

Committee on International Scientific Affairs (CISA) Annual Report -- 2000

Prepared by **B. Crasemann, Chair**

1. Statement on APS Role in International Scientific Affairs

Substantial effort has been expended on formulating a Statement which encapsulates the Committee's view of what APS aims and activities should be in the arena of international scientific affairs, and what the Committee's role should be in helping to formulate plans, advise and assist in their execution, and monitor continuity and effectiveness. Formulation of such a Statement was recommended by (then) APS President-Elect Jim Langer at a meeting in the ACP in September 1999, called to discuss this matter. Officers of CISA and of the Forum on International Physics (FIP) were present (Lynn Boatner, Bernd Crasemann, David Ernst); participants for APS were Irving Lerch, Director of International Affairs, Jim Langer, George Trilling and Judy Franz.

The Statement (Appendix A) calls for CISA to work with the Director of International Affairs, the Officers of the Society, members of the Presidential Line and the Council, maintaining close coordination with the Forum on International Physics (FIP). This plan will more effectively provide APS leadership with advice and assistance through the expertise and efforts of members of CISA and FIP, in the spirit of volunteerism that has been a valuable asset of our Society throughout its history.

A concomitant draft revision of the Bylaws pertaining to CISA has been prepared which is more appropriate than previous wording for the Committee's envisioned role (Appendix B). Development, over more than a year, of the Statement and draft revision of the Bylaws derived much benefit from discussions with the Director of International Affairs, Operating Officers of the Society, and members of the Presidential Line. The Statement is presented to Council at its 19 November 2000 meeting for information, and the proposed revised Bylaws are being transmitted through the Committee on Constitution and Bylaws.

2. Outreach Activities

Outreach activities aimed at strengthening physics research and education in selected areas abroad have been continued and extended, with special emphasis on developing countries in Latin America and Africa. Visits by Committee members to Cuba (Lerch, Crasemann), Africa (Reed) and Lithuania (Crasemann) were helpful in evaluating and prioritizing needs and initiating efforts to meet some of them.

Inter-American-Iberian Physics Working Group - Within the framework of a Presidential/CISA long-term initiative, plans for an Inter-American Physics Working group were first envisioned at a meeting in Cuernavaca, Mexico, November 1998, organized by the Mexican Physical Society, the Federation of Latin-American Physical Societies (FeLaSoFi) and the APS. Representatives from the Canadian Association of Physicists and a number of other pertinent

organizations participated. At a follow-up meeting ("Physics Cooperation in the Americas") held during the APS Centennial Meeting on 22 March 1999, the participants voted unanimously to create a working group as a mechanism for maintaining the interaction initiated in Cuernavaca and Atlanta. An outline of a Charter was drafted by Carmen Cisneros, President of FeLaSoFi, and Lynn Boatner, then Chair of CISA, and subsequently refined by a subcommittee of CISA (Erb, Ferbel, Crasemann) consulting with Cisneros. At the request of the Royal Spanish and Portuguese Physical Societies, their countries were added to the Group and "-Iberian" added to its name. The Charter (Appendix C) was debated and unanimously approved by CISA on 21 March 2000; subsequently accepted by APS, FeLaSoFi and other parties.

The third official meeting of the Working Group was held on 13-15 September 2000 in El Escorial, Spain. The APS was represented by David Ernst, Chair of FIP and member of CISA, and Irving Lerch. A meeting of FeLaSoFi was followed by thorough discussion of interactions between the US and Latin America, including the visa situation, progress with sponsoring Spanish translations of physics education materials, the crucial question of journal distribution and the APS Online Directory of physicists interested in possible collaborations with colleagues in Latin America (see below). Funding sources for joint US-Latin American projects were discussed at length. Irving Lerch described planned joint workshops. The relation between science and technology in developing countries was discussed, including the use of new sophisticated economic models that confirm the strength of this relationship. The meeting demonstrated the viability and usefulness of this Working Group in addressing common problems of scientists in the member countries.

Cuba - As a result of discussions with Victor Fajer A., President of the Cuban Physical Society (CPS), an agreement in principle was developed between CPS and APS to implement an exchange program. Accordingly, Dr. Fajer was invited to participate in the April, 2000, meeting of the APS in Long Beach and to consult with Society officers on the scope and agenda for such exchange. In return, Bernd Crasemann, Chair of CISA, and Irving Lerch, Director of International Affairs, were invited to Cuba to lecture in the Fourth International Workshop on Physics Teaching in Engineering and the First Iberoamerican Workshop on Applied Physics in Engineering, held in Havana on 6-9 June 2000. This provided an opportunity to consult with the officers of CPS, the Cuban Academy and the Chair of the Cuban National Committee of IUPAP concerning implementation of an exchange program. In addition, contacts were made with members of the physics faculty in the University of Havana. The result of this visit was to develop priorities and recommendations for a closer association between the US and Cuban physics communities.

