



By: *Tomorrow's Affairs Staff*

# Let's not judge balloons too harshly - they will soon be taking us to space



Balloons are capable of great things. They can heat up relations between the two largest global powers, but they will also be able to take the first tourists into space, comfortably, safely and at a relatively affordable price.

Balloons have not changed in construction and principles of flight for hundreds of years. Even some of their purposes, such as entertainment and military observation have remained the same.

The downing of Chinese spy balloons over the US brought them into disrepute. The US was furious that its country's territorial integrity was violated by a country they consider its biggest threat.

Beijing was also angry because they persistently claim that these were civilian aircrafts that collected weather data.

The leading Chinese diplomat, Wang Yi, said at the Munich Security Conference on Saturday that the shooting down of Chinese balloons over US territory was an "unimaginable", "hysterical" and absurd act that violated international law.

After a slight warming of relations and several summit meetings, the US and China cooled relations, precisely because of the balloon incidents, which became a top political issue in both countries.

## A long history of spy balloons

These floating giants filled with helium have been used for espionage purposes for a very long time.

As early as the middle of the 19th century, France used them to monitor enemy Austrian troops. They were also used in the American Civil War, and in the First World War on all sides.

The Cold War was a golden age for spy balloons, they floated everywhere, and they were used to take photos from high altitudes.

Even today, they are irreplaceable for this job, even though they are apparently outdated, slow and too noticeable. Some of them have the ability to follow the earth's rotation, and to "stop" at a certain point and send images and other data from high altitudes.

They are equipped with modern technology, and their images are often more detailed than those from satellites. They are cheap and powered by solar cells.

## Indispensable in space exploration

However, hundreds of other balloons that circle the earth every day are used for scientific and practical purposes, most often for collecting weather data and scientific measurements in the upper atmosphere.

They complete their mission at very high altitudes, about 30 kilometres above the ground, where they explode under pressure.

They are irreplaceable in near space research. NASA has been preparing a balloon larger than a football field to raise its new telescope to a height of about 40 kilometres.

From that height, above Antarctica, the telescope will study a phenomenon that chokes off star formation in some galaxies, effectively killing them.

NASA's Scientific Balloon Programme has been launching 10 to 15 balloon missions into the stratosphere each year.

They are cheaper than other space missions, they need less time to develop, and they use the latest technologies, which would also be used in classic space programmes.

## Stargazing from the front row

Not only spies, but amateurs, tourists, meteorologists and researchers will soon be able to reach heights on the edge of the

cosmos with the help of balloons.

Start-up from Tucson, Arizona World View, has already sold 1,250 seats for its tourist trips to the edge of space and back.

At the price of \$50,000, and a seat booking for \$500, this balloon trip is nine times cheaper than the competition offered by Virgin Galactic.

The first passengers will be able to spend six hours on a flight at an altitude close to 40 kilometres above the ground where they'll be able to see the curvature of Earth.

They would not be in the zone of weightlessness, but they would climb to an altitude three times higher than when traveling on a commercial plane and would be able clearly to see, and almost touch, the darkness of space above them.

The path to this type of space tourism was first paved by Felix Baumgartner in October 2012, and then by Alan Eustace in 2014, performing parachute jumps from the height of approximately 40 kilometres above the ground.

Their adventures were accomplished by pushing the boundaries in balloon design, applying new materials for the aircrafts and protective suits, which all together opened the door wide to the commercial use of stratospheric balloons.

Traveling to the edge of space in helium balloons will soon be a reality, perhaps even a daily routine. These simple structure giants already deserve to be treated not solely for their espionage purposes.