I would like to thank the American Physical Society for honoring me as a co-recipient of the Sakharov Prize along with such illustrious human-rights activists as my colleagues Joe Birman and Herman Winick. I would also like to thank my wife, Flo, for her major contributions to the activities described below which led to this award and to our children, David, Jeremy and Laura, for their unstinting support throughout that hectic period. In addition, I want to express my deep appreciation to Elena Bonner for her very generous comments presented earlier in this session by her daughter, Tatiana Yankelevich, and to Tatiana and her brother Alexey Semyonov and his wife, Liza, for joining us in this occasion.

This award is especially meaningful to me as it pays homage to the great scientist and human-rights champion Andrei Sakharov, a role model to many of us, and because of the outstanding previous awardees, Yuri Orlov and Xu Liangying. While many scientists have valiantly engaged in the struggle for human rights, it is this group, along with Natan Sharansky, Elena Bonner, Fang Li Zhi and the long list of other dissident and refusenik scientists who put their own lives at risk on behalf of human rights, who are the heroes of the movement and a special inspiration to the rest of us.

In accepting this award, I do so with a sense of pride on behalf of my colleagues who were co-founders and leaders of the group Scientists for Sakharov, Orlov and Sharansky (or SOS for short) and the thousands who actively joined our efforts to promote the human rights of scientists worldwide. I especially want to pay tribute to the co-founders and some of the leaders from Berkeley, namely, physicists Robert Cahn (chair of today’s session), Michael Chanowitz, Owen Chamberlain (deceased) Erwin Friedlander (deceased), George Gidal, Gerson Goldhaber, David Jackson, Denis Keefe (deceased), Andrew Sessler and William Wenzel, as well as Kurt Gottfried from Cornell, the chemist Paul Flory (deceased) from Stanford, and Philip Siegelman from San Francisco State University, the lone political scientist. Another person who provided significant wisdom and support for our later efforts was the Sakharov family friend, Edward Kline, of New York. I apologize to the many others who played such important roles for not being able to include mention of them here.

Unfortunately, the need to do battle on behalf of human rights continues unabated. I thought it might therefore be useful to briefly recount the evolution, principles and some activities of the group, with particular emphasis on the strong reactions, for possible lessons learned in developing strategies for the future.

The spirit of free enquiry recognizes no national borders. Scientists comprise an international community, forged through the common bond of our research in expanding the boundaries of our knowledge and often strengthened by personal contact. Thus, if a scientist in one country is harassed for his or her views for political reasons by authorities there, it is often treated as a wider
threat to colleagues in other countries, regardless of formal treaties or conventions between countries or professional organizations. So it is perhaps not surprising that scientists have been in the vanguard of the human rights movement.

In the case of SOS, one may say it started with Yuri Orlov, the first winner of the APS Sakharov Prize. Yuri is an accelerator physicist who was a co-founder (along with Elena Bonner) and first chairman of the Moscow Helsinki Watch Group—an organization monitoring compliance with the Helsinki Accords signed by the Soviet Union in 1975. Yuri’s professional work was already known in the international accelerator physics community, particularly to accelerator physicists at Lawrence Berkeley Laboratory, Denis Keefe and the then lab director, Andy Sessler (later president of the APS), who had met Orlov on earlier occasions in the Soviet Union. So, when Yuri was cruelly incarcerated in 1977 for the very human rights activities which were officially protected by the Soviet Union, we took it personally and felt we had to do something. This feeling became more acute when another prominent dissident, the computer scientist Anatoly Shcharansky (now known as Natan Sharansky), was arrested soon after in early 1978, for his advocacy of the Jewish Refusenik movement as well as being a member of the Moscow Helsinki Watch Group. His arrest was on the charge of treason, which was a dramatic escalation of the clampdown on human rights, as it could lead to the death penalty if convicted. Here too we felt a personal connection, as Sharansky’s wife, Avital, had visited us in Berkeley after his arrest to inform us of his case. We began holding regular strategy meeting in Sessler’s office during lunch hours and after regular working hours. I make a point of this because we were very careful that our human rights activities did not conflict with our professional responsibilities at the lab.

