



ANNIVERSARY
EDITION



NRO LAUNCH: A PICTORIAL HISTORY

1996 - 2021



by Edwin C. Chapman III



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A PICTORIAL HISTORY

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CENTER FOR THE STUDY OF
NATIONAL RECONNAISSANCE

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CENTER FOR THE STUDY OF NATIONAL RECONNAISSANCE

The Center for the Study of National Reconnaissance (CSNR) is an independent National Reconnaissance Office (NRO) research body reporting to the Director/Business Plans and Operations Directorate, NRO. The CSNR's primary objective is to advance national reconnaissance and make available to NRO leadership the analytic framework and historical context to make effective policy and programmatic decisions. The CSNR accomplishes its mission by promoting the study, dialogue, and understanding of the discipline, practice, and history of national reconnaissance. The CSNR studies the past, analyzes the present, and searches for lessons for the future.

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FOREWORD

Since its founding in 1961, individuals working on National Reconnaissance Office systems have defined and redefined expectations for obtaining usable intelligence from space. One of the first barriers that NRO officers faced was the challenge of consistently launching satellites into space in the early 1960s. The United States was still then perfecting its launch capabilities through the development of both intercontinental ballistic missiles and satellite launch vehicles. Within relatively short order, the United States Air Force and its industrial partners established reliable launch capabilities. Those capabilities continued to improve and increase, leaving today's NRO with highly reliable means to successfully place critical national reconnaissance satellites into space.

For those who read this publication, Edwin Chapman illuminates understanding in two important areas. The first, and most evident, is the logging of NRO's launches since the organization began acknowledging them in 1996. Much like the Space Log TRW published in years past, Mr. Chapman provides essential details on those launches, easily accessible to the reader. Mr. Chapman also provides insight into the mix of launch vehicles used by the NRO since 1996. Finally, he includes a summary of the launches of declassified programs prior to 1996. Mr. Chapman's book is a handy reference publication for acknowledged NRO launches.

Second, beyond its value as a reference publication, Mr. Chapman's book also provide additional insight into the culture of the NRO. He has painstakingly gathered the patches developed for each launch, and where possible, documented the meaning associated with the elements of those patches. Accordingly, Mr. Chapman has prepared a cultural history that deepens insight into the NRO. The reader will come away with a fuller understanding of the values and motivations of those who work on the NRO's space systems.

Mr. Chapman's efforts to research, write, and refine this document are commendable. He has worked diligently in documenting a critical capability for NRO mission success. Mr. Chapman establishes here the foundation for future work in sharing insights into national security space launch with those both inside the national reconnaissance community and those who seek to know more about the community. The Center for the Study of National Reconnaissance is privileged to publish Mr. Chapman's work in an effort to promote greater understanding in the discipline of national reconnaissance.

James D. Outzen, Ph.D.
Director
Center for the Study of National Reconnaissance



PREFACE

On the occasion of the National Reconnaissance Office's 60th Anniversary, we reflect on all of the launches since the beginning of NROL designators and the artwork that goes along with every launch. My inspiration to make this book stemmed from a simple records management task last autumn. During the work I was conducting, I discovered that there were no complete repositories of all launch multimedia in the NRO, so I built one to preserve this history before it is lost in the abyss of digital records. The process was a meticulous and sometimes exhausting search through hundreds of thousands of records across the entire enterprise for launch photos and artwork, as well as detailed research on the history of each and every launch. When I completed the repository, I felt that this history would be best captured as a book so that every passionate space enthusiast can enjoy the launch history and artwork as much as I have.

For every launch that the NRO conducts, there are typically two pieces of artwork that are associated with the launch—the NRO mission logo and the launch (or booster) logo. The NRO mission logo is usually created by personnel from that program office or by the Media Services Center. The launch logo is created by the Space Launch Squadron or ground team that conducts the launch vehicle operations. This book will depict the launch logo on the left and the NRO mission logo on the right. Unfortunately, not all of the information about the logos could be found, so some logos are missing information and possibly lost to history. These logos hold significant meaning to those personnel who worked in that program office and the personnel that support them from conception to launch and beyond. The creators incorporate elements that hold importance to that program office, and the symbolism is the reason why certain designs are chosen. Before any artwork is revealed to the public, it goes through a long and arduous review process to ensure each logo meets the high standards set by the NRO. Not every logo makes it through this review process, and some logos will never see the light of day. For the logos that do make it are something the creators and the entire teams can be proud of, as they represent their program offices and the NRO as a whole. Enduring through time, these logos become the resolute symbol of specific launches for generations.

I would like to thank the Office of Space Launch, the NRO ground sites, Media Services Center, the GEOINT Directorate, and the SIGINT Directorate for retaining the historical launch files that helped create this book. I would also like to thank CSNR for helping me make this book a reality, with a special thanks to Chuck Glover from CSNR for working on every detail with me and getting it to print. The end of this book is not the end of our proud traditions of sharing our art and launch history with the public. When you watch our next launch, take a moment to appreciate the personnel behind the launch and understand the dedicated amount of work that goes into making it to launch day. I am grateful for the opportunity to showcase this part of our history and I am very proud of the work we do here at the NRO.

Mr. Edwin C. Chapman III
GEOINT Learning Center Lead



INTRODUCTION

The NRO was formed in September 1961, and almost immediately, the organization took control of national security space operations for the U.S. government. The Air Force had already been launching satellites for the GRAB and Corona programs for over a year, and it would continue to do so under NRO auspices for many years. In the next decades, the NRO would launch satellites into orbit for the Gambit and Hexagon photoreconnaissance systems, as well as many other programs. But all of those launches were classified, as was the NRO name itself. The NRO organization was not declassified until 1992, and it did not start declaring launches for another four years.

In 1996, the NRO decided to start declaring its launches in an effort to be more transparent for the American public, and because of the fact that it is virtually impossible to hide a rocket launch, so why try to act as if it did not happen? So at 10:04 AM PST on 20 December 1996, the NRO's first publically announced launch, NRO Launch 2 (NROL-02), lifted off from Space Launch Complex 4E at Vandenberg Air Force Base in southern California (NROL-01 did not launch until 2004).

Of course by this time, the NRO had launched literally hundreds of satellites into space over the course of its history. So why start with numbering launches with such a simplistic numbering system? It was decided immediately that the NRO would not retroactively trace its entire launch history because many of those satellites that had been launched were still classified, and releasing launch information for past launches would compromise certain information about past programs that were not yet declassified. Today, since NRO systems remain classified, little information is released about each launch, and what is released is usually limited to mainly what can be observed from a distance -- the time, date, and location of the launch and the type of rocket booster used to propel the satellite to the stars.

In 2020, Edwin Chapman in the NRO's GEOINT Learning Center was trying to research past launches and realized that the NRO did not have a complete compilation of launch data available for anyone inside the NRO, much less for anyone in the public sector. So he took it upon himself to collect all the information he could find to retain NRO history for future NRO employees, as well as other historians and space aficionados.

The information in the following pages is a one-stop shop for anyone to learn a little about past NRO launches. This never-before-published information is Mr. Chapman's complete compilation of declassified launch data from the past quarter-century of NRO space launches in one easy-to-navigate compendium. It will be useful to everyone from government historians to amateur space watchers, as well as anyone lucky enough to win an auction on EBay for an old, rare NRO launch patch, to learn more about NRO history and some of the significance surrounding artifacts from past launches.

Michael J. Suk
Chief, Historical Documentation and Research
Center for the Study of National Reconnaissance





A SMALL BODY OF DETERMINED SPIRITS FIRED
BY AN UNQUENCHABLE FAITH IN THEIR MISSION
CAN ALTER THE COURSE OF HISTORY.

— Mahatma Gandhi

KEY MILESTONE TIMELINE



1961

SEPT. 6 - The Department of Defense (DoD) and Central Intelligence Agency (CIA) established the National Reconnaissance Office (NRO) to oversee the National Reconnaissance Program (NRP).

1972

MAY 25 - The NRO launched the last Corona mission from Vandenberg AFB. The NRO soon transitioned to Electro-Optical Imagery. This Corona mission informed the decision for the United States to sign the initial Strategic Arms Limitation Treaty.

1992

SEPT. 18 - Existence of the NRO Publicly Acknowledged for the First Time.

1996

JAN. 11 - NRO Officially Opened Westfields HQ Building.

1996

DEC. 18 - NRO Openly Acknowledged NRO Satellite Launches for the First Time.

1997

MARCH - NRO Openly Acknowledged an NRO presence at launch sites "Operating Location - Vandenberg" and "Operating Location - Cape."

1997

SEPTEMBER - NRO changed the name of the launch sites to, "NRO Cape" and "NRO Vandenberg."

1998

OCT. 3 - The Space Technology Experiment (STEX) was the first Satellite Payload to be openly acknowledged.

2008

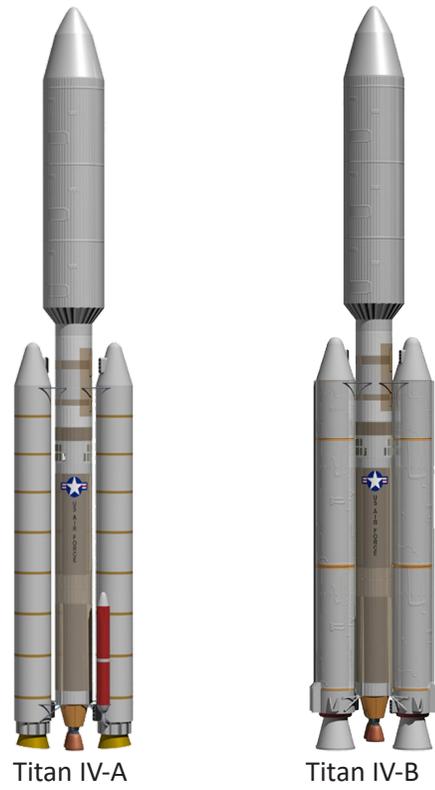
OCT. 15 - The NRO declassified the fact of U.S. Mission Ground Stations, also known as, Aerospace Data Facilities, located in Virginia (ADF-E), Colorado (ADF-C), and New Mexico (ADF-SW).

2000

AUG. 17 - The NRO stood-up a formal review process for all launch designs to be consistent with core values.

LAUNCH VEHICLE REFERENCE

LOCKHEED MARTIN



Titan IV-A

Titan IV-B

ULA



Delta 7920-10C

Delta IV M+ (4,2)

Delta IV M+ (5,2)

