MSI PATCH SHEET

Hunsaker, J.C.

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MASSACHUSETTS INST OF TECH CAMBRIDGE

(U) Fracture and Fatigue of Bi-Materials.

DESCRIPTIVE NOTE: Final rept. 1 Dec 79-30 Nov 80,

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PERSONAL AUTHORS: Mar,James W. ;Hunsaker,Jerome C. ;

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TASK NO. B1

MONITOR: AFOSR
TR-81-0596

UNCLASSIFIED REPORT

ABSTRACT: (U) Eighty-nine axially loaded, aluminum honeycomb sandwich specimens with graphite epoxy face sheets of four different laminates were compressively cycled with a minimum to maximum load ratio of R=10. Fatigue damage initiation and propagation were monitored on both graphite/epoxy faces of each specimen using Moire interferometry, a method of optically producing surface contour lines. These patterns were photographically recorded at intervals for later analysis. Life, residual strength, cycles to damage initiation and damage growth data are reported. Damage initiation site and mode are compared with the analytically predicted three dimensional stress field at the edge of the hole. The location of first observable damage in all laminates was an experimentally repeatable layup characteristic. All laminate types showed a nearly horizontal initial region of damage growth followed by a second region of gradually increasing damage area growth with loading cycles, and a final region of very rapid growth just prior to failure. Post fatigue inspection showed damage concentrated mainly in the angle plys. No well defined relationship could be established however, between specimen fracture and final damage area. Life to first damage and life to specimen failure for the four laminate types showed that both stacking sequence and ply orientation had an affect on the response of a specimen to cyclic compression loads. (Author)

DESCRIPTORS: (U) *Composite structures, *Sandwich construction, *Honeycomb structures, *Laminates, *Fatigue life, *Fracture(Mechanics), Composite materials, Aluminum, Graphite, Epoxy resins, Compressive properties, Strength(Mechanics), Damage, Moire effects, Monitors

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PERSONAL AUTHORS: HUNSAKER,JEROME C.;

UNCLASSIFIED REPORT

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MAJS: /*FATIGUE LIFE/*FRACTURE MECHANICS/*HONEYCOMB STRUCTURES/*LAMINATES/* SANDWICH STRUCTURES
MINS: / ALUMINUM/ COMPRESSIVE STRENGTH/ CRACK INITIATION/ GRAPHITE-EPOXY COMPOSITES/ MOIRE EFFECTS/ PLY ORIENTATION/ STRESS DISTRIBUTION
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ABS: Eighty-nine axially loaded aluminum honeycomb sandwich specimens with graphite epoxy face sheets of four different laminates were compressively cycled with a minimum to maximum load ratio of R=10. Fatigue damage initiation and propagation were monitored on both graphite/epoxy faces of each specimen using Moire interferometry, a method of optically producing surface contour lines. These patterns were photographically recorded at intervals for later analysis. Life, residual strength, cycles to damage initiation and damage growth data are reported. Damage initiation site anf
SIGNOFF ACCEPTED, SESSION DURATION 1.07 MINS., USER DISCONNECTED

SELECT SYSTEM APPLICATION
b recon
READY TO HOST
signon
PLEASE ENTER USERID:
@id ;30121/afwl
INVALID USERID, PLEASE RE-ENTER CORRECTLY.
??0767WW
INVALID USERID, PLEASE RE-ENTER CORRECTLY.
@id ;30121/afwl
UNABLE TO VERIFY USERID, LINE DISCONNECTED.

SELECT SYSTEM APPLICATION
b/recon
READY TO HOST
signon
PLEASE ENTER USERID:
afwl2052
USERID ACCEPTED.RESUME PROCESSING WITH 09 SETS AND WITH FILE CODE A FROM PREVIOUS INTERRUPT.
a au/menzel, donald
EXPAND AU/MENZEL, DONALD

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E02	AU/MENZEL, D. B.----N		5	0	E24	AU/MENZER, G. W.----N	1	0
E03	AU/MENZEL, D. C.----N		4	0	E25	AU/MENZER, M.-------N	1	0
E04	AU/MENZEL, D. H.----N		32	0	E26	AU/MENZER, M. S.----N	1	0
E05	AU/MENZEL, D. W.----N		4	0	E27	AU/MENZER, R.-------N	1	0
E06	-AU/MENZEL, DONALD---		0	0	E28	AU/MENZHULIN, G. V.-N	1	0
E07	AU/MENZEL, E.-------N		3	0	E29	AU/MENZHULINA, N. A.N	2	0
E08	AU/MENZEL, F.-------N		1	0	E30	AU/MENZIA, F.-------N	1	0
E09	AU/MENZEL, G.-------N		1	0	E31	AU/MENZIA, F. A.----N	2	0
E10	AU/MENZEL, H.-------N		1	0	E32	AU/MENZIANI, M.-----N	2	0
E11	AU/MENZEL, J.-------N		4	0	E33	AU/MENZIE, W. R.----N	2	0
E12	AU/MENZEL, K.-------N		3	0	E34	AU/MENZIES, DAVID---N	1	0

