

~~CONFIDENTIAL~~

PROGRAM 162

MISSILE: Thor 369/Agena 1157

LAUNCHED: 1309 PST, 7 January 1963, Pad 1

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 0530 PST on 7 January and proceeded to liftoff with one hold of 9 min duration imposed during the Terminal Count to adjust an AGE gas supply pressure regulator.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. MECO	147.3	149.4
VECO	156.3	158.3
Separation	163.5	164.2
Ignition	195.3	194.6
Burnout	437.4	437.3
2. Both Thor and Agena Airborne Systems performance was satisfactory.		
3.	<u>Predicted</u>	<u>Actual</u>
MECO Inertial Velocity	11,090 fps	11,070 fps
Injection Inertial Velocity	25,716 fps	25,737 fps
Apogee	218 nm	225 nm
Perigee	113 nm	104 nm
Period	90.6 min	90.61 min
Inclination Angle	81.86 deg	82.24 deg
Agena Orbital Weight	2,860 lbs	2,863 lbs

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both Thor and Agena AGE performance was satisfactory.

REMARKS:

The capsule was ejected on the 32nd pass and water recovery was accomplished on 11 January 1963.

~~CONFIDENTIAL~~
Rd 6 Jan 67

6595-63-0159
Cy #1 of 3 Cys
DOWNGRADED AT 3 YEAR INTERVALS,
DECLASSIFIED AFTER 12 YEARS
DOD DIRECTIVE 5200.10

~~CONFIDENTIAL~~

PROGRAM 162

MISSILE: Thrust Augmented Thor 354/Agena 1159

LAUNCHED: 1348 PST, 28 February 1963, Pad 5

COUNTDOWN HISTORY:

1. First Attempt: The countdown was initiated at 0355 PST on 27 Feb 63, and was cancelled due to a problem in the solid booster circuitry.
2. Second Attempt: The count was initiated at 0355 PST on 28 Feb 63 and proceeded to liftoff with one hold imposed at T-15 minutes for a duration of 48 minutes due to an Agena AGE oxidizer pump problem and range clearance.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. MECO	148.5	Vehicle breakup occurred at T-127 seconds
VECO	157.5	
Separation	161.5	
Ignition	170.8	
Burnout	410.4	

2. Agena Airborne Systems: Performance was satisfactory until termination of flight.

Thor Airborne Systems: Solid motor No. 2 did not ignite at liftoff and did not jettison as planned at T+70 seconds. Complete loss of control at approximately T+100 seconds resulted in vehicle breakup and destruction at approximately T+127 seconds.

3.

	<u>Predicted</u>	<u>Actual</u>
MECO Inertial Velocity	12,344 fps	Orbit was not achieved
Injection Inertial Velocity	25,893 fps	" " " "
Apogee	249.3 N.M.	" " " "
Perigee	90.3 N.M.	" " " "
Period	90.72 min	" " " "
Inclination Angle	74.99 deg	" " " "

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both Thor and Agena AGE performed satisfactory.

DOWNGRADED AT 3 YEAR INTERVALS,
CLASSIFIED AFTER 12 YEARS
EOD DIRECTIVE 5200.10

REMARKS:

1. This was the first TAT to be launched.
2. This was the first known combination of liquid plus solid boosters.

Cy # 14304

~~CONFIDENTIAL~~

6595-63-0986

~~CONFIDENTIAL~~

~~SECRET~~
PROGRAM 162

MISSILE: Thrust Augmented Thor 360/Agena 1164

LAUNCHED: 1313 PST, 18 March 1963, Pad 4

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 0220 PST on 18 Mar 63, and proceeded to lift off with one hold of a 43 minute duration imposed to complete work which had fallen behind schedule.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. MECO	148.5	150.7
VECO	157.5	159.7
Separation	161.4	164.3
Ignition	170.8	172.8
Burnout	410.4	403.6

2. Thor Airborne Systems - Performance was satisfactory.

Agena Airborne Systems - An apparent electrical short at the time of separation caused loss of pneumatic control. The engine and hydraulic control of pitch and yaw were normal; however, loss of pneumatic roll control and high roll rate experienced during engine burn caused engine premature shutdown due to vehicle tumbling.

