

Mir set a precedent for collaboration in space – but its legacy is now at risk

February 22 2016, by Kathryn Harriss, University Of Kent



Soviet's Mir space station in 1986. Credit: NASA/wikimedia

The Soviet [space station Mir](#), launched 30 years ago, was the biggest and most complex space station of its era, lasting three times as long as expected – until 2001. Mir in Russian means "peace", which is fitting given that it brought together a number of different countries to collaborate in space – an approach we have almost come to take for granted.

After the final moon landing of [Apollo 17](#) in 1972 the manned exploration of [space](#) took a new direction – to have humans live in space for extended periods of time. From 1971 to 1986 the Soviet Union launched the [Salyut Programme](#) and America launched their own [space station](#), [Skylab](#). These were small with a single module for science laboratories. Their main task was to study the effect of prolonged space flight on the human body as well as to make astronomical, biological and Earth observations.

Mir was the first spacecraft to be assembled in space with a number of individual modules, the first of which was the 20-tonne "[core component](#)". This was officially launched on February 19 1986 and the first crew arrived in 1987. Over the next four years three modules were added – Kvant-1 in 1987, Kvant-2 in 1989 and Kristall in 1990 – enabling research in astronomy, biology and even growing food in space.

In the beginning of the 1990s funding issues for the space agencies of both the new Russian Federation and the US resulted in a "[joint statement on cooperation in space](#)" and the launch of the Shuttle-Mir programme. This was a collaborative project that enabled American space shuttles to visit Mir and Russian cosmonauts to fly in on the

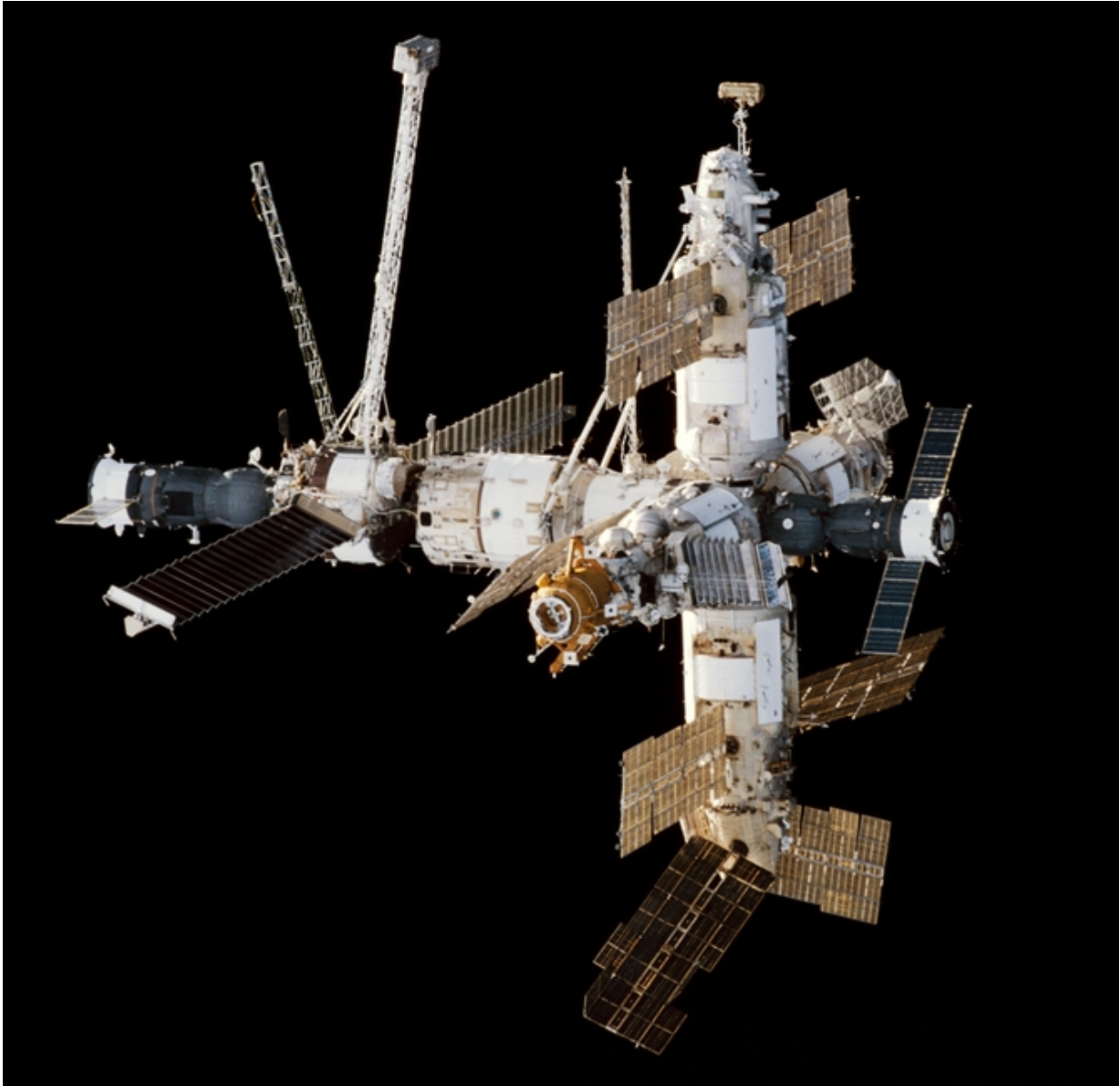
shuttle. This was the first collaboration since the historic Apollo-Soyuz test project in 1975 that signified a policy of non-hostility and the end of the Space race. But aside from this symbolic act and a few foreign visitors to the Salyut station, it was MIR that really kick-started regular international collaboration in space. Over the next 11 years, the Mir space station would host American, European, Japanese and Ukrainian astronauts. Two new modules were added: Spektr, with four solar arrays and equipment for Earth observation, and Priroda, the final module that was added in 1996.