Modern Scientists & Engineers 1980

of a given element go through a maximum with increasing mass number, contrary to the then-existing theory. This discovery was applied immediately in sorting out the radioactivities produced in the world's first thermonuclear explosion ("Mike," November 1952). From samples of this debris, Huizenga and scientists from Argonne, Berkeley, and Los Alamos made the joint discovery of elements 99 and 100, named einsteinium and fermium by the discoverers after the renowned scientists Einstein and Fermi.

Later, Huizenga and his associates extended these studies of the lifetime of a compound nucleus for decay by fission to higher energies by experimentally measuring the competition between fission and the other open-exit channels such as neutron emission. In order to interpret these results theoretically, a major experimental and theoretical program was initiated to study the exact form of the nuclear level density as a function of excitation energy, angular momentum, isospin, nuclear shells, and nuclear deformation. A microscopic theory of the level density was developed which utilized realistic single-particle levels and the nuclear pairing interaction. This theory was extensively compared with experimental data of various types and contributed to the understanding of nuclear reactions and the way highly excited states of nuclei deexcite.

The level structure of the highly deformed transition-state nucleus in fission was studied at both low and high excitation energies. At high excitation energy, the actual deformation or shape of the transition nucleus was determined by measuring angular correlations of fission fragments and by making use of statistical theory. The results from these experiments were a major development in the support of the liquid drop theory of fission. At lower excitation energies, studies centered on the characterization of collective and single-particle excited states of the very short-lived transition nucleus. In this way, data were obtained about the same nucleus at a second, completely different deformation obtained by reaction spectroscopy.

In the mid-1960s when high-resolution beams of helium ions from Emperor tandem accelerators first became available, Huizenga and his collaborators embarked on a systematic study of the single-particle and collective levels of actinide nuclei with the use of reaction spectroscopy. These direct-reaction experiments produced a large amount of new data on spins and energies of levels of deformed nuclei and contributed to the rapid development of theoretical models of such nuclei.

Nuclear techniques were applied to other areas, including investigations of trace elements in meteorites, of the effect of high pressure on the decay constant of electron-capturing nuclei, and, later, of negative muon capture rates in very heavy muonic atoms. The presence of the muon leads to a pertubation of the fission barrier due to the muon-nuclear Coulomb interaction.

With the discovery that the fission barrier of heavy nuclei contains two peaks separated by a secondary minimum, Huizenga and R. Vandenbosch embarked on a project to produce a reference and text on fission (*Nuclear Fission,* 1973), which gave a comprehensive and unified account of the new discoveries that drastically altered the understanding not only of fission but of nuclear science itself. Methods developed for fission were later applied to the field of very-heavy-ion reactions. As soon as beams of very heavy ions with energies exceeding the Coulomb barriers of heavy elements became available, Huizenga and his associates initiated a program to study the mechanism of such reactions. The studies revealed a variety of new reaction phenomena intermediate between those pertaining to simple direct and compound nucleus reactions. This reaction process, called damped or deep-inelastic collisions, is characterized by the exchange of nucleons and the substantial dissipation of the kinetic energy of relative motion. It was shown that the kinetic energy loss reflects the stage of evolution of the reaction or the interaction time. The application of classical and statistical concepts to the various experimental distributions resulting from these very-heavy-ion reactions led to new insights both in the energy dissipation processes and in the radial dependence of the nuclear interaction potential.

Huizenga majored in chemistry and mathematics at Calvin College, receiving his A.B. in 1944. After 2 months in the graduate school of the University of Illinois, he joined the Manhattan Project in Oak Ridge, where he was first introduced to nuclear fission in experiments designed to measure the isotopic ratio of uranium samples by a fission fragment counting technique with thermal neutrons. He returned to the University of Illinois in 1946 and received his Ph.D. in 1949. He then joined the Argonne National Laboratory, where he remained until 1967, except for a year as a Fulbright fellow in 1954–55 in the Netherlands and a year as a Guggenheim fellow and visiting professor at the University of Paris-Orsay in 1964–65. Huizenga was appointed professor of chemistry and physics at the University of Rochester in 1967 and was subsequently Tracy H. Harris Professor of Chemistry and Physics. He was a Guggenheim fellow at the University of California (Berkeley), the Technical University of Munich, and the Niels Bohr Institute (Copenhagen) in 1973–74, received the American Chemical Society award for nuclear applications in chemistry in 1975, and was elected into the National Academy of Sciences in 1976.

