Weekly Report – June 05, 2026

Cooperative Institute for Satellite Earth System Studies (CISESS)

NOAA/NESDIS/STAR

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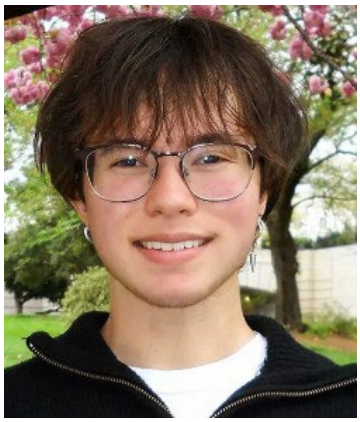
HIGHLIGHTS FOR NESDIS LEADERSHIP

People

Student Working with CISESS Scientist Awarded a Hollings Scholarship

The Ernest F. Hollings Scholarship is a prestigious undergraduate award offered by NOAA. The Hollings Scholarship Program provides undergraduate applicants up to $9,500 per year for two years of full-time study, a 10-week paid Summer Internship at a NOAA facility, and travel funds to attend mandatory orientations, present internship research at the NOAA Science and Education Symposium in Silver Spring, MD, and travel to up to two professional scientific conferences. This year, eight juniors at the University of Maryland have been granted this scholarship, the largest group of awardees in the nation from one educational institute. One of the recipients is Felix Gomez who is pursuing a B.Sc. in the Department of Atmospheric and Oceanic Science (AOSC). Working with CISESS Scientist and AOSC Professor James Carton, Gomez examined how sea surface temperatures in the Chesapeake Bay have changed over the past several decades. With this scholarship opportunity, he hopes to continue doing research focused on the Bay, with a keen interest in sharing his findings with the public in art-inspired ways. He is quoted saying, "Effective environmental science must be paired with public-facing communication to inspire change."



(James Carton, CISESS, carton@umd.edu, Funding: Jason)

TRAVEL AND MEETING REPORTS

Vogel Presents at the Chesapeake Community Research Symposium

Collaborative work on marine heatwaves in the Chesapeake Bay between CISESS Scientist Ron Vogel and partners at NOAA and the Virginia Institute of Marine Science was presented this week at the Chesapeake Community Research Symposium in Annapolis, MD (1–3 June 2026). The work aimed to verify whether model forecasts of marine heatwaves can be used to issue alerts to fishery managers in advance of heatwave events. With the advance-warning information, fishery managers would be able to offer fishing guidance to curb stress on economically important fish populations that are vulnerable to very high temperatures. Vogel

worked with the partners to merge temperature data from buoys and satellites. The merging created a more complete observed dataset for verifying the model's temperature forecasts.

