

Chapter 1 : What is a keyhole satellite and what can it really spy on? | HowStuffWorks

These titles in the new Library of Satellites series offer satisfactory overviews of various types of unmanned spacecraft. Kupperberg begins with the warning that most spy satellites are classified as top secret: "concrete information is hard to find."

January 3, Over the decades, spying from space has always earned super-secret status. They are the black projects, fulfilling dark tasks and often bankrolled by blank check. However last month, several U. One lawmaker, Jay D. Rockefeller D-WV , the vice chairman of the Senate intelligence committee, openly criticized the program on the floor of the U. He said the program "is totally unjustified and very wasteful and dangerous to national security," adding that he has voted to terminate the program for two years, with no success. There is now a delicate dance underway between issues of national security and open public scrutiny about taxpayer dollars being spent wisely or squandered. Meanwhile, the swirl of secrecy seems to be revolving around a top secret "stealthy" satellite project, codenamed MISTY. The Archive is gathering declassified U. Richelson described the launching of the stealth imaging satellite via space shuttle Atlantis in Richelson explained that a spacecraft explosion "may have been a tactic to deceive those monitoring the satellite or may have been the result of the jettisoning of operational debris. Suppression shield Richelson has posted on the Internet declassified documents he has obtained that track the historical roots of the still active stealth satellite work, dating as far back as One document is U. It details a movable "satellite signature suppression shield" -- a bit of clever technology that can suppress the laser, radar, visible, and infrared signatures of a satellite. The invention makes spotting or tracking a satellite a tough-to-do proposition. The camouflage space shield, as reviewed in the patent, takes on the form of an inflatable balloon. It can be quickly deployed and made rigid upon exposure to both outside and internally-created ultraviolet radiation. This shield can be tailored to a particular spacecraft and orbital situation. Once deployed, the cone-shaped balloon is oriented to deflect incoming laser and microwave radar energy, sending it off into outer space. While an intriguing bit of high-tech handiwork, whether or not this stealthy idea is an active ingredient of the MISTY satellite series is not publicly known. So too have changes in denial and deception practices, perhaps calling to question buying additional stealth satellites, he said, contrasted to purchasing more conventional spy satellites. Maybe you can attain the basic objectives in terms of uncovering what various countries are up to with other systems, and possibly for less cash, Richelson suggested. The very existence of the project was a secret and for several years the U. Air Force told the public that it was simply testing engineering equipment, not launching actual reconnaissance satellites," the source, who did not wish to be identified, noted. Air Force both began to look at ways of achieving operational stealth -- that is, actually hiding the satellites themselves. Cold war sneak peeks A number of ideas were fostered decades ago in U. They considered various options, from launching the satellite from a submarine to carrying the rocket underneath or inside an aircraft like a C and launching it over the ocean," the source noted. But these plans never went very far for a number of reasons. In addition, for a good part of the s, the people looking at satellite photographs found no indications that the Soviets were actually trying to hide their activities," the source explained. For instance, the CIA was able to determine how strong Soviet intercontinental ballistic missile silos were because they could watch them under construction and determine the thickness of their walls. But it was not until the s that this effort was dramatically increased. The Reagan administration poured a huge amount of money into satellite reconnaissance, including a stealth satellite program. They created a special security compartment called "Zirconic" that was extremely secret. The most notable of these was dubbed MISTY, a non-acronym but apparently a photoreconnaissance satellite for snapping pictures. MISTY was launched from the space shuttle in in an unconventional way Another stealthy satellite was launched in atop a Titan 4 rocket launched from California. Once again the amateur satellite trackers followed it, although after awhile they began to suspect that they were actually following a decoy and that the satellite itself was in a different orbit. They are not as versatile as regular intelligence satellites. Presumably there are only a few instances where this is useful -- after all, lots of activities and objects cannot be hidden," the source said. Are there are any lessons to be

learned from the issue? If there are, Hitchens added, "it is that space programs are expensive, and it is important to carefully weigh the benefits of any program versus the costs He directs the FAS Project on Government Secrecy which works to reduce the scope of government secrecy, to accelerate the declassification of cold war documents, and to promote reform of official secrecy practices. The reason why, Aftergood explained, is because congressional appropriators are free to spend the money without being held accountable for their actions. Industry lobbyists holding security clearances are free to advocate for their preferred programs. But critics or skeptics are not even permitted to know what is at issue. So it is not surprising that there will be enormous boondoggles from time to time," Aftergood said.

Chapter 2 : Hexagon spy satellite was 'better than Google Earth' - CNN

Spy Satellites The Library Of Satellites Spy Satellites The Library Of Satellites Summary: Spy Satellites The Library Of Satellites Pdf Download Books hosted by Max Mason on November 02 It is a pdf of Spy Satellites The Library Of Satellites that you could be downloaded this by your self at racedaydvl.com

