

UNCLASSIFIED

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ATLAS - "PILOT LIGHT"

Missile: Atlas 106F, AF Serial No. 62-12142

Launched: 1859:54.35Z, 8 January 1965, 576-G Site

Countdown History:

The first launch attempt was on 7 January 1965. The first countdown proceeded normally until approximately 30 seconds prior to engine start, at which time a red range light was received. Abort was initiated at that time. Red range light was received because of momentary loss of signal strength detected by the Navy Safety Officer, in the command destruct system while the missile was being driven to the surface. Although the range status returned to green shortly, a complete re-cycle was already necessitated by the abort action. Abort and re-cycle systems functioned normally. The second attempt to launch was begun on 7 January 1965. The second count proceeded normally until shortly after the fine LOX loading was completed. Although individual systems indicated green condition, the system summary (LN₂/HE) did not get a green light. An abort was necessitated and the mission was scrubbed for the day because of insufficient re-cycle time. The third attempt to launch occurred on 8 January 1965. The P-Count began at 1530Z. The count proceeded smoothly to P-0 at 1830Z. R-7 and counting occurred at 1833Z and proceeded to R-0 at 1840Z. The countdown started at 1843Z. "Missile Ready for Commit", was achieved at 1850Z. The commit sequence started at 1856Z and lift-off occurred at 1859:54.35Z. There were no anomalies and the missile was launched successfully on this attempt.

Flight Performance:

1. Performance was normal for all subsystems. Discrete events occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO (Engine relay switch closure)	125.3	126.75
SECO	303.8	303.25
VECO	317.2	318.32
R/V Separation	323.2	324.35
Retre	335.2	336.35
Tank Frag	519.2	521.05

2. The Pacific Missile Range GERTS acquired in the first cube.

3. Impact Data:

GERTS	3.9 NM Long and 1.2 NM Left
Visual (Theodolite)	3.0 NM Long and 1.0 NM Left

Remarks:

Operation "Pilot Light" was flown to evaluate the performance, accuracy, and environment of the Inertial Guidance Computer, and to obtain data on the booster subsystems.

WFTA-5-011

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30 JAN 1968

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UNCLASSIFIED
DOWNGRADED
DECLASSIFIED
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ATLAS - "PENCIL-SET"

Missile: 166D (S/N 61-2589)

Launched: 1432:26.880Z, 12 January 1965, 576-B Site, Pad 1.

Countdown History:

The first launch attempt occurred on 9 January 1965. The ground guidance system failed to hold lock and subsequent troubleshooting used up most of the window time. Launch was scrubbed and a new guidance beacon was installed on the following day. The second launch attempt occurred on 12 January 1965. Countdown began at T-280 at 0750Z. Count proceeded to T-99 at 1015Z where, during loop test, the vernier 2 yaw bias indicated red. Count resumed at T-99 at 1135Z, and proceeded normally to T-35, where a hold was initiated to wait for the Nike-Zeus system which was at Z-3 and holding. Nike-Zeus arrived at Z-0 and ready at 1300Z. Atlas count then picked up from T-35 and continued to T-6, when ground guidance gave a no-go indication on the loop test. Guidance lock of the pulse beacon could not be held in conical mode low power, which is the same indication given on the first attempt on 9 January 1965. A guidance go indication was obtained by shutting off the pad air conditioning to permit guidance components to warm. Temperature is critical on this electron tube guidance package. Countdown picked up at T-6 at 1426Z, and proceeded smoothly to lift-off at 1432:26.880Z.

Flight Performance:

1. Performance was normal for all subsystems. Discrete flight events occurred as follows:

<u>Event</u>	<u>Planned</u>	<u>Actual</u>
BECO	136	136.80
SECO	271	272.60
VECO	290	290.00
R/V Separation	293	293.10
BSE Separation	293.5	293.10
HIRS Pitch Rocket Fire	298	303.10
HIRS Retro-Rocket Fire	308 (Approx)	316.70

2. The Pacific Missile Range GERTS acquired in the first cube.

3. Impact Data:

GERTS: 2.80 NM Short and 1.0 NM Right
MOD III: 0.12 NM Long and 0.8 NM Right

Remarks:

Operation "Pencil Set" was flown to present a target for the Nike-Zeus radar system and to gather data for future R/V design.

VWTA-5-10

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30 JAN 1968

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DOWNGRADE AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 18 YEARS
MOD. DIR. 5800.10

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CONFIDENTIAL *Jan 65*

ATLAS - "BEAVER'S DAM"

Missile: Atlas 172D (AF Serial Number 62-5991)

Launched: 2134:54.145Z, 21 January 1965, Complex 576B, Pad 3.

Countdown History:

The countdown was to start at T-245 at 1525Z, but was slipped one hour due to an OVI-1 technical hold. Count began at T-245 at 1625Z and proceeded smoothly to T-215 at 1655Z when a 15 minute technical hold was initiated to research an OVI-1 helium pressure system problem. Pressure drop was found to have been caused by a disconnection of high pressure lines. Count resumed from T-215 at 1710Z and continued to T-20 at 2026Z, when an 18 minute hold was imposed to wait for a train. Terminal countdown began at T-20 at 2044Z. A hold was initiated at T-16 to check a booster fuel loading problem. Countdown then proceeded to T-5, when a hold was initiated for downrange weather (thunderstorm in R/V impact area) and investigation of interference on an OVI-1 frequency, TANGO 78. Interference problem was resolved during the count, which picked up at T-5. A short hold occurred at T-3 for a GO-NO/GO check. Count picked up at T-3 and proceeded smoothly to lift-off at 2134:54.145Z.

Flight Performance:

1. A sustainer engine anomaly caused early engine shutdown, which caused the MTV to impact short of the target. The OVI-1 Orbiting Vehicle did not eject from the Atlas Missile. Significant flight events occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	132	132.50
SECO	300	291.58
OVI-1 Separation	302.5	-----
VECO	319	299.05
R/V Separation	337	329.45

2. The Pacific Missile Range GERTS acquired in the first cube.

3. Impact Data:

GERTS	218.222 NM	Short and 1.178 NM Right
MOD III	223	NM Short, unknown azimuth

Remarks:

The primary objectives of this mission were to gather flight data on the Materials Test Vehicle (MTV-1) and to place an Orbiting Vehicle (OVI-1) into an equatorial orbit. The objectives were not achieved. Flight anomalies are currently under investigation.

DOWNGRADED AT 3 YR INTERVALS;
DECLASSIFIED AFTER 12 YRS
DOD DIR 5200.10
Mismarked, see ltr in *ASB* ASAS D Bk I.

Judman
JEFFERSON E. SCHROEDER, TSgt, USAF

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VWTA-5-016

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PORK BARREL
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UNCLASSIFIED

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ATLAS - "DRAG-BAR"

DOWNGRADE AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS
DOD DIR 5200.10

Missile: 211D (S/N 62-12428)

Launched: 1111:16.47Z, 27 February 1965, Complex 576-A, Pad 1.

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Countdown History:

The first attempted launch for Operation "DRAG-BAR" occurred on 27 Feb. 1965. The countdown began at T-220 at 0430Z. At T-190 at 0500Z downrange reported that there would be a planned two hour delay during the count because of technical difficulties with TRADEX radar. The window was changed from 1030Z to 1430Z to accomodate the planned two hour delay. The countdown proceeded to T-50 at 0720Z, at which time one hour and thirty minutes of the planned downrange hold occurred. The count picked up again at T-50 at 0850Z and continued to T-25 at 0915Z, at which time the remaining thirty minutes of the planned two hour downrange hold occurred. The count picked up again at T-25 at 0945Z. Terminal count began at 0949Z. The twenty minute planned hold for LOX topping cycles was extended to investigate and clear a possible LN2 leak in the boat tail. The malfunction was cleared and the count resumed at T-3. The commit sequence was stopped because of no indication of automatic flow of cooling water in the flame bucket. Commit was again started with flame bucket cooling water in manual operation. Commit was stopped again because of a red range light, but range green appeared shortly thereafter and the commit sequence proceeded to lift-off. Lift-off occurred at 1111:16.474Z.

Flight Performance:

1. Performance was nominal for all subsystems. Discrete flight events occurred as follows:

<u>EVENT</u>	<u>PLANNED TIME</u>	<u>ACTUAL TIME</u>
BECO	140	139.9
SECO	266	266.0
VECO	285	284.4
R/V Separation	288	287.4
Decoy Eject	289	288.4
HIRS Pitch	298	298.8
HIRS Retro	312 (approx)	306.6

2. The Western Test Range GERTS acquired in the first cube.

3. Impact Data:

GERTS	0.898 NM Right,	0.4535 NM Short
MOD III	0.4 NM Right,	0.0 NM Range

Remarks:

Operation "Drag-Bar" was Flown to evaluate the effect of slender re-entry vehicle configurations upon re-entry optical and radar observables. The AVCO Low Observable Re-entry Vehicle (LORV)-4 was the fifth in a planned series of eight to be fired from the Western Test Range. A GE/RSD Graphite Test Vehicle (Miniature R/V) was carried as an auxiliary payload to test heat shielding materials.

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18 MARCH 65

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ATLAS - "PORK-BARREL"

UNCLASSIFIED
DOWNGRADE AT 3 YEAR INTERVALS
DECLASSIFIED AFTER 12 YEARS
DOD DIR 5200.10

Missile: 301D (S/N 62-12604)

Launched: 0952:31.4172Z, 2 March 1965, Complex 576-A, Pad 3.

