

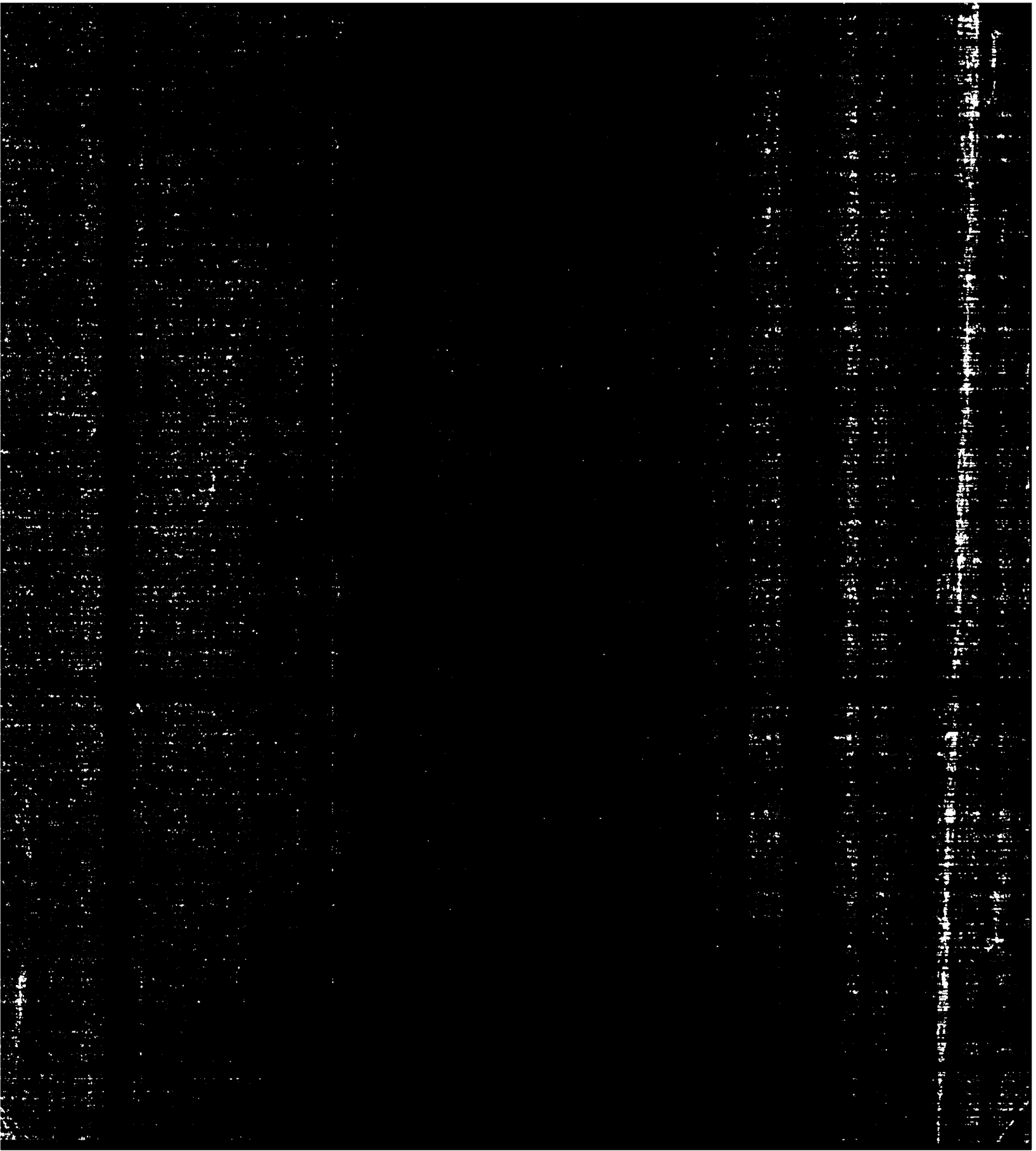
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LASL Reports Related to the Effects of
Atmospheric Nuclear Detonation,
With Emphasis on High Altitude Events:
The Summit

LOS ALAMOS NATIONAL LABORATORY
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LOS ALAMOS SCIENTIFIC LABORATORY
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LASL Reports Related to the Effects of
Atmospheric Nuclear Detonation,
With Emphasis on High Altitude Events:
A Title Listing

Compiled by

John W. Kodis

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INTRODUCTION

This bibliography is a selected title listing of Los Alamos Scientific Laboratory reports (including EG&G and NRL reports on AEC-sponsored work directed by the LASL and LASL contributions to DASA publications.) A few of the recent reports review work supported jointly by the AEC and DASA or ARPA. Reports dealing exclusively with airdrop or other weapon design and development programs have not been included. Reports from underground tests are included if these are related to the effects of high altitude nuclear detonations.

The entries have been arranged by subject matter as per the outline below and by date of publication. Report listings applicable to more than one subject are either repeated or otherwise cross referenced.

The main source of references was LA-3511-MS, a title listing prepared by R. Virginia Winsor from the Los Alamos Reports Catalog. Herman Hoerlin assisted in the selection of references ultimately included.

PHENOMENOLOGY AND EFFECTS OF ATMOSPHERIC NUCLEAR BURSTS

- I. WEAPON OUTPUTS AND ENERGY DEPOSITION IN THE ATMOSPHERE
 - A. Summaries of Source Characteristics of Atmospheric Nuclear Events
 - B. Prompt Radiation Output and Deposition in the Atmosphere
 1. Gamma
 2. Neutron
 3. X-Ray
 - C. Delayed Gammas and Betas from Fission and Deposition in the Atmosphere
 - D. Transport of X Rays, Gammas, and Neutrons in Air and Related Atmospheric Properties
- II. PHYSICS OF INTERACTION OF NUCLEAR DETONATIONS WITH THE ATMOSPHERE
 - A. Collisionless (Nonhydrodynamic) Debris-Air Interactions
 - B. Hydrodynamics and Thermal Radiation Transport
 - C. Magnetohydrodynamics
 - D. Atomic and Molecular Physics and Chemistry
- III. ANALYSIS OF HIGH ALTITUDE BURSTS AND INTERPRETATION OF RELATED OPTICAL DATA
 - A. Starfish
 - B. Checkmate
 - C. Kingfish
 - D. Bluegill
 - E. Tightrope
 - F. Dominic High-Altitude Events (Fishbowl), General
 - G. Teak and Orange
 - H. ABM Detonations
 - I. Miscellaneous
 1. Nonnuclear Experiments
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- IV. IONIZATION AND RADAR DEGRADATION
- V. VULNERABILITY AND HARDENING
 - A. X-Ray
 - B. Neutron and Other
- VI. ELECTROMAGNETIC EFFECTS, DETECTION OF DETONATIONS, AND WEAPON DIAGNOSTICS
 - A. Electromagnetic Signals
 - B. Optical Emission
 1. Air Fluorescence
 2. Optical Power-Time
 - C. Satellite Systems and Test Data
 - D. Bomb Debris Chemistry
- VII. EYEBURN
- VIII. INSTRUMENTATION AND DATA REDUCTION METHODS FOR HIGH ALTITUDE NUCLEAR TESTS
- IX. MISCELLANEOUS

UNCLASSIFIED

I. WEAPON OUTPUTS AND ENERGY DEPOSITION IN THE ATMOSPHERE

A. SUMMARIES OF SOURCE CHARACTERISTICS OF ATMOSPHERIC NUCLEAR EVENTS

- LA-3931-MS Secret RD Sigma 1
OUTPUTS OF NUCLEAR WEAPONS
Conrad L. Longmire. June 1968
(also published in DASA-1826,
p. 5-18, October 1966)
- LA-3180-MS Secret RD Sigma 1
CALCULATED SOURCE CHARACTERISTICS OF DOMINIC HIGH ALTITUDE EVENTS BASED ON A SPHERICAL MODEL
Elbert W. Bennett. May 1963
- LAMS-2749 Secret RD Sigma 1
CALCULATIONS OF THE EARLY PHASES OF THE STARFISH, BLUEGILL, AND URRACA EXPLOSIONS
Robert D. Cowan, Richard L. Garwin, Roger B. Lazarus, Conrad L. Longmire, and Albert G. Petschek.
September 1962

B. PROMPT RADIATION OUTPUT AND DEPOSITION IN THE ATMOSPHERE

(See Section VI. B. 1, AIR FLUORESCENCE, for other papers applicable to energy deposition)

1. Gamma Radiation

- LA-3944 Unclassified
SCATTERING OF GAMMA RAYS IN AN EXPONENTIAL ATMOSPHERE
E. D. Cashwell, Conrad L. Longmire, and J. R. Neergaard.
June 1968
- LA-3113-MS Secret RD Sigma 3
GAMMA RAYS FROM ATOMIC BOMBS
John Malik. May 1964
- LAMS-3044 Secret RD Sigma 1
GAMMA RAY SOURCE TIME DEPENDENCE
John Malik. September 1963
- T-1304 Secret RD
Letter to Distr. (C. R. Mehl, Sandia),
Subj: PROMPT NEUTRON AND GAMMA RAY EMISSION IN THE XW-49
W. B. Goad. January 1962
- LA-2507 Unclassified
GAMMA-RAY MEASUREMENTS IN AND ABOVE THE ATMOSPHERE
John A. Northrop. December 1960
- LAMS-2577 Secret RD US/UK Atomic Sigma 1
TEN TO 1000 MICROSECOND GAMMA RAY DOSE RATE DATA
John Malik. October 1960

LA-1620 Secret RD Sigma 1
SUMMARY OF INFORMATION ON GAMMA RADIATION FROM ATOMIC WEAPONS
J. S. Malik. January 1954