Delta IV - Heavy

LOCKHEED MARTIN / ULA



Atlas IIA

Atlas IIAS

Atlas IIIB

Atlas V401

Atlas V411

Atlas V421

Atlas V501

Atlas V531

NGSS



Minotaur I

Minotaur-C
Taurus 1110

Minotaur-IV

SPACEX



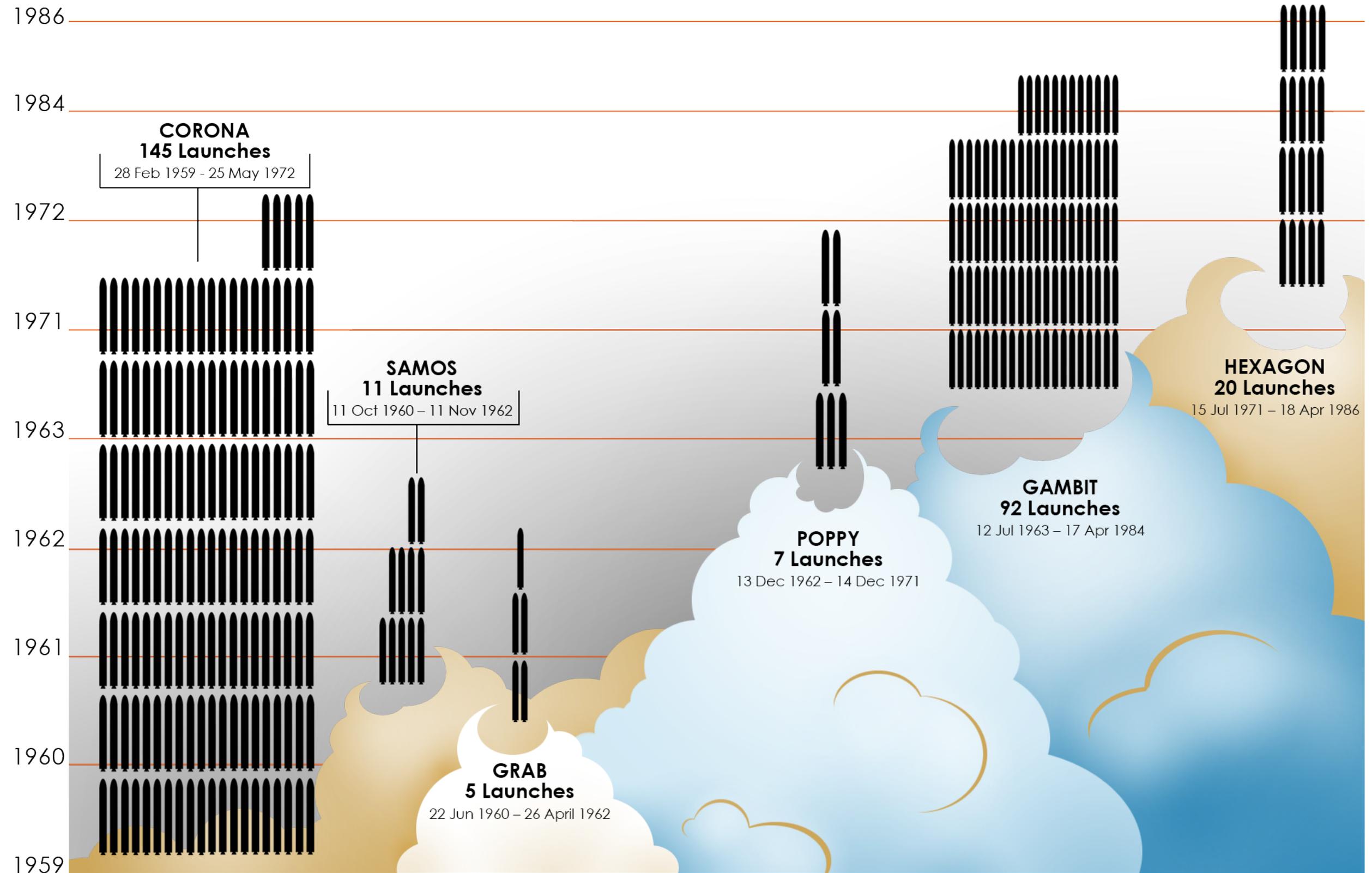
Falcon 9

ROCKET LABS

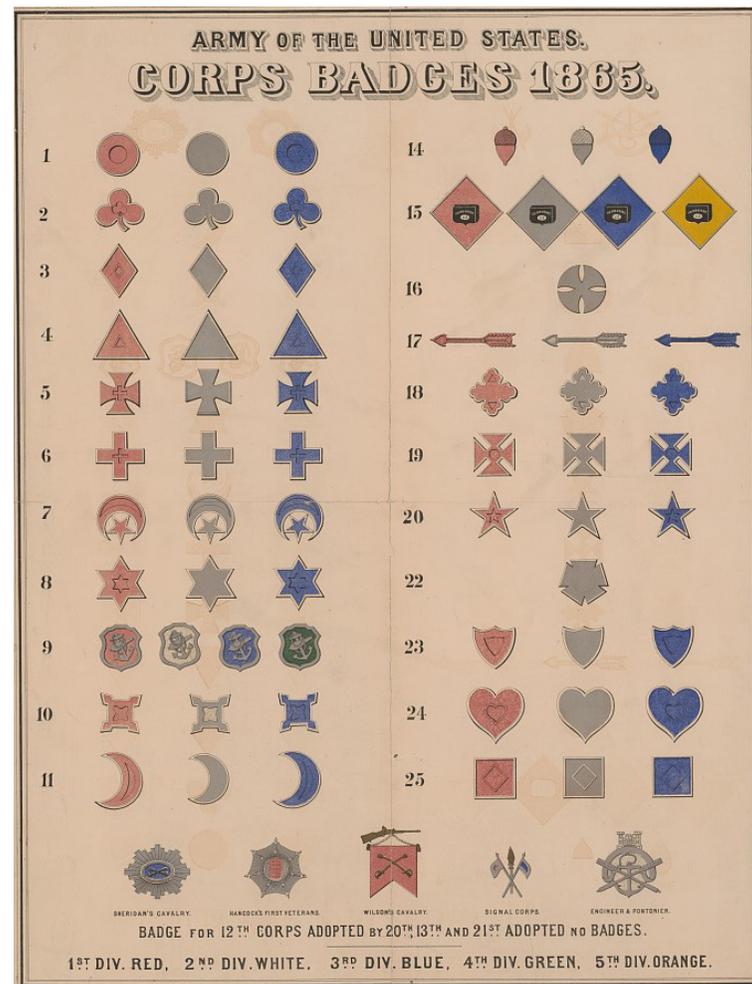


Electron

ACKNOWLEDGING THE PAST



HISTORY OF THE MISSION PATCH



Army Corps Badges, 1865 - Source: Library of Congress.

The concept of designing a unique patch for a mission or unit originated during the Civil War, when the Army of the Potomac created special insignias to identify corps and divisions. After General Robert E. Lee's surrender at Appomattox, the army dissolved, and unit patches went out of fashion. The tradition was revived at the declaration of World War I and has since expanded throughout all branches of the military in both war and peacetime.

The National Aeronautics and Space Administration (NASA) was founded on 1 October 1958 as the official United States response to the 'space race' and the launch of Sputnik by the Soviet Union. NASA and the United States government was determined to get ahead of the Soviet Union and began to screen military candidates to be aboard the manned space flight missions.

During the early days of spaceflight, NASA allowed astronauts to give their spacecraft nicknames. However, when the Gemini program commenced, NASA ceased this practice. The naming privilege was a morale building opportunity, and this loss was unsatisfactory to the astronauts. A Gemini pilot, Gordon Cooper, asked NASA if they would be willing to compromise and to inherent the military tradition of allowing the crew to design a patch instead. NASA agreed on the condition that their "8 Days or Bust" slogan was removed on the fear that it would become a public relations nightmare if the mission did not last the eight days. Since then, patches have become a proud tradition of all space flights, both manned and unmanned.

On 6 September 1961, the National Reconnaissance Office was formed under a veil of secrecy while some of the first NASA patches were being created. The former president Dwight D. Eisenhower established the NRO as a singular organization to manage United States reconnaissance operations and imaging satellites. The NRO operated and launched satellites for a decade before the general public became aware of the organization and 31 years before the United States government finally acknowledged its existence to the public.

Today, the NRO launches a few satellites each year that are highly classified. Beginning in 1996, in the spirit of public relations, the NRO has been disclosing the date and time of the launches, since a rocket launch cannot really be hidden from the public eye. These newly acknowledged activities formed a community of passionate enthusiasts that have become committed to watching the skies, piecing together the satellites' orbits.

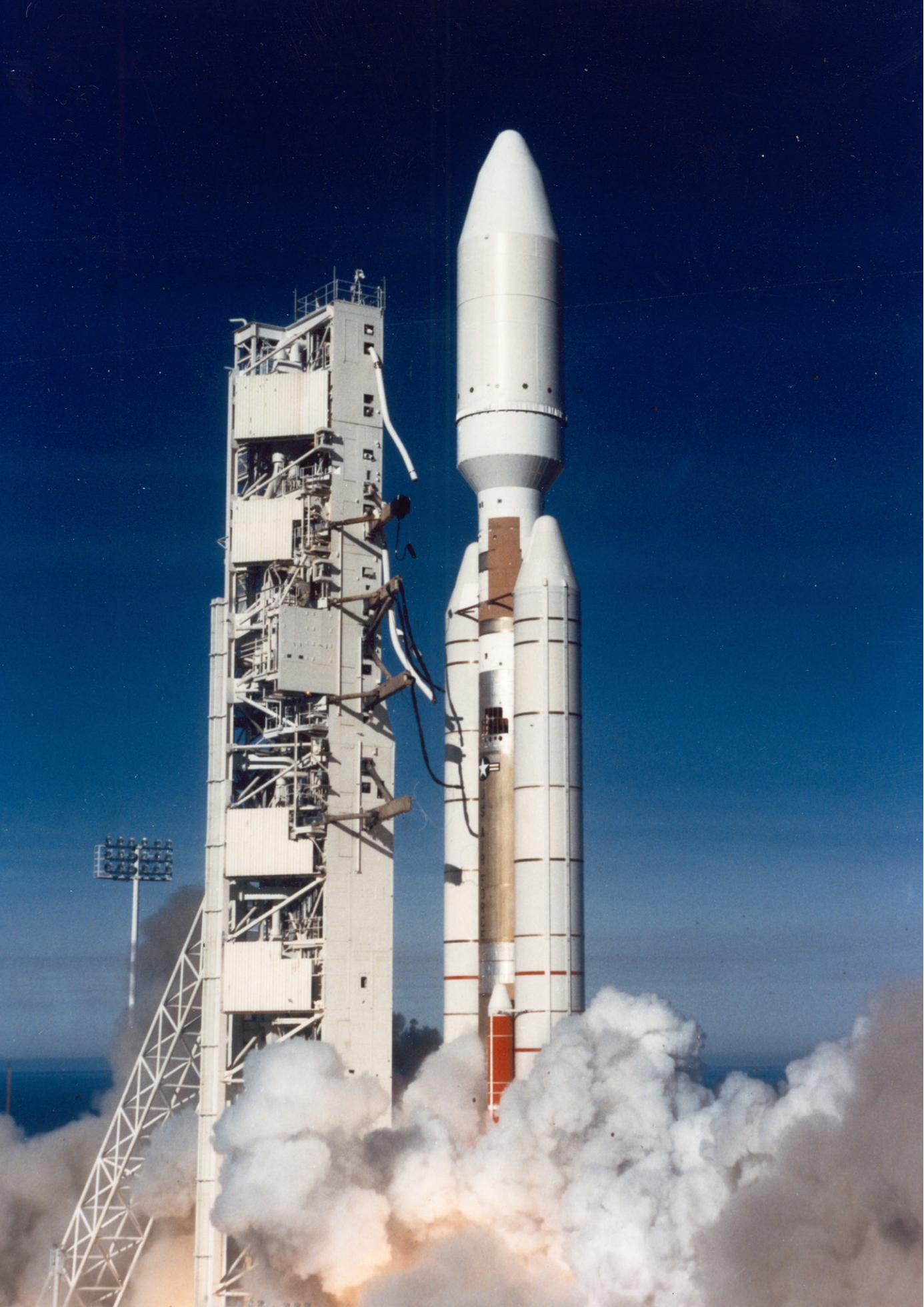
At some point, those enthusiasts discovered that the NRO also issues mission patches. The NRO embraced the idea of making the mission patches public, and eventually it even started publishing depictions of the patches along with launch announcements.

These peculiar patches quickly gained public interest due to the unique characters and animals depicted in the designs. To ensure that the launch patch designs were consistent with the core standards and values, the NRO established a comprehensive review and approval process was stood-up before the designs were released to the public. With this new procedure established, the NRO leaned more toward public advertisements. The designs of the years have become more eccentric and this generated a lot of positive public relations. The NROL-39 mission has generated the most commentary due to the giant Earth-eating octopus, which made its way to the Daily Show and imitation designs started to sell out online.



Gordon Cooper original patch design (left) and the revised version (right).

NROL - 02



NROL - 03



LAUNCH VEHICLE:
Titan IV A-18

DATE OF LAUNCH:
Thursday, 23 October 1997

TIME OF LAUNCH:
19:32:00 PDT

LOCATION OF LAUNCH:
SLC-4E, Vandenberg AFB, CA

NROL - 04



NROL - 05



LAUNCH VEHICLE:
Atlas IIA

DATE OF LAUNCH:
Thursday, 29 January 1998

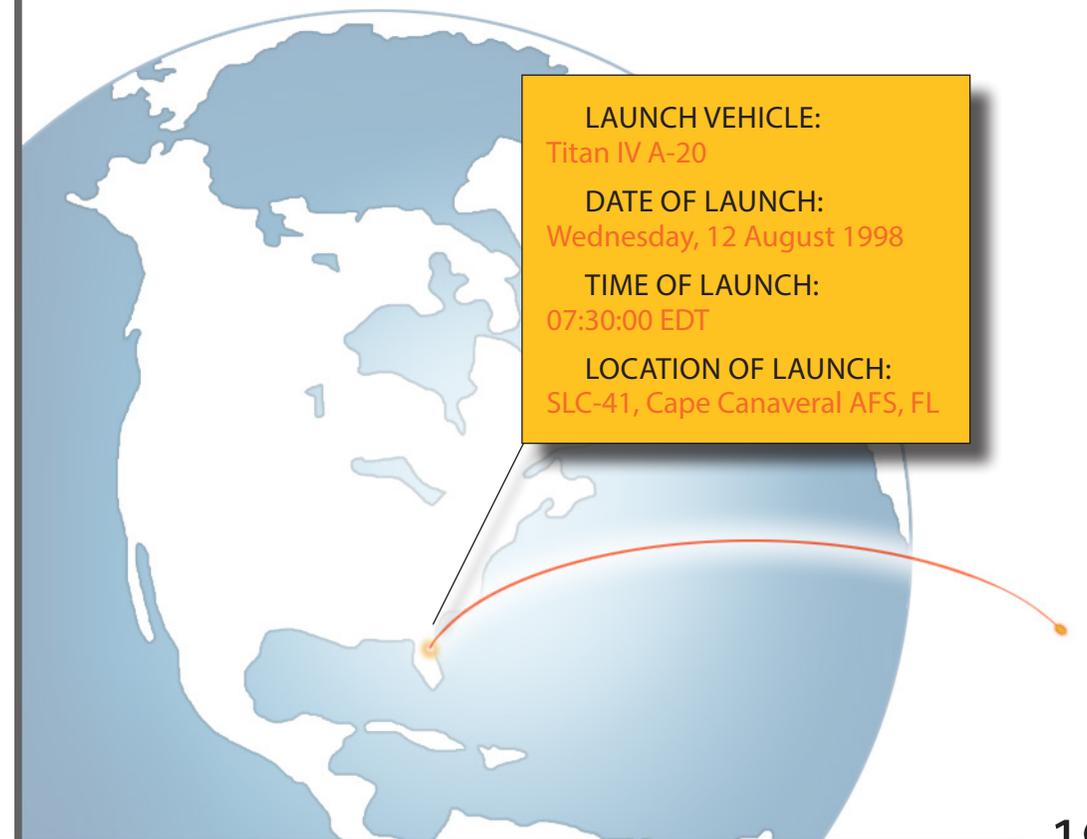
TIME OF LAUNCH:
13:37:00 EST

LOCATION OF LAUNCH:
SLC-36A, Cape Canaveral AFS, FL

NROL - 06

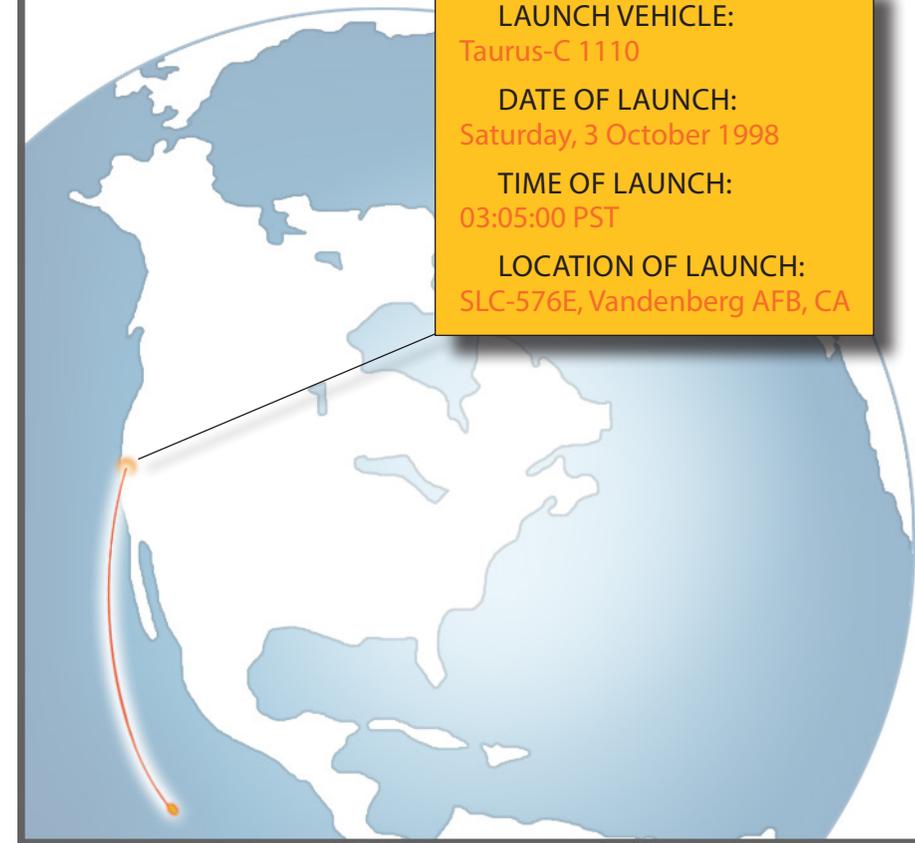


NROL - 07



* Note: 41 seconds after lift-off on 12 August, an electrical malfunction caused the Titan IV A-20 to lose guidance control. The launch vehicle and the payload were destroyed.