Plans are in progress for pan-American workshops in Cuba on science education and on medical physics, and for the participation of Cuban physicists in APS meetings and short-term research and didactic visits to US universities.

Inter-American Workshops - In addition to the Cuban workshops noted above, an Inter-American Workshop on the Use of Synchrotron Radiation for Research and a Symposium on Nanotechnologies will be held in Campinas, Brazil in February, 2001; the US Liaison Committee to IUPAP as well as CISA have been instrumental in the organization. Crasemann and Carmen Cisneros, President of the Federation of Latin-American Physical Societies, serve on

the International Organizing Committee. A future workshop in Chile on the overlap between physics and astronomy is under discussion.

Online Directory - An Online Directory has been developed to facilitate initiation of collaborations between US and Latin American physicists. This joint effort of FIP, chaired by David Ernst, and CISA is now virtually operational.

The Baltics.- While participating in the 32nd Conference of the European Group for Atomic Spectroscopy in Vilnius, Lithuania, on 4-7 July 2000, Crasemann met informally, on behalf of CISA, with officers of the physical societies of the Baltic countries, in order to gauge the status of physics in the region and difficulties which the APS might be able to help ameliorate. The discussion revealed that online access to APS journals is of primary concern for our colleagues in the region. Efforts to remedy this problem, which indeed occurs in several areas, already seem to be coming to fruition, thanks to strong interest by the APS, notably its Publisher Tom McIlrath. Regarding potential exchange programs, on the other hand, our colleagues in the Baltics appear to be quite skeptical out of concern over possible increases in "brain drain."

Africa -Activities in Africa with CISA participation began several years ago when a meeting on science in Africa was held at UNESCO, followed by a visit of directors of African laser laboratories to the U.S. African outreach has primarily been guided by Irving Lerch and Kennedy Reed (who will serve as CISA Vice-Chair in 2001). Following a communications workshop in Ghana in 1998, Lerch and Reed visited that country to make recommendations. Several universities in Ghana showed interest in signing Memoranda of Understanding with laser centers and universities in the US.

In light of this interest, Reed and Lerch organized a visit to the US from 25 May to 4 June 2000 by Samuel Adjepong, Vice-Chancellor of the University of Cape Coast, Ghana, within the framework of an APS initiative to increase interaction between the US and African physics communities.

Adjepong and Reed had a meeting at the Carnegie Foundation, which plans to join a "Partnership to Strengthen African Universities." At the New Jersey Institute of Technology and Rutgers University/Newark Campus, a formal agreement was signed establishing a Physics Scholar Exchange Program with the University of Cape Coast. At the University of Huntsville, Alabama, Adjepong and Reed met with President Frank Franz and other officials and also visited the Raytheon Company. At Alabama A&M University, an MOU was signed to establish a student and faculty exchange program. Agreements signed in Newark and Huntsville include plans for use of the Internet and distance learning. Selected courses are to be offered through programs of the African Virtual University and the New Jersey Virtual University.

In Washington, DC, Adjepong, Lerch and Reed met with NSF officials and attended a meeting at the National Academy of Sciences. Finally, Adjepong had an opportunity to discuss development of the African Virtual University at the World Bank.

Adjepong's successful visit can be seen as a significant step in the continuing efforts by APS to

promote scientific links with Africa.

3. Scientific Freedom and National Security

The Committee extensively discussed the issue of Scientific Freedom vs. National Security, cogently outlined in Irving Lerch's unpublished report with the same title. The situation clearly has significant international implications, from impairment of interactions between scientists at the National Laboratories with their international colleagues to loss of the ability to attract the best scientists to do research in the US. Members of CISA had the opportunity to consider the impact of the current crisis from the viewpoint of scientists at National Laboratories, through Peter Barnes and others, and a high official in the National Science foundation (Karl Erb). It appears clear that the difficulties transcend the weapons laboratories and extend to the larger scientific community, constituting a pervasive and nefarious trend. It was concluded that collection of factual information should precede any initiative, and that the latter, if undertaken, should be pursued with or through the Committee on Public Affairs (on which the Chair of CISA serves as liaison).

The Committee will stay alert to this major problem area and continue to gather factual information. A discussion of the issues by a distinguished panel is being organized by David Ernst, Chair of FIP and incoming Chair of CIA, for the April, 2001 Meeting of the APS. Irving Lerch is organizing a Symposium on the more encompassing topic, "Globalization of Science: Who Benefits? Who Pays?" at the General Meeting of the AAAS in February, 2001.

The Committee wishes to acknowledge the wise counsel and effective support lent by the APS Director of International Affairs and his staff.