



Data Sheet #5
Submarine Missile Test Firings
1960 to 1991

In 1960, following commissioning of USS GEORGE WASHINGTON (SSBN-598), the Navy commenced a series of Demonstration and Shakedown Operation (DASO) test firings from fleet ballistic missile submarines off Cape Canaveral. The purpose of these tests was to acquire reliability data on the missile as well as provide crew training and a complete checkout of the launcher, guidance, ship control and navigation systems. These tests progressed from the initial A-1 Polaris missile and the A-2 and A-3 longer range versions through the C-3 Poseidon and into the Trident C-4 and D-5 missiles.

The attached sheets list DASO test firings both by ship (hull number order) and chronologically by date. Launches conducted from pads on Cape Canaveral (Kennedy) or from USS OBSERVATION ISLAND are not documented. Also not documented are Operational Test (OT) and Follow-on Operational Test (FOT) launches, both of which are conducted on a classified basis from a patrol condition. Although OT/FOT information has been released, collectors do not have the opportunity to arrange for covers from these tests and no point would be served in listing them.

The question of what constitutes a valid DASO launch cover is open to discussion. Covers for launches exist with hand and/or machine cancels from Cape Canaveral, Kennedy Space Center, Satellite Beach, Patrick Air Force Base, USS OBSERVATION ISLAND and various destroyers used as escort vessels. From 1960 to 1979, covers with these cancels should bear the firing date (or the next day for an evening launch) to be considered a valid cover. In 1979, advance notice of test firings was discontinued and covers postmarked on the date of the launch are difficult, if not impossible, to obtain. Covers carried on board the submarine during the launch will generally be cancelled with a PAFB cancel sometimes on the day of firing but more often a day or two after. Frequently, the firing submarine returned to port after the post office had terminated service for the day or even later if other operations were conducted following the DASO launch.

No attempt has been made to document missile launch cachets which are numerous. Covers for early firings were sponsored by the individual ships and by Nuclear Ships Chapter; later firings by Whitney. A number of submarine firing covers bear the OBSERVATION ISLAND cachet and postmark. One needs a check list and a sharp eye to know what is a legitimate submarine missile test firing and what is not.

References: Covers from submarines and/or sponsors
FBM Chronology, Strategic Systems Program Office,
Washington, D.C.

About the Missiles:

Polaris A-1: two-stage ballistic missile powered by solid fuel rocket motors and guided by a self-contained inertial guidance system independent of external commands or control. The first generation Polaris, the A-1 missile had a 1,200 nautical mile range. The A-1 was retired from service on October 14, 1965.

Polaris A-2: larger and more powerful than A-1, the A-2 had a 1,500 nautical mile range. The A-2 was in service from October 23, 1961 to September 1974.

Polaris A-3: larger and more powerful than A-2, the A-3 had a multiple reentry warhead capability to match its 2,500 nautical mile range. The A-3 became operational in September, 1964 and was retired from service in February 1982.

Poseidon C-3: an improved version of the Polaris missile with a 2,500 nautical mile range, Poseidon became operational on March 31, 1971. Commencing with SAM RAYBURN (SSBN-635), Poseidon C-3 capable submarines began being retired in August 1985 in compliance with SALT.

Trident I C-4: a three stage solid propellant missile, Trident I has a range of 4,000 nautical miles and a payload greater than the Poseidon. Trident was backfitted into selected Poseidon capable submarines with USS FRANCIS SCOTT KEY (SSBN-657) making the first tactical C-4 patrol from Charleston, SC in October 1979. The first Trident submarine, USS OHIO (SSBN-726), deployed in September, 1982 from Bangor, Washington.

Trident II D-5: a more sophisticated missile than the C-4, Trident II has a range in excess of 4,000 nautical miles and a payload greater than Trident I. Only the OHIO class submarines are capable of carrying the D-5. USS TENNESSEE (SSBN-734) was the first submarine to deploy with this missile in March 1990.

FBM submarines classes:

GEORGE WASHINGTON (598 Class), 5 submarines, A-1/A-3 loadout

ETHAN ALLEN (608 Class), 5 submarines, A-2/A-3 loadout

LAFAYETTE (616 Class), 9 submarines, A-2/A-3/C-3 loadout

JAMES MADISON (627 Class), 10 submarines, A-3/C-3/C-4 loadout

BENJAMIN FRANKLIN (640 Class), 12 submarines, A-3/C-3/C-4 loadout

OHIO (726 Class), 18 submarines (projected), C-4/D-5 loadout

Glossary:

PEM (Program Evaluation Missile): specially configured missiles used during the Poseidon and Trident test programs; operationally configured missiles were tested following the PEM series.

SSBN Missile Firings, Ship List

Date	Missile	Crew	Notes
USS GEORGE WASHINGTON (SSBN-598)			
July 20, 1960	A-1	Blue	two launches
July 30, 1960	A-1	Gold	
Aug. 1, 1960	A-1	Gold	
Mar. 31, 1966	A-3	Blue	
Apr. 14, 1966	A-3	Gold	
Feb. 4, 1972	A-3	Gold	
Sep. 20, 1978	A-3	Blue	
USS PATRICK HENRY (SSBN-599)			
Sep. 13, 1960	A-1	Blue	
Sep. 15, 1960	A-1	Blue	
Sep. 22, 1960	A-1	Blue	
Oct. 15, 1960	A-1	Gold	Operational test
Oct. 16, 1960	A-1	Gold	Op test, 2 launches
Oct. 18, 1960	A-1	Gold	Op test
Oct. 31, 1966	A-3	Gold	
Apr. 24, 1972	A-3	Blue	
June 28, 1978	A-3	Blue	
USS THEODORE ROOSEVELT (SSBN-600)			
Mar. 23, 1961	A-1	Blue	
Apr. 6, 1961	A-1	Gold	
Apr. 27, 1967	A-3	Blue	
May 31, 1974	A-3	Blue	
Aug. 27, 1974	A-3	Gold	
USS ROBERT E. LEE (SSBN-601)			
Dec. 22, 1960	A-1	Blue	
Jan. 11, 1961	A-1	Gold	
Jan. 14, 1961	A-1	Gold	
Apr. 19, 1961	A-1	Gold	
Oct. 10, 1966	A-3	Blue	
Oct. 5, 1972	A-3	Blue	
Nov. 20, 1978	A-3	Blue	
USS ABRAHAM LINCOLN (SSBN-602)			
May 3, 1961	A-1	Blue	
May 17, 1961	A-1	Gold	
Aug. 12, 1961	A-1	Gold	
Sep. 8, 1967	A-3	Blue	
July 26, 1974	A-3	Gold	
USS ETHAN ALLEN (SSBN-608)			
Oct. 16, 1961	A-1	Blue	
Oct. 23, 1961	A-2	Blue	first A-2
Nov. 3, 1961	A-1	Gold	
Nov. 8, 1961	A-2	Gold	
May 6, 1962	A-2	Blue	live missile firing
Jan. 8, 1968	A-2	Gold	
Jan. 24, 1968	A-2	Blue	
Aug. 9, 1974	A-3	Gold	