After many discussions, certain guiding principles emerged:

(1) New and very different tactics were required since the traditional pleas to Heads of State and other political leaders no longer seemed sufficient; (2) violators of human rights must pay a price somehow for their transgressions; (3) the need to engage scientists to commit to individual action in concert with others to promote human rights but operating independently of their governments, and not to depend on providing a proxy for others to act on their behalf; and (4), we would rely most heavily on the feedback from the people most affected by our efforts, namely, the dissident scientists themselves, to calibrate the worthiness of our approach in each instance—not on the science establishment spokespeople, nor on the political leadership or even other human rights groups, despite the generally very good working relationships we had with such groups. This latter reservation arose because of past experience where we were often urged not to act publicly to avoid compromising “quiet diplomacy,” which turned to naught anyway.

These principles led to vigorous, often agonizing, debates on how to translate them into concrete action. Finally however, a sudden event precipitated the need for an immediate strategy. On the July 4th weekend of 1978, the Soviet authorities without warning announced an imminent trial date for Sharansky. On the spur of that moment we invited Sharansky’s wife in Israel to make another visit to the United States and meet with scientists across the country to publicize concern about the trial. (Since we had no money, we put the expenses on one of our personal credit cards in the hope that our colleagues would help reimburse us—which they did after about 3 years). One of the events was an outdoor rally on the Berkeley campus with Avital Sharansky and local scientists, joined by the singer Joan Baez. This attracted the largest crowd there since the end of the Vietnam War, more than 5,000 people, and resulted in much local media coverage, which was presumably not lost on the Soviet Consulate officials nearby in San Francisco.
The strategy which crystallized then was to ask individual scientists to commit to a personal moratorium on scientific cooperation with the Soviet Union until it improved its treatment of its dissident and refusenik scientists as guaranteed by its signing the Helsinki Accords. The purpose was to deny the Soviet Union the benefits of Western science and technology because of their human rights transgressions. This unprecedented proposal was made after much soul-searching because it went against a hallowed tradition of scientists promoting scientific exchange among the international community of like-minded scholars. Despite these misgivings, the group went forward with this initiative because of the extent of the mistreatment of the Soviet scientists and the perversion of the scientific exchange process whereby the Soviet authorities would allow only regime loyalists and not always even bona-fide scientists, to participate, resulting in a major lack of reciprocity in the exchange programs. This initial moratorium effort was focused on the U.S. scientific community.

Within days of announcing the moratorium, and through word-of-mouth communication only, 500 scientists signed on. After Sharansky’s trial, SOS, then known as Scientists for Orlov and Sharansky, continued to promote the initiative and six months later held a press conference in Washington to announce that 2,400 U.S scientists joined the moratorium, including more than a dozen Nobel Laureates, 10% of the National Academy of Sciences membership and 20 past or current presidents of national scientific organizations. This led to widespread coverage in the Western media and swift and pronounced responses from the Soviet Union—immediate, strongly positive, support from dissidents such as mathematician Naum Meiman and Sakharov on the one hand and vigorous denunciations from the Soviet authorities on the other hand. These initial denunciations were voiced by one of their foremost radio commentators, Valentin Zorin, on several occasions and reiterated in an unusually long article in Pravda signed by five leading members of the Soviet Academy of Sciences.

To gain further insight into the reaction, it may be of interest to point out how the Pravda article came about. Many years later, after the fall of the Berlin Wall, one of our colleagues had access to the Soviet Archives and came across a document of the Central Committee of the Communist Party labeled ‘Top Secret’ and dated April 3, 1979. We have a copy of the original in Russian. The English translation reads as follows:

RESOLUTION OF THE SECRETARIAT OF THE CENTRAL COMMITTEE OF THE COMMUNIST PARTY OF THE SOVIET UNION

On publication of the article by the so-called “SOS” group (USA)

1. We are in accord with the proposal of the U.S.S.R. Academy of Sciences to publish in the newspaper “Pravda” the article by Soviet scientists on the state of and prospects for the development of Soviet-American scientific cooperation.

2. The U.S.S.R. Academy of Sciences and the editorial board of the newspaper “Pravda” shall be entrusted with the final editing of the text of the article.

