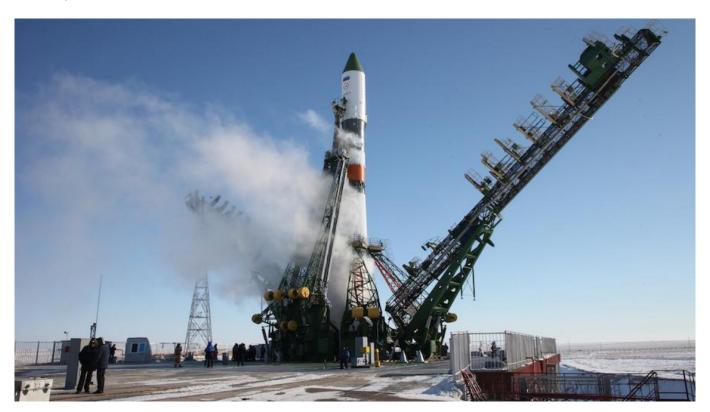


## Russia Retires Legendary Soviet-Designed Space Rocket

February 22, 2017



## **Federal Space Agency**

The Russian space agency Roscosmos retired a Soviet legend on Feb. 22 with the final launch of a Soyuz-U rocket from the Baikonur Cosmodrome in Kazakhstan.

First launched in 1973, the Soyuz-U design holds a number of records. Among them, it is the longest serving rocket in space exploration history. Over its 43 years in service, Soyuz-U rockets were launched 787 times.

A Roscosmos statement on the event of the final launch described the design as "the largest and one of the most reliable variants in the family of legendary Soyuz rockets." The Soyuz family are themselves derived from the original R-7 rocket that launched Sputnik and Yury Gagarin into space in the late 1950s and early '60s.

The Soyuz-U included several outdated features, but it was the analog guidance system that prompted Roscosmos to end production of the design in 2015. Although the designs work

technically, the guidance systems for Soyuz-U are built in Ukraine.

Ongoing tensions between Russia and Ukraine following the annexation of Crimea risked grounding the Russian space program.

The retirement of the Soyuz-U is part of <u>a broader effort by Russia's space industry to</u> <u>decouple from Ukrainian suppliers</u> — a relic of the industry's Soviet roots. Several cooperative projects have been retired or stalled. These include refurbished ICBM programs like Rokot and Dnepr, as well as the Sea Launch project recently purchased by S7 airlines.

The Soyuz-FG, a derivative of the Soyuz-U used for manned space missions, is also slated for retirement after Roscosmos exhausts its existing supply of the rocket. It will be replaced by the newer Soyuz-2, a fully Russian variant. Later, the <a href="new Angara class of rockets">new Angara class of rockets</a> will take over.

The Angara is Russia's first post-Soviet rocket design but has only flown twice and the status of the program is unclear. Soyuz variants will likely be the flag bearer of Russia's space program for some time.

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