIRVed) solution, Midgetman.

Since, in Washington, nothing is ever over, these two missiles are still rattling around with their various constituencies and inventors urging their approval—on whatever combination of new and old arguments are currently workable.

FAS's position is this:

The US deterrent clearly does not need either the MX or the Midgetman missile to maintain a secure deterrent. If we are to buy only what we need, we don't need either missile.

#### Missiles Not Weak Link

Second, if we did believe that our deterrent was in danger, the money in question for either MX or Midgetman would be better spent on other programs, such as command and control. More land or sea-based missiles in a world in which we have ten thousand strategic warheads at the ready is wrong.

Third, if our land-based missiles are too vulnerable for some, we could and should resolve the matter, in this era, through disarmament rather than through buildup, i.e. by persuading the Soviet Union to reduce some of its silo-killing capability in a disarmament trade. This is no time to be building up.

In particular, if any mobile missiles are to be bought, whether Midgetman or rail-mobile MX, they should certainly not be bought in advance of START negotiations with the Soviets but be part of the negotiations in those talks. Traditionally Administrations pursue disarmament negotiations by leaving room for missile options on the Congressional agenda—in effect promising to reduce other missiles if it decides later to go ahead with the new ones. The Administration could do that in this case.

Finally, it is argued that more land-based missiles would reduce the political pressure for a small anti-ballistic missile system to defend the missiles. But the main pressure for SDI comes from fears of accidental firings that would

kill people rather than massive firings at land-based missiles that could not, in any case, be significantly degraded by a thin ABM.

For these reasons, FAS is opposed to going ahead with either Midgetman or MX. Children of the window of vulnerability era, these weapons have resurfaced at a time when what exists is a window of opportunity. New missiles now would truly be anachronistic. —FAS Council

### Editorial Dissent

The window of vulnerability has never been the problem. This trumped-up argument has only obscured the real danger of vulnerable missiles, which is crisis instability. Since deep superpower crisis will be possible for many more years, it is essential that there be no incentives for either side to initiate nuclear war in a crisis.

A vulnerable land-based missile force is not stable. Thus, I want the United States to solve the ICBM vulnerability problem. FAS should be advocating its preferred solutions, rather than arguing that there is no problem.

Here are four options, each preferable to the editorial's policy of ignoring the problem: (1) Replace the 500 silo-based MX warheads with 500 single-warhead Midgetmen (or a smaller number, MIRVed) deployed in randomly moving mobile launches in the Southwestern desert. (2) Same as option 1, only put single-warhead Midgetmen into new superhard silos. (3) Remove 167 triple-warhead Minuteman III missiles from their present silos and distribute them deceptively among some 2000 new silos drilled into rock, moving them occasionally. (4) Trade the land-based missiles away and rely on a bomber/submarine diad. □

—FAS Council member Art Hobson

### FAS CAUTIONS CHINESE EMBASSY

At 10:00 pm, May 19, as the first reports came over the television that media coverage of the Chinese demonstrations was being cut off, the FAS executive committee caucused by phone and prepared—and delivered by hand within the hour—the following message which, it felt, might be useful within the internal Chinese debate.

“Our Executive Committee has discussed, by phone, the horrifying prospect that your Government is about to use force against a peaceful protest for democracy in China.

We know our own country well and want to warn your Embassy that such actions would lead to an enormous and permanent loss of face for China.

In particular, organizations like our own, which boycotted the USSR for three years over its treatment of Andre Sakharov, would be forced to review their entire China policy.

Please advise your Government of our fear for the future of US-China relations.” ■

## ARMS CONTROL AND THE CHEMICAL WEAPONS CONVENTION

Prior to the inauguration of George Bush, it was announced that a complete study of the relationships of the separate arms control negotiations, all of which are underway and have been declared to be priorities of the new Administration, could take as much as a year. So much for hitting the ground running. Later, it was announced that the overall foreign policy review would be complete by May—the first results of which are yet to be announced. Along these lines, we would like to suggest the following points from the perspective of the chemical negotiations, as well as an initial conclusion: Each negotiation has much to offer the others and, progress in each will mean more progress in all of them.

