A southern bloom

This true-color image of the South Atlantic Ocean was acquired 24 December 2018 by the Moderate Resolution Imaging Spectroradiometer (MODIS) aboard NASA's *Terra* satellite. Off the southeastern coast of Argentina, between the Valdes peninsula (top) and the Falkland Islands (Islas Malvinas, bottom), two turquoise filaments stand out in the otherwise uniform deep blue of the open ocean. They are a phytoplankton bloom, most likely coccolithophores. The unicellular, photosynthetic microalgae enshroud themselves with calcite shields they later shed. Even though individual organisms are just 100 μm in diameter, they show up in blooms such as this one because their concentration can exceed 10^5 mm^{-3}.

Blooms occur when environmental conditions—the amount of solar radiation, nutrient availability, temperature, and other variables—are just right. Phytoplankton are at the base of the ocean's food chain, and they play a crucial role in many biogeochemical cycles, including the carbon cycle. Their response to and influence on global warming is an active area of research. (Submitted by René Garreaud, Universidad de Chile.) —RJF

TO SUBMIT CANDIDATE IMAGES FOR BACK SCATTER VISIT http://contact.physicstoday.org.