

Satellites, weather and climate

Artificial satellites and natural satellites (such as the moon) orbit a larger object, such as the Earth. Satellites have been used for weather observations since 1959 when Vanguard 2 was launched. More recently, scientists have used satellites to monitor our climate.

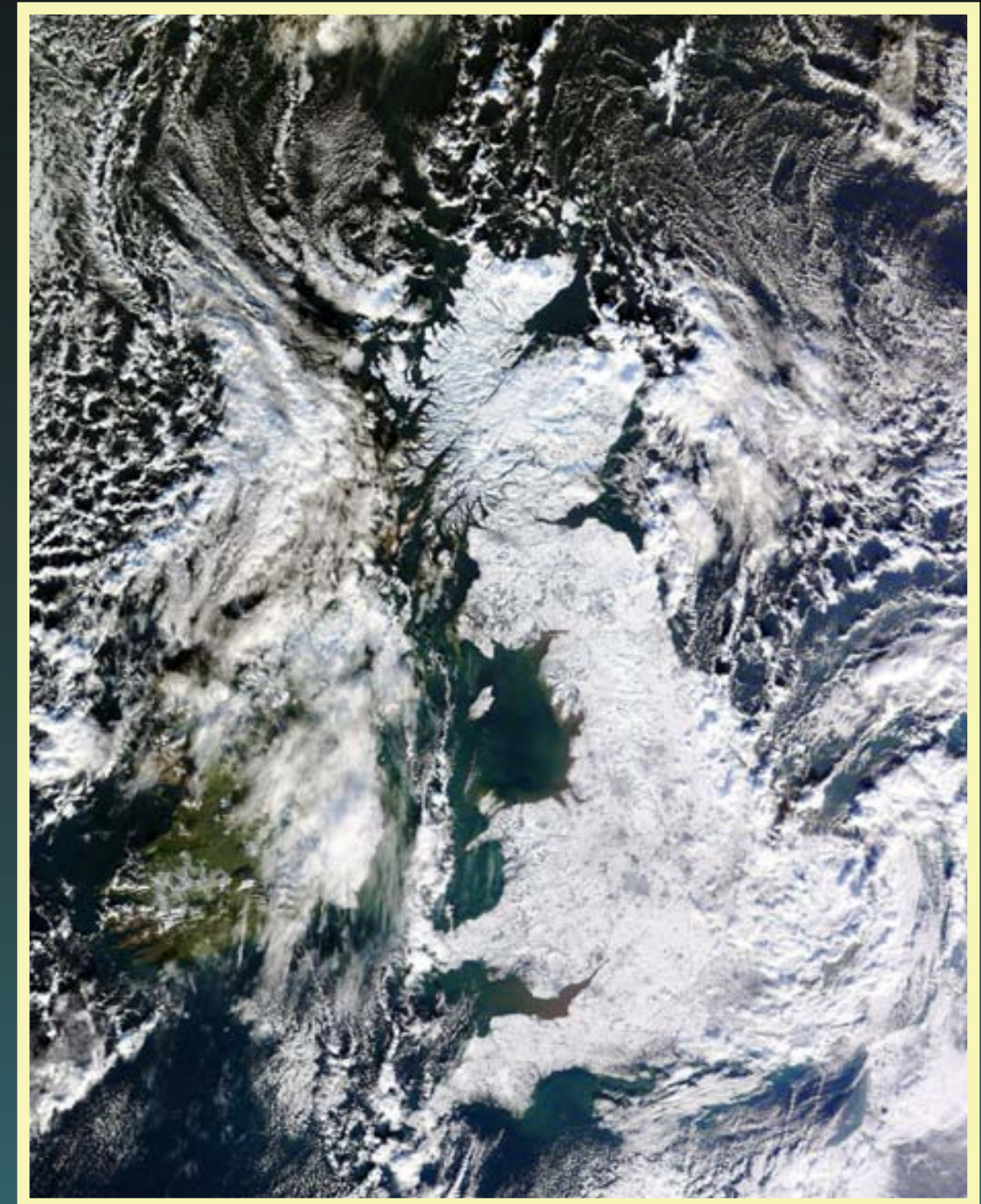
There are two types of satellite orbit:

Geostationary orbit

These satellites are not stationary in space but travel at the same speed as the rotation of the Earth and therefore are always over the same part of the Earth. The good thing about this is that your satellite receiver on Earth always needs to point at the same part of the sky.