2. Neutron

- LA-3688 Secret RD Sigma 3
NEUTRON OUTPUTS FROM SELECTED LASL NUCLEAR DEVICES
Wendell A. Biggers and K. C. Kohr.
July 1967
- LA-DC-6170 Unclassified
TIME-OF-FLIGHT MEASUREMENTS MADE WITH NEUTRONS FROM NUCLEAR EXPLOSIONS IN SPACE
S. J. Bame. January 1964
- LA-DC-5456 Unclassified
NEUTRON FLUX AND ENERGY SPECTRUM ABOVE THE ATMOSPHERE
S. J. Bame, J. P. Conner et al.
1963
- P-4-80 Secret RD
LASL MEASUREMENTS OF NEUTRON SPECTRA FROM THE FISHBOWL EVENTS
S. J. Bame et al. March 1963
- LA-2390, Supplement Unclassified
SPACE, ENERGY, AND TIME DISTRIBUTION OF NEUTRONS AT THE GROUND-AIR INTERFACE, CALCULATED BY MONTE CARLO NHM
W. A. Biggers, et al. March 1962
- LA-2390 Unclassified
SPACE, ENERGY, AND TIME DISTRIBUTION OF NEUTRONS AT THE GROUND-AIR INTERFACE, CALCULATED BY MONTE CARLO NHM
W. A. Biggers, et al. March 1962
- T-1304 Secret RD
Letter to Distr. (C. R. Mehl, Sandia),
Subj: PROMPT NEUTRON AND GAMMA RAY EMISSION IN THE XW-49
W. B. Goad. January 1962
- LAMS-2121 Secret RD Sigma 1
A SUMMARY OF CERTAIN MONTE CARLO CALCULATIONS RUN ON MANIAC I
Edmund D. Cashwell, et al.
April 1957
3. X-Ray
- T-2: 69-52 Secret RD Sigma 1
OUTPUT OF THE PRETZEL DEVICE
G. R. Spillman, et al.
September 1969
- LA-4026-MS Secret RD Sigma 1
OUTPUT FROM THE HIBALL CODE
G. R. Spillman. July 1969
- LA-4025-MS Unclassified
INPUT FOR THE HIBALL CODE
G. R. Spillman. November 1968



T-1605 Secret RD Sigma 1
OBSERVED UMBER X-RAY SPECTRUM
C. C. Longmire. August 1967

LA-3480-MS Secret RD Sigma 1
TIME-DEPENDENT CALCULATIONS OF SPECTRUM EMITTED
Cecil C. Davis, Jr. July 1967

T-1509 Secret RD
FINAL CALCULATED SPECTRUM FOR SCREAMER
C. L. Longmire. April 1965

LA-3187-MS Secret RD Sigma 3
BLUEGILL X-RAY ENERGY DEPOSITION CALCULATIONS
E. W. Bennett. April 1962

C. DELAYED GAMMAS AND BETAS FROM FISSION AND DEPOSITION IN THE ATMOSPHERE

LA-2811, Addendum II Unclassified
RE-EVALUATION OF OPTIMAL PARAMETERS FOR POST-FISSION BETA DECAY
James J. Griffin. April 1964

LA-2811, Addendum Unclassified
OTHER DETAILS OF POST-FISSION BETA DECAY
James J. Griffin. October 1963

LA-2811 Unclassified
BETA DECAYS AND DELAYED GAMMAS FROM FISSION FRAGMENTS
James J. Griffin. December 1962

LAMS-3059 Unclassified
ENERGY DEPOSITION IN THE ATMOSPHERE BY DELAYED GAMMAS FROM FISSION
Elbert W. Bennett. March 1964

LA-3179-MS Secret RD Sigma 3
ENERGY DEPOSITION BY DELAYED GAMMA RAYS FROM BLUEGILL
Elbert W. Bennett. September 1963

LAMS-2642 Unclassified
ENERGY AND TIME DEPENDENCE OF DELAYED GAMMA FROM FISSION
Leon B. Engle and Philip C. Fisher. January 1962

D. TRANSPORT OF X RAYS, GAMMAS AND NEUTRONS IN AIR AND RELATED ATMOSPHERIC PROPERTIES

(See VI. B., OPTICAL EMISSION, below, for additional papers on optical emission following interaction of weapon outputs with the atmosphere)

LA-3816 Unclassified
X-RAY SCATTERING FACTORS COMPUTED FROM NUMERICAL HARTREE-FOCK WAVE FUNCTIONS
D. T. Cromer and J. B. Mann. March 1968

LA-3810 Unclassified
EFFECT OF BASIC NEUTRON REACTION CROSS SECTIONS OF NITROGEN (n,n'), (n₂n), (n,γ), (n,p) and (n,α) ON HIGH ENERGY NEUTRON PENETRATION IN AIR
G. E. Hansen and H. A. Sandmeier. December 1967

LADC-8109 Unclassified
MULTITABLE TREATMENTS OF ANISOTROPIC SCATTERING IN Sn MULTIGROUP TRANSPORT CALCULATIONS
G. I. Bell, et al. 1967

LA-3415 Unclassified
COMPUTATION OF FAST NEUTRON PENETRATION IN AIR BY THE "Sn-METHOD" WITH SPECIAL EMPHASIS ON THE USE OF "MULTITABLE-MULTIGROUP CROSS SECTION SETS"
H. A. Sandmeier, et al. August 1965

LADC-6488 Unclassified
NEUTRON PENETRATION FACTORS OBTAINED BY ADJOINT TRANSPORT CALCULATIONS
H. A. Sandmeier and G. E. Hansen. July 1965

LA-3349-MS Unclassified
DIFFUSION OF NEUTRONS FROM A POINT SOURCE IN AN EXPONENTIAL ATMOSPHERE
Marshall Rosenbluth. June 1956

II. PHYSICS OF INTERACTION OF NUCLEAR DETONATIONS WITH THE ATMOSPHERE

A. COLLISIONLESS (NONHYDRODYNAMIC) DEBRIS-AIR INTERACTIONS

DASA 2455, Vol 1, 2, 3, Secret RD
PROCEEDINGS OF THE HIGH ALTITUDE NUCLEAR EFFECTS SYMPOSIUM, Sandia Base, N. M. (Expected publication date: May 1970)

LASL Papers:

J-10 1909 Secret RD
CURRENT HIGH ALTITUDE DEBRIS-AIR COUPLING MECHANISMS
C. R. Shonk and D. W. Forslund. December 1969

J-10 1913 Secret RD
LARGE SCALE NUMERICAL SIMULATION OF HIGH ALTITUDE NUCLEAR BURSTS AT EARLY TIME
R. Morse and C. Shonk. December 1969

J-10 1914 Confidential FRD
THE SIMULATION OF BINARY COLLISION PROCESSES IN PLASMAS
T. A. Oliphant and C. W. Nielson. December 1969

J-10 1904 Secret RD
THE DEBRIS LOSS CONE
John Zinn. December 1969

Phys. Rev. Letters, Vol 23, p. 1087

Unclassified

ONE, TWO, AND THREE DIMENSIONAL NUMERICAL SIMULATION OF TWO-BEAM PLASMAS

C. W. Nielson and R. L. Morse.
November 1969

Physics of Fluids, Vol 12 Unclassified
(Also in LA-3990 Unclassified)

LASL Papers:

p. 2418 NUMERICAL SIMULATION OF WARM TWO BEAM PLASMA

C. W. Nielson and
R. L. Morse. August 1969

p. 1708 NUMERICAL SIMULATION OF AXI-SYMMETRIC, COLLISIONLESS, FINITE BETA PLASMA

D. O. Dickman, R. L. Morse,
and C. W. Nielson.
August 1969

LA-4130 Secret RD Sigma 3
DEBRIS-AIR COUPLING IN HIGH ALTITUDE NUCLEAR EXPLOSIONS

D. S. DeYoung, H. W. Hoerlin,
C. L. Longmire, D. S. Sappenfield,
C. R. Shonk, and John Zinn.
April 1969

LA-3990 Unclassified
PROCEEDINGS OF THE APS TOPICAL CONFERENCE ON NUMERICAL SIMULATION OF PLASMA, September 18-20, 1968
Edited by R. L. Morse

LASL Paper:

C-3 TWO-DIMENSIONAL SIMULATION OF SHOCK WAVES IN COLLISIONLESS PLASMAS

C. R. Shonk and R. L. Morse.
September 1968

RAND'RM-3386-PR (AD-296, 597)

Unclassified

NOTES ON DEBRIS-AIR MAGNETIC INTERACTION

C. L. Longmire. January 1963

B. HYDRODYNAMICS AND THERMAL RADIATION TRANSPORT

J-10 1903 Confidential FRD

A CALCULATION OF THE KINGFISH FIREBALL

D. S. Sappenfield and F. E. Fajen.
December 1969 (Will also be published in DASA 2455, PROCEEDINGS OF THE HIGH ALTITUDE NUCLEAR EFFECTS SYMPOSIUM, Sandia Base, N. M. Expected publication date: May 1970)

LA-4189-MS Unclassified

A TWO-DIMENSIONAL HYDRODYNAMIC MODEL FOR AN EXPLOSION IN A NONUNIFORM ATMOSPHERE

Dale S. Sappenfield.
September 1969

DASA 2145-I (p. 305-337) (J-10 1536)