For background information *see* FISSION, NUCLEAR; RADIOACTIVITY; THERMAL NEUTRONS in the McGraw-Hill Encyclopedia of Science and Technology. ■

HUNSAKER, JEROME CLARKE

★ American aeronautical engineer

Born Aug. 26, 1886, Creston, IA, U.S.A.

Trained as a naval officer and naval architect, Hunsaker began his 50-year career in aeronautics by measuring the force on a turning destroyer's rudder. This led to estimation of the aerodynamic forces on airplanes by model tests in a wind tunnel. From wind tunnel measurements followed studies of balance, control and stability, propeller action, and structural

strength. In 1914 he started a graduate course in aeronautical engineering at the Massachusetts Institute of Technology (MIT), the first in the United States.

In 1916 Hunsaker was recalled by the Navy to Washington to organize an Aircraft Division in the Bureau of Construction and Repair. This division was expanded to handle design and production of all naval aircraft during World War I. Hunsaker's responsibilities were mainly administrative, but they included initiation of urgent development projects such as vee-bottom seaplane floats, nonrigid dirigibles, tank-tested flying boats, waterproof laminated wood construction, aluminum alloy of Duralumin type, and venturi-type air speed meters. He was charged with two special engineering projects, undertaken as a precaution against the possiblity of hostilities continuing for several years: a flying boat to cross the Atlantic under its own power and a zeppelin-type airship.

The flying boat was given the name NC because of collaboration with Glenn Curtis. Three giant flying boats, each with four liberty engines, started from Newfoundland for the Azores in May 1919. NC4 reached its destination without incident and proceeded to Lisbon and Plymouth. NC1 and NC3 landed at sea some 200 miles (320 kilometers) short of the Azores because of bad weather. This performance greatly exceeded expectations.

The zeppelin project became the *Shenandoah*, the first such airship to be made in the United States and the first to be inflated with helium rather than hydrogen. Hunsaker had information from wrecked German zeppelins but had to work backwards to discover the structural factors of safety or experience used by the German designers. Sample girders, like German girders, made of an alloy corresponding to analysis of the German metal (Duralumin), were tested at the Bureau of Standards. Commissioned in 1923, the *Shenandoah* gave 2 years' service before being lost in a heavy storm. Because it used helium, there was no fire. It then appeared that a better communication of weather information might permit an airship to avoid a dangerous situation.

In 1921 Hunsaker's division was transferred to the new Bureau of Aeronautics, where he served as chief of design. Under his supervision were developed launching catapults and arresting gear for aircraft carriers, air-cooled radial engines (with Charles Lawrance), light shipboard airplanes, and the torpedo plane (with Donald Douglas).

During 1925–26 Hunsaker served as assistant naval attaché in London, Paris, Berlin, and The Hague until he resigned from the regular Navy. He joined the Bell Telephone Laboratories to develop airway wire, radio, and weather services. With the support of the American Telephone and Telegraph Company and the Daniel Guggenheim Fund, a model airway was operated between Los Angeles and San Francisco. The combination of communication services, substantially as conceived by Hunsaker, became the operating system for the new airways.

In 1928 Hunsaker joined Goodyear to build the *Akron* and *Macon* and to promote airships for transoceanic transportation. Proposed extension of existing maritime laws to subsidize civil airships failed to interest the Congress. The development of long-range airplanes was even then changing the relative value of airships, which were later found to be not only vulnerable but also unnecessary.

Hunsaker returned to MIT in 1933 as head of the departments of mechanical engineering and aeronautical engineering. He expanded programs at MIT in supersonic aerodynamics, aeroelasticity, vibration and instrumentation, automatic controls, and jet propulsion. There followed a substantial expansion of the Graduate School with the completion of a gas turbine laboratory and a supersonic laboratory.

In 1941, on leave from MIT, Hunsaker was coordinator of research in the office of the Secretary of the Navy, a member of the council of the Office of Scientific Research and Development, and a member of its Guided Missiles Section. He served as an adviser to numerous government agencies. He was a member of the National Advisory Committee for Aeronautics (NACA), appointed for 5-year terms by three presidents in 1939, 1944, 1949, and 1954. He was chairperson from 1941 to 1957. During World War II he handled the expansion of NACA personnel from 650 to 6500 people and enlarged research and test facilities at the Langley, Ames, and Lewis laboratories and two flight stations.

