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**No. 2024-18**

**December 17, 2024**

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## **NGA, NOAA, BGS Release World Magnetic Model 2025**

SPRINGFIELD, Virginia – The U.S. National Geospatial-Intelligence Agency, in partnership with the U.S. National Oceanic and Atmospheric Administration, and in agreement with the British Geological Survey and the U.K. Defense Geographic Centre, released the World Magnetic Model 2025 today.

For the first time, two versions of the model were released: the standard 5-year update, WMM2025, and a high-resolution version, WMMHR2025. WMM2025's spatial resolution at the equator is 3,300 kilometers. By comparison WMMHR2025's offers improved spatial resolution of approximately 300 kilometers, providing greater directional accuracy through enhanced data precision.

"We're delighted to join with NOAA and BGS to publish WMM2025 and WMMHR2025, and we encourage users, where possible, to transition to the higher resolution model," said Mike Paniccia, geodetic earth scientist and NGA's WMM program manager.

The WMM is a joint product of NGA and DGC. The model and associated software are jointly developed and distributed on behalf of NGA and DGC by the NOAA National Centers for Environmental Information and BGS, respectively.

The U.S. Department of Defense, the U.K. Ministry of Defence, the UK Hydrographic Office, the North Atlantic Treaty Organization and the International Hydrographic Organization use the WMM as the standard model for navigation, attitude and heading referencing systems using the geomagnetic field. Everyone who uses a GPS-enabled cell phone to navigate, or has ever flown on an airplane, relies on the WMM. The model is updated every five years and validated annually to ensure it falls within the WMM military specification.

The WMM also includes updates to blackout zones, near the North and South poles, where the Earth's magnetic field can be unusable for navigation.

To download the WMMHR2025 or the WMM2025, visit <https://www.ncei.noaa.gov/products/world-magnetic-model>

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NGA is a unique combination of intelligence agency and combat support agency. It is the world leader in timely, relevant, accurate and actionable geospatial intelligence. NGA enables the U.S. intelligence community and the Department of Defense to fulfill the president's national security priorities to protect the nation.

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