Secret RD

CALCULATIONS OF NUCLEAR WEAPON PHENOMENOLOGY FOR BURST ALTITUDES BETWEEN 100 AND 200 KM

Dale Sappenfield. June 1968

LA-3531-MS Confidential RD Sigma 3

FIREBALL SPIKES

J. S. Malik. July 1966

LA-3239-MS Secret RD Sigma 1

FIREBALL BEHAVIOR IN BLUEGILL AND A HYPOTHETICAL 100-MEGATON EXPLOSION AT BLUEGILL ALTITUDE

John Zinn. January 1965

JMDR-65-2, Vol II, Number 3 Secret RD
RADIATION TRANSPORT AND HYDRODYNAMIC COMPUTATION OF FIREBALL GROWTH IN BLUEGILL

J. Zinn and F. E. Fajen.
Winter 1964

LAMS-3095 Secret RD Sigma 3

RADIATION TRANSPORT IN BLUEGILL

John Zinn. June 1964

LA-3064 Unclassified

THEORY OF THE FIREBALL

H. A. Bethe. February 1964

LAMS-2791 Secret RD Sigma 1

ASYMMETRICAL NUCLEAR EXPLOSIONS AT HIGH ALTITUDES

F. H. Harlow and Billy D. Meixner.
January 1963

LAMS-2770 Unclassified

RISE THROUGH THE ATMOSPHERE OF A HOT BUBBLE

F. H. Harlow and Billy D. Meixner.
October 1962

LAMS-2567 Unclassified

PARTICLE-AND-FORCE COMPUTING METHOD FOR FLUID DYNAMICS

F. H. Harlow and Billy D. Meixner.
June 1961

LAMS-2453 Secret RD Sigma 1

TEAK FIREBALL FORMATION, RADIATIVE GROWTH AND BRIGHTNESS HISTORY

Andrew Skumanich. August 1960

LA-2412 Unclassified

DYNAMICS OF COMPRESSIBLE FLUIDS

Francis H. Hansen. April 1960

LA-2164 Secret RD Sigma 3

SOME PHENOMENA IN HIGH-ALTITUDE EXPLOSIONS

Hans A. Bethe. November 1957

LADC-2593 Unclassified

HYDRODYNAMIC PROBLEMS INVOLVING LARGE FLUID DISTORTIONS

F. H. Harlow. 1957



C. MAGNETOHYDRODYNAMICS

LA-3784 Secret RD Sigma 3
SOME THEORETICAL ASPECTS OF THE STARFISH EXPLOSION
John Zinn, Fredric E. Fajen, LASL,
and John K. Buckner, EG&G.
December 1967

DASIAC Review 67-2, DASA-1985, (p. 107)
Secret RD
MULTIDIRECTIONAL SPHERICAL MAGNETO-
HYDRODYNAMIC COMPUTATIONS OF THE
STARFISH AND NIKE ZEUS EXPANSION
John Zinn and John K. Buckner.
June 1967

Published in PROCEEDINGS OF THE ADVANCED
STUDY INSTITUTE--RADIATION TRAPPED IN
THE EARTH'S MAGNETIC FIELD--Bergen,
Norway, August 1965. D. Reidel Pub. Co.
(p. 671-92), 1966; DASIAC Review 66-2
(DASA 1793), (p. 78-9), June 1966; and
LADC 7177 Unclassified
MOTION OF BOMB DEBRIS FOLLOWING THE
STARFISH TEST
J. Zinn, H. W. Hoerlin, and
A. G. Petschek.

D. ATOMIC AND MOLECULAR PHYSICS AND CHEMISTRY

LA-4248 Unclassified
FLUORESCENCE EFFICIENCIES AND COLLISIONAL DEACTIVATION RATES FOR N₂⁺ AND N₂⁺ BANDS, EXCITED FROM DEPOSITION OF SOFT X RAYS
K. B. Mitchell. November 1969

LA-4303 Confidential FRD Sigma 3
RADIATION FROM A RECOMBINING OXYGEN PLASMA
Dale Sappenfield. December 1969

LA-4314 Unclassified
FLUORESCENCE EFFICIENCIES OF NITROGEN EXCITED BY 1- TO 5-MeV POSITIVE IONS
J. L. Dunn and R. F. Holland.
December 1969

LA-4044-MS Confidential DI Sigma 3 gp 1
ESTIMATES OF NITROGEN FLUORESCENCE EFFICIENCY FOR EXCITATION BY DEBRIS IONS
William B. Maier II and
R. F. Holland. January 1969

LADC-9468 Unclassified
EXCITATION OF NITROGEN BY ELECTRONS: THE LYMAN-BIRGE-HOPFIELD SYSTEM OF N₂
Redus F. Holland. March 1968

LA-3793-MS Unclassified
NEW MEASUREMENTS OF THE FLUORESCENCE EFFICIENCY OF AIR UNDER ELECTRON BOMBARDMENT
Paul L. Hartman. January 1968

LA-3783 Unclassified
CROSS SECTIONS FOR ELECTRON EXCITATION OF THE 3914-A (0,0) BAND OF THE N₂⁺ FIRST NEGATIVE SYSTEM
Redus F. Holland. December 1967

LADC-8331 Unclassified
CONTRIBUTION OF INVERSE NEUTRAL BREMSSTRAHLUNG TO THE ABSORPTION COEFFICIENT OF HEATED AIR
R. C. Mjolsness. 1967

LA-3591 Secret RD Sigma 3
IONIZATION AND EXCITATION IN CHECKMATE
Hans A. Bethe. September 1966

EGG-B-3725A (EGG-1183-435) Unclassified
AN EXTINCTION COEFFICIENT MATRIX FOR ATMOSPHERIC TRANSMISSION IN THE 0.32 to 0.70 μ WAVELENGTH RANGE
R. J. Ouellette. February 1968

DASA-1825 (p. 7-29) (DASIAC NWER 66-3)
Secret RD
ELECTRON-ION RECOMBINATION COMPARISON OF THEORY WITH LATE-TIME KINGFISH AND CHECKMATE OBSERVATIONS
D. S. Sappenfield. August 1966

LADC-6494 Unclassified
COMPARISON OF TWO METHODS OF OPACITY CALCULATIONS USED IN AIR
J. S. Stewart, Jr. September 1964

LA-3147-MS Unclassified
MEASUREMENTS OF THE ABSOLUTE FLUORESCENCE EFFICIENCY OF AIR UNDER ELECTRON BOMBARDMENT
Paul L. Hartman. January 1964

LADC-5643 Unclassified
EXCITATION OF FIRST NEGATIVE EMISSION IN THE BOMBARDMENT OF NITROGEN BY MOLECULAR NITROGEN IONS
John P. Doering and Redus F. Holland.
1963

LADC-5160 Unclassified
MEASUREMENTS OF THE FLUORESCENT EFFICIENCY OF AIR UNDER ELECTRON BOMBARDMENT
Paul L. Hartman and H. W. Hoerlin.
1962

III. ANALYSIS OF HIGH ALTITUDE BURSTS AND INTERPRETATION OF RELATED OPTICAL DATA

A. STARFISH

J-10-1910 Confidential DI gp 1
EXPERIMENTAL DATA AND THEORY, THE CHALLENGE OF STARFISH AURORAL PHENOMENA
Herman W. Hoerlin. December 1969

J-10-1904 Secret RD
THE DEBRIS LOSS CONE
John Zinn. December 1969

EGG ET-7145 Confidential FRD
SPACE DISTRIBUTION OF ENERGY DEPOSITION IN THE STARFISH LATE BETA PATCH
John K. Buckner. December 1969

EGG ET-7148 Confidential FRD
RADIOMETRIC ANALYSIS OF THE STARFISH DEBRIS-AIR-SHOCK THROUGH 350 MSEC
John K. Buckner. December 1969

(The above four reports were given at the DASA HIGH ALTITUDE NUCLEAR EFFECTS SYMPOSIUM, Sandia Base, N. M. and will appear in the Proceedings, DASA 2455. Expected publication date: May 1970)

EGG B-3999 (EGG-1183-495) Secret RD
Sigma 3

STARFISH BURST AREA TOTAL DEBRIS-AIR POWER HISTORY FROM 0 TO 350 MILLI-SECONDS
J. Epstein, J. Holzer, L. Isaacson, J. Malone, E. P. Marram, W. Schlueter. June 1969

EGG B-3961 (EGG-1183-483) Secret RD
Sigma 3

RADIOMETRIC ANALYSIS OF THE STARFISH NORTH CONJUGATE REGION
L. H. Leonard, J. K. Buckner. May 1969

LA-4043-MS Secret RD Sigma 3
STARFISH NORTHERN CONJUGATE ANALYSIS
Herman Hoerlin, LASL, and John K. Buckner, EG&G. December 1968

LA-3943-MS Secret RD Sigma 3
DOMINIC SPECTROSCOPY BY LASL: STARFISH
Dale S. Sappenfield, H. Milton Peek, and Herman Hoerlin. June 1968

EGG B-3713 (EGG-1183-426) Secret RD
Sigma 3
GEOMETRIC MODEL OF STARFISH NORTH CONJUGATE REGION AT EARLY TIMES
L. H. Leonard. May 1968

LA-3865 Confidential RD Sigma 3
MAPMAG--PROJECTION OF GEOMAGNETIC FIELD LINES ONTO A FILM PLANE WITH APPLICATION TO THE STARFISH PROBLEM
Gayle M. Connor. April 1968

LA-3784 Secret RD Sigma 3
SOME THEORETICAL ASPECTS OF THE STARFISH EXPLOSION
John Zinn, Fredric E. Fajen, LASL, and John K. Buckner, EG&G. December 1967

DASIAC Review 67-2, DASA-1985, (p. 107)
Secret RD
MULTIDIRECTIONAL SPHERICAL MAGNETO-HYDRODYNAMIC COMPUTATIONS OF THE STARFISH AND NIKE ZEUS EXPANSION
John Zinn and John K. Buckner. June 1967

Published in PROCEEDINGS OF THE ADVANCED STUDY INSTITUTE--RADIATION TRAPPED IN THE EARTH'S MAGNETIC FIELD--Bergen, Norway, August 1965. D. Reidel Pub. Co. (p. 671-92), 1966; DASIAC Review 66-2 (DASA 1793), (p. 78-9), June 1966; and LADC-7177. Unclassified
MOTION OF BOMB DEBRIS FOLLOWING THE STARFISH TEST
J. Zinn, H. W. Hoerlin and A. G. Petschek.