Date	Missile	Crew	Notes
USS SAM HOUSTON (SSBN-609)			
Apr. 25, 1962	A-2	Blue	
May 9, 1962	A-2	Gold	
May 11, 1962	A-2	Gold	
Jan. 15, 1968	A-2	Gold	
Jan. 31, 1968	A-2	Blue	
Apr. 26, 1975	A-3	Blue	
USS THOMAS EDISON (SSBN-610)			
May 23, 1962	A-2	Blue	
June 2, 1962	A-2	Gold	
June 18, 1968	A-2	Blue	
July 11, 1968	A-2	Gold	
Apr. 12, 1975	A-3	Blue	
USS JOHN MARSHALL (SSBN-611)			
July 12, 1962	A-2	Blue	
July 21, 1962	A-2	Gold	
June 10, 1968	A-2	Blue	
July 19, 1968	A-2	Gold	
Sep. 18, 1976	A-3	Blue	
USS LAFAYETTE (SSBN-616)			
June 13, 1963	A-2	Blue	
July 2, 1963	A-2	Gold	
Feb. 20, 1969	A-2	Blue	
Apr. 4, 1969	A-2	Gold	
Dec. 16, 1974	C-3	Blue	
Sep. 2, 1983	C-3	Gold	
USS ALEXANDER HAMILTON (SSBN-617)			
Aug. 9, 1963	A-2	Blue	
Aug. 23, 1963	A-2	Gold	
Sep. 10, 1968	A-2	Blue	
Sep. 26, 1968	A-2	Gold	
May 28, 1975	C-3	Blue	
Sep. 29, 1989	C-3	Blue	
USS THOMAS JEFFERSON (SSBN-618)			
Feb. 21, 1963	A-2	Blue	
Mar. 7, 1963	A-2	Gold	
July 30, 1968	A-2	Blue	
Aug. 14, 1968	A-2	Gold	
Mar. 29, 1976	A-3	Blue	
USS ANDREW JACKSON (SSBN-619)			
Oct. 1, 1963	A-2	Blue	
Oct. 16, 1963	A-2	Gold	
Oct. 26, 1963	A-3	Gold	first test A-3
Nov. 11, 1963	A-3	Gold	test A-3
Nov. 16, 1963	A-2	Gold	
Sep. 18, 1969	A-2	Blue	

Date	Missile	Crew	Notes
USS ANDREW JACKSON (SSBN-619) continued,			
Nov. 15, 1969	A-2	Gold	
Oct. 10, 1975	C-3	Blue	
USS JOHN ADAMS (SSBN-620)			
June 23, 1964	A-2	Blue	
July 8, 1964	A-2	Gold	
Dec. 2, 1969	A-3	Gold	
May 25, 1976	C-3	Blue	
USS JAMES MONROE (SSBN-622)			
Feb. 3, 1964	A-2	Blue	
Feb. 17, 1964	A-2	Gold	
Oct. 30, 1969	A-3	Blue	
Nov. 24, 1969	A-3	Gold	
Aug. 3, 1977	C-3	Blue	
USS NATHAN HALE (SSBN-623)			
Jan. 13, 1964	A-2	Blue	
Jan. 26, 1964	A-2	Gold	
Aug. 19, 1969	A-3	Blue	
Sep. 30, 1969	A-3	Gold	
Sep. 24, 1975	C-3	Blue	
USS WOODROW WILSON (SSBN-624)			
Mar. 2, 1964	A-2	Blue	
Mar. 16, 1964	A-2	Gold	
Oct. 15, 1969	A-3	Gold	
Feb. 14, 1976	C-3	Gold	
USS HENRY CLAY (SSBN-625)			
Apr. 6, 1964	A-2	Blue	
Apr. 20, 1964	A-2	Gold	1st surfaced firing
Apr. 10, 1970	A-3	Blue	
May 22, 1970	A-3	Gold	
Sep. 6, 1977	C-3	Blue	
USS DANIEL WEBSTER (SSBN-626)			
May 25, 1964	A-3	Blue	1st operational A-3
June 8, 1964	A-3	Gold	
Aug. 29, 1968	A-3	Gold	1st improved A-3
Feb. 6, 1970	A-3	Gold	
Mar. 29, 1978	C-3	Blue	
USS JAMES MADISON (SSBN-627)			
Sep. 28, 1964	A-3	Blue	
Oct. 13, 1964	A-3	Gold	
Aug. 3, 1970	C-3	Blue	Poseidon PEM
Aug. 17, 1970	C-3	Gold	Poseidon PEM
Oct. 6, 1970	C-3	Gold	Poseidon PEM
Oct. 23, 1970	C-3	Blue	1st Operational C-3
June 5, 1982	C-4	Gold	

Date	Missile	Crew	Notes
USS TECUMSEH (SSBN-628)			
Aug. 6, 1964	A-3	Blue	
Aug. 20, 1964	A-3	Gold	
Apr. 30, 1971	C-3	Blue	
July 17, 1971	C-3	Gold	
Oct. 23, 1979	C-3	Gold	
Jan. 31, 1987	C-3	Blue	
USS DANIEL BOONE (SSBN-629)			
July 16, 1964	A-3	Blue	
July 29, 1964	A-3	Gold	
Sep. 8, 1970	C-3	Blue	Poseidon PEM
Sep. 21, 1970	C-3	Blue	Poseidon PEM
Nov. 27, 1970	C-3	Blue	
May 15, 1978	C-3	Blue	
July 21, 1980	C-4	Gold	
Aug. 23, 1987	C-4	Blue	
USS JOHN C. CALHOUN (SSBN 630)			
Feb. 15, 1965	A-3	Blue	
Mar. 1, 1965	A-3	Gold	
Apr. 19, 1971	C-3	Blue	
June 7, 1971	C-3	Gold	
Mar. 23, 1979	C-3	Gold	
Oct. 28, 1980	C-4	Blue	
Aug. 31, 1986	C-4	Blue	
USS ULYSSES S. GRANT (SSBN-631)			
Sep, 5, 1964	A-3	Blue	
Sep. 21, 1964	A-3	Gold	
Mar. 29, 1971	C-3	Gold	
May 11, 1971	C-3	Blue	
May 26, 1979	C-3	Gold	
July 31, 1987	C-3	Blue	
USS VON STEUBEN (SSBN-632)			
Dec. 22, 1964	A-3	Gold	
Jan. 11, 1965	A-3	Blue	
Feb. 4, 1971	C-3	Blue	
Mar. 15, 1971	C-3	Gold	
Nov. 14, 1982	C-4	Gold	
USS CASIMIR PULASKI (SSBN-633)			
Oct. 31, 1964	A-3	Blue	
Nov. 13, 1964	A-3	Gold	
July 2, 1971	C-3	Blue	
Aug. 16, 1971	C-3	Gold	
Apr. 19, 1983	C-4	Gold	