	<u>Predicted</u>	<u>Actual</u>
3. MECO Inertial Velocity	12,344 fps	12,330 fps
Injection Inertial Velocity	25,893 fps	25,070 fps at engine shutdown
Apogee	90.30	no orbit
Perigee	249.3	no orbit
Period	90.72	no orbit
Inclination Angle	74.9	no orbit
Agena Orbital Weight	3,522 lbs	no orbit

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

DOWNGRADED AT 3 YEAR INTERVALS,
DECLASSIFIED AFTER 12 YEARS
DOD DIRECTIVE 5200.10

Both Thor and Agena AGE systems performed satisfactorily.

REMARKS:

1. This was the first Thor/Agena vehicle to fly with BTL missile borne guidance equipment in the Agena.
2. This was the second TAT vehicle to be launched.

6595-63-1205
Cy # 1 of 3 cys

~~CONFIDENTIAL~~

~~SECRET~~

~~CONFIDENTIAL~~

~~SECRET~~

9053

PROGRAM 162

MISSILE: Thor 376/Agena 1160

LAUNCHED: 1501 PST, 1 April 1963, Pad 5

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 0640 PST on 1 Apr 63 and progressed to liftoff with no holds.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. MECO	145.5	146.5
VECO	154.5	155.5
Separation	160.6	161.1
Ignition	190.2	193.0
Burnout	434.8	436.3

2. Both Thor and Agena Airborne Systems performed satisfactorily.

3.

	<u>Predicted</u>	<u>Actual</u>
MECO Inertial Velocity	11,103 FPS	11,150 FPS
Injection Inertial Velocity	25,733 FPS	25,734 FPS
Apogee	224.9 N.M.	223 N.M.
Perigee	112.1 N.M.	110.8 N.M.
Period	90.7 min	90.65 min
Inclination Angle	74.9 deg	75.4 deg
Agena Orbital Weight	2,903 lbs	2,878 lbs

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both Thor and Agena AGE performed satisfactorily.

REMARKS:

The capsule was ejected on the 48th pass and ariel recovery was accomplished on 4 Apr 63.

~~CONFIDENTIAL~~
29 6 Jan 67

6595-63-1344

DOWNGRADED AT 3 YEAR INTERVALS,
DECLASSIFIED AFTER 12 YEARS
DOD DIRECTIVE 5200.10

~~SECRET~~

Cy # 1 of 3 Cy

~~SECRET~~

~~CONFIDENTIAL~~

PROGRAM 162

MISSILE: Thor 372/Agena 1411

LAUNCHED: 1213 PST, 26 April 1963, Pad 1

COUNTDOWN HISTORY:

1. First Attempt: The countdown was initiated at 0340 PST on 25 Apr 63, and was cancelled at 1210 PST due to an electrical incompatibility between the Agena vehicle and the AGE.
2. Second Attempt: The countdown was initiated at 0340 PST on 26 Apr 63, and progressed to liftoff with two holds of a 28 minute duration due to trains in the hazard corridor.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. -MECO	147.6	145.1
- VECO	156.6	153.3
Separation	160.5	160.3
Ignition	198.6	196.8
Burnout	438.8	438.3

2. Thor Airborne Systems - Performance was satisfactory.

Agena Airborne Systems - An improper horizon sensor bias during the ascent portion of the flight caused orbital injection conditions such that orbit was not achieved.

	<u>Predicted</u>	<u>Actual</u>
3. MECO Inertial Velocity	10,796 fps	10,930 fps
Agena Inertial Velocity	25,373 fps	25,257 fps
Apogee	168.9 N.M.	No orbit
Perigee	161.3 N.M.	No orbit
Period	90.6 min	No orbit
Inclination Angle	81.9 deg	No orbit
Agena Orbital Weight	2,518 lbs	No orbit

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both Thor and Agena AGE performed satisfactorily.

REMARKS:

This was a recoverable vehicle.

~~CONFIDENTIAL~~
Ed Agan 67

6595-63-1922

~~SECRET~~

Cy # 1 of 3 up

UNGRADED AT 3 YEAR INTERVALS,
DECLASSIFIED AFTER 12 YEARS
DOD DIRECTIVE 5200.10

~~CONFIDENTIAL~~

~~SECRET~~
~~SECRET~~
PROGRAM 162

MISSILE: Thrust Augmented Thor 364/Agena 1165

LAUNCHED: 1521 PDT, 18 May 1963, Pad 5

COUNTDOWN HISTORY:

