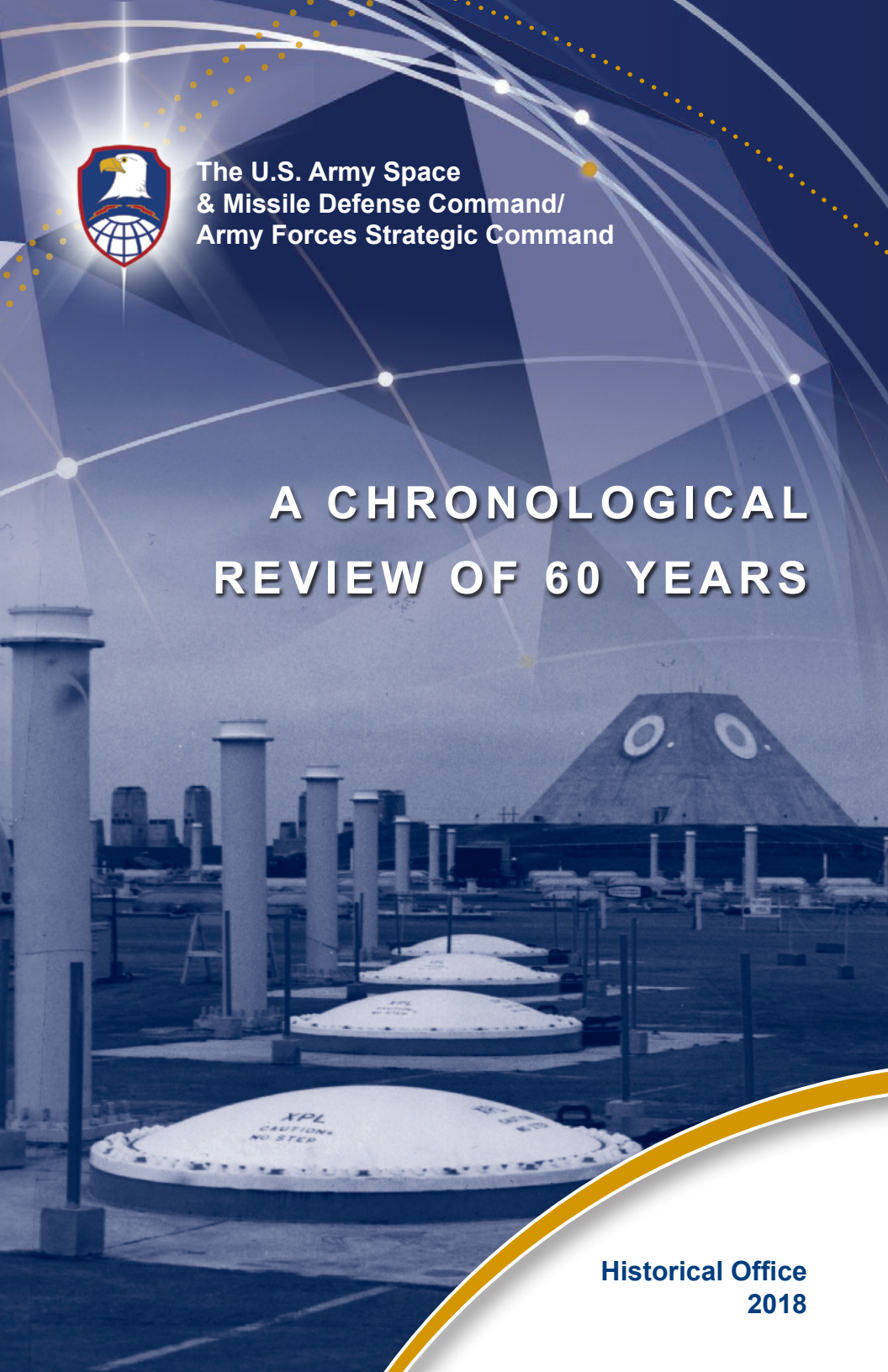
The U.S. Army Space
& Missile Defense Command/
Army Forces Strategic Command

A CHRONOLOGICAL REVIEW OF 60 YEARS



Historical Office
2018

U.S. Army Space and Missile Defense Command/Army Forces Strategic Command

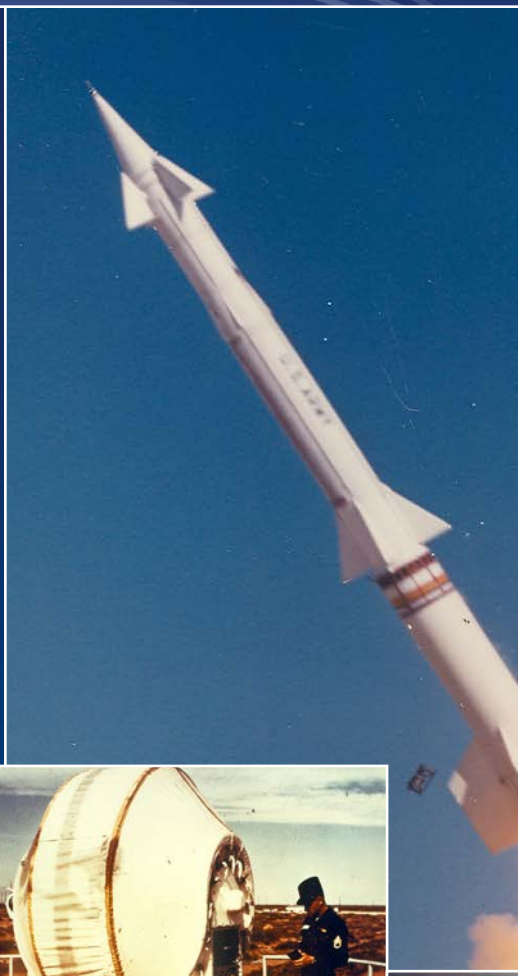
Commander's Introduction

In October 2017, the U.S. Army Space and Missile Defense Command/Army Forces Stra tegic Command (USASMDC/ ARSTRAT) celebrated its first 60 years as the Army lead for space and global missile defense. It was a remarkable and historic 60 years! This short chronology introduces some of the critical milestones — political events, organizational advancements, and technological achievements.

The chronology also seeks to illustrate the road to today. Where possible, the origin of every USASMDC/ARSTRAT mission is documented.