Hunsaker grew up in Detroit and Saginaw, MI, where his father was a newspaper editor and publisher. Graduating first in his class from the U.S. Naval Academy in 1908, he spent a year at sea and then was selected for the Construction Corps of the Navy and sent to MIT to study naval architecture. He received his M.S. (1912) and Sc.D. (1916) at MIT. In 1912 the Navy sent him to Europe to investigate the state of aeronautical engineering, preparatory to instituting a graduate course at MIT. He was taken on as an assistant by Eiffel in Paris, Prandtl in Göttingen, and Bairstow in Teddington, thanks to MIT and Smithsonian introductions.

The course at MIT was successful, but Hunsaker was recalled by the Navy in 1916 to apply aeronautical engineering in Washington, DC. He resigned his naval commission in 1926, joining Bell Telephone Laboratories to develop communications for the airways and moving to Goodyear in 1928 to build zeppelins. He returned to the faculty of MIT in 1933, retiring in 1952. He received many honors, among them the 1933 Guggenheim Medal and the 1942 Franklin Medal of the Franklin Institute. He was elected to the National Academy of Sciences in 1935.

Hunsaker wrote *Engineering Applications of Fluid Mechanics*, with B. G. Rightmire (1947) and *Aeronautics at the Mid-century* (1952).

For background information *see* AERONAUTICAL ENGINEERING; AIRSHIP in the McGraw-Hill Encyclopedia of Science and Technology. ■

HUNT, FREDERICK VINTON

☆ American acoustical physicist and engineer

Born *Feb. 5, 1905, Barnesville, OH, U.S.A.*

Died *Apr. 21, 1972, Buffalo, NY, U.S.A.*

At the Harvard Underwater Sound Laboratory during World War II, Hunt directed a research group that developed a number of important techniques and weapons—including scanning sonar and the acoustic torpedo—with both immediate and long-range applications in the field of underwater acoustics.

In 1941 Hunt, who was then associate professor of physics and communication engineering at Harvard University, proposed jointly with the physicist Philip M. Morse that Cambridge, MA (the site of Harvard), should be the location for one of the submarine detection laboratories which the National Defense Research Committee was planning for the east

elected governor of Nevada on the Republican ticket for a four-year term. As governor he revised the revenue and taxation system of the state, prompted laws for the protection of the mining industry, fostered the building of good roads and encouraged the colonization of the state. At the close of his term, in 1915, he resumed his private business. During the period of the European war he was a member of the Nevada state council of defense, chairman of the state highways transportation committee of the war industries board, and chairman of the Nevada district for the war resources committee which coöperated with the resources and conversion section of the war industries board. In 1920 he was elected U. S. senator for the six-year term, and as he had long been actively interested in the mining industry of the west, he was promptly drawn into the monetary discussions of congress. He is chairman of the gold and silver investigating committee of the senate and has conducted a series of conferences with mining engineers, experts and finance authorities. He is a defender of the gold standard of currency and advocated increasing the volume of subsidiary money to insure the stability of the paper in circulation after the European war. He was known before his election as an active opponent of the League of Nations and in the senate upheld the policy of Pres. Harding. He was active in the promotion of highway improvement and construction. Sen. Oddie is a life-member of the American Institute of Mining and Metallurgical Engineers, and a member of the Masonic order and the Elks. In his religious affiliations he is an Episcopalian. He was married, Nov. 30, 1916, to Daisy, daughter of Stephen Arnold Rendall, of Los Angeles, Calif.

HUNSAKER, Jerome Clarke, naval officer, was born at Creston, Ia., Aug. 26, 1886, son of Walter J. and Alma (Clarke) Hunsaker. He was appointed to the U. S. naval academy, Annapolis, from Michigan in 1904, and was graduated in 1908 with the highest honors. He received the degree M.S. from the Massachusetts Institute of Technology in 1912 and the degree Eng.D. from that institution in 1916. Following his graduation at the naval academy he served for approximately one year on board of various naval vessels in both the Atlantic and Pacific. In 1909 he was given the rank of assistant naval constructor and ordered to the Massachusetts Institute of Technology for a graduate course in naval architecture. In 1912 he served at the Boston navy yard, after which he was again ordered to the Massachusetts Institute of Technology to establish a course in aeronautics. In 1913 he visited England, France and Germany, collecting information concerning details, methods and resources used for the prosecution of aeronautical research. He continued on duty as an instructor in aeronautics until 1916. During this tour of duty he established a graduate course in aeronautical engineering and built a wind tunnel, modeled after European laboratories. While at the institute he carried on much valuable research work. Since 1916 he has been on duty at the Bureau of Construction and Repair, Navy Department, in charge of the aeronautical work of the bureau. During the European war Comr. Hunsaker's entire time was given to the development of the navy's aviation program. He served on the joint army and navy airship board, and the joint army and navy technical board. He designed the dirigible balloons which were constructed for the navy during the war, and collaborated in the design of the N.C. transatlantic flying boats. He has written numerous scientific papers on aeronautical subjects, many of them being reproduced in foreign publications. In 1920, he delivered the Wilbur Wright memorial lecture before the Royal Aeronautical Society, London, and was made an honorary fellow of that society. He is a member of the American Physical Society, American Society of Naval Architects, and the Army and Navy Club (Washington). For his services in the European war he was awarded the navy cross. He was married in 1912 to Alice Porter Avery of Farmington, Conn.