1. First Attempt: The countdown was initiated at 0455 PDT on 7 May 63, and was cancelled due to high velocity upper air winds.
2. Second Attempt: The countdown was initiated at 0540 PDT on 8 May 63, and was cancelled due to high velocity upper air winds.
3. Third Attempt: The countdown was initiated at 0455 PDT on 17 May 63 and was cancelled due to questionable integrity of the separation primacord.
4. Fourth Attempt: The countdown was initiated at 0555 PDT on 18 May 63 and progressed to liftoff with two holds totaling 23 minute duration. Hold No. 1 was imposed for 19 minutes to complete work which had fallen behind schedule. Hold No. 2 was imposed for 4 minutes in Phase V of the Terminal Count when DAC telemetry was intermittent at the ground station.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. Solid Separation	70.0	70.5
MECO	147.4	174.2
VECO	156.4	156.2
Separation	160.4	160.6
Ignition	164.7	168.2
Burnout	406.7	410.1

2. Both Thor and Agena airborne systems operated satisfactorily; however at orbit injection, BTL guidance power was not switched off and payload power was not switched on.

<u>Inertial</u>	<u>Predicted</u>	<u>Actual</u>
MECO Velocity	12,332 fps	12,410 fps
Injection Inertial Velocity	25,896 fps	25,960 fps
Apogee	250 N.M.	282 N.M.
Perigee	89.9 N.M.	85 N.M.
Period	90.72 min	91.19 min
Inclination Angle	74.99 deg	74.6 deg
Agena Orbital Weight	3560 lbs	3560 lbs

AEROSPACE GROUND EQUIPMENT PERFORMANCE:
Both Thor and Agena AGE performance was satisfactory.

REMARKS:

The capsule was ejected on the 32nd pass and a water recovery was accomplished on 20 May 63.

DOWNGRADED AT 3 YEAR INTERVALS,
CLASSIFIED AFTER 12 YEARS
DOD DIRECTIVE 5200.10

~~CONFIDENTIAL~~
28 6/20/67

~~SECRET~~

6595-63-2170

Cy #1 of 3 up

~~CONFIDENTIAL~~

~~SECRET~~

PROGRAM 162

MISSILE: Thrust Augmented Thor 362/Agena 1161

LAUNCHED: 1658 PDT, 12 Jun 1963, Pad 4

COUNTDOWN HISTORY:

1. First Attempt: The countdown was initiated at 0630 PDT on 11 Jun 1963 and was cancelled in Terminal Count due to a problem with booster engine slews.
2. Second Attempt: The countdown was initiated at 0800 on 12 Jun 1963 and progressed to liftoff with no holds.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>PREDICTED TIME</u>	<u>ACTUAL TIME</u>
1. Solid Separation	70.0	70.7
MECO	148.1	148.1
VECO	157.1	157.1
Separation	161.1	161.8
Ignition	170.4	169.0
Burnout	413.8	411.2

2. Both TAT and Agena Airborne Systems operated satisfactorily.

3. Inertial

	<u>Predicted</u>	<u>Actual</u>
MECO inertial Velocity	12,192 fps	12,190 fps
Injection inertial Velocity	25,766 fps	25,765 fps
Apogee	237.9 N.M.	240.3 N.M.
Perigee	110.0 N.M.	106.6 N.M.
Period	90.89 min	90.79 min
Inclination Angle	81.8 deg	81.83 deg
Agena Orbital Weight	3,435 lbs	3435 lbs

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both TAT and Agena AGE performed satisfactorily.

REMARKS:

The capsule was ejected on the 33rd orbit and aerial recovery was accomplished on 14 Jun 1963.

DOWNGRADED AT 3 YEAR INTERVALS,
DECLASSIFIED AFTER 12 YEARS
E.O. 13526, DIRECTIVE 5200.10

~~CONFIDENTIAL~~
RL 6 Jan 67

6595-63-2709

~~SECRET~~

~~CONFIDENTIAL~~

~~SECRET~~

PROGRAM 698BK

MISSILE: Thor 378/Agena 2353

LAUNCHED: 0729 PDT, 15 Jun 1963, Pad 1

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 1930 on 7 Jun 1963 and aborted in the terminal count due to a dead cell in the BTL battery. Four holds totaling 98 minutes were imposed.

Second Attempt: The countdown was initiated at 1930 on 9 Jun 1963 and was aborted in the terminal count when a premature liftoff signal caused disconnect of all Agena umbilicals. Two holds totaling 61 minutes.