The spread of chemical weapons has received increased public attention, particularly as a result of the Paris Conference which was convened in January to reinvigorate the Geneva Protocol ban on the use of chemicals. However, it is frequently forgotten that *aquisition and possession* of chemical weapons is fully legal under international law and is openly practiced by the United States and other countries, several of which are also nuclear powers. Thus, the best long-term remedy for the spread of chemical weapons is the complete world-wide ban on chemical weapons (Chemical Weapons Convention) which is being negotiated in Geneva. As discussed in the January PIR, the Bush presidency should increase both the pace and public awareness of those negotiations. But interrelationships with other arms control developments, particularly in Europe, also make the successful conclusion of the Chemical Weapons Convention important, and the Convention depends, in turn, on some of them.

### Conventional Weapons Talks

It is widely believed that the Soviet stockpile of chemical munitions is one of the significant advantages it possesses in the European force balance. Poison gas would be a "force multiplier" affecting the bean-count ratios of armor and other ground forces.

Recently the chemical ratio assumed in the early 1980s has been called into question by assertions that are themselves questionable:

- France has denied, contrary to all published analyses, having any chemical stockpile (and says it will not have one for several years)
- The US has asserted that it will withdraw its existing chemical stock from Germany by September 1992
- The Soviet Union and the Warsaw Pact deny, contrary to DoD publications, the existence of *any* chemical stocks in eastern Europe.

If these assertions are true, then, in a few years, there could exist a *de facto* chemical-weapon-free zone throughout central Europe. Further, this might be verified by existing procedures of the Conference on Security and Cooperation in Europe, without the fanfare or political difficulty of separate negotiations which would distract attention from the world-wide ban being negotiated. How-

*Excerpted from Secretary of State Baker's speech "New Horizons in Europe," 6 March 89, Vienna, Austria.*

...And we look forward, once our review is completed, to further steps on the road toward arms reductions and arms control. President Bush has declared that the control and elimination of chemical weapons is a high priority for the United States. Since 1984, when he tabled a draft treaty to eliminate chemical weapons from the face of the earth on an effectively verifiable basis, the United States has exercised leadership in the Geneva negotiations. We will continue to be at the forefront of these efforts in the future as well....

ever, uncertainty would remain. So the best course in any case would be the earliest conclusion of the Chemical Weapons Convention, which would remove a major obstacle to the conventional weapons talks.

### Short Range Nuclear Forces

Second, the decisions on modernizing or eliminating short range nuclear forces in Europe. West Germany is vitally concerned by two categories of weapons which would doom the civilian population of the country if ever used: chemical weapons and tactical nuclear weapons. After the INF Treaty, the Soviet Union and US agreed to dismantle intermediate range forces it seemed politically doubtful that a "third zero"—elimination of short-range nuclear—could be achieved before conventional and strategic nuclear talks progressed further. Hence, German emphasis has been on waging a diplomatic campaign for the Chemical weapons Convention and quietly urging steps to limit the possible use of chemicals. (This latter was done by removing the US stockpile and by arguing that flexible response does not have a chemical deterrence/retaliation aspect.) At a minimum, progress on the Chemical Weapons Convention is a German condition for cooperation with any upgrading of short range nuclear forces, or resistance to negotiations to eliminate them.

### Verification Measures for START

Under both the Chemical Weapons Convention and START Treaties, defense contractors will be subject to inspection. High security munitions stockpiles will require techniques to determine the presence of nuclear, and therefore not chemical, warheads. Work on such techniques is underway in the FAS joint project on verification with Soviet scientists. However, the Chemical Weapons Convention will require additional work on the relationship of challenge inspections to the U.S. Constitution, since the civilian chemical industry is farther from government control than are weapons contractors, and the challenges will probably be permitted literally "anywhere."

This point leads to a broader one. Arms control in the 1990s will be different from any prior agreements in a fundamental way. States must come to realize that national sovereignty must give way to cooperative actions and highly intrusive inspection regimes if true national security is to be assured. □

—Gordon Burck



## CAMBODIA: LETHAL AID IS A STRAW IN THE WIND

There are two possible U.S. Cambodian policies: anti-Vietnamese or anti-Khmer Rouge. For the last decade, the U.S. has joined with China and the ASEAN countries in following an anti-Vietnamese policy.

