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THE CUTTING EDGE

Chuck Hansen, Editor

Number 4, June 1998

This is the fourth issue of the *Cutting Edge*, a periodic newsletter and "intelligence report" for current and prospective customers of *The Swords of Armageddon*. Our intention is to keep you advised of recent and little-known publications, document collections, research sources, and videotapes concerning Cold War topics, primarily nuclear weapons and weapons testing-related subjects (other Cold War subjects are also included).

RECENT PUBLICATIONS OF INTEREST

As we mentioned in Issue Number 1, a good source for several of the following books is an on-line Internet bookstore named Amazon.com at <http://www.amazon.com>. Do not -- repeat, do not -- contact Chuokelea Publications for copies of items mentioned in this newsletter. We sell only *The Swords of Armageddon*.

Aerojet History Group. 1997. **Aerojet: The Creative Company**. 958 p. paper. ISBN 0-9659769-0-4.

In the best traditions of Frank Shelton's **Reflections of a Nuclear Weaponeer** and Major A. Johnson's **Progress in Defense and Space: A History of the Aerospace Group of the General Electric Company** (both mentioned in Issue No. 1 of *The Cutting Edge*), this is a large-format privately-published comprehensive history of the wide spectrum of the activities of the Aerojet General Corporation between 1952 and 1997, including solid and liquid propellant rockets, ordnance, marine activities, space electronics and nuclear rockets, and tactical missiles. Highly recommended. For copies, contact A&M Services, Inc., 949 Cataract Avenue, Unit I, San Dimas,

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CA 91773, or visit the Aerojet History Group Web site at <http://www.aerojet-thecreativeco.org/history>.

Broad, William J. 1997. ***The Universe Below: Discovering the Secrets of the Deep Sea***. Simon & Schuster, New York. 432 p. ISBN 100684-81108-1.

In this, the latest book by the Pulitzer Prize-winning New York *Times* science reporter and author of ***Star Warriors*** (Simon & Schuster, New York, 1985) and ***Teller's War*** (Simon & Schuster, New York, 1992), Broad turns his attention from the high heavens to the deep seas. Of particular interest in this volume is the second chapter, which describes several U.S. intelligence successes and failures during what has been called "the deep Cold War."

Clearwater, Dr. John M. 1998. ***Canadian Nuclear Weapons: The Untold Story of Canada's Cold War Arsenal***. Dundurn Press, Toronto, Ontario. 309 p. Paper. ISBN 1-55002-299-7.

Between 1963 and 1984, U.S. nuclear warheads armed Canadian weapons systems in both Canada and Germany. During the early part of the period, the Canadian military was putting more effort, money and manpower into its nuclear commitment than any other single activity. This important book is an operational-technical expose of that period, bringing together recently-declassified information about the nature of the nuclear arsenal in Canada. Chapters provide a detailed discussion of the four nuclear weapons systems deployed by Canada: the BOMARC surface-to-air guided interceptor missile; the HONEST JOHN short-range battlefield rocket; the STARFIGHTER tactical thermonuclear bomber; and the VOODOO-GENIE air defense system.

Each chapter also includes a section on accidents and incidents which occurred while the weapons were at Canadian sites. The final chapter covers the ultimately futile efforts of the Maritime Air Command and the Royal Canadian Navy to acquire nuclear anti-submarine weapons. An appendix includes the texts of the secret agreement between Canada and the U.S. for provision of nuclear warheads; the four service-to-service arrangements for each weapon system; and the draft text of the consultation and authorization agreement of 1965 which laid out the means by which the Prime Minister would give permission to use nuclear weapons.

The Department of Energy has released the fourth edition of ***Drawing Back the Curtain of Secrecy: Restricted Data Declassification Decisions, 1946 to the Present*** (RDD-4), dated January 1, 1998. This periodic compilation of declassification actions is far from a complete compendium of all data ever declassified by DOE or its predecessor agencies, but it provides a useful historical window into what the government thought the public and the world should know about U.S. nuclear weapons and the weapons research programs. Hazel O'Leary's absence is highlighted by RDD-4: no figures on annual U.S. nuclear weapons stockpile megatonnage and weapon builds and retirements have been released since April 1994 (annual

dismantlement totals have been released in unclassified congressional testimony). RDD-4 is

available upon request from Richard J. Lyons, NN-521, Germantown Bldg., U.S. Dept. of Energy, 19901 Germantown Road, Germantown, MD 20874-1290.

