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Next-Generation Weather Satellites to Enhance Extreme Weather Forecasting and Save Lives

August 12, 2025

A new era in weather forecasting is set to begin with the launch of the first in a series of advanced satellites designed to provide early warnings of increasingly extreme weather events. The **Metop Second Generation** project, a collaborative effort between the European Organisation for the Exploitation of Meteorological Satellites (EUMetSat) and the European Space Agency (ESA), will deploy a constellation of six satellites over the next 15 years to significantly improve the accuracy of weather prediction models.

The inaugural satellite, **Metop-SG A1**, is scheduled for launch this Wednesday from French Guiana. Following its deployment, the satellite will commence data collection on weather patterns next year, with the information feeding directly into forecasting models used by meteorological services, including the UK's Met Office. This enhanced data is expected to empower meteorologists to create more detailed and precise forecasts, enabling better preparation for severe weather.

According to project experts, the advanced capabilities of the new satellites are not just about more accurate forecasts, but about a critical mission to **save lives**. By providing earlier and more reliable warnings of events like severe storms, floods, and heatwaves, the system will allow governments and communities to take proactive measures to protect citizens and infrastructure.

The Metop Second Generation project represents a major leap forward in Europe's meteorological capabilities, building on the success of previous generations of weather satellites. This long-term commitment to space-based observation highlights the growing importance of satellite technology in mitigating the impacts of climate change and protecting the public from increasingly unpredictable

weather phenomena.