Accordingly, the U.S. has made the expulsion of Vietnamese forces from Cambodia its first priority, has voted to seat the genocidal Khmer Rouge in the U.N., has helped to give the Khmer Rouge a cosmetic uplift by pressuring Prince Sihanouk to join in an anti-Vietnamese coalition with them, has isolated the Hun Sen Government left behind by the Vietnamese, and has overlooked the atrocities which the Khmer Rouge continue to perpetrate in their refugee camps and in Cambodia.

### Policy Flounders in Wake of Events

State Department speeches have always said that, when and if the Vietnamese forces left, the U.S. would "subsequently" deal with the problem of preventing the return of the Khmer Rouge. But only recently has the Vietnamese withdrawal been deemed credible by the Department and it is now having trouble finding the rudder with which to tack the ship of state around.

So far it has no confirmed Assistant Secretary of State. And its policy has been overtaken by an historic meeting between Hun Sen and Sihanouk, who have reached a tentative agreement on just about everything—except the role of the Khmer Rouge in the interim Government that would hold elections.

Much time is being wasted in Washington wrestling with a drum-beat from Congressman Stephen Solarz calling for lethal aid to be sent to Prince Sihanouk. Congressman

Solarz wants the aid as part of the anti-Vietnamese strategy—specifically as a bargaining chip which the Prince could use in his negotiations with the Hun Sen Government set up by the Vietnamese.

In response, Chairman of the Senate Foreign Relations Committee, Claiborne Pell, proposed an amendment which would, in effect, turn the lethal aid into part of an anti-Khmer Rouge strategy. According to Chairman Pell, and in a substitute amendment fashioned by Senator Alan Cranston, the lethal aid would be forthcoming only if Prince Sihanouk left the Coalition Government of Democratic Kampuchea (CGDK), which is dominated by the Khmer Rouge. In effect, the lethal aid would not be a bargaining chip against Hun Sen but would become an encouragement, and an assurance, to Prince Sihanouk that he would get lethal aid if he left the CGDK and moved to a coalition with Hun Sen against the Khmer Rouge.

During the markup of the bill authorizing State Department salaries, to which the amendments were attached, Senator Cranston proposed striking the amendments. In a two page statement, he alluded to the strategy which the Administration seemed to be pursuing, called "covert-overt". In this strategy, the lethal aid would be funded through existing Administration funds by simply informing the Intelligence Committees, i.e. covert aid. But since the main purpose of the aid is symbolic and requires publicity, the Administration would then leak the fact that the aid had been provided.

Thus, Senator Cranston said, both the Foreign Relations and the Intelligence Committees would be "badly used"; the Foreign Relations Committee "would have been finessed and by-passed by 'covert aid'" and the Intelligence Committee "would be imposed upon to consider 'covert' aid that was in fact 'overt'."

He preferred, he said, to hold hearings on the subject in his Asian Subcommittee to deal with this "changing situation".

In the markup, Senator Cranston showed the Senators the picture on page 8 of this report, which depicts Prince Sihanouk and Khieu Samphan (Vice President of Pol Pot's Democratic Kampuchea) at a joint press conference calling, on behalf of the Khmer Rouge coalition, for lethal aid from the U.S. to Prince Sihanouk. Reading from an *L.A. Times* report accompanying this picture, he noted that the two had called for a new "High Council for National Defense to ensure cooperation between the three resistance forces"—which Sihanouk called a step toward merging the three forces (including those of Son Sann) into a single army.

### State Downplays Khmer Rouge Role

The State Department representative at the markup, Deputy Assistant Secretary David Lambertson, was asked to explain why the Administration was supporting something supported by the Khmer Rouge. Confirming that the joint announcement had been made, he said that it "had no significance whatsoever on the ground in Cambodia. It meant nothing." He went on to say:

### LETHAL AID WIDELY PANNED

On Sunday, May 7, the *New York Times* editorialized: "It is hard to imagine that Cambodia needs less than \$7 million in military aid proposed by Mr. Solarz."