Edwards, Paul N. 1996. ***The Closed World: Computers and the Politics of Discourse in Cold War America***. MIT Press, Cambridge, Massachusetts. 440 p. ISBN 0-262-05051-X (hardbound), 0-262-55028-8 (paper).

Edwards traces the origins of many of the postwar advances in computers and computing science to U.S. military requirements during the Cold War.

Hales, Peter Bacon. 1997. ***Atomic Spaces: Living on the Manhattan Project***. University of Illinois Press, Chicago, Illinois. 448 p. ISBN 0-252-02296-3.

Hales, a cultural historian, describes the genesis and wartime maturation and occupation of the main Manhattan Engineer District sites at Hanford, Oak Ridge, and Los Alamos. He examines the Manhattan Project as a culture that produced new ideas, social systems, beliefs, economic relations, and languages. A review of this book appeared in the December 1997 issue of *The Nation*.

Henriksen, Margot A. 1997. ***Dr. Strangelove's America: Society and Culture in the Atomic Age***. University of California Press, Berkeley, California. 451 p. ISBN 0-52-08310-5.

This book strikes close to home for those of us Baby Boomers who can still remember cowering under our schoolroom desks as sirens blared during city-wide air-raid drills in our childhoods. Henriksen attributes the Damoclean threat of The Bomb for many postwar U.S. cultural trends, including rock and roll music, the civil rights movement, the "flower children" and the anti-establishment radicals of the 1960s.

Hopkins, Robert S. III. 1997. ***Boeing KC-135 Stratotanker: More than Just A Tanker***. Aerofax/Midland Counties Publications Ltd., Hinckley England. 224 p. Paper. ISBN 1-85780-069-9.

After its first flight in July 1954, the Boeing Model 367-80 prototype, which would go into commercial service as the Model 707, was evaluated by the U.S. Air Force both as a military transport and as an in-flight refueling tanker. The first KC-135 was rolled out during the summer of 1956, and the aircraft has since then had a lengthy and distinguished career in many variants, several of which continue in service today. Hopkins' book is an exhaustive history of this versatile airframe in all of its many mutations. The author writes from first-hand experience as an Air Force pilot who flew no fewer than 17 different types of EC-, KC-, RC- and TC-135s. To learn more about the book and the many C-135 models, visit

the KC-135 World Wide Web site at
http://www.novia.net/~drbob/kc135_book.html.

Murray, James V. and John Swantek. 1997. ***The Watervliet Arsenal, 1813-1997: A Chronology of the Nation's Oldest Arsenal***. U.S. Army Ordnance Corps, Watervliet Arsenal, Watervliet, New York. 509 p. Paper.

This is a well-illustrated and comprehensive history of the U.S. Army's oldest weapons factory. Originally prepared in 1993, this updated edition includes information about Watervliet's contribution to the Army's nuclear weapons programs, specifically, the *Davy Crockett* and the 280MM "atomic cannon." Available upon request from the Public Affairs Office, Dept. of the Army, Watervliet Arsenal, Watervliet, New York 12189-4050.

The once-supersecret **National Security Agency** has published several "Historical Monographs" (short booklets) concerning the *Venona* cryptographic intercepts, plus many more on other cryptologic matters (e. g., the origins of NSA; KGB/GRU global operations; Cold War aerial reconnaissance; etc.) and several book-length monographs on cryptographic operations, history, and noted cryptographers. For copies, or for a list of available publications, write to the Center for Cryptologic History, National Security Agency, ATTN: S542, 9800 Savage Road, Fort George G. Meade, MD 20755-6000.

Ross, Steven T. 1996. ***American War Plans, 1945-1950***. Frank Cass, London, England. 189 p. Paper. ISBN 0-7146-4192-68.

This is a paperback edition of a hardbound book by the same title published in 1988 by Garland Publishing, Inc., in New York. Ross has added a few new bibliographic sources; the text is otherwise identical to the 1988 edition. The ambitious nuclear war plans drawn up by the Joint Chiefs of Staff did not even begin to match the U.S. stockpile of atomic weapons until mid-1948.

Sawyer, Edmund V. 1997. ***The Camel Project (Fifth Edition)***. Crescent Engineering & Research, Napa, California. 120 p. Paper.

"Camel" was the World War II Manhattan Engineer District codename for the California Institute of Technology program concerning implosion bomb component design and manufacture. This book describes the activities of the Crescent Engineering & Research Company, a Cal Tech subcontractor then located in Los Angeles, California. Copies available upon request from the Pacific Rocket Society, P. O. Box 2147, Napa, CA 94559.