NROL - 08



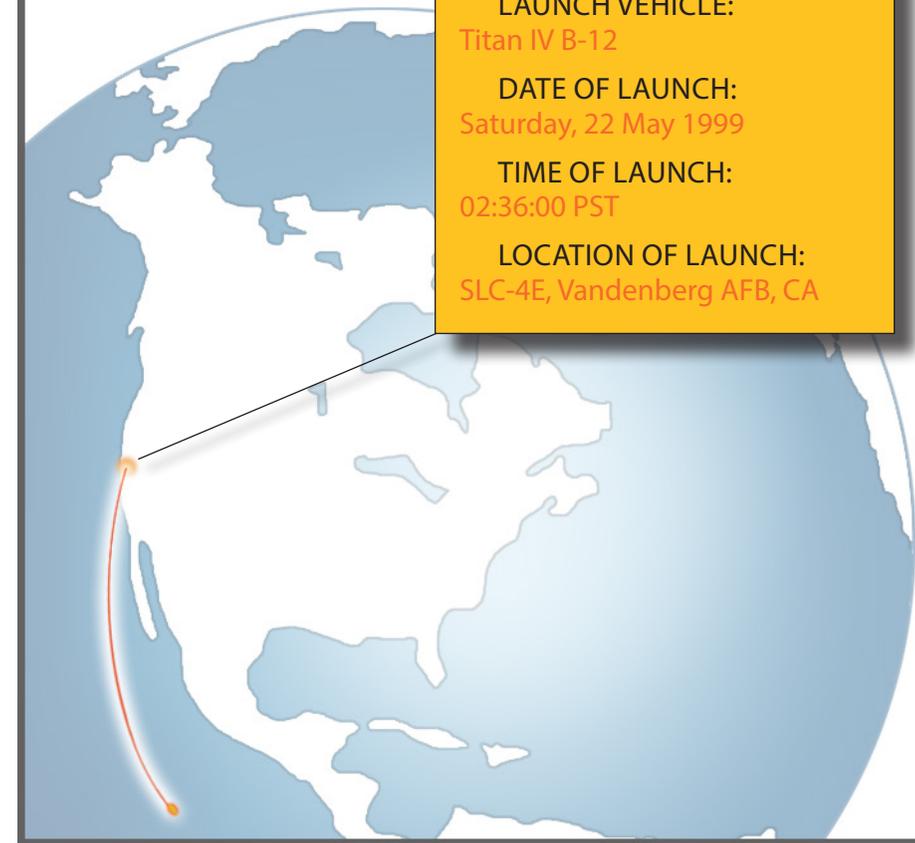
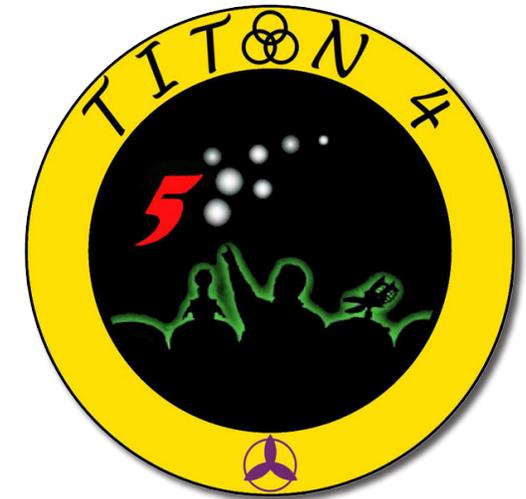
LAUNCH VEHICLE:
Taurus-C 1110

DATE OF LAUNCH:
Saturday, 3 October 1998

TIME OF LAUNCH:
03:05:00 PST

LOCATION OF LAUNCH:
SLC-576E, Vandenberg AFB, CA

NROL - 09



LAUNCH VEHICLE:
Titan IV B-12

DATE OF LAUNCH:
Saturday, 22 May 1999

TIME OF LAUNCH:
02:36:00 PST

LOCATION OF LAUNCH:
SLC-4E, Vandenberg AFB, CA

NROL - 11



DESCRIPTION: "We Own the Night" refers to our ability to thrive in the vast darkness of space; while the gold border and the sun represent the caliber of the people and the program, as well as the brightness of our future. Gold is also representative of the NRO and the Air Force.

The mesh represents world-encompassing capability from the far reaches of space. Four "meshes" represent OD-4 and are configured to form the eyes of an owl. Four "orbital" meshes represent the Titan IV that launches us to space.

The owl, the program mascot, is a wise and graceful predator that strikes quickly and accurately.

LAUNCH VEHICLE:
Titan IV B-28

DATE OF LAUNCH:
Thursday, 17 August 2000

TIME OF LAUNCH:
16:45:00 PST

LOCATION OF LAUNCH:
SLC-4E, Vandenberg AFB, CA

NROL - 10



DESCRIPTION: The Great Bear logo represents the MLV-11 mission launch, which was dedicated to Daniel M. Potter, deceased. Potter was an employee of the Central Intelligence Agency assigned to the NRO as an engineer. He was an advocate and supporter of the NRO Cub Run Partners in Education Program, where he tutored students at Cub Run Elementary on a regular basis. He inspired and motivated students to achieve in math and science.

In memory of Dan, his dedication to the students, and education, the NRO Cub Run Partnership held a launch logo design contest. The Ursa Major constellation—the Great Bear—was selected as the design theme for the logo. The Great Bear complimented Cub Run's mascot—the Bear Cub—and symbolized Dan's love for the students and his support of the Partners in Education Program.

Samantha Wingo's entry was selected as the winning design. She was a 12 year old, 6th grade student at Cub Run Elementary, and was very excited to be the first child to have her logo, bigger than life, painted on a rocket that soared into space. The logo appeared on the payload fairing of the Atlas-IIAS rocket.

LAUNCH VEHICLE:
Atlas IIAS

DATE OF LAUNCH:
Tuesday, 5 December 2000

TIME OF LAUNCH:
21:47:00 EST

LOCATION OF LAUNCH:
SLC-36A, Cape Canaveral AFS, FL



NROL - 17



NROL - 13



DESCRIPTION: The overall theme of the MLV-10 patch is strength. The Atlas has a strong central presence to the theme, rising through the center of the patch, while the skull and crossbones serve as a warning and a show of our strength in space.

The origins of the Jolly Roger skull and crossbones come from the Templars, pious men who were ferocious warriors, pitching themselves into the midst of their enemies, often against terrible odds.

The two four-pointed stars represent the 2SLS, and the four organizations that are historic to the unit (6595ATG-Det9-4SLS-2SLS).

The five organizations in yellow are the key players in our national missions.

The four five-pointed stars are historically associated with squadron mission patches and featured repeatedly throughout the unit's history.



LAUNCH VEHICLE:
Atlas IIAS

DATE OF LAUNCH:
Saturday, 8 September 2001

TIME OF LAUNCH:
08:25:05 PDT

LOCATION OF LAUNCH:
SLC-3E, Vandenberg AFB, CA

NROL - 14



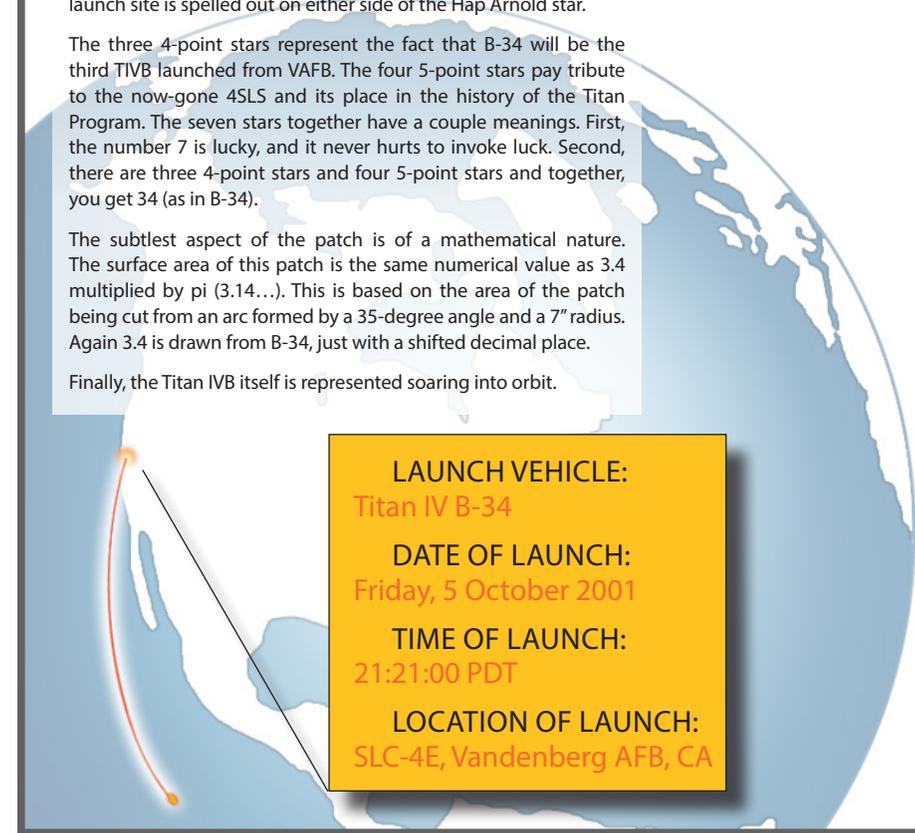
DESCRIPTION: The keystone shape of this patch is important for two reasons. First, the TIV missions launch spacecraft that play a key role in this nation's defense. Second, the personnel, government and contractor, are the key to the success of any launch. The personnel are listed at the base of the keystone—without good people, there is no mission.

Central to this design is the Hap Arnold star and wings, a symbol used in the Air Force since the days of the Army Air Forces. The launch site is spelled out on either side of the Hap Arnold star.

The three 4-point stars represent the fact that B-34 will be the third TIVB launched from VAFB. The four 5-point stars pay tribute to the now-gone 4SLS and its place in the history of the Titan Program. The seven stars together have a couple meanings. First, the number 7 is lucky, and it never hurts to invoke luck. Second, there are three 4-point stars and four 5-point stars and together, you get 34 (as in B-34).

The subtlest aspect of the patch is of a mathematical nature. The surface area of this patch is the same numerical value as 3.4 multiplied by pi (3.14...). This is based on the area of the patch being cut from an arc formed by a 35-degree angle and a 7" radius. Again 3.4 is drawn from B-34, just with a shifted decimal place.

Finally, the Titan IVB itself is represented soaring into orbit.



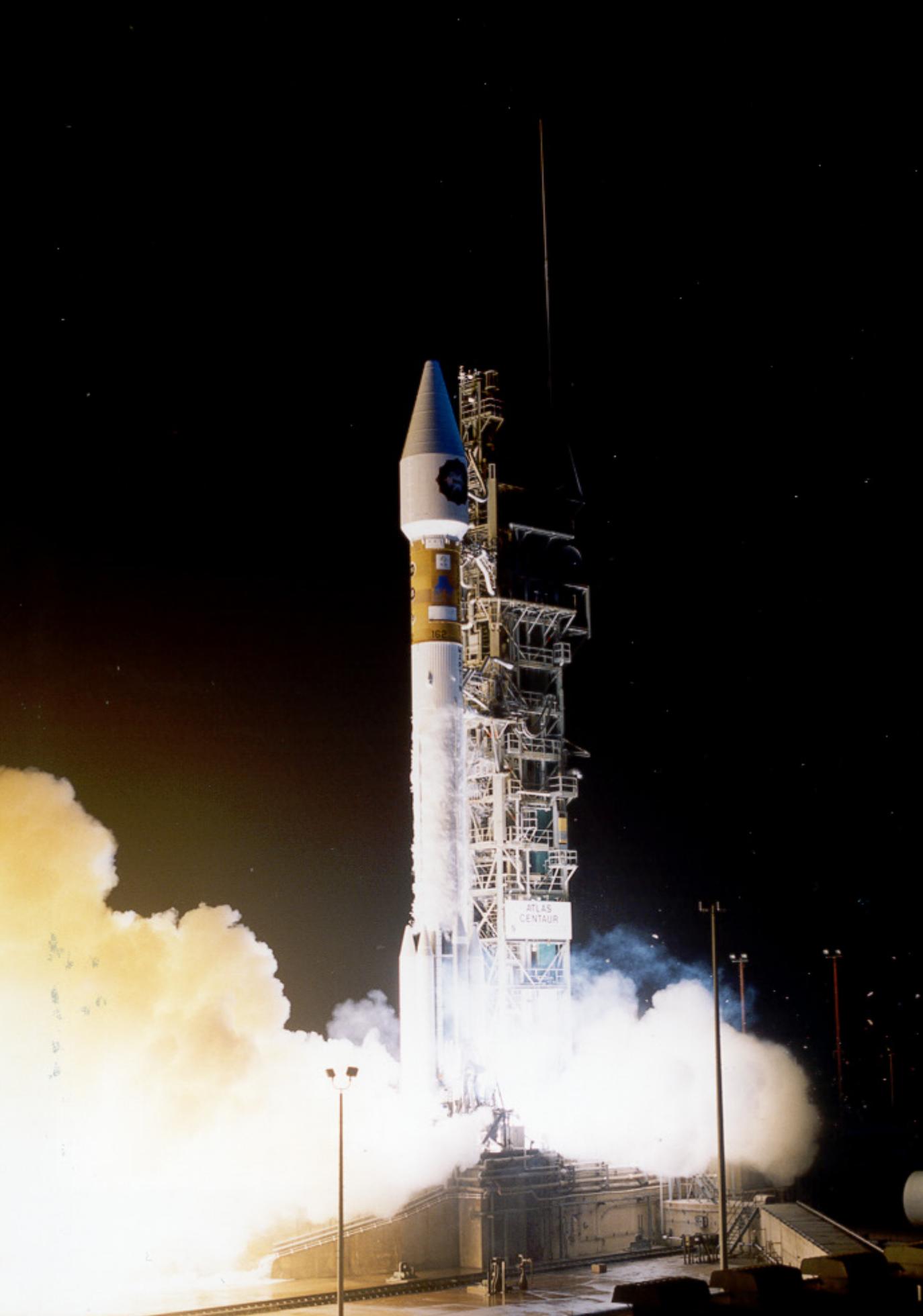
LAUNCH VEHICLE:
Titan IV B-34

DATE OF LAUNCH:
Friday, 5 October 2001

TIME OF LAUNCH:
21:21:00 PDT

LOCATION OF LAUNCH:
SLC-4E, Vandenberg AFB, CA

NROL - 12



LAUNCH VEHICLE:
Atlas IIAS

DATE OF LAUNCH:
Wednesday, 10 October 2001

TIME OF LAUNCH:
22:32:00 EDT

LOCATION OF LAUNCH:
SLC-36B, Cape Canaveral AFS, FL

NROL - 19



DESCRIPTION: The Dragon represents strength while the Dragon's wings and number of stripes incorporate the U.S. flag to show patriotism. The Dragon holds the Earth from behind, representing our goal to be the best in the world. The diamond represents our position as the "crown jewel" of space programs.