TARKINGTON, [Newton] Booth, author, was born in Indianapolis, Ind., July 29, 1869, son of John Stevenson and Elizabeth (Booth) Tarkington. He was named after an uncle, a former governor of California and U. S. senator. His father, son of Joseph Tarkington, was a lawyer, served as a member of the Indiana house of representatives, also as captain of the 132nd Ind. infantry in the civil war, and as a judge of the 7th judicial circuit. His call to fictional pursuits came in early youth, when he used to dictate stories to a sister before he himself could write. His preparatory education was acquired at Phillips Exeter Academy, where he was graduated in 1889. He spent a year at Purdue University, finishing his college career at Princeton University, where he acquired a prominent place in many lines of student activity, while standing well in his class. He wrote freely, drew sketches, composed music, and acted in theatrical diversions. He engaged in every form of artistic expression in an exuberant exercise of his varied talents, and won a popularity among his classmates that is recorded in a rondel written about him and preserved on the walls of the Princeton Club, New York city, beside a portrait sketch of him standing at a piano. He completed his studies at Princeton with the class of 1893; later his alma mater honored him with the degree of A.M. (1899), and Litt.D. (1918). For some time after his graduation he was unable to take himself or his career very seriously; but began a struggle to master the twin arts of authorship and drawing. Of those days he recorded that he always wrote—somehow or anyhow—but wanted to be an illustrator. In 1895 "Life" accepted a pen drawing he sent that journal, and he thought his artistic career had begun. Then "Life" rejected thirty-one subsequent drawings, which determined him, though loathfully, to abandon drawing. He continued to write, experiencing days and years of trial, rewriting a variety of stories which continued to be rejected, every time he submitted them, for five years. The gross return he received for the first five years of work as an author amounted only to $22.50. "McClure's Magazine" finally accepted as a serial "The Gentleman from Indiana." The serial publication of "Monsieur Beaucaire" followed, and its author was no longer among the obscure and rejected of the writing craft. His interest in all sorts of people led to a brief excursion in politics in Indiana, where (1902–03) he was a member of the legislature, joining the insurgent Republicans, and plunged into political issues with zest. As a novelist his range embraces pure romance, the local color of realism, a graphic presentation of foreign atmosphere and settings, and entertaining studies of boy life, as in "Pen-

RESPONSE LETTER

NAME OF EMPLOYEE	DATE OF BIRTH	SOCIAL SECURITY NUMBER
Hunsaker, Jerome C.	6/26/86	

DATE OF REQUEST	DATE REQUEST RECEIVED	DATE OF RESPONSE
5/25/89		7-11-89

REQUESTED INFORMATION OR DOCUMENTS: Records of Emp. FOIA

[X] The attached material is furnished in response to your request. SF 50's

[ ] Your request did not specify a particular Standard Form 50, Notification of Personnel Action. We have attached a copy of the most recent form. If you require another SF 50, please include in your request the date of the SF 50 and the specific action shown on the form.

[ ] This transcript of employment (which has been prepared from pay records) is furnished in lieu of an official personnel folder which either was never established or cannot be located. File this transcript as a permanent record on the right side of the official personnel folder established for this employee.

[ ] The records of employment with the District of Columbia Government and Defense Non-appropriated Fund activities are not combined with the records of other Federal employment. The attached transcript serves as official documentation of the employee's service in lieu of the folder.

[ ] This form has not been notarized as we have no notary available. We have affixed the seal of the National Archives and Records Administration, which is generally accepted as sufficient certification.

[ ] We cannot answer questions of a personal nature. Unless otherwise indicated, conduct and performance were satisfactory.

[ ] The requested information or document is not in the official personnel folder.

[ ] The information you requested is not releasable without either written authorization and signature from the person whose records are involved or proof of that person's death. If you resubmit your request, please return all correspondence.

[ ] A search of our records did not reveal a record of the claimed Federal employment. If additional information or documentation can be submitted to verify the information shown in the request or to otherwise support the claimed employment, we will make a further search. If you resubmit your request, please return all correspondence.