This resolution was agreed to unanimously in a vote of the seven Secretaries, including among them such notables as A.P. Kirilenko, K.U. Chernenko and M.S. Gorbachev. The latter two subsequently became Head of State of the U.S.S.R. within a few years afterwards.
In analyses of the ensuing [Pravda] article, a number of Sovietologists have remarked that the unusual length was significant, usually reserved for leading articles such as to criticize grave shortcoming in a major section of Soviet administration or condemn the U.S. for mining Vietnamese ports. One of the curious points in the article, entitled “Scientific Ties Serve Progress”, is the highlighting of the Soviet success in strengthening ties and contacts with scientists of developing countries such as Afghanistan—only to see a few months later the invasion of that country by the Soviet armed forces. Perhaps more strengthening was deemed necessary.

A common assessment of the SOS action and the Soviet response was exemplified by the remarks of the U.S. National Security Council aide, Jessica Tuchman Mathews, in an interview with Science magazine upon her departure at the time from that position. The interviewer wrote:

The protest by American scientists in support of their colleagues in the Soviet Union has been particularly effective, Mathews believes. “The Soviets care deeply about scientific exchanges with the United States, so when they are curtailed by the American scientific community, that has an enormous effect, particularly because it is something that government can’t turn on and off. The action by scientists here has been enormously important.”

Nonetheless, the subsequent invasion of Afghanistan was accompanied by a further crackdown of human rights by the Soviet authorities, culminating in the exile of Andrei Sakharov in January 1980. At that moment, SOS decided to expand its campaign internationally, adding Sakharov’s name to the group’s name. This larger effort was embarked upon despite no support staff whatsoever in SOS, which posed a significant challenge. We printed human rights advertisements containing the moratorium pledge in major science journals, including Physics Today, Science and Nature, asking scientists to fill it out and send it back to us, along with a donation if possible, to help defray expenses. The intent was that when we were to go public with the results we would include the name of every signatory, in keeping with the principle of personal accountability for one’s actions. The response was overwhelming—at least to us. Within months more than 8,000 scientists from 44 countries joined the SOS moratorium campaign. Signatories included 32 Nobel laureates, 187 members of the U.S. National Academy of Sciences, 82 Fellows of the Royal Society and a number of members of the French and Italian academies of sciences. This unprecedented action in peacetime was embraced by participants spanning the entire political spectrum, with Left and Right alike joining together in a common protest of human rights violations.

To gauge the early impact of the SOS actions, we tried to develop some quantitative metric and not rely solely on judgements based on anecdotal information. To that end, Andy Sessler and a colleague at Lawrence Berkeley Lab did a simple study in 1984 based on citation figures of the Science Citation Index published by the Institute of Scientific Information, Philadelphia. They compared data for 58 leading Soviet journals in 1975 and 1981 and found a significant decrease over that period in the number of original articles and the citation rate of these journals with respect to those worldwide, suggesting a declining influence of Soviet science. While several factors may have contributed, perhaps the moratorium was among them.

In addition to the moratorium, SOS encouraged a variety of actions. One of these was the peaceful picketing of conferences where prominent Soviet scientists who had aided and abetted in the repression of our colleagues were invited to speak. We never interfered with the events in question but got the messages across with informational posters and leaflets outlining the actions of such visitors. Because prominent scientists often participated, the news media tended
to provide more extensive coverage, which highlighted our concerns. One amusing memory is of Andy Sessler on our picket line at the Quantum Electronics Conference in San Francisco where the Soviet Nobel Laureate, Alexander Prokhorov, was to speak and Andy marching with the sign which read “Prokhorov—great scientist, lousy human being!” A somewhat poetic ring, if not particularly literary.