LAUNCH VEHICLE:
Titan IV B-36

DATE OF LAUNCH:
Tuesday, 9 September 2003

TIME OF LAUNCH:
00:29:00 EDT

LOCATION OF LAUNCH:
SLC-40, Cape Canaveral AFS, FL



NROL - 18



LAUNCH VEHICLE:
Atlas IIAS
DATE OF LAUNCH:
Tuesday, 2 December 2003
TIME OF LAUNCH:
02:04:00 PST
LOCATION OF LAUNCH:
SLC-3E, Vandenberg AFB, CA

DESCRIPTION: Libra (The Balance) represents justice. Justice is the theme behind the mission in remembrance of the tragic events of 11 September 2001. The logo prominently displays two national symbols of the United States; the Bald Eagle and the "Stars and Stripes."

The Eagle, with its talons extended, signifies that we are a nation at war. Its prominence over the Earth reminds us that the war against terrorism is a global endeavor and that the United States will not rest until the global reach of terrorism has been brought to justice.

The "Stars and Stripes" represent our great nation and all of the ideals and freedoms that we must fight to protect. Whether it flies alone or with its allies, the flag will pronounce the leader in the fight against terrorism.

The Libra constellation is dominated by two bright stars. These stars symbolize the World Trade Center and the Pentagon. The victims and events of September the 11th will be remembered as long as the stars shine in the sky.



NROL - 01



NROL - 23



DESCRIPTION: Canis Minor, the "Little Dog", stands on the back of the unicorn (Monoceros); it is the second of Orion's two hunting dogs. In mythology, Canis Major and Canis Minor represent the dogs that tore the unsuspecting Actaeon to pieces when he came upon Artemis, the virgin goddess of the hunt, while she was bathing in a woodland pool.

LAUNCH VEHICLE:
Atlas IIIB

DATE OF LAUNCH:
Thursday, 3 February 2005

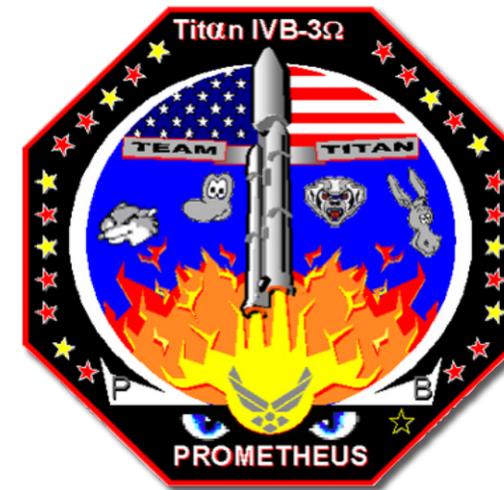
TIME OF LAUNCH:
02:41:00 EST

LOCATION OF LAUNCH:
SLC-36B, Cape Canaveral AFS, FL

The NROL-23 PLF art depicts the support provided to the military services by the Intelligence Community. Three panels display a representation of the air, land, and sea components of the armed services while the fourth panel displays the constellation Canis Minor. The five star configuration of Canis Major in the background has one star for each military service: Army, Navy, Air Force, Marine Corps, and Coast Guard. As we continue in the information age, intelligence data becomes woven into the fabric of the U.S. military, as depicted by the thread that ties the components together. Information generated by NRO satellites allows the United States to maintain its intelligence and military superiority. This information also helps to protect the U.S. military forces abroad, and like a faithful canine pet, intelligence information is the "Serviceman's Best Friend."



NROL - 16



DESCRIPTION: The patch background includes red, white, and blue and stars to symbolize the U.S. flag.

The border includes the names for the launch and the program motto separated by stars. TIV- represents the B-30 booster

Sunset- symbolizes the last Titan launch from CCAFS.

Pelican- highlights the program's move from the west coast to the east coast and the immense efforts associated with the change including the design and build of new handling equipment such as the pelican shield.

Gorilla- a program office mascot.

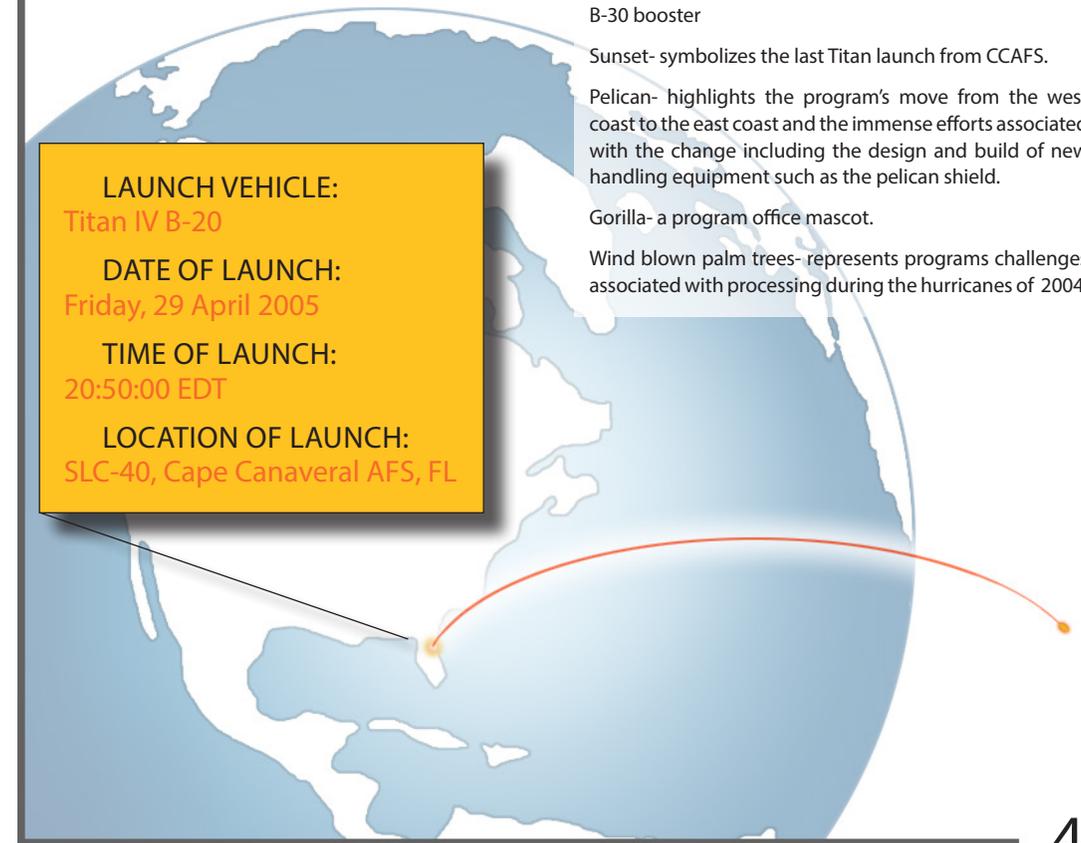
Wind blown palm trees- represents programs challenges associated with processing during the hurricanes of 2004.

LAUNCH VEHICLE:
Titan IV B-20

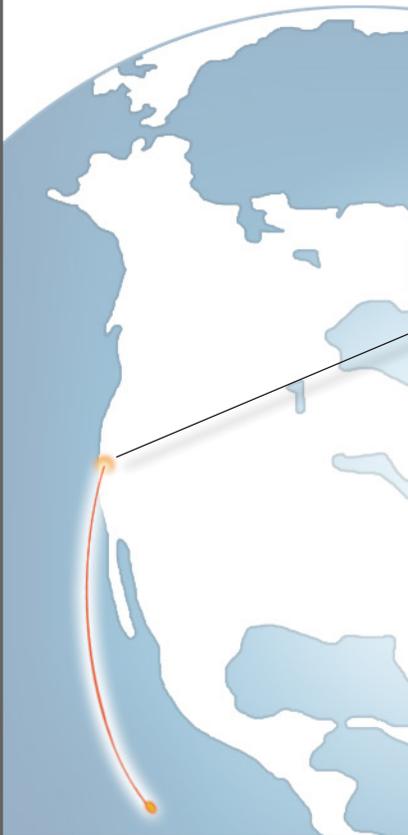
DATE OF LAUNCH:
Friday, 29 April 2005

TIME OF LAUNCH:
20:50:00 EDT

LOCATION OF LAUNCH:
SLC-40, Cape Canaveral AFS, FL



NROL - 20



LAUNCH VEHICLE:
Titan IV B-26

DATE OF LAUNCH:
Wednesday, 19 October 2005

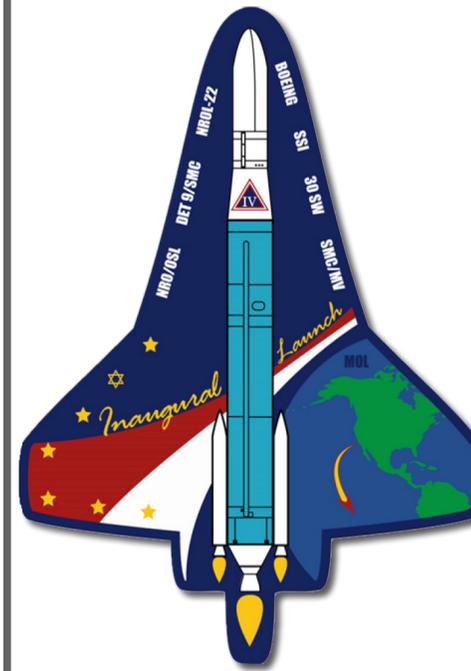
TIME OF LAUNCH:
11:05:00 PDT

LOCATION OF LAUNCH:
SLC-4E, Vandenberg AFB, CA

The need to modernize the U.S. rocket industry caught up with Titan. Known for its complexity and stiff price tag, military leaders took the first steps to retire the Titan Launch Vehicle by the creation of the Evolved Expendable Launch Vehicle program. The new-generation EELV rockets—Lockheed Martin's Atlas V and Boeing's Delta IV—were less expensive and offer a tailored-fee for a payload's weight. Both made inaugural flights in 2002.

The Titan launch vehicle was a pillar in American rocketry. The program was born 61 years ago to develop a two-stage intercontinental ballistic missile weapon system. NROL-20 marked the final Titan launch.

NROL - 22



DESCRIPTION: The Earth and Stars represent space, our area of operations. The launch path starts on the Earth and ascends to space and is in the shape of delta, since we're launching off a Delta IV. The shooting star represents our path, blazing a trail across the heavens.



LAUNCH VEHICLE:
Delta IV Medium + (4.2)

DATE OF LAUNCH:
Tuesday, 27 June 2006

TIME OF LAUNCH:
20:33:00 PDT

LOCATION OF LAUNCH:
SLC-6, Vandenberg AFB, CA

NROL - 21



NROL - 30



DESCRIPTION: Because of precession, more southern stars were visible to the ancient mariners of the Mediterranean Sea than are visible today. During their time, a great ship sailed across the sky during spring months. This ship sailed ever westward, skimming the southern horizon. The ancient Greeks said it was Argo Navis, the ship sailed by Jason and the Argonauts in search of the Golden Fleece.

Nicolas Louis de Lacaille dismantled the older constellation Argo Navis in the mid-eighteenth century, breaking it into four smaller constellations: Carina – the Keel, Puppis – the Poop or Stern, Vela – the Sails, and Pyxis – the Compass. He originally called the compass Pyxis Nautica for the Nautical Box, or Mariner's Compass. In modern times the name was shortened to Pyxis.

The mission logo for NROL-30 is based on the fourth constellation of the great constellation Argo Navis. A central theme is the compass, which represents the constellation Pyxis. Also included is an area containing the star pattern for Pyxis orbiting the Earth. The outer perimeter of the logo contains the Latin phrase "Non est ad astra mollis e terris via" which means "There is no easy way to get from the Earth to the stars."

LAUNCH VEHICLE:

Atlas V 401

DATE OF LAUNCH:

Friday, 15 June 2007

TIME OF LAUNCH:

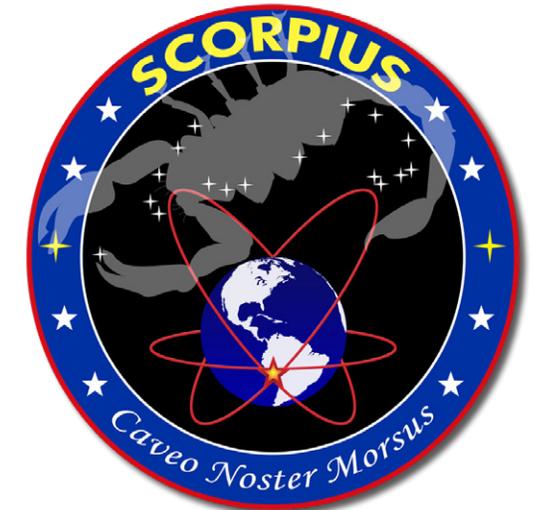
11:12:00 EDT

LOCATION OF LAUNCH:

SLC-41, Cape Canaveral AFS, FL



NROL - 24



DESCRIPTION: Scorpius is one of the oldest constellations known and the eighth sign of the zodiac. The asterism of a gigantic skewed 'S' was seen in many ancient cultures as a scorpion. The two stars that represent the stinger are both called "the Sting" in Arabic.

According to mythology, Apollo told Gaia to send the scorpion to kill the great hunter, Orion. Apollo was fearful that Orion had eyes for his sister Artemis. To this day, Scorpius chases Orion around the heavens but will never catch him, for it is placed such that it rises in the east only after Orion has safely disappeared over the western horizon.

The Latin phrase, "Caveo Noster Morsus," means: "Beware our Sting." The Earth with the three different orbits represents the many different NRO satellites that watch over our planet and provide the critical information needed by our leaders and our war fighters. The eight stars around the perimeter of the patch and the single star at the intersection of the orbits represent the nine Unified Commands protecting our nation. These commands are Central Command, European Command, Joint Forces Command, Northern Command, Pacific Command, Southern Command, Special Operations Command, Strategic Command, and Transportation Command. The two yellow stars at each side of the patch represent the joint relationship of the NRO to the offices of the National Director of Intelligence and the Department of Defense.