RECENT ARTICLES OF INTEREST

A couple of articles in ***Scientific American*** earlier this year related to Cold War subjects. "Lisa Meitner and the Discovery of Fission," by Ruth Lewin Sime, in the January issue, described how

Ms. Meitner was denied a Nobel Prize for her contributions in physics. (A similar article by Ms. Sime, Elisabeth Crawford, and

Mark Walker appeared in the September 1997 issue of **Physics Today**.) The February issue of *Scientific American* included an article by noted spy satellite writer Jeffrey T. Richelson entitled "Scientists in Black" which examines how previously-classified imagery is being put to use in long-term environmental studies.

The January 26, 1998 issue of **Aviation Week & Space Technology** featured an article entitled "Shaky Russian Export Controls Heighten Proliferation Risks" which discusses how the current state of near-anarchy in parts of Russia may lead to undesirable export of high-tech weapons to potential U.S. foes.

An article by Robert S. Hopkins III entitled "An Expanded Understanding of Eisenhower, American Policy and Overflights" appeared in the April 1996 issue (Vol. 11 No. 2) of **Intelligence and National Security**, published by Frank Cass & Co., Ltd. in England. The article provides a brief but comprehensive overview of U.S. overflights of the Soviet Union between 1946 and 1961. Cass has an extensive Website at <http://www.frankcass.com>; their e-mail address is jnlsubs@frankcass.com. Postal mail goes to Frank Cass & Co., Ltd., 900 Eastern Avenue, Newbury Park, Ilford, Essex, IG2 7HH UK.

Charles A. Ziegler, co-author of *Spying without Spies: Origins of America's Secret Nuclear Surveillance System* (Praeger, Westport, Connecticut, 1996) which was reviewed in Issue No. 1 of *The Cutting Edge*, has written an article entitled "Intelligence Assessments of Soviet Atomic Capability, 1945-1949: Myths, Monopolies, and Maskirovka" in the October 1997 issue of **Intelligence and National Security**, published by Frank Cass & Co., Ltd. in England. The article describes the mistaken postwar U.S. estimates of when the Soviets would have their own atomic bomb. Ziegler also explores possible efforts by the Soviets to deliberately mislead Western intelligence.

A couple of **World Wide Web sites list shootdowns** of Western aircraft over or around the former Soviet Union. Vic Flintham at <http://www.vflintham.demon.co.uk/vf4.htm>, has a table showing losses of civil and military aircraft. Another site, "Cold War Shootdown Incidents," at <http://www.aiipowmia.com/cw1.html>, lists U.S. military personnel lost in aircraft shootdowns between 1950 and 1960.

The Spring 1998 issue of **Air Power History** (Vol. 45 No. 1), published by the Air Force History Support Office (AFHSO) for the Air Force Historical Foundation, contains a brief but well-illustrated article on the WW II Soviet reverse-engineering of the Boeing B-29 *Superfortress* into the Tupolev Tu-4 and some of Tupolev's resulting progeny which flew throughout the Cold War. The best series of articles to date on the postwar Soviet bomber

program based on the B-29 appeared in "The Billion-Dollar Bomber," by William Green in *Air Enthusiast*, Vol. 1 Nos. 2, 3, 4,

and 5 (July, August, September, October 1971). For copies of *Air Power History*, contact Air Power History, George C. Marshall Library, Virginia Military Institute, Lexington, VA 24450, phone (540) 464-7468 or fax (540) 464-7330.

The May/June 1998 issue of ***The Bulletin of the Atomic Scientists*** contains a short note by the late Stanley Goldberg, whose untimely demise at age 62 in October 1996 is a great loss to historians everywhere. Stan's article, "What Did Truman Know, and When Did He Know It?," explains why a third atomic bomb was not use against Japan in August 1945.

RECENT VIDEOS OF INTEREST

Peter Kuran, producer/director of ***Trinity & Beyond: The Atomic Bomb Movie*** reviewed in Issue No. 1 of *The Cutting Edge*, has issued ***Atomic Filmmakers: Behind the Scenes***, a 45-minute history of the U.S. Air Force's Lookout Mountain Laboratory in Hollywood, California, which made more than 6,00 films for the government between 1947 and 1969. This color and black-and-white

video features test footage interspersed with reminiscences of former Lookout Mountain employees at their October 1997 reunion. For copies of the video, contact VCE Inc., in Sylmar, CA; phone 1-818-367-9187 or 1-800-242-9627.