Countdown History:

The first attempted launch for Operation "Pork-Barrel", occurred on 26 Feb. 1965. The count proceeded smoothly to T-25 at 1045Z when a ninety-seven minute hold was required for a downrange aircraft (which experienced pre-take-off mechanical difficulties) to arrive on station, and to allow for trains to clear the launch corridor. The count resumed and another hold for one hour and twenty-three minutes occurred because of main missile battery difficulties. After resuming the count again, a ten minute hold was required for the LN2 fine load valve (LN-23). The count was again picked up and it continued into terminal count. After the LO2 topping cycles were completed, the range went "Red" because of five unidentifiable objects in the re-entry area. The window was extended to 1550Z; however, the range remained "Red" throughout that time and the mission was scrubbed at 1535Z due to range "Red" and aircraft low on fuel. The second launch attempt, on 1 March 1965, was successful. Count began at T-200 at 0550Z and proceeded smoothly to T-3 at 0856Z when a planned hold was initiated to allow for three LO2 topping cycles for LO2 density stabilization. During this hold, Kwajalein requested a fifteen minute hold for PRESS Radar at 0925Z. This hold was further extended to 0949Z because of a train in the hazard corridor. The count resumed at 0949Z and proceeded smoothly to lift-off at 0952:31.4172Z.

Flight Performance:

1. Discrete flight events occurred as follows:

<u>EVENTS</u>	<u>PLANNED TIME</u>	<u>ACTUAL TIME</u>
BECO	137	136.62
SECO	269	265.42
VECO	288	285.42
RMV Separation	291	287.94
HIRS Pitch	296	298.02
HIRS Retro	306	310.97

2. Booster telemetry abruptly ceased operating at 319 seconds, indicating that the sustainer tank broke up shortly after the HIRS operation. Break-up was substantiated by an unusual amount of debris being observed by downrange radar. Quick look data indicates that low propellant tank pressurization allowed HIRS "G" forces to cause missile break-up. R/V TIM continued operating until impact.

3. The Western Test Range GERTS acquired in the first cube.

4. Impact Data: (Miss distances, as referenced looking downrange)
GERTS: 9.78 NM Short 0.52 NM right
MOD III 0.1 NM Long 0.1 NM right

REMARKS:

Operation "Pork-Barrel" was a Nike Targets Measurements Program (NIMP) launch.

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ATLAS - "ANGEL CAMP"

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Missile: 154D (S/N 61-2577)

Launched: 2321:52.950Z, 12 March 1965, ABRES B Complex, Pad 3

Countdown History:

Countdown began at T-240 at 1930Z, 12 March 1965 after a space launch was clear of the range. The count proceeded to T-70 at 2221Z when the count was jumped to T-40. At 2311Z, a six minute hold was initiated for a train in the launch corridor. The count resumed at 2317Z and proceeded smoothly to lift-off at 2321:52.950Z.

Flight Performance:

1. Performance was nominal for all subsystems. Discrete flight events occurred as follows:

<u>EVENT</u>	<u>PLANNED TIME</u>	<u>ACTUAL TIME</u>
BECO	137	136.011
Booster Jettison	140	138.876
SECO	276	274.316
VECO	296	292.948
R/V Separation	313	310.234
Atlas Retro-rocket Ignition	315	313.199

2. The Western Test Range GERTS acquired in the first cube.

3. Impact Data:

GERTS:	1.039 NM Left,	1.5 NM Short
MOD III:	0.08 NM Left,	0.0 NM Range

Remarks:

Operation "Angel Camp" was flown to collect Materials Test Vehicle (MTV-2) performance data. Telemetry was not used. Data collection was contingent upon recovery of on-board tape recorders. The R/V shattered upon impact in the Eniwetok Atoll area, but recovery was effected. AVCO reports that objectives of the mission were completed.

VWTA-5-055

DOWNGRADED AT YEAR INTERVALS;
DECLASSIFIED EVERY 25 YEARS.
DOD DIR 5200.10

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ATLAS - "FRESH FROG"

Missile: 297D (S/N 62-12609)

Launched: 0901:11.616Z, 26 March 1965, ABRES A Complex, Pad 1.

Countdown History:

Countdown began at T-280 at 0350Z on 26 March 1965. The count proceeded smoothly to T-4 at 0826Z when a twenty-two minute hold was initiated for downrange radar. The count resumed at T-4 at 0848Z. A technical hold was initiated at 0849Z to resolve a noisy signal in the main AVCO Tango 52 real time no-go readout in CTCS. The filter in the 22 KC discriminator in PAM/FM/FM equipment was the problem. The trouble was cleared by sliding an electronic tray out and back in to establish good electrical contact. The count resumed at T-4 at 0857Z, and proceeded smoothly to lift-off.

Flight Performance:

1. Performance was nominal for all subsystems. Discrete flight events occurred as follows:

<u>EVENT</u>	<u>PLANNED TIME</u>	<u>ACTUAL TIME</u>
BECO	139.4	139.598
Booster Jettison	142.4	142.456
SECO	267.5	264.541
VECO	286.7	284.629
R/V Separation	290.1	287.504
GTV Ejection	290.7	288.50
HIRS Pitch Rocket	298.1	297.699
HIRS Retro-Rocket	310.1	308.985

2. The Western Test Range GERTS acquired in the first cube.

3. Impact Data:

GERTS	0.94 NM Short,	0.0 NM Cross-range
MOD III	0.0 NM Range,	0.0 NM Cross-range

Remarks:

Operation "Fresh Frog" was flown to evaluate the effects of slender vehicle configurations upon re-entry optical and radar observables. The AVCO Low Observable Re-entry Vehicle (LORV-7) was the sixth in a series of eight to be fired on the Western Test Range. A GE/RSD Graphite Test Vehicle (GTV-3a) was carried as an auxiliary payload to test heat shielding materials.

VWTA-5-054

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18 FEB 1972

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GROUP 4

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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UNCLASSIFIED

ATLAS - "FLIP SIDE"

Missile: 150D (S/N 61-2518)

Launched: 1334:59.973Z, 6 April 1965, ABRES B Complex, Pad 1

Countdown History:

The first launch attempt occurred on 2 April 1965. The launch was cancelled due to mechanical difficulties in the TRAP I aircraft. The second attempt occurred on 3 April 1965, but was cancelled when the missile autopilot gyro failed to gain the proper speed of rotation. The autopilot canister was replaced. The third launch attempt began at 0500Z on 6 April 1965. The count proceeded smoothly until T-144 at 0734Z when a hold was imposed for MOD III Ground Guidance Station and main missile battery comparative voltage circuit problems. The count resumed at T-144 at 1045Z and proceeded to T-3 at 1252Z, when a hold was imposed for trains in the launch corridor and for frequency interference experienced at the MOD III Ground Guidance Station and the WTR FPS-16 (C-Band) sensor. Count resumed from T-3 at 1332Z and continued smoothly to lift-off.

Flight Performance:

1. All subsystems performed satisfactorily. Discrete flight events occurred as follows:

<u>EVENT</u>	<u>PLANNED TIME</u>	<u>ACTUAL TIME</u>
BECO	135.9	136.2
SECO	275.2	272.6
VECO	293.8	292.6
R/V Separation	296.6	295.0
HIRS Pitch Rocket	307.6	205.85
HIRS Retro Rocket	321.2	320.3

2. The Western Test Range GERTS acquired in the first cube.

3. Impact Data:

GERTS:	1.3 NM Short,	0.65 NM Right
MOD III:	0.1 NM Short,	0.1 NM Right

Remarks:

Operation "FLIP Side" was flown to test the radar and optical characteristics of the WAC-4 re-entry vehicle. Auxiliary payloads included two Mark 4 decoys and exo-atmospheric chaff. The R/V was targeted to the Kwajalein Atoll area, approximately 4177 nautical miles downrange.

VWTA-5-056

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DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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ATLAS - "TENNIS MATCH" R

Missile: 68D (S/N AF 58-7063)

Launched: 0254:56.832Z, 27 May 1965, ABRES-B Complex, Pad 3

Countdown History:

Countdown for the first launch attempt began at 1110Z on 27 May 1965. The same guidance malfunction occurred during two successive loop checks. A faulty de-coder cable pin connector was located and replaced. The second countdown began at 2315Z on 27 May 1965. At T-35, a 45 minute hold was imposed to resolve an OVL-3 C-Band Beacon problem. Late in task 5, a 20 minute hold was imposed for LO₂ topping and a train in the launch corridor.

Flight Performance:

Thrust decay began after approximately 120 seconds of flight. All telemetry was lost at 226 seconds. Missile break-up was observed and Missile Destruct was sent at 293 seconds. The predicted impact was 353 miles west of the launch pad. Flight failure evaluation is in progress.

2. The Western Test Range GERTS acquired in the first cube.
3. Impact Data: See Flight Performance.

Remarks:

This was the second attempt to launch an OVL into orbit. The first OVL failed to eject from its Atlas "D" missile. No positive conclusions have been reached to date concerning Atlas missile 68D failure.