Third Attempt: The countdown was initiated at 1930 on 12 Jun 1963 and was aborted in terminal count due to low voltage indication on the BTL battery. Five holds totaling 315 minutes were imposed.

Fourth Attempt: The countdown was initiated at 1930 on 14 Jun 1963 and progressed to liftoff with two holds totaling 13 minutes. Hold No. 1 was imposed at T-15 minutes for nine minutes due to trains in the hazard area. Hold No. 2 was imposed in the terminal count for four minutes due to a late "launcher clear to fire" indication.

Flight Performance

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. MECO	149.3	146.4
VECO	158.3	155.4
Separation	165.5	161.8
1st Ignition	213.5	208.2
1st Burnout	450.4	441.6
2nd Ignition	3283.6	not achieved
2nd Burnout	3286.3	not achieved

2. Both Thor and Agena Airborne Systems Performance was satisfactory.

	<u>Predicted</u>	<u>Actual</u>
3. MECO Inertial Velocity	11,218 fps	11,220 fps
Injection Inertial Velocity	26,344 fps	26,303 fps
Apogee	500 N.M.	507 N.M.
Perigee	507 N.M.	92 N.M.
Period	103.5 min	95.67 min
Inclination Angle	70.0 deg	69.9 deg
Agena Orbital Weight	2,460 lbs	2,479 lbs

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both Thor and Agena AGE performance was satisfactory.

REMARKS:

This was a non-recoverable vehicle carrying six payloads for the Naval Research Labs.

UNCLASSIFIED AT 3 YEAR INTERVALS,
DECLASSIFIED AFTER 12 YEARS
BY EXECUTIVE ORDER 12065
AND DIRECTIVE 5200.10

~~SECRET~~

6595-63-2803

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

~~SECRET~~

CORONA 66 / KH-4 9056 63-25

#609

PROGRAM: 162

MISSILE: Thrust Augmented Thor 381/Agema 1166

LAUNCHED: 1737 PDT, 26 Jun 1963, Pad 2

COUNTDOWN HISTORY:

1. First Attempt: The countdown was initiated at 0655 PDT on 26 Jun 1963 and progressed to liftoff with two holds totaling 37 minutes. Hold No. 1 was imposed for 35 minutes to complete work which had fallen behind schedule. Hold No. 2 was imposed in the Terminal Count for two minutes to close the Thor fuel tank vent valve.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>PREDICTED TIME</u>	<u>ACTUAL TIME</u>
1. Solid Separation		
MECO	70.0	70.6
VECO	147.1	146.3
Separation	156.1	155.3
Ignition	160.1	159.6
Burnout	168.1	167.2
	408.7	410.9

2. Both Thor and Agema Airborne Systems performance was satisfactory.

3. Inertial

	<u>Predicted</u>	<u>Actual</u>
MECO Inertial Velocity	12,185 fps	12,060 fps
Injection inertial velocity	25,739 fps	25,730 fps
Apogee	221.7 N.M.	221 N.M.
Perigee	109.6 N.M.	113 N.M.
Period	90.6 min	90.6 min
Inclination Angle	81.8 deg	81.6 deg
Agema Orbital Weight	3,425 lbs	3,469 lbs

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both Thor and Agema AGE performance was satisfactory.

REMARKS:

The capsule was ejected on the 48th orbit and aerial recovery was accomplished on 29 Jun 1963.

RV AR 048 29 Jun. Program 162.
6595-63-2802

UPGRADED AT 3 YEAR INTERVALS,
CLASSIFIED AFTER 12 YEARS
DIRECTIVE 5200.10

~~CONFIDENTIAL~~

Ed 6 Jun 67

~~CONFIDENTIAL~~

PROGRAM 162

#621 63-29
CORONA 67/KH-4 9057
15 JUL 1963

MISSILE: Thor388/Agena 1412

LAUNCHED: 1700 PDT, 18 July 1963, Pad 1

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 0840 on 17 July and was cancelled when a destruct receiver failed.

Second Attempt: The countdown was initiated at 0840 on 18 July 1963 and progressed to liftoff with no holds imposed.