As the space and global missile defense missions evolve, this command will continue to provide the Army and the joint force with the most highly-trained, lethally equipped forces in the world to provide for our Nation's defense.

James H. Dickinson
Lieutenant General, U.S. Army
Commanding



A Positive Beginning

1946 – Stillwell Board (War Department) found that "guided missiles, winged or non-winged traveling at extreme altitudes and at velocities in excess of supersonic speed, are inevitable."

1955 – Army Ordnance ordered an 18-month feasibility study (Nike II) to defend against intercontinental ballistic (ICBM) missiles.

1957 October 3 – Redstone Anti-Missile Missile System Office (RAMMSO) established at Redstone Arsenal, the first organization with a strictly missile defense mission.

1958 January 22 – National Security Council assigned highest national priority to the NIKE-ZEUS anti-missile missile development program.

1959 August 26 – First NIKE-ZEUS missile tested at White Sands Missile Range, N.M.

1961 June – Entire NIKE-ZEUS system (four launch cells, seven radars and battery control equipment and target intercept computer) installed on Kwajalein Missile Range.

1962 December 12 – NIKE-ZEUS system achieved first fully successful 'nuclear kill' intercept of an ICBM.

1963 May 23 – Operation Mudflap – NIKE-ZEUS accomplished first successful satellite intercept; remaining operational as an anti-satellite (ASAT) system on Kwajalein into the late 1960s.

Army Puts the U.S. into Space

1946 January – Project Diana – Army Signal Corps initiated space research bouncing radio signals off the moon and receiving them back on Earth.

1956 – Jupiter C achieved first deep penetration of space with an altitude of more than 682 miles and a range of 3,355 miles.

1957 November – President Dwight Eisenhower directed the Army to place a satellite in orbit by March 1958.

1958 January 31 – Army Ballistic Missile Agency (ABMA) launched the first American satellite, the Explorer I.

1958 Army proposed Project ADAM to support manned space research, which became the basis of Project Mercury.

1958 December – Army Signal Corps' Project SCORE broadcast Eisenhower's Christmas message via a communications payload satellite.

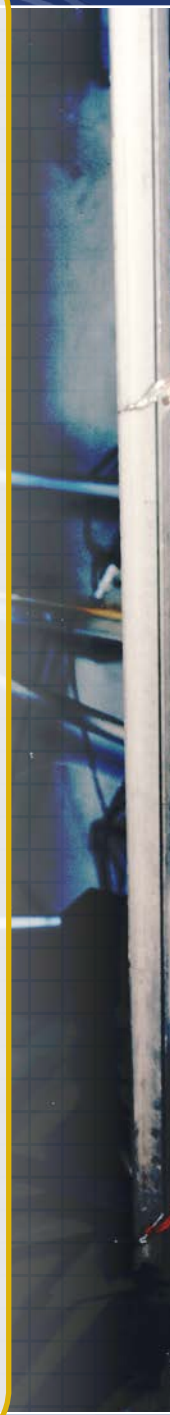
1959 – Army researchers initiated Project Horizon, a plan to establish a lunar outpost.

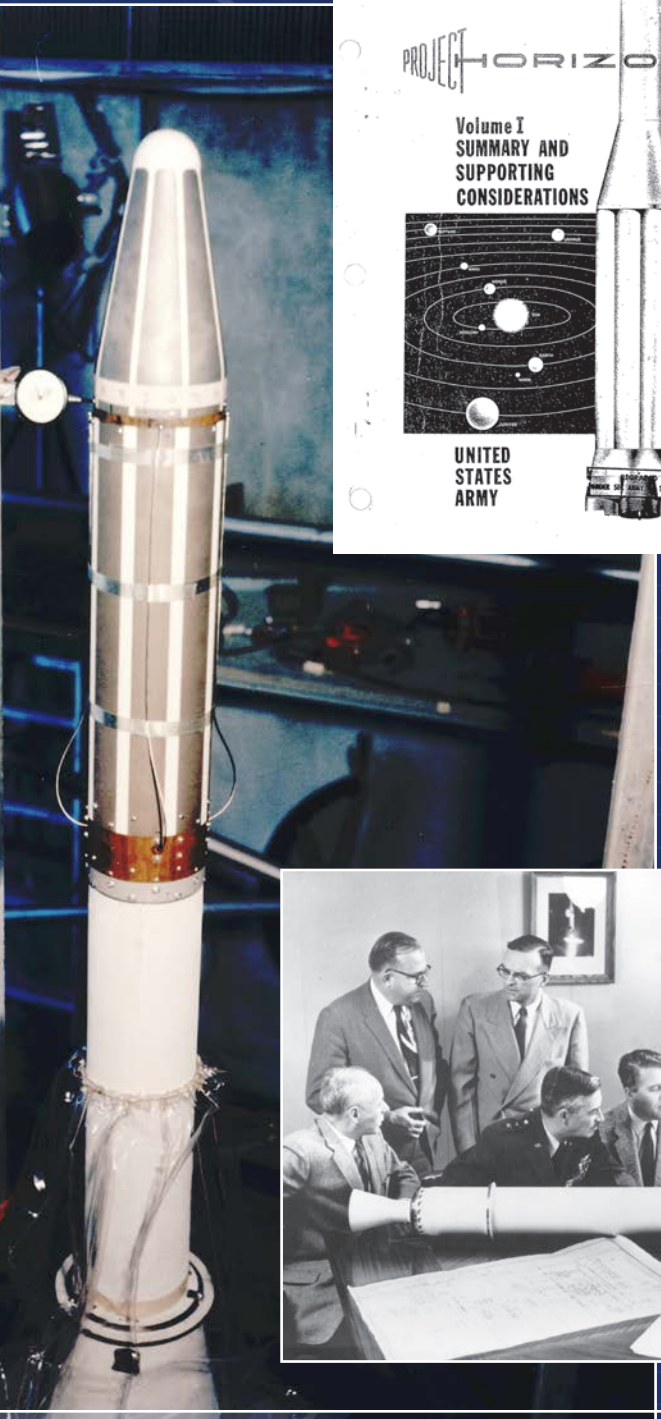
1959 October 13 – ABMA launched its last Explorer satellite – Explorer VII, a meteorological leader, with a Juno II rocket.

