(Each year Space News chooses 10 people who make a difference in space and this year DNRO Carlson was of the 10 selected. The following was excerpted from an August 29, 2011, Space News article.)

## 10 Who Made a Difference in Space: Bruce Carlson, NRO Director



Bruce Carlson Photo Credit: Tom Kimmell

The U.S. National Reconnaissance Office (NRO) doesn't make the news very often and prefers to keep it that way. The vast majority of the agency's activities are classified, which prevents it from trumpeting triumphs such as well-executed development programs and operational successes that help save lives, win battles and lead to better strategic decisions. Meanwhile, cost overruns, on-orbit failures and turf battles with sister organizations like the U.S. Air Force sometimes have a way of bubbling to the surface, even if most of the details remain secret.

But launches are tough to hide, and the NRO conducted an impressive six launches during an eight-month period from Sept. 20, 2010, to April 14, 2011, all under the watch of Bruce Carlson, the retired Air Force general who became the spy satellite agency's 17th director in June 2009. The campaign roughly coincided with the 50-year anniversary of the legendary NRO.

Among the missions was the Jan. 20 launch of a Delta 4 Heavy rocket from Vandenberg Air Force Base, Calif., that Carlson said helped close a projected nine-month gap in a key NRO capability to just 33 days. Naturally he did not identify that capability, but based on the information he did provide it is reasonable to infer that the mission in question is optical imaging.

Carlson said the satellite launched in January was placed under contract in 2005. It was during that year that the NRO canceled the optical portion of the multibillion-dollar Future Imagery Architecture (FIA) after the Boeing-led program ran into what intelligence officials characterized as insurmountable technical difficulties. At about the same time, the NRO awarded Lockheed Martin, the longtime reconnaissance satellite incumbent that was stunned by Boeing in the FIA competition, a contract to build two optical imaging satellites based on legacy hardware.

Moreover, the satellite lifted off from Vandenberg, the primary U.S. launch site for missions to polar orbit, which is ideal for imaging missions because it provides full global coverage. The mission, designated NROL-49, was the first West Coast launch of a Delta 4 Heavy.

According to Carlson, closure of the projected gap was the result not only of the contractor's ability to complete the satellite two years earlier than planned but also of "brilliant" work on the ground that extended the life of an aging in-orbit spacecraft.

In an indication of just how expensive NRO missions can be, Carlson also said the satellite cost \$2 billion less than originally projected. That also provides a clue as to how much investment was at stake during the six-launch campaign, which included two of the Delta 4 Heavy rockets, whose payloads are so large that a multibillion-dollar price tag is all but certain.

The NRO, whose exploits, even if legendary, are truly known only to a select few, hit a low point with the FIA cancellation. Today, under Carlson's leadership, the agency appears to have shored up critical national intelligence gathering capabilities and in the process, gotten some of its swagger back.