<u>Flight Performance</u>	<u>Predicted Time</u>	<u>Actual Time</u>
<u>Event</u>		
1. MECO	146.7	145.3
VECO	155.7	154.1
Separation	162.3	160.3
Ignition	192.4	188.8
Burnout	431.2	426.7

2. Both Thor and Agena Airborne Systems performed satisfactorily.

3.	<u>Predicted</u>	<u>Actual</u>
MECO Inertial Velocity	11,055 fps	11,045 fps
Injection Inertial Velocity	25,747 fps	25,717 fps
Apogee	234.5 n.m.	216 n.m.
Perigee	112.2 n.m.	111.5 n.m.
Period	90.9 min	90.44 min
Inclination Angle	81.8 deg	82.8 deg
Agena Orbital Weight	2759 lbs	2785 lbs

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both Thor and Agena AGE performed satisfactorily.

REMARKS:

The capsule was ejected on the 64th orbit and a successful ariel recovery was accomplished on 22 July 1963.

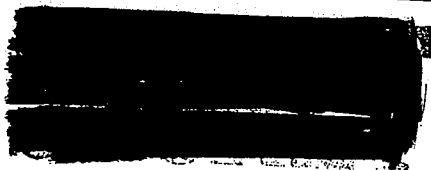
RV AR 64 22 Jul. Program 162.

6595-63-3365

DOWNGRADED AT 3 YEAR INTERVALS,
DECLASSIFIED AFTER 12 YEARS
DOD DIRECTIVE 5200.10

~~CONFIDENTIAL~~

67
COPY 1 of 3 COPIES



PROGRAM 162

~~CONFIDENTIAL~~

MISSILE: Thrust Augmented Thor 377/Agena 1162

LAUNCHED: 1730 PDT, 24 August 1963, Pad 4

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 0825 PDT and proceeded with no holds until a relay in the booster AGE engine start circuitry malfunctioned.
Second Attempt: The countdown was initiated at 0825 PDT and proceeded to lift-off with no holds.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. Solid Separation	70.7	70.0
MECO	149.1	148.9
VECO	158.0	157.9
Separation	162.4	161.9
Ignition	169.9	171.3
Burnout	412.0	414.1

2. Both Thor and Agena Airborne Systems performed satisfactorily.

3.

	<u>Predicted</u>	<u>Actual</u>
MECO Inertial Velocity	12,516 fps	12,354 fps
Injection Inertial Velocity	25,822 fps	25,818 fps
Apogee	240 N.M	235.5 N.M
Perigee	98 N.M	99.6 N.M
Period	90.6 min	90.6 min
Inclination Angle	75.0 deg	75.0 deg
Agena Orbital Weight	3,595 lbs	3,539 lbs

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

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both Thor and Agena AGE performance was satisfactory.

REMARKS:

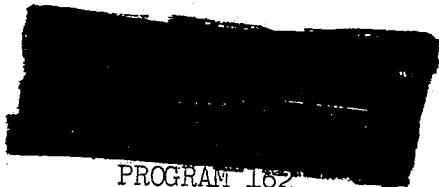
This vehicle carried two recoverable capsules. The first capsule was ejected on the 64th orbit and aerial recovery attempt on 28 August was successful. An attempt to recover the second capsule failed when the capsule did not eject.



~~CONFIDENTIAL~~

6595-63-3846

13-3-5
Date



PROGRAM 162

9058A

~~CONFIDENTIAL~~

MISSILE: Thor 394/Agena 1169

LAUNCHED: 1331 PDT, 29 August 1963, Pad 5

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 0530 PDT on 29 August 1963 and progressed to lift-off with one hold of 31 minutes duration imposed during Phase I of the terminal count when a pressure switch on the launch mount malfunctioned.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. MECO	147.6	147.3
VECO	156.6	156.2
Separation	160.6	160.6
Ignition	191.0	189.2
Burnout	433.8	432.1

2. Both Thor and Agena Airborne Systems operated satisfactorily.

	<u>Predicted</u>	<u>Actual</u>
3. MECO Inertial Velocity	11,019 fps	11,010 fps
Injection Inertial Velocity	25,350 fps	25,379 fps
Apogee	164.6 N M	180.3 N M
Perigee	164.6 N M	162.5 N M
Period	90.6 min	90.8 min
Inclination Angle	81.9 deg	81.8 deg
Agena Orbital Weight	2,646 lbs	2,648 lbs

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both Thor and Agena AGE performed satisfactorily.

REMARKS:

The capsule was ejected on the 48th orbit and aerial recovery was accomplished on 1 September 1963.