Date	Missile	Crew	Notes
USS STONEWALL JACKSON (SSBN-634)			
Dec. 2, 1964	A-3	Blue	
Dec. 16, 1964	A-3	Gold	
Dec. 6, 1971	C-3	Blue	
Jan. 21, 1972	C-3	Gold	
July 14, 1980	C-3	Gold	
Jan. 26, 1982	C-4	Blue	
Feb. 27, 1988	C-4	Blue	
USS SAM RAYBURN (SSBN-635)			
Jan. 23, 1965	A-3	Blue	
Feb. 8, 1965	A-3	Gold	
Oct. 14, 1971	C-3	Blue	
Nov. 24, 1971	C-3	Gold	
Feb. 13, 1980	C-3	Gold	
USS NATHANAEL GREENE (SSBN-636)			
Mar. 15, 1965	A-3	Blue	surface launch
Mar. 29, 1965	A-3	Gold	
Nov. 4, 1971	C-3	Blue	surface launch
Dec. 17, 1971	C-3	Gold	
Aug. 22, 1981	C-3	Gold	
USS BENJAMIN FRANKLIN (SSBN-640)			
Dec. 6, 1965	A-3	Gold	
Dec. 20, 1965	A-3	Blue	
June 16, 1972	C-3	Blue	
Nov. 15, 1981	C-4		
Jan. 23, 1989	C-4	Blue	
USS SIMON BOLIVAR (SSBN-641)			
Jan. 17, 1966	A-3	Gold	
Jan. 31, 1966	A-3	Blue	
July 5, 1972	C-3	Blue	
Apr. 1, 1981	C-4	Gold	
Feb. 6, 1988	C-4	Blue	
USS KAMEHAMEHA (SSBN-642)			
Feb. 24, 1966	A-3	Blue	
Mar. 10, 1966	A-3	Gold	
Dec. 15, 1972	C-3	Blue	
Apr. 8, 1983	C-3	Gold	
Apr. 30, 1990	C-3	Gold	Final C-3 DASO
USS GEORGE BANCROFT (SSBN-643)			
Apr. 7, 1966	A-3	Blue	
Apr. 21, 1966	A-3	Gold	
Sep. 25, 1972	C-3	Blue	
Apr. 24, 1982	C-4	Blue	
Jan. 6, 1989	C-4	Blue	

Date	Missile	Crew	Notes
USS LEWIS & CLARK (SSBN-644)			
Feb. 17, 1966	A-3	Blue	
Mar. 3, 1966	A-3	Gold	
Dec. 18, 1972	C-3	Blue	
Mar. 19, 1984	C-3	Gold	
USS JAMES K. POLK (SSBN 645)			
June 10, 1966	A-3	Gold	
June 23, 1966	A-3	Blue	
Jan. 13, 1973	C-3	Blue	
July 23, 1983	C-3	Gold	
Mar. 9, 1989	C-3	Blue	
USS GEORGE C. MARSHALL (SSBN-654)			
July 11, 1966	A-3	Blue	
July 25, 1966	A-3	Gold	
Apr. 28, 1973	C-3	Blue	
July 24, 1984	C-3	Gold	
USS HENRY L. STIMSON (SSBN-655)			
Nov. 14, 1966	A-3	Blue	
Nov. 28, 1966	A-3	Gold	
May 9, 1973	C-3	Blue	
Mar. 26, 1980	C-4	Gold	
Dec. 15, 1984	C-4	Gold	
USS GEORGE WASHINGTON CARVER (SSBN-656)			
Sep. 1, 1966	A-3	Blue	
May 19, 1973	C-3	Blue	
Aug. 10, 1985	C-3	Blue	
USS FRANCIS SCOTT KEY (SSBN-657)			
Apr. 3, 1967	A-3	Blue	
Sep. 15, 1973	C-3	Gold	
Apr. 10, 1979	C-4		Trident I PEM
June 8, 1979	C-4		Trident I PEM
June 19, 1979	C-4		Trident I PEM
July 14, 1979	C-4		Trident I PEM
July 22, 1979	C-4		Trident I PEM
July 30, 1979	C-4		Trident I PEM
July 31, 1979	C-4		Trident I PEM
Aug. 28, 1979	C-4	Blue	
Sep. 26, 1979	C-4	Gold	
Dec. 7, 1985	C-4	Gold	
USS MARIANO G. VALLEJO (SSBN-658)			
Mar. 5, 1967	A-3	Blue	
Apr. 12, 1974	C-3	Gold	
Dec. 13, 1979	C-4	Gold	
Oct. 9, 1984	C-4	Gold	

Date	Missile	Crew	Notes
USS WILL ROGERS (SSBN-659)			
July 31, 1967	A-3	Gold	
May 15, 1974	C-3	Gold	
May 20, 1986	C-4	Gold	
USS OHIO (SSBN-726)			
Jan. 17, 1982	C-4	Blue	
Mar. 13, 1982	C-4	Gold	
USS MICHIGAN (SSBN-727)			
Nov. 21, 1982	C-4	Blue	
USS FLORIDA (SSBN-728)			
Aug. 21, 1983	C-4	Blue	
Oct. 3, 1983	C-4	Gold	
USS GEORGIA (SSBN-729)			
Apr. 7, 1984	C-4	Blue	
USS HENRY M. JACKSON (SSBN-730)			
Dec. 4, 1984	C-4	Blue	
USS ALABAMA (SSBN-731)			
July 6, 1985	C-4	Blue	
USS ALASKA (SSBN-732)			
Feb. 21, 1986	C-4	Blue	
USS NEVADA (SSBN-733)			
Sep. 30, 1986	C-4	Blue	
USS TENNESSEE (SSBN-734)			
Mar. 21, 1989	D-5		Trident II PEM
Aug. 2, 1989	D-5		Trident II PEM
Aug. 15, 1989	D-5		Trident II PEM
Dec. 4, 1989	D-5		Trident II PEM
Dec. 13, 1989	D-5		Trident II PEM
Dec. 15, 1989	D-5		Trident II PEM
Jan. 15, 1990	D-5		Trident II PEM
Jan. 16, 1990	D-5		Trident II PEM
Feb. 12, 1990	D-5	Blue	
USS PENNSYLVANIA (SSBN-735)			
Mar. 11, 1990	D-5		
Sep. 26, 1990	D-5		
USS WEST VIRGINIA (SSBN-736)			
Nov. 28, 1990	D-5		
Apr. 15, 1991	D-5		

