

The New Space Era

Why hasn't NASA been back to the moon?

The last time NASA has sent anyone on an expedition to the moon was the Apollo mission 17 in 1972 during the peak of the cold war. It's been almost 50 years!!

With so many modern advancements in industry and technology, why hasn't NASA been back to the moon in decades?

Well the simple answer, money and politics, the Apollo mission cost approx. around 25.4 billion dollars (140 billion today due to inflation of the US Dollar.) Furthermore, more government spending was used on the program due to the fierce competition during the cold war. Now NASA receives less than 0.4% of federal US budget.

In general space projects and equipment cost billions for companies and countries. This is no surprise as all these projects take years of planning and designing by professional engineers not to mention the materials need to be lightweight and durable to withstand the rapid changes in temperature in rocket. The main cost involved comes from the labour costs and materials as in effect you are throwing everything away, country popular belief fuel is not that expensive compared to the rest of the rocket. This money can be arguably used better in other places such as health care and education.



Cassini-Huygens:	\$3.26 billion. ...
Mir Space Station:	\$4.2 billion. ...
New Horizons:	\$650 million. ...
Apollo Space Program:	\$25.4 billion. ...
Curiosity Mars Rover:	\$2.5 Billion. ...
International Space Station:	\$160 Billion. ...
Global Positioning System:	\$12 Billion. ...
Juno Jupiter Probe:	\$1.1 Billion.

The Change

So why has attention suddenly been placed back onto space travel, why has there been a change?

Well its due to private companies such as SpaceX, you may have most likely already heard of them and their achievements. Such as being the first to achieve privately funded liquid fuel rockets which can reach low orbit space with the Falcon 1 in 2008. Being the first in the world to achieve and revolutionise space tech by landing its falcon 9 on a landing pad in the Atlantic Ocean after being launched into space then later that year, reusing the same rocket to be launched.

And the most recent one, the launch of the falcon heavy rocket in February. The Falcon Heavy is now the most powerful rocket in operation anywhere in the world at an absurd cheaper cost compared to previous high-powered rockets such as the ATLAS.



BLUE ORIGIN



SpaceX has been aiming to bring down the costs of space travel, making it more affordable. From rapid reusability of rocket boosters and rocket parts (which cost billions) and newly developed Merlin rocket engines that have so far shown extreme reliability even when in clusters. And being the first to announce 'moon tourists', planning to send average people on a trip around the moon. The Sudden change in attitude has led other private companies to also pursue space travel. Such as Blue Origin, Space X's most heated rival at the moment, they've recently been able to land their own rockets as well and are planning to get ahead of SpaceX by being able to successfully land their rockets on used cargo ships on the sea. Other companies are following this model of bringing down costs and are hot in pursuit.



The Future

With the sudden change in view of space travel, other companies have announced their own exciting and ambitious future projects and plans.

NASA plans to send humans to mars by receiving funding from the Trump administration. However, SpaceX and China have fully expressed interests in colonising the planet. Both computers seek to use the planet's resources for their own, moreover the composition of mars atmosphere is carbon dioxide and nitrogen, ambitions of introducing green plants to the planet to produce oxygen to make it fit for human life.



Furthermore, Space tourism has also gained a large attraction from the big space companies.

With SpaceX announcing they will be sending a Japanese billionaire, Yusaku Maezawa, as the first tourist to be sent to the moon. The mission which has been planned to happen as soon as 2023, will send the billionaire around a sling shot trip around the moon.

Also, another company called Virgin Galactic will soon become the first publicly traded space tourism company.

With a massive 800-million-dollar investment into the company which should fund the company's space ship development until they are ready to turn a profit with the plan to take tourists around the Earth's atmosphere.

With all that being said, the future of space travel is definitely going to be a huge developing field in the future and its exciting to see where it will lead us to.