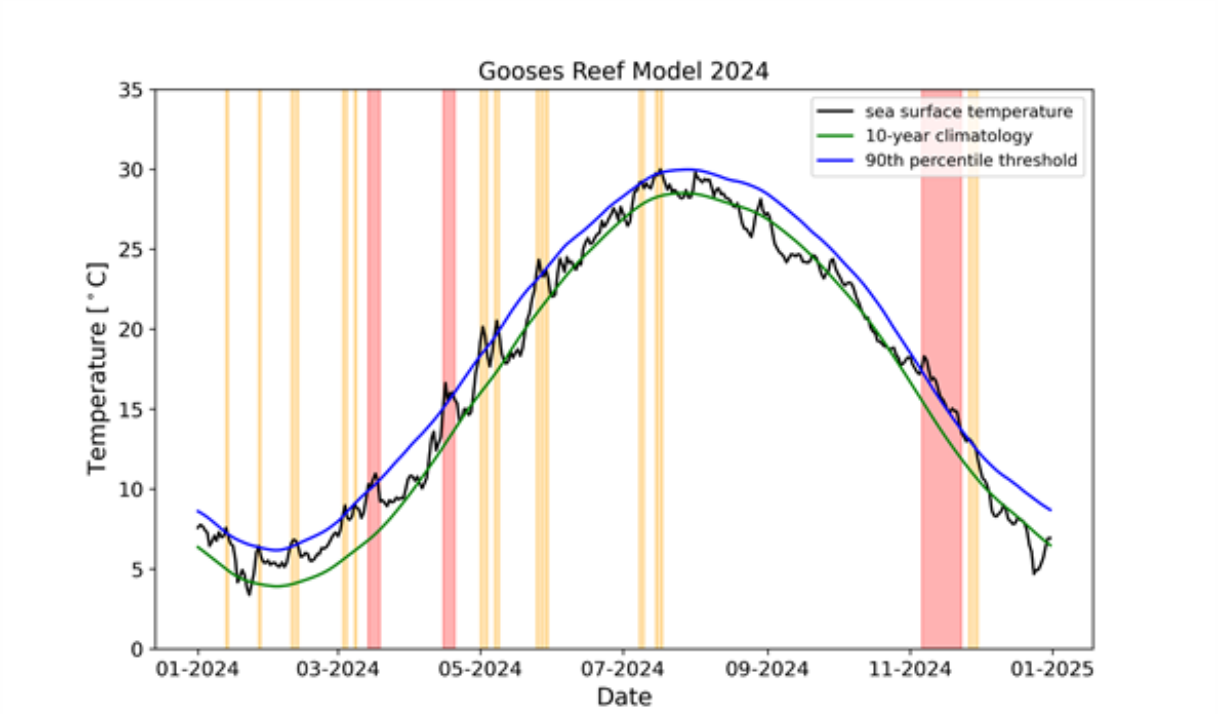


Figure: Comparison of observed marine heatwaves with model-hindcast marine heatwaves at the Gooses Reef buoy location (38.5563°N, 76.4147°W) in Chesapeake Bay for 2024. The red vertical stripes indicate time periods of marine heatwaves in which daily temperature (black line) exceeds a threshold of 90th percentile long-term averaged daily temperature (blue line) for a period of 5 days or more. The comparison to observed temperature data helps to identify the model's tendencies to overestimate or underestimate marine heatwaves.

(Ron Vogel, CISESS, vogelr@umd.edu, Funding: ORS)

PUBLICATIONS

The Latest Picture of the Ozone Layer
Citation: Sofieva, Viktoria F., Monika E. Szelag, Natalya Kramarova, Robert Damadeo, Wolfgang Steinbrecht, Irina Petropavlovskikh, Corinne Vigouroux, Eliane Maillard Barras, Daniel Zawada, Kleareti Tourpali, Stacey M. Frith, **Jeannette D. Wild**, Sean M. Davis, Carlo Arosio, Mark Weber, Alexei Rozanov, Brian Auffarth, Lucien Froidevaux, Ryan Fuller, Doug Degenstein, Kimberlee Dube, Peter Effertz, Thierry Leblanc, Gérard Ancellet, Sophie Godin-Beekmann, Glen McConville, Richard Querel, Dan Smale, Marie-Renee DeBacker, Emmanuel Mahieu, and Ralf Sussmann, 2025: Updated global and regional trends of stratospheric ozone profiles. *Atmos. Chem. Phys.*, **26**, 7387–7405, https://doi.org/10.5194/acp-26-7387-2026.

Summary: The ozone layer, which is situated 15–40 km above the surface in the stratosphere, protects living organisms on Earth from damaging solar ultraviolet radiation and is an essential component of the atmosphere's radiation budget. Ground-based, in-situ and satellite instruments have been regularly measuring the stratospheric ozone abundance and its vertical distribution. Every four years, the World Meteorological Organization (WMO) publishes its WMO Ozone Assessments, providing comprehensive scientific reports on the state of the ozone layer and its recovery progress. According to the latest report from 2022, ozone is increasing in the upper stratosphere at a rate of ~2% per decade, agreeing well with estimates from chemistry-transport models. Since this report, climate data records have been updated and improved through use of the latest versions of data from individual instruments, and new datasets have become available. In their paper published in the journal *Atmospheric Chemistry and Physics*, Jeannette Wild (no longer with CISESS) and colleagues provide detailed and updated information about the vertical distribution of ozone trends in the stratosphere for the latitude range of 60°S–60°N, comparing their findings with the results of the WMO 2022 assessment. Overall, the mean trends in ozone profiles over 2000–2024 are highly consistent with the trends calculated over 2000–2020 reported in the last WMO assessment. Compared to the 2022 WMO assessment, upper stratospheric trends are nearly unchanged in the tropics but are slightly reduced at mid-latitudes.

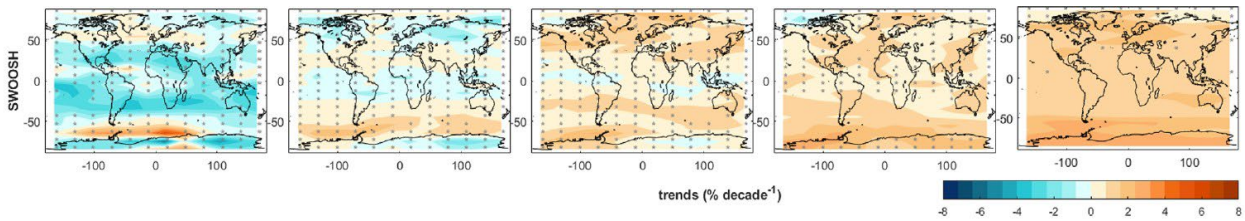


Figure: Latitude- and longitude-dependent ozone trends (% per decade) derived for the period 2003–2024 for five different altitude levels (left to right: 20, 25, 30, 35, and 40 km) based on the updated Stratospheric Water and Ozone Satellite Homogenized (SWOOSH) dataset, one of 10 merged satellite datasets used in the paper. Gray dots indicate regions where the trends are not statistically significant at the 2σ level.

(Maureen Cribb, CISESS, mcribb@umd.edu, Funding: CISESS Task I)