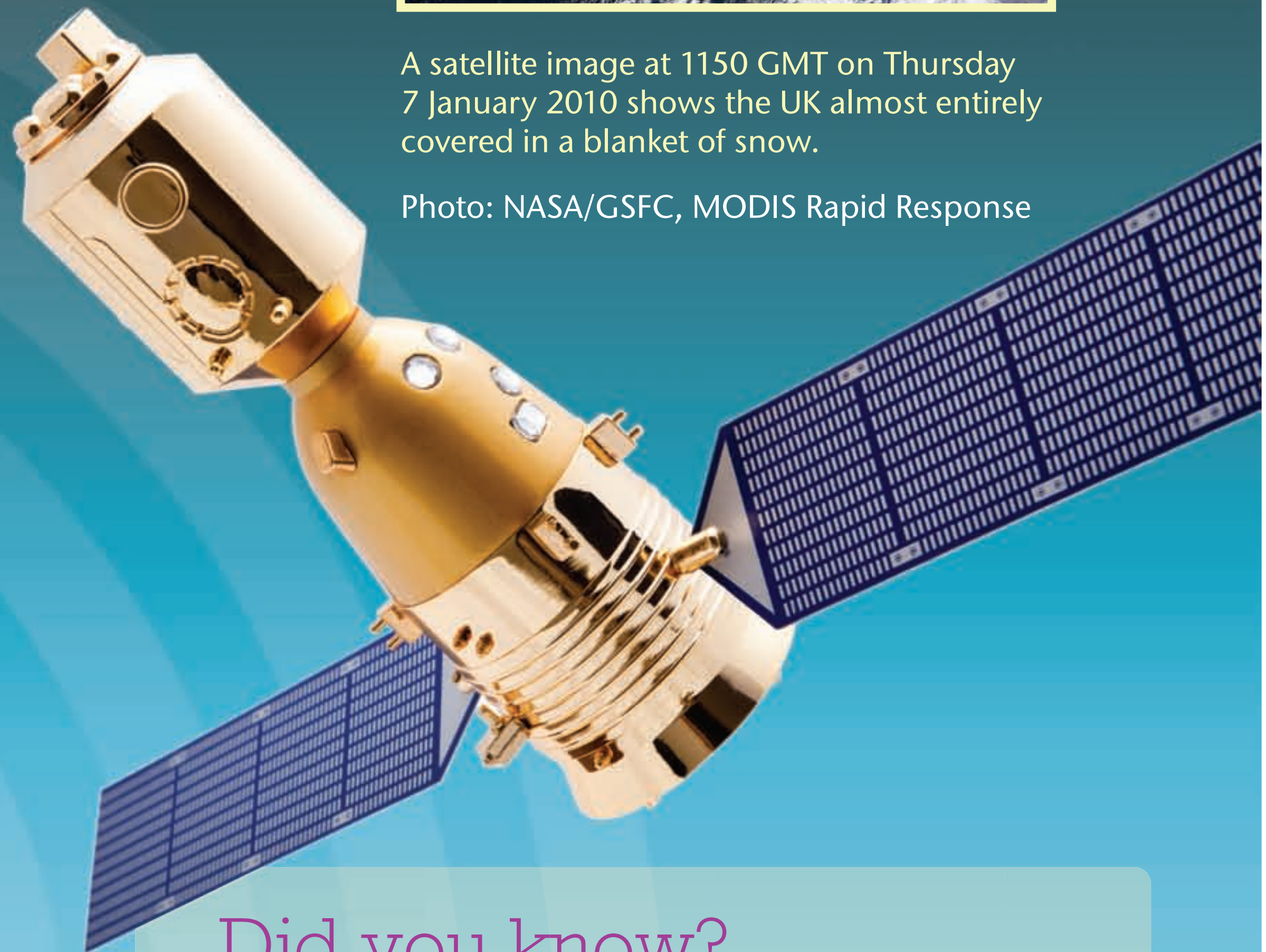
Polar orbit

A polar orbiting satellite passes near to or directly over the poles on each orbit. With the Earth turning underneath it this means that a polar orbiting satellite sees a different bit of the Earth each time. To receive data from this satellite you need a receiving dish that will track the satellite as it passes overhead.



A satellite image at 1150 GMT on Thursday 7 January 2010 shows the UK almost entirely covered in a blanket of snow.

Photo: NASA/GSFC, MODIS Rapid Response



Did you know?

You can use satellites to:

- track tropical storms and tornadoes
- monitor coral reefs
- measure the temperature of the oceans
- spot forest fires and track volcanic ash
- measure sea-level rise
- monitor space weather