Date	Missile	Crew	Notes
USS KENTUCKY (SSBN-737)			
Aug. 30, 1991	D-5		
Nov. 4, 1991	D-5		
USS MARYLAND (SSBN-738)			
USS NEBRASKA (SSBN-739)			

SSBN Missile Firings - Chronological List

Date	Ship	Hull	Crew	Type	Remarks
July 20, 1960	GEORGE WASHINGTON	598	Blue	A-1	1st Polaris; 2 launches
July 30	GEORGE WASHINGTON	598	Gold	A-1	
Aug 1	GEORGE WASHINGTON	598	Gold	A-1	
Sept 13	PATRICK HENRY	599	Blue	A-1	
Sept 15	PATRICK HENRY	599	Blue	A-1	
Sept 22	PATRICK HENRY	599	Blue	A-1	
Oct 15	PATRICK HENRY	599	Gold	A-1	Op test
Oct 16	PATRICK HENRY	599	Gold	A-1	Op test (2)
Oct 18	PATRICK HENRY	599	Gold	A-1	Op test
Dec 22	ROBERT E. LEE	601	Blue	A-1	
Jan 11, 1961	ROBERT E. LEE	601	Gold	A-1	
Jan 14	ROBERT E. LEE	601	Gold	A-1	
Mar 23	THEODORE ROOSEVELT	600	Blue	A-1	
Apr 6	THEODORE ROOSEVELT	600	Gold	A-1	
Apr 19	ROBERT E. LEE	601	Gold	A-1	
May 3	ABRAHAM LINCOLN	602	Blue	A-1	
May 17	ABRAHAM LINCOLN	602	Gold	A-1	
Aug 12	ABRAHAM LINCOLN	602	Gold	A-1	
Oct 16	ETHAN ALLEN	608	Blue	A-1	
Oct 23	ETHAN ALLEN	608	Blue	A-2	1st A-2
Nov 3	ETHAN ALLEN	608	Gold	A-1	
Nov 8	ETHAN ALLEN	608	Gold	A-2	
Apr 25, 1962	SAM HOUSTON	609	Blue	A-2	
May 6	ETHAN ALLEN	608	Blue	A-2	Live missile
May 9	SAM HOUSTON	609	Gold	A-2	
May 11	SAM HOUSTON	609	Gold	A-2	
May 23	THOMAS EDISON	610	Blue	A-2	
June 2	THOMAS EDISON	610	Gold	A-2	
July 12	JOHN MARSHALL	611	Blue	A-2	
July 21	JOHN MARSHALL	611	Gold	A-2	
Feb 21, 1963	THOMAS JEFFERSON	618	Blue	A-2	
Mar 7	THOMAS JEFFERSON	618	Gold	A-2	
June 13	LAFAYETTE	616	Blue	A-2	
July 2	LAFAYETTE	616	Gold	A-2	
Aug 9	ALEXANDER HAMILTON	617	Blue	A-2	
Aug 23	ALEXANDER HAMILTON	617	Gold	A-2	
Oct 1	ANDREW JACKSON	619	Blue	A-2	
Oct 16	ANDREW JACKSON	619	Gold	A-2	
Oct 26	ANDREW JACKSON	619	Gold	A-3	test A-3
Nov 11	ANDREW JACKSON	619	Gold	A-3	test A-3
Nov 16	ANDREW JACKSON	619	Gold	A-2	demo. for Pres. Kennedy
Jan 13, 1964	NATHAN HALE	623	Blue	A-2	
Jan 26	NATHAN HALE	623	Gold	A-2	
Feb 3	JAMES MONROE	622	Blue	A-2	
Feb 17	JAMES MONROE	622	Gold	A-2	

