



Director's Matters

By H. Frederick Dylla, Executive Director & CEO

Reaching millions

Every scientist likes to think his or her work is important for advancing human knowledge and would like to broadly communicate the results, to perhaps unlock related discoveries or catalyze new collaborations. And, if the communication is cast in language the general public can understand, it helps generate appreciation of science and support for public funding of scientific research.

Mainstream media's reach can be sobering for any scientist. A class lecture might reach anywhere from a dozen people for a seminar, to hundreds for a large survey course. Special lectures typical of scientific meetings might reach the same size audience, whereas a plenary lecture, reserved only for scientists who achieve world-class scientific breakthroughs, may reach a few thousand. Scientific journal articles have a similar reach, although online access is increasing that reach significantly. With the exception of rare instances when some viral explosion of a website or YouTube clip exceeds the potential millions of viewers of television, broadcast journalism is the most successful mechanism for broadly distributing science information.



A science documentary broadcast on PBS's NOVA series is typically seen by more than 10 million viewers in its debut broadcast. The web version allows a long tail of

subsequent views and referrals for classroom use, which can reach tens of thousands more. However, this exponential leap in reach requires massive effort and dedication, as demonstrated by the production of the 2008 NOVA broadcast of [Absolute Zero](#). *Absolute Zero* began as hopeful conversations in the mid-1990s between a distinguished low-temperature physicist, [Russell Donnelly](#) from the University of Oregon, and his neighbor, Meredith Burch of Meridian Productions. The project would be based on a book by [Tom Shachtman](#) on the history of science and technology of low temperatures—from our practical need for refrigeration to the Nobel Prize winning research to make Bose Einstein condensates in laboratory settings with temperatures reaching a tiny fraction of a degree above absolute zero (-273 °C).

As executive producer, Burch enlisted [David Dugan](#) of Windfall Films, a talented writer, director, and producer of broadcast documentaries. Together, the team spent some seven years making the film, which included soliciting a grant from the NSF and finding additional funding from the Alfred P. Sloan Foundation, eventually raising more than \$2 million to produce and promote the award-winning piece. In 2008, *Absolute Zero* was broadcast on WGBH/NOVA in association with TPT/Twin Cities Public

Television. This 15-year venture is a testament to the dedication of the production team in getting the message out. The efforts have educated millions of viewers. Key portions of the production are available through the [NOVA website](#); thousands of Society of Physics Students members continue to use the DVD version for classroom and outreach exercises.

AIP is pleased to award its 2009 Science Broadcast Award to Tom Shachtman and David Dugan on behalf of their full production team at a ceremony at last week's AAPT/APS meeting in Washington. See the [AIP press release](#) for more details.



Tom Shachtman (left) and David Dugan accept the 2009 AIP Science Broadcast Award.

AIP also honored another gifted communicator, [Dan Falk](#), with the 2009

Science Writing Award for his feature article "[End of Days: A Universe in Ruins](#)," which was published in *COSMOS* magazine in 2008. The article is expertly written and incorporates both astrophysics and cosmology in the examination of the long-term fate of our solar system, the universe, and life itself. The article's teaser: "*When will the*



Fred Dylla presents Dan Falk (right), freelance writer and radio broadcaster specializing in science stories, with the 2009 AIP Science Writing Award.

universe end? And will the ultimate apocalypse arrive with a bang, or a whimper? A look into the far, far future - to the day the cosmos decays into a frozen, featureless void." It's prose like this that instantly intrigues readers and compels them to keep reading. The science community needs such individuals to get the message out to the public and share the wonders that can only be answered—if not today then someday—by science.

PUBLISHING MATTERS

AIP UniPHY wins PROSE Award

[AIP UniPHY](#)—our pioneering scientific social and professional networking platform—was awarded the prestigious [PROSE Award](#) in the eProduct category, Best in Physical Sciences and Mathematics. Selected by the [Professional/Scholarly Publishing \(PSP\) division](#) of the [Association of American Publishers](#), the PROSE Awards annually recognize the very best in professional and scholarly publishing. The 2009 PROSE



PROSE Award
Winner - 2009



Representing the [AIP UniPHY](#) team at the PROSE award luncheon during the [2010 PSP annual conference](#) in Washington, DC, were (from the left) Steven Leicht, chief operating officer of [Collexis Inc.](#), with AIP staff members Mark Cassar, Tim Ingoldsby, Lori Carlin, and Terry Hulbert.

Awards were presented in early February during a luncheon at the [2010 PSP annual conference](#) in Washington, DC. Titled "The New

Reality: Disruption, Innovation, Relevance," this year's PSP conference was the perfect setting to highlight the innovations brought to our community of researchers by AIP UniPHY. Since its launch, AIP UniPHY has amassed 20,000 registered users and continues to receive press and positive feedback. AIP UniPHY contains a new graphical interface and enhanced functionality, such as a new CV section where you can display your professional profiles and research interests, a method for you to recommend articles to other members, and a "people you might know" feature, which lists researchers who have collaborated with one's co-authors. Visit [AIP UniPHY](#) to find out more about this award-winning service.

PRC MATTERS

History Center brings bright ideas to light



Peter Sorokin and Mirek Stevenson adjusting a gas laser at IBM in 1961.
Credit: Emilio Segrè Visual Archives

AIP's Center for History of Physics proudly announces its newest online history of physics exhibit: [Bright Idea: The First Lasers](#). With this exhibit, we celebrate those first few years of laser development, without which there would be no [LaserFest!](#) Former History Center director Spencer Weart is responsible for the content, and web specialist Ada Uzoma is credited for its design. This exhibit provides the model for future, small, historical exhibits. We anticipate opening an exhibit later this year

—Physics at the Edge of Space: Early Exploration of the Magnetosphere—and another in 2011 commemorating the legacy of Sir Ernest Rutherford. You may remember Rutherford's announcement of the nuclear model of the atom in 1911. Refer to the ["Rubies and lasers in the summer of 1960"](#) article by center director Greg Good in the January 25, 2010, edition of *AIP Matters* for more insights on the beginnings of the laser.

Honored for advancing science



The [American Association for the Advancement of Science](#) honored a [new class of fellows](#) at its [2010 annual meeting](#) in San Diego, CA. Fred Dylla, AIP executive director and

CEO, was among those elected by their peers for meritorious efforts to advance science or its applications. Two AIP Governing Board members—Kevin Marvel, executive officer of AAS, and Joe Serene, treasurer and publisher of APS—and Francis Slakey, APS associate director of public affairs were also among those honored.

AIP congratulates Fred, Kevin, Joe, and Slake for this well-deserved recognition!



AAAS fellows Fred Dylla (left) and Joe Serene (right) at the AAAS awards ceremony and reception.

We invite your feedback to this newsletter via e-mail to aipmatters@aip.org.

For past issues of this newsletter, visit the [AIP Matters archives](#).