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Solar eclipse from above: MSG observes path of Moon shadow

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If you missed observing the solar eclipse on 29 March 2006, relax! You can see it now from a rather unusual perspective. This animation was generated from data gathered by the Spinning Enhanced Visible & Infrared Imager (SEVIRI) instrument onboard METEOSAT-8 alias Meteosat Second Generation (MSG); it shows the path of the Moon's shadow across north-central Africa.

The total solar eclipse began at the eastern edge of Brazil. Afterwards, the Moon's umbral shadow moved across the Atlantic, then over Ghana, Nigeria, the Niger and up to Libya. At the border between Chad and Libya, the total solar eclipse reached its maximum for four minutes and seven seconds. The shadow path then touched Egypt before it continued moving over the Mediterranean to Turkey, where -- at the coast -- totality could be seen for three minutes and eleven seconds at 13:54 local time (12:54 Central European Summer Time). Afterwards, the shadow moved further to the Black Sea, to Georgia, Russia, Kazakhstan and to the border with Mongolia.

In Germany, only a partial solar eclipse could be seen as the Moon obscured only about one-third of the Sun's disk. The next partial solar eclipse in Germany will not take place until 1 August 2008. The path of totality for this eclipse will travel from northern Canada to Greenland, Siberia, Mongolia and then to China.

The SEVIRI sensor onboard MSG is at present the best geostationary imager in orbit. It can observe the Earth in twelve spectral bands and deliver pictures every 15 minutes in visible light, infrared and at water vapour wavelength with a ground resolution of between 3km x 3km (11 channels) and 1 km x 1 km (1 channel). This capability offers new possibilities for observing and studying the Earth and its atmosphere. The European MSG satellite is operated from EUMETSAT (European Organisation for the Exploitation of Meteorological Satellites).

Data is received and analysed by the DLR Institute of Atmospheric Physics and the German Remote Sensing Data Center (DFD), both in Oberpfaffenhofen. Among various scientific applications, the data is used, for example, to study the effect of air traffic on the properties of cirrus clouds and Earth's radiative balance.

The animated image shows the eclipse path from 07:00 - 11:45 UTC on 29 March 2006 at a temporal resolution of 15 minutes. The single scenes are rendered in false colours.

Related Contacts

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