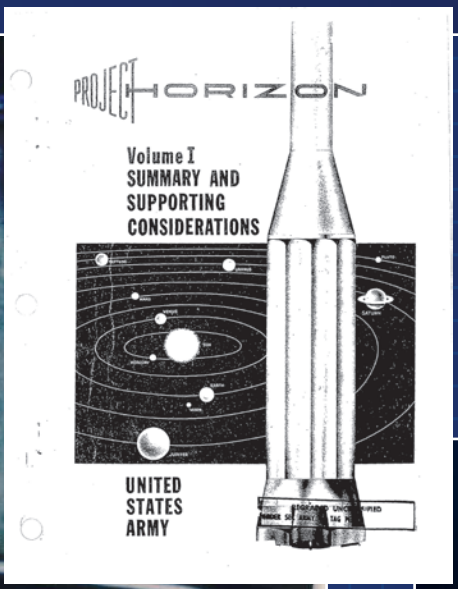
1960 – ABMA space-related missions, personnel, and equipment transferred to NASA's recently-created George C. Marshall Space Flight Center.

1960 October 4 – Army's COURIER 1B UHF communications satellite launched into low-earth orbit.

1961 – An Army rocket put the first Americans into space as part of NASA's Project Mercury.



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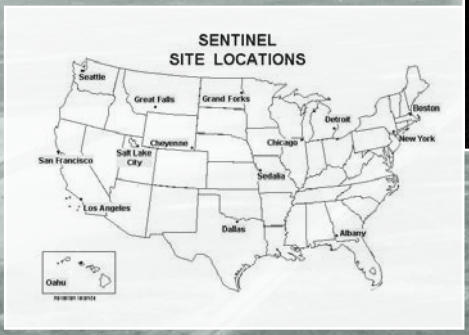
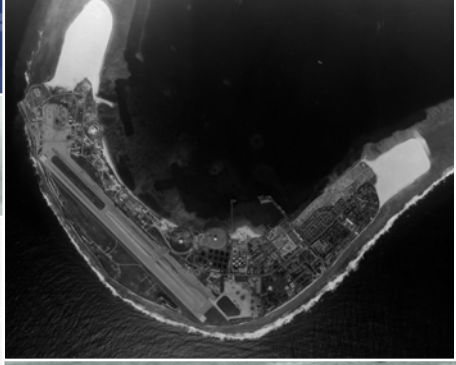
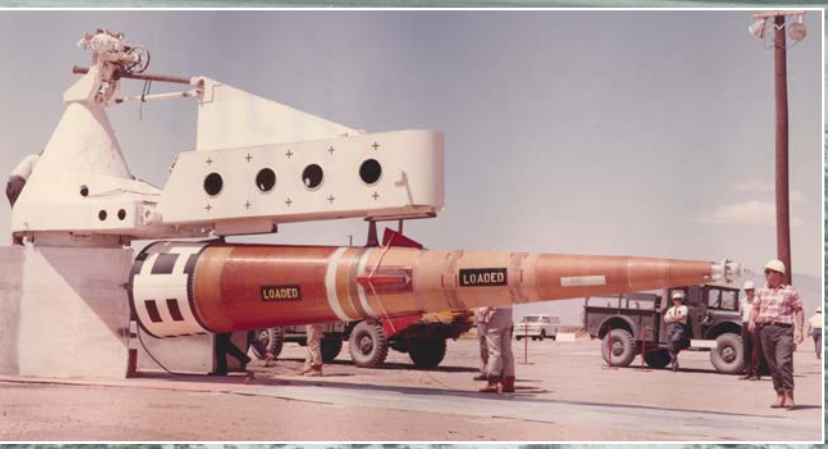
Volume I
SUMMARY AND
SUPPORTING
CONSIDERATIONS
UNITED
STATES
ARMY


SENTINEL
SITE LOCATIONS
Seattle
Great Falls
Grand Forks
Detroit
Boston
Chicago
New York
Cheyenne
Salt Lake City
San Francisco
Sedalia
Los Angeles
Dallas
Albany
Oahu




LOADED
LOADED

To Deploy or Not To Deploy

1964 January – NIKE-X Project Office replaced NIKE-ZEUS to address the anticipated threat for the 1970s.

1964 July 1 – Kwajalein Test Site transferred from the U.S. Navy to the NIKE-X Project Office.

1964 September – New Multifunction Array Radar successfully tracked first real target.

1965 October – NIKE-X deployment study recommended a 25-city deployment to provide a defense against an "Nth" country threat.

1965 November – First launch of short-range SPRINT interceptor, missile was incandescent in flight as friction heat exceeded engine temperatures.

1966 September – Army Chief of Staff selected NIKE-X for exceptional management techniques, creating a single Point of Contact – the NIKE-X System Manager, a format retained in the future.

1966 November – Secretary of Defense announced the Soviet Union had deployed Galosh, an Anti-Ballistic Missile (ABM) system, around Moscow.

1967 – People's Republic of China exploded their first thermonuclear bomb.

1967 – Kwajalein and NIKE-X assumed responsibility for the Advanced Research Projects Agency's Project PRESS radars on Roi-Namur.

1967 September – Deployment decision for the SENTINEL ABM system. Army was given 54 months to reorient program from R&D to production and deployment. Initial concept included six Perimeter Acquisition Radars, 17 Missile Site Radars, 480 long-range Spartan and 220 short-range Sprint interceptors at sites across the country.

SAFEGUARD: First Ballistic Missile Defense (BMD) System Deployed

1967 – U.S. Army Corps of Engineers – Huntsville Division organized to support ABM deployment.

1968 March 30 – First launch of SPARTAN long-range interceptor, formerly the ZEUS DM 15X-2.

1969 March 14 – President Richard Nixon redirected the BMD program with three new objectives: Protect land-based retaliatory forces; Defend the American people; and Protect against accidental attacks.

1969 March – SENTINEL Program renamed SAFEGUARD. Phased deployment included two sites (North Dakota and Montana) with five additional sites added in 1970.

1971 October 1 – The Army Air Defense Command organized U.S. Army Surveillance Battalion, Cavalier, North Dakota and the SAFEGUARD Command, Langdon, North Dakota.

1972 August – The U.S. Senate ratified the ABM Treaty, limitations included restricting the U.S. and the U.S.S.R. to two ABM sites and 200 launchers.