On May 8, the *Washington Post* editorialized: "It is far fetched to dally with the idea that, at this late date, a hesitant United States can add substantially and usefully to its own direct influence by supplying military aid to the weakest military links in the Cambodian equation."

*Time Magazine's* Strobe Talbott said "President Bush could make the nightmare all the more likely if he decides—as some of his aides and key Congressmen are urging—to start sending U.S. arms to the non-Communist resistance forces. Under present circumstances, and under current U.S. policy, that 'lethal assistance' would be directed against Phnom Penh, not the Khmer Rouge." He urged changing the order of battle on the ground from three against one with the Non-Communist Resistance and Khmer Rouge against Hun Sen to three against one with the NCR and Hun Sen against the Khmer Rouge.

"It was an effort by Prince Sihanouk at a time when Hun Sen's popularity and standing in the West seemed to be growing to effect something of a public relations coup and to give an impression of renewed unified effort on the part of all of the resistance factions." But he did not deny that the Khmer Rouge supported US lethal aid.

Asked by Chairman Pell whether Mr. Lambertson could assure the Committee that the Administration would not proceed with lethal aid until the Committee had an opportunity to hold the hearings outlined by Senator Cranston, Mr. Lambertson said: "I am sure we would not undertake that sort of step without full consultation."

The next day, May 18, President Gorbachev addressed the Chinese leadership in Beijing. On Cambodia, he said he saw "light at the end of the tunnel" and that "following the complete withdrawal next September of the Vietnamese troops, a qualitatively new situation will emerge and practical prerequisites will be in place for this old conflict finally to be settled." He felt a Kampuchea settlement is "gradually taking on a realistic shape." Only the Kampuchians could "find the formula for agreement" but the Soviet Union was "ready to take part in the appropriate international guarantees" and to respect their course of "independence, neutrality and nonalignment". □

*Khmer Rouge's Khieu Samphan and Prince Sihanouk, here joined together on March 15 in Beijing, supporting Congressman Solarz's proposal for U.S. lethal aid to Prince Sihanouk's forces. Solarz subsequently opposed Senate legislation that would have required Sihanouk to leave his coalition with Pol Pot's Khmer Rouge before receiving U.S. weapons.*

*U.S. policy actions toward Cambodia, as shaped by Solarz's Subcommittee and recent Administrations, have encouraged aid to Pol Pot through our regional allies, supported seating the Khmer Rouge in the U.N., pushed Sihanouk into coalition with the Khmer Rouge, isolated their common opponent in Phnom Penh and now may arm two factions of the Khmer Rouge coalition—to Khieu Samphan's evident satisfaction.*



*Meanwhile, in the third week of May, Prince Sihanouk announced that "we don't need US lethal aid" because "Thanks to China, we can continue fighting for two years" and, moreover, that his army would not fight anyway since he wished "to play the role of peacemaker" in the forthcoming civil war. He predicted that "civil war and a Khmer Rouge blitzkrieg were inevitable in Cambodia after Vietnamese troops withdrew in September" to preclude international recognition of Hun Sen. He said Deng Xiaoping had threatened to "fight" Sihanouk if the Khmer Rouge were expelled from a settlement.*

**FAS PUBLIC INTEREST REPORT (202) 546-3300**

307 Mass. Ave., N.E., Washington, D.C. 20002

**Return Postage Guaranteed**

June 1989, Volume 42, No. 6

Second Class Postage  
Paid at  
Washington, D.C.

I wish to renew membership for the calendar year 1989.  
 I wish to join FAS and receive the newsletter as a full member.  
 Enclosed is my check for 1989 calendar year dues.

\$25 Member     \$75 Supporting     \$150 Patron     \$1000 Life     \$12.50 Student/Retired

Subscription only: I do not wish to become a member but would like a subscription to:  
 FAS Public Interest Report—\$25 for calendar year.

Enclosed is my tax deductible contribution of \_\_\_\_\_ to the FAS Fund.

NAME AND TITLE \_\_\_\_\_  
Please Print

ADDRESS \_\_\_\_\_

CITY AND STATE \_\_\_\_\_ Zip \_\_\_\_\_

PRIMARY PROFESSIONAL DISCIPLINE \_\_\_\_\_