The Department of Energy has released 27 more videos, including black-and-white and color **films concerning nuclear weapons testing in Alaska and Nevada**, Plowshare peaceful nuclear explosions in New Mexico and Colorado, and several **Department of Defense nuclear weapons training films**. Four Alaska weapons test videos depict graphically the forbidding terrain and weather of the Aleutian Islands. For copies, contact Bechtel Nevada CIC, P. O. Box 98521, Las Vegas, Nevada, 89193-8521; (702) 295-0748. The next set of films is scheduled for release during June of this year.

FORTHCOMING PUBLICATIONS & DOCUMENT COLLECTIONS

As of mid-February 1998, the first draft of ***Magnificent Mavericks***, the third volume in a series of histories of the China Lake Naval Ordnance/Naval Weapons Test Station, has been sent out to several of its interview subjects for review. The manuscript still has to undergo a DOD security review, so it will probably not be published anytime soon.

Robert S. Hopkins III is currently preparing for publication ***U.S. Strategic Aerial Reconnaissance and the Cold War, 1945-1961*** which promises to be a long-overdue comprehensive history of its subject.

Noted aerospace writer Robert Jackson has written ***Nuclear Alert: The Strategic Bomber Forces of the Cold War*** which is due out in May

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1998 from Brassey's, Inc., Herndon, Virginia. The 160 page hardcover has ISBN 1-85753-256-2.

A new book about Rear Admiral "Deak" Parsons, USN, entitled **Target Hiroshima: Deak Parsons and the Creation of the Atomic Bomb** (Naval Institute Press, Annapolis, Maryland, 1998. 280 p. ISBN 1-55750-120-3) is scheduled for release at the end of May 1998. Admiral William S. "Deak" Parsons was a prominent naval member of the Manhattan Engineer District, responsible for ordnance development of the wartime nuclear bombs. Parsons, who was also associate director at Los Alamos, went on after the war to help establish Navy nuclear policies. Albert Christman is also the author/co-author of the first two volumes of the U.S. Navy's China Lake Naval Weapons Center, **History of the Naval Weapons Center, China Lake, California, Volume I: Sailors, Scientists, and Rockets** (U.S. Government Printing Office, Washington, D.C., 1971) and **History of the Naval Weapons Center, China Lake, California, Volume II: The Grand Experiment at Inyokern** (U.S. Government Printing Office, Washington, D.C., 1978). Both of these titles are out-of-print.

The Brookings Institution's **Atomic Audit: The Costs and Consequences of U.S. Nuclear Weapons Since 1940** by Stephen I. Schwartz (ed.), and mentioned in Issues 2 and 3 of *The Cutting Edge*, is now slated for publication in mid to late June of this year. The hardbound edition is ISBN 0-815-7777-44; the paperbound 500-page edition is ISBN 0-815-7777-36.

PROGRESS ON SWORDS, ETC.

Work continues on Release 2.0 of *The Swords of Armageddon*. The current manuscript is about 16% larger than the September 1995 Release 1.0. No publication date for Release 2.0 is yet scheduled; we have sold just over 50% of our inventory of Release 1.0 and we will not publish Release 2.0 until this figure gets up around 80%.

Among new information that will be in the next release will be updates on all eight previously published volumes, including many associations of Nevada and Pacific Ocean atmospheric and underground tests to specific weapons and devices. The initiator history in Volume II is now nearly six times as long as the September 1995 version, and many new weapon accidents and incidents have been added to Appendix 3 in Volume VIII.

We still occasionally receive inquiries about Chuck Hansen's 1988 book, **U.S. Nuclear Weapons: The Secret History**. This book has been out-of-print for several years, and used copies -- when they can be found -- have been selling for between \$75 and \$200. Copies are not available from Chukelea Publications.

Chuck Hansen will be presenting a paper entitled **"A Hindenburg in the Bomb Bay: The Transition from Liquid to Solid Fueled Thermonuclear Weapons, 1951-1954"** "at the Second Los Alamos International History Conference co-sponsored by the Los Alamos

Historical Society and the University of New Mexico at Los Alamos between August 9 and 12, 1998. The abstract of Mr. Hansen's paper follows:

Early U.S. thermonuclear war plans were based on the availability of large liquid-fueled weapons and all their attendant encumbering cryogenic apparatuses. A Hindenburg in the Bomb Bay explains the transition in U.S. Air Force planning and logistics for the replacement of liquid-fueled hydrogen weapons by solid-fueled devices. The objectives and results of both Nevada and Pacific Ocean proof tests of early thermonuclear weapons and their components are also described.

For information about the forthcoming historical conference, contact Dr. Marjorie Bell Chambers at 336 Andanada, Los Alamos, NM 87544 via e-mail to bellchambers@compuserve.com or phone or fax (505) 662-7481.