

## Presentation of the International Scientific Study on CTBT Verification

### Speaker Biographies

July 13, 2009

#### Yves Caristan

Yves Caristan is the Director of the Physical Sciences Division and Director of the French Atomic Energy Commission (CEA) Saclay Research Center. Previously, he served as Head of the Department of Monitoring of the Environment and Director General of the French Geological Survey. From 1990 to 1999, Dr. Caristan acted as scientific expert for the French delegation to the Conference on Disarmament in Geneva in the context of the “Comprehensive Nuclear Test Ban Treaty.” Dr. Caristan graduated from the French *Ecole Normale Supérieure* of Paris in 1975, and obtained his Ph.D in Geophysics from the Massachusetts Institute of Technology and a French Ph.D in physics from the University of Grenoble. Dr. Caristan has been very active during his career in the field of Management of Science, especially in the context of changing national science policy. He received the Lamb Award from the French Academy of Sciences in 1999 and the CEA Applied Science Award in 1998. He is a knight of the *Ordre National du Mérite* and knight of the *Légion d’Honneur*.

#### Massimo Chiappini

Massimo Chiappini is Research Director of the Geophysical Institute (Istituto Nazionale di Geofisica e Vulcanologia INGV) in Rome and head of the “Methodologies of Environmental Geophysics” Unit, the Airborne Geophysics Science Team and the President’s Advisory Committee.

Dr. Chiappini has experience in geophysical techniques aimed at exploration, environment, and risk mitigation while cooperating with national and international authorities. Over the last 15 years he has actively pursued field activity in extreme environmental conditions, participating in nine Antarctic Research expeditions and inspections. He has led the INGV Airborne Geophysics Lab which has conducted surveys in several areas around the world (Croatia, Kazakhstan, New Zealand, Spain, Hungary, Antarctica, Italy, etc.) and produced wide scientific literature. His academic experience includes serving as contract professor of Physics at the University of Chieti; lecturer of Geophysics; tutor of Ph.D and Master Theses at University of Bologna, University of Rome, University of Naples, and University of Pisa, and served on a review panel of European Ph.D theses. He is author or co-author of more than 50 scientific papers in international journals, and served as principal investigator of several international research projects aimed at crustal studies and potential field research.

### **Ola Dahlman**

Ola Dahlman is the Chairman of the International Scientific Study. Previously, Dr. Dahlman was Chairman of the Working Group on Verification at the Preparatory Commission of the CTBTO for ten years, after serving as Chairman of the Group of Scientific Experts at the Conference on Disarmament in Geneva (1982 – 1996) and Advisor to the Swedish delegation to the Conference on Disarmament. He also co-authored a recently published book, *Nuclear Test Ban*.

Dr. Dahlman served as the Deputy Director General of the Swedish Defense Research Institute (FOI) for 6 years and before that as Director and Head of the FOI Laboratory for Weapon and Weapon Systems and of the Laboratory for Information Technology. Dr. Dahlman has been the Swedish representative to the Panel on Research of the Western European Armament Group, a visiting senior scientist at the EU Joint Research Centre, Ispra, Italy, and Advisor at The Swedish Institute of International Affairs, chairing a European-Russian project on bio-security. He holds a doctoral degree from the Royal Institute of Technology in Stockholm.

### **Jenifer Mackby**

Jenifer Mackby is a Fellow in the CSIS International Security Program. She has worked in France for CSIS on the Strengthening the Global Partnership project, a Russian-European project on bioterrorism, U.S. force reductions in Europe, and as rapporteur for numerous international conferences. In Washington she works on nuclear and nonproliferation issues in the International Security Program. Previously, Ms. Mackby served as a senior political affairs officer in the Conference on Disarmament in Geneva, Switzerland, where she was secretary of the negotiations on the CTBT and the group of scientific experts that designed the verification system. She then worked for the Comprehensive Nuclear Test-Ban Treaty Organization Preparatory Commission in Vienna, Austria, where she served as secretary of the work on the implementation of the verification regime. She also worked at the United Nations as a political affairs officer for outer space and disarmament issues, a government expert study on nuclear weapons, a Nuclear Non-Proliferation Treaty review conference, the disarmament commission subcommittees on nuclear weapons and South Africa's nuclear capability, and an international conference on outer space. She has written numerous articles and books, including *The Final Test* (co-author).