6595-63-3980

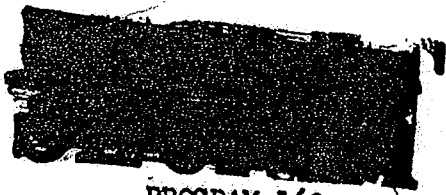
DOWNGRADED AT 3 YEAR INTERVALS,
DECLASSIFIED AFTER 12 YEARS
COD DIRECTIV. 5200.10



~~CONFIDENTIAL~~
6 Jan 67

Copy 1 of 3

Follow King
75-1-2



~~CONFIDENTIAL~~

PROGRAM 162

63-027 #668

CORONA 71/KH-4A 1002-1&2

MISSILE: Thor 383/Agena 1163

LAUNCHED: 1600 PDT, 23 September 1963, Pad 2

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 0600 PDT on 23 September 1963 and progressed to lift-off with no holds.

FLIGHT PERFORMANCE:

Event	Predicted Time	Actual Time
1. Solid Separation	65.0	65.1
MECO	147.2	147.0
VECO	156.2	155.7
Separation	160.2	160.6
Ignition	169.5	167.9
Burnout	409.6	410.4

2. Both TAT and Agena Airborne Systems performed satisfactorily.

3.

	Predicted	Actual
MECO Inertial velocity	12,323 fps	12,250 fps
Injection Inertial velocity	25,818 fps	25,817 fps
Apogee	235.5 N M	237 N M
Perigee	99.6 N M	99.2 N M
Period	90.7 Min	90.6 Min
Inclination Angle	75.0 Deg	74.9 Deg
Agena Orbital Weight	3,510 lbs	3,534 lbs

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both TAT and Agena AGE performed satisfactorily.

REMARKS:

The capsule was ejected on the 64th orbit and aerial recovery was accomplished on 27 September 1963.

Note upper only are RV!!

6595-63-4306

DOWNGRADED AT 3 YEAR INTERVALS,
DECLASSIFIED AFTER 12 YEARS
DOD DIRECTIVE 5200.10

~~CONFIDENTIAL~~
24 6 Dec 67



~~CONFIDENTIAL~~

PROGRAM 162

MISSILE: Thrust Augmented Thor 386/Agema 1601

LAUNCHED: 1319 PST, 29 October 1963, Pad 4

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 0325 on 29 October 1963 and progressed to liftoff with one hold of 51 min. imposed for range clearance (trains).

FLIGHT PERFORMANCE:

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. Solid Separation	65.0	65.5
MECO	148.1	147.7
VECO	157.1	156.6
Separation	161.1	161.0
Ignition	208.4	206.5
Burnout	451.9	451.8

2. Both TAT and Agema Airborne Systems performed satisfactorily.

3.

	<u>Predicted</u>	<u>Actual</u>
MECO Inertial Velocity	11,689 FPS	11,750 FPS
Injection Inertial Velocity	25,211 FPS	25,215 FPS
Apogee	189.9 N.M.	191.6 N.M.
Perigee	155.8 N.M.	155.6 N.M.
Period	90.9 Min	90.9 Min
Inclination Angle	90.0 Deg	89.9 Deg
Agema Orbital Weight	2,965 lbs	3,019 lbs

AEROSPACE GROUND EQUIPMENT

Both TAT and Agema AGE performed satisfactorily.

REMARKS

The capsule was ejected on the 65th orbit and aerial recovery was accomplished on 2 November 1963.

DOWNGRADED AT 3 YEAR INTERVALS,
DECLASSIFIED AFTER 12 YEARS
DOD DIRECTIVE 5200:10

6595-63-4937

~~CONFIDENTIAL~~

Ed Agema 67

Cy #1

~~CONFIDENTIAL~~

PROGRAM 162

MISSILE: Thor 400/Agena 1171

LAUNCHED: 1227:54.51 PST, 9 November 1963, 75-1, Pad 2

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 0440 PST on 9 November 1963 and proceeded to liftoff with two holds of 4 minute duration. Hold No. 1 was imposed at Task 16 to prepare to open terminal count ahead of schedule because of train interference. Hold No. 2 was imposed to insure hazard corridor clearance.

FLIGHT PERFORMANCE

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. MECO	148.10	Loss of
VECO	157.10	Vehicle
Separation	161.10	Control
Ignition	170.40	at
Burnout	413.79	T+134 sec.