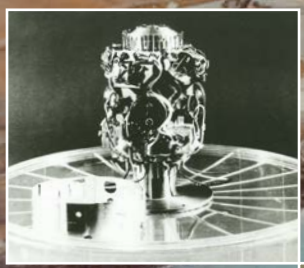
1974 July 3 – ABM Protocol further limited both nations to one site and 100 launchers. Malmstrom, Montana site closed.

1974 October 1 – Stanley R. Mickelsen SAFEGUARD Complex officially accepted and dedicated.

1975 September 28 – SAFEGUARD achieved full operational capability ahead of schedule.

1976 February 10 – Joint Chiefs of Staff directed the inactivation of SAFEGUARD per Public Law 94-212.

Artist's Concept of LoAD Unit for Defense of Multiple Protective Shelters



New Directions

1971 January – Defense Department authorized a follow-on to the SAFEGUARD system, Hardsite Defense designed to address larger and more sophisticated threats.

1974 1981 – Congress issued a ban on prototyping, limiting research and development to subsystem/component levels.

1974 February 13 – First launch of the ATHENA Special Targets Program.

1974 May 20 – New BMD Advanced Technology Center created.

1974 May 20 – Safeguard System Command redesignated BMD Systems Command as the mission extends beyond the Safeguard program.

1970s – Work conducted at the Advanced Research Center greatly improved integrated and centralized data processing capabilities.

1977 June – Systems Technology Test Facility reached full operating capability, e.g. accomplished bulk filtering and gathered discrimination data.

1977 October 3 – SAFEGUARD's Perimeter Acquisition Radar transferred to the Air Force. Still operational today.

1978 – Mobile basing option selected for the Air Force's MX ICBMs and the Army's Low Altitude Defense (LoAD) system designed to provide defense.

1982 – Optical Aircraft Measurement Program demonstrated expanded onboard tracking and discrimination capability tracking Soviet re-entry vehicles and missile launches.

A Non-Nuclear Approach

1970s – BMD Advanced Technology Center explored two different directed energy technologies – neutral particle beams and high energy lasers.

1977 March – Homing Overlay Experiment chartered.

1977 December 12 – Designating Optical Tracker (DOT), an infrared telescope, proved long-range infrared sensor probe could discriminate, designate and track re-entry vehicles.

1981 – Defense Advanced Research Projects Agency became manager of all Neutral Particle Beam programs.

1982 – LoAD was redesignated Sentry, a new non-nuclear interceptor.

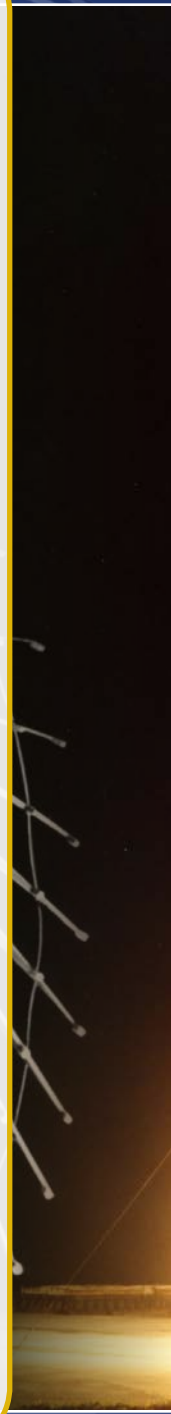
1983 – Sentry terminated following the rejection of the mobile basing system for the MX/Peacekeeper.

1984 – DoD guidance affirms R&D trend away from nuclear weapons.

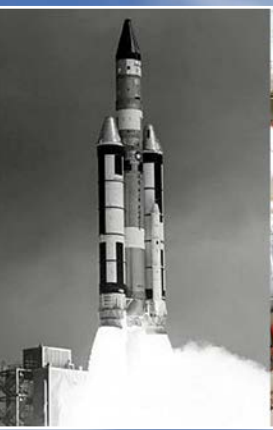
1984 June 10 – Homing Overlay Experiment achieved first kinetic kill intercept of an ICBM re-entry vehicle, colliding with its target at 20,000 mph, proving it is possible to “hit a bullet with a bullet.”

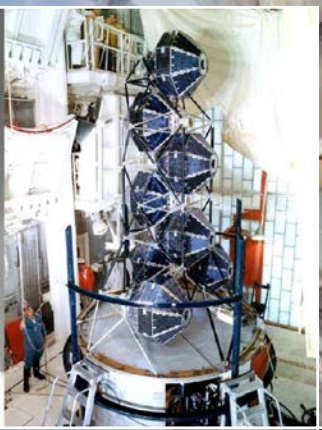
1984 – Small Radar Homing Intercept Technology (SRHIT) achieved first flight test.

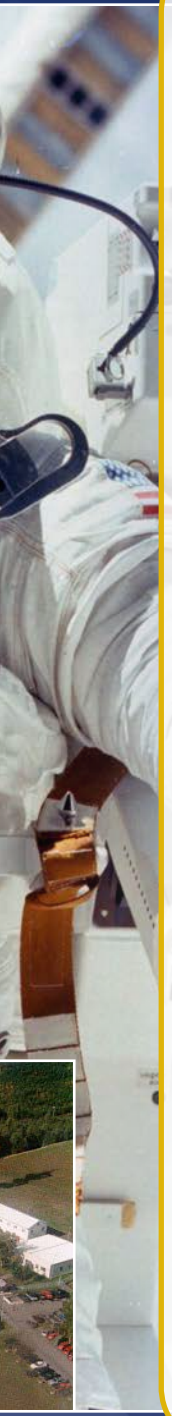
1987 May 21 – Flexible Lightweight Agile Guided Experiment (FLAGE), formerly SRHIT, demonstrated feasibility of a short-range nonnuclear intercept, destroying its target within seconds of launch.



ASPO
ARMY SPACE PROGRAM OFFICE







Army Space Continues Behind the Scenes

1961 March – DoD Directive 5160.32 removed satellite launches and satellite reconnaissance missions from the Army mission; however, Army would continue its ADVENT communications satellite work.

1961 – Kwajalein Missile Range initiated radar support of NASA's manned space flight missions.

1962 – U.S. Army Satellite Communications Agency, established at Fort Monmouth, New Jersey, and was responsible for managing ground terminals and ground support for space systems.