VWTA-5-083

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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ATLAS - "OLD FOGY"

15

Missile: 177D (S/N AF 62-5992)

Launched: 1038:09.082Z, 3 June 1965, ABRES-B Complex, Pad 2

Countdown History:

The countdown for the first launch attempt began at 0415Z on 27 March 1965. The launch was scrubbed after mechanical failure of a relay in the AGE launch control logic caused impacting fuel to damage the missile fuel "Y" duct and missile fuel fill and drain valve. Fuel was pumped overboard onto the launch pad. The missile was 41D. Possible engine corrosion was detected, and 41D was removed from the pad. Missile 177D was readied during downrange down-time.

The second countdown began at 0555Z on 2 June 1965. A 15 minute hold was called for Nike DR at T-35 (0925Z). At T-12 (1005Z), KTS called a hold to reposition the EC-121 aircraft for optimum optical data gathering. An 8-minute hold was called for trains at 1027Z. At 1035Z the count resumed at T-3 and proceeded smoothly through lift-off.

Flight Performance:

1. Performance appeared nominal for all subsystems. Discrete flight events occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	138	137.43
Booster Jettison	141	140.43
SECO	268	267.15
VECO	287	285.35
RMV Separation	290	288.42
HIRS Pitch Rocket	295	298.74
HIRS Retro-rocket	305	309.19

2. The Western Test Range GERTS acquired in the first cube.

3. Impact Data:

GERTS:	1.532 N.M. Short	1.017 N.M. Right
MOD III:	0 N.M. Short	0 N.M. Right

Remarks:

Operation "Old Fogey" was flown in support of the Nike Target Measurements Program (NTMP). The General Electric RMV-304 was the first of four 304's to be flown on the AFWTR. Auxiliary payloads were four 7 1/2 inch in diameter Bell Spheres of the BSE-2 Experiment.

VWIA-5-084

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
EOD DIR 5200.10

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ATLAS - "LEA RING"

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Missile: 299D (S/N AF 62-12611)

Launched: 1517:03.184Z, 8 June 1965, ABRES-A Complex, Pad 1

Countdown History:

The first attempt to launch began at 0655Z (T-280) on 4 June 1965. The mission was scrubbed when insufficient time remained to replace components indicated faulty in the B-2 patch test. The second countdown started at 0730Z (T-280) on 7 June, 1965. At T-15, the R/V continuity monitoring circuit indicated an R/V malfunction at 70% LOX load. The indication disappeared when LOX was drained. Upon re-cycling, the same indication occurred again at 70% LOX load. The indication remained through 95% LOX load, but disappeared when LOX was drained. The mission was scrubbed after attempts to rectify the anomaly failed. The third launch attempt began at 0800Z on 8 June 1965 and proceeded smoothly through lift-off.

Flight Performance:

1. Performance was nominal for all subsystems. Discrete events occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	139.9	139.7
Booster Jettison	143	142.02
SECO	265.8	264.6
VECO	284.9	285.1
R/V Separation	287.9	288.2
ECM Decoy Ejection	289	289.5
HIRS Pitch Rocket	297.9	298.3
HIRS Retro-rocket	311.5	309.1
R/V Impact	1833	1832

2. The Western Test Range GERTS acquired in the first cube.

3. Impact Data:

GERTS:	0.958 N.M. Short	0.818 N.M. Right
MOD III:	0.25 N.M. Short	0.2 N.M. Right

Remarks:

Operation "Lea Ring" was flown to evaluate the effects of slender vehicle configurations upon re-entry optical and radar observables. The AVCO LORV-6 was the seventh of eight in a series of eight to be fired on the AFWTR. The first of the Sperry ECM decoys (Model A-1) was carried as an auxiliary payload.

VWTA-5-082

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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UNCLASSIFIED

ATLAS - "STOCK-BOY"

Missile: 302D (S/N AF 62-12605)

Launched: 1226:40.442Z, 10 June 1965, ABRES-A Complex, Pad 3

Countdown History:

Countdown began at 0640Z on 10 June 1965. High battery resistance caused battery check to be moved from Task 1 to Task 5. GERTS problem caused Loop Check to be run without GERTS. GERTS checked out after Range Safety Command checks. At T-38 (1002Z) an Atlas hold was called for erratic landline hydraulic readings, suspected LOX leak and low pressure reading on the Integrated Start System. During the Atlas hold, KTS called a hold and cleared a TTR-5 problem. Atlas count resumed at T-38 (1147Z). The count then proceeded smoothly until lift-off.

Flight Performance:

1. All missile subsystems operated normally. Flight events occurred as follows:

<u>Event</u>	<u>Planned</u>	<u>Actual</u>
BECO	137	136.78
SECO	276	278.04
VECO	295	298.64
RMV Separation	298	301.13
Auxiliary Payload Ejection	298	304.50
HIRS Pitch Rocket	308	311.26
HIRS Retro-rocket	316	322.11

2. The Western Test Range GERTS acquired in the first cube.

3. Impact Data:

GERTS:	1.439 Short	0.7 N.M. Right
MOD III:	0.03 Short	0.4 N.M. Right

Remarks:

Operation "Stock-Boy" was flown in support of the Nike Target Measurements Program (NTMP). The General Electric RMV-303 was the second of seven 303's scheduled to be flown on the AFWTR. Auxiliary payloads were three 7.5 inch (diameter) spheres of the Bell Spheres Experiment.

VWTA-5-081

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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UNCLASSIFIED

ATLAS - "BLIND SPOT"

Missile: 59D (S/N AF-57-2230)

Launched: 0954:11.865Z, 1 July 1965, from ABRES B Complex, Pad 1

Countdown History:

Countdown was initiated at 0455Z on 1 July 1965. The count proceeded normally until 0915Z (in Task 4) when the Kwajalein Test Site imposed a hold for a power problem in the Nike Battery Control Building. The problem was corrected and Nike radar was ready at 0848Z. The hold was continued to complete the R/V checkout that was delayed due to AGE problems at the launch site. The count resumed at 0910Z (T-40) and Task 4 was completed at 0915Z. Task 5 was started at 0915Z and continued to 0945 (T-5) when a four minute hold was imposed for a train in the hazard corridor. The commit sequence was normal, and lift-off occurred at 0954:11.865Z.

Flight Performance:

1. Performance was nominal for all subsystems. Discrete flight events occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	136.9	135.88
SECO	270.6	264.80
VECO	290.0	283.38
RMV Separation	292.5	285.88
Auxiliary Payload Ejection	295.5	288.88
HIRS Pitch Rocket Fire	302.5	295.78
HIRS Retro-rocket Fire	310.5	307.88
RMV Impact	1625.0	1620.00

2. The Western Test Range GERTS acquired in the first cube.

3. Impact Data:

GERTS:	2.225 N.M. Short	0.381 N.M. Right
MOD III:	0.1 N.M. Short	1.5 N.M. Left

Remarks:

Operation "Blind Spot", Mission KX-32, was flown in support of the Nike Targets Measurements Program (NTMP). The Re-entry Vehicle was the General Electric RMV-301, the second of four 301's to be flown on the AFWTR. The auxiliary payload was the Bell Spheres Experiment (BSE) number 8, which ejected three 7 1/2 inch spheres to test the re-entry properties of various materials.

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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VWTA-5-092

Wing/N#

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ATLAS--"PIANO WIRE"

UNCLASSIFIED

Missile: 183D (S/N 62-5993)

Launched: 1243:08.399Z, 4 August 1965, ABRES-B Complex, Pad 1

Countdown History:

Countdown began at 0745Z on 4 August 1965. The count proceeded normally into Countdown Task 4, when at 1048Z the downrange PRESS System initiated a hold which lasted until 1155Z. The Atlas count was held at T-45 minutes during the PRESS hold. The count was resumed at 1155Z and proceeded normally to lift-off at 1243:08.399Z.

Flight Performance:

1. The flight progressed normally through VECO; however, R/V separation and subsequent planned events did not occur. The cause of the failure was and has not been definitely determined, but both GD/C and GE/RSD agree that the failure was probably due to an electrical short which occurred at the time of the R/V separation signal.
2. The AFWTR GERTS acquired in the first cube.
3. Impact Data:

The Instantaneous Impact Prediction (IIP) presented by GERTS was 1.113 NM short and 0.515 NM left of the intended target. Mod III Guidance predicted 0.3 NM short with zero azimuth error. The above predictions were based upon normal R/V separation.

Remarks:

Operation "PIANO WIRE", Mission WAC-5, WTR Ops. Number 7611, was flown in support of the ABRES Program. The re-entry vehicle under test was the General Electric Wake Analysis and Control Vehicle number 5 (WAC-5). Auxiliary payloads were fast chaff and one Mark 4 decoy. Due to the failure of the R/V to separate none of the test objective were met.

This document supersedes Commander's Summary dated 9 Sep 65, VWTA-5-123, which should be destroyed.

VWTA-5-131

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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ATLAS--"SEA TRAMP"

UNCLASSIFIED

Missile: 147F (S/N 62-12619)

Launched: 1321:28.190Z, 5 August 1965, ABRES-A, Complex, Pad 2.

Countdown History:

Countdown started at 0916Z on 5 August 1965. The count progressed normally to the end of Task 6, when a 20-minute hold was imposed for the Nike-X Discrimination Radar System. Nike reported ready, and Task 7 was started at 1216Z. Commit stop was initiated at T-60 seconds to gain hold for Nike-X. Missile countdown was recycled to T-4 minutes. Nike reported ready at 1306Z and the count was again started. A second commit stop was initiated at T-30 seconds due to a lack of water deluge in the launcher flame bucket. The count was recycled to T-4 minutes, and was resumed at 1317Z. Lift-off occurred at 1321:28.190Z.

