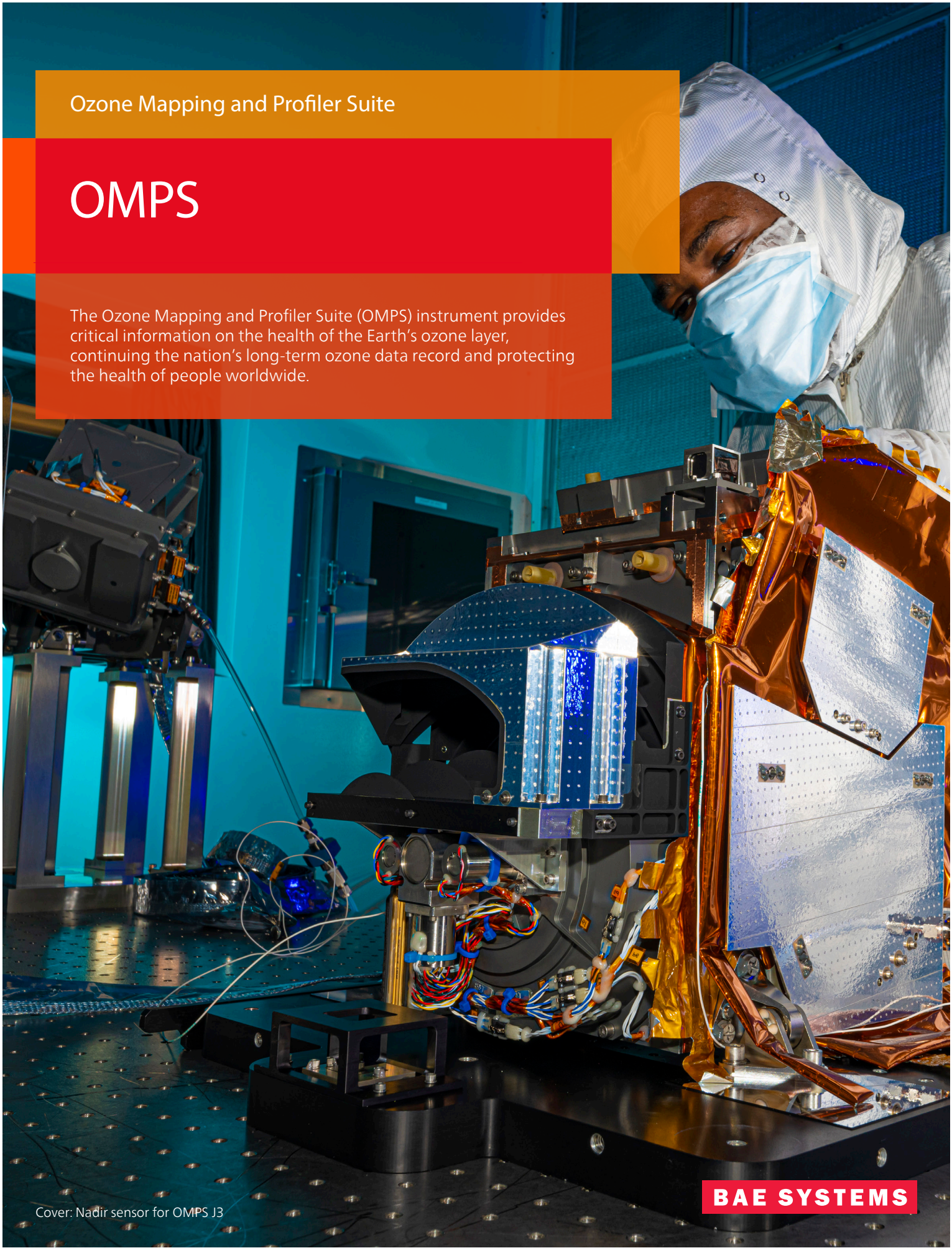
Ozone Mapping and Profiler Suite

OMPS

The Ozone Mapping and Profiler Suite (OMPS) instrument provides critical information on the health of the Earth's ozone layer, continuing the nation's long-term ozone data record and protecting the health of people worldwide.