LAMS-2891 Secret RD Sigma 3
LASL PAPERS PRESENTED AT DASA SYMPOSIUM ON OPTICAL MEASUREMENTS. OPERATION DOMINIC - FISHBOWL. March 1963

Individual papers are:

p. 5-21 EARLY STARFISH EXPANSION, BRIGHTNESS AND MOTION OF DEBRIS FROM JOHNSTON ISLAND. HIGH-SPEED PHOTOGRAPHY AND SPECTROSCOPY
Sidney N. Stone and Robert D. Cowan.

p. 22-64 PHOTOGRAPHIC OBSERVATIONS ON DEBRIS MOTIONS IN STARFISH
John Zinn.

p. 65-74 STARFISH EVENT. THE NORTHERN MAGNETIC PANCAKE
Herman Hoerlin.

p. 75-82 X-RAY EXCITED AIR FLUORESCENCE ON STARFISH
Elbert W. Bennett.

EGG ET-2257 Secret RD
STARFISH PRIME: EARLY BRIGHTNESS AND VELOCITIES FROM EGG/LASL MAUI PHOTOGRAPHS
D. J. Barnes. March 1963

DASA-1327 (DASA-DC-SR-4) Secret DI
SYMPOSIUM PROCEEDINGS--THE ARTIFICIAL RADIATION BELT

LASL Paper:
p. 193-211 OPTICAL CHARACTERISTICS OF STARFISH PHENOMENOLOGY
Herman W. Hoerlin. October 1962

DASA-1337 Secret RD
SYMPOSIUM PROCEEDINGS--LONG-DURATION DEBRIS HISTORY AND IONOSPHERIC EFFECTS RESULTING FROM STARFISH

LASL Paper:
p. 293-311 OPTICAL OBSERVATIONS
Herman W. Hoerlin. September 1962

JO-600 Secret RD Sigma 3
"QUICK LOOK" AT THE TECHNICAL RESULTS OF STARFISH PRIME
William E. Ogle. August 1962

JI-02 Secret
 STARFISH TU 8.1.1, LASL, PRELIMINARY
 FIELD REPORT, STATUS AS OF H+5 DAYS
 Herman W. Hoerlin. July 1962

B. CHECKMATE

EGG ET-7146 Confidential FRD
 A FIRST LOOK AT EGG-LASL DATA ON
 CHECKMATE STRIATIONS
 M. P. Shuler, Jr. December 1969

EGG ET-7147 Secret RD
 CHECKMATE EARLY TIME DIMENSIONS
 M. P. Shuler, Jr. December 1969

(The above two reports were given at
 the DASA HIGH ALTITUDE NUCLEAR EFFECTS
 SYMPOSIUM, Sandia Base, N. M. and will
 appear in the Proceedings, DASA 2455.
 Expected publication date: May 1970)

EGG-1183-521 (EGG Report No. B-4089)
 Secret RD Sigma 1
 CHECKMATE EARLY TIME DIMENSIONAL
 MEASUREMENTS
 M. P. Shuler, Jr. September 1969

EGG-B-4010 (EGG-1183-499)
 Confidential RD Sigma 3
 CHECKMATE MAGNETIC PHENOMENA
 R. E. Hubert and M. P. Schuler, Jr.
 June 1969

EGG-B-3886 (EGG-1183-470)
 Confidential DI Sigma 3
 CHECKMATE PHOTOGRAPHIC ANALYSIS: LATE-
 TIME OPTICAL PHENOMONOLOGY
 H. Milton Peek, LASL, and
 Marion P. Shuler, Jr., and
 Ronald E. Hubert, EG&G.
 September 1968

EGG-B-3718 (EGG-1183-430)
 Confidential FRD Sigma 3
 CURRENT STATUS OF CHECKMATE PHOTOG-
 RAPHY DATA ANALYSIS
 J. C. Chapman and M. P. Shuler, Jr.,
 EG&G, and H. Milton Peek, LASL.
 May 1968

DASIAC Review 67-2, DASA-1985, p. 85-106
 Secret RD
 THE EARLY PHASES OF THE CHECKMATE
 EVENT AND OF A HYPOTHETICAL NIKE ZEUS
 EVENT AT CHECKMATE ALTITUDE
 D. Sappenfield and F. Fajen.
 June 1967

LA-3613-MS Confidential FRD Sigma 3
 DOMINIC SPECTROSCOPY BY LASL: CHECK-
 MATE AND TIGHTROPE
 H. Milton Peek and
 Dale S. Sappenfield. December 1966

LA-3591 Secret RD Sigma 3
 IONIZATION AND EXCITATION IN CHECK-
 MATE
 Hans A. Bethe. September 1966

DASIAC NWER 66-3 (DASA 1825) (p. 7-29)
 Secret RD
 ELECTRON-ION RECOMBINATION COMPARISON
 OF THEORY WITH LATE-TIME KINGFISH AND
 CHECKMATE OBSERVATIONS
 D. S. Sappenfield. August 1966

LAMS-2891 Secret RD Sigma 3
 LASL PAPERS PRESENTED AT DASA SYM-
 POSIUM ON OPTICAL MEASUREMENTS OP-
 ERATION DOMINIC - FISHBOWL

p. 146-164 CHECKMATE: SPECTROSCOPIC
 STUDY OF EARLY EXPANSION
 OF SELECTED SPECIES
 Kenneth B. Mitchell.
 March 1963

J-10-990 Secret RD
 PRELIMINARY FIELD REPORT--OPERATION
 DOMINIC: CHECKMATE EVENT
 Herman Hoerlin. November 1962

JO-640 Secret RD Sigma 1
 "QUICK LOOK" AT THE TECHNICAL RESULTS
 OF CHECKMATE
 William E. Ogle. November 1962

C. KINGFISH

J-10-1903 Confidential FRD
 A CALCULATION OF THE KINGFISH FIRE-
 BALL
 D. S. Sappenfield and F. E. Fajen.
 December 1969

J-10-1907 Confidential FRD
 ANALYSIS OF KINGFISH STRIATION DATA
 H. Linnerud and D. S. Sappenfield.
 December 1969

(The above two reports were given at
 the DASA HIGH ALTITUDE NUCLEAR EFFECTS
 SYMPOSIUM, Sandia Base, N. M. and will
 appear in the Proceedings, DASA 2455.
 Expected publication date: May 1970)

EGG-1183-434 (EGG Report No. B-3727)
 Confidential FRD
 A PICTORIAL HISTORY OF KINGFISH MAG-
 NETIC PHENOMENA
 H. J. Linnerud. August 1969

EGG-B-4035 (EGG-1183-504) Secret RD
 Sigma 3
 DIMENSIONAL AND RADIOMETRIC ANALYSIS
 OF KINGFISH PHOTOGRAPHIC DATA
 H. J. Linnerud, W. T. Foreman.
 June 1969

EGG-B-3770 (EGG-1183-447)
 Confidential FRD Sigma 3
 KINGFISH MAGNETIC PHENOMENOLOGY
 Harold J. Linnerud. August 1968

LA-3572-MS Confidential FRD Sigma 3
 DOMINIC SPECTROSCOPY BY LASL: KING-
 FISH
 H. Milton Peek and
 Dale S. Sappenfield. November 1966

DASIAC NWER 66-3 (DASA 1825) (p. 7-29)
Secret RD

ELECTRON-ION RECOMBINATION COMPARISON
OF THEORY WITH LATE-TIME KINGFISH AND
CHECKMATE OBSERVATIONS
D. S. Sappenfield. August 1966

LAMS-2891 Secret RD Sigma 3

LASL PAPERS PRESENTED AT DASA SYMPO-
SIUM ON OPTICAL MEASUREMENTS OPERA-
TION DOMINIC - FISHBOWL

p. 83-91 SPECTROGRAPHIC MEASURE-
MENTS OF PROMPT AIR FLU-
ORESCENCE FROM STARFISH
AND KINGFISH
Michael Hane.

p. 92-114 KINGFISH EARLY PHENOMENA
Herman Hoerlin,
Kenneth B. Mitchell,
and Sidney N. Stone.

p. 115-126 KINGFISH LATE OPTICAL
PHENOMENOLOGY
H. Milton Peek.

p. 117-134 LATE TIME AIR EXCITATION
DUE TO DELAYED GAMMAS AND
NEUTRONS FROM KINGFISH
John Zinn.

p. 135-145 SPECTROSCOPIC ANALYSIS OF
KINGFISH LATE-TIME FIRE-
BALL
Dale Sappenfield,
Philip J. Bendt, and
P. M. Stone.

JO-642 Secret RD Sigma 1
"QUICK LOOK" AT THE TECHNICAL RESULTS
OF KINGFISH
William E. Ogle. December 1962

D. BLUEGILL

LA-3504-MS Confidential FRD Sigma 3
DOMINIC SPECTROSCOPY BY LASL: BLUE-
GILL
H. Milton Peek and
Dale S. Sappenfield. August 1966

DASA-1793 (p. 110-11) Secret RD
BLUEGILL, LATE-TIME ANALYSIS, INCLUD-
ING DEBRIS SPECTRA
D. S. Sappenfield. June 1966

LA-3321-MS Secret RD Sigma 3
ANALYSIS OF LATE-TIME BLUEGILL SPEC-
TROGRAMS
Dale S. Sappenfield. August 1965

EGG-B-3049 (EGG-1183-201)
Confidential FRD Sigma 3
ANALYSIS OF BLUEGILL PHOTOGRAPHIC
DATA
B. J. Constantine. June 1965

LA-3239-MS Secret RD Sigma 1
FIREBALL BEHAVIOR IN BLUEGILL AND A
HYPOTHETICAL 100-MEGATON EXPLOSION AT
BLUEGILL ALTITUDE
John Zinn. January 1965

JMDR-65-2, Vol. II, Number 3
Secret RD

A RADIATION TRANSPORT AND HYDRODYNAMIC
COMPUTATION OF FIREBALL GROWTH IN
BLUEGILL
J. Zinn and F. E. Fajen.
Winter 1964

LA(MS)-3095 Secret RD Sigma 3
RADIATION TRANSPORT IN BLUEGILL
John Zinn. June 1964

J-10-1028 Secret RD
SUPPLEMENT TO JO-641 (JTF-8),
"QUICK LOOK" AT BLUEGILL
Herman W. Hoerlin. January 1963