LAUNCH VEHICLE:
Atlas V 401

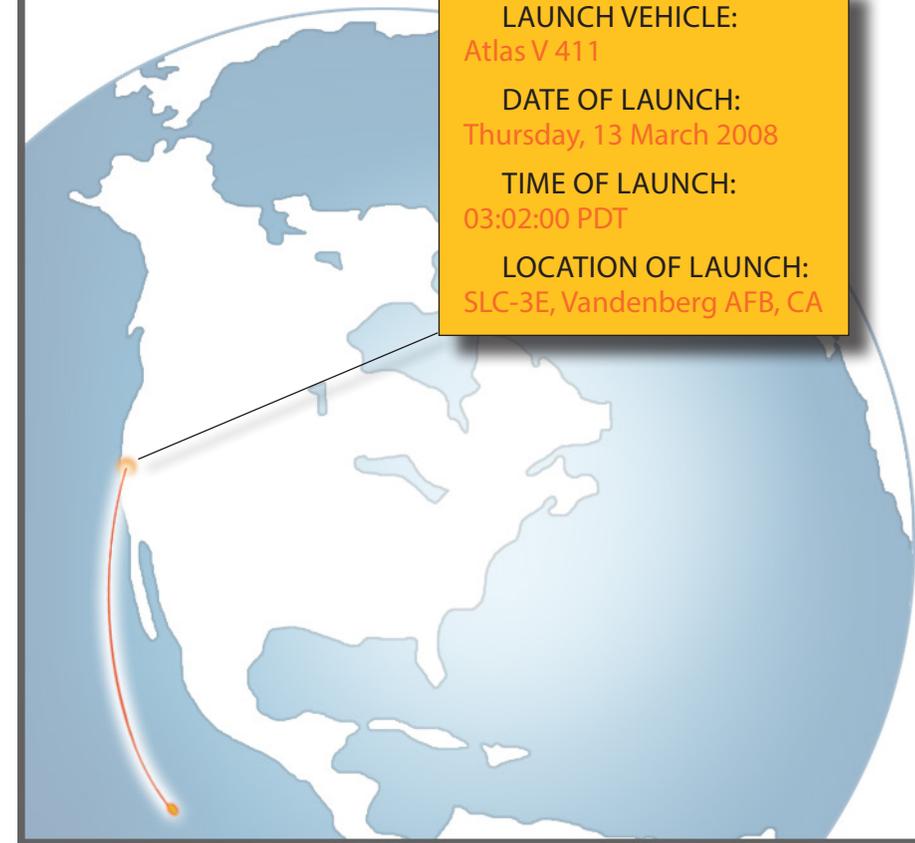
DATE OF LAUNCH:
Monday, 10 December 2007

TIME OF LAUNCH:
17:05:00 EST

LOCATION OF LAUNCH:
SLC-41, Cape Canaveral AFS, FL



NROL - 28



LAUNCH VEHICLE:
Atlas V 411

DATE OF LAUNCH:
Thursday, 13 March 2008

TIME OF LAUNCH:
03:02:00 PDT

LOCATION OF LAUNCH:
SLC-3E, Vandenberg AFB, CA

NROL - 26



DESCRIPTION: The general theme of the emblem represents the Statue of Liberty who symbolizes liberty and freedom with watchful gaze over the same freedom, much as the L-26 program will through its mission.

The brightest star and shooting star in the sky is in remembrance of a colleague and friend who had worked on the program for many years and recently passed away. They represent both the brightness of the individual's personality and the transition of life.

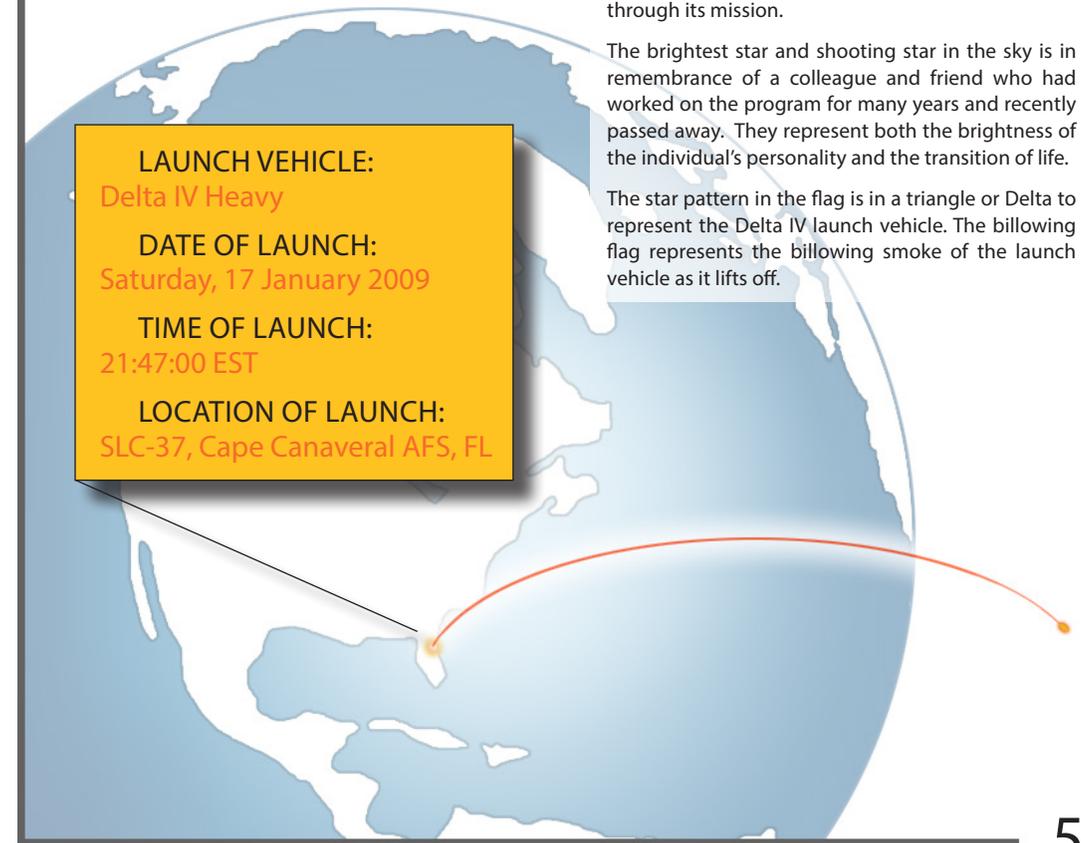
The star pattern in the flag is in a triangle or Delta to represent the Delta IV launch vehicle. The billowing flag represents the billowing smoke of the launch vehicle as it lifts off.

LAUNCH VEHICLE:
Delta IV Heavy

DATE OF LAUNCH:
Saturday, 17 January 2009

TIME OF LAUNCH:
21:47:00 EST

LOCATION OF LAUNCH:
SLC-37, Cape Canaveral AFS, FL



NROL - 41



LAUNCH VEHICLE:
Atlas V 501

DATE OF LAUNCH:
Monday, 20 September 2010

TIME OF LAUNCH:
21:03:30 PDT

LOCATION OF LAUNCH:
SLC-3E, Vandenberg AFB, CA

DESCRIPTION: The NROL-41 mission is represented by an abstract falcon. Throughout history, falcons symbolize power, superiority, and freedom. The falcon is the emblem for victory and the ability to rise above any situation. Falcons do not rest until the objective is achieved, as this mission will continue until the warfighter and Nation are safe.

The stars in the sky are to honor the many users from around the world that will benefit from this mission as they serve and protect the citizens of our great Nation. Symbolically, the star is representative of high ambitions and pure intentions. Its light provides clarity and is ever present in the conquest of darkness and evil, and epitomizes this mission. There is no significance to the number or placement of the stars.

The Earth signifies community and unification, and denotes the critical importance of this mission to keep our military and Nation safe. The shield below provides protection to the Earth. The red stripes in the shield symbolize strength and magnanimity, while the white stripes represent peace.

The stars in the crescent of the shield are symbolic of hope and should remind us of our obligations and duties to each other and the warfighter. The term "Ut Curator Et Protego" is Latin for "to oversee and protect."



NROL - 32



DESCRIPTION: The basic shape of the logo, a triangle or "delta," is designed to represent the NROL-32 launch system, a Delta IV Heavy. The launch system is comprised of not only the launch vehicle itself, but also several other items that make up the system...most importantly the dedicated government and industry workforce that labor intently to ensure mission success for each and every launch.

LAUNCH VEHICLE:
Delta IV Heavy

DATE OF LAUNCH:
Sunday, 21 November 2010

TIME OF LAUNCH:
17:58:00 EST

LOCATION OF LAUNCH:
SLC-37, Cape Canaveral AFS, FL

The centerpiece and main focus of the logo, the eye of an eagle imposed over a pyramid surrounded by rays of light, is designed to represent the main focus of the entire mission team, the NROL-32 spacecraft system. This again includes not only the satellite vehicle itself, but also the devoted government and industry teams that toil to design, build, and operate this critical national security payload. Borrowed from the "all seeing eye" on the reverse side of the nationally symbolic Great Seal of the United States (commonly seen on the back of the one dollar bill), this symbol is designed to represent the "all seeing" nature of this "national" asset. The rays of light number 32 to coincide with the NROL number of this mission.

The Roman numeral representation of 32, "XXXII," is at the bottom of the logo and filled with a fluttering American flag to represent the NROL number for this mission. The "NROL" text, nor any other specific organization identifying text, is omitted from the logo to further emphasize the broad community of both government and industry organizations that come together namelessly in spirit in pursuit of success for this critical mission.



NROL - 49



LAUNCH VEHICLE:
Delta IV Heavy

DATE OF LAUNCH:
Thursday, 20 January 2011

TIME OF LAUNCH:
13:10:30 PST

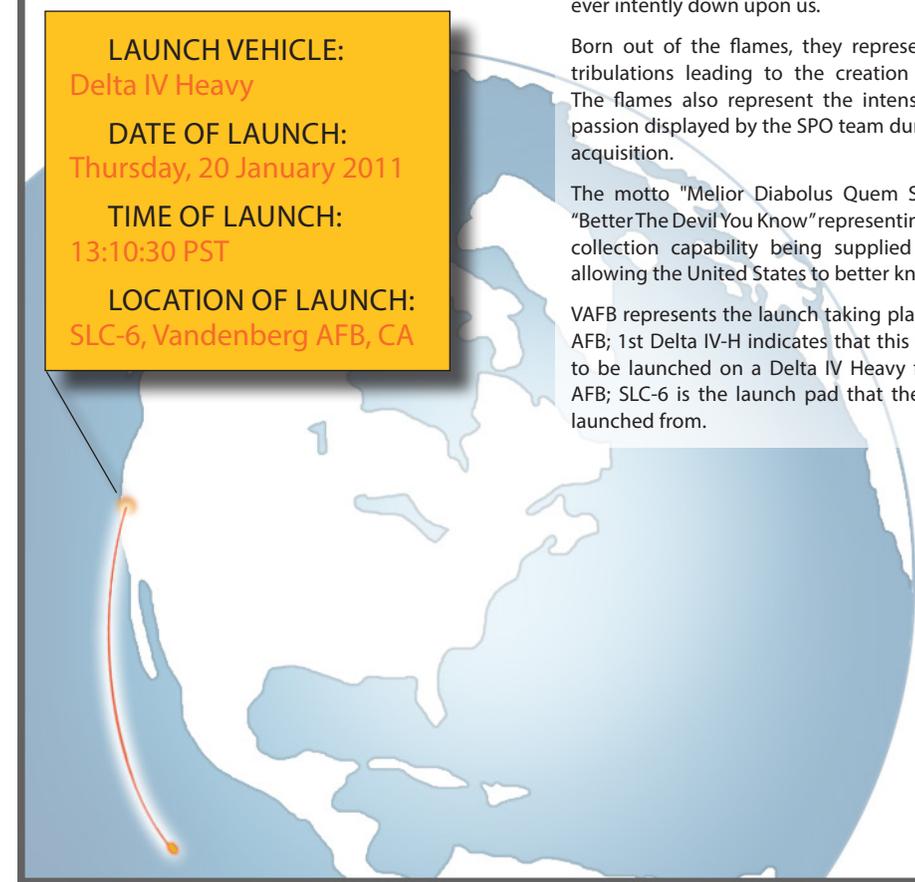
LOCATION OF LAUNCH:
SLC-6, Vandenberg AFB, CA

DESCRIPTION: The Phoenix rising from the flames represents the birth of the operational satellite out of the acquisition womb. The phoenix rises above watching ever intently down upon us.

Born out of the flames, they represent the trials and tribulations leading to the creation of the program. The flames also represent the intensity, tenacity, and passion displayed by the SPO team during the life of the acquisition.

The motto "Melior Diabolus Quem Scies" is Latin for "Better The Devil You Know" representing the intelligence collection capability being supplied by the satellite, allowing the United States to better know our enemies.

VAFB represents the launch taking place at Vandenberg AFB; 1st Delta IV-H indicates that this mission is the 1st to be launched on a Delta IV Heavy from Vandenberg AFB; SLC-6 is the launch pad that the vehicle is being launched from.



NROL - 66



LAUNCH VEHICLE:
Minotaur I

DATE OF LAUNCH:
Sunday, 6 February 2011

TIME OF LAUNCH:
04:26:00 PST

LOCATION OF LAUNCH:
SLC-8, Vandenberg AFB, CA

NROL - 27



LAUNCH VEHICLE:
Delta IV M+ (4,2)

DATE OF LAUNCH:
Friday, 11 March 2011

TIME OF LAUNCH:
18:38:00 EST

LOCATION OF LAUNCH:
SLC-37, Cape Canaveral AFS, FL

DESCRIPTION: Maroon & Gold in outer circle represent the few, the proud, the United States Marine Corps. Eagle represents the United States Air Force "Above All." Lion represents the United States Army and its strength, courage, and dominance on the ground. The blue background represents the United States Navy, no ocean too deep or too vast that can't be dominated.

Eagle & Leo (lion) Constellations represent the fact that various spacecraft work together in support of the greater mission. The depictions refer to actual astronomical Eagle & Leo star constellations, and the stars do not represent actual NRO satellites or the number of vehicles in the NRO constellation in any way.

Maroon of outer circle also recognizes Virginia Tech and those that perished in the tragedy that occurred there in 2007. Gold Star in Leo constellation represents your "particular" fallen veteran and all those that have perished in combat for our great country. "We Will Prevail" recognizes VA Tech and that this country will always prevail against aggression no matter how daunting.



