

# Spatial-temporal variations in surface ozone over Ushuaia and the Antarctic region: observations from in situ measurements, satellite data, and global models

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**Abstract** The Antarctic continent is known to be an unpopulated region due to its extreme weather and climate conditions. However, the air quality over this continent can be affected by long-lived anthropogenic pollutants from the mainland. The Argentinian region of Ushuaia is often the main source area of accumulated hazardous gases over

the Antarctic Peninsula. The main objective of this study is to report the first in situ observations yet known of surface ozone (O<sub>3</sub>) over Ushuaia, the Drake Passage, and Coastal Antarctic Peninsula (CAP) on board the *RV Australis* during the Malaysian Antarctic Scientific Expedition Cruise 2016 (MASEC'16). Hourly O<sub>3</sub> data was measured contin-

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