

## Data from BAE Systems TEMPO instrument is now publicly available

*The new data platform will provide near real-time information on air pollution throughout greater North America*

BROOMFIELD, Colo., May 30, 2024 /PRNewswire/ -- Residents and scientists across North America now have access to enhanced air quality data in their area following the launch of a publicly available data platform for the BAE Systems (LON: BA) Tropospheric Emissions: Monitoring of Pollution (TEMPO) instrument. The mission was developed as a collaborative effort between NASA's Langley Research Center and the Smithsonian Astrophysical Observatory, part of the Harvard & Smithsonian Center for Astrophysics, and will serve as a major step forward in efforts to better understand and address air pollution issues throughout the continent.

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The BAE Systems-built TEMPO instrument uses a geostationary ultraviolet/visible spectrometer to provide hourly, high-resolution daytime measurements of air pollutants as it scans across the United States and parts of Canada, Mexico, the Caribbean, and other portions of the continent. The unprecedented high spatial and high temporal resolution measurements will give scientists precise data on the

origin, concentration, and movement of pollution over time, exceeding the current capabilities of ground-based sensors and helping to improve the detail and accuracy of air quality forecasts.

TEMPO's near real-time air pollution data can be viewed on NASA's Atmospheric Science Data Center website here: [ASDC | Projects | TEMPO \(nasa.gov\)](#)

"The data acquired by TEMPO can now be used by scientists and policymakers to gain new insights into how to characterize and improve air quality," said Dr. Alberto Conti, vice president and general manager of Civil Space for BAE Systems Space & Mission Systems. "The population of North America can now have firsthand access to measurements of air pollutants in their communities. At BAE Systems, we are proud to help usher in this new era of air quality monitoring."

TEMPO launched in April 2023 and is hosted on the Intelsat 40e satellite built by Maxar. The instrument captured its first images last July, and the science team has spent the last several months validating the instrument and processing algorithm performance to ensure the accuracy of the data.

"These public data sets show TEMPO's measurements for nitrogen dioxide, formaldehyde, and ozone," said Dr. Hazem Mahmoud, lead data scientist at NASA's Atmospheric Science Data Center (ASDC). "These pollutants contribute to a wide variety of health issues that affect how we live our lives. We already have over 500 early adopters engaging with the data, and now scientists, researchers, policymakers, and the public have the capability to study what is in the air we breathe on a neighborhood level from TEMPO's hourly, daytime scans from space on NASA's ASDC TEMPO page."

BAE Systems developed TEMPO alongside with the Geostationary Environment Monitoring Spectrometer (GEMS), a similar instrument that launched in 2020 for the Korea Aerospace Research Institute (KARI) and the National Institute of Environmental Research (NIER) of South Korea.

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