JO-641 Secret RD Sigma 1
"QUICK LOOK" AT THE TECHNICAL RE-
SULTS OF BLUEGILL TRIPLE PRIME
William E. Ogle. November 1962

E. TIGHTROPE

LA-3613-MS Confidential FRD Sigma 3
DOMINIC SPECTROSCOPY BY LASL:
CHECKMATE AND TIGHTROPE
H. Milton Peek and
Dale S. Sappenfield. December 1966

EGG-B-3230 (EGG-1183-269)
Confidential FRD Sigma 3
RADIOMETRIC AND DIMENSIONAL REPORT
EVENT TIGHTROPE
Lawrence H. Leonard. August 1966

Review 66-2, DASA-1793, June 1966, p. 112
Secret RD
TIGHT ROPE EXPERIMENTAL DATA AND COR-
RELATION WITH PUBLISHED THEORY
H. M. Peek. June 1966

JO-643 Secret RD Sigma 2
"QUICK LOOK" AT THE TECHNICAL RE-
SULTS OF TIGHTROPE
William E. Ogle, Scientific Deputy,
JTF-8. December 1962

F. DOMINIC HIGH-ALTITUDE EVENTS (FISH BOWL),
GENERAL

EGG REPORT B-4093 (EGG-1183-522)
Confidential FRD
PRELIMINARY MEASUREMENTS OF SELECTED
HIGH ALTITUDE STRIATIONS
J. Piacente and J. K. Buckner.
December 1969

EGG ET 5529 Confidential DI
BETA PARTICLE DEPOSITION IN THE AT-
MOSPHERE
H. Linnerud. October 1967

DASA 1600 (DASIAC RV 65-1) (p. 39-56)
Secret RD
PROCEEDINGS OF THE FIRST HIGH ALTI-
TUDE OPTICAL WORKSHOP
H. Milton Peek. March 1965

LAMS-3024 Secret RD US/UK Atomic
Sigma 1

SELECTED PHENOMENA OF DOMINIC-FISH-
BOWL HIGH ALTITUDE EVENTS
H. W. Hoerlin, E. W. Bennett,
H. M. Peek, et al. December 1963

DASA 1449 Secret RD
PROCEEDINGS: DASA REVIEW SYMPOSIUM
FISH BOWL, December 1963

LASL Paper:
p. 55-102 REVIEW OF SELECTED PHENOM-
ENOLOGICAL ASPECTS OF DOM-
INIC-FISHBOWL HIGH-ALTI-
TUDE EVENTS
H. W. Hoerlin,
E. W. Bennett,
H. M. Peek, et al.
December 1963

LAMS-2891 Secret RD Sigma 3
OPERATION DOMINIC (FISH BOWL)-LASL
PAPERS PRESENTED AT DASA SYMPOSIUM
ON OPTICAL MEASUREMENTS
H. W. Hoerlin, H. M. Peek, et al.
July 1963

DASA 1337 Secret RD
SYMPOSIUM PROCEEDINGS: LONG-DURATION
DEBRIS HISTORY AND IONOSPHERIC EFFECTS
RESULTING FROM STARFISH-August 31 -
September 1, 1962

LASL Paper:
p. 293-311 OPTICAL OBSERVATIONS
Herman W. Hoerlin.

G. TEAK AND ORANGE

LAMS-2536 Unclassified
ARTIFICIAL AURORA AND UPPER ATMOSPHER-
IC SHOCK PRODUCED BY TEAK
Herman W. Hoerlin. March 1961

NRL Report 5524 Secret RD
PROJECT 18.1, "OPTICAL PHENOMENA OF
TEAK AND ORANGE SHOTS (EARLY TIME
PHASE)
D. F. Hansen, F. D. Harrington,
et al. January 1961

LAMS-2453 Secret RD Sigma 1
TEAK FIREBALL FORMATION, RADIATIVE
GROWTH AND BRIGHTNESS HISTORY
Andrew Skumanich. August 1960

LAMS-2417 Secret RD Sigma 1
TEAK PHENOMENOLOGY. A SUMMARY REPORT
OF STUDIES OF THE TEAK HIGH ALTITUDE
EXPLOSION WITH EMPHASIS ON THE PHYSICS
OF THE MAJOR PHASES OF FIREBALL DE-
VELOPMENT
Herman W. Hoerlin. February 1960

NRL Report 5444 Secret RD
POWER-TIME AND TOTAL-THERMAL MEASURE-
MENTS
D. F. Hansen, J. E. Perry, and
A. G. Rockman. February 1960

NRL Report 5294 Secret RD
INTERIM TEST REPORT ON TEAK
D. F. Hansen, F. D. Harrington,
J. H. Campbell, et al.
February 1959

J-10-467 Secret
TEAK ENERGY DEPOSITION
F. C. Jahoda and A. Skumanich.
January 1959

ORD-SP-43 (p. 45-62) Secret RD Sigma 3
EXPERIMENTAL PLANNING AND PREDICTED
PHENOMENA FOR A 250,000-ft SHOT
Herman W. Hoerlin. May 1958

H. ABM DETONATIONS

J-10-1906 Secret RD
DEBRIS NORTHERN CONJUGATE EFFECTS FOR
SPARTAN BURSTS
Martin Tierney. December 1969
(Also given at the DASA HIGH ALTI-
TUDE NUCLEAR EFFECTS SYMPOSIUM,
Sandia Base, N. M. and will appear
in the Proceedings, DASA 2455.
Expected publication date: May 1970)

LA-4358 Secret FRD Sigma 3
SPARTAN WEAPON EFFECTS
F. Fajen and D. Sappenfield.
February 1970

LA-4318 MS Secret RD Sigma 3 (Limited
Distribution)
NUMERICAL SIMULATION OF A HIGH ALTI-
TUDE NUCLEAR EVENT
Dale Sappenfield and Fred Fajen.
January 1970

J-10-1536 (DASA 2145-I, p. 305-337)
Secret RD
CALCULATIONS OF NUCLEAR WEAPON PHE-
NOMENOLOGY FOR BURST ALTITUDES BE-
TWEEN 100 and 250 km
Dale Sappenfield. June 1968

DASIAC Review 67-2 (DASA 1985) Secret RD
LASL Papers:
p. 85-106 THE EARLY PHASES OF THE
CHECKMATE EVENT AND OF A
HYPOTHETICAL NIKE ZEUS
EVENT AT CHECKMATE ALTITUDE
D. Sappenfield and
F. Fajen. June 1967

p. 107-119 MULTIDIRECTIONAL SPHERICAL
MAGNETOHYDRODYNAMIC COM-
PUTATIONS OF THE STARFISH
AND NIKE ZEUS EXPANSION
John Zinn and
John K. Buckner.
June 1967



I. MISCELLANEOUS

1. Nonnuclear Experiments

LA-4313 Unclassified
 RESONANCE RADIATION IN ARTIFICIAL
 STRONTIUM AND BARIUM CLOUDS
 H. C. Horak, D. M. Kerr, and
 M. S. Tierney. December 1969

EGG B-4088 (EGG-1183-520)
 Unclassified
 SECEDE I - PHOTOGRAPHIC AND SPECTRO-
 GRAPHIC DATA REDUCTION
 T. Lumenello, J. Davis, J. Freedman.
 September 1969

LA-3929 Unclassified
 RESULTS OF THE 1967 LASL-SANDIA AURO-
 RAL ROCKET PROGRAM IN THE VACUUM UL-
 TRAVIOLET AND VISIBLE
 J. Karl Theobald and H. Milton Peek.
 April 1969

2. Other

LA-3265-MS Confidential RD Sigma 3
 OPTICAL OBSERVATIONS OF AN UNDER-
 GROUND NUCLEAR EXPLOSION: PARROT
 EVENT
 Sidney N. Stone. February 1965

NRL Report 4982 (RD00752) Secret RD
 SPECTRAL AND RADIOMETRIC COMPARISONS
 OF "WASP" AND "HA" RADIOMETRY I
 BRANCH, NRL. June 1957

IV. IONIZATION AND RADAR DEGRADATION

T-1619 Secret RD
 CONTRIBUTION OF NEUTRON INDUCED AC-
 TIVATION TO RADAR BLACKOUT
 George I. Bell. December 1967

JMDR-67-5 (p. 56-64) Secret RD Sigma 3
 RADAR ATTENUATION FROM DELAYED GAMMA
 RAYS IN THE FISHBOWL TEST SERIES
 (Revision of paper contained in
 LA-3127-MS Suppl.)
 R. C. Mjolsness. Summer 1967

LA-3127-MS Suppl. Secret RD Sigma 3
 EFFECT OF NEUTRAL ATOMIC OXYGEN ON
 BLUEGILL RADAR ATTENUATION
 R. C. Mjolsness. August 1967

LA-3277-MS Secret RD Sigma 2
 CALCULATION OF X-RAY INDUCED BLACKOUT
 Elbert W. Bennett and
 Raymond C. Mjolsness.
 November 1965

LA-3360 Secret RD Sigma 3
 HIGH ALTITUDE BLACKOUT CONSIDERATIONS
 Hans A. Bethe and Keith A. Brueckner.
 August 1965

LA-3127-MS Secret RD Sigma 3
 RADAR ATTENUATION FROM DELAYED GAMMA
 RAYS IN THE FISHBOWL TEST SERIES
 Raymond C. Mjolsness. August 1964

LA-MD-2033 Confidential
 OPTIMUM BLACKOUT
 R. L. Garwin. August 1964

LA-3129 Unclassified
 RADAR ATTENUATION DUE TO DELAYED
 GAMMA RAYS FROM HIGH ALTITUDE NUCLEAR
 EXPLOSIONS
 Raymond C. Mjolsness and
 Albert G. Petschek. July 1964

V. VULNERABILITY AND HARDENING

(See Section VI A for reports on
 Electromagnetic effects)

A. X-RAY

LA-4101 Secret RD Sigma 1
 UMBER EXPERIMENTS
 T. A. Sanford. October 1969

LA-4229 Secret RD Sigma 1
 X-RAY SOURCE CALCULATIONS
 Cecil G. Davis, Jr. September 1969