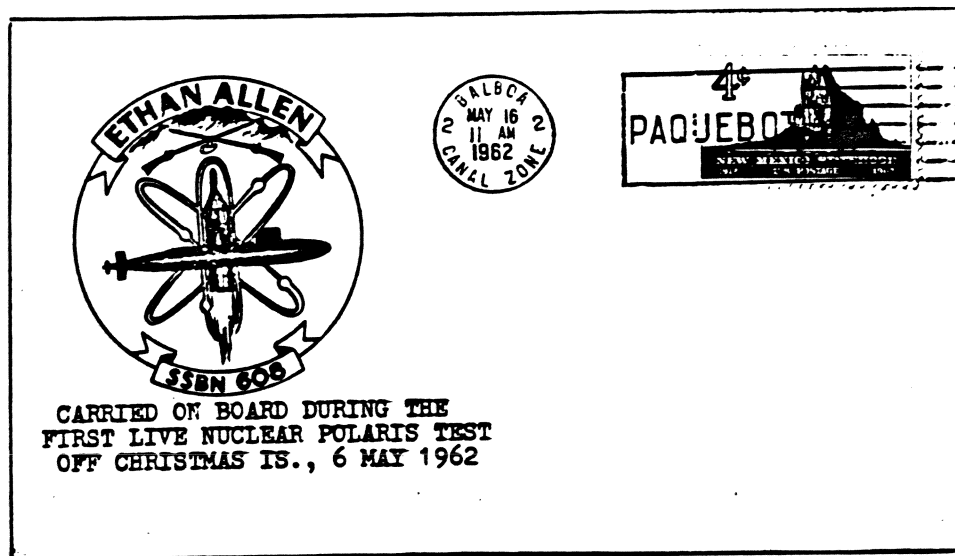
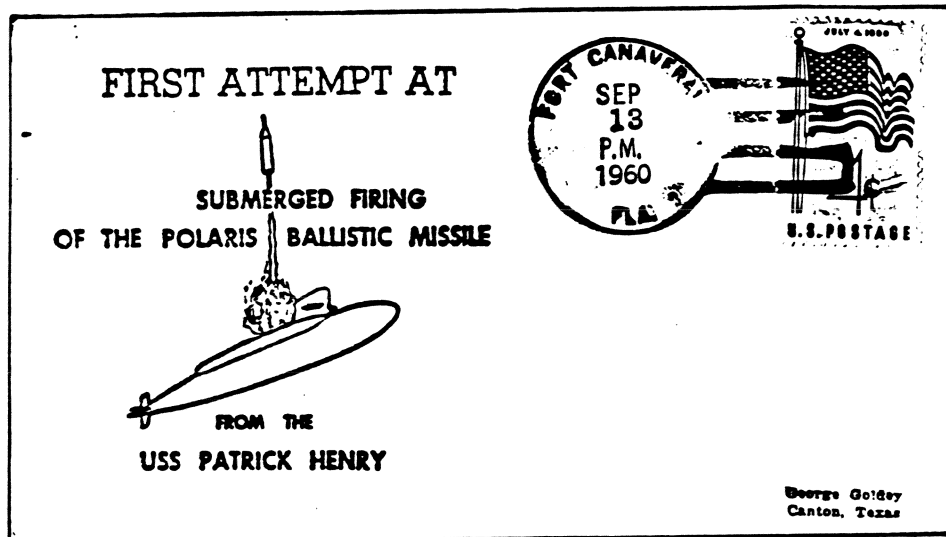
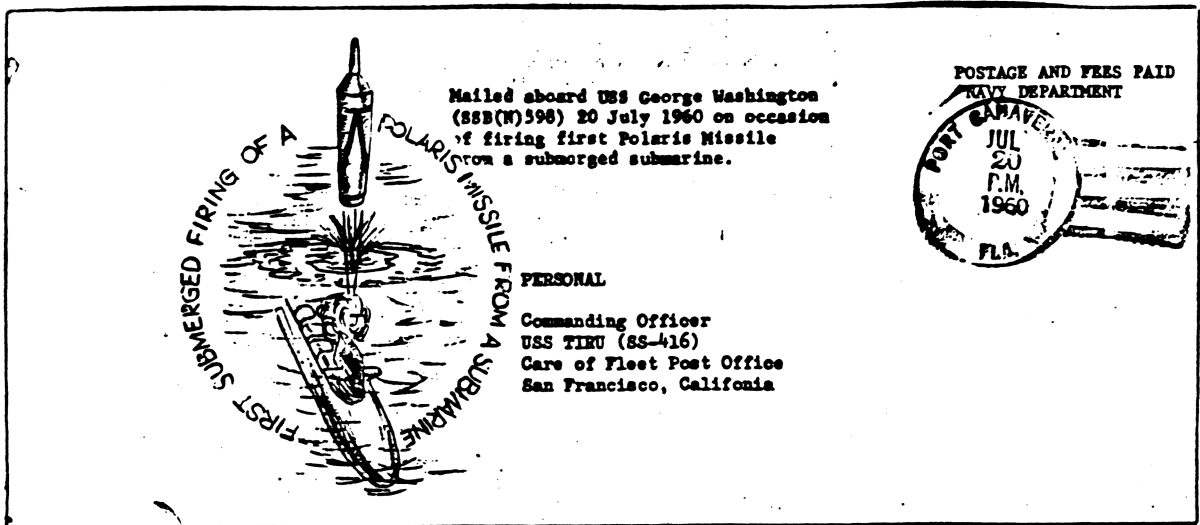
Date	Ship	Hull	Crew	Type	Remarks
Mar 2, 1964	WOODROW WILSON	624	Blue	A-2	
Mar 16	WOODROW WILSON	624	Gold	A-2	
Apr 6	HENRY CLAY	625	Blue	A-2	
Apr 20	HENRY CLAY	625	Gold	A-2	1st surface launch
May 25	DANIEL WEBSTER	626	Blue	A-3	1st A-3 (oper)
June 8	DANIEL WEBSTER	626	Gold	A-3	
June 23	JOHN ADAMS	620	Blue	A-2	
July 8	JOHN ADAMS	620	Gold	A-2	
July 16	DANIEL BOONE	629	Blue	A-3	
July 29	DANIEL BOONE	629	Gold	A-3	
Aug 6	TECUMSEH	628	Blue	A-3	
Aug 20	TECUMSEH	628	Gold	A-3	
Sept 5	ULYSSES S. GRANT	631	Blue	A-3	
Sept 21	ULYSSES S. GRANT	631	Gold	A-3	
Sept 28	JAMES MADISON	627	Blue	A-3	
Oct 13	JAMES MADISON	627	Gold	A-3	
Oct 31	CASIMIR PULASKI	633	Blue	A-3	
Nov 13	CASIMIR PULASKI	633	Gold	A-3	
Dec 2	STONEWALL JACKSON	634	Blue	A-3	
Dec 16	STONEWALL JACKSON	634	Gold	A-3	
Dec 22	VON STEUBEN	632	Gold	A-3	
Jan 11, 1965	VON STEUBEN	632	Blue	A-3	
Jan 23	SAM RAYBURN	635	Blue	A-3	
Feb 8	SAM RAYBURN	635	Gold	A-3	
Feb 15	JOHN C. CALHOUN	630	Blue	A-3	
Mar 1	JOHN C. CALHOUN	630	Gold	A-3	
Mar 15	NATHANAEL GREENE	636	Blue	A-3	1st A-3
surface launch					
Mar 29	NATHANAEL GREENE	636	Gold	A-3	
Dec 6	BENJAMIN FRANKLIN	640	Gold	A-3	
Dec 20	BENJAMIN FRANKLIN	640	Blue	A-3	
Jan 17, 1966	SIMON BOLIVAR	641	Gold	A-3	
Jan 31	SIMON BOLIVAR	641	Blue	A-3	
Feb 17	LEWIS & CLARK	644	Blue	A-3	
Feb 24	KAMEHAMEHA	642	Blue	A-3	
Mar 3	LEWIS & CLARK	644	Gold	A-3	
Mar 10	KAMEHAMEHA	642	Gold	A-3	
Mar 31	GEORGE WASHINGTON	598	Blue	A-3	
Apr 7	GEORGE BANCROFT	643	Blue	A-3	
Apr 14	GEORGE WASHINGTON	598	Gold	A-3	
Apr 21	GEORGE BANCROFT	643	Gold	A-3	
June 10	JAMES K. POLK	645	Gold	A-3	
June 23	JAMES K. POLK	645	Blue	A-3	
July 11	GEO. C. MARSHALL	654	Blue	A-3	
July 25	GEO. C. MARSHALL	654	Gold	A-3	
Sept 1	GEO. WASH. CARVER	656	Blue	A-3	
Oct 10	ROBERT E. LEE	601	Blue	A-3	
Oct 31	PATRICK HENRY	599	Gold	A-3	
Nov 14	HENRY L. STIMSON	655	Blue	A-3	
Nov 28	HENRY L. STIMSON	655	Gold	A-3	