1962 – Zeus Acquisition Radar supports satellite tracking exercise.

1966 June – Phase I of Defense Satellite Communications System or DSCS program initiated with launch of first eight satellites. By 1967, DSCS was relaying photographs and data from Vietnam to Hawaii and Washington, D.C.

1970 September – DoD revised Directive 5160.32 opening opportunities for an increased Army role in space.

1971 November – DSCS Phase II began and Phase III became in October 1982.

1973 – Army Space Program Office established to carry out the Army Tactical Exploitation of National Capabilities Program (TENCAP), which became a model for the other services.

1978 January – NASA announced the selection of 35 astronaut candidates for the Space Shuttle program. Included in this number was Maj. Robert Stewart, the first Army astronaut.

Strategic Defense Initiative or Star Wars

1983 February – Joint Chiefs of Staff recommended increased emphasis on strategic defenses; ending a 37-year policy of offensive deterrence.

1983 March – President Ronald Reagan announced a Strategic Defense Initiative (SDI) and called upon the scientific community "to give us a means of rendering these nuclear weapons impotent and obsolete."

1983 – SDI derided by political opponents as "Star Wars".

1984 – Strategic Defense Initiative Organization chartered.

1984 – Army (USASDC) given the lead on the Ground Based Laser, the Exoatmospheric Re-entry-vehicle Interceptor Subsystem (ERIS), Airborne Optical Adjunct, the Ground Based Radar, the Ground-based Surveillance and Tracking System, and the High Endoatmospheric Defense Interceptor (HEDI) and assisted with the Space Based Laser, the Neutral Particle Beam and the Battle Management Control Center.

1985 – BMDO became the U.S. Army Strategic Defense Command (USASDC).

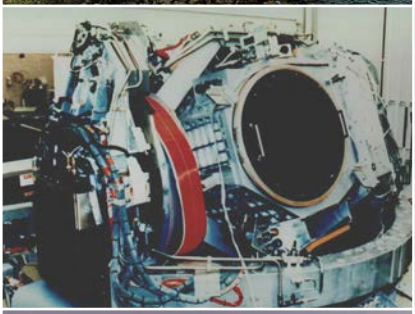
1985 – National Security Advisor introduced a new "broad" interpretation of the ABM Treaty.

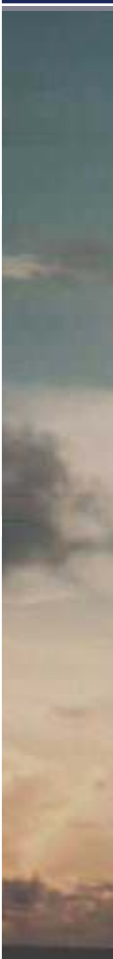
1988 October – USASDC Commander named Program Executive Officer (PEO) for Strategic Defense.

1990 – Airborne Surveillance Testbed operational.

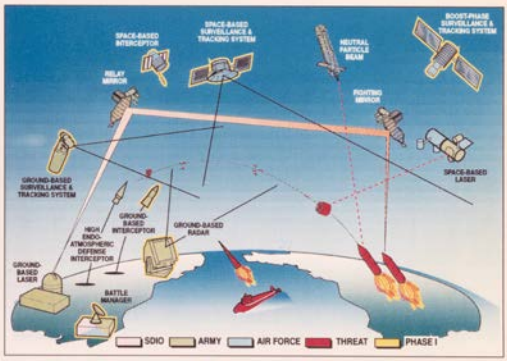
1991 January 28 – ERIS, later renamed Ground Based Interceptor, completed successful intercept.

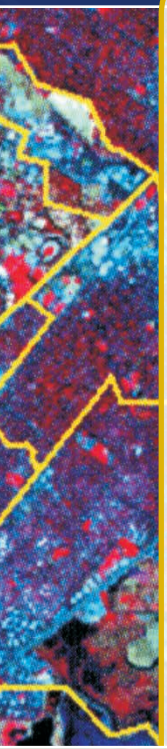
1991 December – Soviet Union ceased to exist. End of the Cold War.





STRATEGIC DEFENSE INITIATIVE
SYSTEM ARCHITECTURE CONCEPTS





Army Returns to Space

1983 – Army Science Board's Army Utilization of Space Assets concluded that Army was not using space systems to their full potential.

1984 – Vice Chief of Staff of the Army (VCSA) activated Army Staff Field Element to act as liaison with Air Force Space.

1986 – U.S. Space recommended Army assume more active role. U.S. Army Space Agency (USASA) formed as the Army component to U.S. Space Command.

1986 June – Army Space Institute assigned 3Y proponency (Space Activities); transferred to ARSPACE in 1990.

1986 – Pentagon established the Military Man in Space program part of Space Shuttle Operations – Army experiments included Terra View, Terra Scout and Terra Geode.

1987 – At the direction of the VCSA, Army Space Institute initiated the Army Space Demonstration Program – first items Global Positioning System Azimuth Determination, weather and terrain analysis, and lightweight small satellites.

1987 – Responsibility for DSCS assigned to USASA, transition completed in 1990.

1988 – Army Space Agency reorganized as the U.S. Army Space Command (ARSPACE).

1988 October – ARSPACE activated Regional Space Support Centers.

1990–1991 – Operation Desert Shield/Desert Storm recognized as the First Space War as ARSPACE assets demonstrated the many benefits of space technology.

A New Theater

1985 March – Defense Secretary invited allied participation in the BMD program.

1985 December – Strategic Defense Initiative Organization tasked USASDC to develop Theater Missile Defense (TMD) architectures.

1986 – VCSA approved TMD research program, established Joint TMD Program Office.

1988 May – Initiated Extended Range Interceptor (ERINT-1), a follow-on to the FLAGE.

1988 July – United States and Israel signed an agreement to develop the Arrow anti-tactical ballistic missile.

1988 – USASDC introduced the Theater High Altitude Area Defense (THAAD).

1991 January – President George Bush's Global Protection Against Limited Strikes (GPALS) redirected SDI to defend against "various Third World powers developing ballistic missiles, or accidental or unauthorized" Soviet launches.

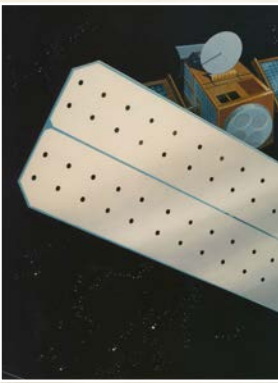
1991 January – All Army TMD functions assigned to USASDC.