LA-4161 Secret RD Sigma 1
 DELAYED AND IMMEDIATE X-RAY KILL OF
 REENTRY THREATS
 W. S. Lyons, et al. September 1969

LA-4054-MS Secret RD Sigma 1
 X-RAY HARDENING
 D. H. Byers. August 1969

GMX-3-7719 Secret RD
 SOME UMBER EXPERIMENTS RELATED TO
 SYSTEMS
 T. A. Sandford. April 1969

LA-4028-MS Secret RD Sigma 1
 X-RAY PINHOLE CAMERA EXPERIMENTS ON
 UMBER AND DORSAL FIN EVENTS
 Sidney N. Stone. December 1968

GMX-7-1965 Secret RD
 UMBER: DAMAGE TO DETONATORS AND OTHER
 EXPERIMENTS
 Terry R. Gibbs. November 1968

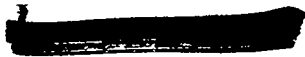
LA-3922 Secret RD Sigma 1
 THE UMBER EXPERIMENT
 D. H. Byers. August 1968

LMSC-B 196459 Vol I (Appendix) Secret RD
 UMBER/LASL - FINAL REPORT
 R. V. Smith, et al. July 1968

LMSC-B 196459 Vol I Secret RD
 UMBER/LASL - FINAL REPORT
 R. V. Smith, et al. July 1968

EGG B-3714 (EGG-1183-425)
 Confidential FRD
 A PRELIMINARY REPORT ON UMBER OPTICAL
 EXPERIMENTS
 P. Zavattaro, et al. December 1967

GE-66SD868 Secret RD Sigma 1
 LASL SPECIAL ENVIRONMENT, PRETEST
 REPORT
 T. L. Brewer, et al. June 1967



W-8-325 Secret RD Sigma 1
SCREAMER VULNERABILITY EXPERIMENT
H. R. Lehman, D. H. Byers, et al.
October 1965

LA-3261-MS Secret RD Sigma 3
DETERMINATION OF THE KILL PROBABILITY
TO BE EXPECTED FOR A REENTRY VEHICLE
ENCOUNTERING A NUCLEAR INTERCEPTOR
Richard A. Gentry, Paul I. Nakayama,
and Byron E. Thompson. March 1965

LA-3172-MS Secret RD Sigma 1
STRUCTURAL RESPONSE OF A HARDENED
REENTRY VEHICLE TO A NUCLEAR SHOCK
Richard A. Gentry and
Paul Nakayama. August 1964

B. NEUTRON AND OTHER

RS-3410/1474 (SC-WD-69-418) Secret RD
Sigma 1
SURE-KILL OF REENTRY VEHICLE THREATS-
PART 1: NEUTRONS
H. R. Lehman, R. L. Wagner, and
W. M. Webster. September 1969

LA-3897-MS Secret RD Sigma 1
NEUTRON VULNERABILITY OF ARES VEHICLE
R. E. Rousch and D. R. Koerg.
August 1968

LA-3856-MS Secret RD Sigma 2
SOME CALCULATIONS CONCERNING RUSSETT
John F. Barnes. February 1968

LA-3165 Secret RD Sigma 1
LETHAL RADII FOR NEUTRON KILL OF BAL-
LISTIC MISSILE WAR-HEAD AS A FUNCTION
OF INTERCEPT ALTITUDE
Henry A. Sandmeier and
Bruce E. Hoverson. July 1964

LA-3005 Secret RD Sigma 1
NEUTRON VULNERABILITY OF NUCLEAR
WEAPONS FROM A NUCLEAR EXPLOSION
Henry A. Sandmeier and
Robert T. Wagner. November 1963

DASA-1327 (DASA-DC-SR 4) Secret Gp 4
SYMPOSIUM PROCEEDINGS - THE ARTIFICIAL
RADIATION BELT

LASL Paper:
p. 349-51 SHIELDING CALCULATIONS
A. G. Petschek.
October 1962

LA-2246, Supplement Secret RD Sigma 1
SUPPLEMENT TO VULNERABILITY OF NU-
CLEAR WEAPONS TO NEUTRONS FROM A NU-
CLEAR EXPLOSION
Walter B. Goad. March 1961

LA-2246 Secret RD Sigma 1
VULNERABILITY OF NUCLEAR WEAPONS TO
NEUTRONS FROM A NUCLEAR EXPLOSION
Walter B. Goad and Lew Allen, Jr.
September 1958

VI. ELECTROMAGNETIC EFFECTS, DETECTION OF
DETONATIONS, AND WEAPON DIAGNOSTICS

A. ELECTROMAGNETIC SIGNALS

LA-4124-MS Secret RD Sigma 1
DETECTION AND DIAGNOSIS OF NUCLEAR
EXPLOSIONS FROM THE RADIOFLASH
JOWOG-24, Editors: E. D. Dracott
and J. S. Malik. April 1969

UCRL REPORT CONF. 680303, PROCEEDINGS OF
THE NOISE REDUCTION CONFERENCE
THE ANTIAUTOCORRELATOR - A SCHEME FOR
OBSERVING TRANSIENTS IN THE PRESENCE
OF A QUASI-SINUSOIDAL BACKGROUND
R. E. Partridge. July 1968

LA-3919 Unclassified
ADVANCED TRANSIENT WAVE FORM RECORDING
TECHNIQUES
R. E. Partridge. July 1968

LA-3864-MS Unclassified
STABILITY OF THE NEW RADIO FLASH CODE
R. D. Richtmyer.

LA-3830-MS Unclassified
PREDICTABLE UNFOLDING IN THE TIME
DOMAINE
E. K. Hodson. May 1968

DASA-1880-1 Unclassified
ELECTROMAGNETIC PULSE SENSOR AND
SIMULATION NOTES, VOLUME 1, NOTES I
THROUGH XXVI
Ralph E. Partridge, Coeditor.
April 1967

NOTE I. EMP TESTING FACILITY
Ralph E. Partridge.
February 1964

NOTE II. "INVISIBLE" ABSOLUTE E-
FIELD PROBE
Ralph E. Partridge.
February 1964

NOTE III. COMBINED E AND B SENSOR
Ralph E. Partridge.
February 1964

NOTE IV. ON THE PROPERTIES OF LOOP
ANTENNAS
Karl Theobald. February 1964

NOTE XI. CAPACITATIVE PROBE E-FIELD
SENSORS
Ralph E. Partridge.
February 1965

LA-3571-MS Unclassified
THEORY OF RADIO FLASH. PART VII.
FINITE GROUND CONDUCTIVITY
Bergen R. Suydam. September 1966

LA-3532-MS Unclassified
THEORY OF THE RADIO FLASH - PART VI.
HIGH FREQUENCY SIGNAL FROM A GROUND
BURST
Bergen R. Suydam. July 1966



LA-3408-MS Secret RD Sigma 2
THEORY OF RADIO FLASH. PART V: THE
HIGH FREQUENCY SIGNAL
Bergen R. Suydam. January 1966

LA-3230-MS Confidential Sigma 3
THEORY OF THE RADIO FLASH. PART IV:
THE RINGING SPHERE MODEL
Bergen R. Suydam. April 1965

LA-3218-MS Secret RD Sigma 2
THEORY OF THE RADIO FLASH. PART III:
NUMERICAL METHOD
Bergen R. Suydam. March 1965

LADC-6392 Unclassified
THEORY OF THE RADIO FLASH - NUMERICAL
METHOD
B. R. Suydam. April 1964

LAMS-3033 Secret RD Sigma 2
THEORETICAL STUDY OF RADIO FLASH.
PART II
Bergen R. Suydam. February 1964

LAMS-2855 Confidential RD Sigma 3
THEORETICAL STUDY OF THE RADIO FLASH.
PART I
Bergen R. Suydam. November 1962

LA-3433 Secret FRD Sigma 3
VERY LOW-FREQUENCY EM MEASUREMENTS ON
OPERATION DOMINIC
George E. Challenger.
February 1966

JMDR-65-4 (p. 51-62) Secret RD
ELECTROMAGNETIC FIELDS PRODUCED BY
NUCLEAR EXPLOSIONS
C. L. Longmire. February 1966

AD-364 006L, BSD-TR-65-384, AS-TDR-469
(S5855-80)-3 Secret RD
DEPENDENCE OF THE PEAK RADIAL ELEC-
TRIC FIELD ON ALTITUDE AND DISTANCE
FROM A NUCLEAR BURST
C. L. Longmire. June 1965

SC-M-65-61 Secret RD Sigma 1
PRESENTATIONS MADE AT THE SEVENTH NET
SUBCOMMITTEE MEETING ELECTROMAGNETIC
PHENOMENA
J. S. Malik. May 1965

DASA 1882-1, Vol I (p. 8-1, 8-88)
Unclassified
NOTE VIII - "EM PULSE FIELDS IN DIS-
SIPATIVE MEDIA," OF ELECTROMAGNETIC
PULSE THEORETICAL NOTES
J. S. Malik. April 1965

EEMS/MTG-64-1 (ESD-TDR-64-602)
(WL-TDR-6487)
ELECTROMAGNETIC SIGNALS PRODUCED BY
GAMMA RAYS FROM HIGH ALTITUDE NUCLEAR
EXPLOSIONS
C. L. Longmire and J. S. Malik.
January 1965

LA-DC-6524 Unclassified
ELECTROMAGNETIC SIGNALS PRODUCED BY
NUCLEAR DETONATIONS
C. L. Longmire. July 1964

LA(MS)-3105 Secret Sigma 3
DOMINIC FISHBOWL RADIOFLASH WAVEFORMS
John S. Malik. May 1964

LA-3087 Secret Sigma 3
THEORETICAL STUDY OF THE FAST MAGNET-
IC DIPOLE RADIO FREQUENCY SIGNAL FROM
NUCLEAR EXPLOSIONS
Leston W. Miller. April 1964