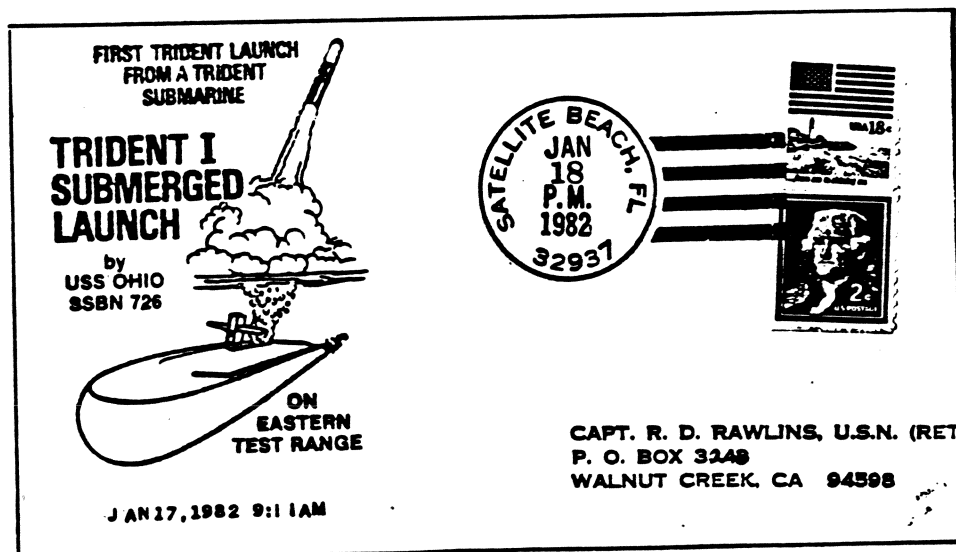
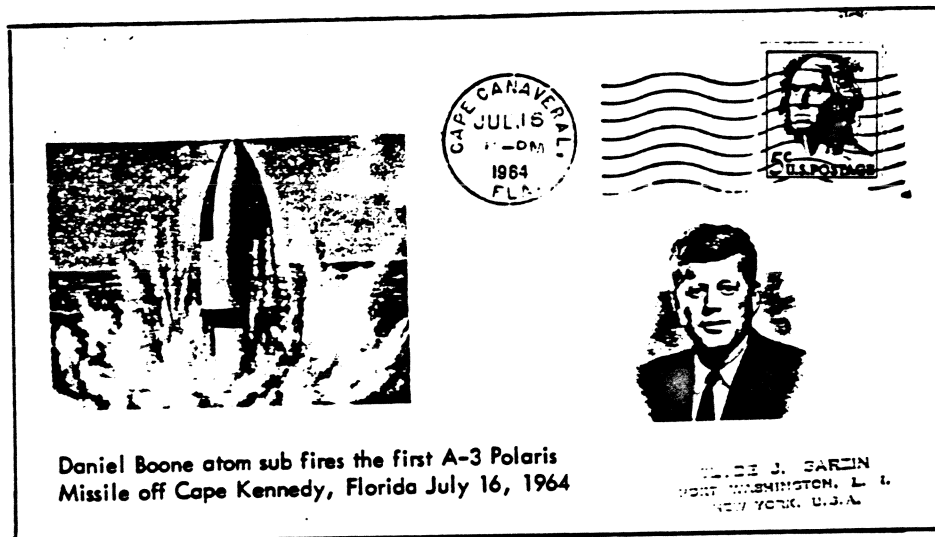
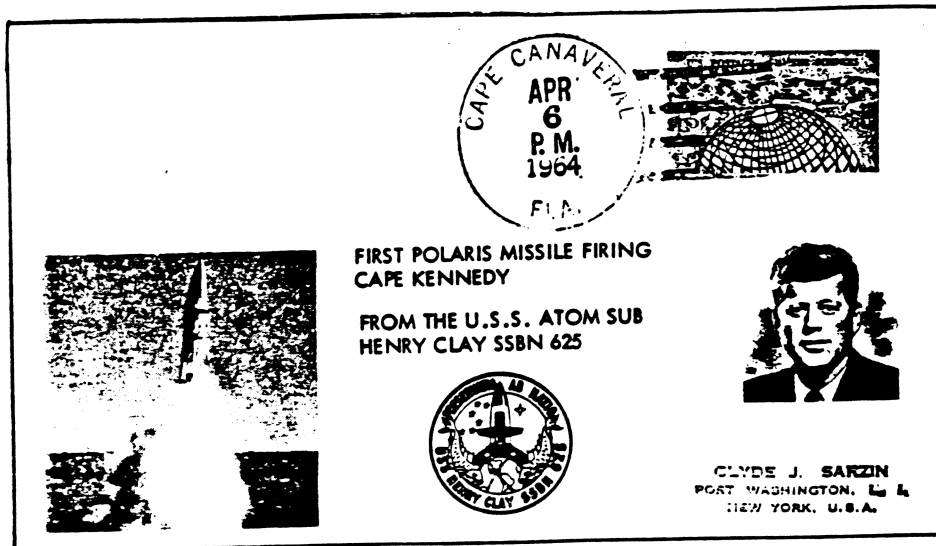
Date	Ship	Hull	Crew	Type	Remarks
Mar 5, 1967	MARIANO G. VALLEJO	658	Blue	A-3	
Apr 3	FRANCIS SCOTT KEY	657	Blue	A-3	
Apr 27	THEODORE ROOSEVELT	600	Blue	A-3	
July 31	WILL ROGERS	659	Gold	A-3	
Sept 8	ABRAHAM LINCOLN	602	Blue	A-3	
Jan 8, 1968	ETHAN ALLEN	608	Gold	A-2	
Jan 15	SAM HOUSTON	609	Gold	A-2	
Jan 24	ETHAN ALLEN	608	Blue	A-2	
Jan 31	SAM HOUSTON	609	Blue	A-2	
June 10	JOHN MARSHALL	611	Blue	A-2	
June 18	THOMAS EDISON	610	Blue	A-2	
July 11	THOMAS EDISON	610	Gold	A-2	
July 19	JOHN MARSHALL	611	Gold	A-2	
July 30	THOMAS JEFFERSON	618	Blue	A-2	
Aug 14	THOMAS JEFFERSON	618	Gold	A-2	
Aug 29	DANIEL WEBSTER	626	Gold	A-3	improved A-3
Sept 10	ALEXANDER HAMILTON	617	Blue	A-2	
Sept 26	ALEXANDER HAMILTON	617	Gold	A-2	
Feb 20, 1969	LAFAYETTE	616	Blue	A-2	
Apr 4	LAFAYETTE	616	Gold	A-2	
Aug 19	NATHAN HALE	623	Blue	A-3	
Sept 18	ANDREW JACKSON	619	Blue	A-2	
Sept 30	NATHAN HALE	623	Gold	A-3	
Oct 15	WOODROW WILSON	624	Gold	A-3	
Oct 30	JAMES MONROE	622	Blue	A-3	
Nov 15	ANDREW JACKSON	619	Gold	A-2	
Nov 24	JAMES MONROE	622	Gold	A-3	
Dec 2	JOHN ADAMS	620	Gold	A-3	
Feb 6, 1970	DANIEL WEBSTER	626	Gold	A-3	
Apr 10	HENRY CLAY	625	Blue	A-3	
May 22	HENRY CLAY	625	Gold	A-3	
Aug 3	JAMES MADISON	627	Blue	C-3	Poseidon PEM
Aug 17	JAMES MADISON	627	Gold	C-3	Poseidon PEM
Sept 8	DANIEL BOONE	629	Blue	C-3	Poseidon PEM
Sept 21	DANIEL BOONE	629	Blue	C-3	Poseidon PEM
Oct 6	JAMES MADISON	627	Gold	C-3	Poseidon PEM
Oct 23	JAMES MADISON	627	Blue	C-3	1st Oper. C-3
Nov 27	DANIEL BOONE	629	Blue	C-3	
Feb 4, 1971	VON STEUBEN	632	Blue	C-3	
Mar 15	VON STEUBEN	632	Gold	C-3	
Mar 29	ULYSSES S. GRANT	631	Gold	C-3	
Apr 19	JOHN C. CALHOUN	630	Blue	C-3	
Apr 30	TECUMSEH	628	Blue	C-3	
May 11	ULYSSES S. GRANT	631	Blue	C-3	
June 7	JOHN C. CALHOUN	630	Gold	C-3	
July 2	CASIMIR PULASKI	633	Blue	C-3	
July 17	TECUMSEH	628	Gold	C-3	
Aug 16	CASIMIR PULASKI	633	Gold	C-3	
Oct 14	SAM RAYBURN	635	Blue	C-3	