2. AGENA AIRBORNE SYSTEMS: Performance was satisfactory until termination of flight.

THOR AIRBORNE SYSTEMS: Ascent was normal until T+113 seconds. At this time, a deterioration in flight control performance was evidenced. At T+134 seconds, the engine went hard over in a yaw right position. This resulted in simultaneous MECO, VECO, and the breakoff of the orbital stage.

3. <u>Event</u>	<u>Predicted</u>	<u>Actual</u>
MECO Inertial Velocity	12,190 fps	Orbit was not achieved
Injection Inertial Velocity	25,765 fps	" " " "
Apogee	240.3 n.m.	" " " "
Perigee	100 n.m.	" " " "
Period	90.7 deg	" " " "
Inclination Angle	81.83 deg	" " " "

AEROSPACE GROUND SUPPORT EQUIPMENT PERFORMANCE:

Both Thor and Agena AGE systems performed satisfactorily.

REMARKS:

The loss of control at T+134 seconds was the result of loss of the main engine flame shield at liftoff. The control system wiring in the boat-tail was exposed to excessive temperatures.

~~CONFIDENTIAL~~
6 Jan 67

6595-63-5370

Cy 1 of 3

DOWN GRADED AT 3 YEAR INTERVALS,
DECLASSIFIED AFTER 12 YEARS
DOD DIRECTIVE 5200.10.

~~CONFIDENTIAL~~

9061

PROGRAM 162

MISSILE: Thor 406/Agena 1172

LAUNCHED: 1315 PST, 27 November 1963, PALC I, Pad 1

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 0415 PST on 27 November 1963 and proceeded to liftoff with one hold of 15 minutes due to an AMR operation conflict.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. MECO	147.56	146
VECO	156.56	155
Separation	160.56	159
Ignition	170.00	169
Burnout	414.82	421
2. Both Thor and Agena airborne systems performed satisfactorily.		
3.	<u>Predicted</u>	<u>Actual</u>
MECO Inertial Velocity	11,257 fps	11,270 fps
Injection Inertial Velocity	25,780 fps	25,779 fps
Apogee	212.13 n.m.	211.5 n.m.
Perigee	99.34 n.m.	98.1 n.m.
Inclination Angle	70.00 deg	69.99 deg
Period	90.21 min	90.17 min
Agena Orbital Weight	3,022 lbs	3,031 lbs

AEROSPACE GROUND EQUIPMENT PERFORMANCE:

Both Thor and Agena AGE performed satisfactorily.

REMARKS:

Recovery attempted 5 days after launch on the 83rd orbit, 1 December 1963, but failed when payload did not eject out of orbit.

DOWNGRADED AT 3 YEAR INTERVALS,
D. CLASSIFIED AFTER 12 YEARS
DOD DIRECTIVE 5200.10

6595-63-5369

~~CONFIDENTIAL~~

Bl 6 Jan 67

C4/M 3

Water Spout

2062

~~SECRET~~

~~CONFIDENTIAL~~

PROGRAM 162

MISSILE: Thrust Augmented Thor 398/Agena 1168

LAUNCHED: 1345 PST, 21 December 1963, 75-1 Pad 2

COUNTDOWN HISTORY:

First Attempt: The countdown was initiated at 0425 PST on 21 December 1963 and proceeded to liftoff with one hold of 16 minutes duration. This hold was imposed due to train interference.

FLIGHT PERFORMANCE:

<u>Event</u>	<u>Predicted Time</u>	<u>Actual Time</u>
1. MECO	148.23	148.55
VECO	157.23	157.49
Separation	161.23	162.07
Ignition	170.50	170.67
Burnout	413.42	414.97
2. Both TAT and Agena Airborne Systems performed satisfactorily.		
3.		
	<u>Predicted</u>	<u>Actual</u>
MECO Inertial Velocity	12,252	12,260
Injection Inertial Velocity	25,760	25,758
Apogee	202.7	200.6
Perigee	100.0	99.5
Period	90.040	89.98
Inclination Angle	64.94	64.88

DECLASSIFIED AT 3 YEAR INTERVAL
 DECLASSIFIED AFTER 25 YEARS
 DOD DIR 5500.10

AEROSPACE GROUND EQUIPMENT PERFORMANCE

Both TAT and Agena AGE systems performed satisfactorily.

REMARKS

The capsule was ejected on the 81st orbit and a successful aerial recovery was accomplished on 26 December 1963.

~~CONFIDENTIAL~~
13 FEB 1968

6595-64-0003

~~SECRET~~