Cosmonaut Polyakov, who holds the record for longest time spent in space with 438 days, looks out Mir's window. Credit: NASA

In 1997 [a number of failures](#), including a collision with a resupply ship and fires on board, meant that Mir was starting to show her age. Even after the ill-fated year, the station was repaired and continued to be used until it was abandoned in 1999. In November 2000, the space agency announced that it would be decommissioned. On January 24 2001 it crashed into the South Pacific Ocean.

The International Space Station (ISS) is an amalgamation of Russia and America's plans for space stations that were due to be launched after Mir: [Mir-2](#) and the [Space Station Freedom](#). It continues to build on Mir's collaborative reputation with 221 astronauts and cosmonauts from 18 countries – most recently the British astronaut Tim Peake.



Mir space station viewed from Endeavour. Credit: NASA

Uncertain future

But the situation is changing. The loss of NASA's space shuttle programme means the ISS relies wholly on the Russian Soyuz capsule

for resupply, but it is getting untenable for the Russian space agency to do both the resupply and other space exploration projects. This opens the door to independent companies for commercial resupply, such as Space X and Boeing.

It is unclear if the collaboration between Russia and the US will last. Russia announced plans [to build its own national space station](#) by 2023, though NASA and Russia have since agreed to operate and finance the ISS until 2024. However, this does put the possibility of future joint space projects in doubt.

Also, the international landscape is quickly changing as many new countries launch their own space programmes. Last year China [announced plans](#) for a [manned space station](#), currently scheduled to be launched in 2018 with the aim of being operational by around 2022. It is not yet clear to what extent this project will be international, as the possibility of having international partners joining attach modules to the core system is still under discussion. It may have doubts about working with the US, however, as NASA researchers are [not allowed to work with Chinese citizens](#) affiliated with Chinese state organisations, which has prevented Chinese astronauts visiting the ISS.

Meanwhile India is also making advances. Its [space agency](#), ISRO, is currently looking to launch its [first manned space mission in 2021](#). However, their own space station may be some way off.

Countries can achieve more through collaboration. The loss of Mir's greatest legacy would not just impede human exploration of the solar system but also political relations on the surface of our own planet. For decades, the US and Russia have worked closely in space despite tension on the ground. One can only wonder what we could achieve if the world could follow the example of the European Space Agency – by bringing different nations together to form an Earth Space Agency. Well, one can

dream.

This article was originally published on [The Conversation](#). Read the [original article](#).

Source: The Conversation

Citation: Mir set a precedent for collaboration in space – but its legacy is now at risk (2016, February 22) retrieved 17 July 2024 from <https://phys.org/news/2016-02-mir-collaboration-space-legacy.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.