LAMS-3072 Secret RD Sigma 3
CLOSE-IN EM EFFECTS. LECTURES I
THROUGH IX
Conrad Longmire. April 1964

LAMS-3073 Secret RD Sigma 3
CLOSE-IN EM EFFECTS. LECTURES X AND
XI
Conrad Longmire. April 1964

LAMS-3019 Secret RD Sigma 1
OPERATION DOMINIC RADIOFLASH RECORDS
John S. Malik and
Ralph E. Partridge, Jr.
November 1963

LAMS-2790 Secret RD Sigma 3
ELECTROMAGNETIC EFFECTS OF NUCLEAR
EXPLOSIONS
Conrad L. Longmire. December 1962

LA-2808 Unclassified
FAST ELECTROMAGNETIC SIGNALS PRODUCED
BY NUCLEAR EXPLOSIONS IN THE TROPO-
SPHERE
J. Karl Theobald. November 1962

LA-2729 Unclassified
NUMERICAL SOLUTION AND APPLICATIONS
OF THE FOLD INTEGRAL
H. J. Longly. October 1962

LAMS-2605 Secret FRD Sigma 3
CASTLE AND TEAPOT ELF EM SIGNALS.
ALBERT LOOP DATA
John S. Malik, Roger Ray, and
Neel W. Glass. October 1961

J-13-373 Secret
ELECTROMAGNETIC RADIATION MECHANISMS
J. S. Malik. July 1961

LAMS-2606 Secret RD Sigma 3
NOTES ON ELECTROMAGNETIC RADIATION
John S. Malik. June 1961

LAMS-2610 Unclassified
COMPUTATIONS ON THE PARAMETER VALUES
INSIDE OF THE E.M. SOURCE
Bergen R. Suydam. April 1961

LAMS-2476 Secret RD Sigma 3
SLOW ELECTROMAGNETIC SIGNALS FROM
NUCLEAR EXPLOSIONS
Bergen R. Suydam. October 1960

- LA-2454 Secret RD Sigma 1
RADIO-FREQUENCY SIGNALS CREATED BY
NUCLEAR DETONATIONS. PART ONE--
OBSERVATIONS
Ralph E. Partridge, Jr.
September 1960
- LADC-6869 Unclassified
TRANSIENT DIPOLE FIELDS IN TWO SEMI-
INFINITE MEDIA
J. S. Chang. 1960
- LAMS-2624 Unclassified
ELECTROMAGNETIC SIGNAL FROM A BOMB
BURST IN VACUO
Bergen R. Suydam. June-August 1959
- LA-2244 Unclassified
ELECTROMAGNETIC IMPULSE TRANSMISSION
AND RECEPTION USING A WIDE BAND
ANTENNA
Leland K. Neher. July 1958
- LA-2173 Secret RD Sigma 1
ELECTROMAGNETIC SIGNAL EXPECTED FROM
HIGH-ALTITUDE TEST
Hans A. Bethe. October 1957
- B. OPTICAL EMISSION
1. Air Fluorescence
- (Items with ** are of interest to Sec-
tion I. B., PROMPT RADIATION OUTPUT
AND DEPOSITION IN THE ATMOSPHERE.)
- LA-3756 Unclassified
THE 1965 ARPA-AEC JOINT LIGHTNING
STUDY AT LOS ALAMOS, Vol III COMPARI-
SON OF THE LIGHTNING SPECTRUM AS MEA-
SURED BY ALL-SKY AND NARROW-FIELD
DETECTORS. PROPAGATION OF LIGHT FROM
LIGHTNING INTO ALL-SKY DETECTORS.
T. Robert Connor and Guy E. Barasch.
June 1969
- LA-3757 Unclassified
THE 1965 ARPA-AEC JOINT LIGHTNING
STUDY AT LOS ALAMOS, VOL. IV DIS-
CRIMINATION AGAINST FALSE TRIGGERING
OF AIR-FLUORESCENCE DETECTION SYSTEMS
BY LIGHTNING
Guy E. Barasch. April 1969
- LA-3754 Addendum Vol. 1 Unclassified
STROKE- AND SPACE-RESOLVED SLIT
SPECTRA OF LIGHTNING
T. R. Conner. August 1968
- LA-3754 Unclassified
THE 1965 ARPA-AEC JOINT LIGHTNING
STUDY AT LOS ALAMOS, VOL. I THE
LIGHTNING SPECTRUM. CHARGE TRANSFER
IN LIGHTNING. EFFICIENCY OF CONVER-
SION OF ELECTRICAL ENERGY INTO VISI-
BLE RADIATION
T. Robert Connor. May 1967
- LA-3755 Unclassified
THE 1965 ARPA-AEC JOINT LIGHTNING
STUDY AT LOS ALAMOS. VOL. II THE
LIGHTNING SPECTRUM AS MEASURED BY
COLLIMATED DETECTORS. ATMOSPHERIC
TRANSMISSION. SPECTRAL INTENSITY
RADIATED
Guy E. Barasch. February 1968
- LA-3929 Unclassified
THE 1967 LASL-SANDIA ROCKET-BORNE
STUDY OF VACUUM ULTRAVIOLET AND
VISIBLE EMISSIONS IN AURORAS
Karl Theobald and H. Milton Peek.
April 1969
- LA-4032 Unclassified
AEROSOL CONCENTRATION AND EXTINCTION
IN THE EARTH'S ATMOSPHERE
Henry G. Horak. March 1969
- LA-3727 Unclassified
EVALUATION OF LENSES FOR USE IN ALL-
SKY PHOTOMETERS
Guy E. Barasch. September 1967
- LA-3409-MS Secret Sigma 1
PROMPT AIR FLUORESCENCE EXCITED BY
HIGH ALTITUDE NUCLEAR EXPLOSIONS:
DATA AND RESULTS (STATUS REPORT):
OPERATIONS HARDTACK AND DOMINIC
Elbert W. Bennett. May 1966
- LA-3409-MS Supplement Unclassified
PROMPT AIR FLUORESCENCE EXCITED BY
HIGH ALTITUDE NUCLEAR EXPLOSIONS:
PHOTOELECTRIC INSTRUMENTATION AND THE
HIGH ALTITUDE FLUORESCENCE (HAF) AND
HIGH ALTITUDE RESONANCE ABSORPTION
CALCULATION (HARAC) CODES
Elbert W. Bennett and
Redus Foy Holland. May 1966
- LA-3417-MS Unclassified
AIR FLUORESCENCE EXCITED BY HIGH-
ALTITUDE NUCLEAR EXPLOSIONS
Herman W. Hoerlin. January 1966
- **LA-3439-MS Unclassified
GRAPHS OF CALCULATIONS OF ENERGY DEP-
OSITION AND AIR FLUORESCENCE FROM
RADIATION PRODUCED BY A NUCLEAR EX-
PLOSION IN SPACE
Elbert W. Bennett. November 1965
- LA-3353-MS Secret RD Sigma 3
OVER-THE-HORIZON SCATTERING OF LIGHT
SIGNALS FROM HIGH-ALTITUDE NUCLEAR
EXPLOSIONS
Gary E. Thomas. October 1965
- LA-DC 7458 Unclassified
(Also in Proceedings of the IEEE,
December 1965, p. 2067-72)
LOS ALAMOS AIR FLUORESCENCE DETECTION
SYSTEM
D. R. Westervelt and H. W. Hoerlin.
1965

LA-DC-7204 Unclassified

TIME RESOLVED SPECTROSCOPY OF AIR FLUORESCENCE PRODUCED BY HIGH ALTITUDE NUCLEAR EXPLOSIONS

S. N. Stone, H. W. Hoerlin, and D. R. Westervelt. 1965

WESTINGHOUSE 2/5260, Vol. 1, Secret RD PROCEEDINGS ON A SUMMER STUDY ON AIR FLUORESCENCE AT NBS, Boulder, Colo.

LASL Papers:

p. 34-79 DISCUSSION OF GROUND BASED SYSTEMS UTILIZING N_2^+

FIRST NEGATIVE FLUORESCENCE

Herman Hoerlin, Elbert Bennett, et al. July 1964

p. 296-300 DESCRIPTION OF THE LASL AIR FLUORESCENCE DETECTION SYSTEM

W. J. Tomlinson. July 1964

**LA-DC-6586

BRIEF DESCRIPTION OF LASL ENERGY DEPOSITION AND HIGH-ALTITUDE AND FLUORESCENCE CALCULATIONS

E. W. Bennett. August 1964

LA-DC-6585

FLUORESCENCE EFFICIENCY IN 3919 BAND (COMPARISON OF LABORATORY AND FIELD DATA)

H. W. Hoerlin. August 1964

LAMS-3048 Secret RD Sigma 3

SPECTROGRAPHIC AIR FLUORESCENCE MEASUREMENTS ON STARFISH, KINGFISH, AND BLUEGILL. INTERIM REPORT

Elbert W. Bennett and Michael W. Hane. February 1964

LAMS-2508 Unclassified

COMMENTS ON THE OPTICAL SURVEILLANCE SYSTEMS (VELA SIERRA)

Donald R. Westervelt. February 1961

ARPA-TR-60-6/S (p. 293-319) Secret AIR FLUORESCENCE SYSTEM FOR GROUND-BASED DETECTION OF NUCLEAR EXPLOSIONS IN SPACE

D. R. Westervelt. October 1960

LADC-3864 (J-10-546) Unclassified AIR FLUORESCENCE EXCITED BY GAMMA RAYS AND X-RAYS

A. Skumanich, D. R. Westervelt, and E. W. Bennett. August 1959

J-10-541 Unclassified

EXCITATION AND DE-EXCITATION IN THE NITROGEN BAND SYSTEMS

D. R. Westervelt and A. Skumanich. July 1959

LA-DC PUB-213 (AECU-4499) Unclassified AIR FLUORESCENCE IN THE UPPER ATMOSPHERE, AND ITS RELATION TO THE DETECTION OF NUCLEAR EXPLOSIONS IN SPACE
D. R. Westervelt. June 1959