Flight Performance:

1. Flight events, with times referenced in seconds after lift-off, occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	125	126.81
SECO	299	297.82
VECO	314	313.46
R/V Separation	320	320.50
GTV Ejection	321	The Graphite Test Vehicle did not eject
HIRS Pitch Rocket Fire	330	330.4
HIRS Retro-rocket Fire	345	342.3

2. The GERTS Instantaneous Impact Prediction (IIP) was 1.025 NM short and 0.997 NM left of the intended target.

Remarks: Operation "SEA TRAMP", Mission LORV-2A, WTR Ops Number 7650, was an ABRES mission. The re-entry vehicle was the AVCO Low Observable Re-entry Vehicle (LORV) 2A. The auxiliary payload was a General Electric Graphite Test Vehicle (GTV). This was the last in a series of eight LORV missions. Good booster and R/V data was acquired by range sensors. The GTV failed to eject and no data was gathered on GTV objectives. Cause of the failure of the GTV to eject cannot be determined from available data.

This document supersedes Commander's Summary dated 9 Sep 65, WTA-5-125, which should be destroyed.

WTA-5-132

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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ATLAS - "TONTTO RIM"

Missile: 61D (S/N 58-7056)

Launched: 1120:14.38Z, 26 August 1965, ABRES-B Complex, Pad 2

Countdown History:

The first launch attempt began at 0456Z on 25 August 1965. The launch was aborted at approximately 1215Z due to an indication of engine gimbaling noticed during count-down evaluation in Task 5. Repairs were effected and the second countdown was started at 0455Z on 26 August 1965. The count progressed normally to 0815Z, at which time Nike-X initiated a hold. Count was resumed at 1030Z and lift-off occurred at 1120:14.38Z.

Flight Performance:

1. All systems functioned satisfactorily. Significant programmed flight events occurred as follows:

<u>EVENT</u>	<u>PLANNED TIME</u>	<u>ACTUAL TIME</u>
BECO	137	138.12
SECO	271	260.90
VECO	290	279.59
RMV Separation	293	282.21
BSE Ejection	293	282.21
HIRS Pitch Rocket Fire	303	292.48
HIRS Retro-rocket Fire	318	303.12

2. Impact Data: (Instantaneous Impact Prediction - IIP)

GERTS: 2.44 NM Short and 0.312 NM Left
MOD III: 1.75 NM Short and 0.200 NM Left

Remarks:

Operation "TONTTO RIM" Mission KX-41, WTR Ops Number 7963 was flown in support of the Nike Targets Measurements Program 479A. The Re-entry vehicle was the General Electric Re-entry Measurements Vehicle (RMV) type 304. An auxiliary payload, the Bell Spheres Experiment (BSE-5), was carried in an Aeronutronic Division of Ford (ADP) MOD IIA Payload Ejection Mechanism in missile Quad I. Range sensors reported good data coverage of the mission.

VWTA-5-124

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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DOWNGRADED AT 5 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

ATLAS = "WATER SNAKE"

Missile: 125 D (AF Serial Number 60-5467).

This was the Nike Targets Measurements Program (NTMP) Mission KX-45. The Re-entry Vehicle was the GE/RSD Re-entry Measurements Vehicle (RMV) Type 303. An AVCO chaff experiment was carried in an ADP MOD II A Payload Ejection Mechanism (PEM). In addition, an ADP MOD IV PEM was carried for operational testing. This was the first MOD IV PEM to be flight tested.

Launched: 1040:11.075Z, 29 September 1965, from ABRES B Complex, Pad 1.

Countdown History:

Countdown was initiated at T-245 minutes at 0555Z, and proceeded normally to T-3 minutes at 0957Z, where a hold was imposed for ships in the Vandenberg and Kwajalein hazard areas. The count was recycled to T-5 for system re-verification, and was re-initiated at 1015Z. At 1017Z, the count was held at T-3 minutes to verify the status of the airborne beacon system. A third hold was imposed at 1023Z for a second ship and a train in the Vandenberg hazard area. The count was re-cycled to T-5, and was resumed at 1035Z. Count then proceeded normally to lift-off.

Flight Performance:

Significant flight events occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	137	139.04
SECO	271	265.99
VECO	290	286.10
RMV Separation	293	288.67
Chaff Ejection	295	291.17
HIRS Pitch Rocket Fire	303	298.84
HIRS Retro-rocket Fire	311	311.58
Impact	1625	1619.00

2. Impact Data:

GERTS: 1.696 N.M. Short and 0.894 N.M. Right
MOD III: 1.8 N.M. Short and 0.6 N.M. Right

3. Anomalies:

Three major anomalies occurred on this flight. (1) One of the two HIRS retro-rockets did not fire, causing less than the desired separation distance between the tank and the R/V. Subsequent flights will use a modified HIRS System. (2) The MOD IV PEM TLM system (TANGO 80) failed at approximately 200 seconds. However, important MOD IV TLM data was also transmitted by the booster TLM system, and valuable data was obtained. (3) Tank fragmentation by downrange command was not accomplished due to a failure in the airborne command destruct system.

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VWTA-5-152

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Atlas - "Seething City"

Missile: Atlas 34D (AF Serial Number 58-2205)

This launch was conducted under the Office of Aerospace Research, Program 850B. It was the first of four launches involving a dual Orbital Vehicle (OV)/nose mounted configuration. One active Orbital Vehicle, the OVL-2 was carried, while a second OV was represented by ballast. A Scientific Passenger Pod (SPP #A-302) was carried as an auxiliary payload.

Launched: 0907:08:000 Z hours, 5 October 1965 from Launch Complex ABRES B, Pad 3.

Countdown History: The countdown was initiated at 0430Z at T-240 minutes, and proceeded normally to T-35 minutes at 0755Z. A planned hold of 20 minutes was imposed until 0815Z. The count then continued to T-5 minutes at 0845Z. A second planned hold (10 minutes) was imposed to await the opening of the launch window (0900Z). This hold was extended for seven minutes for a train in the hazard area.

Flight Performance:

Flight events, referenced in seconds after lift-off, occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	132.4	133.23
SECO	297.6	299.07
SPP Ejection	299.2	299.40
OV Pod Door Open	300.0	300.23
OVL-2 Ejection	304.9	304.50
VECO	317.5	317.40
OVL-2 Rocket Motor Ignition	719.7	719.50
OVL-2 Rocket Motor Cutoff	743.7	744.12
Satellite Separation	840.7	843.00

The Satellite was successfully placed into orbit with the following parameters:

	<u>Planned N.M.</u>	<u>Actual N.M.</u>
Apogee	1837	1871
Perigee	236	209

Performance of the Scientific Passenger Pod was satisfactory.

Booster Impact Data: Impact was in the vicinity of Guam, however; no exact IIP was given due to switching of the GERTS computer to receive inputs for tracking the OVL-2.

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DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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ATLAS = "WILD GOAT"

Missile: 200D (AF Serial Number 62-5999)

This was Nike Targets Measurements Program (NTMP) Mission KX-33, WTR Ops Number 7927. The re-entry vehicle was the GE/RSD Re-entry Measurements Vehicle (RMV) Type 302. A MOD II A Payload Ejection Mechanism (PEM) carried and ejected the Bell Spheres Experiment Number Six. The Office of Aerospace Research Scientific Passenger Pod (SPP) Number A-206 was carried at WTR Ops Number 7591.

Launched: 1430:13.116Z hours, 29 November 1965 from Launch Complex ABRES A, Pad 1.

Countdown History:

The first countdown was initiated at 0550Z hours on 24 November 1965, however, the mission was cancelled due to excessive winds aloft in the launch area. The second countdown was initiated at 0720Z (T-220) on 29 November 1965. The count proceeded normally to 0930Z (T-90) where a hold was initiated for the Nike-X Discrimination Radar. Count resumed at 1000Z (T-90) and continued to 1110Z (T-20) where a second Nike-X Discrimination Radar hold was called. Launch vehicle count was resumed at 1340Z and was continued to 1355Z (T-5) where the count stopped to wait for Nike, which was still holding. Nike was ready at 1425Z, after a total hold time of 210 minutes. Countdown was resumed at 1425Z, and launch was effected without further difficulty.

Flight Performance:

Significant events occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	137	139.83
SECO	271	265.17
VECO	290	285.53
R/V Separation	293	287.87
BSE Ejection	296	291.70
HIRS Pitch Rocket Fire	303	297.87
HIRS Retro-rocket Fire	322	316.15
SPP Ejection	410	446
Impact	1625	1621

Impact Data:

GERTS:	2.209	N.M. Short	and 1.377	N.M. Right
MOD III:	0.1	N.M. Long	and 0.25	N.M. Right

Remarks:

All uprange, midrange, and downrange sensors gathered good data for this flight.

WTA-6-009

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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10 Feb 66

ATLAS - "TAG DAY"

UNCLASSIFIED

Missile: 85D (AF Serial Number ^{ATLAS D} 58-7080)

This was Nike Targets Measurements Program (NTMP) Mission KX-31, WTR Ops Number 7869. The Re-entry Vehicle was a GE/RSD Re-entry Measurements Vehicle (RMV) Type 303. A MOD II Payload Ejection Mechanism (PEM) mounted in missile Quad 1, carried and ejected the Bell Spheres Experiment Number 7. An Aeronutronics MOD IV Payload Ejection Mechanism was carried for operational testing. The Atlas missile was equipped with a tank fragmentation system which was activated by downrange command.