NROL - 34



LAUNCH VEHICLE:
Atlas V 411

DATE OF LAUNCH:
Thursday, 14 April 2011

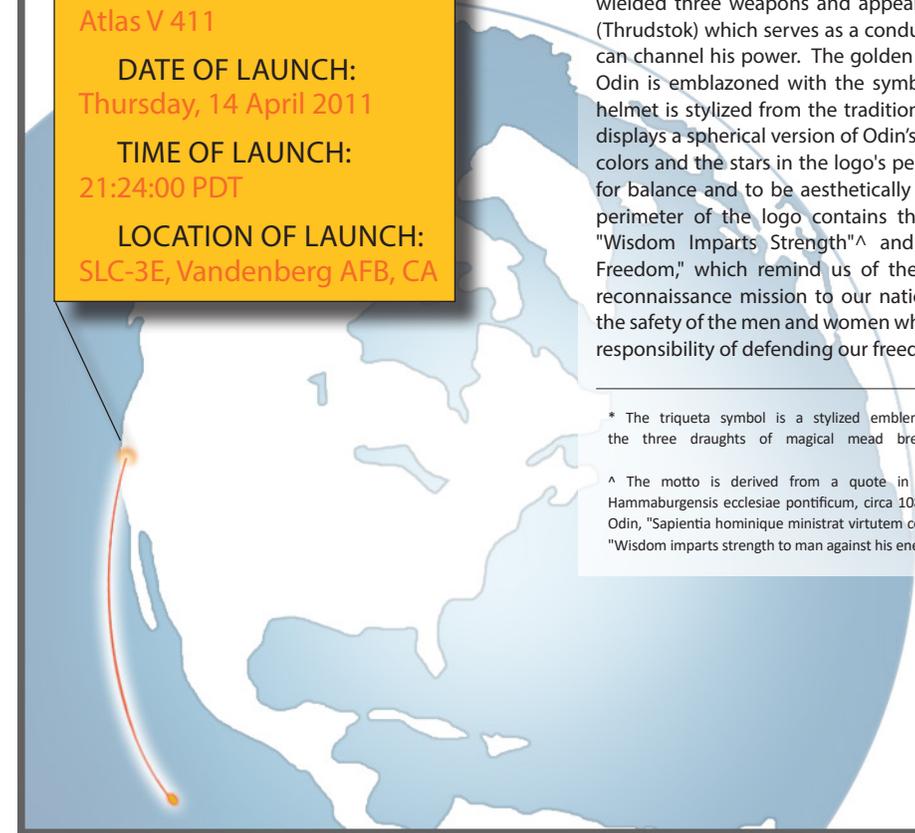
TIME OF LAUNCH:
21:24:00 PDT

LOCATION OF LAUNCH:
SLC-3E, Vandenberg AFB, CA

DESCRIPTION: The mission logo for NROL-34 is based on Odin, the Norse god of war and wisdom. Odin appears with an eye patch; legend explains that Odin sacrificed his eye for a drink from the spring of wisdom. Odin wielded three weapons and appears with one of them (Thrudstok) which serves as a conduit through which he can channel his power. The golden belt buckle worn by Odin is emblazoned with the symbol* of Odin. Odin's helmet is stylized from the traditional Norse model and displays a spherical version of Odin's symbol*. The logo's colors and the stars in the logo's perimeter were chosen for balance and to be aesthetically pleasing. The outer perimeter of the logo contains the following mottos, "Wisdom Imparts Strength"[^] and "Strength Defends Freedom," which remind us of the importance of our reconnaissance mission to our nation's defense, and to the safety of the men and women who have accepted the responsibility of defending our freedom.

* The triquetra symbol is a stylized emblem of Odin and represents the three draughts of magical mead brewed by the god Kvasir.

[^] The motto is derived from a quote in Adam of Bremen's Gesta Hammaburgensis ecclesiae pontificum, circa 1080. The phrase attributed to Odin, "Sapientia hominiquè ministrat virtutem contra inimicos" translates to: "Wisdom imparts strength to man against his enemies."



NROL - 25



LAUNCH VEHICLE:
Delta IV M+ (5,2)

DATE OF LAUNCH:
Thursday, 3 April 2012

TIME OF LAUNCH:
16:12:57 PDT

LOCATION OF LAUNCH:
SLC-6, Vandenberg AFB, CA

DESCRIPTION: In Greek mythology, the Cretan Bull fathers the beast Minotauros. Unable to contain the beast, King Minos orders that a labyrinth be built underneath his castle. Unable to escape the maze, Minotauros is ultimately found and killed by Theseus. Emblematic of this myth, the NROL-25 Bull gives birth to a mission that places our enemies in a labyrinth. While they may be able to run, they can never escape.

The NROL-25 Bull symbolizes the power, perseverance, and determination of this mission. The image of a celestial bull shielding the Earth is representative of this mission's commitment to help protect our nation and provide intelligence to the warfighter. Left alone, the bull remains peaceful, but when provoked will charge and defend to the finish.

The twenty-five stars and the branded XXV represent NROL-25 and are dedicated to all of those who have devoted efforts to make the mission successful. It is because of their resolve and persistence that this mission will flourish. The phrase "Victoria Commissa Omnibus" is Latin for "Committed to the Victory for All."



NROL - 38



DESCRIPTION: The namesake, Drake, for NROL-38 is rooted in Greek Mythology, Old English, and honors a former NRO employee who lost a valiant fight against cancer.

DRAKE or firedrake comes from the Old English for dragon. In Greek mythology there is the legend of the Draco, or three-headed dragon. The three-headed dragon represents NROL-38's strength, power, and fortitude.

The Latin saying in the outer part of the triangle, Non Morieris Bello means "Thou Shalt Not Die in Battle." This statement is derived from the Greek myth of the dragon Draco. When a Greek King asked the Oracle if he would be successful in the war he was waging in a neighboring city-state, the Oracle responded, "Win. Lose. You will not die in battle." The king was victorious in his campaign, only to be slain by an assassin on the way home. Borrowing from the latter portion of the Oracle's statement, it is an assurance to all Americans who battle our adversaries, at home and abroad: We will carry out our mission and keep our country safe.

LAUNCH VEHICLE:
Atlas V 401

DATE OF LAUNCH:
Wednesday, 20 June 2012

TIME OF LAUNCH:
08:28:00 EDT

LOCATION OF LAUNCH:
SLC-41, Cape Canaveral AFS, FL



NROL - 15



DESCRIPTION: The NROL-15 launch logo features a striking black panther lunging through the logo. The Native Americans regard the panther as the protector of the universe. Of all the big cats, the black panther has the greatest mysticism associated with it and is a symbol of courage, valor, and power. The panther is the enemy of the snake and the dragon and the sentry of the night. The choice of the black panther also represents the classified nature of the mission.

The background around the panther is the United States flag, representing the patriotism of the mission.

Finally, on the outer ring of the logo are the annotations, "Delta IV HLV", "NROL-15," and "CCAFS." "Delta IV HLV" represents the launch vehicle, the Delta IV Heavy Launch Vehicle. "NROL-15" represents the mission number. "CCAFS" represents the launch site for this mission.

LAUNCH VEHICLE:
Delta IV Heavy

DATE OF LAUNCH:
Friday, 29 June 2012

TIME OF LAUNCH:
09:15:00 EDT

LOCATION OF LAUNCH:
SLC-37B, Cape Canaveral AFS, FL



NROL - 36



DESCRIPTION: The colors were chosen for balance and to be aesthetically pleasing. All background stars are random.

The mission logo for NROL-36 is based on the Bison – a patriotic symbol of the American Frontier. The stars at his foot denote he is charging. The lower perimeter of the logo contains the phrase “Freedom’s Shield and Hope” from the Stars and Stripes Forever. The flag field was chosen to represent the U.S. flag (a symbol of patriotism)

The words “Made in the USA” and the 3 rivets remind us that the hard work of many Americans resulted in the creation of NROL-36.



LAUNCH VEHICLE:
Atlas V 401

DATE OF LAUNCH:
Thursday, 13 September 2012

TIME OF LAUNCH:
14:39:00 PDT

LOCATION OF LAUNCH:
SLC-3E, Vandenberg AFB, CA

NROL - 65



LAUNCH VEHICLE:
Delta IV Heavy

DATE OF LAUNCH:
Wednesday, 28 August 2013

TIME OF LAUNCH:
11:03:00 PDT

LOCATION OF LAUNCH:
SLC-6, Vandenberg AFB, CA

DESCRIPTION: The patch design is a symbolic representation of the NROL-65 mission, and it will be used in conjunction with the launch of the satellite and will be visible on the Delta IV Heavy fairing.

The Eagle represents the symbol of both freedom and the United States of America. The Eagle is adorned in fatigues complete with the American flag in support of the United States military. The Eagle is seen holding the Earth and a snake. The Earth held in the Eagle's right arm represents how the United States watches over and protects the world. The snake clutched in the Eagle's left hand represents evil and is a symbol of our enemies that work to destroy our way of life. The tight grip the Eagle has on the snake demonstrates the United States dominance over our enemies. The Eagle's facial expression displays the SPO's intensity, tenacity, and passion during the life of the acquisition. The "Buttercup" tattoo is a whimsical addition to show a sensitive side to the tough exterior of the Eagle.

The motto "Sheachadadh Do Rudai" is Irish for "Deliver Your Stuff," or "DYS," representing the determination and tenacity of the SPO to deliver the mission on time in support of warfighter and intelligence community needs. The term "DYS" has been our program battle cry since the inception of the SPO.

NROL 65 is the OSL mission number; Delta IV-H indicates that this mission is to be launched on a Delta IV Heavy; SLC-6 is the Vandenberg AFB pad that the vehicle is being launched from.



NROL - 39



LAUNCH VEHICLE:
Atlas V 501

DATE OF LAUNCH:
Thursday, 5 December 2013

TIME OF LAUNCH:
23:14:30 PST

LOCATION OF LAUNCH:
SLC-3E, Vandenberg AFB, CA

DESCRIPTION: The NROL-39 mission is represented by the Octopus. Throughout the animal kingdom, few animals are as versatile and adaptable as the Octopus. Highly intelligent, the octopus uses its tentacles to reach prey in even the most intricate spaces. Emblematically, our enemies can be reached no matter where they choose to hide. "Nothing is Beyond Our Reach" best defines this mission and the value it brings to our nation. The Octopus symbolizes the resourcefulness, adaptability, and perseverance of this mission. The image of the Octopus reaching around the world is representative of this mission and the warfighters it supports, who serve valiantly all over the globe protecting our nation. Like the Octopus, our mission, our warfighters, and our nation will always remain versatile and find a way to adapt to and overcome any threat we face.



NROL - 67



LAUNCH VEHICLE:
Atlas V 541

DATE OF LAUNCH:
Thursday, 10 April 2014

TIME OF LAUNCH:
13:45:00 EDT

LOCATION OF LAUNCH:
SLC-41, Cape Canaveral AFS, FL

NROL - 33



LAUNCH VEHICLE:
Atlas V 401

DATE OF LAUNCH:
Thursday, 22 May 2014

TIME OF LAUNCH:
09:09:00 EDT

LOCATION OF LAUNCH:
SLC-41, Cape Canaveral AFS, FL

DESCRIPTION: VALKYRIE comes from Norse mythology and means "chooser of the slain." In Norse mythology, Valkyries served the gods. In times of war they would hover over the battlefield, and would choose who would die in battle.

Latin slogan "Nullus Asylum" means "No Sanctuary." In Norse mythology, adversaries of the Vikings could find no sanctuary from Valkyries. Similarly, Nullus Asylum is an assurance to all Americans who battle our adversaries, at home and abroad: our enemies will find no sanctuary.

Norse mythology sometimes depicts wolves in the company of Valkyries. The three wolves depict strength, perseverance, and speed. Like the wolf, we instill fear in our adversaries and protect what America holds dear.

The rays emanating from the Valkyrie's hand graphically represent the Valkyrie choosing who will live and who will die in battle. The skulls, also a common element in the Norse mythology, represent adversaries who have been slain in battle. The rising sun over the globe symbolizes worldwide coverage. Our enemies cannot hide.



NROL - 35



LAUNCH VEHICLE:
Atlas V 541

DATE OF LAUNCH:
Friday, 12 December 2014

TIME OF LAUNCH:
19:19:00 PST

LOCATION OF LAUNCH:
SLC-3E, Vandenberg AFB, CA

DESCRIPTION: The Goddess is an archetype combining attributes of a number of female forms in mythology, including Mother Nature and Minerva.

She rules over the Earth, looking down and protecting all from the vantage point of space. She glows with light from within, providing a refuge from the black expanse of space. The Goddess is strong, confident and harnesses the energy of the universe.

Her open arms show an all encompassing reach and her forward gait is moving her and the world towards the future. Her unwavering gaze sees all.

The Goddess rules benevolently over the world, commanding earth, wind, and fire to harness the energy of the universe for mankind's use. The wind is symbolized by the movement in her hair and cape, the Earth by the small wedge of land that serves as her perch, as well as the trident which encompasses the seas. She holds a cauldron of fire that she sends forth as lightning and a spiral of light waves that wrap around the trident.



NROL - 55



LAUNCH VEHICLE:
Atlas V 401

DATE OF LAUNCH:
Thursday, 8 October 2015

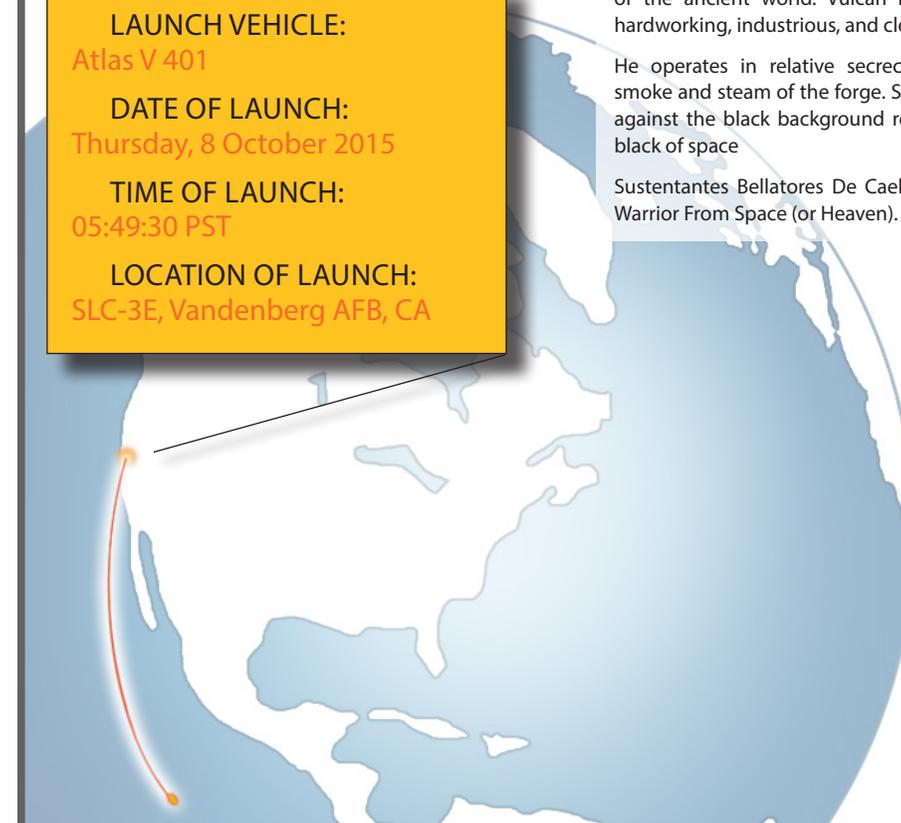
TIME OF LAUNCH:
05:49:30 PST

LOCATION OF LAUNCH:
SLC-3E, Vandenberg AFB, CA

DESCRIPTION: Vulcan provided support to the warfighters of mythology, forging the weapons and armor of the gods, goddesses, and heroes of the ancient world. Vulcan is extremely strong, hardworking, industrious, and clever.