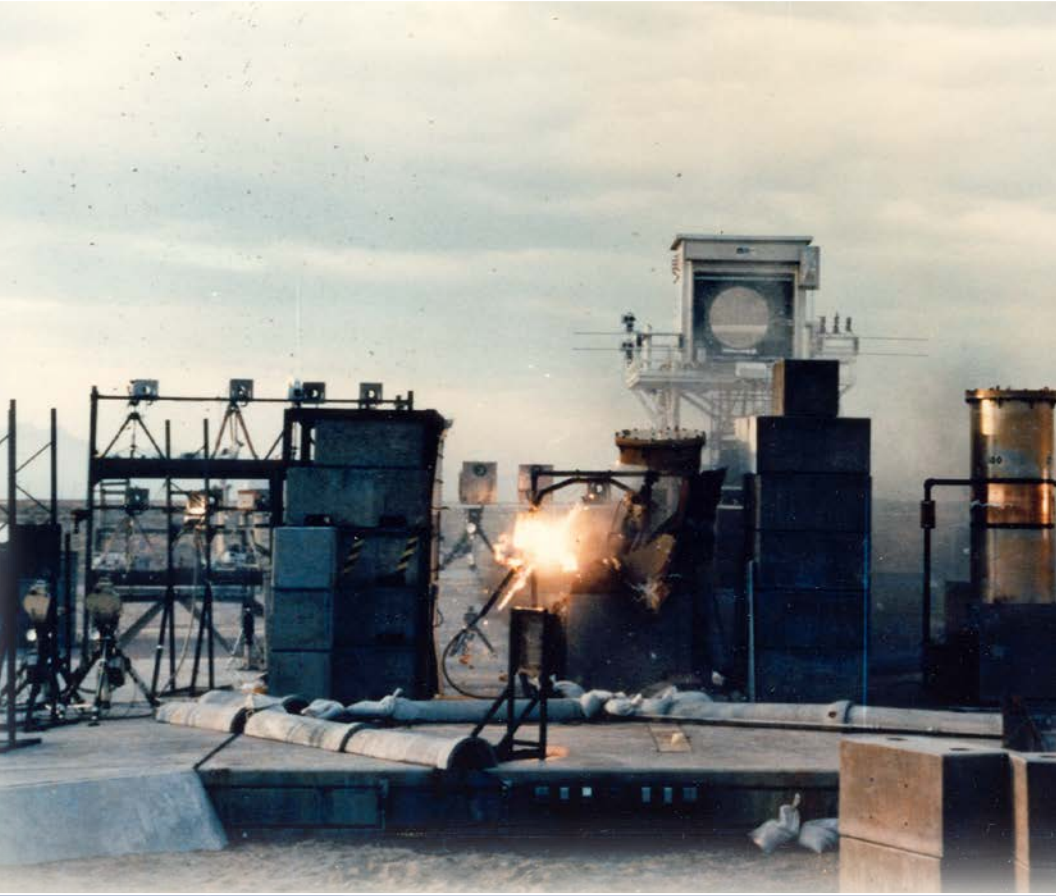
1991 – TMD Countermeasures Program initiated.

1993 May 13 – Secretary of Defense announced new emphasis on TMD.

1994 – Extended Range Interceptor ERINT selected as interceptor for new Patriot PAC-3.

1996 July 18 – U.S. and Israel signed agreement to explore feasibility of the Theater High Energy Laser (THEL).





New Frontiers

1989 January 6 – Defense Acquisition Board authorized new Anti-Satellite or ASAT Program.

1989 February – Army given lead in Kinetic Energy ASAT Joint Program Office.

1989 March – Army directed to develop prime candidate for Directed Energy ASAT.

1990 July – Army Space Council approved USASDC's Army Tactical Surveillance Satellite program.

1990 October – USASDC assumed responsibility for the High Energy Laser Systems Test Facility (HELSTF) at White Sands Missile Range, New Mexico.

1993 – USASDC's Lightweight Exoatmospheric Agile Projectile (LEAP) transferred to the U.S. Navy; selected for Navy's Upper Tier TMD program in 1995.

1993 – Strategic Target System initiated test phase.

1994 – Joint Tactical Ground Station (JTAGS) Concept Plan approved. First unit equipped in Germany, 1997.

1995 February – TMD Force Projection Tactical Operations Center designed and demonstrated by ARSPACE.

1996 February 9 – Nautilus demonstrated ability to lase a tactical missile.

1996 January – USASSDC tasked to study Aerostats as sensor platforms – Joint Land Attack Cruise Missile Defense Elevated Netted Sensor Platform.

1997 – USASSDC appointed implementing agent for START Treaty.

A New Beginning

1992 August – ARSPACE merged with the USASDC to create a new U.S. Army Space and Strategic Defense Command (USASSDC) the Army's focal point for space.

1992 – USASDC's missile defense related program and projects offices transferred to a newly created Program Executive Office for GPALS.

1992 – ARSPACE designated responsible agent for MILSTAR Network.

1993 – SDIO became Ballistic Missile Defense Organization and PEO GPALS was renamed PEO Missile Defense.

1993 March – Per VCSA, the Army Space Technology Research Office merged with USASSDC.

1994 June 1 – Army Space Program Office and the Tactical Exploitation of National Capabilities Program transferred to USASSDC.