Launched: 1339:56.045Z hours on 20 December 1965 from Launch Complex ABRES B, Pad 2.

Countdown History:

The countdown was initiated at T-210 minutes at 0530Z on 20 December 1965. The count included four holds, one re-cycle and one count advance which resulted in a total countdown time of 489 minutes. Holds occurred as follows: Ten minutes for CTCS at T-160; 35 minutes for Nike Discrimination Radar at T-30; 195 minutes for booster guidance rate beacon checkout and replacement at T-5 (Countdown was re-cycled to T-35 minutes following rate beacon replacement.); and 19 minutes for booster thrust section heater replacement and adjusting the LO₂ chilldown regulator at T-21. At 1334Z, the count was advanced from T-10 to T-5. The commit sequence was entered at 1337:54 hours and lift-off occurred at 1339:56.045Z.

Flight Performance: Significant events occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	138.5	137.50
SECO	259.6	254.70 *
VECO	274.9	274.75 *
RMV Separation	277.4	277.30 *
BSE Ejections	295.8	Nominal*
HIRS Pitch Rocket Fire	287.4	287.50 *
HIRS Retro-rocket Fire	295.5	300.60 *
Tank Fragmentation	1522.00	1518.00
RMV Impact	1625	1617.00

* Approximate time. TLM Data became noisy at 210 seconds.

Impact Data: Target miss distances, as predicted by GERTS and MOD III Guidance are:

GERTS: 1.437 N.M. Short and 0.369 N.M. Right
MOD III: 0.040 N.M. Short and 0.110 N.M. right

Remarks: Booster TLM transmitting power dropped off after 210 seconds, causing the acquisition of poor booster TLM data. As a result, propellant residuals were not computed, and the determination of event times was made difficult. The cause of the low power has not been determined. All downrange sensors acquired data.

VWTA-6-010

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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ATLAS - "Yeast Cake"

Missile: 305D (AF Serial Number 62-12608)

This was Nike Targets Measurements Program (NTMP) Mission, KX-38, WTR Ops Number 7642. The re-entry vehicle was a General Electric Re-entry Measurements Vehicle (RMV) Type 303. The auxiliary payload was Scientific Passenger Pod (SPP) Number A-201, which was carried at WTR Ops Number 1728.

Launched: 0948:46.071Z hours, 10 Feb 66 from Complex ABRES A, Pad 1.

Countdown History:

Launch was attempted, utilizing booster #208D on 25 Jan 66, but was scrubbed due to downrange Nike-X radar problems. A second launch attempt, on 29 Jan 66, achieved engine ignition, however, the launcher hold-down and release system failed to release the missile, and automatic engine shutdown occurred. Telemetry data proved that the automatic engine purge system did not operate after engine shutdown. Booster 305D replaced booster 208D, which was removed to inspect for propulsion system contamination. The third launch countdown was started at 0450Z hours (T-220) on 10 Feb 66. A forty minute hold was imposed at 0810Z hours (T-20) to replace the autopilot rate and displacement gyros. The hold was extended for thirty minutes at 0847Z for checkout of the replaced units and clearing the launch area. Count resumed at 0915Z hours (T-20). A five minute hold was called from 0930Z hours (T-5) to 0935Z for the ground guidance station. Countdown then progressed into commit where a commit stop was initiated because of an indication of an autopilot null detector system malfunction in the autopilot test panel. The problem was corrected, and the count was recycled to T-5 for re-verification of the autopilot system. The count resumed at 0946Z (T-5) and proceeded to lift-off.

Flight Performance: Significant flight events occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	140.25	140.20
SPP Capsule Ejection	200.00	201.80
SECO	256.84	258.39
VECO	274.34	276.56
RMV Separation	276.84	279.19
HIRS Pitch Rocket Fire	287.84	289.08
HIRS Retro-rocket Fire	297.84	303.01
RMV Impact	1625.00	1618.00

Impact Data: Target miss distances, as predicted by GERTS and MOD III Guidance, were:

GERTS: 1.59 N.M. Short and .195 N.M. Left
MOD III: .12 N.M. Long and .37 N.M. Right

Remarks: Telemetry, optical, and radar data sensors participated in this mission. Good data coverage was reported.

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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ATLAS - "Lonely Mountain"

UNCLASSIFIED

Missile: 86D (AF Serial Number 58-7081)

This was Nike Targets Measurements Program (NTMP) Mission KX-51, WTR Ops Number 0591. The Re-entry Vehicle was a GE/RSD Re-entry Measurements Vehicle (RMV) Type 304. An Aerodynamic Mod II A Payload Ejection Mechanism (PEM) mounted in missile Quad I carried and ejected an AVCO Mark 11 Mod A re-entry decoy, and two bags of UHF exo-atmospheric chaff.

Launched: 1304:53.649Z hours, 11 February 1966, from Complex ABRES B, Pad 2.

Countdown History:

The countdown was initiated at 0500Z hours (T-210) on 11 Feb 66. At 0505Z (T-205), a 115 minute hold was imposed for Nike-X Radar. The count resumed at 0700Z hours (T-205) and proceeded normally to 0945Z hours (T-45) where a hold of 110 minutes was imposed for Nike-X radar. This hold was extended for 30 minutes at 1040Z hours. Five minutes additional hold was also imposed for Range Telemetry Central (RTC) at 1205Z hours. Countdown resumed at 1210Z hours (T-45) and progressed to 1253Z hours (T-2) where a PRESS aircraft problem caused a seven minute hold. During the hold, countdown was re-cycled to T-5. The count picked up again at 1300Z hours and proceeded normally to lift-off.

Flight Performance: Significant flight events occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	137.00	136.32
SECO	273.71	265.82
VECO	289.00	284.42
RMV Separation	291.50	286.61
Chaff Ejection -- PEM Tube 1	293.20	289.50
Chaff Ejection -- PEM Tube 3	294.50	289.90
Decoy Ejection -- PEM Tube 4	294.75	290.30
HIRS Pitch Rocket Fire	302.50	296.77
HIRS Retro-rocket Fire	312.50	313.67
RMV Impact	1625.00	1621.00

Impact Data: Target Miss distances, as predicted by GERTS and MOD III Guidance were:

GERTS: 1.404 N.M. Short and .643 N.M. Left
MOD III: 0 N.M. Range and .2 N.M. Right

Remarks: Telemetry, optical, and radar sensors participated in this mission. Good data coverage was reported.

DOWNGRADED AT 3 YEAR INTERVALS;
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DOD DIR 5200.10

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ATLAS - "Sycamore Ridge"

MISSILE: 73D (AF Serial Number 58-7068)

This was Nike Targets Measurements Program (NTMP) Mission KX-47, WTR Ops Number 0959. The Re-entry Vehicle was a General Electric Re-entry Measurements Vehicle (RMV) Type 301. The Auxiliary Payload was Avco Corporation Mark 11Bx decoy, ejected from Aeronutronics MOD IIA Payload Ejection Mechanism (PEM).

LAUNCHED: 0956:42.488Z hours on 19 February 1966 from Complex ABRES B, Pad 1.

COUNTDOWN HISTORY: Countdown was initiated at 0600Z hours (T-210 Min) on 18 February 1966, however, the launch was scrubbed because of a liquid oxygen leak in the missile booster section. The malfunction was detected during the commit sequence at 1124Z hours, and the decision to scrub the mission was made at 1150Z hours. Total hold time prior to the missile malfunction was 115 minutes for downrange radar and aircraft problems. The leaking liquid oxygen flex line was replaced, and all necessary checkouts were performed on 18 February 1966. The second launch attempt was initiated at 0600Z hours (T-210 Min) on 19 February 1966, and progressed normally to 0745Z hours (T-105 Min) where a ten minute hold was initiated to correct a low pressure relief indication on number one vernier engine bleed valve. The countdown resumed at 0755Z hours (T-105 Min) and then progressed to 0855Z hours (T-45 Min) where a second hold was called for downrange Nike-X discrimination radar (DR). After a 15 minute hold, the countdown was resumed at 0910Z hours (T-45 Min) and progressed normally, except for a one minute and forty two second delay due to a liquid oxygen topping over-fill, to commit start. Commit start was entered at 0955Z hours and proceeded normally to lift-off.

FLIGHT PERFORMANCE: Significant flight events occurred as follows:

Event	Planned Time	Actual Time
BECO	138.00	138.23
SECO	260.06	261.38
VECO	277.00	276.13
RMV Separation	279.50	278.73
Decoy Ejection	285.00	287.32
HIRS Pitch Rocket Fire	289.50	288.64
HIRS Retro-rocket Fire	299.50	304.21
RMV Impact	1824.00	1823.70

FOR USE OF BRASE WITHOUT APPROVAL FROM THE RESEARCHERS
APPROVED FOR RELEASE BY NSA
DATE 08-28-2001

IMPACT DATA: Target Miss Distance, as predicted by GERTS and MOD III Ground Guidance Station were:

GERTS: 1.90 N.M. Short and 1.07 N.M. Left
MOD III: 0 N.M. Range and 1.20 N.M. Right

REMARKS: Telemetry, optical, and radar data sensors participated in this mission. Good data coverage was reported.