He operates in relative secrecy, shrouded in the smoke and steam of the forge. Sparks from the forge against the black background resemble stars in the black of space

Sustentantes Bellatores De Caelis = Supporting the Warrior From Space (or Heaven).



NROL - 45



DESCRIPTION: In Greek mythology, the gods bestow the dog Laelaps with such remarkable stamina and swiftness that no prey can escape him. Inspired by this legend, the NROL-45 mission is represented by the Rottweiler, whose intelligence, endurance, and alertness will ensure no enemy can escape us. Zeus ultimately places Laelaps into the heavens in the constellation now recognized as Canis Major, anchored by the brightest star in the sky Sirius. Similarly, the NROL-45 mission anchors an intelligence capability that will help ensure the nation's security for years to come.

Throughout history, Rottweilers have worked in various roles to scout, patrol, or act as messengers in support of the warfighter. As one of the first known herding breeds, Rottweilers protected and herded the food needed to feed the Roman Army. In modern times, they are used for detection and tracking of concealed enemies and weapons. The Rottweiler's strength, intelligence, and noble character, represents the NROL-45 mission, and will remain "Ever Vigilant" to our warfighters.

DESCRIPTION: The design of the above patch provides an unclassified symbolic representation for the NROL-45 launch where L-45 is the OSL mission number, and VAFB stands for Vandenberg AFB where the mission will originate from.

The scene depicts a male and female soldier kneeling, along with a service dog, before a battlefield memorial for a fallen soldier. Deployed troops, unable to return home to attend the funerals of their fellow soldiers, often pay their respects by holding memorial ceremonies in the field before their fallen comrades are taken home to their families.

This tradition originated during the Civil War when fallen soldiers were marked on the battlefield with their rifle with its bayonet stuck into the ground and hat placed on top to later be recovered for a proper burial. This memorial to the fallen has come to be used as a poignant and all too frequent reminder of the cost of war. The helmet and identification tags signify the fallen soldier, their name never to be forgotten. The inverted rifle with bayonet signals a time for prayer and remembrance, a brief break in the action to pay tribute to our friend. The combat boots, worn and dirty, represent the final march of the soldier's last battle.

The stars around the logo have no meaning but illustrate the SPO's patriotism. The phrase "For Those Who Have Served," and "We Remember" is a dedication to our fallen soldiers, and it reminds us of our commitment to deliver the mission on time in support of warfighter and intelligence community needs.



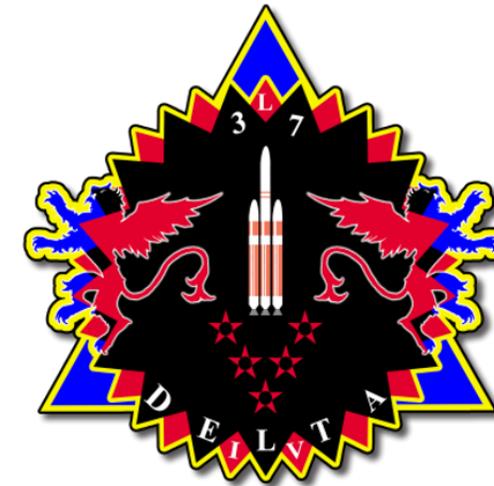
LAUNCH VEHICLE:
Delta IV M+ (5,2)

DATE OF LAUNCH:
Wednesday, 10 February 2016

TIME OF LAUNCH:
03:40:32 PST

LOCATION OF LAUNCH:
SLC-6, Vandenberg AFB, CA

NROL - 37



DESCRIPTION: The design of the above patch provides a symbolic representation of the NROL-37 mission to be used in conjunction with the launch of the satellite and will be visible on the Delta IV Heavy fairing.

The Knight is a symbol of courage with a chivalrous code of conduct representing bravery, training, and service to others. The Knight stands in front of the U.S flag in a defensive posture, as to protect at all cost. The Eagle on the chest is a symbol of both freedom and the United States of America. The sword is a message of tenacious, fierce focus with the claws representing extreme reach with global coverage.

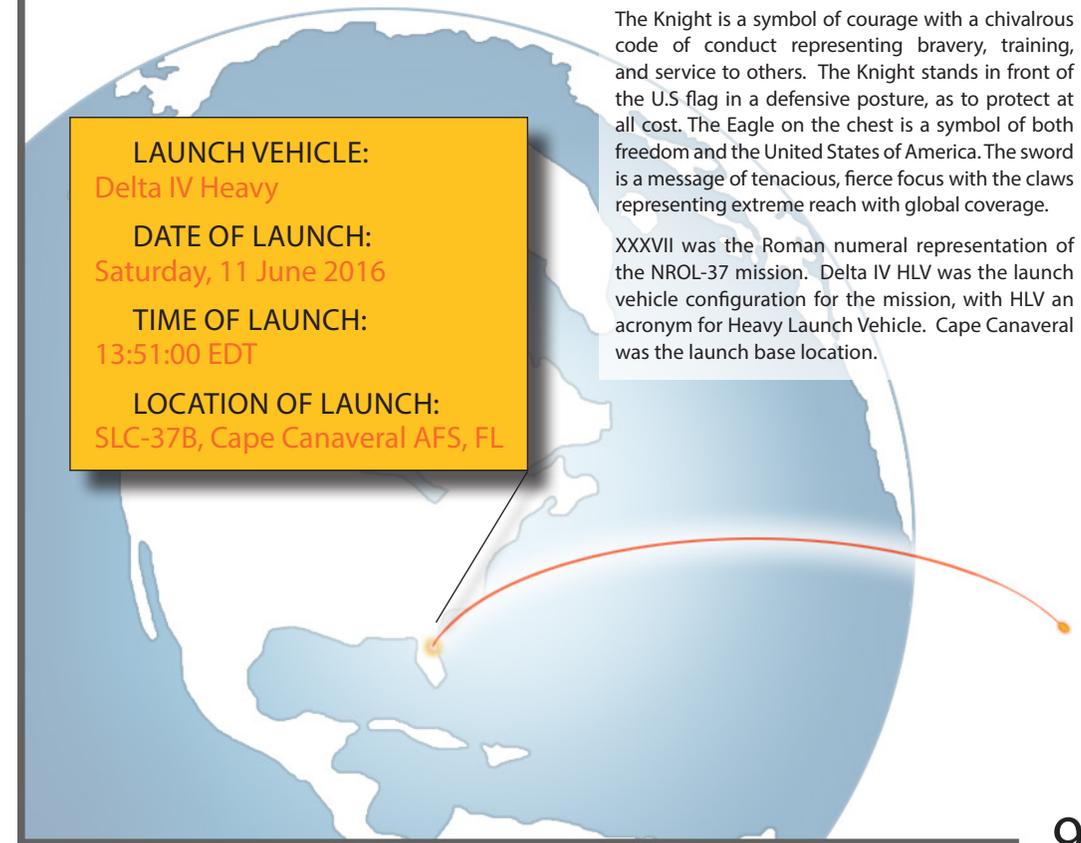
XXXVII was the Roman numeral representation of the NROL-37 mission. Delta IV HLTV was the launch vehicle configuration for the mission, with HLTV an acronym for Heavy Launch Vehicle. Cape Canaveral was the launch base location.

LAUNCH VEHICLE:
Delta IV Heavy

DATE OF LAUNCH:
Saturday, 11 June 2016

TIME OF LAUNCH:
13:51:00 EDT

LOCATION OF LAUNCH:
SLC-37B, Cape Canaveral AFS, FL



NROL - 61



DESCRIPTION: The NROL-61 logo depicts Spike, a green lizard, riding an Atlas V launch vehicle from Cape Canaveral Air Force Station (CCAFS).

LAUNCH VEHICLE:
Atlas V 421

DATE OF LAUNCH:
Thursday, 28 July 2016

TIME OF LAUNCH:
08:37:00 EDT

LOCATION OF LAUNCH:
SLC-41, Cape Canaveral AFS, FL



NROL - 79



LAUNCH VEHICLE:
Atlas V 401

DATE OF LAUNCH:
Wednesday, 1 March 2017

TIME OF LAUNCH:
09:49:51 PST

LOCATION OF LAUNCH:
SLC-3E, Vandenberg AFB, CA

DESCRIPTION: Athena, Goddess of Military Victory & Wisdom, is Zeus' favorite child and is the embodiment of wisdom, reason, and purity. Athena looks over the Earth in her bid to impart knowledge to those she protects

Athena fought for just reasons, and she was fierce and brave in battle. Athena protected the heroes as they went out to war and saved them as they returned back home. She was always giving precious advice and stood by on any danger.

Colors and number of stars are random, Athena's shield depicted Medusa to terrify her opponents. "Victoriam Per Intelligentiam" means Victory Through Intelligence. We are supporting the Tip of the Spear warriors. Athena's owl mask represents characteristics of an owl such as wisdom.



NROL - 76



DESCRIPTION: The Falcon represents the SpaceX Falcon-9 booster of launch NROL-76. The rifle represents command and power. The spyglass represents the ability to see to the horizon and to explore the unknown.

The star field represents the on-orbit mission noted by the one bright star. The number and placement of the stars have no significance.

Lewis & Clark heading into the great unknown (staring to the west) to discover and explore the newly purchased Louisiana Territory and report back to the National Command Authority (President Jefferson). This mirrors the scientific discovery nature of NROL-76 program and our goal to explore new capabilities for the Intelligence Community. The slogan "Explore-Discover-Know" echoes this symbolism for the program.

LAUNCH VEHICLE:
Falcon 9

DATE OF LAUNCH:
Monday, 1 May 2017

TIME OF LAUNCH:
07:15:00 EDT

LOCATION OF LAUNCH:
LC-39A, Kennedy Space Center, FL



NROL - 42



LAUNCH VEHICLE:
Atlas V 541

DATE OF LAUNCH:
Sunday, 24 September 2017

TIME OF LAUNCH:
10:49:47 PDT

LOCATION OF LAUNCH:
SLC-3E, Vandenberg AFB, CA

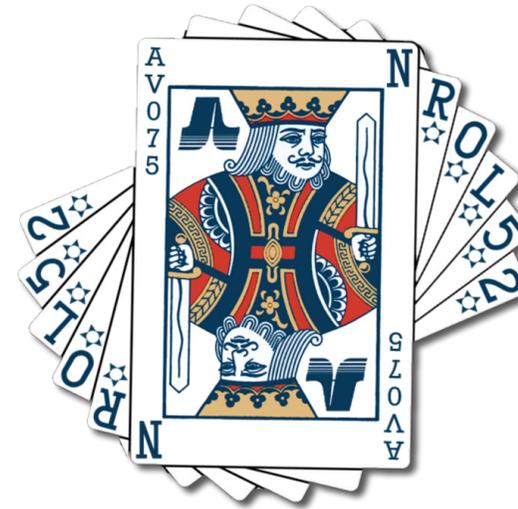
DESCRIPTION: The border is a darkened shade of "NRO Blue" as described in NRO Brand Style Guide, symbolizing cross-organization collaboration required for mission success.

The rocket silhouette closely resembles the silhouette of an ATLAS-V 541, the NROL-42 launch vehicle.

The starry field is random with no specific meaning to placement or size. The bear's stance indicates motion, representing the unceasing motion of the satellite along its orbital path. Use of a Grizzly Bear has no significant meaning.



NROL - 52



ZUMA



LAUNCH VEHICLE:
Falcon 9 (1,1)

DATE OF LAUNCH:
Sunday, 7 January 2018

TIME OF LAUNCH:
07:30:00 EDT

LOCATION OF LAUNCH:
SLC-39A, Cape Canaveral AFS, FL

NROL - 47



DESCRIPTION: The design of the above patch provides a symbolic representation for the NROL-47 launch. VAFB stands for Vandenberg AFB where the mission will originate from, L-47 is the OSL mission number, and SLC-6 is the pad where the rocket will be launched.

LAUNCH VEHICLE:
Delta IV M+ (5,2)

DATE OF LAUNCH:
Friday, 12 January 2018

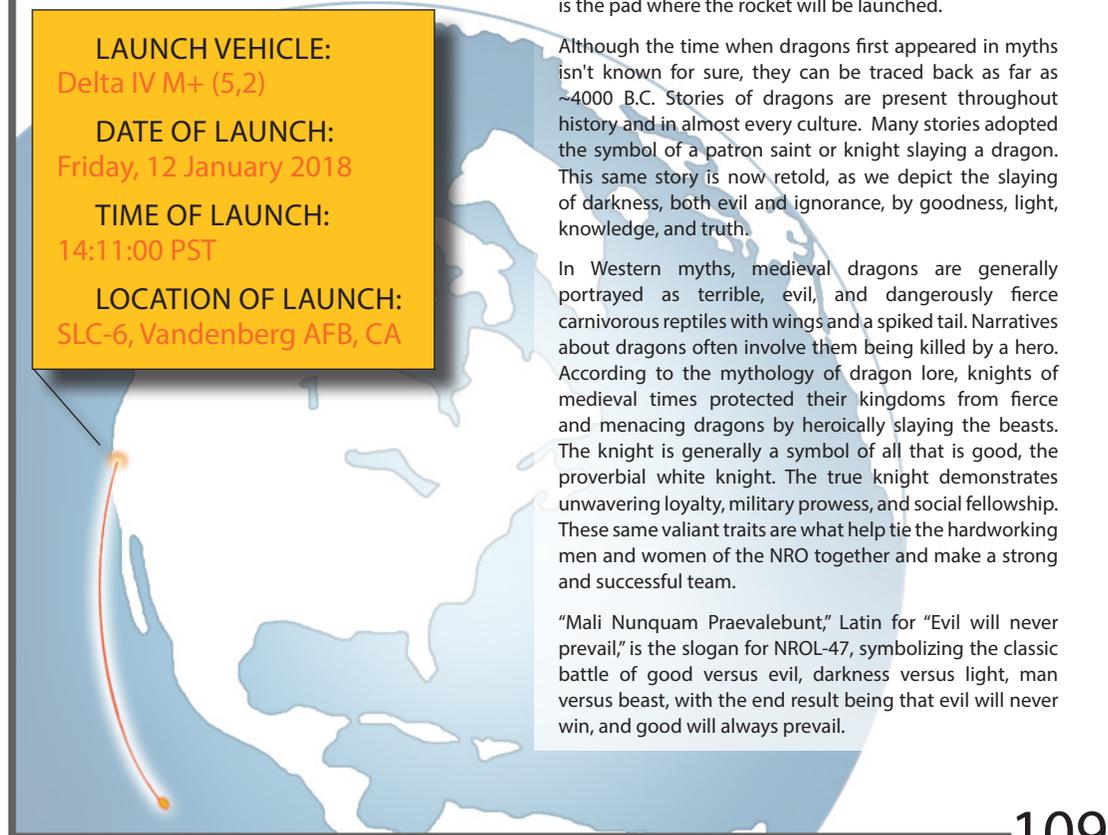
TIME OF LAUNCH:
14:11:00 PST

LOCATION OF LAUNCH:
SLC-6, Vandenberg AFB, CA

Although the time when dragons first appeared in myths isn't known for sure, they can be traced back as far as ~4000 B.C. Stories of dragons are present throughout history and in almost every culture. Many stories adopted the symbol of a patron saint or knight slaying a dragon. This same story is now retold, as we depict the slaying of darkness, both evil and ignorance, by goodness, light, knowledge, and truth.