[ ] Requests involving retirement or insurance information or medical records should be sent to the Office of Personnel Management, Compensation Group, 1900 E Street NW, Washington, DC 20415.

[ ] Pay claims arising from Federal employment should be sent to the General Accounting Office, 441 G Street NW, Washington, DC 20415.

[ ] Requests concerning amendment or removal of information in the official personnel folder should be sent to the Assistant Director for Workforce Information, Personnel Systems and Oversight Group, Office of Personnel Management, 1900 E Street, N.W., Room 5415, Washington, DC 20415.

[ ] We do not have the authority to determine civil service status, reinstatement eligibility, or creditability of service. Contact the personnel office with which you are currently employed or seeking employment, or the Office of Personnel Management, 1900 E Street, Washington, DC 20415. The attached documents or transcript will assist in making such determinations.

[ ] The records you have requested are not on file at this Center.

[ ] We suggest you contact the address given below/on the attached printout.

[ ] The official personnel folder is not at this Center. Please contact the last or current employing agency.

[ ] The agency mentioned in your request does not retire personnel records at this Center. We suggest you write directly to that agency.

[ ] Your request, along with the necessary documents, has been forwarded to the office that retains legal custody of the record for processing. Please contact that office at the address given below if you have further questions about this matter.

[ ] The requested official personnel folder was sent to the address given below on _____. We suggest you contact that office.

~~Referral address:~~ We believe the attached photocopies will serve your purpose. No other service found.

Brian Parks
3629 Emerald St. #1
Torrance, Ca. 90503

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NATIONAL PERSONNEL RECORDS CENTER
(Civilian Personnel Records)
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St. Louis, Missouri 63118

NATIONAL ARCHIVES AND RECORDS

Standard Form 50—6 Part
Rev. July 1957
Promulgated by U. S. Civil Service Commission—FPM-R-1

NOTIFICATION OF PERSONNEL ACTION

Ser. Rec.
Leave

1. NAME (LAST [CAPS]—First—Middle—Mr.—Miss—Mrs.)	2. DATE OF BIRTH	3. IDENTIFICATION *(optional)*
HUNSAKER, Jerome C. Capt. USNR (Retired)	8-26-86	25796

4. THIS IS AN OFFICIAL NOTICE OF THE PERSONNEL ACTION DESCRIBED BELOW, WHICH AFFECTS YOUR EMPLOYMENT. GENERAL INFORMATION CONCERNING YOUR EMPLOYMENT APPEARS ON THE REVERSE SIDE OF THIS FORM.

5. NATURE OF ACTION *(standard terminology must be used)*	6. EFFECTIVE DATE OF ACTION	7. CIVIL SERVICE OR OTHER LEGAL AUTHORITY
Termination-Expiration of Appointment	COB 12-31-58	

FROM—	8. POSITION TITLE AND NUMBER	TO—
Consultant $50 per diem WAE OASD (Research & Engineering) Immediate Office Washington, D. C.	9. SERIES, GRADE, SALARY 10. NAME AND LOCATION OF OFFICE BY WHICH EMPLOYED 11. DUTY STATION	

[ ] Yes	12. APPORTIONED POSITION	[ ] Yes STATE:	[ ] Apportionment Waived [ ] Proved

13. VETERAN PREFERENCE				14. TENURE GROUP	15. POSITION OCCUPIED IS IN THE:	
No	5-pt.	10-pt. Disab.	10-pt. Other		[ ] Competitive Service	[X] Excepted Service
	X					

16. APPROPRIATION	17. PAYROLL DEDUCTIONS			18. DATE OF APPOINTMENT AFFIDAVITS *(accessions only)*
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		X		

19. REMARKS:

[ ] a. Subject to completion of 1 year probationary (or trial) period commencing _____

[ ] b. Service counting toward career (or permanent) tenure from: _____

Separations: Show reasons below, as required. Check, if applicable: [ ] c. During probation [ ] d. From appointment of 6 months or less

20. EMPLOYING DEPARTMENT OR AGENCY	22. SIGNATURE *(or other authentication)* AND TITLE
Office of the Secretary of Defense	John H. Moore Director of Personnel
21. OFFICE MAINTAINING OFFICIAL PERSONNEL FOLDER *(if different than Item 10, above)*	23. DATE: 12-29-58

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DEPARTMENT OF DEFENSE
SECRETARY OF DEFENSE
NOTIFICATION OF PERSONNEL ACTION

1. NAME (MR.—MISS—MRS.—ONE GIVEN NAME, INITIAL(S), AND SURNAME)	2. DATE OF BIRTH	3. JOURNAL or ACTION NO.	4. DATE
Capt. Jerome C. Hunsaker, USNR (Retired) SS# 012-24-9534	8-26-86		11-12-57

This is to notify you of the following action affecting your employment:

5. NATURE OF ACTION (USE STANDARD TERMINOLOGY)	6. EFFECTIVE DATE	7. CIVIL SERVICE OR OTHER LEGAL AUTHORITY
Excepted Appointment (WAE) NTE 12-31-58	11-12-57	Section 601, PL 117, 85th Cong. Section 173, PL 1028, 84th Cong.