Next The code named Kennan "Keyhole-class" KH reconnaissance satellites have been orbiting the Earth for more than 30 years. They are typically used to take overhead photos for military missions. The big question for a lot of people is: For security reasons, there are no published orbit schedules for the imagery spacecraft. They are supplemented by the ton Lacrosse-class radar-imaging satellites. You can think of a KH satellite as a gigantic orbiting digital camera with an incredibly huge lens on it. Optical image reconnaissance satellites use a charge coupled device CCD to gather images that make up a digital photograph for transmission back to Earth from an altitude of about miles. Since the satellites are in orbit , they cannot hover over a given area or provide real-time video of a single location. Digital images from the satellites are analyzed, manipulated and combined by powerful computers at the National Geospatial-Intelligence Agency NGA. The black and white images are used by the military and civilian communities. Many of the details about this class of satellites remain classified, but it is known that there are several of these overhead at any given time. They have an imaging resolution of inches, which means they can see something 5 inches or larger on the ground. Corona satellites, the first to do mapping of the Earth from space, had an imaging resolution of 6 feet. Air Force from to and were reportedly launched more than times. Mapping analysts can use satellite data to create 3-D images of land formations and structures on the ground. These images can then go to the negotiating table as countries try to end a war. Or, as in the case of the television show, the images can prove that the official word from a foreign government about some activity on the ground is not true. The same technology is also used to visualize potential escape routes for criminal activity. One was once reportedly used to observe the underbelly of an orbiting space shuttle for missing ceramic tiles, needed for re-entry. In the United States, Vandenberg Air Force Base in California has been the primary site for the launch of many surveillance satellites during the Cold War and to the present. Some early satellites had capsules aboard to return film canisters to the Earth. The canisters were snatched in the air by Air Force crews over the Pacific Ocean. Since the special satellites were made by Lockheed Martin, and more recently Boeing has the contract with the National Reconnaissance Office. Here are some interesting links:

Chapter 3 : Spy Satellites (The Library of Satellites): Paul Kupperberg: racedaydvl.com: Books

Will it be a spy satellite, the International Space Station, or the Hubble Space Telescope? Enter your zip code at Satellite Flybys and find out. Spot the Space Station will give you a list of upcoming ISS sighting opportunities for over 6, locations worldwide.

Image showing the recovery process for a Discoverer film canister. The first military use of satellites was for reconnaissance. In the United States the first formal military satellite programs, Weapon System L, was developed in the mid s. The first launches were code named Discoverer. This mission was a series of reconnaissance satellites , designed to enter orbit, take high-resolution photographs and then return the payload to Earth via parachute. There have also been a number of subsequent programs including Magnum and Trumpet , [6] but these remain classified and therefore many details remain speculative. The Soviet Union began the Almaz Russian: program in the early s. This program involved placing space stations in Earth orbit as an alternative to satellites. Three stations were launched between and Salyut 2 , Salyut 3 and Salyut 5. Following Salyut 5, the Soviet Ministry of Defence judged in that the time consumed by station maintenance outweighed the benefits relative to automatic reconnaissance satellites. During the Cold War arms race , the nuclear threat was used to justify the cost of providing a more capable system. The US Navy required precise navigation to enable submarines to get an accurate fix of their positions before they launched their SLBMs. SECOR used ground-based transmitters from known locations that sent signals to satellite transponder in orbit. A fourth ground-based station, at an undetermined position, could then use those signals to fix its location precisely. The first launch of a DSP satellite was on 6 November with the 23rd and last launched 10 November Satellite weapons[edit] In the United States, research into satellite based weapons was initiated by President Dwight D. Eisenhower in the s. The satellites would have deployed a huge wire mesh to disable ICBMs during their early launch phase. The project floundered due to the lack of any mechanism to protect the satellites from attack resulting in the cancellation of Defender in IV of the Outer Space Treaty specifically prohibits signatories from installing weapons of mass destruction in Earth orbit. The treaty became effective on 10 October and, as of May , countries are parties to the treaty with a further 27 pending full ratification. The US Armed Forces maintains international networks of satellites with ground stations located in various continents. Signal latency is a major concern in satellite communications, so geographic and meteorological factors play an important role in choosing teleports. Since some of the major military activities of the U. Six spacecraft were launched between and , of which five are operational, with the sixth lost in a launch failure. They are deployed in geostationary orbit and provide wideband, narrowband and protected military communication systems. Wideband systems support high-bandwidth transfers. Protected systems offer more sophisticated security protection like antijam features and nuclear survivability, while narrowband systems are intended for basic communications services that do not require high bandwidth. The United Kingdom also operates military communication satellites through its Skynet system. This is currently operated with support from Astrium Services and provides near worldwide coverage with both X band and Ultra high frequency services. There are four Skynet satellites in orbit, with the latest launch completed in December

Chapter 4 : Anatomy of a Spy Satellite

Get this from a library! Spy satellites. [Paul Kupperberg] -- Examines the history, technology, and uses of spy satellites, looking especially at the various reconnaissance satellite programs of the United States, from the mid-twentieth century to the present.

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Chapter 5 : US Launches Spy Satellite on Secret Mission

Spy Satellites and Other Intelligence Technologies that Changed History See more like this Spy Satellites and Other Intelligence Technologies That Changed History by New (Other).

Chapter 6 : The Early Satellites | NASA

*While numerous books over the past dozen years have explored the development of reconnaissance satellites and a few, like David Lindgren's *Trust But Verify* (), have provided some explication of the relationship between that technology and Cold War strategies or policies, *Spy Satellites* has a distinctive focus.*

Chapter 7 : Reconnaissance satellite - Wikipedia

The spy satellite will be operated by Japan s Cabinet Satellite Intelligence Center. NASA Spaceflight, the spy satellite will be operated as part of Japan s Information Gathering Satellites (IGS) program, which consists of optical and radar imaging spacecraft.

Chapter 8 : To Keep An Eye On India, 2 Pak Spy Satellites Launched By China

Experts believe the primary mirror is meters in diameter, identical to the mirror size inside the Hubble Space Telescope, which Lockheed Martin derived from the KH spy satellites.

Chapter 9 : Satellites & Stargazing | Homeschool Library of Links

But not all satellites are LEO and not all are used for imaging. There are stories of geostationary satellites sent up by the military which position themselves quietly adjacent to commercial communications satellites in order to listen in to traffic. This kind of spy satellite is much easier to disguise.