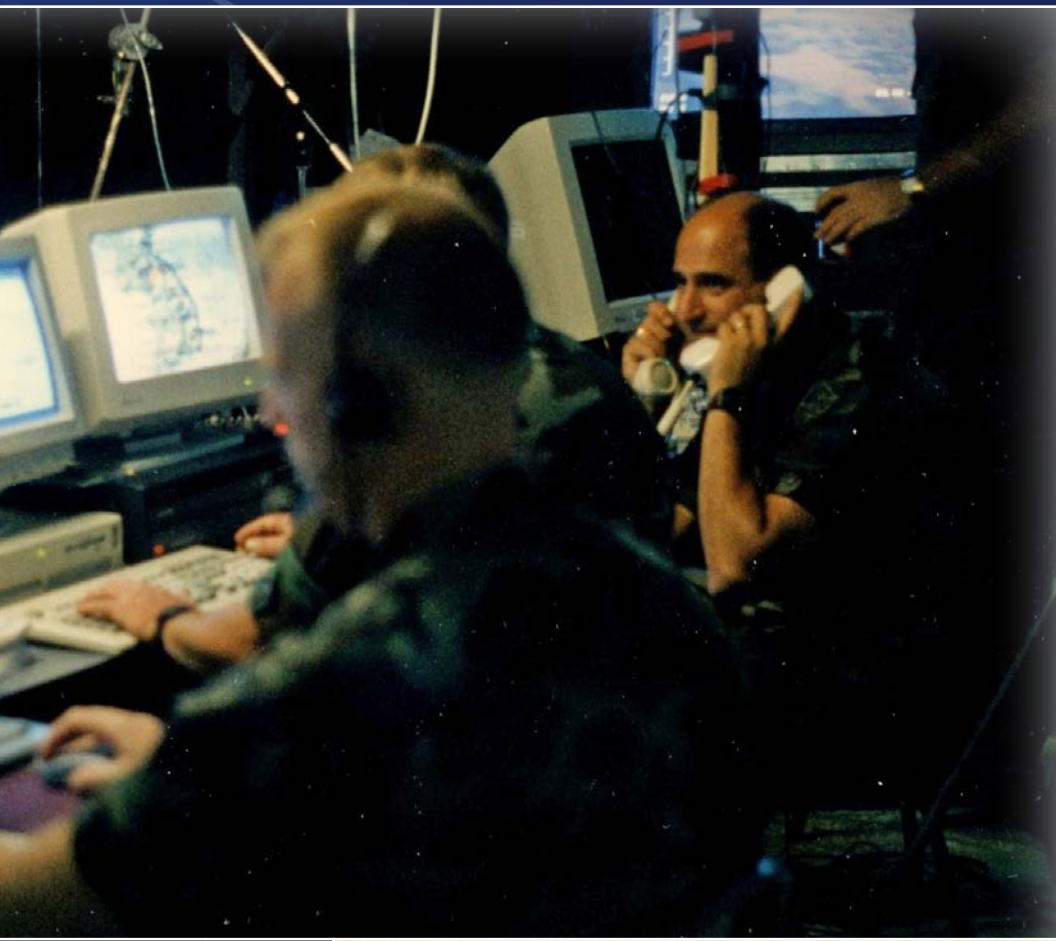
1994 June – VCSA appointed USASSDC the Theater Missile Defense Advocate.

1994 – ARSPACE assigned new mission – Contingency Operations (Space) later Army Space Support Teams.

1994 October – Assumed custody of Wake Island for test program. Returned to Air Force in 2002.

1995 November – Designated a Reinvention Laboratory by Secretary of the Army.

1996 – VCSA designated USASSDC a stand-alone Army Component Command.



USASMDC – A New Major Command

1997 February – Space and Missile Defense Battle Lab Chartered.

1997 October – USASSDC became the U.S. Army Space and Missile Defense Command (USASMDC), a major Army command, and the Army specified proponent for Space and National Missile Defense and operational integrator for TMD.

1997 October – Data Collection Exercise demonstrated ability to lase a satellite.

1998 March – Ballistic Missile Targets Joint Project Office chartered.

1998 September – Successful transportable laser radar test.

1999 January – Directed Energy Master Plan published.

1999 June – Tactical High Energy Laser achieved first light and successfully tracked and destroyed a rocket in 2000.

1999 November – Army designated lead service for land-based National Missile Defense system.

2000 October – As U.S. Space component, assigned Computer Network Attack/Computer Network Defense mission.

2001 August – Ground-based Midcourse Defense (GMD) Site preparation began at Fort Greely, Alaska.

2002 June – President George W. Bush formally withdrew from the ABM Treaty.

2002 December – National Security Directive 23 eliminated the distinction between National and Theater Missile Defense.

Organizing for the Future

1995 May – Military Satellite Control Directorate converted to 1st Satellite Control Battalion, first Army unit with operational mission directly tied to space systems/capabilities.

1998 May – New Functional Area (FA 40) Space Operations established. First 11 FA 40 officers selected in May 1999.

1999 December – 1st Space Battalion established.

2001 May – Army personnel authorized wear of Air Force Space Badge.

2001 September – 193rd Space Support Battalion activated.

2003 April – 1st Space Brigade (Provisional) established.

2003 October – 100th Missile Defense Brigade (GMD) activated.

2004 January – 49th Missile Defense Battalion (GMD) activated at Fort Greely, Alaska.

2005 October – 1st Satellite Control Battalion redesignated 53rd Signal Battalion.

2006 January – VCSA concurred with recommended Army Space Cadre of Space Professionals and Space Enablers.

2006 – X-Band Radar Detachments established.

2007 – 193rd redesignated the 117th Space Support Battalion.

2009 June – 3Y extended to Warrant Officers and enlisted personnel.

2011 May – Detachment 1, 100th Missile Defense (GMD) activated at Vandenberg AFB, California.

2017 October – 2nd Space Battalion activated.


CONTEGAMUS ET CASSAMUS


GUARDIANS OF SPACE


PROMPTNESS AND ENERGY


FIRST SPACE BRIGADE


SPACE WARRIORS


1st SATELLITE CONTROL BATTALION
WE CONTROL THE HIGH GROUND


SPATIUM MILITUM


DEFENSIMUS PATRIAM


FIRST
LAST
ALWAYS


LOADED
LOADED

Army Service Component Command U.S. Strategic Command

2002 October – USASMDC became ASCC to U.S. Strategic Command.

2003 June – Designated Operational Manager for Joint Blue Force Situational Awareness.

2004 January – USASMDC/ARSTRAT reached full operational capability.

2004 June – Army Space Support Elements created.

2004 – Concepts Analysis Lab established.

2004 October – Initial Defensive Operations date for GMD.

2004 November – Future Warfare Center established.

2005 January – Commander dual-hatted as Joint Functional Component Command for Integrated Missile Defense.

2005 – Assumed Measurement and Signatures Intelligence/ Advanced Geospatial Intelligence mission.

2006 – Appointed Designated Approving Authority for Wideband Global SATCOM (WGS) and Global Broadcast Service.