2. Optical Power-Time

NRL Report 5524 Secret RD PROJECT 18.1, "OPTICAL PHENOMENA OF TEAK AND ORANGE SHOTS (EARLY TIME PHASE)"

D. F. Hansen, F. D. Harrington, et al. January 1961

NRL Report 5444 Secret RD POWER-TIME AND TOTAL-THERMAL MEASUREMENTS - TEAK AND ORANGE

D. F. Hansen, J. E. Perry, and A. G. Rockman. February 1960

C. SATELLITE SYSTEMS AND TEST DATA

ARPA-NTDO-68-45 (p. 91-102) Secret RD VELA SATELLITE PROGRAM: LAUNCH IV PERFORMANCE AND LAUNCH V PLANS RELATING TO X-RAY, GAMMA RAY, AND NEUTRON OBSERVATIONS

J. H. Coon. December 1968

ARPA-NTDO-68-45 (p. 169-74) Secret RD DELAYED GAMMA MEASUREMENTS

H. V. Argo. December 1968

LA-DC-7197 Unclassified SATELLITE-BASED NUCLEAR TEST DETECTION AND RADIATION IN SPACE AT 17 EARTH RADII

R. F. Taschek. May 1965

LA-DC-6906 Unclassified EXPERIMENTAL RESULTS FROM THE VELA SATELLITES AT DISTANCES NEAR 17 EARTH RADII

H. V. Argo. January 1965

LADC-6584 Unclassified HYPOTHETICAL DETECTION CAPABILITY FOR A 1 KT SEA LEVEL EXPLOSION OBSERVED IN SPACE AT A DISTANCE OF 10^5 KM FROM THE EARTH

Herman Hoerlin. September 1964

LAMS-3074 Unclassified DETECTION OF NUCLEAR EXPLOSIONS IN SPACE INCLUDING DETECTOR INFORMATION FOR LAUNCH 2

Members of Group P-4. April 1964

LA-DC-6654 and Transactions, American Geophysical Union, Vol 45, p. 623
Unclassified

INTRODUCTION TO THE SCIENTIFIC RESULTS FROM THE VELA SATELLITE PROGRAM

H. V. Argo. March 1964

LADC-5489 Unclassified SATELLITE-BASED DETECTION OF NUCLEAR EXPLOSIONS IN DEEP SPACE

R. F. Taschek. March 1964

LADC-5496 Unclassified
 INTERPRETATION OF SATELLITE DETECTOR
 COUNTER RATES
 P. J. Edwards. 1963

LADC-5752 Unclassified
 NATURAL AND ARTIFICIAL RADIATION EN-
 VIRONMENT ENCOUNTERED DURING MISSIONS
 IN SPACE
 Richard F. Taschek. May 1963

DASA 1327 (DASA-DC-SR-4) Secret Gp 4
 PROCEEDINGS: THE ARTIFICIAL RADIA-
 TION BELT, Goddard Space Flight
 Center, 1962

LASL Papers:
 p. 81-88 INTERPRETATION OF SATELLITE
 DETECTOR COUNTING RATES
 A. G. Petschek.
 October 1962

p. 345-51 SHIELDING CALCULATIONS
 A. G. Petschek.
 October 1962

ARPA-TR-60-6/S Secret
 p. 335-365 VELA-HOTEL DETECTOR AND
 LOGIC CONCEPT-LASL/
 SANDIA
 A. D. McGuire.

p. 419-435 CURRENT PROGRAM OF THE
 LASL AND SANDIA CORP.
 (PROJECT VELA)
 James H. Scott.

SWC-58-TS-060 Top Secret
 NOTES FROM HIGH ALTITUDE WEAPONS
 EFFECTS SYMPOSIUM, 20-21 May 1958,
 Albuquerque, New Mexico.
 Frederick Reines and
 Rolf Landshoff.

D. BOMB DEBRIS CHEMISTRY

JMDR-67-2 (p. 191-4) Secret RD Sigma 3
 DESCRIPTION OF CLOUD RISE AND AIR
 SAMPLING TECHNIQUES
 Paul R. Guthals. Fall 1966

VII. EYEBURN

J-10-1443 Secret RD
 REVIEW OF THE RETINAL BURN HAZARD
 ASSOCIATED WITH LOW AND HIGH ALTITUDE
 TESTING
 D. S. Sappenfield. September 1967

LA-3204-MS Unclassified
 CALCULATION OF RETINAL DOSE DUE TO
 VISIBLE RADIATION FROM NUCLEAR EX-
 PLOSIONS
 Robert D. Cowan. October 1964

LAMS-2337 Secret RD Sigma 1
 HIGH ALTITUDE EXPLOSIONS AND EYEBURN
 PROBLEM. A DISCUSSION OF THE EARLY
 FIREBALL PHASES OF NUCLEAR EXPLOSIONS
 AT ALTITUDES HIGHER THAN 100 KM, WITH
 EMPHASIS ON THE EMISSION OF VISIBLE
 LIGHT AND THE RESULTING CALORIC DOSE
 ON THE RETINA OF THE DARK ADAPTED
 HUMAN EYE
 Herman Hoerlin, Andrew Skumanich,
 and Donald R. Westervelt.
 August 1959

 VIII. INSTRUMENTATION AND DATA REDUCTION
 METHODS FOR HIGH ALTITUDE NUCLEAR TESTS

LA-4903-MS Confidential DI Gp. 1
 Sigma 3
 OPTICAL INSTRUMENTS FOR HIGH ALTITUDE
 NUCLEAR TESTS, THE JOWOG-13 OPTICAL
 INSTRUMENT SUBWOG
 H. Milton Peek. April 1969

EGG B-3968 (EGG-1183-484) Unclassified
 THREE-BAND SOURCE SPECTRA FROM COLOR
 FILM
 J. Buckner, R. Maciel. March 1969

EGG B-3885 (EGG-1183-469) Unclassified
 RANDOM FLUCTUATIONS IN MICRODENSITOM-
 ETER READING AS A CAUSE OF SYSTEMATIC
 ERRORS IN THE COMPUTED VALUES OF EX-
 POSURE
 K. L. Larner. September 1968

EGG B-3768 (EGG-1183-446) Unclassified
 RADIOMETRIC ANALYSIS OF PHOTOGRAPHIC
 DATA BY THE EFFECTIVE EXPOSURE METHOD
 Betsy J. Constantine. May 1968

LA-3865 Confidential RD Sigma 3
 MAPMAG--PROJECTION OF GEOMAGNETIC
 FIELD LINES ONTO A FILM PLANE WITH
 APPLICATION TO STARFISH EVENT
 Gayle M. Connor. April 1968

LA-3727 Unclassified
 EVALUATION OF LENSES FOR USE IN ALL-
 SKY PHOTOMETERS
 Guy E. Barasch. September 1967

EGG B-3660 (EGG-1183-414) Unclassified
 RADIOMETRIC DATA REDUCTION SYSTEM FOR
 PHOTOGRAPHIC FILM
 J. K. Buckner. September 1967

DASA 1600 (Dasiac Rv 65-1) (p. 39-56)
 Secret RD Gp 1
 PROCEEDINGS OF THE FIRST HIGH ALTI-
 TUDE OPTICAL WORKSHOP
 H. Milton Peek. March 1965



IX. MISCELLANEOUS

DASA-1327 (DASA-DC-SR 4) Secret Gp 4
SYMPOSIUM PROCEEDINGS - THE ARTIFICIAL RADIATION BELT

LASL Paper:
p. 339-47 SIGNIFICANCE OF THE BIO-EFFECTS
W. H. Langham.
October 1962

LAMS-2442 Secret RD Sigma 1
PROCEEDINGS OF THE CONFERENCE ON SCIENTIFIC APPLICATIONS OF NUCLEAR EXPLOSIONS HELD JULY 6-8, 1959.
Los Alamos, New Mexico
George A. Cowan, compiler.
October 1960

LASL Papers:
p. 28-43 RADIOCHEMICAL EXPERIMENTS WITH NUCLEAR DEVICES
George A. Cowan.

p. 59-73 ARTIFICIAL AURORAE AND RELATED PHENOMENA
Herman Hoerlin.

p. 100-107 NUCLEAR EXPLOSIONS IN SPACE
Conrad L. Longmire.

p. 108-130 ON RADIATION PRESSURE ACCELERATION OF OUTER BOMB LAYERS
Andrew Skumanich.

p. 131-142 A SYMPOSIUM ON "FIREBALL SPIKES"
Alfred T. Peaslee.

p. 143-153 HYDRODYNAMICS STUDIES WITH NUCLEAR EXPLOSIONS
Stanislaw Ulam.

p. 154-161 MEASUREMENT OF OPACITIES
Arthur N. Cox and
Robert R. Brownlee.

LAMS-2443 Unclassified
PROCEEDINGS OF THE CONFERENCE ON SCIENTIFIC APPLICATIONS OF NUCLEAR EXPLOSIONS HELD JULY 6-8, 1959.
Los Alamos, New Mexico
George A. Cowan, compiler.
September 1960

LASL Papers:
p. 22-25 PROPERTIES OF VERY HEAVY NUCLEI PRODUCIBLE BY MULTIPLE NEUTRON CAPTURE IN PLUTONIUM
Jere Donald Knight.

p. 61-63 BOMBS AND ANTINEUTRINO EXPERIMENTS
Frederick Reines.

UCRL-5679 (LA-DC-NN-224) Unclassified
PROCEEDINGS OF PLOWSHARE SYMPOSIUM, 2ND, San Francisco, May 13-15, 1959

LASL Paper:
p. 96-110 NUCLEAR EXPLOSIONS IN SPACE FOR SCIENTIFIC PURPOSES
Harold Argo,
Herman Hoerlin, et al.
May 1959

LAMS-2391 Unclassified
NUCLEAR EXPLOSIONS AS NEUTRON SOURCES. TALK GIVEN AT PLOWSHARE SYMPOSIUM. San Francisco, California. May 1959
George A. Cowan.