Cover: Nadir sensor for OMPS J3

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Overview

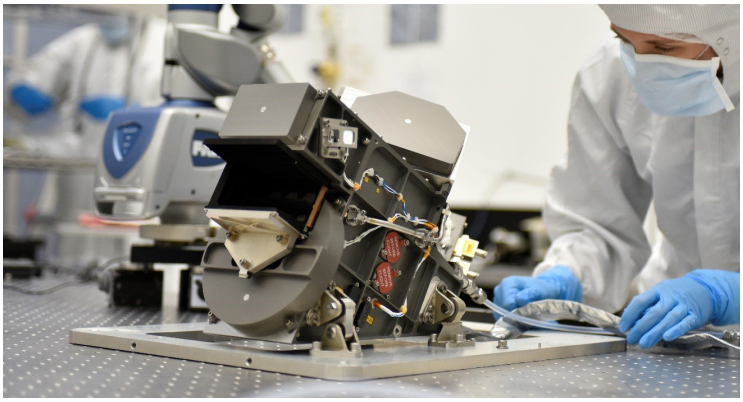
Policymakers rely on the nation's more than 40-year record of total-ozone and ozone-profile observations to track the health of the ozone layer, which absorbs much of the sun's harmful ultraviolet radiation before it reaches the Earth. The OMPS instrument, flying on NOAA-21 (formerly Joint Polar Satellite System-2), NOAA-20 (formerly JPSS-1), and Suomi National Polar-orbiting Partnership (Suomi NPP) satellites, has taken on the task to continue those observations.

By measuring the global distribution of ozone, OMPS data helps scientists track the recovery of the ozone layer from the effects of ozone-depleting substances like halons or chlorofluorocarbons over the next few decades. OMPS helps the U.S. fulfill its obligation to monitor ozone depletion under the 1987 Montreal Protocol – an international agreement to ensure there are no gaps in ozone coverage. In addition to monitoring ozone, OMPS is also capable of measuring and tracking other atmospheric constituents, including ash and sulfur dioxide from volcanoes, smoke clouds and dust.

Our Role

BAE Systems designed, built and tested all three OMPS instruments that are currently in orbit, as well as supporting instrument integration on Suomi NPP, NOAA-20, and NOAA-21 satellites. As a result of our success on the first two OMPS builds, BAE Systems received sole-source contracts from NASA to build OMPS instruments for all the next JPSS missions (JPSS-2, JPSS-3 and JPSS-4).

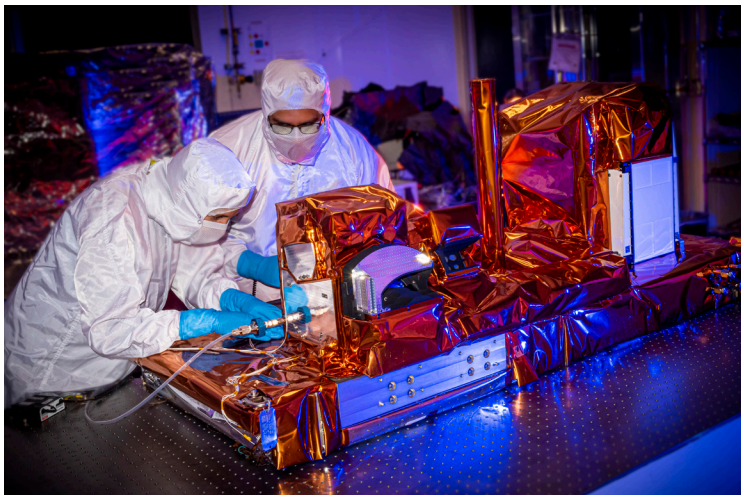
OMPS builds on heritage of developing ozone monitoring instruments for NOAA and NASA. We built nine Solar Backscatter Ultraviolet Radiometers, which helped to discover the ozone hole above Antarctica in 1987.



Limb Sensor

Quick Facts

- OMPS is a three-part spectrometer: a nadir mapper that will map global ozone, a nadir profiler that will measure the vertical distribution of ozone in the stratosphere and a limb profiler that measures ozone in the lower stratosphere and troposphere
- OMPS is one of five instruments that launched aboard our Suomi National Polar-Orbiting Partnership (NPP) spacecraft. BAE Systems-built a second OMPS instrument that is on board the BAE Systems-built NOAA-20 satellite
- The third BAE Systems-built OMPS instrument launched aboard NOAA-21 on Nov. 10, 2022
- BAE Systems delivered the fourth and fifth OMPS instruments for launch on JPSS-3 and JPSS-4
- 2018's biggest volcanic eruption of sulfur dioxide was confirmed by OMPS



OMPS instrument flying on NOAA-21

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