FROM		TO
	8. POSITION TITLE	Consultant
	9. SERVICE, SERIES, GRADE, SALARY	$50 per diem WAE
	10. ORGANIZATIONAL DESIGNATIONS	OASD (Research & Engineering) Immediate Office
	11. HEADQUARTERS	Washington, D. C.
☐ FIELD ☐ DEPARTMENTAL	12. FIELD OR DEPT'L	☐ FIELD ☒ DEPARTMENTAL

13. VETERAN'S PREFERENCE						14. POSITION CLASSIFICATION ACTION			
NONE	WWII	OTHER	5-PT.	10-POINT DISAB.	10-POINT OTHER	NEW	VICE	I. A.	REAL.
			X						

15. SEX	16. APPROPRIATION	17. SUBJECT TO C. S. RETIREMENT ACT (YES—NO)	18. DATE OF APPOINTMENT AFFIDAVITS (ACCESSIONS ONLY)	19. LEGAL RESIDENCE
M	FROM: TO: 9780100.97 01.4 86000 29/71500	No	11-12-57	☒ CLAIMED ☐ PROVED STATE: Mass.

20. REMARKS: This action is subject to all applicable laws, rules, and regulations and may be subject to investigation and approval by the United States Civil Service Commission. The action may be corrected or canceled if not in accordance with all requirements.

Subject to Federal Insurance Contributions Act.

Appointee not entitled to accrue leave benefits.

To be employed as services may be required through COB 12-31-58.

ENTRANCE PERFORMANCE RATING:

John E. Moore
Director of Personnel

21. SIGNATURE OR OTHER AUTHENTICATION

☆ U. S. GOVERNMENT PRINTING OFFICE : 1957—419781

4. PERSONNEL FOLDER COPY

Standard Form 50—Rev. Dec. 1961
U.S. Civil Service Commission
FPM R-1

NOTIFICATION OF PERSONNEL ACTION

6 PART
50-115

(For agency use)

4 5.2.2

1. NAME (CAPS) LAST-FIRST-MIDDLE MR.-MISS-MRS.	2. *(For agency use)*	3. BIRTH DATE *(Mo., Day, Year)*	4. SOCIAL SECURITY NO.
HUNSAKER, JEROME C., DR.	63-38-3SS 07-22-63	0	0

5. VETERAN PREFERENCE	6. TENURE GROUP	7. SERVICE COMP DATE	8. PHYSICAL HANDICAP CODE
0 (1—NO, 2—5 PT., 3—10 PT. DISAB., 4—10 PT. COMP., 5—10 PT. OTHER)	0	0	0

9. FEGLI	10. RETIREMENT	11. *(For CSC use)*
2 (1—COVERED, 2—INELIGIBLE, 3—WAIVED)	4 (1—CS, 2—FICA, 3—FS, 4—NONE, 5—OTHER)	

12. NATURE OF ACTION	13. EFFECTIVE DATE *(Mo., Day, Year)*	14. CIVIL SERVICE OR OTHER LEGAL AUTHORITY
322 Separation 6-16-63 171 CODE Excepted Appt NTE 6-16-64	06-17-63	Headquarters Order No. 119, 6-17-63, CS Reg. 6.101(m)

15. FROM: POSITION TITLE AND NUMBER	16. PAY PLAN AND OCCUPATION CODE	17. GRADE OR LEVEL	18. SALARY

19. NAME AND LOCATION OF EMPLOYING OFFICE

20. TO: POSITION TITLE AND NUMBER	21. PAY PLAN AND OCCUPATION CODE	22. GRADE OR LEVEL	23. SALARY
Advisor to the Director Nat'l. Selective Service Scientific Advisory Group	0	0	WOC

24. NAME AND LOCATION OF EMPLOYING OFFICE
National Headquarters
Washington, D. C.

25. DUTY STATION *(City—county—State)*	26. LOCATION CODE
Cambridge, Middlesex, Massachusetts	20-0170-017

27. APPROPRIATION	28. POSITION OCCUPIED (1—COMPETITIVE SERVICE, 2—EXCEPTED SERVICE)	29. APPORTIONED POSITION FROM:	TO:	STATE (1—PROVED—1, 2—WAIVED—2)
	2			

30. REMARKS:
A. SUBJECT TO COMPLETION OF 1 YEAR PROBATIONARY (OR TRIAL) PERIOD COMMENCING
B. SERVICE COUNTING TOWARD CAREER (OR PERMANENT) TENURE FROM:

SEPARATIONS: SHOW REASONS BELOW, AS REQUIRED. CHECK IF APPLICABLE: C. DURING PROBATION D. FROM APPOINTMENT OF 6 MONTHS OR LESS

It is estimated that Dr. Hunsaker will be employed less than 130 days during this period of employment.