Date	Ship	Hull	Crew	Type	Remarks
Nov 4, 1971	NATHANAEL GREENE	636	Blue	C-3	1st C-3
surface launch					
Nov 24	SAM RAYBURN	635	Gold	C-3	
Dec 6	STONEWALL JACKSON	634	Blue	C-3	
Dec 17	NATHANAEL GREENE	636	Gold	C-3	
Jan 21, 1972	STONEWALL JACKSON	634	Gold	C-3	
Feb 4	GEORGE WASHINGTON	598	Gold	A-3	
Apr 24	PATRICK HENRY	599	Blue	A-3	
June 16	BENJAMIN FRANKLIN	640	Blue	C-3	
July 5	SIMON BOLIVAR	641	Blue	C-3	
Sept 25	GEORGE BANCROFT	643	Blue	C-3	
Oct 5	ROBERT E. LEE	601	Blue	A-3	
Dec 15	KAMEHAMEHA	642	Blue	C-3	
Dec 18	LEWIS & CLARK	644	Blue	C-3	
Jan 13, 1973	JAMES K. POLK	645	Blue	C-3	
Apr 28	GEO. C. MARSHALL	654	Blue	C-3	
May 9	HENRY L. STIMSON	655	Blue	C-3	
May 19	GEO. WASH. CARVER	656	Blue	C-3	
Sept 15	FRANCIS SCOTT KEY	657	Gold	C-3	
Apr 12, 1974	MARIANO G. VALLEJO	658	Gold	C-3	
May 15	WILL ROGERS	659	Gold	C-3	
May 31	THEODORE ROOSEVELT	600	Blue	A-3	
July 26	ABRAHAM LINCOLN	602	Gold	A-3	
Aug 9	ETHAN ALLEN	608	Gold	A-3	
Aug 27	THEODORE ROOSEVELT	600	Gold	A-3	
Dec 16	LAFAYETTE	616	Blue	C-3	
Apr 12, 1975	THOMAS EDISON	610	Blue	A-3	
Apr 26	SAM HOUSTON	609	Blue	A-3	
May 28	ALEXANDER HAMILTON	617	Blue	C-3	
Sept 24	NATHAN HALE	623	Blue	C-3	
Oct 10	ANDREW JACKSON	619	Blue	C-3	
Feb 14, 1976	WOODROW WILSON	624	Gold	C-3	
Mar 29	THOMAS JEFFERSON	618	Blue	A-3	
May 25	JOHN ADAMS	620	Blue	C-3	
Sept 18	JOHN MARSHALL	611	Blue	A-3	
Aug 3, 1977	JAMES MONROE	622	Blue	C-3	
Sept 6	HENRY CLAY	625	Blue	C-3	
Mar 29, 1978	DANIEL WEBSTER	626	Blue	C-3	
May 15	DANIEL BOONE	629	Blue	C-3	
June 28	PATRICK HENRY	599	Blue	A-3	
Sept 20	GEORGE WASHINGTON	598	Blue	A-3	
Nov 20	ROBERT E. LEE	601	Blue	A-3	final A-3
Mar 23, 1979	JOHN C. CALHOUN	630	Gold	C-3	
Apr 10	FRANCIS SCOTT KEY	657		C-4	Trident I PEM
June 8	FRANCIS SCOTT KEY	657		C-4	Trident I PEM

Date	Ship	Hull	Crew	Type	Remarks
June 19, 1979	FRANCIS SCOTT KEY	657		C-4	Trident I PEM
July 14,	FRANCIS SCOTT KEY	657		C-4	Trident I PEM
July 22	FRANCIS SCOTT KEY	657		C-4	Trident I PEM
July 30	FRANCIS SCOTT KEY	657		C-4	Trident I PEM
July 31	FRANCIS SCOTT KEY	657		C-4	Trident I PEM
Aug 28	FRANCIS SCOTT KEY	657	Blue	C-4	1st Oper. C-4
Sept 26	FRANCIS SCOTT KEY	657	Gold	C-4	
Oct 23	TECUMSEH	628	Gold	C-3	
Dec 13	MARIANO G. VALLEJO	658	Gold	C-4	
Feb 13, 1980	SAM RAYBURN	635	Gold	C-3	
Mar 26	HENRY L. STIMSON	655	Gold	C-4	
July 14	STONEWALL JACKSON	634	Gold	C-3	
July 21	DANIEL BOONE	629	Gold	C-4	
Oct 28	JOHN C. CALHOUN	630	Blue	C-4	
Apr 1, 1981	SIMON BOLIVAR	641	Gold	C-4	
Aug 22	NATHANAEL GREENE	636	Gold	C-3	
Nov 15	BENJAMIN FRANKLIN	640	Blue	C-4	
Jan 17, 1982	OHIO	726	Blue	C-4	
Jan 26	STONEWALL JACKSON	634	Blue	C-4	
Mar 13	OHIO	726	Gold	C-4	
Apr 24	GEORGE BANCROFT	643	Blue	C-4	
June 5	JAMES MADISON	627	Gold	C-4	
Nov 14	VON STEUBEN	632	Gold	C-4	
Nov 21	MICHIGAN	727	Blue	C-4	
Apr 8, 1983	KAMEHAMEHA	642	Gold	C-3	
Apr 19	CASIMIR PULASKI	633	Gold	C-4	
July 23	JAMES K. POLK	645	Gold	C-3	
Aug 21	FLORIDA	728	Blue	C-4	
Sept 2	LAFAYETTE	616	Gold	C-3	
Oct 3	FLORIDA	728	Gold	C-4	
Mar 19, 1984	LEWIS & CLARK	644	Gold	C-3	
Apr 7	GEORGIA	729	Blue	C-4	
July 24	GEORGE C. MARSHALL	654	Gold	C-3	
Oct 9	MARIANO G. VALLEJO	658	Gold	C-4	
Dec 4	HENRY M. JACKSON	730	Blue	C-4	
Dec 15	HENRY L. STIMSON	655	Gold	C-4	
July 6, 1985	ALABAMA	731	Blue	C-4	
Aug 10	GEO. WASH. CARVER	656	Blue	C-3	
Dec 7	FRANCIS SCOTT KEY	657	Gold	C-4	
Feb 21, 1986	ALASKA	732	Blue	C-4	
May 20	WILL ROGERS	659	Blue	C-4	
Aug 31	JOHN C. CALHOUN	630	Blue	C-4	
Sept 30	NEVADA	733	Blue	C-4	
Jan 31, 1987	TECUMSEH	628	Blue	C-3	
July 31	ULYSSES S. GRANT	631	Blue	C-3	
Aug 23	DANIEL BOONE	629	Blue	C-4	