## **Harry Miley**

Harry Miley is a Laboratory Fellow at Pacific Northwest National Laboratory (PNNL), after serving at the laboratory since 1990 as a staff scientist, senior research scientist and research scientist. He is also an Adjunct Faculty at Washington State University and has been a visiting fellow at the Institute for Nuclear Theory and the Aspen Center for Physics.

Dr. Miley has worked at the intersection of pure science and science for national security for more than 20 years. As a contributor to the Nuclear Explosion Monitoring (NEM) program, he led a team of scientists and engineers in the development of the Radionuclide Aerosol Sampler/Analyzer (RASA), which is in use today in the verification regime of the Comprehensive Test Ban Treaty. As a Lab Fellow, Dr. Miley helped organize an international pure science collaboration in neutrino physics related to ultra-low background germanium detectors, and continues to serve as a mentor to young PI's in monitoring research. Dr. Miley also supports NA-22 in planning efforts and the NA-22 relationship management team at PNNL. Recently, Dr. Miley has worked as a Radionuclide Coordinator as part of the International Scientific Symposium preparations to assess the current International Monitoring System of the CTBT. He holds a Ph.D in Physics from the University of South Carolina.

## **Benn Tannenbaum**

Benn Tannenbaum is Associate Program Director at the Center for Science, Technology and Security Policy of the American Association for the Advancement of Science (AAAS). He works on drafting policy briefs, tracking legislation, serving as liaison with MacArthur-funded centers and the security policy community, organizing workshops and other meetings, attending Congressional hearings and providing testimony to Congress, and leading panel studies on areas including nuclear weapons policy, nuclear forensics, and the Reliable Replacement Warhead program.

Tannenbaum served as an American Physical Society Congressional Science Fellow, working for Representative Edward J. Markey (D-MA) on nonproliferation issues. The legislative work focused on nuclear "bunker busters," missile defense, Iran's nuclear program and preventing U.S. nuclear technology from being transferred to North Korea. Through the Bipartisan Task Force on Nonproliferation, Tannenbaum brought nationally recognized experts on topics such as Iran's nuclear program and political situation, dirty bombs, and the Biological Weapons Convention to brief Members of Congress and their staff. Tannenbaum received his Ph.D in physics from The University of New Mexico.

## Jay Zucca

Dr. Jay Zucca is a physicist at the Lawrence Livermore National Laboratory in Livermore, California where he is currently the Acting Program Director for Nonproliferation and the Deputy Program Manager for E Program (Energy/Nonproliferation) within the Global Security Directorate. Dr. Zucca came to Livermore in 1984 after completing post-doctoral positions at the U.S. Geological Survey in Menlo Park and the University of Karlsruhe in Germany.

Dr. Zucca has worked primarily on advancing nuclear test monitoring efforts, concentrating on seismic instrumentation development, on-site inspection, and regional seismology. He was a member of the U.S. Delegation to the Nuclear Testing Talks (Threshold Test Ban Treaty), a member of the U.S. Delegation to the Conference on Disarmament for the Comprehensive Test Ban Treaty, and is currently a member of the U.S. Delegation to the Preparatory Commission for the CTBT where he serves as the International Monitoring System Task Leader. In his current role as Acting Program Director for Nonproliferation, he has management responsibility for efforts to develop advanced technologies for detecting nuclear proliferation activities and securing nuclear and radiological materials worldwide. In Dr. Zucca's role as Deputy Program Manager for E Program, he guides the execution of the organization's \$120 million budget for energy and nonproliferation. Dr. Zucca received his Ph.D. in Geophysics from Stanford University in 1981.