GROUP 4

DOWNGRADED AT 8 YEAR INTERVALS;
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ATLAS - "Eternal Camp"

MISSILE: 303D (AF Serial Number 62-12606)

This was Nike Targets Measurements Program (NIMP) Mission KX-35, WTR Ops Number 0812. The Re-entry Vehicle was a General Electric Re-entry Measurements Vehicle (RMV) Type 303.

LAUNCHED: 1229:55.17Z hours on 4 March 1966 from ABRRS A, Pad 1.

COUNTDOWN HISTORY: Countdown was initiated at 0620Z hours (T-220 Minutes) on 4 March 1966. The count progressed normally to 0940Z hours (T-26 Minutes) where a two hour hold was imposed for Trap #1 Optical Aircraft (30 Minutes) and re-entry vehicle telemetry problems (90 Minutes). Countdown was resumed at 1140Z hours (T-3 Minutes) where a thirty minute hold was imposed for the EC-121K Optical Aircraft. Countdown was recycled to T-5 minutes, and was re-initiated at 1225Z hours. The count then progressed normally to missile lift-off at 1229:55.136Z hours.

FLIGHT PERFORMANCE: Booster performance was unsatisfactory. Missile impact was in clear ocean approximately 975 nautical miles from the launch area. Booster engine cut-off signal was received from the programmer at 141.2 second after lift-off. Sustainer and vernier engines shut down at 195 seconds and 205 seconds respectively. Apparent cause was a failure of the sustainer hydraulic system at staging. All booster systems appeared normal until staging. There were no discrete events after BECO. MOD III Guidance did not lock onto the missile due to a failure in the antenna drive system at the Ground Guidance Station. GERTS tracking and airborne guidance were normal.

GROUP 4

VWTA-6-058

DOWNGRADED AT 3 YEAR INTERVALS;
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ATLAS - "White Bear"

MISSILE: 304D (AF Serial Number 62-12607)

This was a Nike Target Measurements Program (NTMP) Mission KX-43, WTR Ops Number 0500. The re-entry vehicle was a General Electric Re-entry Measurements Vehicle (RMV) Type 301.

LAUNCHED: 1229:57.159Z hours on 19 March 1966 from ABRES A, Pad 1.

COUNTDOWN HISTORY: Count pickup was delayed for three hours due to late RMV mating (1 hour) and downrange radar problems (2 hours). Countdown was initiated at 0850Z hours (T-220 minutes) on 19 March 1966 and proceeded without holds to lift-off.

FLIGHT PERFORMANCE: Flight performance was unsatisfactory due to a malfunction in the booster sustainer engine head suppression valve which caused the R/V to over-fly the assigned impact point. Significant flight event occurred as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	139.00	140.14
SECO	258.50	261.37
VECO	281.50	276.87
RMV Separation	283.00	279.35
HIRS Pitch Rocket Fire	293.00	290.85
HIRS Retro-rocket Fire	305.00	306.70
RMV Impace	1824.00	
	Predicted by GERTS:	1859.00
	Predicted by MOD III:	1822.00

MOD III AND GERTS: Instantaneous impact predictions (IIP) were as follows:

MOD III - 82.0 Long and 1.6 Right
GERTS - 69.0 Long and 0.0 Cross-Range

REMARKS: All data gathering sensors reported acquisition of data except for the following: Trap 1, Trap 6, Press KC-135, and Press NRA3B Optical Aircraft; and Press Ground Optics. Preliminary data reports indicate that radar and telemetry objectives were achieved and that optical objectives were not achieved.

VWTA-6-059

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ATLAS - "Bronze Bell"

MISSILE: 72D (AF Serial Number 58-7068)

This was a Dual Orbital Vehicle (OV1) Program, Mission OV1-4/5, WTR Ops Number 7560. The OV1 was a General Dynamics/Convair OV1-4/5 sponsored by the Office of Aerospace Research (OAR). The Auxiliary Payload, Scientific Passenger Pod (SPP) Number A-302 (Also sponsored by OAR), was carried as WTR Ops Number 1049.

LAUNCH: 0920:12.556Z hours on 30 March 1966 from ABRES B, Pad 3.

COUNTDOWN HISTORY: Countdown was initiated at 0530Z hours (T-225 Minutes) on 30 March 1966. The count proceeded normally to the end of task 4 at 0830Z hours (T-45 Minutes) where a five minute hold was imposed for an OV1 Beacon Evaluation. The count was resumed at 0835Z hours (5045 Minutes) and progressed normally to lift-off.

FLIGHT PERFORMANCE:

A. All launch vehicle subsystems performed satisfactorily. Flight event times, reference in seconds from lift-off were as follows:

<u>Event</u>	<u>Planned Time</u>	<u>Actual Time</u>
BECO	132.4	132.08
SECO	298.2	298.16
SPP Ejection	298.4	298.46
OV1 Pod Door Open (Mark 1)	307.8	308.94
OV1-4/5 Ejection (Mark 2)	310.8	212.94

B. OV1 Mark Events, following ejection from the Atlas Launch Vehicle, were as follows:

Mark 3 (OV1-4 Motor Ignition)	680.5	682.94
Mark 4 (OV1-4 Motor Burnout)	709.3	726.14
Mark 5 (OV1-4 Satellite Separation)	807.5	810.84
Mark 6 (OV1-5 Motor Ignition)	945.9	945.44
Mark 7 (OV1-5 Motor Burnout)	974.7	991.44
Mark 8 (OV1-5 Satellite Separation)	1072.9	1075.44

C. OV1-4 and OV1-5 Vehicles obtained orbit, and were considered nominal.

D. All functions of the Scientific Passenger Pod were normal.

GROUP 4

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOI DIR 5200.10

UNCLASSIFIED

~~CONFIDENTIAL~~

UNCLASSIFIED

~~SECRET~~

OPS 5-1
ed

ATLAS - "CRAB CLAW"

MISSILE: 208D (AF Serial Number 62-12426)

This was a Nike Target Measurements Program (NTMP) Mission KX-37, WTR. OPS. Number 7947. The re-entry vehicle was a General Electric Re-entry Measurements Vehicle Type 303.

LAUNCHED: 1030:20.454 Z hours on 3 May 1966 from ABRES A, Pad 1.

COUNTDOWN HISTORY: Countdown was initiated at 0550 Z hours (T-220 minutes) on 3 May 1966. Loop Test evaluation performed in task 2 indicated an autopilot programmer malfunction. The programmer was replaced during task 4, and a thirty minute hold was initiated at 0800 Z hours (T-90 minutes) to perform autopilot system maintenance and checks. Countdown was resumed at 0830 Z hours (T-90 minutes) and the loop test portion of task 2 was re-accomplished. All systems checked go. The count progressed to 0935 Z hours (T-25 minutes) where a thirty minute hold was initiated for Nike-X radar. The count then picked up at 1005 Z hours (T-25 minutes) and proceeded to lift-off.

FLIGHT PERFORMANCE: Flight performance was not satisfactory. Boat tail temperature started to increase at T+45 seconds and has moved off scale high (greater than 350 degrees F) on telemetry measurements at approximately T+65 seconds and remained at this level until staging. At approximately T+135.5 seconds (3.2 seconds prior to BECO--138.7) the sustainer engine went hard over in the pitch and yaw planes. Control remained erratic for the remainder of powered flight. Also, vernier engine number 1 bias increased at T+135.5 seconds. The vernier engine continued to respond to steering signals until 195.5 seconds when it turned and remained hard inboard. All engines began thrust decay at approximately T+233.7 seconds. There were no indications that the payloads separated from the launch vehicle. The impact point predicted by Mod III Guidance, was 27 degrees North latitude by 152 degrees West longitude near Hawaii. The GERTS predicted impact was 27.4 degrees North latitude by 153.4 degrees West longitude.

REMARKS: Uprange and midrange sensors gathered data. No downrange data was recorded due to the short flight.

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VWTA-6-106

GROUP 4

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5800.10

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~~CONFIDENTIAL~~

*File ORS-5-1
Book 10*
UNCLASSIFIED

COMMANDER'S SUMMARY

ATLAS 98D

SUPPLY ROOM

LAUNCH DATE: 13 May 1966

TIME: 0443:51.813 PDT

LAUNCH SITE: ABRES B-1

OPS NUMBER: 0001

PRIMARY PAYLOAD: WAC-5A; phenolic graphite heatshield, graded boron pyrolytic graphite nose, active wake quench system, C-band beacon, and TLM.

AUXILIARY PAYLOADS: (a) Chaff; tungsten rod dipoles at L-band length, and a 3 1/4 inch diameter aluminum reference sphere. Ejected from MOD II PEM.

(b) Subscale RV; graphite test vehicle with boron pyrolytic heatshield and phenolic carbon nose. Ejected from MOD IV PEM.

MISSION RESULTS: Unsuccessful

ANOMALIES: RV separation was not normal, and the HIRS maneuver was not executed. RV separation signal was sent at VECO + 2.5. A small disturbance was measured but no separation occurred. At 5.1 seconds after VECO, electrical interface measurements indicated "shorting" and separation did occur. The electrical short apparently prevented the HIRS sequence. The sustainer tank reentered with the payload complex so data was compromised.