Lastly, a very different initiative, but perhaps indicative of the breadth of SOS tactics, was to get Sakharov’s wife, Elena Bonner, to be allowed to have heart by-pass surgery in the West. In 1984, a few of us visited the Soviet Consulate in San Francisco to encourage improving relations and achieving this goal. The consular officials with whom we met were adamant that Bonner would use the opportunity for political reasons to undermine the U.S.S.R. and were therefore unalterably opposed to letting her out. Nothing we could say would change their position. In fact the discussion became very heated at times. Although discouraged and angry, we left the meeting with the resolve to challenge their position publicly. I recount the episode to illustrate our modus operandi—developing new initiatives quickly as visceral response to a particular provocation. We then organized a novel hostage-exchange proposal to the Soviet Union on behalf of Bonner, involving prominent scientists from many countries to volunteer to go to the Soviet Union as “Good-Faith Witnesses” or “Guarantors” of her “proper behaviour” while she was in the West for medical treatment. In the end, 55 scientists from 13 countries volunteered, including 6 Nobel laureates and 26 members of the U.S. National Academy of Sciences. Typical of the strong outpouring of sentiment on this issue was the poignant reply of Izaak Kolthoff, Professor of Chemistry at the University of Minnesota, who wrote, “I would be willing to serve as a guarantor. However, I should add that I am 90 ½ years of age and physically handicapped.” Another type of response was from Willy Fowler of Caltech who supported us “whole-heartedly” but couldn’t travel because of recent surgery and so could not participate. Needless to say the Soviet authorities declined the offer, despite the world-wide publicity generated. Perhaps it was totally unrelated, but Bonner was eventually allowed to come to the West a year later—and without any constraints!

One issue that I would like to address at this point is what I call the “Moral Equivalence” argument which we confronted on occasion during the international SOS campaign. We heard from some scientists, particularly from the U.S., that they wouldn’t get involved because their own government was also guilty of some human rights violations and so did not feel comfortable challenging the Soviet Union’s record, despite their own admission that the scale of the violations was vastly different! Along similar lines, just after SOS went public with results of its international campaign, a two-page editorial also appeared in *Nature* entitled “How to speak out on Sakharov et al?” which opposed a boycott, stating,

Talk of boycotting relations with Soviet scientists is, however, mistaken... A sense of perspective is essential. It is thus relevant that what the Soviet government has done to Sakharov et al. does not hold a candle to, say, what Pol Pot did in Cambodia between 1976 and 1978. Moreover, the West cannot be too smug in its complaints against the Soviet way of dealing with people such as Sakharov—it is after all only a quarter of a century since Senator Joseph McCarthy was riding high in the United States administering injustice in an arbitrary way. Russian illiberality is, however, a special challenge because the Russian state is within an ace of being decent....
In response, I certainly agree that the Pol Pot regime in Cambodia was worse than that of the Soviet government but we question the logic as we couldn’t see a special role for scientists to protest there nor that the abominable Cambodian regime behaviour was a reason to ignore the Soviet human rights violations. In addition, Western scientists who were involved in SOS were not smug in their complaints of the Soviet way, since they were acting independently of their governments and many would have objected to McCarthyism too. Furthermore, the more we learned of the repressive treatment of the dissident scientists in the Gulags or the force-feeding of Sakharov in exile, one might question the characterization of the Russian State then as “within an ace of being decent.”

My personal view is that in dealing with human rights issues, major differences in the degree of such violations are important to be confronted and the demand for absolute purity of one’s own government should not be a justification to do nothing. On the contrary, one should address one’s government too, as did Kurt Gottfried, one of the SOS leaders, when he testified before the U.S. Senate Foreign Relations Committee in 1981 against President Reagan’s nomination of Ernest W. Lefever as Assistant Secretary of State for Human Rights and Humanitarian Affairs, precisely because the nominee had advocated a distinction between human rights abuses by communist as compared to those by authoritarian regimes. The nomination was ultimately unsuccessful.

After the release of Sakharov, Orlov and Sharansky in 1986, along with other dissident scientists, SOS as a group eventually disbanded as promised. Many participants then continued their active involvement through other groups. As we look back to assess the effectiveness of our unconventional tactics, the positive endorsement from those beleaguered colleagues in the Soviet Union most affected by our activities provided an important calibration and suggests that we did some good. If so, then our experience may yield some useful lessons learned for future actions to complement the important and sustained efforts of the human rights committees of the various scientific societies, such as the Committee for the International Freedom of Scientists (CIFS) of the American Physical Society.

In the end, human rights is too important to be left solely to governments to deal with. Moreover, a multi-pronged approach beyond government intervention allows for more nuanced strategies which may be better fit to deal with particular provocations, leading to an overall improvement in the cause of human rights.

To conclude, I would like to quote President John F. Kennedy’s remarks in Bonn, West Germany at the signing of a charter establishing the German Peace Corps, June 24, 1963, which he attributed to Dante:

The hottest places in Hell
Are reserved for those,
Who in a period of moral crisis
Retain their neutrality.