Date	Ship	Hull	Crew	Type	Remarks
Feb 6, 1988	SIMON BOLIVAR	641	Blue	C-4	
Feb 27	STONEWALL JACKSON	634	Blue	C-4	
Jan 6, 1989	GEORGE BANCROFT	643	Blue	C-4	
Jan 23	BENJAMIN FRANKLIN	640	Blue	C-4	
Mar 9	JAMES K. POLK	645	Blue	C-3	
Mar 21	TENNESSEE	734		D-5	Trident II PEM
Aug 2	TENNESSEE	734		D-5	Trident II PEM
Aug 15	TENNESSEE	734		D-5	Trident II PEM
Sept 29	ALEXANDER HAMILTON	617	Blue	C-3	
Dec 4	TENNESSEE	734		D-5	Trident II PEM
Dec 13	TENNESSEE	734		D-5	Trident II PEM
Dec 15	TENNESSEE	734		D-5	Trident II PEM
Jan 15, 1990	TENNESSEE	734		D-5	Trident II PEM
Jan 16	TENNESSEE	734		D-5	Trident II PEM
Feb 12	TENNESSEE	734	Blue	D-5	
Mar 11	PENNSYLVANIA	735		D-5	
Apr 30	KAMEHAMEHA	642	Gold	C-3	Final C-3 DASO
Sep 26	PENNSYLVANIA	735		D-5	
Nov 28	WEST VIRGINIA	736		D-5	
Apr 15, 1991	WEST VIRGINIA	736		D-5	
Aug 30	KENTUCKY	737		D-5	
Nov 4	KENTUCKY	737		D-5	





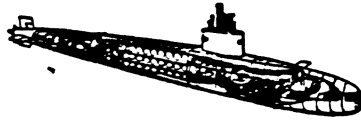
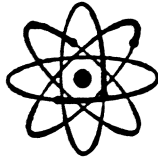
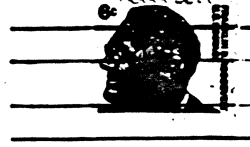
Data Sheet 5
UK SSBN Missile Test Firings
1968 to 1986

The British Navy opted to develop its own missile capability and designed and constructed four Polaris SSBNs. Initially, a U.S. A-3 missile was utilized with a British designed warhead. In the 1980s, the UK developed an improved version of the A-3, designated the A-3TK and known as the Chevaline missile.

British SSBNs used the U.S. Atlantic Missile Test Range and conducted DASO operations as listed. Due to budget limitations, follow on testing scheduled after 1986 was cancelled.

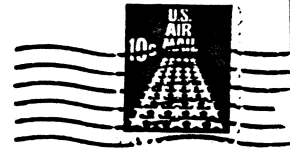
Date	Crew	Missile
HMS RESOLUTION (SSBN-01)		
Feb 15, 1968	Port	A-3
Mar 4, 1968	Stbd	A-3
Mar 6, 1972	Port	A-3
July 14, 1977	Stbd	A-3
May 18, 1985		A-3TK
May 20, 1985		A-3TK
June 10, 1985		A-3TK
HMS RENOWN (SSBN-02)		
July 24, 1969	Stbd	A-3
Aug 11, 1969	Port	A-3
July 16, 1974	Stbd	A-3
Jan 30, 1982		A-3TK
Feb 1, 1982		A-3TK
Feb 3, 1982		A-3TK
Feb 8, 1982		A-3TK
HMS REPULSE (SSBN-03)		
Mar 27, 1969	Stbd	A-3
Apr 14, 1969	Port	A-3
Feb 13, 1973		A-3 (1st stage malfunction)
Feb 20, 1978		A-3
Apr 16-17, 1987	Stbd	A-3TK (2 missiles)
May 10, 1987	Port	A-3TK (2 missiles)
HMS REVENGE (SSBN-04)		
June 18, 1970	Port	A-3
Nov 22, 1975	Port	A-3
May 15, 1983		A-3TK
May 16, 1983		A-3TK
June 9, 1983		A-3TK (2nd stage malfunction)
June 11, 1983		A-3TK
July 25, 1986	Port	A-3TK (2 missiles)
Aug 11, 1986	Stbd	A-3TK (2 missiles)

H.M.S. RESOLUTION SSBN 01
PORT CREW
First British Polaris sub to use the
U.S. Navy's Atlantic Ocean Target Range
successfully fired a Polaris A-3 missile.



DONALD O. SCHULTZ
2521 N. Kirkland Ct.
Appleton, Wisconsin 54911

AIR
MAIL



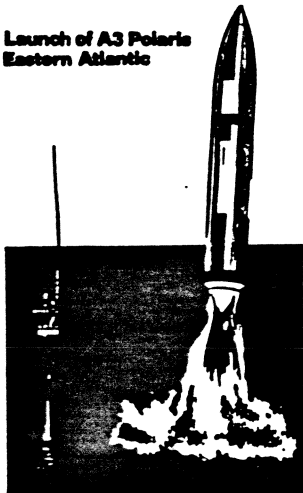
FIRST
MISSILE
FIRING



H.M.S. RENOWN
(PORT)
11 AUG 1969
COMMANDING OFFICER

~~G.L. Rawlins,
170 Pukoa Street,
Hailua, Oahu, Hawaii
96734.~~

Launch of A3 Polaris
Eastern Atlantic



HMS RENOWN SSBN 02
16 July 1974



OFFICIAL COVER
SUBMARINE SERIES NO. 9