LAUNCH ATTEMPTS: 1

COUNTDOWN HOLDS: 100 minutes at T-45 for WTR Op No. 2402
120 minutes at T-30 for PRESS radar and satellite pass
10 minutes at T-5 for Nike-X DR
2 minutes at T-2 for Downrange TLM interference

UUTA-8-118

UNCLASSIFIED

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~~SECRET~~

GROUP 4

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

OPS (S-1)

ATLAS--"SAND SHARK"

MOD III AND GERTS: Instantaneous impact predictions

UNCLASSIFIED

MOD III -- 0.8 N.M. short and 2.0 N.M. left

MISSILE: 41D (Air Force Serial Number 58-2212)

GERTS -- 2.6 N.M. short and 2.9 N.M. left

This was a Nike Target Measurements Program (NIMP) Mission, KX-47, WTR Operations Number 14177. The re-entry vehicle was a General Electric Re-entry Measurements Vehicle (RMV) Type 301.

LAUNCHED: 1204:27.362Z hours on 26 May 1966 from ABRES B, Pad II.

COUNTDOWN HISTORY: The countdown scheduled to start at 0610Z hours 21 May 1966; however, pick-up was delayed for two hours for Nike-X discrimination radar (DR). The count was initiated at 0810Z hours (T-210 minutes) and proceeded to 1110Z hours (T-30 minutes) where a 50 minute hold was imposed for Nike-X radar. The count resumed at 1200Z hours (T-30 minutes) and progressed to 1225Z hours (T-5 minutes) where a missile LO₂ tank overflow occurred. A hold was initiated and propellants were drained. Troubleshooting revealed a defective LO₂ tank boil-off valve. Resolution required replacement of the valve which could not be accomplished prior to launch window closing. The mission was officially scrubbed at 1252Z hours. The second countdown was initiated at 0830Z hours (T-210 minutes) on 26 May 1966. The count progressed except for one five minute hold at 1155Z hours (T-5 minutes) to allow the PRESS KC-135 optical aircraft to arrive on station. Lift-off occurred at 1204:27.362Z hours.

FLIGHT PERFORMANCE: All booster subsystems performed satisfactorily. Significant flight events occurred as follows:

<u>EVENT</u>	<u>PLANNED TIME</u>	<u>ACTUAL TIME</u>
BECO	138.00	137.11
SECO	260.87	264.17
VECO	277.95	282.55
RMV Separation	280.45	285.55
Auxiliary Payload Ejection	283.45	288.25
HIRS Pitch Rocket Fire	290.45	295.33
HIRS Retro-rocket Fire	304.45	312.54

GROUP 4
 DOWN RMV Impact 3 YEAR INTERVALS;
 DECLASSIFIED AFTER 12 YEARS.
 Predicted by GERTS:

1824.00
 1821.00

Predicted by Mod III: 1818.70

~~CONFIDENTIAL~~

2 GROUP 4

2
 DOWNGRADED AT 3 YEAR INTERVALS;
 DECLASSIFIED AFTER 12 YEARS.
 DOD FORM 100.10

UNCLASSIFIED

Wing/15X

~~CONFIDENTIAL~~

File
OPS 5-1
21

ATLAS--"VENEER PANEL"

PLANNED TIME

UNCLASSIFIED

~~MISSILE~~ Retro-rocket Fire

211.50

214.91

MISSILE: 96D (Air Force Serial Number 58-7091)
RMV Impact 1824.00

This was a Nike Target Measurements Program (NTMP) mission, KX-42, WTR Operations Number 7654. The re-entry vehicle was a General Electric Re-entry Measurements Vehicle (RMV) Type 302.

Predicted by Mod III:

1813.00

LAUNCHED: 1115:00.854Z hours on 10 June 1966 from ABRES B, Pad I.

COUNTDOWN HISTORY: Countdown was initiated at 1510Z (T-210 minutes) on 10 June 1966. The count progressed normally until 0701Z hours (T-99 minutes) where during loop test in task 4, the guidance system indicated a no-go. A second loop test was attempted at 0720Z hours (T-80 minutes); however, the guidance system was still no-go and vernier engine number one went hard over in the pitch plane at loop test reset. Troubleshooting was continued at the ground guidance station. At 0755Z hours (T-45 minutes) a 45-minute hold was initiated to resolve the guidance and vernier engine problems. Equipment was replaced at the ground guidance station and a third loop test was successfully completed at 0801Z hours. The vernier engine anomaly did not reoccur at loop test reset; however, the missile was de-erected to troubleshoot the vernier engine servo loop for possible faulty wiring. The hold was extended for a total of 105 minutes for maintenance of the vernier engine system. During this time, the problem was traced to corroded pins in the vernier engine number one servo valve electrical connector. The pins were cleaned and the system functioned properly. A five-minute hold extension was called to evaluate a GERTS lock failure. Countdown resumed at 1030Z hours (T-45 minutes) after a total hold time of 155 minutes. The count progressed normally to lift-off.

FLIGHT PERFORMANCE: All booster subsystems performed satisfactorily except for a decay in the vernier engines thrust, prior to planned vernier engine cut-off (VECO). A suspected fuel leak at the booster staging disconnect, causing depletion of fuel from the vernier engine solo supply system was the apparent cause of the thrust decay, resulting in a short impact of the RMV. Significant flight events occurred as follows:

EVENT	PLANNED TIME	ACTUAL TIME
BECO	137.50	136.41
SECO	265.50	261.61
VECO	282.50	283.99
RMV Separation	284.50	286.48
Auxiliary Payload Ejection	287.00	289.00
HIRS Pitch Rocket Fire	294.50	296.80

UNCLASSIFIED AT 5 YEAR INTERVALS;
DECLASSIFY ON 12 YEARS.
GROUP 4

~~CONFIDENTIAL~~

UNCLASSIFIED

Wings/KX

7-0
OPS 6-1
RA

ATLAS--"GOLDEN MOUNTAIN"

UNCLASSIFIED

GROUP 4: Instantaneous impact predictions

MISSILE: 147D (Air Force Serial Number 61-2515)

This was a Nike Target Measurements Program (NTMP) mission, KX-20, WTR Operations Number 5615. The re-entry vehicle was a General Electric Re-entry Measurements Vehicle (RMV) Type 302.

LAUNCHED: 1534:47.216Z hours on 26 June 1966 from ABRES B, Pad II.

COUNTDOWN HISTORY: The first launch attempt was initiated at 0610Z hours (210 minutes) on 21 June 1966. Holds in the countdown occurred as follows: 1 hour and 30 minutes hold at 0810Z hours (T-90 minutes) for Nike-X discrimination radar (DR); 1 hour and 40 minutes hold at 1025Z (T-45 minutes) for Nike-X DR (25 minutes), and downrange weather (1 hour and 15 minutes); 31 minute hold at 1245Z hours (T-5 minutes) for re-entry vehicle technical problems. The countdown resumed at 1316Z hours (T-5 minutes) and proceeded into commit sequence 1320Z hours, where the countdown was stopped and recycled back to T-5 minutes because of an LO₂ tank boil-off valve malfunction. The countdown was held at T-5 for 10 minutes, and at 1330Z hours the countdown was scrubbed due to the boil-off valve problem. The second countdown began at 1010Z hours (T-210 minutes) on 26 June 1966, and progressed normally to 1310Z hours (T-30 minutes) where a 1 hour and 30 minute hold was imposed for downrange Nike-X target tracking radar #5 (TTR #5) technical problems. The count resumed at 1440Z hours (T-30 minutes) and progressed to 1445Z hours (T-25 minutes) where a second hold (25 minutes) for Nike-X TTR #5 technical problems was called. At 1510Z hours, the countdown was resumed and was continued normally to lift-off.

FLIGHT PERFORMANCE: All booster subsystems performed satisfactorily. Significant flight events occurred as follows:

<u>EVENT</u>	<u>PLANNED TIME</u>	<u>ACTUAL TIME</u>
BECO	139.00	137.90
SECO	264.55	263.13
VECO	281.49	283.45
RMV Separation	283.99	285.95
Chaff Ejection	284.01	289.35
HIRS Pitch Rocket Fire	293.99	296.00
HIRS Retro-rocket Fire	313.69	313.72
RMV Impact	1824.00	

GROUP 4

Predicted by GERTS:

1820.00

DOWNGRADED AT 3 YEAR INTERVALS;

UNCLASSIFIED FROM Predicted by Mod III:

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~~SECRET~~

UNCLASSIFIED

VWTA-6-110

wing/kx

~~CONFIDENTIAL~~

~~SECRET~~

UNCLASSIFIED

STONE ISLAND

0847/1820

ATLAS - "HEAVY ARTILLERY"

MISSILE: 298D (AF Serial Number 62-12610)

ABRES

This was a Nike Target Measurements Program (NTMP) Mission KX-39, WTR. OPS Number 0506. The Re-entry Vehicle was a General Electric Re-entry Measurements Vehicle (RMV) Type 303.

13 JUL 68

LAUNCHED: 10:00.686 Z hours on 30 Jun 1966 from ABRES A, Pad 1.

COUNTDOWN HISTORY: The countdown was initiated at 0650 Z (T-220 minutes) on 30 Jun 1966 and progressed normally to 0900 Z hours (T-90 minutes) where a 30 minute jump in the countdown (to T-60) was imposed. The countdown progressed without incident from 0900 Z hours (T-60 minutes) to lift-off.