In Western myths, medieval dragons are generally portrayed as terrible, evil, and dangerously fierce carnivorous reptiles with wings and a spiked tail. Narratives about dragons often involve them being killed by a hero. According to the mythology of dragon lore, knights of medieval times protected their kingdoms from fierce and menacing dragons by heroically slaying the beasts. The knight is generally a symbol of all that is good, the proverbial white knight. The true knight demonstrates unwavering loyalty, military prowess, and social fellowship. These same valiant traits are what help tie the hardworking men and women of the NRO together and make a strong and successful team.

"Mali Nunquam Praevalebunt," Latin for "Evil will never prevail," is the slogan for NROL-47, symbolizing the classic battle of good versus evil, darkness versus light, man versus beast, with the end result being that evil will never win, and good will always prevail.



NROL - 71



LAUNCH VEHICLE:
Delta IV Heavy

DATE OF LAUNCH:
Saturday, 19 January 2020

TIME OF LAUNCH:
11:10:00 PST

LOCATION OF LAUNCH:
SLC-6, Vandenberg AFB, CA

DESCRIPTION: The design of the above patch provides a symbolic representation for the NROL-71 launch, where NROL-71 is the OSL mission number; Delta IV-H indicates that this mission is to be launched on a Delta IV Heavy; and VAFB stands for Vandenberg AFB from where the mission will originate from.

The phrase "Serving Those Who Serve," again representing our commitment to deliver the mission on time in support of warfighter and intelligence community needs.

The Eagle represents the symbol of both freedom and the United States of America. The Eagle, adorned with dog tags, is using his talons to break free from any obstacle to symbolize the program's tenacity in meeting our commitment in support of the warfighter and the intelligence community. The Eagle's facial expression displays the SPO's intensity and passion during the life cycle of the acquisition.

The partially-hidden letters on the background dog tag refer to the eagle's nickname, "Bo," while the foreground dog tag, labeled "JLC," is in honor of Joshua L. Chamberlain. Col Chamberlain was awarded the Medal of Honor for his heroism at the battle of Gettysburg. On 2 July 1863, Col Chamberlain held his position on the Union Army's southern flank at Little Round Top against repeated assault from the Confederate force. Low on ammunition, he led his men to execute a bold bayonet charge saving the vulnerable Union flank and contributing greatly to Union victory. Col Chamberlain's heroism, leadership, and commitment to service before self, exemplify the ethos of the American warfighter we serve today.



NROL - 151



DESCRIPTION: For more than six decades, the National Reconnaissance Office has answered the hardest questions posed by national security with bold, innovative technology. NROL-151 stands firm in this tradition, and we send it off assured of good fortune and luck on its daring mission.

LAUNCH VEHICLE:
Electron

DATE OF LAUNCH:
Friday, 31 January 2020

TIME OF LAUNCH:
15:56:00 NZDT

LOCATION OF LAUNCH:
Launch Complex-1, New Zealand

There is zero hidden meaning in the logo. All of the symbols stand for luck: deer, horseshoe, dice adding up to lucky #7, color green, four-leaf clover, rabbit's foot, antler's crossed, New Zealand's Maori heritage, and a wishbone.

The NRO competitively awarded the contract under the Rapid Acquisition of a Small Rocket (RASR) contract vehicle, which allows the NRO to explore new launch opportunities that can provide a streamlined, commercial approach for getting small satellites into space.



NROL - 129



DESCRIPTION: The NROL-129 mission is represented by two launch patches featuring two warrior figures working together to defend our nation's interests and deny our enemies sanctuary. The patches include the phrase "Our Time has Come," which symbolizes that the payload will enable the NRO's continued support to both defense and intelligence operations in support of national security.

NROL-129 represents the first NRO launch from NASA's Wallops Flight Facility in Virginia and the first NRO payload to be launched on a Minotaur IV launch vehicle.

LAUNCH VEHICLE:
Minotaur IV

DATE OF LAUNCH:
Wednesday, 15 July 2020

TIME OF LAUNCH:
13:46:00 EDT

LOCATION OF LAUNCH:
Pad 0B, Wallops Flight Facility, VA



NROL - 101



DESCRIPTION: The gold "ring" represents the gold ring that the character guards in *The Hobbit*. The blue background represents "space." The radiant lines form an "X" with a star atop; the mathematical symbol of an "X" with a dot centered above is Newton's notation for differentiation. The four star glints do not have an individual representation/meaning; they are part of the X dot. The smaller stars have no significance.

Elfish script translation: "Goodness Persists." The Elfish language was used because it is the language used in *The Hobbit*.

LAUNCH VEHICLE:
Atlas V 531

DATE OF LAUNCH:
Friday, 13 November 2020

TIME OF LAUNCH:
17:32:00 EST

LOCATION OF LAUNCH:
SLC-41, Cape Canaveral AFS, FL



NROL - 44



DESCRIPTION: The wolf's howl represents a warning to the pack as the first point of detection of signs of trouble. The wolf's voice, in this representation is directed toward space, where NRO spacecraft are operating the agency's overhead collection mission in support of both defense and intelligence operations.

The five wolves show the solidarity across the FVEY community, and the pack represents the solidarity of the nation in leveraging and supporting the warning sentry.

The darkened shade of the NRO blue found in the organizational logo symbolizes the collaboration required for mission success.

The falling snow is random with no specific meaning to placement or size. It represents the purity of our intentions and the serene calm of peace.

LAUNCH VEHICLE:
Delta IV Heavy

DATE OF LAUNCH:
Thursday, 10 December 2020

TIME OF LAUNCH:
20:09:00 EST

LOCATION OF LAUNCH:
SLC-37, Cape Canaveral SFS, FL



NROL - 108



DESCRIPTION: Gorillas are known for their size and force and are extremely powerful, but they are also known for their gentle human-like behavior. Gorillas often beat their chests, show their teeth, and make eye contact whenever they perceive a threat or danger, and in doing so establish dominance over the threat. The phrase "Peace Through Strength" was chosen because the mission itself is to increase global awareness of actions against the United States, our war fighters, our interests, and our alliances. Like the Gorilla, this mission stands in watch, constantly vigilant... alert, and ready to defend its own.

LAUNCH VEHICLE:

Falcon 9

DATE OF LAUNCH:

Saturday, 19 December 2020

TIME OF LAUNCH:

09:00:00 EST

LOCATION OF LAUNCH:

LC-39A, Kennedy Space Center, FL



NROL - 82



LAUNCH VEHICLE:

Delta IV Heavy

DATE OF LAUNCH:

Monday, 26 April 2021

TIME OF LAUNCH:

13:47:00 PDT

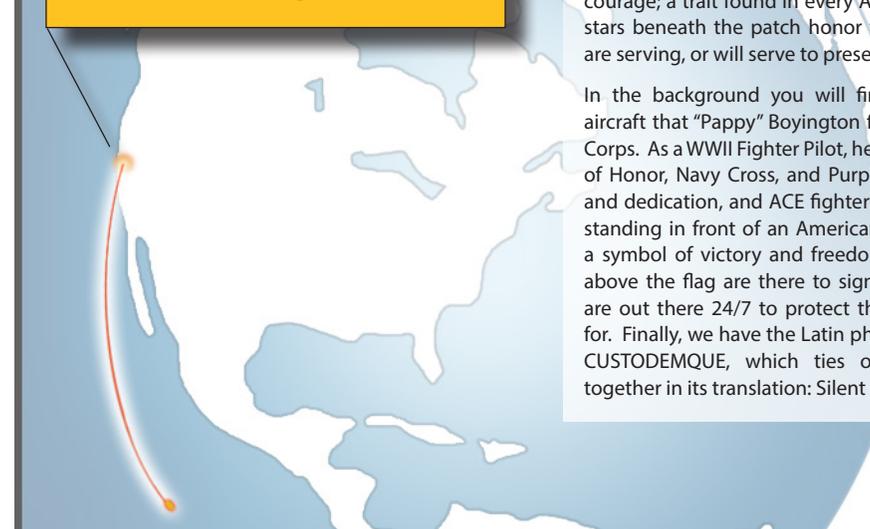
LOCATION OF LAUNCH:

SLC-6, Vandenberg AFB, CA

DESCRIPTION: This logo was designed to commemorate the many heroic acts and sacrifices that have been made to protect our way of life as Americans.

The Eagle is our symbol of Freedom. In the NROL-82 logo he is wearing the traditional flight gear of a WWII Fighter Ace, specifically Gregory "Pappy" Boyington. The dog tags contain GPB for Pappy Boyington and ADP-Accountability, Diligence, and Proficiency, the core values by which our SPO operates, as a critical acquisition enabler for the warfighter. On the flight suit, there is a patch containing the word SISU; a mystical Finnish word roughly translated as strength of will, determination, perseverance, and acting rationally in the face of adversity: true grit. SISU is not momentary courage, but the ability to sustain courage; a trait found in every American Hero. The three stars beneath the patch honor those who have served, are serving, or will serve to preserve America's way of life.

In the background you will find an F4U Corsair, the aircraft that "Pappy" Boyington flew while in the Marine Corps. As a WWII Fighter Pilot, he was awarded the Medal of Honor, Navy Cross, and Purple Heart for his heroism and dedication, and ACE fighter pilot skills. The Eagle is standing in front of an American Flag depicted waving; a symbol of victory and freedom. The stars in the sky above the flag are there to signify that our warfighters are out there 24/7 to protect the Flag and all it stands for. Finally, we have the Latin phrase TACITAE LIBERTATIS CUSTODEMQUE, which ties our entire logo theme together in its translation: Silent Guardians of Freedom.



NROL - 111



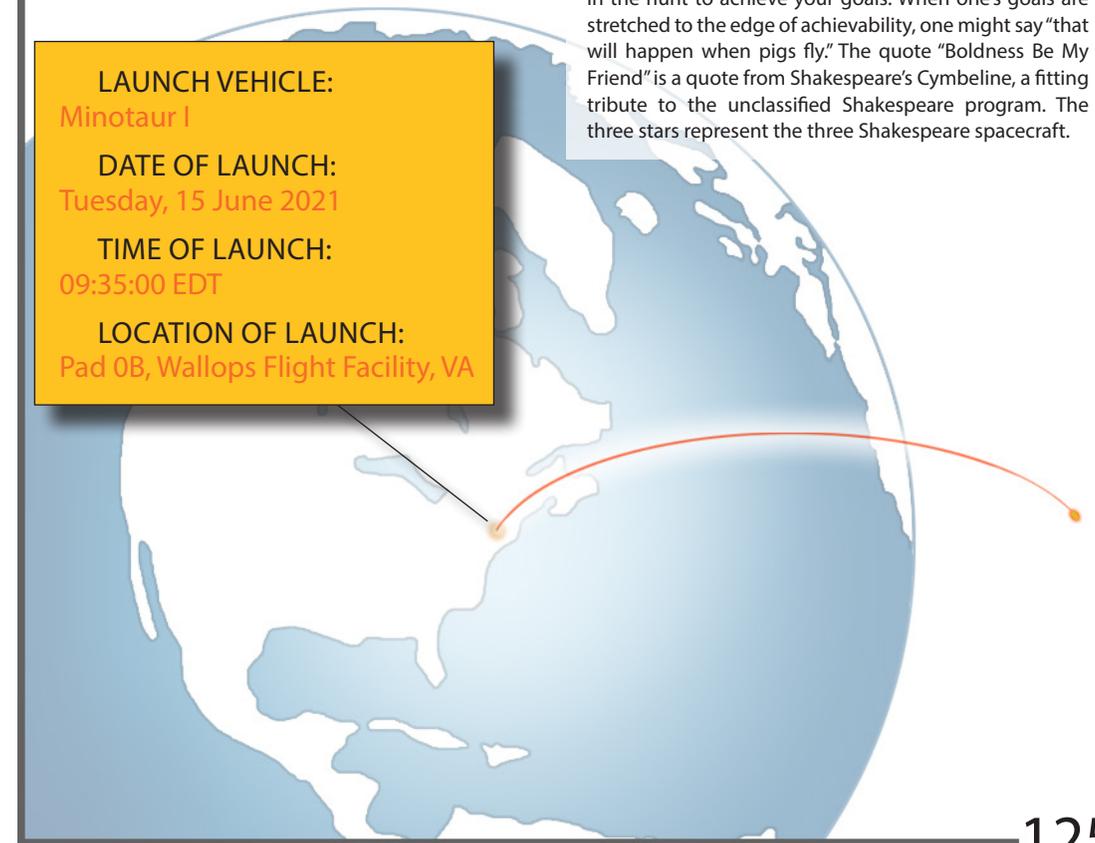
DESCRIPTION: The NROL-111 logo is a flying wild boar in traditional aviator gear. Boars are a good spirit guide to call on when you have elusive goals, and inspire tenacity in the hunt to achieve your goals. When one's goals are stretched to the edge of achievability, one might say "that will happen when pigs fly." The quote "Boldness Be My Friend" is a quote from Shakespeare's Cymbeline, a fitting tribute to the unclassified Shakespeare program. The three stars represent the three Shakespeare spacecraft.

LAUNCH VEHICLE:
Minotaur I

DATE OF LAUNCH:
Tuesday, 15 June 2021

TIME OF LAUNCH:
09:35:00 EDT

LOCATION OF LAUNCH:
Pad 0B, Wallops Flight Facility, VA



THE DREAM OF YESTERDAY IS THE HOPE OF
TODAY AND THE REALITY OF TOMORROW.

— Robert Goddard





CENTER FOR THE STUDY OF
NATIONAL RECONNAISSANCE

December 2021