2006 June – GMD Site at Fort Greely put on operational status for 54 days.

2006 September – Forward-based X-band Radar (AN/TPY-2) deployed to Shariki, Japan.

2007 June – Headquarters transferred to Redstone Arsenal.

2009 October – Designated the Army Forces Cyber Command – created and stood up new organization.

A Source for Innovation

2007 September – Named Specified Proponent for High Altitude.

2008 – Transitioned Multiple Kill Vehicle to Missile Defense Agency.

2008 July – Zephyr High Altitude Long Endurance flight.

2009 January – Final test of Joint High Power Solid State Laser.

2010 January – SMDC-One nanosatellite launched.

2010 – Initiated Space Situational Awareness mission.

2011 November – First flight Advanced Hypersonic Weapon.

2011 December – Site K operational AN/TPY-2.

2012 February – First flight for Economical Target - 1.

2012 – First flight Long Endurance Multi-Intelligence Vehicle.

2012 – Kwajalein transferred to Installation Management Command.

2012 – Multiple User Objective System mission assigned.

2013 April – First launch of low-cost Zombie target.

2015 – In-flight Interceptor Communications System at Fort Drum, N.Y. accepted.

2016 – Space Toolkit transitioned.

2017 – Mobile Expeditionary High Energy Laser intercepted drone during exercise.

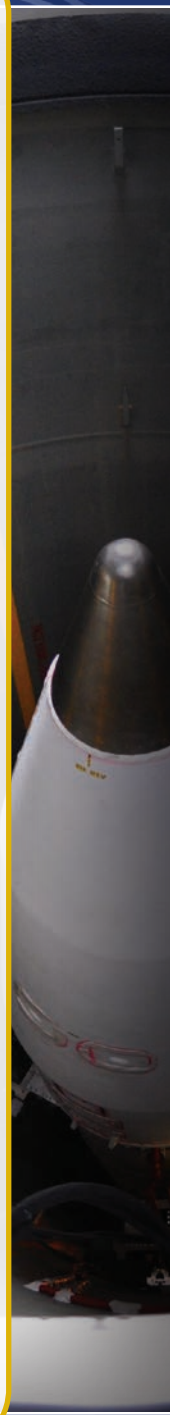
2017 August – Kestrel Eye launched.

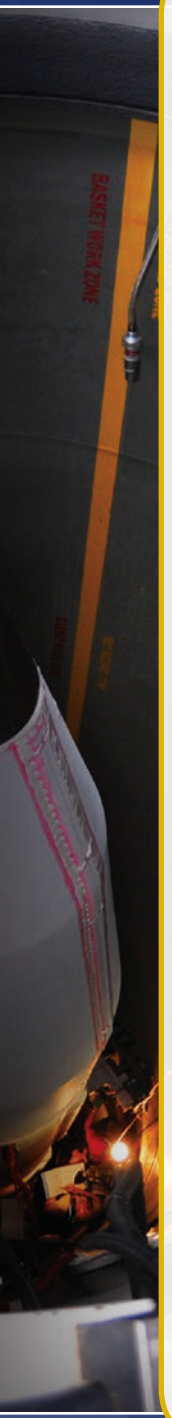
Commanders

LTG James H. Dickinson	5 January 2017 – present
LTG David L. Mann	12 August 2013 – 5 January 2017
LTG Richard P. Formica	15 December 2010 – 12 August 2013
LTG Kevin T. Campbell	18 December 2006 – 15 December 2010
LTG Larry J. Dodgen	16 December 2003 – 18 December 2006
LTG Joseph M. Cosumano Jr.	30 April 2001 – 16 December 2003
LTG John Costello	1 October 1998 – 28 March 2001
LTG Edward G. Anderson III	7 October 1996 – 6 August 1998
LTG Jay M. Garner	6 September 1994 – 7 October 1996
LTG Donald M. Lionetti	24 August 1992 – 6 September 1994
LTG Robert D. Hammond	11 July 1988 – 30 June 1992
LTG John F. Wall	1 July 1985 – 24 May 1988
MG Eugene Fox	28 July 1983 – 6 January 1986
COL Robert J. Feist	7 September 1982 – 28 July 1983
MG Grayson D. Tate Jr.	29 June 1979 – 6 September 1982
MG Stewart C. Meyer	15 November 1977 – 29 June 1979
BG John G. Jones	15 September 1975 – 5 October 1977
MG Bates C. Burnell	13 April 1973 – 28 July 1975
BG Robert Creel Marshall	1 August 1969 – 13 April 1973
BG Ivey O. Drewry	19 July 1962 – 31 July 1969
COL Glenn Crane	10 July 1960 – 19 July 1962
COL John G. Zierdt	16 January 1960 – 10 July 1960
COL Edward M. Dooley	1958 – 1960
COL Matthew R. Collins Jr.	1957 – 1958

"I discovered there are now two grim alternatives — do nothing or push the button that unleashes our devastating nuclear fury...Safeguard provides an additional alternative, an additional button."

Senator Winston Prouty (R-VT), 14 July 1969





Command Sergeants Major

CSM Jerome Wiggins	8 May 2015 – present
CSM James N. Ross	26 April 2013 – 8 May 2015
CSM Larry S. Turner	30 June 2010 – 26 April 2013
CSM Ralph C. Borja	May 2007 – 30 June 2010
CSM David L. Lady	19 May 2003 – 6 April 2007
CSM Reginald Ficklin	24 March 2003 – 19 May 2003
CSM Wilbur V. Adams Jr.	24 April 2000 – 17 March 2003
CSM Frank J. Mantia	February 1998 – 2 March 2000
CSM Jack L. Tilley	25 July 1997 – December 1997
CSM William O. Morgan	9 February 1996 – 30 June 1997
CSM Wayne P. Strohm	June 1992 – 9 February 1996

"Wouldn't it be better to protect the American people rather than avenge them?"

General John Vessey, Vice Chief of Staff of the Army
February 1983

"We tried to hit a bullet with a bullet and it worked."

Principal Deputy Assistant Secretary of Army Amoretta Hoeber,
June 1984 (HOE Intercept Test)

"The age of 'Star Wars' has arrived."

Los Angeles Times, January 1991

"Army's future is inextricably tied to space."

Army Space Policy, July 1994

"Space is the high ground for terrestrial success."

General Dennis Reimer, Army Chief of Staff
January 1998

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