FLIGHT PERFORMANCE: All booster subsystems performed satisfactorily. Significant flight events occurred as follows:

EVENT	PLANNED TIME	ACTUAL TIME
BECO	139.00	139.81
SECO	260.81	262.47
VECO	283.50	281.85
RMV Separation	286.00	284.46
Chaff Ejection	287.00	287.65
HIRS Pitch Rocket Fire	296.00	294.42
HIRS Retor-rocket Fire	310.00	309.50

PREDICTED BY GERTS: 1825.00

PREDICTED BY MOD III: 1823.00

MOD III AND GERTS: Instantaneous impact predictions (IIP) were as follows:

MOD III - 0.0 range and 0.28 N. M. right

GERTS - 1.588 N. M. short and 0.264 N. M. left

REMARKS: All mandatory sensor supporting this mission acquired data.

GROUP 4

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DATE 071 5200.10

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VWTA-6-109

UNCLASSIFIED

Wing/KX

~~CONFIDENTIAL~~

File
OPS 5-1

The OV1 7 began tumbling ATLAS "STONEY ISLAND" was in motor ignition occurred. The OV1 7 could not gain orbit and, therefore, impacted in the Indian Ocean at an apogee of 553 miles and at a perigee of 544 miles with an orbital period of 104.5 minutes. The payload was a scientific passenger pod (SPP) number A-203 (also sponsored by OAR), was carried as WTR Operations Number 1820. MISSILE #58D (Air Force Serial Number 58-2229)

UNCLASSIFIED

This was a dual orbital vehicle (OV1) program, mission OV-1 7/8, WTR Operations Number 0847. The OV1 was a General Dynamics/Convair OV1 7/8 sponsored by the Office of Aerospace Research (OAR). The auxiliary payload, scientific passenger pod (SPP) number A-203 (also sponsored by OAR), was carried as WTR Operations Number 1820.

(12th or 14th)

LAUNCHED: 0210:02.340Z hours on 13 July 1966 from ABRES B, Pad III.

COUNTDOWN HISTORY: Launch countdown was started at 2115Z hours (T-225 minutes) on 13 July 1966. Countdown progressed normally to 2330Z hours (T-90 minutes) where a 30-minute hold was imposed to troubleshoot a missile guidance malfunction that appeared during loop test. This hold was increased by two 30-minute extensions, during which time two AGE autopilot modules were replaced and a loop test was successfully accomplished. The count was re-entered at 0100Z hours (T-90 minutes). At 0200Z hours (T-30 minutes), the count was jumped to T-10 minutes. The count progressed normally from 0200Z hours (T-10 minutes) to missile lift-off.

FLIGHT PERFORMANCE:

A. All booster subsystems performed satisfactorily. Significant flight events occurred as follows:

<u>EVENT</u>	<u>PLANNED TIME</u>	<u>ACTUAL TIME</u>
BECO	132.50	130.79
SECO	299.77	292.17
VECO	316.50	312.40

B. Scientific Passenger Pod: The SPP did not eject from the launch vehicle; however, no loss of scientific experiment data occurred. The experiment payloads were ejected from the SPP as planned.

C. OV1 7 and OV1 8: Mark events occurred as follows:

<u>MARK EVENT</u>	<u>PLANNED TIME</u>	<u>OV1 7</u>	<u>OV1 8</u>
OV1 Pod doors open	308.3	304	304
OV1 7/8 ejection	311.8	308	308
Motor ignition command	945.9	942	943
Motor burnout	974.9	972	975

GROUP 4
NEAR INTERVALS;
DECLASSIFIED AFTER 10 YEARS.

GROUP 4
Payload separation

1072.9 1088 1133

DOWNGRADED AT 3 YEAR INTERVALS
DECLASSIFIED AFTER 12 YEARS.
DOC REF 5200.10

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UNCLASSIFIED

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C. W. R. C.

UNCLASSIFIED

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~~SECRET~~

ATLAS -- ROUND TOWER

File
OPS 5-1
A

Missile: 149F (Air Force Serial Number 62-12621)

This launch was the first in support of the Maneuvering Ballistic Re-Entry Vehicle (MBRV) mission of the Advanced Ballistic Re-Entry Systems Program 627A.

Launched: 1747:38.674Z hours on 8 August 1966 from ABRES A, Pad II.

Countdown History: Countdown for the first launch attempt was initiated at 1335Z hours (T-200 minutes) on 3 August 1966. Countdown proceeded normally to T-90 minutes at 1545Z hours, where a eighty minute hold was imposed to analyze an R/V computer anomaly. The mission was scrubbed at 1635Z hours, and the R/V was demated and transported to ATF #2 for troubleshooting and repair.

The second launch countdown was initiated at 1350Z hours (T-200 minutes) on 8 August 1966. Countdown was normal to 1710Z hours (T-5 minutes) where a 10 minute hold was imposed to allow countdown to catch up with the clock. Count picked up at 1720Z hours (T-5 minutes) and progressed to 1723Z hours (T-2 minutes) where the count was recycled to T-5 minutes and holding (12 minutes) for a "Red Range" for San Nicolas Telemetry. San Nicolas Telemetry was replaced by Point Mugu Telemetry. Count picked up at 1735Z hours (T-3 Minutes), but was again recycled to T-5 minutes for a second "Red Range" condition for ARIS Telemetry power supply problems. After a five minute hold, the count was picked up at 1742Z hours (T-5 minutes) and progressed normally to lift-off.

Flight Performance: Flight performance was unsatisfactory. Fuel depletion caused a pre-mature shutdown of the sustainer engine. An investigation committee with members from Ballistic Systems Division, Norton AFB, and Support from the 6595th Aerospace Test Wing, Convair, Rocketdyne and Aerospace, reviewed the flight data and missile history and determined the probable cause of failure was gross contamination in the Booster #2 LOX feed system. The contamination accounted for high fuel usage which caused premature sustainer engine shutdown. There was no R/V separation.

Impact Data: Planned impact was near Johnston Island approximately 2975 nautical miles downrange. The missile impact predicted by GERTS was approximately 1350 nautical miles downrange.

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VWTA-6-118

GROUP 4
DOWNGRADED AT 8 YEAR INTERVALS;
DECLASSIFIED AFTER 13 YEARS.
DOD DIR 5200.10

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UNCLASSIFIED

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UNCLASSIFIED

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~~CONFIDENTIAL~~

File
OPS 5-1
RS
TR

ATLAS 115F

LOW HILL

LAUNCH DATE: 11 October 1966

TIME: 1259:41.436 PDT

LAUNCH SITE: ABRES A-2

OPS NO. 7242

PRIMARY PAYLOAD: SBGRV - Simulated Boost Glide Re-entry Vehicle.
A dummy BGRV same weight and dimensions, no flight control or TLM, and carried a destruct system to destroy R/V 100 seconds after separation.

AUXILIARY PAYLOAD: None

MISSION RESULTS: Unsuccessful. Propulsion System malfunction resulted in vehicle self-destruction at 88.52 seconds. The missile impact was approximately 50 nautical miles offshore.

ANOMALIES: A fuel low pressure feed system malfunction caused the B-1 turbopump to fail and missile destruct followed.

B1 Pump speed increase began at 83.55 seconds

B1 Chamber pressure increase at 84.05 seconds

B1 Fuel pump discharge press increase 84.15

Steering Commands and shocks recorded 84.05 thru 88.52. All telemetry was lost at 88.52.

The most probable cause of failure was the malfunction of the B1 fuel pre-valve.

NOTE: This failure resulted in the extensive ABRES E/F review team investigation.

NUMBER OF LAUNCH ATTEMPTS: 1

COUNTDOWN HOLDS AND REASONS FOR HOLDS: 145 minute hold to allow catchup with the clock. (Time was lost in Guidance Autopilot checkout and Red Box checkout equipment power supply difficulties).

5 minute hold for train.

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VWTA-7-057

DOWNGRADE AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS
DOD DIR 5200.10

UNCLASSIFIED

UNCLASSIFIED

VWG file ops
5-1-77
Thru WGO
TB

ATLAS 89D

BUSY PANAMA

LAUNCH DATE: 11 December 1966

TIME: 1309:56.997 PST

LAUNCH SITE: ABRES B-3

OPS NO. 0848

PRIMARY PAYLOAD: OV1-9 and OV1-10 (Polar Orbit)

OV1-9 to measure charged particle, ion radiation and radiation hazards to man.

OV1-10 to study hyd. geocorona, interplanetary and galactic Lyman-Alpha radiation, UV spectrum, night airglow, and solar X-Ray emissions.

AUXILIARY PAYLOAD: None

MISSION RESULTS: Both vehicles achieved proper orbit.

ANOMALIES: a 3 percent step type performance decrease was observed at 61 seconds in the B2 thrust chamber data. Cause unknown. No adverse effect on performance.

Also, V1 & V2 thrust chamber pressure data indicated a momentary 3 percent decrease during satellite separations attributed to sloshing.

NUMBER OF LAUNCH ATTEMPTS: 4

COUNTDOWN HOLDS AND REASONS FOR HOLDS: Three launch attempts were terminated due to excessive upper atmosphere wind velocities.

A planned 20 minute hold was reduced to 10 minutes to eliminate possible interference from a train approaching the hazard corridor.

UNCLASSIFIED