31. DATE OF APPOINTMENT AFFIDAVIT *(Accessions only)*	34. SIGNATURE *(Or other authentication)* AND TITLE
32. OFFICE MAINTAINING PERSONNEL FOLDER *(If different from employing office)* National Headquarters	David B Hershey DIRECTOR
33. CODE, EMPLOYING DEPARTMENT OR AGENCY 88 00 Selective Service System	35. DATE 07-22-63

SO Code 1275

3. CIVIL SERVICE COMMISSION COPY (Washington 25, D.C.)

Standard Form 50 — Rev. Dec. 1961
U. S. Civil Service Commission
FPM R-1

NOTIFICATION OF PERSONNEL ACTION

8 PART
50-115

(For agency use) 17-5-3-

1. NAME (CAPS) LAST-FIRST-MIDDLE	MR.-MISS-MRS.	2. (For agency use)	3. BIRTH DATE (Mo., Day, Year)	4. SOCIAL SECURITY NO.
RUNSAKER, JEROME C.,	DR.	64-26-3338 06-16-64	0	0

5. VETERAN PREFERENCE	6. TENURE GROUP	7. SERVICE COMP. DATE	8. PHYSICAL HANDICAP CODE
0 (1 — NO, 2 — 5 PT., 3 — 10 PT. DISAB., 4 — 10 PT. COMP., 5 — 10 PT. OTHER)	0	0	0

9. FEGLI	10. RETIREMENT	11. (For CSC use)
2 (1 — COVERED, 2 — INELIGIBLE, 3 — WAIVED)	4 (1 — CS, 2 — FICA, 3 — FS, 4 — NONE, 5 — OTHER)	

12. NATURE OF ACTION	13. EFFECTIVE DATE (Mo., Day, Year)	14. CIVIL SERVICE OR OTHER LEGAL AUTHORITY
322 Separation 06-16-64 171 Excepted Appt NTE 06-16-65 Inter CODE	06-17-64	Headquarters Order No. 119, 6-17-63, Sec. 213.3102 (k)

15. FROM: POSITION TITLE AND NUMBER	16. PAY PLAN AND OCCUPATION CODE	17. GRADE OR LEVEL	18. SALARY

19. NAME AND LOCATION OF EMPLOYING OFFICE

20. TO: POSITION TITLE AND NUMBER	21. PAY PLAN AND OCCUPATION CODE	22. GRADE OR LEVEL	23. SALARY
Advisor to the Director Nat'l. Selective Service Scientific Advisory Group	0	0	WOC

24. NAME AND LOCATION OF EMPLOYING OFFICE
National Headquarters
Washington, D. C.

25. DUTY STATION (City — county — State)	26. LOCATION CODE
Cambridge, Middlesex, Massachusetts	20-0170-017

27. APPROPRIATION	28. POSITION OCCUPIED	29. APPORTIONED POSITION
	1-COMPETITIVE SERVICE 2 (2 — EXCEPTED SERVICE)	FROM: (1 — PROVED-1, 2 — WAIVED-2) TO: STATE

30. REMARKS:
A. SUBJECT TO COMPLETION OF 1 YEAR PROBATIONARY (OR TRIAL) PERIOD COMMENCING
B. SERVICE COUNTING TOWARD CAREER (OR PERMANENT) TENURE FROM:

SEPARATIONS: SHOW REASONS BELOW, AS REQUIRED. CHECK IF APPLICABLE: C. DURING PROBATION D. FROM APPOINTMENT OF 6 MONTHS OR LESS

It is estimated that Dr. Runsaker will be employed less than 130 days during this period of employment.

31. DATE OF APPOINTMENT AFFIDAVIT (Accessions only)	34. SIGNATURE (Or other Authentication) AND TITLE
32. OFFICE MAINTAINING PERSONNEL FOLDER (If different from employing office) National Headquarters	Lewis B Hershey DIRECTOR
33. CODE EMPLOYING DEPARTMENT OR AGENCY SS 00 Selective Service System	35. DATE 06-16-64

1275

3. CIVIL SERVICE COMMISSION COPY (Washington 25, D.C.)